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* 570 Fulton Street Rezoning

3. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
18DCP111K	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
180459 ZMK, 180458 ZSK, 180457 ZRK, 180456 ZMK, 150455 ZCK	

4a. *Lead Agency Information*			**4b. *Applicant Information***		
NAME OF LEAD AGENCY			NAME OF APPLICANT		
New York City Department of City Planning (DCP)			570 Fulton Street Property LLC.		
NAME OF LEAD AGENCY CONTACT PERSON			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON		
Robert Dobruskin			David Schwartz		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 38 East 29th Street, 9th Floor		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10029
TELEPHONE (212) 720 3423	EMAIL rdobrus@planning.nyc.gov		TELEPHONE (646) 762 1420	EMAIL david@slatepg.com	

5. *Project Description*

The applicant, 570 Fulton Street Property LLC, is seeking a zoning map amendment, zoning text amendments, a special permit, and a certification (the "Proposed Actions") to facilitate the development of a 40-story, mixed-use residential and commercial office building at 570 Fulton Street in Downtown Brooklyn, Community District 2. The Proposed Actions would facilitate the development of a mixed-use building containing 139 dwelling units (DUs), 89,846 gross square feet (gsf) of office space, and 12,433 gsf of retail space (the "Proposed Project"). In addition to the Proposed Project, the Environmental Assessment Statement considers a "No Special Permit Scenario" that assumes development in accordance with the proposed zoning but not the bulk modifications sought under the zoning special permit. See Attachment A, "Project Description," for a detailed project description.

Project Location

BOROUGH Brooklyn	COMMUNITY DISTRICT(S) CD2	STREET ADDRESS 570 Fulton Street
TAX BLOCK(S) AND LOT(S) Block 2106/Lots 26, 35 and p/o 24		ZIP CODE 11201

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Fulton Street to the north, Rockwell Place to the east, Lafayette Avenue to the south, and Flatbush Avenue to the west.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY	ZONING SECTIONAL MAP NUMBER
DB/C6-4	16c

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 Special Permit pursuant to ZR Section 101-82 to modify: the residential rear yard requirements of ZR Sections 23-47, 23-52, and 35-53; the commercial rear yard requirement of ZR Section 33-

26; the inner court recess requirements of ZR Section 23-852; the setback requirements of ZR Section 101-223(b); and the residential tower lot coverage requirements of ZR Section 101-223(c). ;

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

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

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

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

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.): 22,504
Waterbody area (sq. ft) and type: n/a
Roads, buildings, and other paved surfaces (sq. ft.): 22,504
Other, describe (sq. ft.): n/a

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): 227,598
NUMBER OF BUILDINGS: 1
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 227,598
HEIGHT OF EACH BUILDING (ft.): 506' plus 40' bulkhead
NUMBER OF STORIES OF EACH BUILDING: 40

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: approximately 7,193 sf (B2106 L35)
The total square feet not owned or controlled by the applicant: approximately 15,301 sf (B2106 L26 and p/o L24)

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: 7,087 sq. ft. (width x length)
VOLUME OF DISTURBANCE: 120,500 cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 7,087 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.)	111,249	89,846 Office; 12,433 Retail		
Type (*e.g.,* retail, office, school)	139 units	Office and 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: 279
NUMBER OF ADDITIONAL WORKERS: 396
Provide a brief explanation of how these numbers were determined: The average household size of 2.01 for Brooklyn Community District 2, based on the 2010 U.S. Census. The following industy standard employment multipliers were used to calculate

the number of employees: 1 employee per 250 sf of office; 1 employee per 400 sf of retail; and 1 employee per 25 DUs.

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: In the No Action condition, a 20-story 103,753-gsf building would be constructed on the Development Site. Under the No Action condition, the Development Site will contain 85,209 gsf of residential space (107 DUs), and 10,844 gsf of retail space. See Attachment A, "Project Description" for more information.

9. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2021

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 24 months

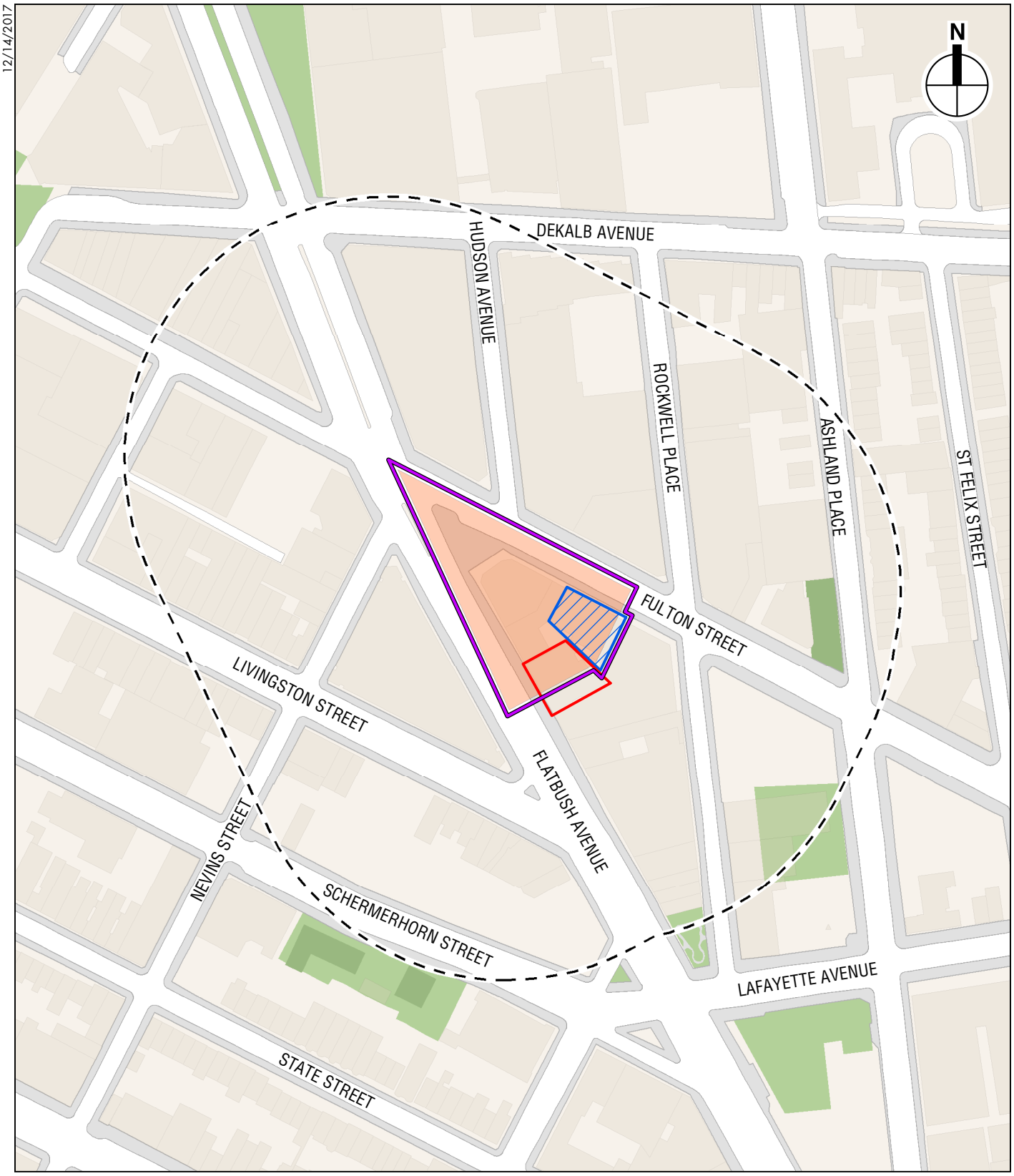
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO | IF MULTIPLE PHASES, HOW MANY?

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:

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

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

12/14/2017

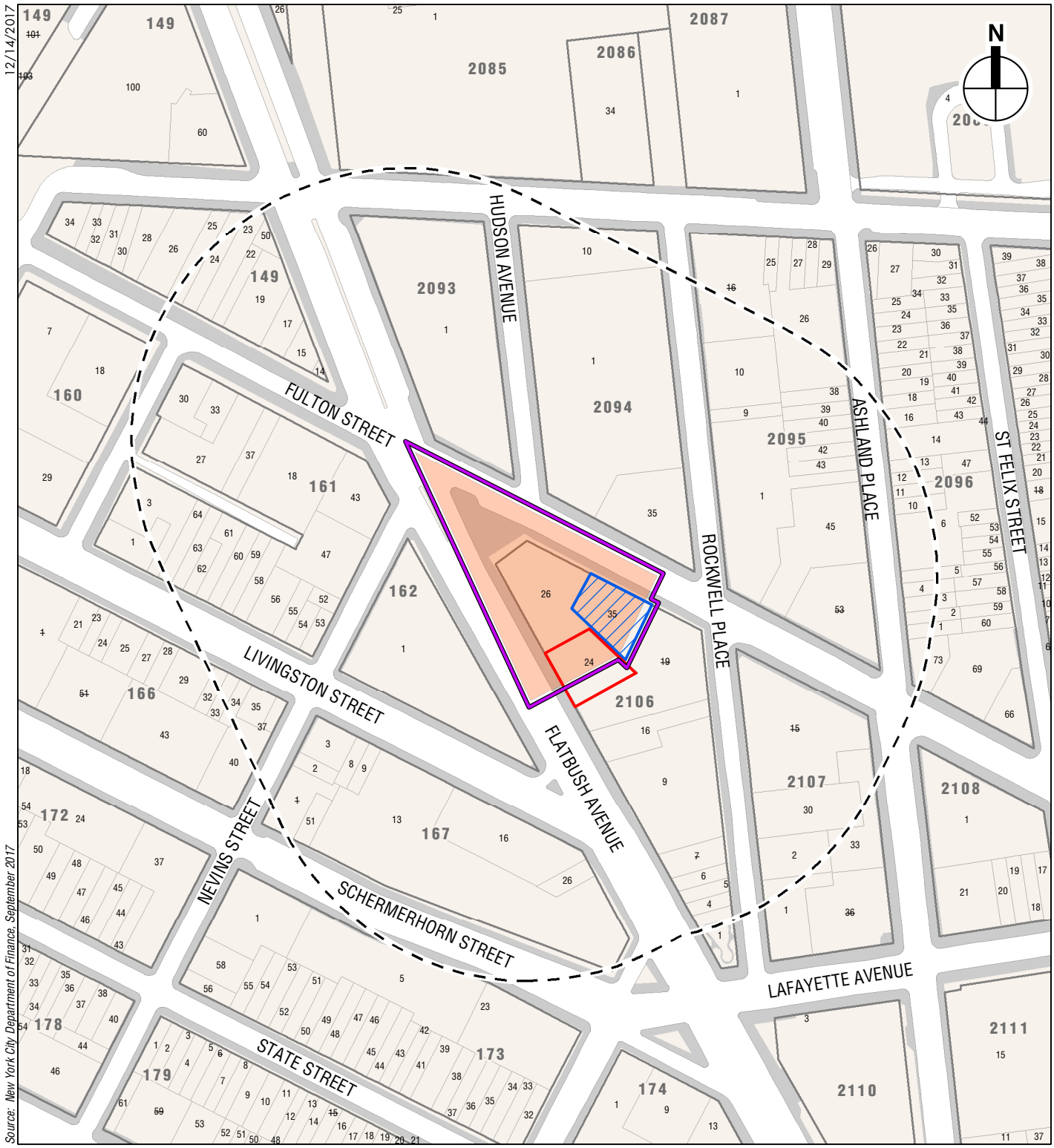


Project Area
Development Site
Potential Enlargement
Rezoning Area
Study Area (400-foot boundary)

0 200 FEET

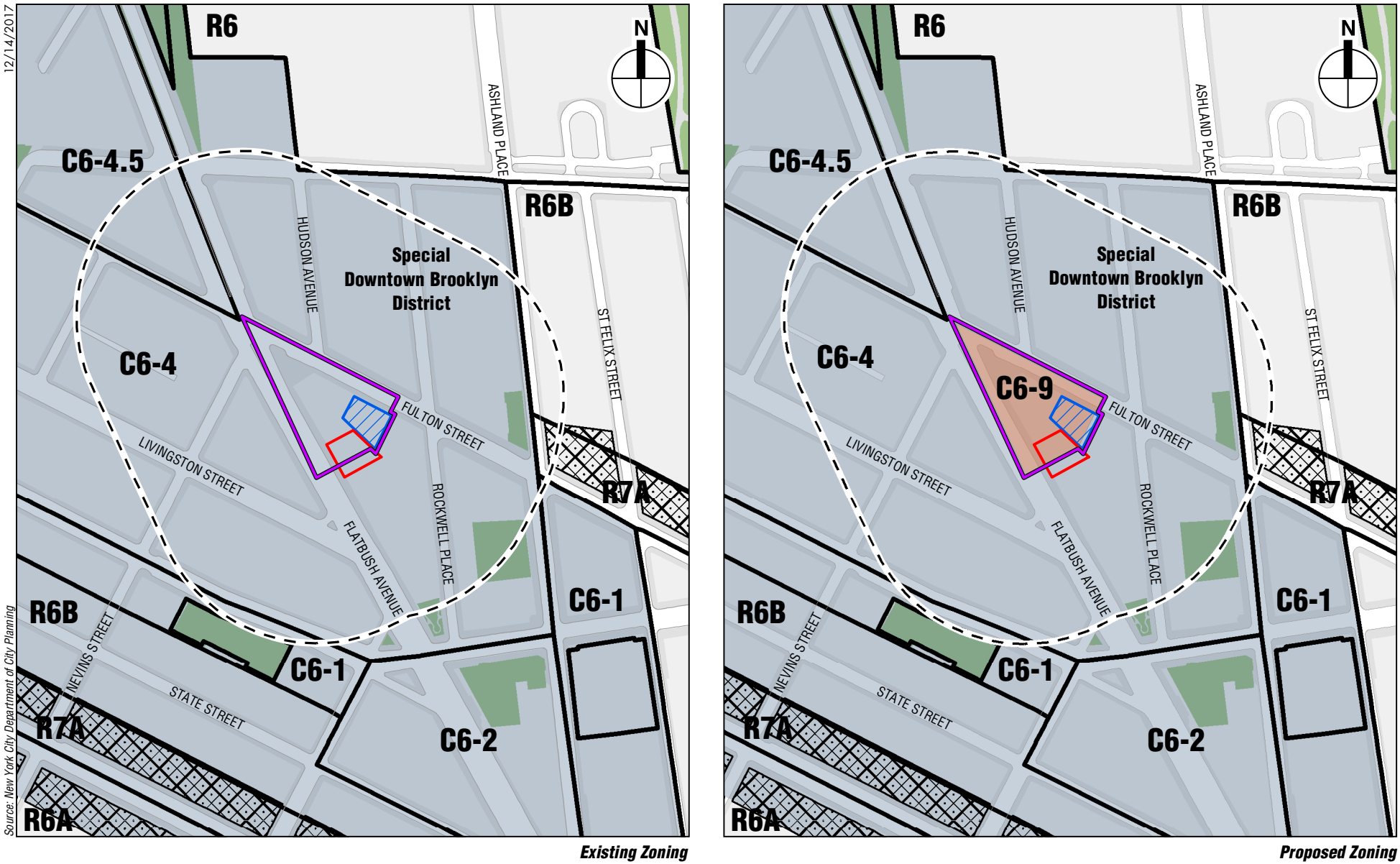
570 FULTON STREET REZONING

Project Location
Figure 1



570 FULTON STREET REZONING

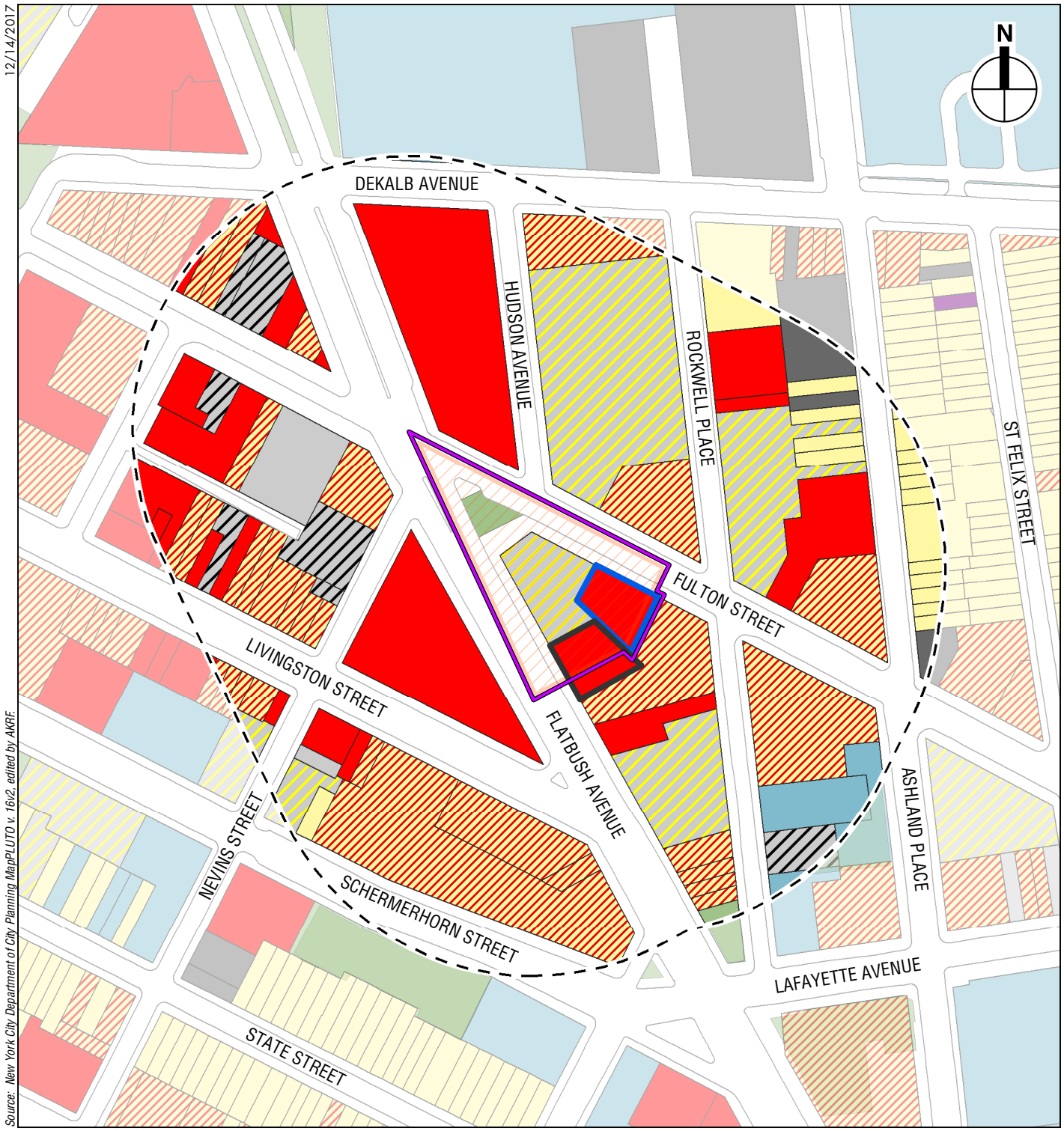
Tax Map
Figure 2



570 FULTON STREET REZONING

Existing and Proposed Zoning

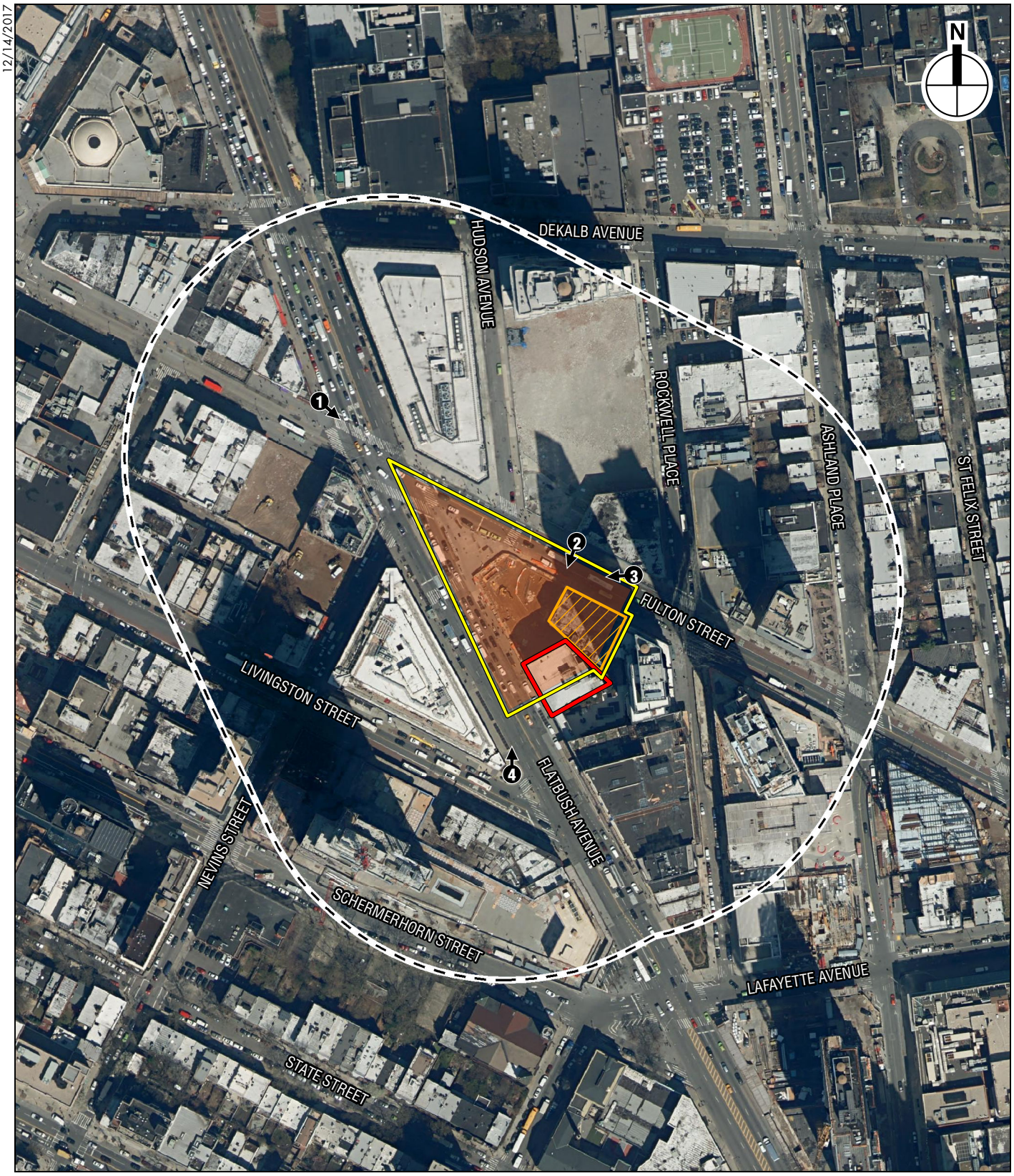
Figure 3



570 FULTON STREET REZONING

Existing Land Use
Figure 4

12/14/2017



Project Area

Development Site

Potential Enlargement

Rezoning Area

Study Area (400-foot boundary)

Photograph View Direction and Reference Number

0 200 FEET

570 FULTON STREET REZONING

Photograph Key

Figure 5



1



2

Photographs
Figure 6a



3



4

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. See Attachment A		
(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?	☐	☒

	YES	NO
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☐	☒
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☐	☒
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☐	☒
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources.		
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.		
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 F.	☐	☐
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?	☐	☒
(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?	☐	☒

	YES	NO
(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): 10,902		
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): 36,218,196		
(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 H.	☒	☐
(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?	☐	☒
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;	☒	☐

	YES	NO
Hazardous Materials; Noise?		
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary. No unmitigated significant adverse impacts would occur with respect to hazardous materials, noise, and air quality.		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☒	☐
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. See Attachment A.		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
o Construction activities lasting longer than two years?	☐	☒
o Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☒	☐
o Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☒	☐
o Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☐	☒
o The operation of several pieces of diesel equipment in a single location at peak construction?	☐	☒
o Closure of a community facility or disruption in its services?	☐	☒
o Activities within 400 feet of a historic or cultural resource?	☐	☒
o Disturbance of a site containing or adjacent to a site containing natural resources?	☐	☒
o Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☐	☒
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination.		

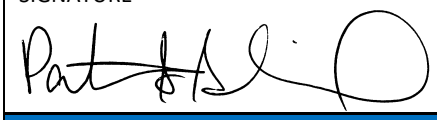
20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	DATE
Patrick S. Blanchfield - AKRF, Inc.	August 15, 2018

SIGNATURE



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

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

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

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

	Potentially Significant Adverse Impact	
IMPACT CATEGORY	**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
Deputy Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME	**DATE**
Olga Abinader	August 17, 2018

SIGNATURE

Olga Abinader

NEGATIVE DECLARATION (Use of this form is optional)

Statement of No Significant Effect

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

Reasons Supporting this Determination

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

Air Quality, Noise
An (E) designation (E-490) for noise has been incorporated into the sites affected by the proposed actions. Refer to "Determination of Significance Appendix 1: (E) Designation" for a list of the sites affected by the proposed (E) designation and applicable requirements. With these measures in place, the proposed actions would not result in significant adverse impacts related to air quality or noise.

Land Use, Zoning and Public Policy
A detailed analysis of Land Use, Zoning and Public Policy is included in this EAS. The analysis concludes that the Proposed Actions, which would facilitate the development of a new mixed use residential and commercial office building, would not generate new land uses that would be incompatible with the current land uses within the Study Area, as the Study Area currently contains mixed-use residential and commercial land uses. The analysis further concludes that there would be no significant adverse impacts related to Zoning. The Proposed Actions would facilitate an increase in commercial density that would be consistent with and complementary to the goals of the Special Downtown Brooklyn District. Additionally, the Proposed Actions would be consistent with the goals of the applicable Public Policies in the Study Area, including the Downtown Brooklyn Development Plan, the Brooklyn Center Urban Renewal Plan, and the Downtown Brooklyn Partnership - MetroTech Business Improvement District.

Shadows
A detailed analysis of Shadows generated is included in this EAS. As a result of the proposed actions, incremental shadows would fall on four sunlight-sensitive resources: Fort Greene Park, Fox Square, St. Nicholas Cathedral, and University Place. Considering the following factors: the projected duration of the incremental shadows, the percentage of incremental shadow coverage on the affected resources, the availability of other sunlit areas nearby, the effect on peak usage times, and the number of analysis days a shadow is projected to reach affected sunlight-sensitive resources, the analysis finds that the shadows cast by the proposed project would not result in significant adverse impacts.

Historic and Cultural Resources
A detailed analysis of Historic and Cultural Resources is included in this EAS. The New York City Landmarks Preservation Commission (LPC), upon consultation, determined that there were no archaeological resources of concern in the Study Area. The Study Area contains three architectural resources: the Pioneer Warehouse, the Strand Theatre, and the Fort Greene Historic District. The analysis concludes that the Proposed Actions would not result in significant adverse impacts to the architectural resources in the Study Area, as the architectural resources are located more than 90 feet from the proposed Development Site. The Proposed Actions would also not introduce significant shadows over a historic landscape or an architectural resource with sunlight-sensitive features.

Urban Design
A detailed analysis of Urban Design and Visual resources is included in this EAS. The analysis concludes that the proposed actions would not result in significant adverse impacts related to urban design or visual resources. The Proposed Actions would facilitate a mixed-use building that would be consistent in height with the range of building heights in the Study Area. No significant visual resources or view corridors were identified at the proposed Development Site or in the Study Area, and the Proposed Actions would not result in substantial changes to the street-scape of the neighborhood, affect the pedestrian experience, noticeably change the scale of buildings, or result in substantial changes to the built environment of a historic district. The Proposed Actions would result in development consistent with the character of Urban Design in the Study Area.

Hazardous Materials
A detailed analysis of Hazardous Materials is included in this EAS. The New York City Department of Environmental Protection (DEP), in a letter dated May 10, 2018, approved a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) prepared by the Applicant. The analysis concludes that with the measures identified in the RAP and CHASP included as part of the Proposed Actions, no significant adverse impacts related to hazardous materials would occur.

Transportation
A detailed analysis of Transportation-Pedestrian traffic was included in this EAS. The analysis conducted shows that the Proposed Actions would not generate incremental vehicular or transit trips that meet the threshold for detailed analysis, or for an analysis of parking supply and utilization, per the CEQR Technical Manual, and would not result in significant adverse impacts to these categories. The detailed analysis on Pedestrian traffic concludes that the pedestrian volumes generated as a result of the Proposed Actions would not result in a significant adverse impact to the levels of service for the sidewalks in the Study Area. Additionally and separately from the Proposed Actions, the owner of the adjacent property at 1 Flatbush Avenue (Block 2106, Lot 26) was granted a certification for the waiver of subway stair relocation requirements and would undertake, at its own cost and expense, certain improvements to the stairways that New York City Transit, (NYCT) determined to be warranted in connection with the development of 1 Flatbush Avenue.

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA)

TITLE	LEAD AGENCY
Deputy Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME	DATE
Olga Abinader	08/17/18
SIGNATURE	

TITLE Chair, City Planning Commission	
NAME Marisa Lago	DATE 08/20/2018
SIGNATURE	

Attachment A: Project Description

A. INTRODUCTION

The applicant, 570 Fulton Street Property LLC, is seeking a zoning map amendment, zoning text amendments, a special permit, and a certification (the "Proposed Actions") to facilitate the development of a 40-story, mixed-use residential and commercial office building at 570 Fulton Street in Downtown Brooklyn, Community District 2. The Proposed Actions would facilitate the development of a mixed-use building containing 139 dwelling units (DUs), 89,846 gross square feet (gsf) of office space, and 12,433 gsf of retail space (the "Proposed Project"). The Proposed Actions are subject to Uniform Land Use Review Procedure (ULURP) and New York City Planning Commission (CPC) approval.

B. PROJECT DESCRIPTION

DESCRIPTION OF THE PROPOSED PROJECT

The Proposed Project is a 40-story, 227,598-gsf mixed-use building containing 111,249 gsf of residential space (139 DUs assuming an average DU size of 800 sf), 89,846 gsf of office space, and 12,433 gsf of retail space. The Development Site is located at 570 Fulton Street (Block 2106, Lot 35, and p/o Lot 26). The Proposed Project would be facilitated by a zoning map amendment affecting the Development Site and a larger portion of Block 2106, which includes p/o Lot 24 (the "Rezoning Area"). The Development Site and the Rezoning Area compose the Project Area (see **Figure A-1**).

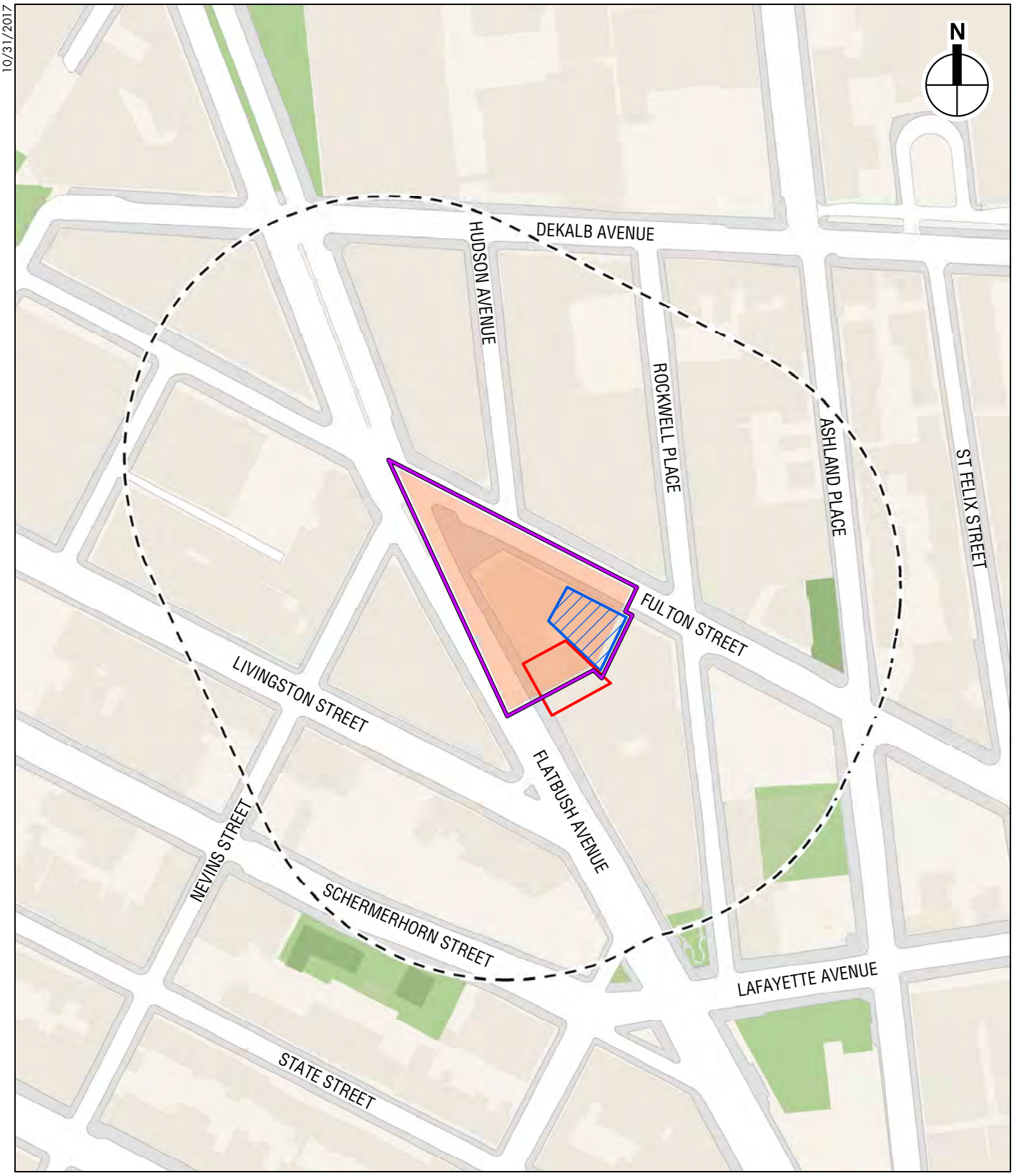
The Proposed Project would include a cellar level, two levels of retail space (on the ground floor and second floor), and office space on floors 3 through 16. Mechanical space would occupy floor 17. Residential space would occupy floors 18 through 40, with residential amenity space located on floor 18. No parking would be provided. All entrances would be located on Fulton Street. The Proposed Project would rise 10 stories along Fulton Street, set back approximately 10 feet and rise to 40 stories (see **Figure A-2**). The Proposed Project would be completed and in operation by 2021.

Lot 26 is currently under construction with a 19-story mixed-use building that will contain 183 DUs and 19,140 sf of retail space (1 Flatbush Avenue). Lot 35 is currently occupied with a three-story commercial building containing approximately 26,200 gsf of floor area, including approximately 7,000 gsf of retail space and 19,196 gsf of office space. The existing commercial building on Lot 35 would be demolished in order to construct the Proposed Project. Lot 24 is currently developed with five-story, 30,000-gsf of commercial building containing 7,540 gsf of retail space and 22,460 gsf of office space.

ACTIONS NECESSARY TO FACILITATE THE PROPOSED PROJECT

The Proposed Project requires the following discretionary land use approvals:

10/31/2017

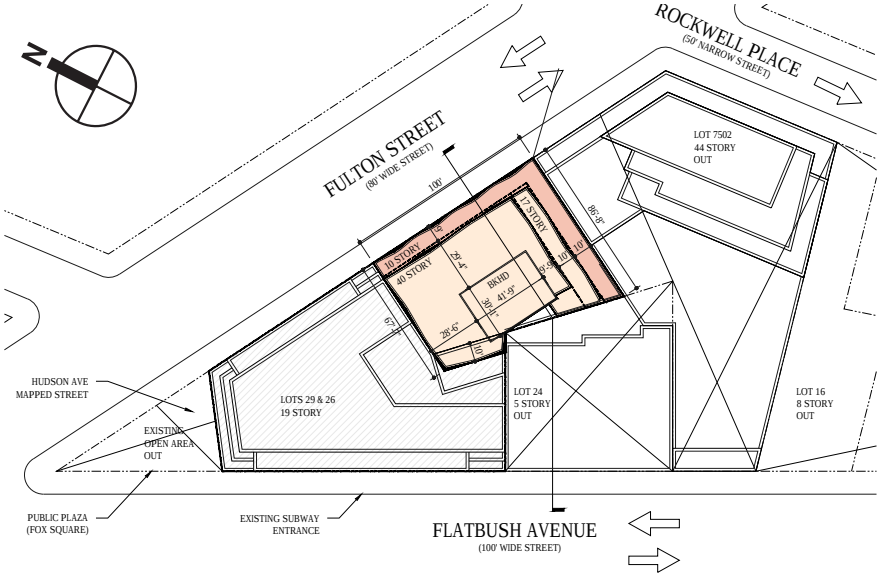


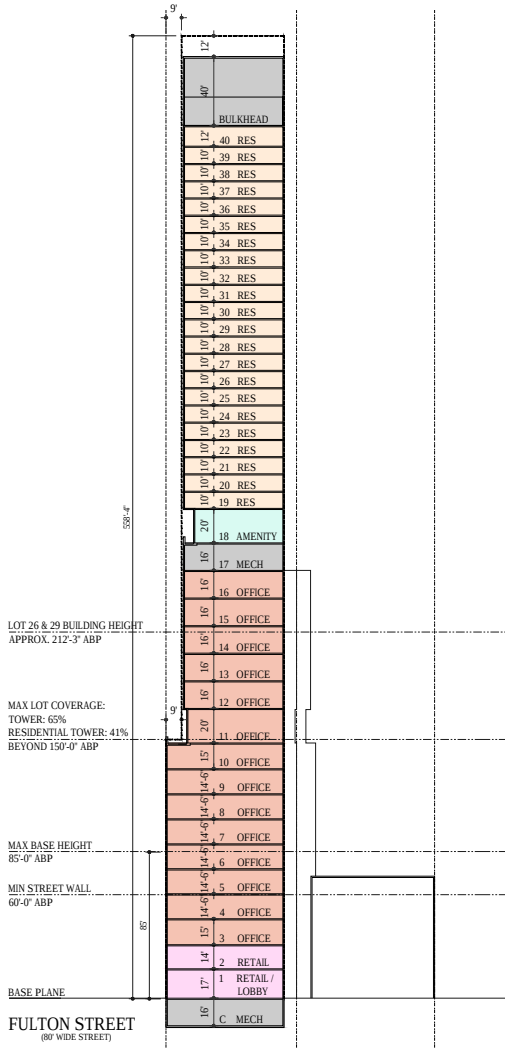
Project Area
Development Site
Potential Enlargement
Rezoning Area
Study Area (400-foot boundary)

0 200 FEET

570 FULTON STREET REZONING

Project Location
Figure A-1





1 SECTION
SCALE: 1"=50'

Source: *Hill West Architects*

With Action Site Plan and Section

570 FULTON STREET REZONING

Figure A-2

ZONING MAP AMENDMENT

The Development Site is located within the Special Downtown Brooklyn District (DB) and within an underlying C6-4 district. The Proposed Project requires a zoning map amendment to change the underlying C6-4 district to a C6-9 district. The existing C6-4 district allows residential, community facility, and commercial uses constructed to a floor area ratio (FAR) of 12. The proposed C6-9 district would allow residential uses to a FAR of 12; however, pursuant to a zoning text amendment discussed below, commercial and community facility uses would have a FAR of 18.

ZONING TEXT AMENDMENTS

The Proposed Project requires the following zoning text amendments to the New York City Zoning Resolution (ZR) to:

- establish the maximum permitted FAR for commercial or community facility uses as 18.0 in C6-9 districts within the DB (ZR Sec. 101-21);
- make the DB's height and setback regulations applicable to C6-9 districts (ZR Sec. 101-222);
- make the DB's tower regulations applicable to C6-9 districts (ZR Sec. 101-223); and
- create a new special permit to allow the CPC to permit modifications to the bulk requirements, other than FAR, applicable to buildings in C6-9 districts within the DB (ZR Sec. 101-82).

SPECIAL PERMIT

The applicant seeks approval of a special permit pursuant to ZR Section 101-82 to modify:

- the residential rear yard requirement of ZR Sections 23-47, 23-52, and 35-53;
- the commercial rear yard requirement of ZR Section 33-26;
- the inner court requirements of ZR Section 23-852;
- the setback requirement of ZR Section 101-223(b); and
- the residential tower lot coverage requirements of ZR Section 101-223(c).

CERTIFICATION

1 Flatbush Avenue (Block 2106, Lot 26), which is part of the zoning lot and adjacent to the Nevins Street subway entrances, previously obtained a waiver of the subway stair relocation requirements (ZR 101-43 and 37-40) pursuant to ZR 37-44. The applicant is seeking a waiver of the provisions of ZR Section 101-43 by joint certification of New York City Transit (NYCT) and the CPC Chairperson pursuant to ZR Section 37-44.

C. PURPOSE AND NEED

The Proposed Actions would facilitate the development of a mixed-use residential and commercial office building and would support the City's effort to increase the amount of office development in Downtown Brooklyn. In 2004, the Downtown Brooklyn Development Plan paved the way for residential and commercial development, but most of the development that has occurred since 2004 has been residential, cultural facility, and retail development. The requested zoning map amendment and text amendment to establish a maximum FAR of 18 in the C6-9 district within the DB would allow the density necessary to provide 14 floors of office space above two levels of retail space. The requested zoning text amendments and special permit would allow for

modifications of setback, rear yard, and inner court requirements. The requested subway stair relocation waiver would allow the Proposed Project to incorporate floor area from 1 Flatbush Avenue generated by the rezoning. In addition, the residential component of the Proposed Project would set aside 30 percent of DUs in the new building as needed affordable housing and would advance the goals of *Housing New York: 2.0*, the City's updated and expanded housing plan, by providing housing opportunities for a range of New Yorkers.

D. FRAMEWORK FOR ANALYSIS

This document has been prepared in accordance with the guidance of the 2014 *City Environmental Quality Review (CEQR) Technical Manual*. The Proposed Project is expected to be completed and fully operational by 2021, which is the Proposed Project's build year for environmental analysis purposes. For each technical area, the analysis includes a description of existing conditions and an assessment of conditions in the Future with the Proposed Project (the "With Action" condition) and the Future without the Proposed Project (the "No Action" condition).

The Proposed Project would be developed in accordance with the zoning actions discussed above. The zoning special permit would allow modifications to setback, inner court, and rear yard requirements, which are not binding. In the unlikely event the applicant does not act on the special permit and development occurs as-of-right in accordance with the DB and the proposed underlying C6-9 zoning district regulations, a different building form could result. In order to account for this, the Environmental Assessment Statement (EAS) includes a scenario that assumes none of the bulk waivers sought under the special permit (the "No Special Permit Scenario"). The No Special Permit Scenario is described in more detail below.

EXISTING CONDITIONS

The analysis framework begins with an assessment of existing conditions on the Development Site and surrounding neighborhood because these can be most directly measured and observed. The assessment of existing conditions does not represent the condition against which the Proposed Project is measured, but generally serves as a starting point for the projection of With Action and No Action conditions and the analysis of project impacts.

The adjacent lot (Lot 26) is currently under construction with a new 19-story mixed-use building, which will contain 183 DUs and 19,140 sf of commercial spaces (1 Flatbush Avenue). The owner of the lot would provide a light and air easement for the benefit of DUs in the Proposed Project and would also grant an easement to allow the Proposed Project to cantilever over a small portion of Lot 26. The Development Site (Lot 35) is currently occupied with a three-story commercial building containing 26,388 gsf of floor area, including 7,192 gsf of retail space and 19,196 gsf of office space. Lot 24 is currently developed with five-story, 30,000-gsf of commercial building containing 7,540 gsf of retail space and 22,460 gsf of office space.

FUTURE WITHOUT THE PROPOSED PROJECT

Absent the Proposed Actions, it is anticipated that the Development Site would be occupied with a 20-story, 103,753-gsf building constructed as-of-right under the existing C6-4 zoning. Under the No Action condition, the Development Site will be merged as a single zoning lot with 1 Flatbush Avenue and will contain 85,209 gsf of residential space (107 DUs), 10,844 gsf of retail space, and 7,700 gsf of mechanical space. The maximum permitted zoning floor area for the merged zoning lot under the C6-4 district is 229,956 zoning square feet (zsf), 142,498 zsf of which will be utilized

in the 1 Flatbush Avenue building, leaving a maximum of 87,458 zsf available to be utilized on the Development Site. The proposed total floor area is approximately 87,456 zsf (see **Figure A-3**). An average DU size of 800 sf is assumed under the No Action condition.

FUTURE WITH THE PROPOSED PROJECT

Under the With Action condition, the Proposed Project described above would occupy the Development Site. The Development Site would be merged as a single zoning lot with 1 Flatbush Avenue and would utilize development rights from 1 Flatbush Avenue generated by the rezoning. The Proposed Project would also cantilever approximately 10 feet above a one-story portion of the 1 Flatbush Avenue building beginning at the third floor, and is the only projected development expected under the Proposed Actions. It should be noted that an approximately 3,319-sf portion of Lot 24 would be rezoned under the With Action condition, providing for approximately 19,980 sf of commercial floor area (approximately 2.6 FAR based on the 7,540 sf lot area of Lot 24). Given the additional floor area under the rezoning, a potential commercial enlargement of up to three stories is possible, but not likely. Market conditions will not support a comparatively small (approximately 19,980 sf) addition to the existing office building on Lot 24 by the Proposed Project's build year given Lot 24's proximity to the proposed commercial space on the Development Site, which would have 89,846 sf of new office space in the Proposed Project. For these reasons, the commercial enlargement on Lot 24 is characterized as a potential enlargement in the EAS and only assessed for site-specific technical areas under CEQR (see **Figure A-1**).

As shown in **Table A-1**, the incremental development expected as a result of the Proposed Actions is 32 DUs, 89,846 gsf of office space, and 12,433 gsf of retail space.

Table A-1
Reasonable Worst Case Development Scenario for Analysis

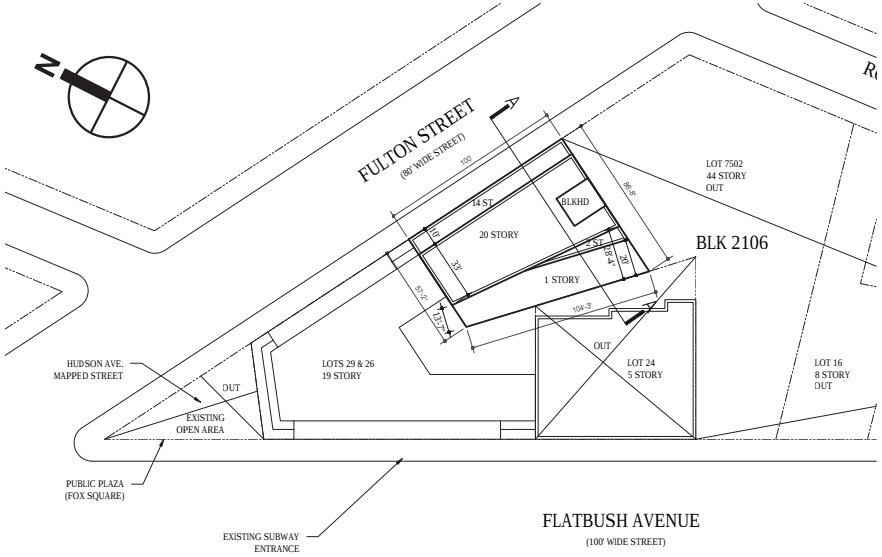
Program	No Action Condition	With Action Condition	Increment
Residential (gsf)	85,209	111,249	26,040
DUs	107	139	32
Office (gsf)	0	89,846	89,846
Retail (gsf)	10,844	12,433	1,589
Total (gsf)[1]	**103,753**	**227,598**	**123,845**

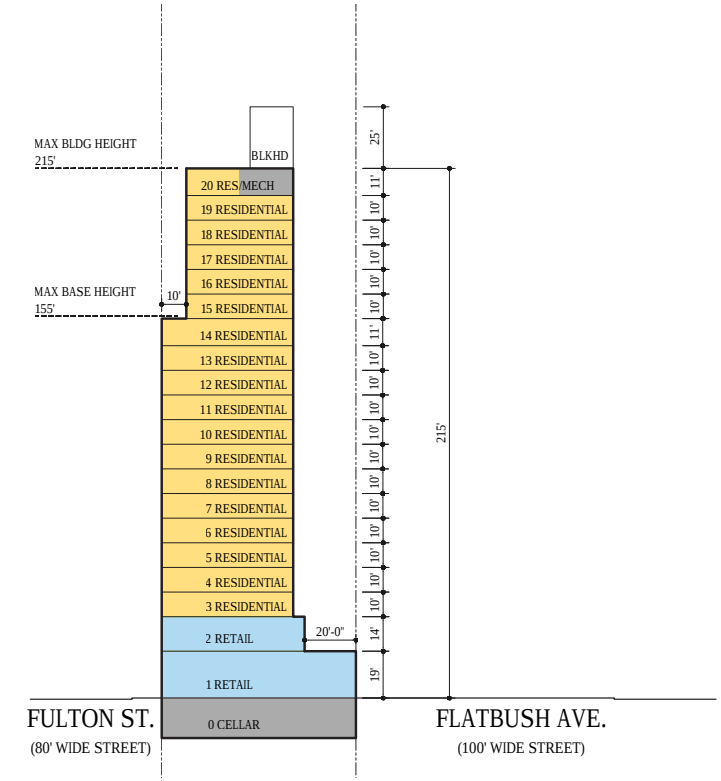
Note:
Total includes approximately 7,700 gsf of mechanical space in the No Action condition and 14,070 gsf of mechanical space in the With Action condition.
Source: Hill West Architects, 2017.

NO SPECIAL PERMIT SCENARIO

In addition to assessing the Proposed Project, the EAS considers a No Special Permit Scenario in which the waivers sought under the special permit are not implemented and development occurs as-of-right in accordance with the DB and the proposed underlying C6-9 zoning district regulations. Under such a scenario, the Development Site would be occupied with a taller building with a maximum height of approximately 54 stories (655 feet excluding bulkhead) (see **Figure A-4**). The building would accommodate the same bulk as the Proposed Project, but it would be accommodated in a taller, more slender building with smaller floorplates.

The building constructed under the No Special Permit Scenario would rise to six stories (85 feet) along Fulton Street, set back 20 feet and rise to a maximum height of 655 feet. The floor plates above the sixth story setback would be comparatively smaller than the Proposed Project, with

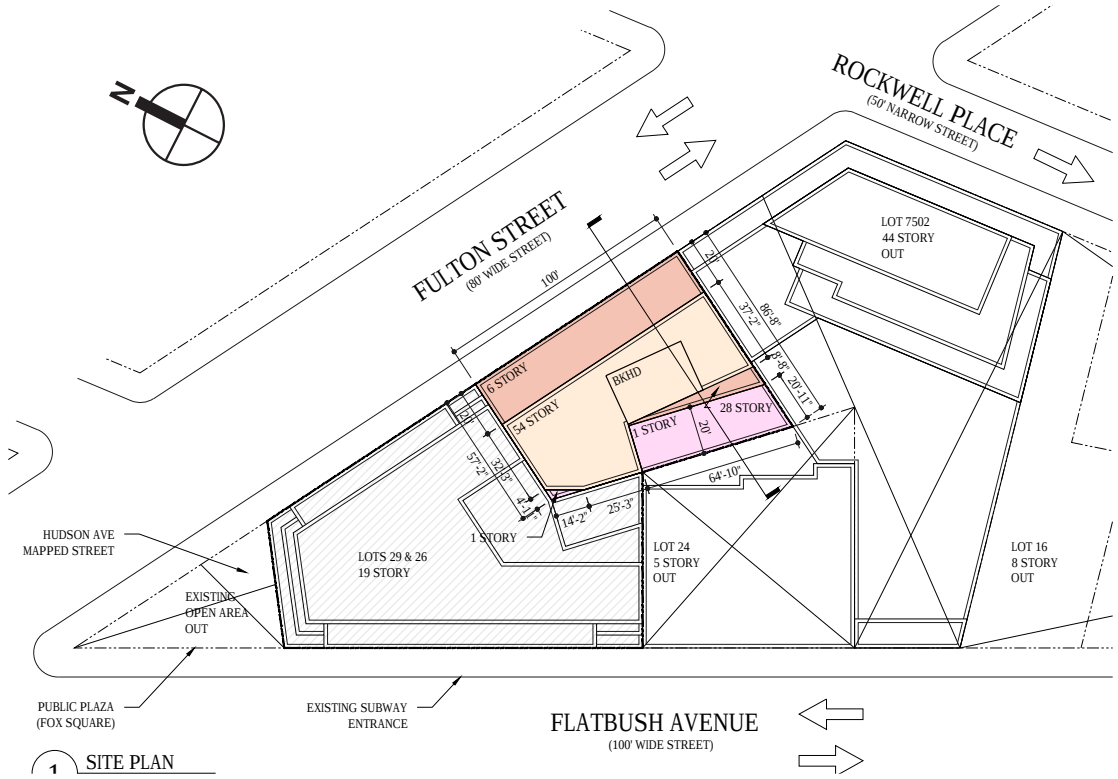


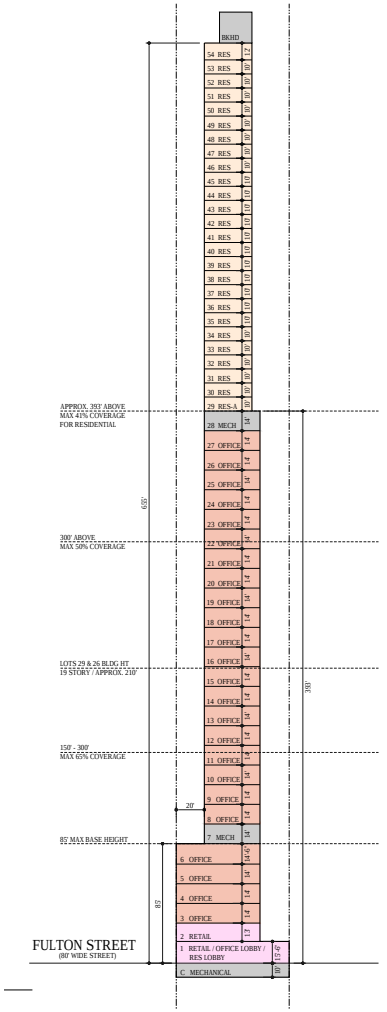


1 SITE SECTION
SCALE: 1'=50'

Source: Hill West Architects

No Action Site Plan and Section





Source: *Hill West Architects*

No Special Permit Scenario
Site Plan and Section

570 FULTON STREET REZONING

Figure A-4

floorplate sizes of 3,920 sf from floors 7 through 28 and floorplate sizes of 3,657 sf from floors 29 through 54. In contrast, the Proposed Project would rise 10 stories (148 feet) along Fulton Street, set back 10 feet and rise to a maximum height of 40 stories (506 feet excluding 40-foot bulkhead). After the 10-foot setback at the 10th story, the floorplates associated with the Proposed Project would range between 4,692 sf and 5,649 sf (the only exception would be the floorplate for the residential amenity space on floor 18).

As shown in **Figure A-4**, the building under the No Special Permit Scenario would provide the required 20-foot commercial rear yard, the 30-foot residential rear yard, and an inner court that complies with the requirements for R10-equivalent districts. The development under the No Special Permit Scenario would be constructed to the same allowable density (18 FAR) and would include the same amount of residential, office and retail space as the Proposed Project. Because there is no change in program, the No Special Permit Scenario is only assessed for site-specific potential effects related to shadows, urban design and visual resources, historic and cultural resources, and air quality.

E. SCREENING ANALYSES

All analyses were performed in accordance with the guidance contained in the *CEQR Technical Manual*.

LAND USE, ZONING, AND PUBLIC POLICY

See Attachment B, "Land Use, Zoning, and Public Policy."

SHADOWS

See Attachment C, "Shadows."

HISTORIC AND CULTURAL RESOURCES

See Attachment D, "Historic and Cultural Resources."

URBAN DESIGN AND VISUAL RESOURCES

See Attachment E, "Urban Design and Visual Resources."

HAZARDOUS MATERIALS

See Attachment F, "Hazardous Materials."

TRANSPORTATION

See Attachment G, "Transportation."

AIR QUALITY

See Attachment H, "Air Quality."

NOISE

See Attachment I, "Noise."

NEIGHBORHOOD CHARACTER

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

CONSTRUCTION

As discussed below, the Proposed Project would not result in significant adverse construction impacts. The construction activities associated with the development of the Proposed Project would be expected to result in conditions typical of construction sites in New York City. Construction activity at the Development Site would not exceed 24 months. The construction phases (i.e. demolition, excavation, foundation work, and erection of superstructure) are described below.

> Months 1–6: This phase of construction typically includes demolition, excavation, and foundation work (including foundation work for the cellar-level parking garage).
>
> Months 7–12: The second phase of construction activities typically involves erection of the superstructure, and façade and roof construction. This phase also includes assembly of exterior walls and cladding.
>
> Months 13–24: The final phase of construction includes interior fit-outs, installation of heating, ventilation, and air conditioning (HVAC) equipment and ductwork; installation of elevators and utilities; and work on interior walls and finishes. It should be noted that since much of this stage of construction would occur when the building is fully enclosed, disruption to the surrounding neighborhood would be minimized.

During this time, construction activities for the Proposed Project would normally take place Monday through Friday, although the delivery or installation of certain critical equipment could occur on weekend days. The permitted hours of construction are regulated by the New York City Department of Buildings (DOB) and apply to all areas of the City. In accordance with those regulations, work would begin at 7:00 AM on weekdays, although some workers would arrive and begin to prepare work areas between 6:00 AM and 7:00 AM. Maintenance and Protection of Traffic (MPT) plans would be developed for any temporary curb-lane and sidewalk closures. Approval of these plans and implementation of the closures would be coordinated with the New York City Department of Transportation (DOT)'s Office of Construction Mitigation and Coordination (OCMC). The construction of the Proposed Project would comply with applicable control measures for construction noise. Construction noise is regulated by the New York City Noise Control Code and by the U.S. Environmental Protection Agency (EPA) noise emission standards for construction equipment. These federal and local requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions

standards. Except under exceptional circumstances, construction activities must be limited to weekdays between the hours of 7:00 AM and 6:00 PM. Construction material must also be handled and transported in such a manner as to not create unnecessary noise. Therefore, no significant adverse noise impacts are expected to occur as a result of the construction.

Dust emissions can occur from hauling debris and traffic over unpaved areas. All appropriate fugitive dust control measures would be employed to reduce the generation and spread of dust, and to ensure that the New York City Air Pollution Control Code regulating construction-related dust emissions is followed. ✷

Attachment B: Land Use, Zoning, and Public Policy

A. INTRODUCTION

As described in Attachment A, "Project Description," the applicant, 570 Fulton Street Property LLC, is seeking a zoning map amendment, zoning text amendments, a special permit, and a certification (the "Proposed Actions") to facilitate the development of a 40-story, mixed-use residential and commercial office building at 570 Fulton Street in Downtown Brooklyn, Community District 2.

B. METHODOLOGY

According to the 2014 *City Environmental Quality Review* (*CEQR) Technical Manual*, a preliminary land use assessment, which includes a basic description of existing and future land uses and public policy, should be provided for all projects that would affect land use or public policy, regardless of a project's anticipated effects. Accordingly, a preliminary analysis has been prepared that describes existing and anticipated future conditions for the 2021 analysis year, assesses the nature of any changes on these conditions that would be created by the Proposed Project, and identifies those changes, if any, that could be significant or adverse.

The study area for this analysis of land use, zoning, and public policy encompasses the area within 400 feet of the Development Site. As shown in **Figure B-1**, the 400-foot study area roughly extends north to DeKalb Avenue, east to Ashland Place, south to Lafayette Avenue, and west past Nevins Street.

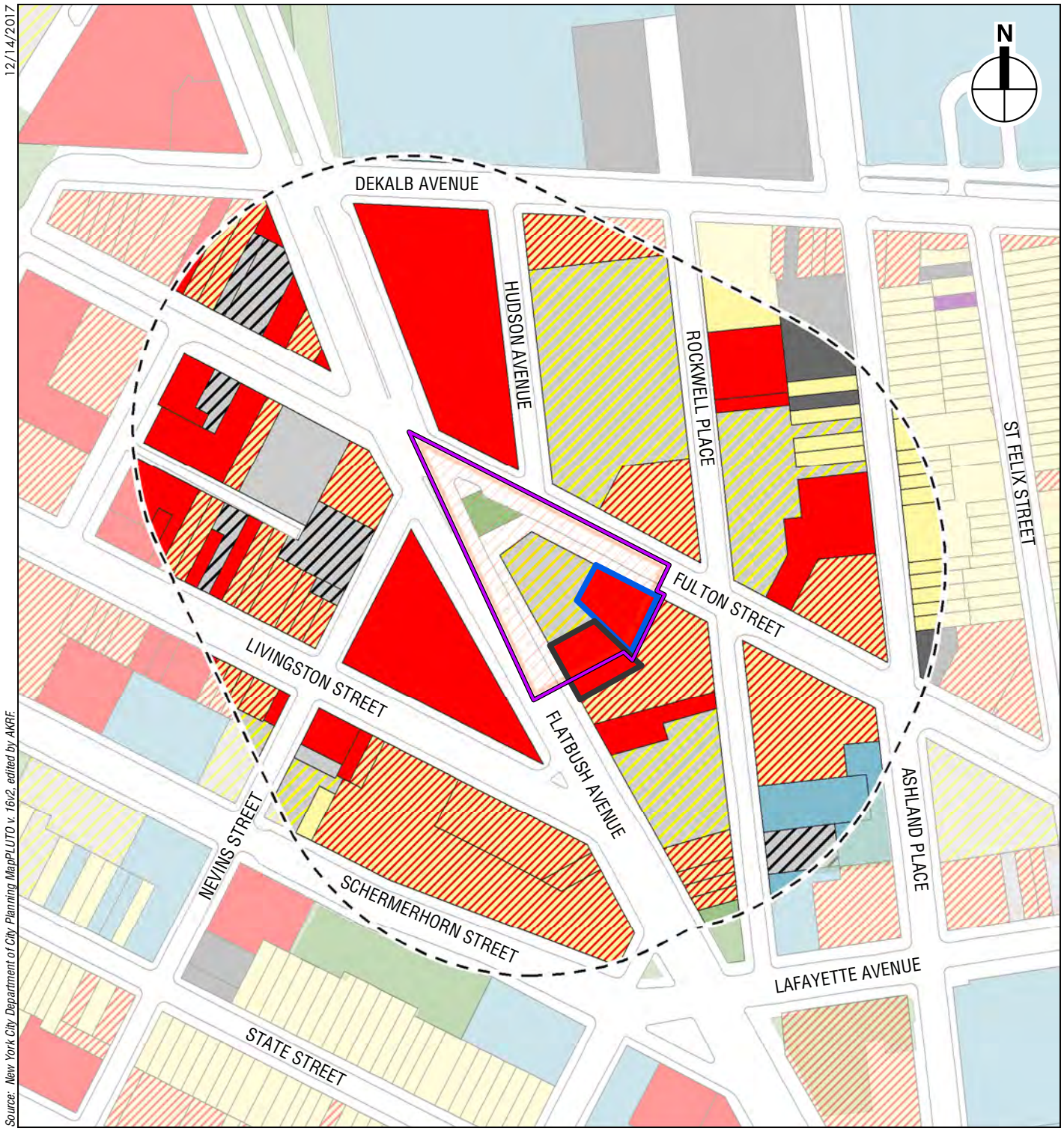
C. EXISTING CONDITIONS

LAND USE

DEVELOPMENT SITE AND PROJECT AREA

The Development Site is located at 570 Fulton Street between Hudson Avenue and Rockwell Place. The Development Site is currently occupied with a three-story commercial building containing ground-floor retail space and office space above.

The Proposed Project would be facilitated by a zoning map amendment affecting the Development Site and a larger Rezoning Area, which includes Block 2106, Lot 26, and p/o Lot 24 (the "Project Area"). Lot 26 is currently under construction with a 19-story mixed-use building that will contain 183 dwelling units (DUs) and 19,140 square feet (sf) of retail space (1 Flatbush Avenue). As discussed in Attachment A, "Project Description," the owner of this lot would provide an easement to the applicant to allow construction on a portion of Lot 26. A five-story office building with ground-floor retail space occupies Lot 24, which has frontage along Flatbush Avenue.



570 FULTON STREET REZONING

Land Use Study Area
Figure B-1

STUDY AREA

As shown in **Figure B-1**, the study area extends north to DeKalb Avenue, east to Ashland Place, south to Schermerhorn Street, and west to Hanover Place. The study area is characterized primarily by residential, commercial, and mixed residential and commercial buildings; however, institutional buildings, and open space are also found in the study area. Several mixed-use residential developments in the study area are under construction.

East of the Project Area on the subject block is the recently completed 44-story residential and commercial development at 66 Rockwell Place. The 10-story building at 41-53 Flatbush Avenue is currently being converted from a storage facility to office space. The Rockwell Place Bears Community Garden is located at the southern end of the subject block. East of Rockwell Place is the nearly completed Ashland development at 300 Ashland Place. The Ashland includes approximately 379 DUs, 20,000 sf of retail space, and community facility space anticipated to include a dance studio, cinema, and cultural library. Approximately 0.34 acres of public open space is anticipated to be developed on the site. A 28-story residential tower with a commercial ground floor is located on the northwest corner of Ashland Place and Fulton Street. Although located outside of the study area, the former Williamsburgh Savings Bank Tower, now known as One Hanson Place, is notable. The development contains 179 DUs and commercial space.

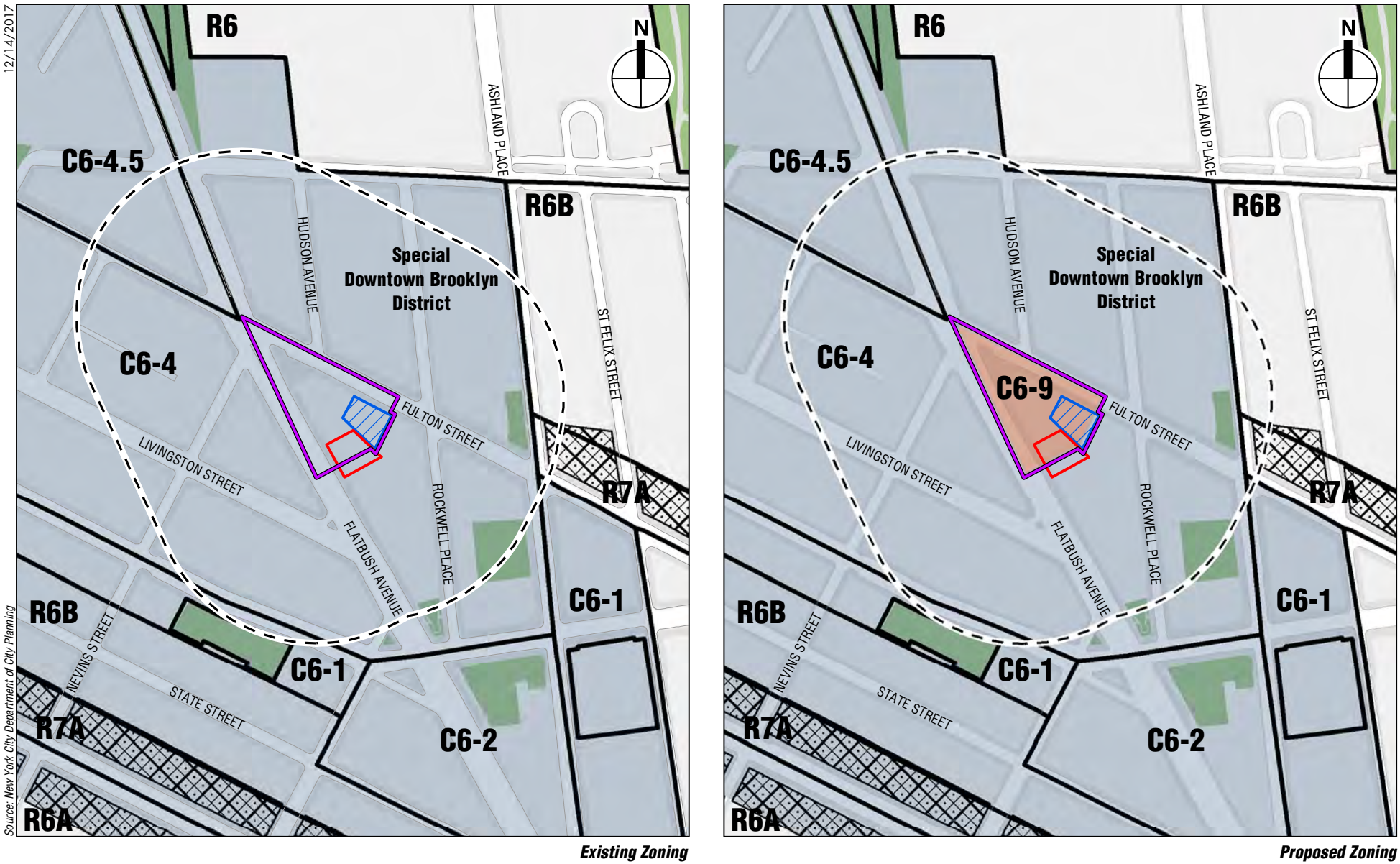
In recent years, a number of new cultural facilities have been developed within the Downtown Brooklyn Cultural District. Within the study area, these include the Theatre for a New Audience at 262 Ashland Place (Block 2107, Lots 30 and 33) and the Mark Morris Dance Center (Block 2107, Lot 1) at Lafayette Avenue and Rockwell Place. The triangular-shaped parcel on the south side of Flatbush Avenue between Nevins and Livingston Streets contains 246,371 gsf of retail and office space. The area west of Nevins Street contains smaller residential buildings, some with ground-floor retail space, generally between three and four stories in height. A hotel is located at the northwest corner of Nevins and Livingston Streets.

ZONING

DEVELOPMENT SITE AND PROJECT AREA

As shown in **Figure B-2**, the Development Site and Project Area are located within a C6-4 zoning district, within the Special Downtown Brooklyn District (DB). C6-4 districts are high-density commercial districts. These districts typically include high-rise mixed-use buildings, such as those housing corporate headquarters, large hotels, department stores, entertainment facilities, and residential towers. C6-4 districts permit a maximum floor area ratio (FAR) of 10.0 for commercial, residential, and community facility uses, with up to 12.0 FAR permitted with a public plaza or the provision of affordable housing through the Inclusionary Housing (IH) program. In R10 equivalent districts, the residential floor area can be increased by 3.5 sf for every 1 sf of affordable housing provided pursuant to the IH program, up to a maximum bonus of 2.0 FAR.

The Development Site is also located within the DB. Neither the Development Site nor the Project Area are located within either of the two DB subdistricts—Atlantic Avenue and Fulton Mall. The DB has flexible height and setback regulations for a range of moderate- to high-density residential and commercial zoning districts to facilitate development on the small, irregularly shaped lots typical of Downtown Brooklyn. Higher-density zoning districts, such as the C6-4 district in which the Development Site is located, allow towers-on-a-base without height limits or Quality Housing Program buildings with height limits. A zoning text amendment approved in December 2012 reduced the minimum parking requirements for new residential developments within the DB from 40 percent



570 FULTON STREET REZONING

Existing and Proposed Zoning

Figure B-2

of new market-rate DUs to 20 percent of new market-rate DUs to better reflect actual parking demand in Downtown Brooklyn, which features some of the most robust transit access in the City.

STUDY AREA

Most of the study area is located within the C6-4 zoning district and within the DB. The C6-4 and DB are described above. West of the other intersection of Fulton Street and Flatbush Avenue, a C6-4.5 district is mapped. Small portions of the study area south of Schermerhorn Street and east of Ashland Place are located within a C6-1 district. Portions of the study area located east of Ashland Place and north of Fulton Street are located within R7A/C2-3 and R6B districts and are outside the DB (see **Figure B-2** and **Table B-1)**.

Table B-1
Existing Zoning Districts in the Study Area

Zoning District	Maximum FAR[1]	Uses/Zone Type
Commercial Districts		
C2-4	2.0 commercial uses[1] Follows bulk residential and community facility regulations of mapped residential district	Commercial overlay mapped within residential districts; includes local shopping and services.
C6-1	0.87–3.44 residential uses[2] 6.0 commercial uses[3] 6.5 community facility uses[3]	Medium- to high-density in central business commercial districts.
C6-4	10.0 residential uses[5] 10.0 commercial uses[3] 10.0 community facility uses	Medium- to high-density in central business commercial districts.
C6-4.5[4]	10.0 residential uses 12.0 commercial uses 12.0 community facility uses	Medium- to high-density in central business commercial districts.
Residential Districts		
R6B	2.0 residential uses 2.2 with IH	Traditional row house districts with typically four-story attached buildings.
R7A	4.0 residential uses 4.0 community facility uses	Contextual residential district, medium-density housing, low-rise buildings with greater lot coverage.

Notes:
[1] Within R6-R10 (1.0 commercial within R1-R5).
[2] 4.0 FAR permitted on wide streets outside the Manhattan Core under the Quality Housing Program.
[3] Up to 20 percent increase for a public plaza bonus.
[4] Mapped only within Special Districts and have unique FAR and bonus rules; residential buildings allowed 12 FAR with plaza bonus or Inclusionary Housing.
[5] 2.0 FAR bonus with the IH program.
Source: *New York City Zoning Resolution.*

The C6-4.5 district was mapped over the Downtown Brooklyn Core Area, which is the area south of MetroTech. The C6-4.5 allows an FAR of 12 for commercial and community facility buildings. Residential buildings would be limited to an FAR of 10 but could achieve an FAR of 12 through the IH program.

C6-1 commercial districts allow medium- to high-density commercial districts with such uses as large hotels, office buildings, department stores, and entertainment facilities. The maximum FAR for commercial uses is 6.0. The permitted FAR for residential uses is 3.44 under the DB, with up to 4.0 FAR on wide streets outside the Manhattan core under the Quality Housing Program and up to 5.01

FAR for elderly housing. The maximum FAR for community facility uses is 6.5. A maximum 20 percent increase in FAR for commercial and community facility uses is available for public plazas.

Within the study area, the R7A district is mapped along the north side of Fulton Street and east of Ashland Place at a depth of approximately 100 feet. Seven- to eight-story apartment buildings with a consistent streetwall and high lot coverage are typical of the district. Residential and community facility development is allowed a maximum of 4.0 FAR in R7A districts. A C2-4 commercial district is mapped as an overlay within the R7A district. C2-4 commercial overlay districts are typically mapped along streets that serve the local neighborhood. Representative retail uses may include grocery stores, restaurants, beauty parlors, and other uses that cater to the immediate neighborhood. Within mixed-use residential and commercial buildings commercial uses are limited to the first or second floors. The FAR is governed by the residential district in which the overlay is mapped. Since the C2-4 overlay district is mapped within an R7A district, the commercial maximum FAR is 2.0 and the residential maximum FAR is 4.0.

An R6B district is mapped in the northeast portion of the study area east of Ashland Place and approximately 100 feet north of Fulton Street. R6B districts are designed to preserve the scale and streetscape of row house districts. Most residential buildings in R6B districts are set back from the street by stoops and small front yards. Residential and community facility development are permitted a maximum of 2.0 FAR.

PUBLIC POLICY

The public policy initiatives applicable to the Development Site and the surrounding study area are described below.

DEVELOPMENT SITE AND PROJECT AREA

2004 Downtown Brooklyn Development Plan

The Project Area is just outside of the mapped area for the 2004 Downtown Brooklyn Development Plan; however, portions of the study area are included in the "commercial core retail" and "residential retail areas" of the plan. Approved by the New York City Planning Commission (CPC) on May 10, 2004, and adopted by the New York City Council on June 28, 2004, the Downtown Brooklyn Development Plan was a comprehensive development plan to facilitate the continued growth of Downtown Brooklyn. The plan aimed to foster a multiuse urban environment to serve the residents, businesses, academic institutions, and cultural institutions of Downtown Brooklyn and its surrounding communities. To achieve these goals, the plan called for enacting major zoning changes, creating high quality public spaces, providing adequate parking facilities, improving transit infrastructure, strengthening retail, expanding cultural resources, and enhancing the pedestrian environment. The plan called for increased allowable FAR for commercial, community facility, and residential uses in the Downtown Brooklyn Core Area, which includes the Development Site. The 2004 approvals from the CPC and City Council included the authorization for acquisition by the City of development parcels in the area and the disposition of such parcels (including the development rights from Willoughby Square) to private parties for redevelopment in accordance with the plan. The Development Site (excluding the existing school lot) was analyzed in the 2004 *Downtown Brooklyn Development Final Environmental Impact Statement (FEIS)* as "potential development site DD," which was anticipated to be developed with 199,000 sf of residential use and 40,000 sf of retail use.

Brooklyn Center Urban Renewal Plan

The Project Area and portions of the study area are within the boundaries of the Brooklyn Center Urban Renewal Area (BCURA), which was established in 1970 and last revised in 2004, in an effort to strengthen and expand the commercial and retail core and the residential base of Brooklyn Center. The Brooklyn Center Urban Renewal Plan (BCURP) was intended to strengthen and expand the commercial and retail core and the residential base of Brooklyn Center; provide new areas for expansion of office, educational, cultural, manufacturing, and open space uses; and improve traffic safety and rationalize the circulation system in the area by providing for the separation of major pedestrian and traffic flows. The BCURP regulations were extended until 2044 as part of the Downtown Brooklyn Development Plan, assessed as part of the *Downtown Brooklyn Development FEIS*.

Brooklyn Cultural District

The study area is within the Brooklyn Cultural District, a joint project between New York City Department of City Planning (DCP), the New York City Economic Development Corporation (EDC), the New York City Department of Cultural Affairs (DCA), the New York City Department of Housing Preservation and Development (HPD), and the Downtown Brooklyn Partnership. Development of the Brooklyn Cultural District is a key component of the Downtown Brooklyn Strategic Plan unveiled in July of 2012. The goal of the Brooklyn Cultural District is to support the existing concentration of established and emerging arts organizations and encourage economic and cultural development with new arts spaces, streetscape enhancements, and affordable housing. The Brooklyn Cultural District is anchored by the Brooklyn Academy of Music (BAM). Plans for the district include new performance and rehearsal spaces, office space for a diverse group of local arts organizations, a public plaza for the community, a library, a cinema, and affordable housing.

Downtown Brooklyn Partnership—Metrotech Business Improvement District

The Development Site and portions of the study area are located within the MetroTech Business Improvement District (MetroTech BID). Founded in 1992 as a nonprofit business improvement district, expanded in 2016 to include the areas of the Brooklyn Cultural District and Atlantic Terminal and Mall, and now managed by the Downtown Brooklyn Partnership local development corporation, the MetroTech BID works to further the revitalization of MetroTech Center. MetroTech BID initiatives include a public safety program, sanitation services, and marketing and promotional services.

Food Retail Expansion to Support Health (FRESH) Program

Portions of the study areas are located in an area eligible to participate in the New York City FRESH program. The FRESH program provides discretionary tax incentives to promote the establishment and retention of neighborhood grocery stores in communities that lack full-line grocery stores. Portions of the primary and secondary study areas are located within a FRESH-designated area. The FRESH program is open to grocery store operators renovating existing retail space or developers seeking to construct or renovate retail space that will be leased by full-line grocery store operators. Financial incentives are available to eligible grocery store operators and developers to facilitate and encourage FRESH grocery stores in the designated area. These incentives include real estate tax reductions, sales tax exemptions, and mortgage recording tax deferrals.

Housing New York 2.0

On May 5, 2014, the de Blasio administration released *Housing New York: A Five-Borough, Ten-Year Plan* (*Housing New York)*, a plan intended to build and preserve 200,000 affordable DUs over the coming decade to support New Yorkers with a range of incomes. The plan details the key policies and programs for implementation, including developing affordable housing on underused public and private sites. *Housing New York* calls for community engagement at the early stages of the planning process, so that community input informs land use and zoning changes intended to generate new affordable housing. Lastly, *Housing New York* calls for providing high-quality affordable housing to the most vulnerable residents of New York City. Investing in quality affordable housing for the City's special needs, homeless, and senior households, as well as for people with disabilities will reduce the demand for social expenditures in the long term and provide a more cost-efficient strategy for addressing a critical housing need. In Fiscal Year 2017, under *Housing New York*, the City financed the creation and preservation of more than 24,000 affordable DUs across the five boroughs, exceeding projections by more than 4,000 DUs. In the third full fiscal year of the Mayor's 10-year plan to build or preserve 200,000 affordable homes, the City financed approximately 7,700 new construction DUs and approximately 16,600 preservation DUs. The Fiscal 2017 affordable housing production figure is the second highest in New York City history. In October of 2017, the City announced plans to expand and update its housing plan with a new goal of preserving and/or creating 300,000 affordable DUs by 2026.

One New York: The Plan for a Strong and Just City

In April 2007, the Mayor's Office of Long Term Planning and Sustainability released *PlaNYC: A Greener, Greater New York (PlaNYC)*. Since that time, updates to *PlaNYC* have been issued that build upon the goals set forth in 2007 and provide new objectives and strategies. In 2015, *One New York: The Plan for a Strong and Just City (OneNYC)* was released by the Mayor's Office of Sustainability and the Mayor's Office of Recovery and Resiliency. *OneNYC* builds upon the sustainability goals established by *PlaNYC* and focuses on growth, equity, sustainability, and resiliency. Goals outlined in the report include those related to housing (ensuring access to affordable, high-quality housing) and thriving neighborhoods (ensuring that neighborhoods will be well-served by transit, affordable housing, retail, and City services).

D. FUTURE WITHOUT THE PROPOSED PROJECT

This section considers land use, zoning, and public policy conditions in the Future without the Proposed Project (the "No Action" condition). These conditions are projected by considering changes that are likely or expected to occur on the Development Site and within the study area.

LAND USE

DEVELOPMENT SITE AND PROJECT AREA

Absent the Proposed Actions, the applicant would construct an as-of-right 20-story 103,753-gsf building on the Development Site. Under the No Action condition, the Development Site will contain 85,209 gsf of residential space (107 DUs), and 10,844 gsf of retail space. The maximum permitted zoning floor area for the combined zoning lot under the C6-4 district is 229,956 zoning square feet (zsf) (142,498 zsf of which will be utilized by the 1 Flatbush Avenue building, leaving 87,458 zsf available to be utilized on the Development Site). The proposed total floor area is approximately 87,456 zsf. Adjacent to the Development Site, the 1 Flatbush Avenue development

would be completed and occupied in the No Action condition with an approximately 19-story mixed-use building, containing 183 DUs and 19,140 sf of retail space.

STUDY AREA

Within the study area, by the 2021 analysis year, several projects are expected to be completed and in operations, introducing over 2,788 DUs and 637,820 sf of commercial space (see **Table B-2** and **Figure B-3**).

Table B-2
No Build Developments (400-foot Study Area)

Map ID	Address	Description
1	1 Flatbush Avenue	19-story mixed-use building with 183 DUs and approximately 20,000 sf of retail.
2	625 Fulton Street	81-story residential tower with 723 DUs and 42,000 sf of retail.
3	540 Fulton Street	43-story mixed-use tower with approximately 96,500 sf of office space and retail uses and 327 DUs.
4	41 Flatbush Avenue	243,000 sf office space with 27,000 ground-floor retail (conversion from light mfg/storage with no change in height).
5	8 Nevins Street	28-story mixed-use building with 147 DUs and 6,657 sf of retail.
6	250 Ashland Place	51-story mixed-use building with 584 DUs and approximately 24,000 sf of retail.
7	651 Fulton Street	BAM studio/theater event space, interior modifications only.
8	333 Schermerhorn Street	55-story residential building known "The Hub" with 750 DUs and approximately 35,000 sf of retail.
9	319 Schermerhorn Street	21-story mixed-use building with 74 DUs and 5,100 sf of retail.
10	93-97 Rockwell Place	29-story with 138,563 sf of hotel space.

Note: See **Figure B-3**.
Sources: Field reconnaissance conducted by AKRF, Inc. in October of 2017, DCP, and the New York City Department of Buildings (DOB).

ZONING

In the No Action condition, no changes to zoning are currently anticipated that would affect the Development Site or the study area.

PUBLIC POLICY

There are no changes to public policy expected in the study area in the No Action condition. Existing public policies are expected to remain in effect.

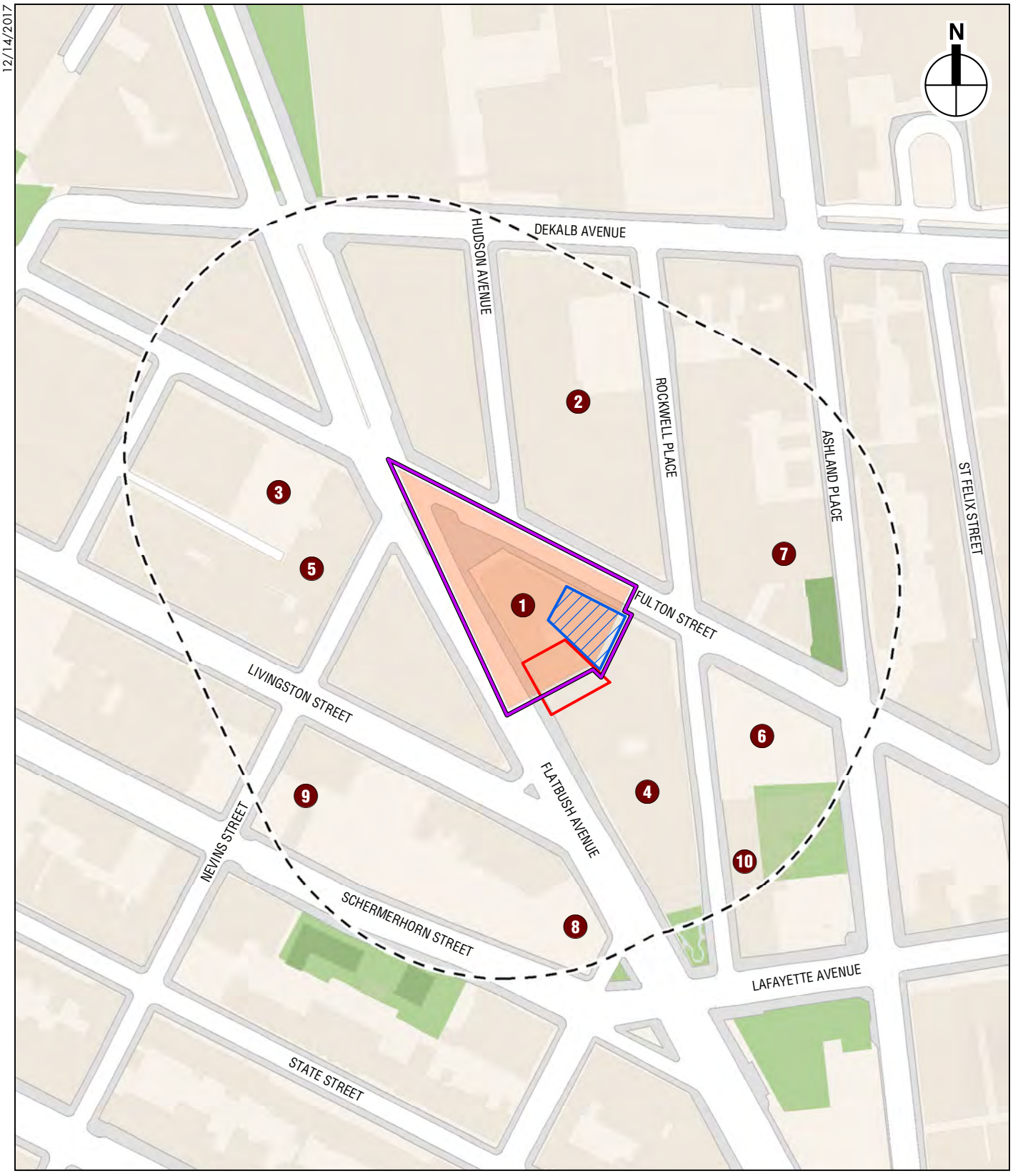
E. FUTURE WITH THE PROPOSED PROJECT

LAND USE

DEVELOPMENT SITE AND PROJECT AREA

In the Future with the Proposed Project (the "With Action" condition), the Development Site would be redeveloped with the Proposed Project, as described in Attachment A, "Project Description." The proposed residential, office, and retail uses would be consistent with land uses expected in the Project Area in the With Action condition.

12/14/2017



Project Area
Development Site
Potential Enlargement
Rezoning Area
Study Area (400-foot boundary)

1 *No Build Project*

0 200 FEET

570 FULTON STREET REZONING

No Build Projects
Figure B-3

STUDY AREA

The Proposed Project would be consistent with land uses in the study area. The study area would continue to have a mix of predominantly residential, commercial, and institutional uses, and the Proposed Project's residential, office, and retail uses would be consistent with those uses. The Proposed Project would continue the trend toward increased density and mixed-use development in Downtown Brooklyn. Overall, the Proposed Project would be compatible with and supportive of land uses in the surrounding area and would not result in significant adverse land use impacts.

ZONING

DEVELOPMENT SITE AND PROJECT AREA

Zoning Map Amendment

As described in Attachment A, "Project Description," the Proposed Actions would rezone the Project Area to a C6-9 district, which would have an FAR of 18 for commercial use, facilitating the creation of increased office space on the Development Site. The Proposed Actions would increase the commercial density in the Project Area from 10 FAR under the No Action condition to 18 FAR under the With Action condition. No changes to the residential FAR would occur with the Proposed Actions.

Zoning Text Amendments

The Proposed Actions include an amendment to the text of the New York City Zoning Resolution (ZR) to:

- establish the maximum permitted floor area ratio for commercial or community facility uses as 18.0 in C6-9 districts within the DB (ZR section 101-21);
- make the DB's height and setback regulations applicable to C6-9 districts (ZR section 101-222);
- make the DB's tower regulations applicable to C6-9 districts (ZR section 101-223); and
- create a new special permit to allow the CPC to permit modifications to the bulk requirements, other than floor area ratio, applicable to developments on irregularly shaped sites in C6-9 districts within the DB (ZR section 101-82).

Special Permit

The Proposed Actions include a new special permit pursuant to ZR Section 101-82 to modify:

- the residential rear yard requirements of ZR Sections 23-47, 23-52 and 35-53;
- the commercial rear yard requirement of ZR Section 33-26;
- the inner court recess requirements of ZR Section 23-852; and
- the setback requirements of ZR Section 101-223(b).

Description of Residential Rear Yard Modification: Modification of the residential rear yard requirements of ZR Sections 23-47, 23-52 and 35-53.

ZR sections 23-47 and 35-53 require that a 30-foot residential rear yard be provided along the Development Site's rear lot line beginning at the level of the lowest residential story used for DUs that face such rear yard. ZR section 23-52 permits the depth of such required rear yard to be reduced by 6 inches for each foot by which the depth of the interior lot portion is less than 90 feet, resulting in a maximum required residential rear yard depth varying from 20.63 feet to 28.33 feet.

The proposed residential floorplates would abut the westernmost point of the rear lot line of the Development Site (which is at an angle to Fulton Street) and thereafter extend westward approximately parallel to Fulton Street, occupying an approximately 900 sf portion of the required rear yard. Although no proposed DUs would utilize the proposed open area provided along the rear lot line for legal light and air, portions of certain DUs may face onto such open area, so a residential rear yard modification is needed, beginning at the level of the lowest residential floor, to allow the proposed residential floorplates to encroach the required rear yard.

Description of Inner Court Recess Modification: Modification of the inner court recess requirements of ZR Section 23-852 to allow an inner court recess with a depth exceeding its width.

ZR section 23-852 requires, in R10 equivalent districts such as the proposed C6-9 district, that the width of an inner court recess shall be at least equal to the depth of the inner court recess, except that such width need not exceed 30 feet. The Proposed Project, together with the 1 Flatbush Avenue building, would create a complying inner court on the zoning lot with an area of approximately 1,210 sf, and an inner court recess with a depth (approximately 33 feet) that exceeds the width of such recess, which varies from 17 feet, 2 inches to 27 feet.

Description of Setback Requirements: Modification of ZR section 101-223

ZR section 101-223 requires that for all buildings with commercial floor area above a height of 85 feet, a setback must be provided for all portions of the building that exceed 85 feet. For zoning lots that exceed an area of 15,000 sf, such portions must set back 20 feet from the street line. The zoning lot measures approximately 19,100 sf and the Proposed Project contains two levels of retail (on the ground and second floor) and office space on floors 3 through 16. The Proposed Project would rise to a height of 148 feet (10 stories) and set back 10 feet.

Description of Tower Lot Coverage Modification: Modification of the Residential Tower Lot Coverage Requirements of ZR Section 101-223(c)

ZR 101-223(c) requires that any portion of a building containing residential floor area above 150 feet is limited to a maximum lot coverage of 40 percent or a larger percentage for zoning lots less than 20,000 sf. For the 19,163-sf Development Site, such maximum permitted lot coverage is 41 percent pursuant to the Lot Coverage of Towers on Small Zoning Lots chart set forth in ZR Section 101-223(c). Both the 1 Flatbush Building and the Proposed Project would contain residential floor area above 150 feet, so the Development Site is subject to a maximum lot coverage of 7,857 sf above 150 feet. The 1 Flatbush Building's existing 6,781 sf of lot coverage above 150 feet, together with the proposed maximum 5,810 sf of lot coverage above 150 feet for the proposed building (totaling 12,591 sf, or approximately 66 percent lot coverage) would exceed the maximum by 4,734 sf, therefore, modification of the residential tower lot coverage requirements is needed to allow the Proposed Project to provide the maximum floorplates above 150 feet that would otherwise be permitted pursuant to the other bulk waivers requested.

Certification

The applicant is seeking a waiver of the provisions of ZR Section 101-43 by joint certification of New York City Transit (NYCT) and the CPC Chairperson (the "Chair") pursuant to ZR Section 37-44.

STUDY AREA

The Proposed Project would not result in significant adverse impacts associated with zoning. The increase in commercial density sought under the Proposed Actions would allow for a new mixed-use office development in Downtown Brooklyn. The Downtown Brooklyn Development Plan paved the way for residential and commercial development, but most of the development that has

occurred since 2004 has been residential, cultural facility, and retail development. The requested zoning map amendment would allow the density necessary to provide approximately 89,800 gsf of new office development in Downtown Brooklyn. The required bulk modifications would allow a building envelope that accommodates the office and residential development on the Development Site and the requested modifications would not affect any other sites in the study area.

Overall, the Proposed Project would be compatible with and in support of zoning in the surrounding area and would not result in significant adverse impacts.

PUBLIC POLICY

The Proposed Project would be consistent with and supportive of the public policies that currently apply to the Development Site and the surrounding study area.

DEVELOPMENT SITE AND PROJECT AREA

Downtown Brooklyn Development Plan

The Proposed Project would further the goals of the Downtown Brooklyn Development Plan by significantly increasing the amount of Class A office space in Downtown Brooklyn, which is one of the goals of the Downtown Brooklyn Development Plan.

Brooklyn Center Urban Renewal Plan

The Proposed Project would be consistent with the goals of the BCURA, which sought to create additional density in this area by providing new areas for expansion of office space, strengthening and expanding existing commercial and residential cores, and encouraging development and high-quality housing.

Brooklyn Cultural District

Although the Proposed Project would not include cultural facility space, it would not conflict with this policy and would contribute to Downtown Brooklyn's dynamic, mixed-use character.

Downtown Brooklyn Partnership—MetroTech BID

The Proposed Project would also be consistent with the goals of the MetroTech BID, as it would contribute to the revitalization of the MetroTech BID area by adding a mixed-use development to the Development Site, and much needed commercial office space to the vibrant business district.

Food Retail Expansion to Support Health (FRESH) Program

The Proposed Actions would facilitate the creation of new ground-floor commercial spaces and therefore would enable an opportunity for new neighborhood grocery stores to be located within the Development Site; therefore the Proposed Actions are consistent with the FRESH Program and would not conflict with this policy.

Housing New York 2.0

The Proposed Actions directly support the goals and principles outlined in *Housing New York 2.0.* The Proposed Actions would foster a diverse and livable neighborhood and build new affordable housing for New Yorkers. The Proposed Project would advance New York City's ambitious housing plan by creating up to 139 new DUs.

One New York: The Plan for a Strong and Just City

The Proposed Actions are consistent with the goals of *OneNYC* as they will help create and preserve affordable housing and support the development of a vibrant neighborhood, make streets safer, improve commercial services and provide access to jobs, all of which are key goals of *OneNYC*. In particular, the Proposed Actions would support *OneNYC*'s land use goals of creating substantial new housing opportunities at a range of incomes; focusing development in areas that are served by mass transit; and fostering walkable commercial corridors. ✷

Attachment C: Shadows

A. INTRODUCTION

This attachment examines whether the Proposed Actions would result in a significant adverse shadow impact on any sunlight-sensitive resources. According to the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, sunlight-sensitive resources of concern include public open space, sunlight-dependent features of historic architectural resources, and natural resources that depend on sunlight. A shadow assessment is required for actions that would result in new structures or additions to existing structures at least 50 feet in height or when the structure or addition is located adjacent to a sunlight-sensitive resource.

The Proposed Actions would facilitate the development at 570 Fulton Street in Downtown Brooklyn (the "Proposed Project"), which would rise to a maximum height of 558 feet, including rooftop mechanical equipment. However, the maximum zoning envelope would allow an additional 12 feet of height; therefore, the Environmental Assessment Statement (EAS) conservatively assesses a maximum building height of 558 feet. The Proposed Project would be 318 feet taller than the as-of-right structure that would be built in the Future without the Proposed Project (the "No Action" condition). The Proposed Actions would also allow for a potential enlargement that would add three stories to the existing office building located at 25 Flatbush Avenue and adjacent to a Greenstreet, a sunlight-sensitive resource. Therefore, the Proposed Project and the adjacent potential enlargement will be assessed together for their potential to cast new shadows on sunlight-sensitive resources. This assessment also considers a "No Special Permit Scenario" under which bulk modifications sought under the special permit would not be implemented and development would occur as-of-right under the proposed C6-9 zoning. Under such a scenario, an approximately 677-foot structure (including rooftop mechanical equipment) would be constructed at 570 Fulton Street.

A detailed shadow analysis determined that both the Proposed Project and No Special Permit Scenario would create brief durations of new shadows on four sunlight-sensitive resources: Fort Greene Park, Fox Square, Saint Nicholas Cathedral, and University Place, which includes the adjacent Flatbush Avenue Medians. However, in both scenarios, the duration of incremental shadow on the resources would be short and relatively small compared to the total size of the affected resources. The incremental shadows would not threaten the usability of the affected open space resources or the vitality of the plant life they support. Similarly, the short duration of new shadows on the historic Saint Nicholas Cathedral would not substantially reduce the appreciation of its sunlight-sensitive architectural features.

Therefore, none of the sunlight-sensitive resources would experience a significant adverse shadow impact and the Proposed Actions would not result in significant shadow impact on any sunlight-sensitive resources.

B. DEFINITIONS AND METHODOLOGY

This analysis has been prepared in accordance with CEQR procedures and follows the guidelines of the *CEQR Technical Manual*.

DEFINITIONS

Incremental shadow is the additional, or new, shadow that a structure resulting from a proposed project would cast on a sunlight-sensitive resource.

Sunlight-sensitive resources are those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. Such resources generally include:

- *Public open space* such as parks, beaches, playgrounds, plazas, schoolyards (if open to the public during non-school hours), greenways, and landscaped medians with seating. Planted areas within unused portions of roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources.
- *Features of architectural resources that depend on sunlight for their enjoyment by the public*. Only the sunlight-sensitive features need be considered, as opposed to the entire resource. Such sunlight-sensitive features might include design elements that depend on the contrast between light and dark (e.g., recessed balconies, arcades, deep window reveals); elaborate, highly carved ornamentation; stained glass windows; historic landscapes and scenic landmarks; and features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as a historic landmark.
- *Natural resources* where the introduction of shadows could alter the resource's condition or microclimate. Such resources could include surface waterbodies, wetlands, or designated resources such as coastal fish and wildlife habitats.

Non-sunlight-sensitive resources include, for the purposes of CEQR:

- *City streets and sidewalks* (except Greenstreets);
- *Private open space* (e.g., front and back yards, stoops, vacant lots, and any private, non-publicly accessible open space);
- *Project-generated open space* cannot experience a significant adverse shadow impact from the project, according to CEQR, because without the project the open space would not exist.

A significant adverse shadow impact occurs when the incremental shadow added by a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other resources. Each case must be considered on its own merits based on the extent and duration of new shadow and an analysis of the resource's sensitivity to reduced sunlight.

METHODOLOGY

Following the guidelines of the *CEQR Technical Manual*, a preliminary screening assessment is first conducted to ascertain whether a project's shadow could reach any sunlight-sensitive resources at any time of year. The preliminary screening assessment consists of three tiers of analysis. The first tier determines a simple radius around the Development Site representing the longest shadow that could be cast. 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 the Project shadow by accounting for the fact that shadows can never be cast between a certain range of angles south of the Development Site due to the path of the sun through the sky at the latitude of New York City.

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 the Project shadow by looking at specific representative days in each season and determining the maximum extent of shadow 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 shadow resulting from the Proposed Project. The detailed analysis provides the data needed to assess the shadow impacts. The effects of the new shadows 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.

C. PRELIMINARY SCREENING ASSESSMENT

A base map was developed using Geographic Information Systems (GIS)[1] showing the location of the Proposed Project and the surrounding street layout (see **Figure C-1**). In coordination with the land use and historic and cultural resources assessments presented in other attachments of this EAS, potential sunlight-sensitive resources were identified and shown on the map.

TIER 1 SCREENING ASSESSMENT

For the Tier 1 assessment, the longest shadow that the Proposed Project and adjacent potential enlargement could cast is calculated, and, using this length as the radius, a perimeter is drawn around the Development Site. Anything outside this perimeter representing the longest possible shadow could never be affected by Project-generated shadow, while anything inside the perimeter needs additional assessment. According to the *CEQR Technical Manual*, the longest shadow that a structure can cast at the latitude of New York City 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.

PROPOSED PROJECT

Including rooftop mechanical equipment, the Proposed Project and adjacent potential enlargement would reach a maximum height of 558 feet above street level (including rooftop mechanical equipment and 12 feet of additional building envelope) and could cast a shadow up to 4.3 times as long, or 2,400 feet. Using this length as the radius, a perimeter was drawn around the Development Site (see **Figure C-1**). Several publicly accessible open space resources and historic resources with potentially sunlight-sensitive features are located within the longest shadow study area. Therefore, a Tier 2 assessment is required for the Proposed Project.

NO SPECIAL PERMIT SCENARIO

Including rooftop mechanical equipment, the No Special Permit Scenario building on the Development Site and the adjacent potential enlargement would reach a maximum height of 677

[1] Software: Esri ArcGIS 10.3; Data: New York City Department of Information Technology and Telecommunications (DoITT) and other City agencies, and AKRF site visits.

4/13/2018



Development Site

Tier 1: Proposed Project longest shadow study area

Tier 1: No Special Permit Scenario longest shadow study area

Tier 2: Area south of site that could never be shaded by proposed building

Open Space Resources

Historic Resources w/ Potentially Sunlight-Sensitive Features

0 1,000 FEET

570 FULTON STREET REZONING

Tier 1 and Tier 2 Assessments

Figure C-1

feet above street level and could cast a shadow up to 4.3 times as long, or 2,911 feet. Using this length as the radius, a perimeter was drawn around the Development Site (see **Figure C-1**). Several additional publicly accessible open resources and historic resources with potentially sunlight-sensitive features are located within the longest shadow study area. Therefore, a Tier 2 assessment is required for the No Special Permit Scenario.

TIER 2 SCREENING ASSESSMENT

Because of the path that the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City, this area lies between -108 and +108 degrees from true north. **Figure C-1** illustrates this triangular area south of the Development Site. The complementing area to the north within the longest shadow study areas represent the remaining area that could potentially experience new shadow from the Proposed Project or building developed under the No Special Permit Scenario. As illustrated in **Figure C-1,** 11 open space resources and four historic resources with potentially sunlight-sensitive features are located within the longest shadow study area for the Proposed Project. An additional five open space resources and four historic resources with potentially sunlight-sensitive features are located within the larger study area of the building developed under the No Special Permit Scenario. Therefore, a Tier 3 assessment is required to model new shadows on specific representative days of the year for both the Proposed Project and the building developed under the No Special Permit Scenario.

TIER 3 SCREENING ASSESSMENT

The direction and length of shadows vary throughout the course of the day and also differ depending on the season. Shadows move constantly but more quickly at the start and the end of the day than they do in the middle of the day. In order to determine whether Project-generated shadow could fall on a sunlight-sensitive resource, three-dimensional computer mapping software is used in the Tier 3 assessment to calculate and display the incremental shadows from the Proposed Project and building developed under the No Special Permit Scenario and adjacent potential enlargement on individual representative days of the year. A computer model was developed containing three-dimensional representations of the elements in the base map used in the preceding assessments, the topographic information of the study area, and the massing of the Proposed Project and the No Special Permit Scenario building.

REPRESENTATIVE DAYS FOR ANALYSIS

Following the guidance of the *CEQR Technical Manual*, shadows on the summer solstice (June 21), winter solstice (December 21), and spring and fall equinoxes (March 21 and September 21, which are approximately the same in terms of shadow patterns) are modeled, to represent the range of shadows over the course of the year. An additional representative day during the growing season is also modeled, the day halfway between the summer solstice and the equinoxes, i.e., May 6 or August 6, which have approximately the same shadow patterns.

TIMEFRAME WINDOW OF ANALYSIS

The shadow assessment considers shadows occurring between 90 minutes after sunrise and 90 minutes before sunset. Within the 90 minutes after sunrise and the 90 minutes before sunset, the sun is low on the horizon, and its rays reach the vicinity of the Development Site at low angles, producing shadows that are very long, move fast, and generally blend with shadows from existing

structures until the sun reaches the horizon and sets. Consequently, shadows occurring in these two 90-minute periods are not considered significant under CEQR, and their assessment is not required.

TIER 3 SCREENING ASSESSMENT RESULTS

Figure C-2 illustrates the range of shadows that would occur, in the absence of intervening buildings, from the Proposed Project, the development assumed under the No Special Permit Scenario, and the adjacent potential enlargement on the 4 representative analysis days. The extent of shadow is shown between the start of the analysis day (90 minutes after sunrise) to the end of the analysis day (90 minutes before sunset).The Tier 3 assessment finds that on the May 6/August 6, June 21, and the December 21 analysis days, in the absence of intervening buildings, the shadows of both the Proposed Project and development under the No Special Permit Scenario shadows would reach four open space resources and three historic resources with potentially sunlight-sensitive features: 360 Pacific Street, Fort Greene Park, Forte Plaza, Fox Square, Lafayette Avenue Presbyterian Church, Saint Nicholas Cathedral, and University Place and Flatbush Avenue Medians. Of these, 360 Pacific Street, Lafayette Avenue Presbyterian Church, and Saint Nicholas Cathedral are historic resources featuring sunlight-sensitive elements on their Project-facing façades. Therefore, the extent and duration of incremental shadows originating from both the Proposed Project and the development assumed under the No Special Permit Scenario on all resources identified in the Tier 3 assessment are determined with a detailed shadow analysis.

D. DETAILED ANALYSIS

The purpose of the detailed shadow analysis is to determine the extent and duration of *incremental* shadows that would fall on the sunlight-sensitive resources identified in the Tier 3 assessment. To complete the analysis, three-dimensional representations of the existing buildings, relative planned future developments, and the anticipated structure occupying the Development Site absent the Proposed Actions are appended to the Tier 3 assessment model. The shadows cast in the No Action condition can then be compared to those cast in the Future with the Proposed Project (the "With Action" condition) and with the development assumed under the Special Permit Scenario.

As documented in Attachment E, "Urban Design and Visual Resources," absent the Proposed Actions, the Development Site would be occupied with a 240-foot tall structure, including rooftop mechanical equipment. Up to this height, the Proposed Project and the development assumed under the No Special Permit Scenario would be similarly massed and produce relatively few incremental shadow. Also, in the No Action condition, the adjacent potential enlargement located at 25 Flatbush Avenue would not construct the potential addition assumed in the With Action condition and No Special Permit Scenario.

The anticipated developments relative to the detailed shadow analysis and assumed to be in operations by the completion date of the Proposed Project and adjacent potential enlargement were modeled with information collected primarily from Zoning Diagrams provided by New York City Department of Buildings (DOB).

ANALYSIS RESULTS

The detailed shadow analysis finds that intervening existing structures would prevent any new shadows originating from the Proposed Project and adjacent potential enlargement from falling on Forte Plaza and the sunlight-sensitive features of 360 Pacific Street and Lafayette Avenue Presbyterian Church. Incremental shadow *would* fall on three publicly accessible open space

12/12/2017



March 21/Sept. 21



May 6/August 6



June 21



December 21

Development Site

Historic Resources With Potentially Sunlight-Sensitive Features

Open Space Resources

Proposed Project Tier 3 Shadows

No Special Permit Scenario Tier 3 Shadows

0 2,000 FEET

Notes:
1. Daylight Saving Time not used.
2. Shadows are shown occurring at approximately one hour intervals from the start of the analysis day (one and a half hours after sunrise) to the end of the analysis day (one and a half hours before sunset). The Tier 3 assessment serves to illustrate the daily path or "sweep" of the proposed project's shadow across the landscape, without accounting for any existing buildings and their shadows.

Tier 3 Assessment

Figure C-2

resources and one historic resource: the Flatbush Avenue Plaza, Fort Greene Park, University Place and Flatbush Avenue Medians, and Lafayette Avenue Presbyterian Church. **Table C-1** and **Table C-2** show the entry and exit times and total duration of incremental shadow originating from the Proposed Project and the No Special Permit Scenario on the affected resources.

Table C-1
Incremental Shadow Durations (Proposed Project)

Analysis day and timeframe window	March 21 / Sept. 21 7:36 AM–4:29 PM	May 6 / August 6 6:27 AM–5:18 PM	June 21 5:57 AM–6:01 PM	December 21 8:51 AM–2:53 PM
Fox Square	—	—	10:05 AM–11:05 AM Total: 1 hr 0 min	—
Fort Greene Park	—	—	—	1:40 PM–1:55 PM 2:15 PM–2:53 PM Total: 0 hr 53 min
Saint Nicholas Cathedral	—	6:27 AM–6:55 AM Total: 0 hr 18 min	—	—
University Place and Flatbush Avenue Medians	—	—	—	9:40 AM–10:40 AM Total: 1 hr 0 min

Notes:
Table indicates entry and exit times and total duration of incremental shadow for each sunlight-sensitive resource.
Daylight saving time is not used—times are Eastern Standard Time, per *CEQR Technical Manual* guidelines. However, as Eastern Daylight Time is in effect for the March/September, May/August, and June analysis periods, add 1 hour to the given times to determine the actual clock time.

Table C-2
Incremental Shadow Durations (No Special Permit Scenario)

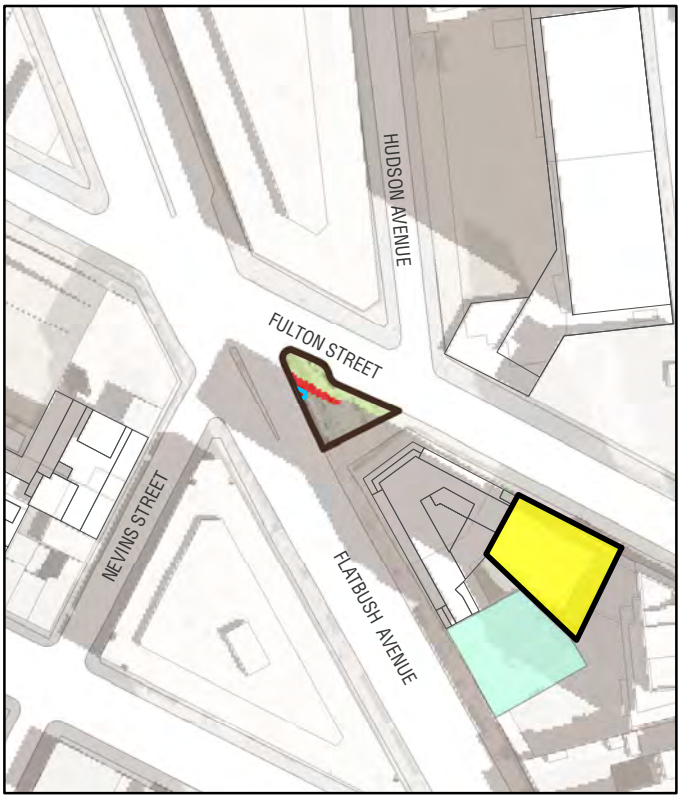
Analysis day and timeframe window	March 21 / Sept. 21 7:36 AM–4:29 PM	May 6 / August 6 6:27 AM–5:18 PM	June 21 5:57 AM–6:01 PM	December 21 8:51 AM–2:53 PM
Fox Square	—	9:50 AM–10:35 AM Total: 0 hr 45 min	10:15 AM–11:05 AM Total: 0 hr 50 min	—
Forte Plaza	—	3:55 PM–4:05 PM	3:20 PM–3:30 PM	—
Fort Greene Park	—	—	—	1:40 PM–2:53 PM Total: 1 hr 13 min
Saint Nicholas Cathedral	—	6:27 AM–6:50 AM Total: 0 hr 23 min	—	—
University Place and Flatbush Avenue Medians	—	—	—	9:40 AM–10:40 AM Total: 1 hr 0 min

Notes:
Table indicates entry and exit times and total duration of incremental shadow for each sunlight-sensitive resource.
Daylight saving time is not used—times are Eastern Standard Time, per *CEQR Technical Manual* guidelines. However, as Eastern Daylight Time is in effect for the March/September, May/August, and June analysis periods, add one hour to the given times to determine the actual clock time.

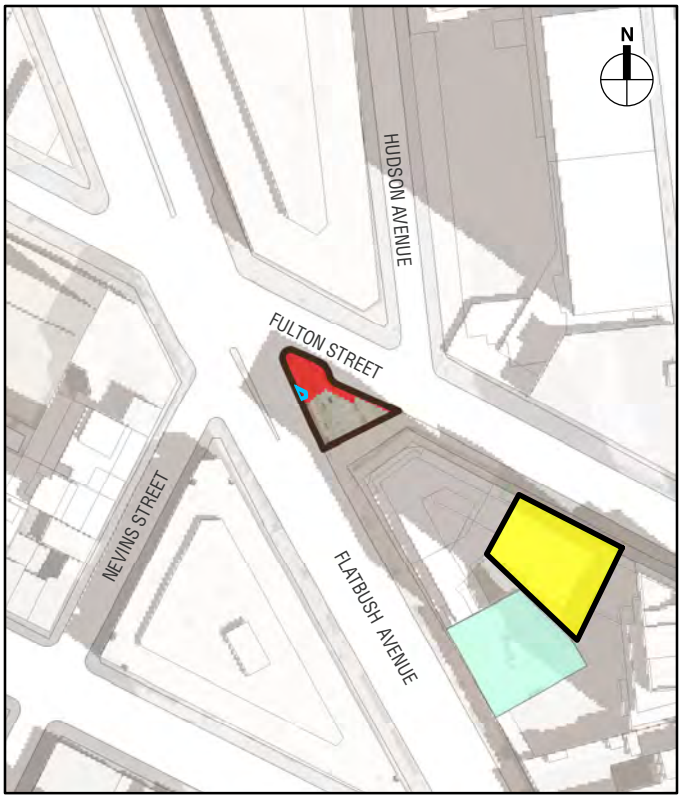
The detailed shadow analysis of the development assumed under the No Special Permit Scenario finds that intervening existing structures would prevent any new shadows originating from the Proposed Project and adjacent potential enlargement from falling on Forte Plaza and the sunlight-sensitive features of 360 Pacific Street and Lafayette Avenue Presbyterian Church. Incremental shadow would fall on three publicly accessible open space resources and one historic resource: the Flatbush Avenue Plaza, Fort Greene Park, University Place and Flatbush Avenue Medians, and Lafayette Avenue Presbyterian Church. **Table C-1** shows the entry and exit times and total duration of incremental shadow originating from the Proposed Project and adjacent potential enlargement on the affected resources.

Figures C-3 through C-6 illustrate the duration of shadows and direct sunlight on the affected resources in the No Action and With Action conditions. The area of the resource affected by

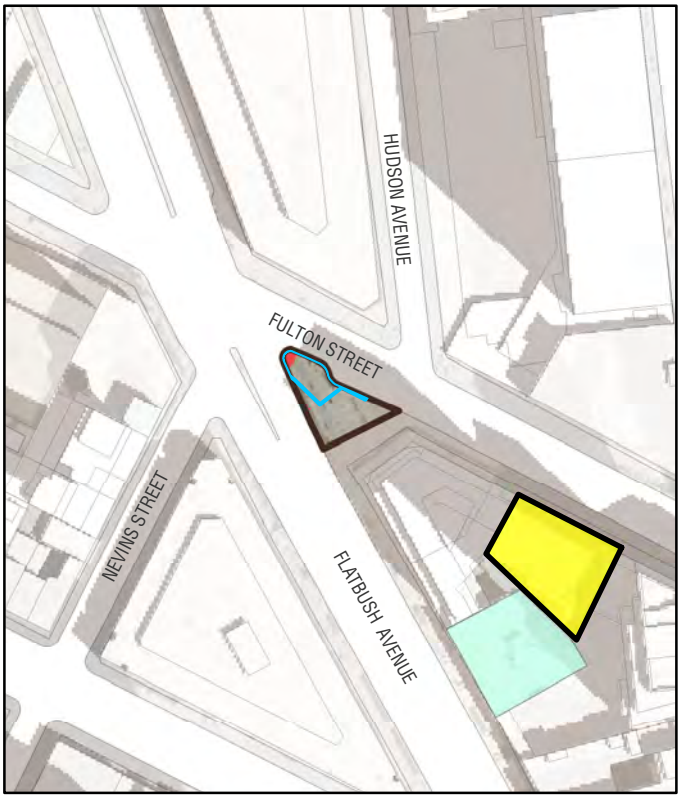
8/13/2018



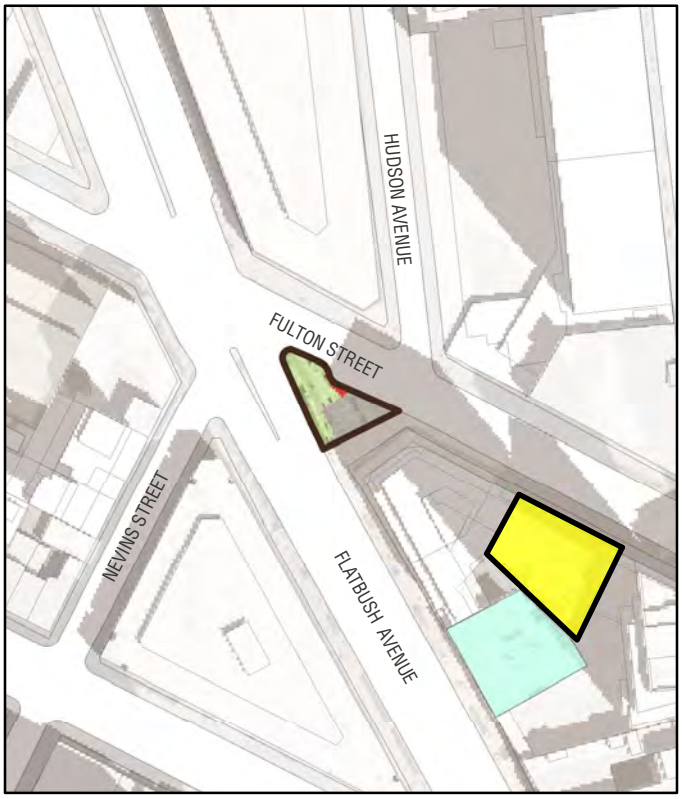
10:15 AM



10:30 AM



10:45 AM



11:00 AM

Development Site
Potential Enlargement
Open Space Resource
Proposed Project - Extent of Incremental Shadow on Resource
No Special Permit Scenario - Extent of Incremental Shadow on Resource
Area of Open Space in Direct Sunlight

0 100 FEET

Detailed Shadow Analysis
Fox Square
June 21

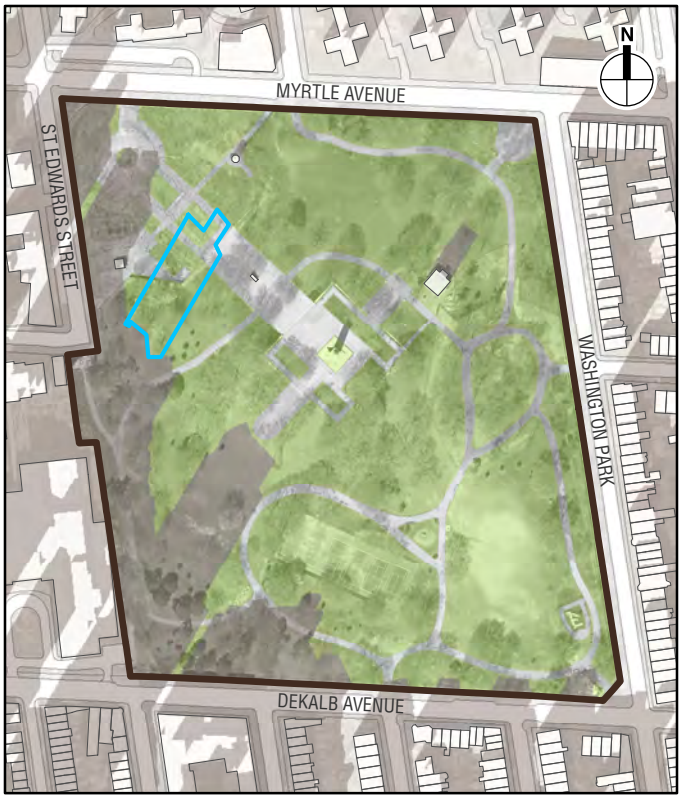
570 FULTON STREET REZONING

Figure C-3

8/13/2018



1:45 PM



2:00 PM



2:15 PM



2:30 PM

Open Space Resource

Area of Open Space in Direct Sunlight

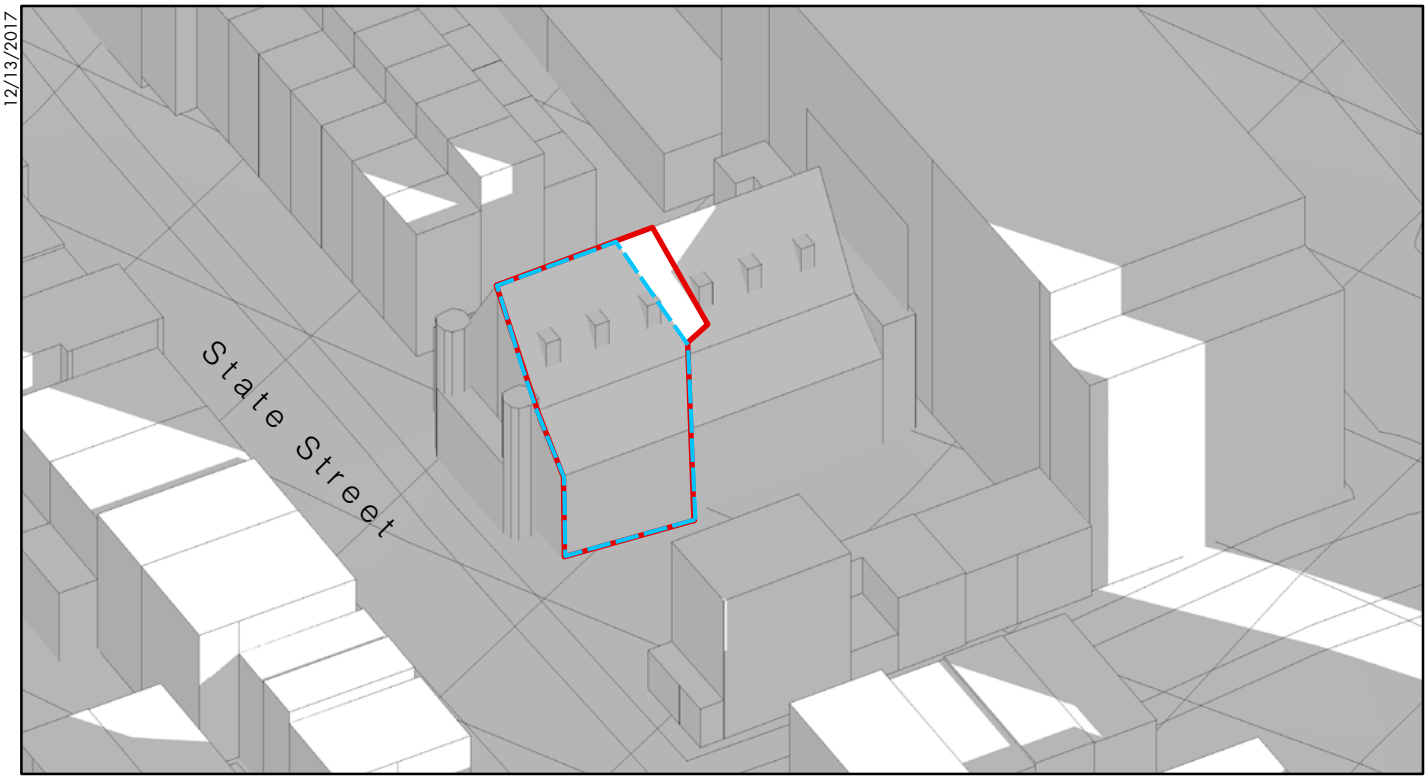
Proposed Project - Extent of Incremental Shadow on Resource

No Special Permit Scenario - Extent of Incremental Shadow on Resource

0 500 FEET

Detailed Shadow Analysis
Fort Greene Park
December 21

12/13/2017



6:30 AM



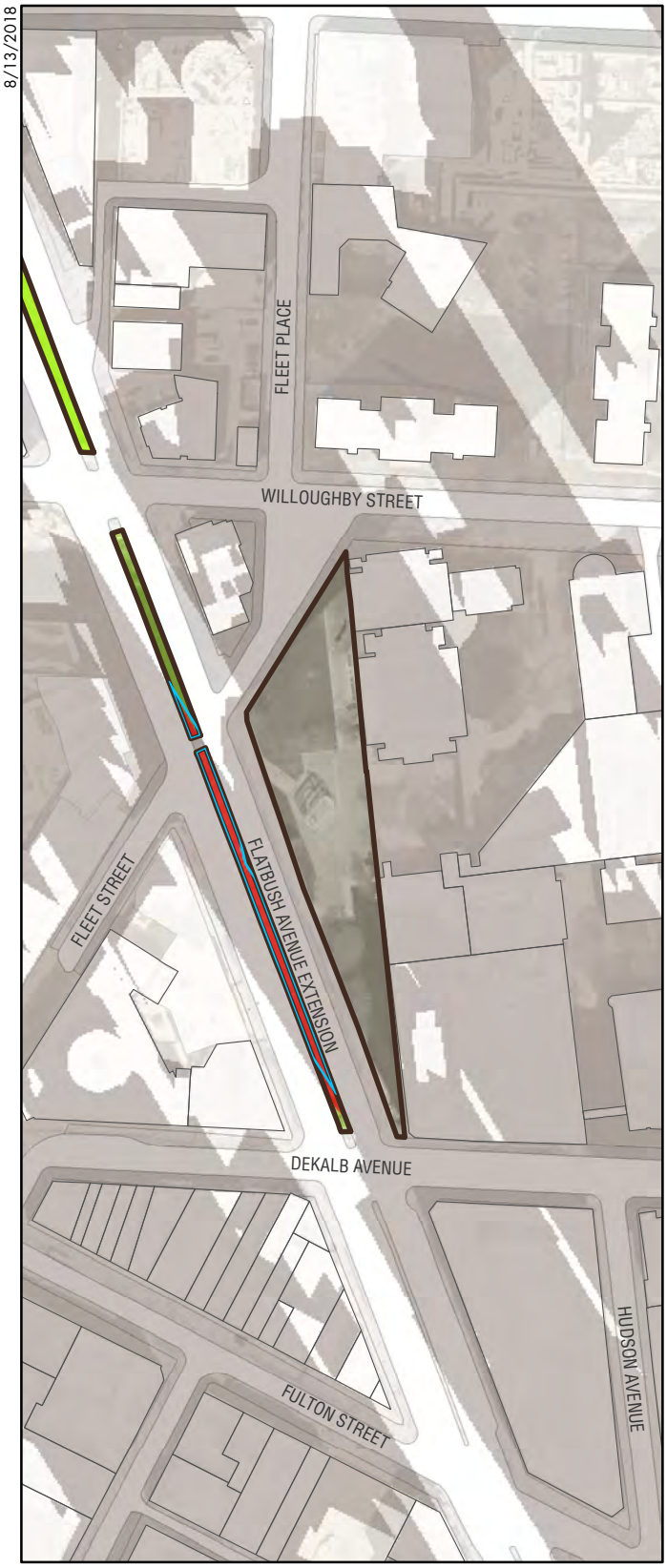
6:45 AM

Proposed Project
- Extent of Incremental Shadow on Facade with Sunlight-Sensitive Features

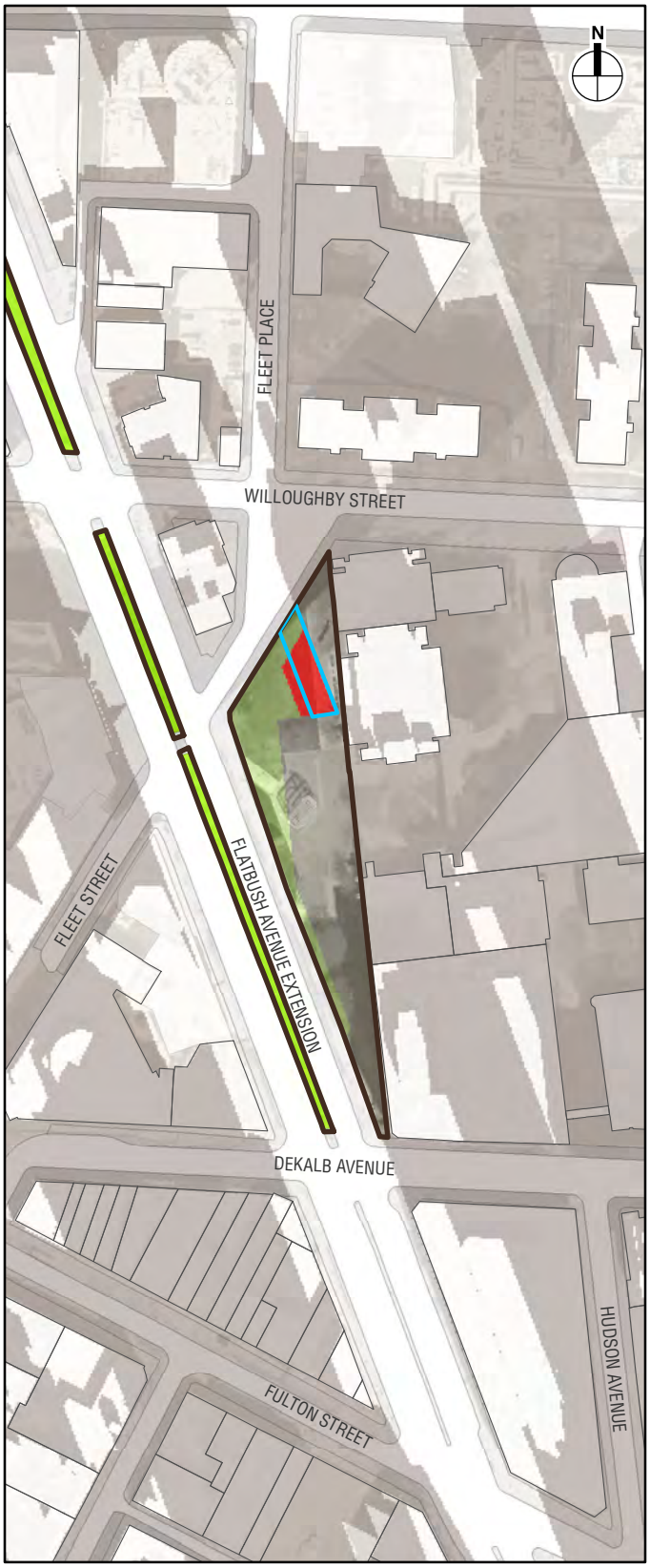
No Special Permit Scenario
- Extent of Incremental Shadow on Facade with Sunlight-Sensitive Features

Detailed Shadow Analysis
Saint Nicholas Cathedral
May 6/August 6
Figure C-5

8/13/2018



9:45 AM



10:30 AM

Development Site

Potential Enlargement

Open Space Resource

Proposed Project - Extent of Incremental Shadow on Resource

No Special Permit Scenario - Extent of Incremental Shadow on Resource

Area of Open Space in Direct Sunlight

0 100 FEET

Detailed Shadow Analysis
University Place
& Flatbush Avenue Medians
December 21

Figure C-6

incremental shadow is outlined in red. Below is a description of the resources and the duration and extent of incremental shadow.

AFFECTED RESOURCES

FOX SQUARE

Fox Square is a street improvement located at the southeast corner of Flatbush Avenue and Fulton Street (see **Figure C-3**). The former median was recently improved with the addition of several benches, landscaping, and several trees.

With the Proposed Actions, Fox Square would be cast in incremental shadow on 1 of the 4 analysis days. On June 21, beginning at 10:05 AM, new shadow would enter the resource, casting incremental shadow on the benches and vegetation located in the northern tip of the seating area. New shadow would remain on the resource until 11:05 AM, blocking all direct sunlight from reaching the seating area from 10:25 AM through 10:45 AM. However, no sunlight-sensitive feature of the resource would be affected by new shadow for more than 45 minutes of incremental shadow at a time.

In the No Special Permit Scenario, Fox Square would be cast in incremental shadow on 2 of the 4 analysis days. On May 6/August 6, beginning at 9:50 AM, new shadow would enter the resource, casting incremental shadow on the benches and vegetation located in the northern tip of the seating area. New shadow would remain on the resource until 10:35 AM, blocking all direct sunlight from reaching the seating area from 10:25 AM through 10:45 AM. However, no sunlight-sensitive feature within the resource would be affected by the new shadow for more than 35 minutes of incremental shadow at a time.

Determination of Significance

Incremental shadows cast by the Proposed Project and the adjacent potential enlargement would fall on Fox Square on 1 of the 4 analysis days, June 21. Incremental shadows cast by the No Special Permit Scenario building and the adjacent potential enlargement would fall on Fox Square on 2 of the 4 analysis days, May 6/August 6, and June 21. In both scenarios, all of the affected areas of the open space would receive over 6 hours of direct sunlight throughout the day, allowing for the survival of a variety of plant life and passive recreation use of the resource's benches. Therefore, incremental shadow resulting from the Proposed Project and the adjacent potential enlargement as well as the No Special Permit Scenario Building and adjacent potential enlargement would not substantially reduce the usability of Fox Square or its ability to support vegetation and would not result in a significant shadow impact on the resource.

FORT GREENE PARK

Fort Greene Park is a well-utilized publicly accessible open space located northeast of the Development Site (see **Figure C-4**). The 30-acre resource features sunlight-sensitive vegetation, athletic courts, and benches and lawns supporting passive recreation.

With the Proposed Actions, Fort Greene Park would be cast in incremental shadow on 1 of the 4 analysis days. On December 21, beginning at 1:40 PM, new shadow would enter the resource near the corner of St. Edwards and Willoughby Streets. After briefly exiting the resource, new shadow would again be cast on the park and then gradually increase in size until the end of the analysis day when it would cover nearly $^{2}/_{3}$-acres of park space. During this timeframe, the trees,

landscaping, seating, and other sunlight-sensitive features located in the center of the park would be partially covered by no more than 15 minutes of incremental shadow at a time.

In the No Special Permit Scenario, Fort Greene Park would be case in incremental shadow on 1 of the 4 analysis days. On December 21, beginning at 1:40 PM, a new shadow would enter the resource near the corner of St. Edwards and Willoughby Streets. The shadow moves from west to east across the park, increasing in length, until the end of the analysis day. During this timeframe, the trees, landscaping, seating, and other sunlight-sensitive features located in the center of the park would be partially covered by no more than 20 minutes of incremental shadow at a time.

Determination of Significance

Incremental shadows cast by the Proposed Project and adjacent potential enlargement would fall on Fort Greene Park on 1 of the 4 analysis days, December 21. New shadow cast in December would fall outside the growing season and would not affect the resource's vegetation. Almost all of the affected areas of the open space supporting sunlight-sensitive uses would be cast in direct sunlight for over 5 hours and 30 minutes of the approximately 6-hour December analysis day. Therefore, incremental shadow resulting from the Proposed Actions would not substantially reduce the usability of Fort Greene Park and would not result in a significant shadow impact on the resource.

As with the Proposed Project, incremental shadows cast by the development assumed under the No Special Permit Scenario and adjacent potential enlargement would fall on Fort Greene Park on 1 of the 4 analysis days, December 21. New shadow cast in December would fall outside the growing season and would not affect the resource's vegetation. Almost all of the affected areas of the open space supporting sunlight-sensitive uses would be cast in direct sunlight for over 5 hours and 30 minutes of the approximately 6-hour December analysis day. Therefore, incremental shadow resulting from the development assumed under the No Special Permit Scenario and adjacent potential enlargement would not substantially reduce the usability of Fort Greene Park and would not result in a significant shadow impact on the resource.

SAINT NICHOLAS CATHEDRAL

Saint Nicholas Cathedral is a State/National Register (S/NR)-eligible architectural resource featuring sunlight-sensitive stained-glass and clerestory windows on its Project-facing, eastern, façade (see **Figure C-5**).

With the Proposed Actions, the sunlight-sensitive features on Saint Nicholas Cathedral's eastern façade would be cast in incremental shadow on 1 of the 4 analysis days. At 6:27 AM, on the beginning of the May 6/August 6 analysis day, new shadows would completely cover half of the sunlight-sensitive windows on the eastern façade of the cathedral. The extent of new shadow would then quickly shrink, falling on fewer sunlight-sensitive windows, before completely exiting the resource at 6:55 AM. During this timeframe, the sunlight-sensitive features of the cathedral's eastern faced would be cast in no more than 25 minutes of incremental shadow at a time.

With the No Special Permit Scenario, the sunlight-sensitive features on Saint Nicholas Cathedral's eastern façade would be cast in incremental shadow on 1 of the 4 analysis days. At 6:27 AM, on the beginning of the May 6/August 6 analysis day, new shadows would completely cover one-half of the sunlight-sensitive windows on the eastern façade of the cathedral. The extent of new shadow would then quickly shrink, falling on fewer sunlight-sensitive windows, before completely exiting the resource at 6:50 AM. During this timeframe, the sunlight-sensitive features of the cathedral's eastern façade would be cast in no more than 20 minutes of incremental shadow at a time.

Determination of Significance

Incremental shadows cast by both the Proposed Project and adjacent potential enlargement and the No Special Permit Scenario development and adjacent potential enlargement would fall on the sunlight-sensitive features of Saint Nicholas Cathedral in the early morning of on 1 of the 4 analysis days, May 6/August 6. After incremental shadow falls off the cathedral, the affected features would be cast in completely in direct sunlight for the remainder of the morning, until approximately 12:30 PM. Therefore, incremental shadow resulting from the Proposed Project and adjacent potential enlargement and the No Special Permit Scenario development and adjacent potential enlargement would not substantially reduce the availability of direct sunlight on the Cathedral's sunlight-sensitive features and would not result in a significant shadow impact on the resource.

UNIVERSITY PLACE AND FLATBUSH AVENUE MEDIANS

University Place is an approximately 1-acre publicly accessible open space resource located just east of Flatbush Avenue Extension between DeKalb Avenue and Fleet Street. The resource features sunlight-sensitive vegetation, benches, and a large lawn supporting passive recreational uses. Located directly adjacent to University Place are the Flatbush Avenue Medians, which features landscaping and benches (see **Figure C-6**).

With the Proposed Actions, University Place and the adjacent Flatbush Avenue Medians would be cast in incremental shadow on 1 of the 4 analysis days. On December 21, beginning at 10:00 AM, new shadow would fall on the medians and then gradually move east to enter the portion of University Place adjacent to the intersection of Fleet Street and Flatbush Avenue Extension at approximately 10:00 AM. Incremental shadow would then gradually increase in size until 10:20 AM when it would cover approximately 0.2 acres of University Place. The extent of new shadow would then gradually shrink before completely exiting the resource at 10:40 AM. During this timeframe, the trees, landscaping, and seating located in the Flatbush Avenue Medians and the northern section of University Place would be partially covered by new shadow. The incremental shadow duration on any one area of the resource would not last for more than 20 minutes at a time.

With the No Special Permit Scenario, University Place and the adjacent Flatbush Avenue Medians would be cast in incremental shadow on 1 of the 4 analysis days. On December 21, beginning at 9:40 AM, new shadow would fall on the medians between Fleet Street and DeKalb Avenue and then gradually move east to enter the portion of University Place adjacent to the intersection of Fleet Street and Flatbush Avenue Extension at approximately 10:00 AM. Incremental shadow would then gradually increase in size until 10:20 AM when it would cover just over one-tenth of University Place. The extent of the new shadows would then gradually shrink before exiting the resource at 10:40 AM. During this timeframe, the trees, landscaping, and seating located in the Flatbush Avenue Medians and the northern section of University Place would be partially covered by new shadow. The incremental shadow duration on any one area of the resource would not last for more than 20 minutes at a time.

Determination of Significance

Incremental shadows cast by the Proposed Project and adjacent potential enlargement would fall on University Place and Flatbush Avenue Medians on 1 of the 4 analysis days, December 21. New shadow cast in December would fall outside the growing season and would not affect the resource's vegetation. All of the affected areas of the open space supporting sunlight-sensitive passive uses would still be cast in direct sunlight for over half of the analysis day. Therefore, incremental shadow resulting from the Proposed Project and adjacent potential enlargement

would not substantially reduce the usability of University Place and Flatbush Avenue Medians and would not result in a significant shadow impact on the resources.

As with the Proposed Actions, incremental shadows cast by the No Special Permit Scenario building and adjacent potential enlargement would fall on University Place and Flatbush Avenue on 1 of 4 analysis days, December 21. New shadow cast in December would fall outside of the growing season and would not affect the resource's vegetation. All of the affected areas of the open space supporting sunlight-sensitive passive uses would still be cast in direct sunlight for over half of the analysis day. Therefore, incremental shadow resulting from the No Special Permit Scenario building and adjacent potential enlargement would not substantially reduce the usability of University Place and Flatbush Avenue Medians and would not result in a significant shadow impact on the resources. ✷

Attachment D: Historic and Cultural Resources

A. INTRODUCTION

This attachment assesses the potential of the Proposed Actions to affect historic and cultural resources. Historic and cultural resources include both archaeological and architectural resources. The Development Site is located at 570 Fulton Street (Block 2106, Lot 35, and p/o Lot 26) in Downtown Brooklyn. Under the Proposed Actions, the Development Site would be developed with a 40-story, mixed-use building with residential, office, and retail space.

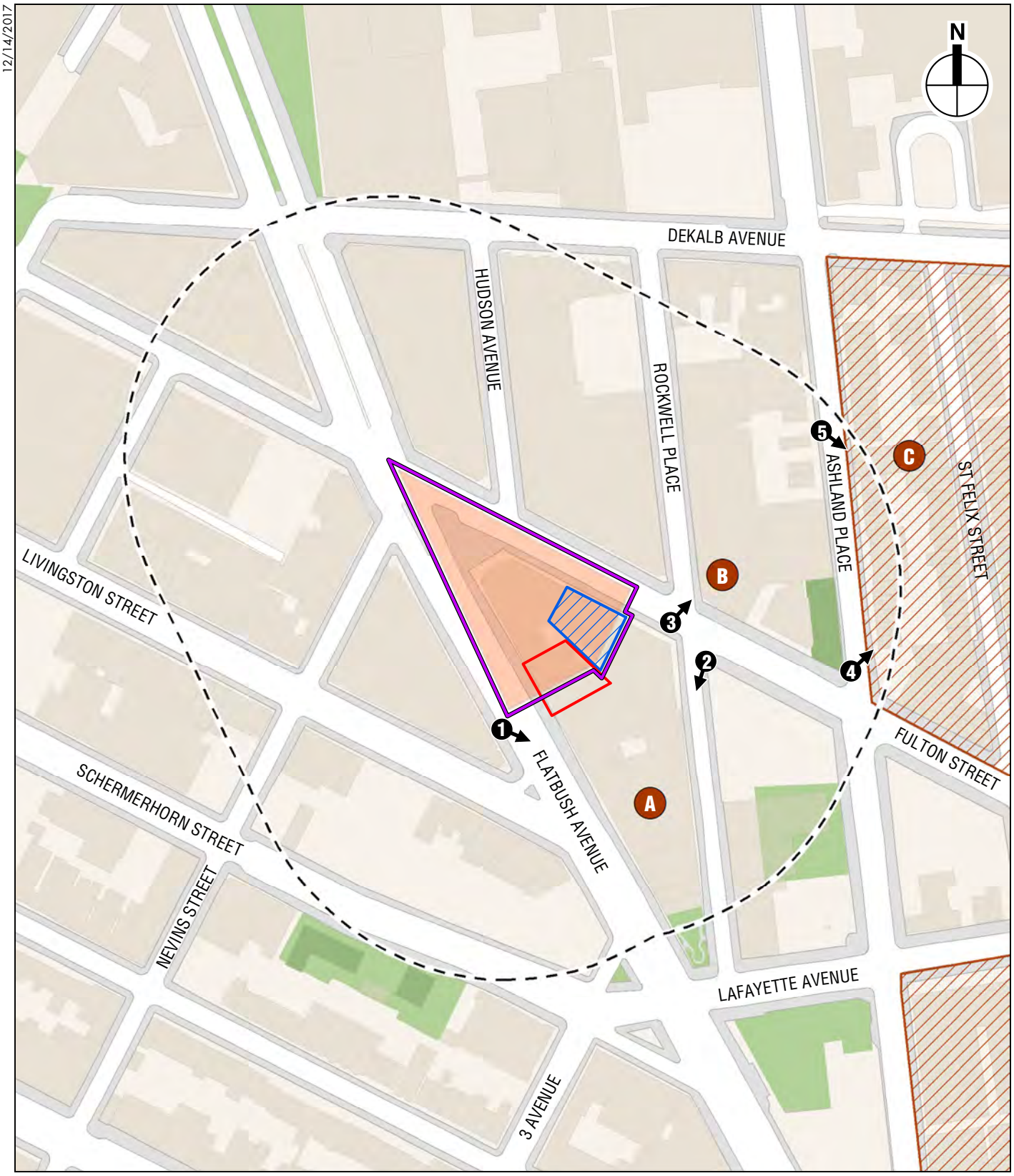
B. METHODOLOGY

The study area for archaeological resources includes the Development Site, which is the area that would be disturbed by the Proposed Project's construction. October 10, 2017, the New York City Landmarks Preservation Commission (LPC) was contacted for their preliminary determination of the Development Site's potential archaeological sensitivity. In a letter dated October 24, 2017, LPC stated that there is no archaeological significance on the Development Site (see **Appendix A**). Study areas for architectural resources are determined based on the area of potential effect for construction-period impacts, such as ground-borne vibrations, and the area of potential effect for visual or contextual effects, which is usually a larger area. Following the guidelines of the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, the architectural resources study area for the Proposed Project is defined as being within an approximately 400-foot radius of the Development Site and a larger portion of Block 2106, which includes p/o Lot 24 (the "Rezoning Area"). The Development Site and the Rezoning Area compose the Project Area (see **Figure D-1**).

For this analysis, known architectural resources include properties listed on the State and National Registers of Historic Places (S/NR) and properties determined eligible for S/NR listing (S/NR-eligible), New York City Landmarks (NYCLs), and Historic Districts (NYCHDs) and properties determined eligible for landmark status. Potential architectural resources are properties that may meet the criteria of eligibility for S/NR listing and/or NYCL designation. A survey of the study area was undertaken by an architectural historian to identify any potential architectural resources, and there were no potential resources identified in the Project Area or the study area.

Impacts on architectural resources can include both direct physical impacts and indirect impacts. Direct impacts include damage from vibration (e.g., from construction blasting or pile driving) and additional damage from adjacent construction that could occur from falling objects, subsidence, collapse, or damage from construction machinery. Adjacent construction is defined as any construction activity

12/14/2017



Project Area
Development Site
Potential Enlargement
Rezoning Area
Study Area (400-foot boundary)

Photograph View Direction and Reference Number

A *Pioneer Warehouse, 37-53 Flatbush Avenue / 74-92 Rockwell Place (S/NR-eligible, NYCL-eligible)*

B *Strand Theatre, 647 Fulton Street (S/NR-eligible)*

C *Fort Greene Historic District (Boundary Increase) [S/NR-listed]*

0 200 FEET

570 FULTON STREET REZONING

Architectural Resources
Figure D-1

that would occur within 90 feet of an architectural resource, as defined in the New York City Department of Buildings (DOB) *Technical Policy and Procedure Notice* (TPPN) #10/88.[1]

Indirect impacts on architectural resources are contextual or visual impacts that could result from project construction or operation. As described in the *CEQR Technical Manual*, indirect impacts could result from blocking significant public views of a resource; isolating a resource from its setting or relationship to the streetscape; altering the setting of a resource; introducing incompatible visual, audible, or atmospheric elements to a resource's setting; or introducing shadows over a historic landscape or an architectural resource with sunlight-sensitive features that contribute to that resource's significance (e.g., a church with stained glass windows).

C. EXISTING CONDITIONS

ARCHITECTURAL RESOURCES

DEVELOPMENT SITE AND PROJECT AREA

The Development Site is currently occupied by a three-story commercial building. While the building retains some Classical Revival style elements, including a modillion cornice, the building has been substantially altered including full alteration of the ground floor and the replacement of the windows within the large window openings. Therefore, there are no architectural resources on the Development Site.

The remainder of the Project Area is currently under construction with a 19-story mixed use building (Lot 26) and occupied with a five-story commercial building (Lot 24). The five-story building is clad in brick with a bracketed and modillion cornice and with stone window lintels. It has been altered including substantial renovations at the ground-floor façade, including the main building entrance, and through the replacement of all of its original windows. Therefore, the building does not meet S/NR eligibility criteria and there are no architectural resources in the Project Area.

STUDY AREA

There are three known architectural resources in the study area. These are described below and mapped on **Figure D-1**.

The Pioneer Warehouse[2] (NYCL-eligible, S/NR-eligible), 37-53 Flatbush Avenue and 74-92 Rockwell Place, was originally designed by J. Graham Glover in 1896. The original warehouses consisted of a two-story building at 41-43 Flatbush Avenue and a seven-story building at 78-84 Rockwell Place. Major additions to these structures took place in 1902, 1910, and 1914. The existing 10-story building probably dates from sometime after 1914. The warehouses have a classically inspired front façade on Flatbush Avenue of buff brick, concrete, and terra-cotta, with decorative ironwork. The design incorporates prows of ships that project from the façade of the building, and lion heads that ornament its base. The building has a central, two-story arched

[1] TPPN #10/88 was issued by DOB on June 6, 1988, to supplement Building Code regulations with regard to historic structures. TPPN #10/88 outlines procedures for the avoidance of damage to historic structures that are listed on the NR or NYCLs resulting from adjacent construction, defined as construction within a lateral distance of 90 feet from the historic resource.

[2] LPC determined that the Pioneer Warehouse appeared to meet S/NR and NYCL eligibility criteria as part of their review of a prior and separate project in 2004.

entrance that leads to a hemispherical shaped vestibule with a domed coffered ceiling. The Rockwell Place façade is primarily clad in red brick with two-story round-arched openings at street level. A red brick extension building at 74 Rockwell Place was designed by Walter H. Volckening and dates from 1931. The building was recently converted from self-storage to office use. The Pioneer Warehouse is approximately 100 feet south of the Development Site (see **Figure D-2**).

The Strand Theatre[3] at 647 Fulton Street was designed by Thomas W. Lamb in 1918 as a vaudeville playhouse. The building is clad in limestone, with a temple façade of four fluted Ionic columns supporting an entablature with a projecting denticulated cornice. The building is adorned with projecting lion heads above the windows at the temple front, and with Latin inscriptions on the Fulton Street and Rockwell Place façades reading "Vita Brevis Ars Longa" and "Carpe Diem Fugit Hora." The building previously had a large projecting marquee at ground level beneath the temple front. It has served as a movie palace, bowling alley, and has been most recently renovated into a multi-disciplinary arts and media complex. The theater is approximately 100 feet east of the Development Site (see **Figure D-3**).

The Fort Greene Historic District (Boundary Increase) (S/NR) is located east of Ashland Place. The Fort Greene Historic District is known for its significant concentration of 19th century townhouses along with individually significant churches, commercial buildings, and apartment buildings. The buildings within the portion of the historic district in the study area are three-and four-story brick Italianate-style row houses. These buildings are located approximately 375 feet east of the Development Site (see **Figure D-4**).

D. FUTURE WITHOUT THE PROPOSED PROJECT

DEVELOPMENT SITE AND PROJECT AREA

In the future absent the Proposed Actions (the "No Action" condition), a 103,753-gsf as-of-right building would be constructed on the Development Site that would contain residential and retail uses. The building would be set back 10 feet from Fulton Street at the 15th floor, rising to a full height of 20 stories.

STUDY AREA

There are five projects planned in the study area that are expected to be completed by the 2021 build year and these projects would not directly affect architectural resources. At 651 Fulton Street, directly across the street from the Fort Greene Historic District Boundary Increase, interior renovations are planned, which would not be expected to affect the buildings in the historic district.

E. FUTURE WITH THE PROPOSED PROJECT

DEVELOPMENT SITE AND PROJECT AREA

In the Future with the Proposed Project (the "With Action" condition), the Development Site would be redeveloped with a 227,598-gsf mixed-use building containing residential, office, and retail space. The building would rise 10 stories on Fulton Street, set back approximately 10 feet and rise to a height of 40 stories. As discussed in Attachment A, "Project Description," a portion of Lot 24,

[3] For a prior and separate project, this building was determined by LPC to appear to meet eligibility criteria for S/NR listing in September 2013.



Pioneer Warehouse, 37-53 Flatbush Avenue **1**



Pioneer Warehouse, 74-92 Rockwell Place **2**



Strand Theatre, 647 Fulton Street **3**



Fort Greene Historic District Boundary Increase, east side of Ashland Place **4**



Fort Greene Historic District Boundary Increase, east side of Ashland Place **5**

which is located south of the Development Site, would also be rezoned with the Proposed Actions. Although unlikely, a potential three-story enlargement to the existing five-story commercial building could occur. The enlargement could accommodate approximately 19,980 sf of office space. Since there are no architectural resources on the Development Site and in the Project Area, the Proposed Actions would not result in significant adverse impacts to architectural resources.

STUDY AREA

The Proposed Actions would have no adverse impacts on architectural resources in the study area. Since the architectural resources are located more than 90 feet from the Development Site, the resources are located beyond the range at which physical impacts would be anticipated.

The surrounding buildings within the study area range in heights from 7 to 51 stories and include older and shorter buildings clad in masonry and more recently constructed buildings of greater heights and with contemporary designs. The Proposed Project would also include residential and commercial uses, consistent with the settings of the resources and their uses within the study area. Therefore, the 40-story building that would be developed in the With Action condition, although 20 stories taller than the building in the No Action condition, would not introduce any incompatible visual, audible, or atmospheric elements to the resources settings, as they are similar to modern buildings currently located, and under construction, in the study area. The Proposed Actions would also not introduce significant shadows over a historic landscape or an architectural resource with sunlight-sensitive features.

F. NO SPECIAL PERMIT SCENARIO

As described in Attachment A, "Project Description," under the No Special Permit Scenario the waivers sought under the special permit would not be implemented, and development would occur in accordance with the C6-9 zoning district regulations. The development under the No Special Permit Scenario would be constructed to the same 18 FAR zoning and would include the same amount of residential, office, and retail space as the Proposed Project.

DEVELOPMENT SITE AND PROJECT AREA

In comparison to the future with the Proposed Project, the No Special Permit Scenario would result in the development of a taller, more slender building on the Development Site. Under the No Special Permit Scenario, the building on the Development Site would rise to six stories (85 feet) along Fulton Street, set back 20 feet and rise to a maximum height of 655 feet. The floor plates above the sixth story setback would be comparatively smaller than the Proposed Project, resulting in a more slender, taller building accommodating the same bulk as the Proposed Project. In contrast, the Proposed Project would rise 10 stories (148 feet) along Fulton Street, set back 10 feet, and rise to a maximum height of 40 stories (558 feet allowed under the maximum zoning envelope and inclusive of the building bulkhead).

Since there are no architectural resources on the Development Site and in the Project Area, the No Special Permit Scenario would not result in significant adverse impacts to architectural resources.

STUDY AREA

Neither the Proposed Actions nor the No Special Permit Scenario would have any adverse impacts on architectural resources in the study area. Since the architectural resources are located more than

90 feet from the Development Site, the resources are located beyond the distance at which physical impacts would be anticipated.

The surrounding buildings within the study area range in height from 7 to 51 stories and include older and shorter buildings clad in masonry and more recently constructed buildings of greater heights and with contemporary designs. The No Special Permit Scenario would be consistent with the settings of the resources and their uses within the study area.

Overall, the Proposed Actions would have no significant impacts on historic and cultural resources in the study area. ✷

A. INTRODUCTION

This attachment considers the potential of the Proposed Project to affect urban design and visual resources. The Proposed Project is a 40-story, mixed-use residential and commercial office building at 570 Fulton Street (the "Development Site") in Downtown Brooklyn (Block 2106, Lot 35 and p/o Lot 26). The Proposed Project would be facilitated by zoning map and text amendments and a special permit to allow bulk modifications (the "Proposed Actions"). The zoning map amendment would affect the Development Site and a larger portion of Block 2106, which includes Lots 24 and 26 (the "Rezoning Area"). The Development Site and the Rezoning Area compose the Project Area (see **Figure E-1**). The Proposed Project is expected to be completed by 2021.

Under the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, urban design is defined as the totality of components that may affect a pedestrian's experience of public space. These components include streets, buildings, visual resources, open spaces, natural resources, and wind. An urban design assessment under CEQR must consider whether and how a project may change the experience of a pedestrian in a study area. The *CEQR Technical Manual* guidelines recommend the preparation of a preliminary assessment of urban design and visual resources, followed by a detailed analysis, if warranted based on the conclusions of the preliminary assessment. The analysis provided below addresses urban design characteristics and visual resources for existing conditions and the Future without the Proposed Project (the "No Action" condition) and the Future with the Proposed Project (the "With Action" condition).

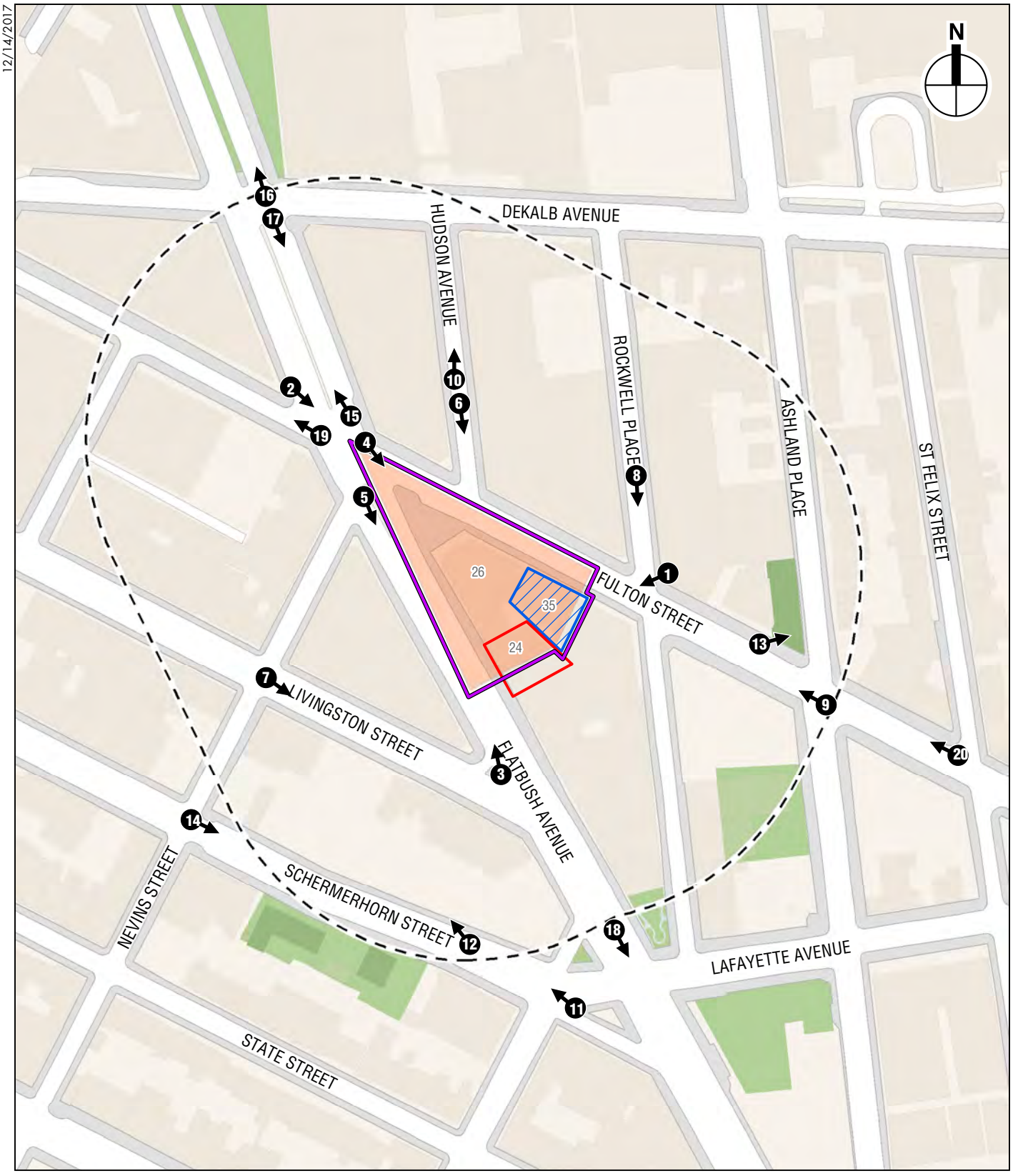
As described in detail below, the Proposed Project would not be anticipated to result in significant adverse impacts to urban design and visual resources.

B. METHODOLOGY

In accordance with the *CEQR Technical Manual*, this analysis considers the effects of the Proposed Project on the experience of a pedestrian in study area. The assessment focuses on those Project elements that have the potential to alter the built environment, or urban design, of the study area, which is collectively formed by the following components:

- *Streets*. For many neighborhoods, streets are the primary component of public space. The arrangement and orientation of streets define the location and flow of activity in an area, set street views, and create the blocks on which buildings and open spaces are organized. The apportionment of street space between cars, bicycles, transit, and sidewalks and the careful design of street furniture, grade, materials used, and permanent fixtures, including plantings, street lights, fire hydrants, curb cuts, or newsstands are critical to making a successful streetscape.
- *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, and placement on the zoning lot and block; the orientation of active uses; and pedestrian and vehicular entrances all play major roles in the vitality of the streetscape. The public realm also

12/14/2017



Project Area

Development Site

Potential Enlargement

Rezoning Area

Study Area (400-foot boundary)

1 Photograph View Direction and Reference No

25 Tax Lot Number

0 200 FEET

570 FULTON STREET REZONING

Urban Design and Visual Resources Reference Map

Figure E-1

extends to building façades and rooftops, offering more opportunity to enrich the visual character of an area.

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

This analysis considers the urban design characteristics and visual resources of the Development Site, Project Area, and study area (see **Figures E-1 and E-2**). The study area is the area within a 400-foot radius of the Project Area. The following analysis addresses each of these characteristics for existing conditions and the Future without and with the Proposed Project for the 2021 build year.

Based on the *CEQR Technical Manual*, a preliminary assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. Examples include 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 No Action condition.

As described in detail in Attachment A, "Project Description," the Proposed Project would require discretionary zoning approvals. The discretionary approvals would facilitate the new mixed-use development on the Development Site. Therefore, as the Proposed Project would result in physical alterations beyond those allowed by existing zoning, it would meet the threshold for a preliminary assessment of urban design and visual resources.

The *CEQR Technical Manual* recommends an analysis of pedestrian wind conditions in the urban design and visual resources assessment for projects that would result in the construction of large buildings at locations that experience high-wind conditions (such as along the waterfront, or other locations where winds from the waterfront are not attenuated by buildings or natural features), which may result in an exacerbation of wind conditions due to "channelization" or "downwash" effects that may affect pedestrian safety. As the Project Area is not located near the waterfront or in an area likely to experience high winds, an analysis of wind conditions and their effect on pedestrian level safety is not warranted under CEQR.

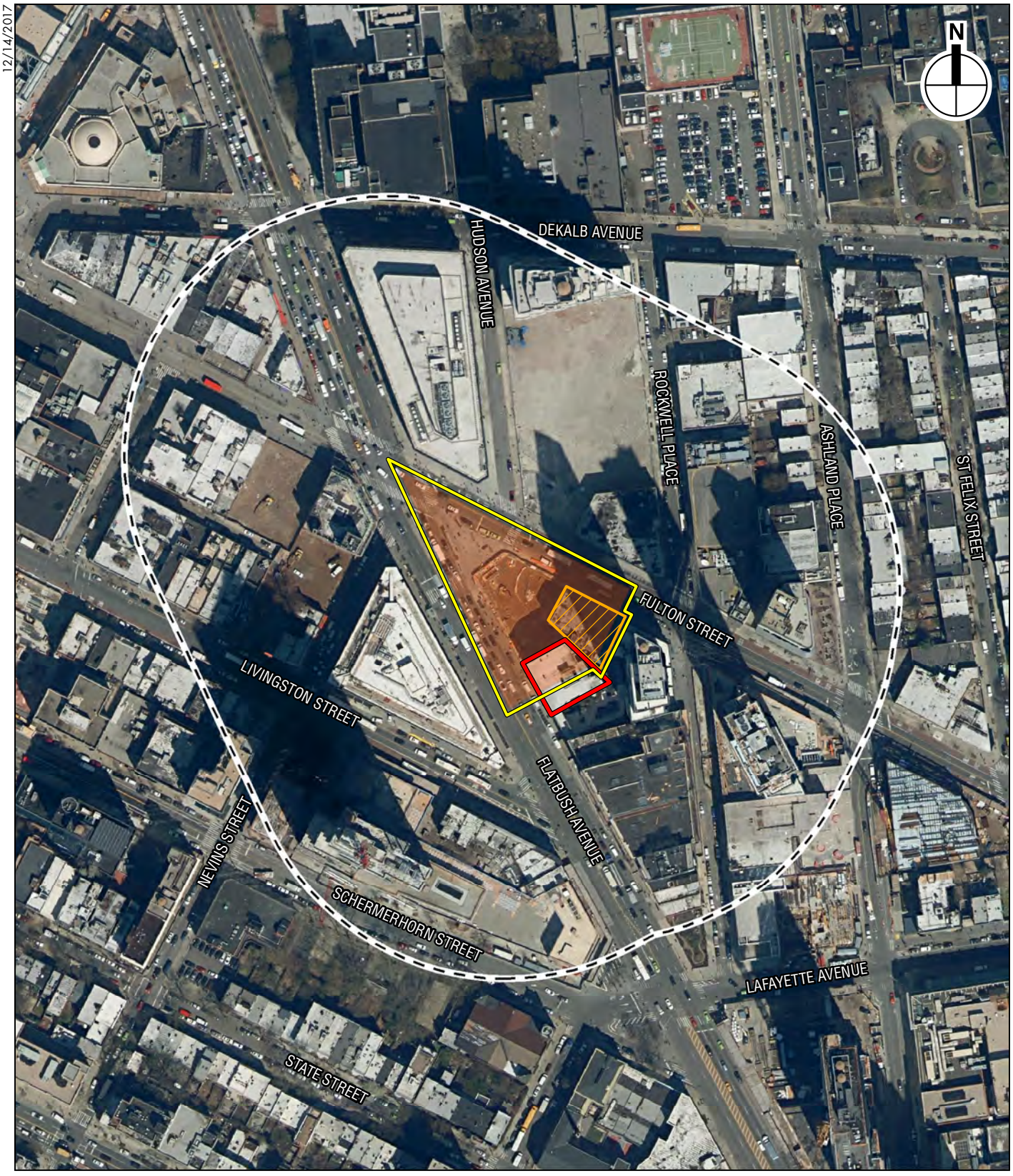
C. EXISTING CONDITIONS

URBAN DESIGN

DEVELOPMENT SITE AND PROJECT AREA

As described in Attachment A, "Project Description," the Development Site is located at 570 Fulton Street (Block 2106, Lot 35 and p/o 26). Lot 35 is currently occupied with an older three-story commercial building clad in brick and stucco with large window openings (see **Figure E-3**, photo 1). The adjacent lot (Lot 26) is currently under construction with a 19-story mixed-use building (see **Figure E-3**, photo 2). Lot 24 is currently developed with an older, five-story

12/14/2017



Project Area
Development Site
Potential Enlargement
Rezoning Area
Study Area (400-foot boundary)

0 200 FEET

Urban Design and Visual Resources
Aerial Map with 400-foot boundary
Figure E-2

570 FULTON STREET REZONING



Lot 35 on the Development Site is currently a three-story building. View from Fulton Street near Rockwell Place facing southwest. **1**



Lot 26 in the Project Area is under construction with a 19-story building. View from Fulton Street and Nevins Street facing southeast. **2**

Existing Conditions—Project Area

commercial building clad in brick and stone with a projecting cornice. The building contains office space and ground-floor retail (see **Figure E-4**, photo 3).

STUDY AREA

Streets

The study area has an irregular street pattern, with Flatbush Avenue running at an angle through the study area and block orientation shifting east and west of Flatbush Avenue, creating blocks of varying shapes and sizes (see **Figures E-1 and E-2**). The topography of the study area is relatively flat without any prominent natural features. Street furniture within the study area includes cobra-head street lamps, tear-drop street lamps, traffic lights, bus stop signs and shelters, fire hydrants, trash cans and recycling bins, mailboxes, newsstands, benches, concrete and steel protective bollards, concrete planters, CitiBike stations, bike racks, parking meter kiosks, and street-food carts.

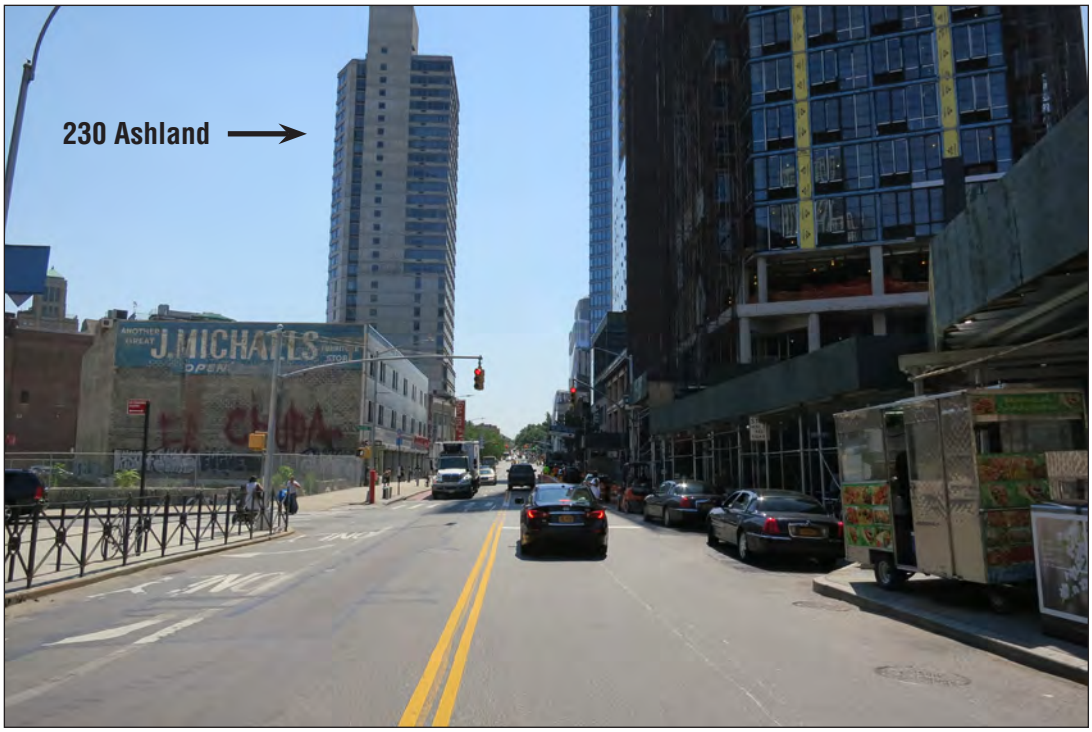
Fulton Street is an 80-foot-wide street with two lanes of two-way traffic and dedicated bus lanes (see **Figure E-4**, photo 4). Flatbush Avenue, which extends at an angle to Fulton Street, is a 100-foot-wide thoroughfare with four lanes of two-way traffic (see **Figure E-5**, photo 5). East of Flatbush Avenue, Hudson Avenue and Rockwell Place are 50-foot-wide one-way streets with curbside parking and Ashland Place is 70 feet wide with two-way traffic and curbside parking on the northbound side of the street (see **Figure E-5**, photo 6). West of Flatbush Avenue, Schermerhorn and Livingston Streets are 80-foot-wide streets with two lanes of two-way traffic and curbside parking. Schermerhorn Street has dedicated bike lanes while Livingston Street has dedicated bus lanes (see **Figure E-6**, photo 7). Nevins Street is a 50-foot-wide street with one lane of southbound traffic and one lane of curbside parking.

Buildings

The built environment within the study area is varied, with tall towers, buildings that occupy a full or half block, and small, three-story row houses. The remainder of the Project Area block is developed with a recently constructed 44-story (approximately 484-foot-tall) glass and stone-clad mixed-use building with a six-story base at 66 Rockwell Place, and five older brick buildings that rise between 3 and 12 stories and extend through the block with frontages on Flatbush Avenue and Rockwell Place (see **Figure E-6**, photo 8). These include the historic 10-story Pioneer Warehouse, which is currently being converted from self-storage to office use. Approximately 150 feet southeast of the Project Area, the recently completed building at 250 Ashland Place rises 51 stories (approximately 568 feet) and is a glass- and masonry-clad residential building with a four-story base with ground-floor retail, including a food market (see **Figure E-7**, photo 9). Approximately 124 feet northeast of the Project Area, the BRIC Arts building at the corner of Fulton Street and Rockwell Place is an older building that rises three stories (approximately 38 feet tall) along Fulton Street and six stories (approximately 73 feet tall) along Rockwell Place (see **Figure E-6**, photo 8). The building is clad in stone and brick with entrances to the ground-floor gallery space on Fulton Street and an entrance to the performance space on Rockwell Place. Just east of BRIC is the landmarked Brooklyn Academy of Music (BAM) Harvey Theater, an older L-shaped building that rises three stories (approximately 43 feet tall) along Fulton Street and four stories (approximately 52 feet tall) along Ashland Place. The building is clad in stone, terra-cotta, and brick with the primary entrance on Fulton Avenue. Just east of the BAM Harvey Theater, the recently constructed mixed-use building at 230 Ashland Place rises 30 stories (approximately 310 feet) without setbacks. This glass and concrete-clad building has a triangular footprint with ground-floor BAM artist space and dwelling units (DUs) above (see **Figure E-4**, photo 4). The



Lot 24 contains a five-story brick and stone building. View from Flatbush Avenue near Livingston Street facing northeast. **3**



Fulton Street is a two-way street with curbside parking and a dedicated bus lane. View from Fulton Street at Flatbush Avenue facing east includes 230 Ashland on the left, the building under construction on Lot 26 and 66 Rockland Place on the right, and mature street trees in the distance. **4**

Existing Conditions—Project Area and Study Area



Flatbush Avenue is a four-lane, two-way street. View from Flatbush Avenue at Nevins Street facing south with 38 Flatbush Avenue on the right. In the distance, One Plaza Street is visible. **5**



The view from Hudson Avenue facing southeast includes a vacant lot, the Project Area, 250 Ashland Place, and 230 Ashland Place. **6**

Existing Conditions—Study Area

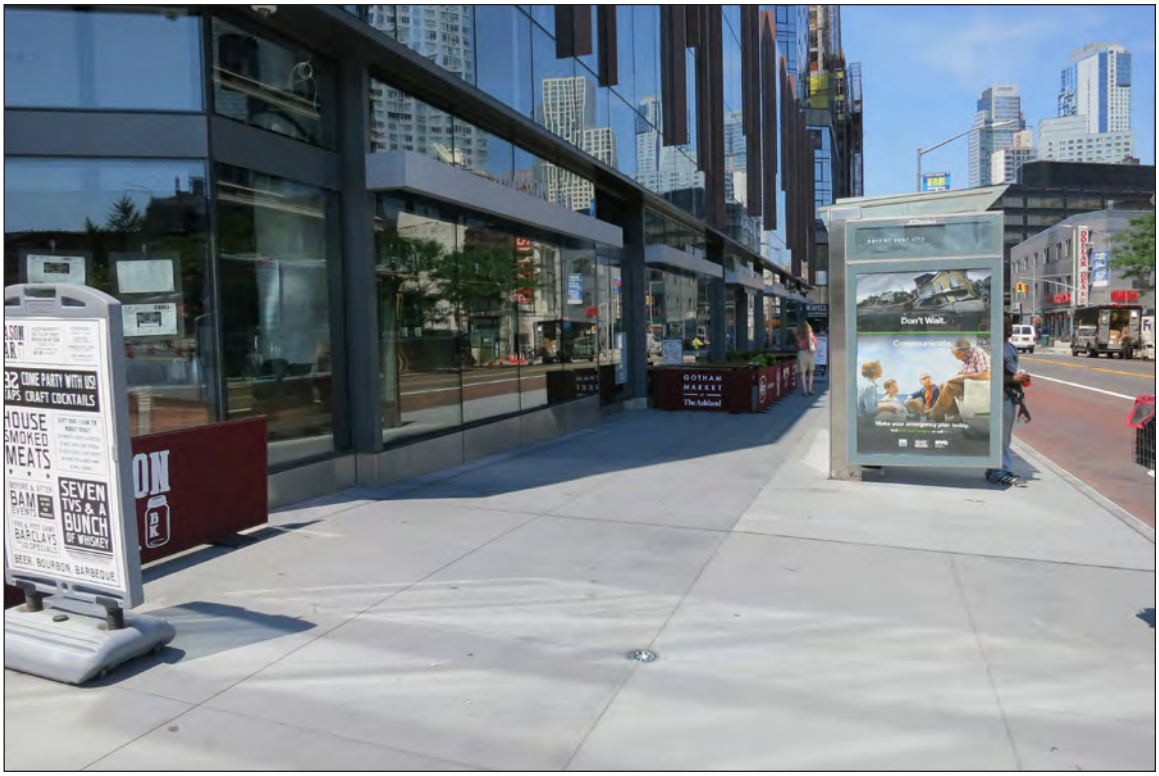


The view from Livingston Street at Nevins Street facing east with 38 Flatbush Avenue on the left and the recently constructed 300 Ashland Place in the background on the right. The domed tower of the former Williamsburgh Savings Bank Tower can be seen behind 300 Ashland Place. **7**



The view from south from Rockwell Place near Fulton Street includes the BRIC theatre on the left, 66 Rockwell Place and a 12-story building located on the Project Area block. **8**

Existing Conditions—Study Area



250 Ashland Place is a recently constructed 51-story mixed-use building with ground-floor retail, including a food market. View from Fulton Street at Ashland Place facing west. **9**



A 37-story building rises north of a vacant lot on Hudson Avenue. 395 Flatbush is on the left. View from Hudson Avenue near Fulton Street facing north. **10**

Existing Conditions—Study Area

remainder of the block bounded by Fulton Street, Ashland Place, DeKalb Avenue, and Rockwell Place is developed with older residential and mixed-use buildings that rise between three and four stories (approximately 36 to 53 feet tall) and are clad in brick. A surface parking lot is located on Rockwell Place just south of DeKalb Avenue.

North of the Project Area, the block bounded by Fulton Street, Rockwell Place, DeKalb Avenue, and Hudson Avenue is primarily a vacant lot enclosed by chain-link fencing (see **Figure E-5**, photo 6). A three-story (approximately 44-foot-tall) concrete-clad mixed-use building is located at the southern end of the block and 80 DeKalb Avenue, a recently constructed 37-story (approximately 370-foot-tall) glass and metal-clad building, is located at the northern end of the block (see **Figure E-7**, photo 10). Approximately 80 feet north of the Project Area, 395 Flatbush Avenue occupies the entire block bounded by Fulton Street, Hudson Avenue, DeKalb Avenue, and Flatbush Avenue. The building has a large footprint (approximately 50,600 square foot [sf]) and rises nine stories (approximately 115 feet). The building is clad in glass and metal with the first two stories recessed (see **Figure E-7**, photo 10). Occupying the entire irregularly shaped block bounded by Flatbush Avenue, Nevins Street, and Livingstone Street, 38 Flatbush Avenue is a concrete and glass-clad building with ground-floor retail that rises seven stories (approximately 94 feet) and has a large footprint (approximately 33,000 sf) (see **Figure E-5**, photo 5 and **Figure E-6**, photo 7). It is located approximately 100 feet west of the Project Area.

Approximately 217 feet southwest of the Project Area, 333 Schermerhorn Street (also known as the Hub) is a recently completed 56-story (approximately 610-foot tall) mixed-use building that rises from a one- to three-story base (see **Figure E-8**). The building is clad in glass and brick with ground-floor retail spaces. The building occupies the most of the southern half of the block and is built out to the sidewalk along Schermerhorn Street and Flatbush Avenue. Just east of this, 319 Schermerhorn Street is a recently completed 21-story (210-foot-tall) residential building clad in glass and cast stone with ground-floor retail.

Natural Features and Open Space

Several open spaces are located throughout the study area, including community gardens and public plazas. Located at the southern end of the Project Area block, the Rockwell Place Bears Community Garden has raised planting beds, small trees, brick pathways, and a wooden pergola all enclosed by a decorative metal fence. The Theatre for a New Audience plaza located on Ashland Place between Lafayette Avenue and Fulton Street contains decorative semi-circular benches, several trees planted in tree pits, and decorative paving. A privately owned public space located on Ashland Place at Fulton Street contains raised stone planting beds, stone benches with planters, trees, and decorative lighting (see **Figure E-9**, photo 13). The space is demarcated with decorative pavers. Although located just outside of the study area, Sixteen Sycamores Playground is visible from the study area and contains a handball court enclosed by a tall chain-link fence, and with playground equipment, benches, a comfort station, landscaping, and mature trees (see **Figure E-9**, photo 14).

VISUAL RESOURCES

As defined in the *CEQR Technical Manual*, "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."



333 Schermerhorn Street is a 56-story mixed-use building that is clad in glass and brick with a three-story base. View from Schermerhorn Street at 3rd Avenue facing west. **11**



The one- to three-story base of 333 Schermerhorn Street. View from Schermerhorn Street west of 3rd Avenue facing northwest. **12**

Existing Conditions—Study Area



The plaza at Ashland Place and Fulton Street contains planting beds, benches, trees, lighting, and decorative pavers. View from Fulton Street facing northeast. **13**



Views east on Schermerhorn Street include the mature trees in Sixteen Sycamores Playground on the right, the recently completed mixed-use building at 300 Ashland Street, and the domed tower of the former Williamsburgh Savings Bank Tower. **14**

Existing Conditions—Study Area

DEVELOPMENT SITE AND PROJECT AREA

As described above, the Development Site currently contains an older, three-story building. The building has been highly altered from its original design and is not architecturally distinguished. The Project Area is also developed with an older five-story building that has been altered, and with a new 19-story building that is under construction. As such there are no visual resources on the Development Site or in the Project Area.

STUDY AREA

Views within the study area are longest along Flatbush Avenue and Fulton Street. Views north on Flatbush Avenue include the tall buildings of Downtown Brooklyn, including the 19-story and 30-story towers of City Point, a mixed-use development, and 388 Bridge Street, a newly constructed 53-story (590-foot-tall) glass-clad building, and distant views of One Manhattan Square in Manhattan, which is under construction (see **Figure E-10**). Views south include 250 Ashland Place, 333 Schermerhorn Street—both described above—and 300 Ashland Place, a 32-story (approximately 364-foot-tall) mixed-use building with a triangular footprint (see **Figure E-11)**. Longer views south on Flatbush Avenue include tall buildings located in the Pacific Park development, including 461 Dean Street, a 32-story modular tower, and 38 Sixth Avenue, a 23-story apartment building at Dean Street and Sixth Avenue (see **Figure E-11**, photo 18 and **Figure E-5**, photo 5). The trees located within Grand Army Plaza can also be seen in the distance as well as One Plaza Street—a 15-story (approximately 195-foot-tall) older brick-clad building with an enclosed roof-top water tower— located at the corner of Flatbush Avenue and Plaza Street West, and 10 Plaza Street—a 15-story (approximately 175-foot-tall) brick building that rises without setbacks—located at the corner of Flatbush Avenue and Plaza Street East.

Views west along Fulton Street extend toward Borough Hall, and include 44 Court Street, a 14-story stone, brick, and terra-cotta-clad building with corner towers capped with copper-clad mansard roofs; 32 Court Street, a 23-story brick and stone-clad building with a hipped copper roof and brick dormer windows; and 388 Bridge Street (see **Figure E-12**, photo 19). Views east along Fulton Street include 333 Schermerhorn Street, 250 Ashland Place, and mature street trees located outside of the study area (see **Figure E-12**, photo 20).

Visual resources in the study area include the former Williamsburgh Savings Bank at 1 Hanson Place and the mature trees located within Sixteen Sycamores Playground, both located just outside of the study area but visually prevalent from within the study area. The former Williamsburgh Savings Bank, now known as One Hanson Place, is a 42-story (approximately 512-foot-tall) commercial and residential building. The stone-clad building has symmetrical setbacks with a central domed tower with clock faces on four sides. The domed tower is prominently visible within the study area from Ashland Place and partially visible from Rockwell Place, and Schermerhorn and Livingston Streets (see **Figure E-6**, photo 7 and **Figure E-9**, photo 14). The large trees within the Sixteen Sycamores Playground can be seen along Schermerhorn Street throughout the study area (see **Figure E-9**, photo 14).



Views north along Flatbush Avenue at Fulton Street include the tall buildings of City Point and Downtown Brooklyn. The One Manhattan Square building currently under construction can be seen in the distance. **15**



The view north along Flatbush Avenue at DeKalb Avenue includes the buildings of Downtown Brooklyn. **16**



The view south along Flatbush Avenue at DeKalb Avenue includes 395 Flatbush Avenue on the left and the 56-story building at 333 Schermerhorn Street on the right **17**



Views south along Flatbush Avenue near Lafayette Avenue include the recently constructed building at 300 Ashland Place and longer views of the Pacific Park development. **18**

Existing Conditions—Study Area



The view west along Fulton Street at Flatbush Avenue extends toward Borough Hall plaza. **19**



Views along Fulton Street include 250 Ashland Place and 66 Rockwell Place. **20**
View from Fulton Street at St. Felix Street facing west.

Existing Conditions—Study Area

D. FUTURE WITHOUT THE PROPOSED PROJECT

URBAN DESIGN

DEVELOPMENT SITE AND PROJECT AREA

Absent the Proposed Actions, the Development Site will be redeveloped with an as-of-right, 20-story building. Under the No Action condition, the mixed-use building will contain DUs with retail on the ground-floor and second level. The Fulton Street façade will set back 10 feet after the 14th floor for a base height of 155 feet and have a maximum overall height of 215 feet. Along Flatbush Avenue, the building will have a 20-foot setback after the first floor (see **Figure E-13**).

Absent the Proposed Actions, the 19-story (approximately 206-foot-tall) mixed-use building currently under construction on Lot 26 will continue to be developed. The new building will have retail space on the first two floors with DUs above. The building will be clad in glass, brick, and metal.

STUDY AREA

As discussed in Attachment B, "Land Use, Zoning, and Public Policy," there are nine development projects that are expected to be constructed within the 400-foot study area by 2021. 540 Fulton Street, located approximately 160 feet west of the Project Area, will be a 19-story (approximately 305-foot-tall) office building. Additional large mixed-use buildings are currently under construction just outside the study area. These include 280 Ashland Street, located approximately 450 feet southeast of the Project Area, will be a 12-story mixed-use building with residences above a library and dance studio clad in glass, brick, and pre-cast panels; and 620 Fulton Street, approximately 460 east of the Development Site, will be a 12-story glass-clad office and health care building. These projects are expected to add new buildings to the study area that will change the built environment in terms of introducing new, taller and mid-rise buildings with a variety of forms, massings, and materials that will add new mixed-use buildings to the study area.

VISUAL RESOURCES

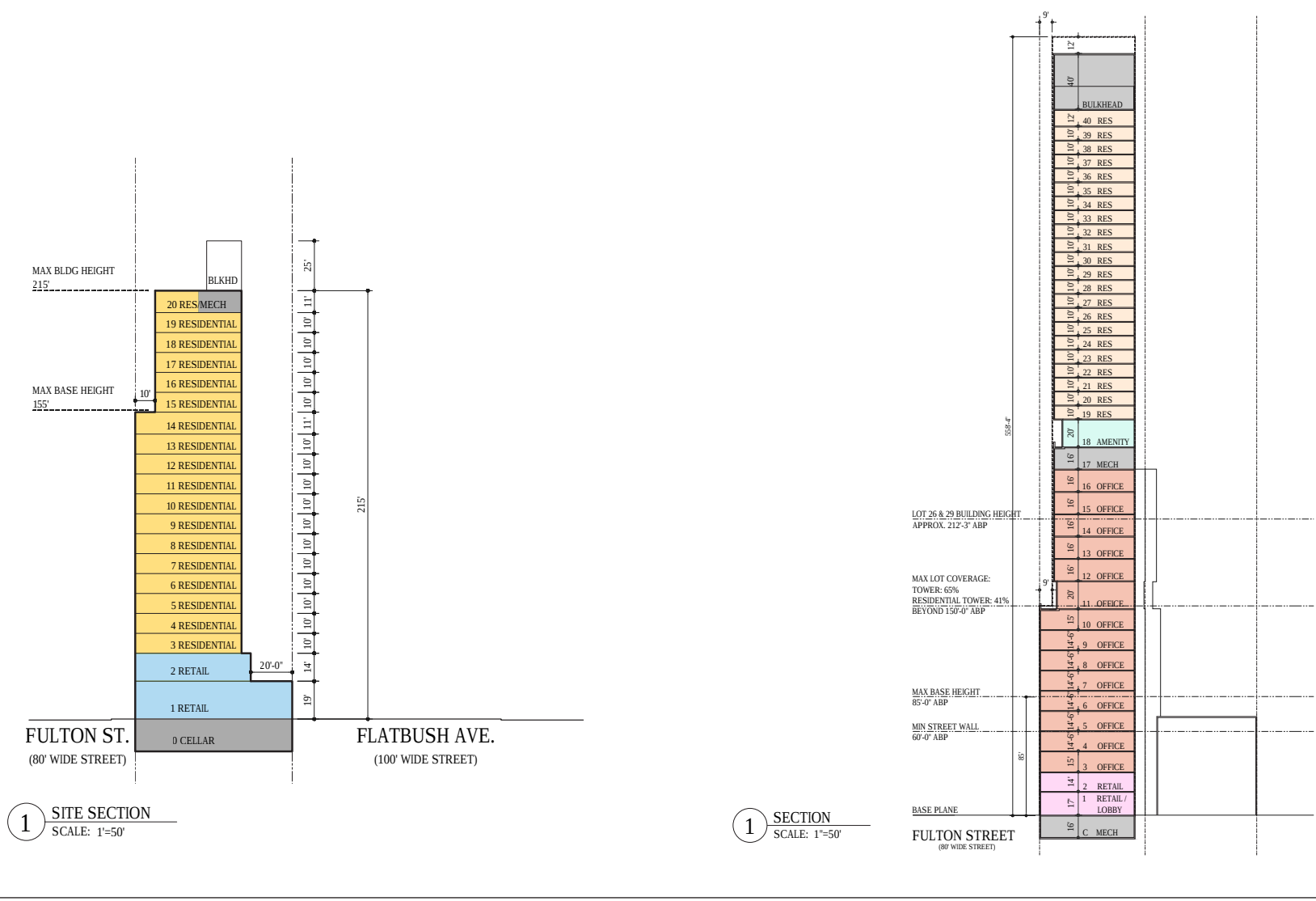
DEVELOPMENT SITE AND PROJECT AREA

Absent the Proposed Actions, the existing three-story building on the Development Site will be replaced with a new 20-story building. The new building will be located on an existing block in close proximity to other tall buildings and will not remove any visual resources.

The building under construction on Lot 26 will add a new, taller building to the Project Area that will not obstruct visual resources or view corridors.

STUDY AREA

The new developments planned for the study area will add a mix of taller and mid-rise buildings to the area and will alter existing views. However, the buildings are planned on existing blocks and will not eliminate any view corridors. Views along Flatbush Avenue are expected to remain long and will continue to include the tall buildings of Downtown Brooklyn, City Point, and Pacific Park, as well as tall buildings within the study area and surrounding areas. Views along Fulton Street will continue to be long and extend toward Borough Hall, and will also include the new buildings at 540 Fulton Street and 620 Fulton Street.



No Action

With Action

No Action and With Action Sections

570 FULTON STREET REZONING

Figure E-13

Views of the domed tower of the former Williamsburgh Savings Bank will be partially obscured by new buildings under construction; however the tower will remain visible from Ashland Place, Rockwell Place, Schermerhorn Street, and Livingston Street. The large trees within the Sixteen Sycamores Playground will also remain visible along Schermerhorn Street throughout the study area.

E. FUTURE WITH THE PROPOSED PROJECT

URBAN DESIGN

DEVELOPMENT SITE AND PROJECT AREA

The Proposed Actions would facilitate the development of a 40-story (an approximately 558-foot building would be allowed under the maximum zoning envelope, inclusive of the building bulkhead), mixed-use building containing residential space, office space, and retail space. The Proposed Project would include two levels of retail space (on the ground floor and second floor) and office space on floors 3 through 16. Residential space would occupy floors 18 through 40, with residential amenity space located on floor 18 (See **Figure E-13**). Entrances to the retail space, office lobby, and residential lobby would be located on Fulton Street. The Proposed Project would rise 10 stories along Fulton Street, then set back approximately 9 feet and rise to a total height of 40 stories. The building would have no rear yard setbacks. The requested zoning map amendment would allow for office space within the building. Compared to the No Action condition, the building that would be developed with the Proposed Actions would have a greater density and would be 20 stories taller (see **Figures E-14 and E-15**).

Under the With Action condition, the Project Area would be mapped with a C6-9 district. Under the proposed zoning text amendment, the setback requirement above 85 feet for a new building would be eliminated and would modify the rear yard and court requirements. These changes would allow for the development of the 40-story, mixed-use development on the Development Site, however, the project currently under construction on Lot 26 would not be altered as a result of these changes. As a result of the rezoning, a three-story addition could be added to the existing building on Lot 24.

STUDY AREA

The Proposed Project would not result in any changes to natural features, open spaces, or streets in the study area. The Proposed Project's mix of commercial, retail, and residential uses would be in keeping with existing uses found throughout the study area. Similar to the No Action condition, the proposed building would activate an underutilized lot and provide visual interest to the pedestrian at street level. Compared with the No Action condition, the proposed building would include commercial office space, which would bring more people to the area and increase foot traffic within the area. Compared to the No Action condition, an addition of up to three stories could be added to the existing building on Lot 24. The resulting eight-story building would be similar to other mid-rise buildings and would not alter the pedestrian experience at street level.

The proposed building would fall within the range of building heights in the study area, and would be in keeping with the newer tall towers such as the 44-story mixed-use building at 66 Rockwell Place, the 51-story building at 250 Ashland Place, the 32-story building at 300 Ashland Place, and the 30-story building at 230 Ashland Place. The proposed building would rise from a base, similar to other new buildings in the study area such as 66 Rockwell Place, 80 DeKalb Avenue, 250 Ashland Place, and 300 Ashland Place. Additionally, the base height of 10 stories would be similar to the nine-story building at 395 Flatbush Avenue and the seven-story building at 38 Flatbush



Current Condition



No Action Condition



Proposed With Action

Comparison of Views
Fulton Street at Flatbush Avenue - View Southeast
Figure E-14



Current Condition



No Action Condition



Proposed With Action

Comparison of Views
Fulton Street at Rockwell Place - View West
Figure E-15

Avenue, and would add to a unified street wall. Therefore, the Proposed Project would not be anticipated to adversely impact any urban design features of the study area or the pedestrian's experience of those characteristics.

VISUAL RESOURCES

DEVELOPMENT SITE AND PROJECT AREA

As there are no visual resources on the Development Site and Project Area, the Proposed Project would not have a significant adverse impact on such resources.

Similar to the No Action condition, the Proposed Actions would result in a new, taller building to the Project Area and alter views of the Project Area from the surrounding streets. However, the taller building that could be built under the Proposed Actions would be consistent with the heights and massings of existing and proposed development in the surrounding area, and would not result in an impact to any visual resources or obstruction of publicly accessible view corridors.

STUDY AREA

Views within the study area along Flatbush Avenue and Fulton Street would continue to include a variety of older and newer buildings of differing heights and designs. As the Proposed Project would be constructed on an existing block, it would not obstruct views along these view corridors (see **Figures E-14 through E-16**). Views north along Flatbush Avenue would continue to include the tall buildings of Downtown Brooklyn and views south would continue to extend to include the taller buildings in the Pacific Park development and the trees located within Grand Army Plaza. Views west along Fulton Street would continue to include Borough Hall to the east and tall buildings and mature street trees to the west.

As in the No Action condition, views of the domed tower of the former Williamsburgh Savings Bank will be partially obscured by new buildings currently under construction, however the Proposed Project would not further obscure those views. Partial views would remain from Ashland Place, Rockwell Place, Schermerhorn Street, and Livingston Street. The large trees within the Sixteen Sycamores Playground would remain visible along Schermerhorn Street throughout the study area.

In conclusion, the Proposed Project would not obstruct any view corridors or block views to any visual resources; would not result in any substantial changes to the built environment of a historic district; would not result in an area-wide rezoning; would not compete with icons in the skyline; would not make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings; and would not adversely impact the experience of the pedestrian. Therefore, the Proposed Project would not result in any significant adverse impacts on urban design and visual resources, or the pedestrian's experience of these characteristics of the built of natural environment. The Proposed Project would not adversely impact the vitality, walkability, or visual character of the area, and a detailed analysis of urban design and visual resources is not warranted.

F. NO SPECIAL PERMIT SCENARIO

As described in Attachment A, "Project Description," under the No Special Permit Scenario the waivers sought under the special permit would not be implemented, and the proposed development on the Development Site would be constructed in accordance with the C6-9 zoning district regulations. Under this scenario, the building to be constructed on the Development Site would be a taller, more slender building, with a maximum height of approximately 54 stories (655 feet



Current Condition



No Action Condition



Proposed With Action

Comparison of Views
Hudson Avenue north of Fulton Street - View Southwest
Figure E-16

excluding mechanical bulkhead) (see Figure A-4). The development under the No Special Permit Scenario would be constructed to the same 18 FAR zoning and would include the same amount of residential, office, and retail space as the Proposed Project.

URBAN DESIGN

DEVELOPMENT SITE AND PROJECT AREA

In comparison to the Future with the Proposed Project, the No Special Permit Scenario would result in the development of a taller, more slender building on the Development Site (see **Figure E-17**). The building would be approximately 14 stories taller than the Proposed Project. The proposed uses of the building would remain the same, as would the density of the building, and anticipated locations of building entrances. The zoning special permit would only apply to the Development Site; therefore, in the absence of the special permit, changes to building form would only apply to the Development Site.

Under the No Special Permit Scenario, the building on the Development Site would rise to six stories (85 feet) along Fulton Street, set back 20 feet and rise to a maximum height of 655 feet. The floor plates above the sixth story setback would be comparatively smaller than the Proposed Project, resulting in a more slender, taller building accommodating the same bulk as the Proposed Project. In contrast, the Proposed Project would rise 10 stories (148 feet) along Fulton Street, set back 10 feet, and rise to a maximum height of 40 stories (528 feet excluding 40-foot bulkhead). **Figure E-18** shows a comparison of the No Action condition, With Action condition, and the No Special Permit Scenario.

The development under the No Special Permit Scenario would provide the required 20-foot commercial rear yard, 30-foot residential rear yard, and inner court that complies with the requirements for R10-equivalent districts. The building constructed under the No Special Permit Scenario would rise to a maximum height of 54 stories (655 feet) as compared to the Proposed Project, which would be 40 stories (approximately 528 feet in height excluding bulkhead). The No Special Permit Scenario would result in a building that is 127 feet taller than the Proposed Project (see **Figure E-19**).

STUDY AREA

Neither the Proposed Project nor the No Special Permit Scenario would result in any changes to natural features, open spaces, or streets in the study area. In both scenarios, the Proposed Project's mix of commercial, retail, and residential uses would be in keeping with existing uses found throughout the study area, and the proposed building would activate an underutilized lot and provide visual interest to the pedestrian at street level.

As with the Proposed Project, the proposed building in the No Special Permit Scenario would fall within the general range of building heights in the study area, and would be in keeping with the newer tall towers such as the 44-story mixed-use building at 66 Rockwell Place, the 51-story building at 250 Ashland Place, the 32-story building at 300 Ashland Place, and the 30-story building at 230 Ashland Place. Therefore, the No Special Permit Scenario would not be anticipated to adversely impact any urban design features of the study area or the pedestrian's experience of those characteristics.



No Action Condition



Proposed With Action



No Special Permit Scenario

Comparison of Views
Fulton Street at Flatbush Avenue - View Southeast
Figure E-17



No Action Condition



Proposed With Action



No Special Permit Scenario

Comparison of Views
Hudson Avenue north of Fulton Street - View Southwest
Figure E-18

No Action Condition



Proposed With Action



No Special Permit Scenario



Comparison of Views

VISUAL RESOURCES

DEVELOPMENT SITE AND PROJECT AREA

As there are no visual resources on the Development Site and Project Area, the No Special Permit Scenario would not have a significant adverse impact on such resources.

As with the Proposed Project, the No Special Permit Scenario would result in the addition of a new, taller building to the Project Area and alter views of the Project Area from the surrounding streets. However, the taller building that could be built under this scenario would be consistent with the heights and massings of existing and proposed development in the surrounding area, and would not result in an impact to any visual resources or obstruction of publicly accessible view corridors.

STUDY AREA

Views within the study area along Flatbush Avenue and Fulton Street would continue to include a variety of older and newer buildings of differing heights and designs, and the No Special Permit Scenario would not obstruct views along these view corridors. Views north along Flatbush Avenue would continue to include the tall buildings of Downtown Brooklyn and views south would continue to extend to include the taller buildings in the Pacific Park development and the trees located within Grand Army Plaza. Views west along Fulton Street would continue to include Borough Hall to the east and tall buildings and mature street trees to the west. As in with the Proposed Project, partial views of the Williamsburgh Savings Bank would remain from Ashland Place, Rockwell Place, Schermerhorn Street, and Livingston Street.

In conclusion, the No Special Permit Scenario would not obstruct any view corridors or block views to any visual resources; would not result in any substantial changes to the built environment of a historic district; would not result in an area-wide rezoning; would not compete with icons in the skyline; would not make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings; and would not adversely impact the experience of the pedestrian. Therefore, the No Special Permit Scenario would not result in any significant adverse impacts on urban design and visual resources, or the pedestrian's experience of these characteristics of the built of natural environment. The No Special Permit Scenario would not adversely impact the vitality, walkability, or visual character of the area. ✶

A. INTRODUCTION

This attachment addresses the potential for the presence of hazardous materials resulting from previous and existing uses both at the Development Site, located at 570 Fulton Street (Block 2106, Lot 35, and p/o Lot 26), and in the surrounding area, and potential risks related to the Proposed Project with respect to any such hazardous materials. The existing commercial building on Lot 35 would be demolished prior to construction of a new building (with cellar level) requiring soil disturbance and excavation.

This assessment is based on a September 2015 *Phase I Environmental Site Assessment* (ESA) prepared by Hydro Tech Environmental Corp. The ESA included the findings of a reconnaissance of the Development Site, an evaluation of readily available historical information, and selected environmental databases and electronic records in accordance with American Society for Testing and Materials (ASTM) E1527-13 (see **Appendix B**).

B. EXISTING CONDITIONS

SUBSURFACE CONDITIONS

The Development Site is approximately 35 feet above mean sea level. Based on data from the east adjacent 29 Flatbush Avenue, groundwater is expected to be first encountered at approximately 27 to 30 feet below grade and would be expected to flow in a southwesterly direction towards the Gowanus Canal, approximately 1 mile away. However, actual groundwater depth and flow may be affected by the many nearby subway tunnels. There are no surface waterbodies or streams located on or near the Development Site. Groundwater in the vicinity is not used as a source of potable water. Bedrock in the Project Area is anticipated to more than 100 feet below grade.

PHASE I ESA

The Development Site is located in a mixed-use residential and commercial area. The Development Site historically included a two-story store (constructed in 1887). The current building was built around 1920. The ESA did not identify any evidence of Recognized Environmental Conditions (RECs), i.e., "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property," based on previous uses or information reported to regulatory agencies at the Development Site or nearby. However, a New York State Department of Environmental Conservation (NYSDEC) Brownfield site is located east adjacent at 29 Flatbush Avenue. Testing prior to construction of this newly constructed 42-story residential building found some elevated levels of chlorinated solvents, semivolatile organic compounds (SVOCs), metals, and pesticides in soil and groundwater, as well as tetrachloroethylene (PCE) in the soil vapor, though NYSDEC concluded the source of the PCE was likely not the site itself. All contaminated soil was excavated and removed from this site and a ventilated underground parking garage and vapor barriers were incorporated into the new construction. Based on this information,

it is possible that the subsurface of the Development Site may also include historical fill materials with elevated levels of some contaminants and PCE in soil vapor.

C. FUTURE WITHOUT THE PROPOSED PROJECT

In the Future without the Proposed Project (the "No Action" condition), it is assumed that a building similar to that associated with the Proposed Project would be built. It would need to meet applicable regulatory requirements, e.g., removing asbestos prior to demolition, properly managing lead-based paint during demolition and properly disposing of any excess soil and reporting (and addressing) any encountered petroleum tanks or spills to the NYSDEC, but, unlike with the proposed project, a vapor barrier around the new building's foundation (to address potential future vapor intrusion) would not be required.

D. FUTURE WITH THE PROPOSED PROJECT

With the Proposed Actions, the Development Site and the larger Project Area would be rezoned to allow greater commercial density. Although unlikely, the rezoning could result in a potential three-story enlargement to the existing commercial building on Lot 24. Because the enlargement would not result in any ground disturbing activities, there would be no increased exposure to hazardous materials with respect to the potential enlargement of the existing building on Lot 24. With respect to the Development Site, the Proposed Project would entail demolition prior to the construction of a new building requiring excavation and soil disturbance for foundations, utilities, etc. Although this could increase pathways for human exposure to any contaminated materials present in the existing structure or subsurface, impacts would be avoided by incorporating the following into the Proposed Project:

- Demolition would be conducted in compliance with applicable regulatory requirements, e.g., for asbestos-containing materials, lead-based paint, etc.
- As a part of the Proposed Project and redevelopment of the site and to protect future occupants in the new construction, a vapor barrier (minimum thickness of 20 mil) would be installed below the building's foundation and outside of any subgrade walls.
- A Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP), dated April 2018, have been prepared and were approved by the New York City Department of Environmental Protection (DEP) in a letter dated May 10, 2018 (see **Appendix A**). The measures identified in the DEP-approved RAP would be implemented by the development contractor during the subsurface disturbance and construction of the Proposed Project. The purpose of the RAP/CHASP is to provide for contingencies that may arise during construction at the site, including specifying appropriate measures to be implemented if underground storage tanks, soil and groundwater contamination, or other unforeseen environmental conditions are encountered.
- Applicable regulatory requirements would be followed, e.g., properly disposing of any excess soil; reporting to NYSDEC any signs of a petroleum spill (removing and registering encountered tanks); and following DEP requirements should dewatering be required.

With these measures included as part of the Proposed Project, no significant adverse impacts related to hazardous materials would occur. ✷

A. INTRODUCTION

This attachment examines the potential effects of the Proposed Actions on the study area transportation systems. The Development Site is located at 570 Fulton Street and is generally bounded by Rockwell Place to the east, Fulton Street to the north, Flatbush Avenue to the west, and Lafayette Avenue to the south.

Under the Future without the Proposed Project (the "No Action" condition), the Development Site would be developed as-of-right (AOR) with a building containing approximately 107 dwelling units (DUs) and 10,844 gross square feet (gsf) of retail space. Under the Future with the Proposed Project (the "With Action" condition), the Development Site would be developed with a mixed-use building containing approximately 139 DUs, 89,846 gsf of office space, and 12,433 gsf of retail space. Under both the No Action and With Action conditions, no parking would be provided on-site and all entrances would be located on Fulton Street.

Table G-1 provides a comparison of the development programs between the No Action and With Action conditions.

Table G-1
Comparison of No Action and With Action Conditions

Components	No Action	With Action	Increment
Residential (DUs)	107	139	32
Office (gsf)	0	89,846	89,846
Local Retail (gsf)	10,844	12,433	1,589
Source: Hill West Architects, 2017			

The analyses consider the 2021 analysis year to identify potential impacts, and if warranted, determine project improvement measures that would be appropriate to address those impacts. The travel demand projections, trip assignments, and capacity analysis presented in this attachment were conducted pursuant to the methodologies outlined in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*. As summarized below, the Proposed Actions would not result in significant adverse impacts.

TRAFFIC

The Proposed Project's incremental vehicle trips would not exceed the *CEQR Technical Manual* analysis threshold of 50 peak-hour vehicle trips. Therefore, a detailed traffic analysis is not warranted and the Proposed Project is not expected to result in any significant adverse traffic impacts.

PARKING

The *CEQR Technical Manual* states that if a quantified traffic analysis is not required, an assessment of parking supply and utilization is also not warranted. Therefore, as a result of the

conclusions described above for traffic, an on- and off-street parking analysis is not required and the Proposed Project is not expected to result in any significant adverse parking impacts.

TRANSIT

The Proposed Project's incremental subway trips would not exceed the *CEQR Technical Manual* analysis threshold of 200 or more peak-hour subway trips. Therefore, a detailed analysis of subway facilities is not warranted and the Proposed Project is not expected to result in any significant adverse subway impacts.

The Proposed Project's incremental rail trips would not exceed the *CEQR Technical Manual* analysis threshold of 200 peak-hour trips made by rail. Therefore, a detailed analysis of rail facilities is not warranted and the Proposed Project is not expected to result in any significant adverse rail impacts.

The Proposed Project's incremental bus trips would not exceed the *CEQR Technical Manual* analysis threshold of 50 or more peak-hour bus riders in a single direction. Therefore, a detailed bus line-haul analysis is not warranted and the Proposed Project is not expected to result in any significant adverse bus line-haul impacts.

PEDESTRIANS

Based on a detailed assignment of incremental Project-generated pedestrian trips, one sidewalk was identified as warranting detailed analysis for the weekday AM, midday, and PM peak hours. Analysis performed for this pedestrian element shows that the Proposed Project would not result in any significant adverse pedestrian impacts.

B. PRELIMINARY ANALYSIS METHODOLOGY AND SCREENING ASSESSMENT

The *CEQR Technical Manual* recommends a two-tier screening procedure for the preparation of a "preliminary analysis" to determine if quantified analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation analysis (Level 1) to estimate the volume of person and vehicle trips attributable to the Proposed Project. If the Proposed Project is expected to result in fewer than 50 peak-hour vehicle trips and fewer than 200 peak-hour transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the Proposed Project would result in 50 or more peak-hour vehicle trips at an intersection, 200 or more peak-hour subway trips at a station, 50 or more peak-hour bus trips in one direction along a bus route, or 200 or more peak-hour pedestrian trips traversing a pedestrian element, then further quantified analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, parking, and vehicular and pedestrian safety.

LEVEL 1 SCREENING ASSESSMENT

A Level 1 trip generation screening assessment was conducted to estimate the numbers of person and vehicle trips by mode expected to be generated by the Proposed Project during the weekday AM, midday, and PM peak hours. These estimates were then compared to the *CEQR Technical Manual* thresholds to determine if a Level 2 screening and/or quantified operational analyses would be warranted.

TRANSPORTATION PLANNING ASSUMPTIONS

Trip generation factors for the No Action project and the Proposed Project were developed based on information from the *CEQR Technical Manual*, the 2014 *Atlantic Yards Arena and Redevelopment Project FSEIS*, and U.S. Census Data—as summarized in **Table G-2**.

Table G-2
Travel Demand Assumptions

Use	Residential			Office			Local Retail		
Total Daily Person Trip	(1) Weekday 8.075 Trips / DU			(1) Weekday 18.0 Trips / KSF			(1) Weekday 205.0 Trips / KSF		
Trip Linkage	0%			0%			25%		
Net Daily Person trip	Weekday 8.075 Trips / DU			Weekday 18.0 Trips / KSF			Weekday 153.75 Trips / KSF		
Temporal	AM	MD	PM	AM	MD	PM	AM	MD	PM
	(1)			(1)			(1)		
	10%	5%	11%	12.0%	15.0%	14.0%	3%	19%	10%
Direction	(2)			(2)			(2)		
In	20%	51%	65%	96%	39%	5%	50%	50%	50%
Out	80%	49%	35%	4%	61%	95%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(3)			(2)			(4)		
	AM	MD	PM	AM	MD	PM	AM	MD	PM
Auto	9.0%	9.0%	9.0%	12.0%	2.0%	12.0%	11.0%	11.0%	11.0%
Taxi	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.0%	0.0%	0.0%
Subway	69.0%	69.0%	69.0%	65.0%	7.0%	65.0%	3.0%	3.0%	3.0%
Railroad	2.0%	2.0%	2.0%	12.0%	0.0%	12.0%	0.0%	0.0%	0.0%
Bus	2.0%	2.0%	2.0%	6.0%	7.0%	6.0%	2.0%	2.0%	2.0%
Walk	17.0%	17.0%	17.0%	4.0%	83.0%	4.0%	84.0%	84.0%	84.0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(2)(3) Weekday			(2) Weekday			(2) Weekday		
Auto	1.12			1.42			2.00		
Taxi	1.40			1.42			2.00		
Daily Delivery Trip Generation Rate	(1) Weekday 0.06 Delivery Trips / DU			(1) Weekday 0.32 Delivery Trips / KSF			(1) Weekday 0.35 Delivery Trips / KSF		
Delivery Temporal	AM	MD	PM	AM	MD	PM	AM	MD	PM
	(1)			(1)			(1)		
	12%	9%	2%	10.0%	11.0%	2.0%	8%	11%	2%
Delivery Direction	(1)			(1)			(1)		
In	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sources:
(1) *CEQR Technical Manual*
(2) *Atlantic Yards Arena and Redevelopment Project FSEIS*
(3) U.S. Census Bureau, 2011–2015 American Community Survey (ACS) 5-Year Estimates—Journey-to-Work (JTW) Data
(4) New York City Department of Transportation(DOT) Trip Generation and Mode Choice Survey

Residential

The daily person trip rate and temporal distribution for the residential component are from the *CEQR Technical Manual*. The directional distribution is from the *Atlantic Yards Arena and Redevelopment Project FSEIS*. JTW data for the 2011–2015 ACS 5-Year Estimates for Brooklyn

Census Tracts 15, 31, 33, 35, 37, 39, and 181 were used to estimate the modal splits. The vehicle occupancies are from the 2011–2015 ACS 5-Year Estimates for autos and from the *Atlantic Yards Arena and Redevelopment Project FSEIS* for taxis. The daily delivery trip rate and temporal and directional distributions are from the *CEQR Technical Manual*.

Office

The daily person trip rate and temporal distribution for the office component are from the *CEQR Technical Manual*. The direction distribution, modal splits, and vehicle occupancies are from the *Atlantic Yards Arena and Redevelopment Project FSEIS*. The daily delivery trip rate and temporal and directional distributions are from the *CEQR Technical Manual*.

Local Retail

The daily person trip generation and delivery vehicle trip generation rates for the local neighborhood retail component are from the *CEQR Technical Manual*. In line with accepted City practice, a 25-percent linked trip credit was applied to the local retail trip generation estimates. The temporal and directional distributions are from the *CEQR Technical Manual* and the *Atlantic Yards Arena and Redevelopment Project FSEIS*, respectively. The modal splits are from the DOT *Trip Generation and Mode Choice Study*. The vehicle occupancies are from the *Atlantic Yards Arena and Redevelopment Project FSEIS*. The temporal distribution for the delivery trips is from the *CEQR Technical Manual*.

TRIP GENERATION SUMMARY

As summarized in **Table G-3**, under the No Action condition, the Development Site would generate a total of 138, 358, and 265 person trips during the weekday AM, midday, and PM peak hours, respectively. Approximately 13, 22, and 20 vehicle trips would be generated during the same respective peak hours.

As summarized in **Table G-4**, under the With Action condition, the Development Site would generate a total of 361, 665, and 542 person trips during the weekday AM, midday, and PM peak hours, respectively. Approximately 37, 36, and 45 vehicle trips would be generated during the same respective peak hours.

The net incremental trips generated by the No Action and With Action conditions are shown in **Table G-5**.

Table G-3
Trip Generation Summary: No Action Condition

Program	Peak Hour	In/Out	Person Trip							Vehicle Trip			
			Auto	Taxi	Subway	Railroad	Bus	Walk	Total	Auto	Taxi	Delivery	Total
Residential 107 DU	AM	In	2	0	12	0	0	3	17	2	1	0	3
		Out	6	1	48	1	1	12	69	5	1	0	6
		Total	8	1	60	1	1	15	86	7	2	0	9
	Midday	In	2	0	15	0	0	4	21	2	0	0	2
		Out	2	0	15	0	0	4	21	2	0	0	2
		Total	4	0	30	0	0	8	42	4	0	0	4
	PM	In	6	1	43	1	1	11	63	5	1	0	6
		Out	3	0	23	1	1	6	34	3	1	0	4
		Total	9	1	66	2	2	17	97	8	2	0	10
Office 0 gsf	AM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Midday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	PM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
Local Retail 10,844 gsf	AM	In	3	0	1	0	1	21	26	2	0	0	2
		Out	3	0	1	0	1	21	26	2	0	0	2
		Total	6	0	2	0	2	42	52	4	0	0	4
	Midday	In	17	0	5	0	3	133	158	9	0	0	9
		Out	17	0	5	0	3	133	158	9	0	0	9
		Total	34	0	10	0	6	266	316	18	0	0	18
	PM	In	9	0	3	0	2	70	84	5	0	0	5
		Out	9	0	3	0	2	70	84	5	0	0	5
		Total	18	0	6	0	4	140	168	10	0	0	10
No Action Total	AM	In	5	0	13	0	1	24	43	4	1	0	5
		Out	9	1	49	1	2	33	95	7	1	0	8
		Total	14	1	62	1	3	57	138	11	2	0	13
	Midday	In	19	0	20	0	3	137	179	11	0	0	11
		Out	19	0	20	0	3	137	179	11	0	0	11
		Total	38	0	40	0	6	274	358	22	0	0	22
	PM	In	15	1	46	1	3	81	147	10	1	0	11
		Out	12	0	26	1	3	76	118	8	1	0	9
		Total	27	1	72	2	6	157	265	18	2	0	20

Table G-4
Trip Generation Summary: With Action Condition

Program	Peak Hour	In/Out	Person Trip							Vehicle Trip			
			Auto	Taxi	Subway	Railroad	Bus	Walk	Total	Auto	Taxi	Delivery	Total
Residential 139 DUs	AM	In	2	0	15	0	0	4	21	2	1	1	4
		Out	8	1	62	2	2	15	90	7	1	1	9
		Total	10	1	77	2	2	19	111	9	2	2	13
	Midday	In	3	0	20	1	1	5	30	3	0	0	3
		Out	2	0	19	1	1	5	28	2	0	0	2
		Total	5	0	39	2	2	10	58	5	0	0	5
	PM	In	7	1	55	2	2	14	81	6	1	0	7
		Out	4	0	30	1	1	7	43	4	1	0	5
		Total	11	1	85	3	3	21	124	10	2	0	12
Office 89,846 gsf	AM	In	22	2	121	22	11	7	185	15	1	1	17
		Out	1	0	5	1	0	0	7	1	1	1	3
		Total	23	2	126	23	11	7	192	16	2	2	20
	Midday	In	2	1	7	0	7	79	96	1	2	2	5
		Out	3	1	10	0	10	123	147	2	2	2	6
		Total	5	2	17	0	17	202	243	3	4	4	11
	PM	In	1	0	7	1	1	0	10	1	1	0	2
		Out	26	2	140	26	13	9	216	18	1	0	19
		Total	27	2	147	27	14	9	226	19	2	0	21
Local Retail 12,433 gsf	AM	In	3	0	1	0	1	24	29	2	0	0	2
		Out	3	0	1	0	1	24	29	2	0	0	2
		Total	6	0	2	0	2	48	58	4	0	0	4
	Midday	In	20	0	5	0	4	153	182	10	0	0	10
		Out	20	0	5	0	4	153	182	10	0	0	10
		Total	40	0	10	0	8	306	364	20	0	0	20
	PM	In	11	0	3	0	2	80	96	6	0	0	6
		Out	11	0	3	0	2	80	96	6	0	0	6
		Total	22	0	6	0	4	160	192	12	0	0	12
With Action Total	AM	In	27	2	137	22	12	35	235	19	2	2	23
		Out	12	1	68	3	3	39	126	10	2	2	14
		Total	39	3	205	25	15	74	361	29	4	4	37
	Midday	In	25	1	32	1	12	237	308	14	2	2	18
		Out	25	1	34	1	15	281	357	14	2	2	18
		Total	50	2	66	2	27	518	665	28	4	4	36
	PM	In	19	1	65	3	5	94	187	13	2	0	15
		Out	41	2	173	27	16	96	355	28	2	0	30
		Total	60	3	238	30	21	190	542	41	4	0	45

Table G-5
Trip Generation Summary: Net Incremental Trips

Program	Peak Hour	In/Out	Person Trip							Vehicle Trip			
			Auto	Taxi	Subway	Railroad	Bus	Walk	Total	Auto	Taxi	Delivery	Total
Net Incremental Total	AM	In	22	2	124	22	11	11	192	15	1	2	18
		Out	3	0	19	2	1	6	31	3	1	2	6
		Total	25	2	143	24	12	17	223	18	2	4	24
	Midday	In	6	1	12	1	9	100	129	3	2	2	7
		Out	6	1	14	1	12	144	178	3	2	2	7
		Total	12	2	26	2	21	244	307	6	4	4	14
	PM	In	4	0	19	2	2	13	40	3	1	0	4
		Out	29	2	147	26	13	20	237	20	1	0	21
		Total	33	2	166	28	15	33	277	23	2	0	25

LEVEL 1 SCREENING

TRAFFIC

As shown in **Table G-5**, the incremental trips generated by the Proposed Project would be 24, 14, and 25 vehicle trips during the weekday AM, midday, and PM peak hours, respectively. Since these increments do not exceed the *CEQR Technical Manual* analysis threshold of 50 peak-hour vehicle trips, a detailed traffic analysis is not warranted and the Proposed Project is not expected to result in any significant adverse traffic impacts.

PARKING

The *CEQR Technical Manual* states that if a quantified traffic analysis is not required, an assessment of parking supply and utilization is also not warranted. Therefore, as a result of the conclusions described above for traffic, an on- and off-street parking analysis is not required and the Proposed Project is not expected to result in any significant adverse parking impacts.

TRANSIT

As shown in **Table G-5**, the incremental subway trips generated by the Proposed Project would be 143, 26, and 166 person trips during the weekday AM, midday, and PM peak hours, respectively. Since these increments do not exceed the *CEQR Technical Manual* analysis threshold of 200 peak-hour subway trips, a detailed subway analysis is not warranted and the Proposed Project is not expected to result in any significant adverse subway impacts.

As shown in **Table G-5**, the incremental railroad trips generated by the Proposed Project would be 24, 2, and 28 person trips during the weekday AM, midday, and PM peak hours, respectively. Since these increments do not exceed the *CEQR Technical Manual* analysis threshold of 200 peak-hour trips made by rail, a detailed analysis of rail facilities is not warranted and the Proposed Project is not expected to result in any significant adverse rail impacts.

As shown in **Table G-5**, the incremental bus trips generated by the Proposed Project would be 12, 21, and 15 person trips during the weekday AM, midday, and PM peak hours, respectively. Since these increments do not exceed the *CEQR Technical Manual* analysis threshold of 50 or more peak-hour bus riders in a single direction, a detailed bus line-haul analysis is not warranted and the Proposed Project is not expected to result in any significant adverse bus line-haul impacts.

PEDESTRIANS

All incremental person trips generated by the Proposed Project would traverse the pedestrian elements (i.e., sidewalks, corners, and crosswalks) surrounding the Development Site. As shown in **Table G-5**, the net incremental pedestrian trips would be greater than 200 during the weekday AM, midday, and PM peak hours. A Level 2 screening assessment has been conducted to determine if there is a need for additional quantified pedestrian analyses.

LEVEL 2 SCREENING ASSESSMENT

As part of the Level 2 screening assessment, Project-generated trips were assigned to specific intersections and pedestrian elements near the Development Site. As previously stated, further quantified analyses to assess the potential impacts of the Proposed Project on the transportation system would be warranted if the trip assignments were to identify key pedestrian elements incurring 200 or more peak-hour pedestrian trips.

SITE ACCESS AND EGRESS

As described above, the Development Site is generally bounded by Rockwell Place to the east, Fulton Street to the north, Flatbush Avenue to the west, and Lafayette Avenue to the south. For both the No Action and With Action conditions, all entrances would be located on Fulton Street.

PEDESTRIANS

Level 2 pedestrian trip assignments were individually developed for all the proposed uses for both the No Action project and the Proposed Project, and discussed below.

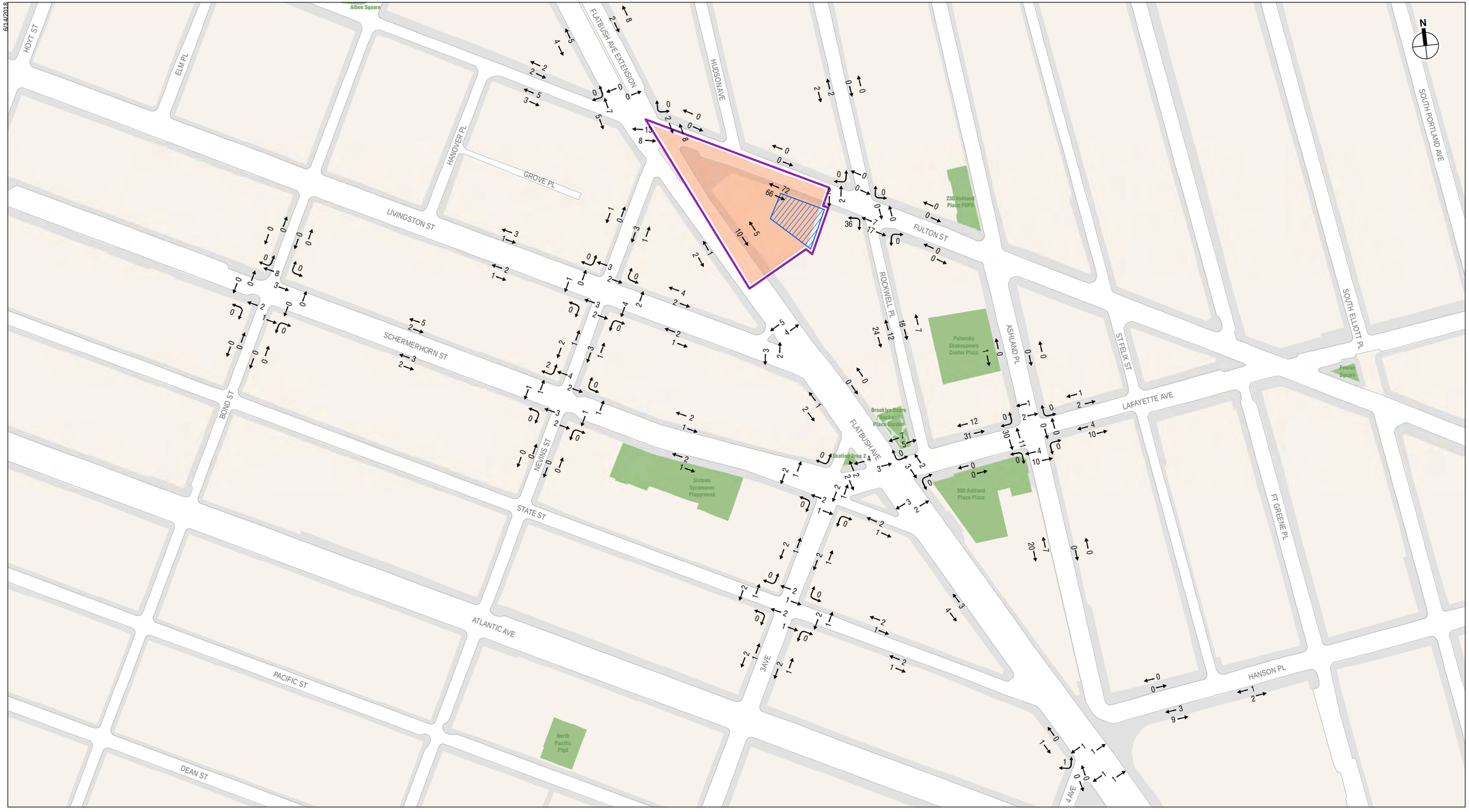
- Auto Trips—All motorists would primarily seek parking at off-street parking facilities in the study area. Motorists parking at off-site facilities would walk to and from these off-street parking facilities.
- Taxi Trips—Taxi patrons would get dropped off and picked up along Fulton Street.
- City Bus Trips—City bus riders would take buses stopping on Fulton Street, Flatbush Avenue, and Atlantic Avenue.
- Subway Trips—Subway riders were assigned to the DeKalb Avenue station (B, Q, and R), Atlantic Avenue–Barclays Center station (B, D, N, Q, and R; and No. 2, 3, 4, and 5 trains), Hoyt–Schermerhorn station (A, C, and G trains), Nevins Street station (Nos. 2, 3, 4, and 5), and Lafayette Avenue station (G train).
- Walk-Only Trips—Pedestrian walk-only trips were developed by distributing Project-generated person trips to area pedestrian facilities (i.e., sidewalks, corner reservoirs, and crosswalks) based on population data as well as the land use characteristics of the surrounding neighborhood.

Based on the detailed assignment of pedestrian trips, illustrated in **Figures G-1 through G-9**, one sidewalk was selected for detailed analysis of weekday peak-hour conditions, as summarized in **Table G-6** and **Figure G-10**.

Table G-6
Pedestrian Level 2 Screening Analysis Results

Pedestrian Elements	Weekday			Selected Analysis Location
	AM	Midday	PM	
Flatbush Avenue and Fulton Street				
Northeast Corner	25	5	28	
Southeast Corner	39	81	49	
Northwest Corner	5	54	7	
Southwest Corner	19	130	28	
North Crosswalk	0	0	0	
South Crosswalk	14	76	21	
East Crosswalk	25	5	28	
West Crosswalk	5	54	7	
Flatbush Avenue and Livingston Street				
West Sidewalk along Flatbush Avenue between Livingston Street and Nevins Street	7	2	9	
West Sidewalk along Flatbush Avenue between Livingston Street and Lafayette Avenue	1	12	2	
Northwest Corner	5	60	8	
Southwest Corner	3	24	3	
North Crosswalk	2	36	5	
West Crosswalk	3	24	3	

6/14/2018



Project Area

Development Site

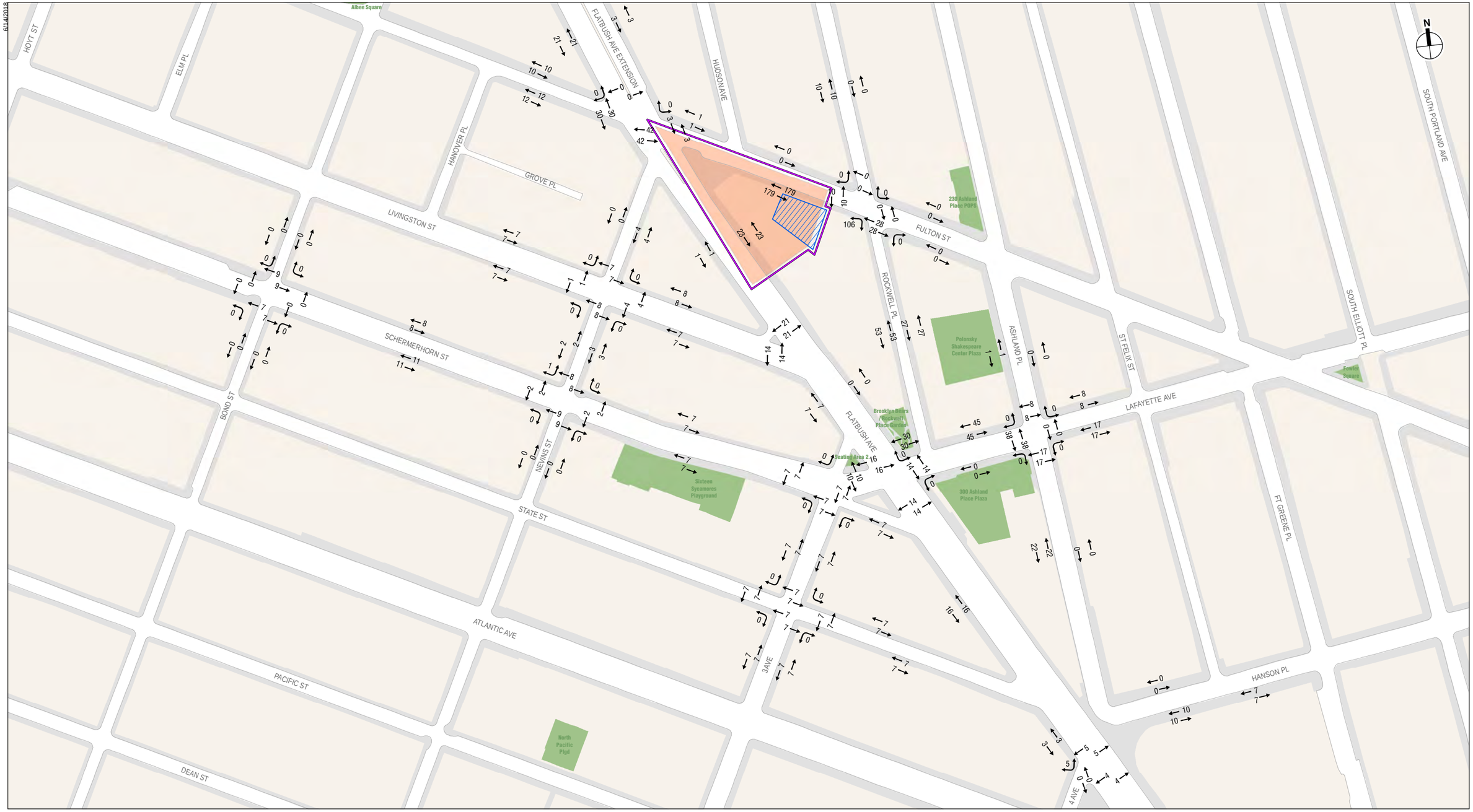
Rezoning Area

0 400 FEET

570 FULTON STREET REZONING

No Action Project Generated Pedestrian Trips
Weekday AM Peak Hour
Figure G-1

6/14/2018



Project Area

Development Site

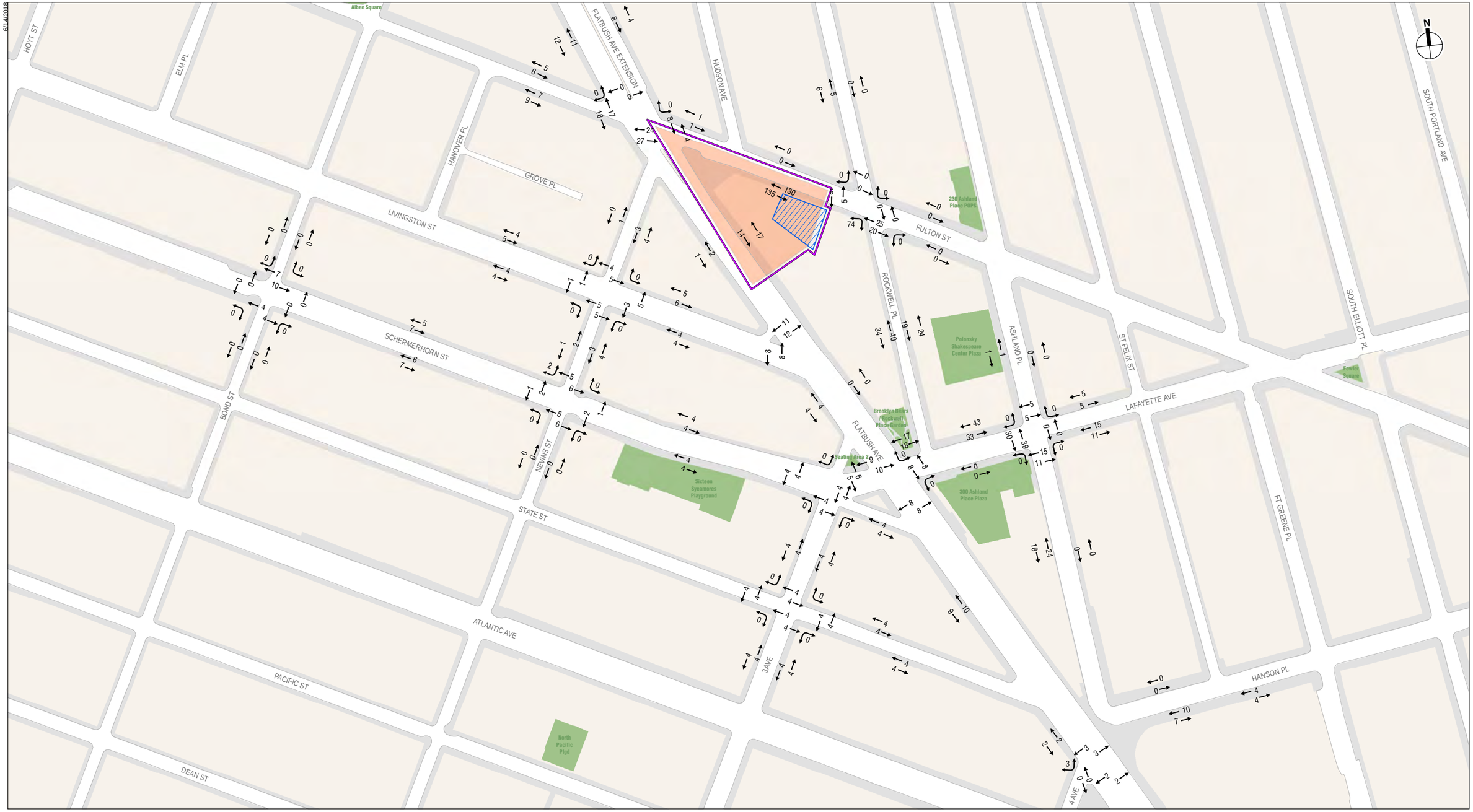
Rezoning Area

0 400 FEET

570 FULTON STREET REZONING

No Action Project Generated Pedestrian Trips
Weekday Midday Peak Hour
Figure G-2

6/14/2018



Project Area

Development Site

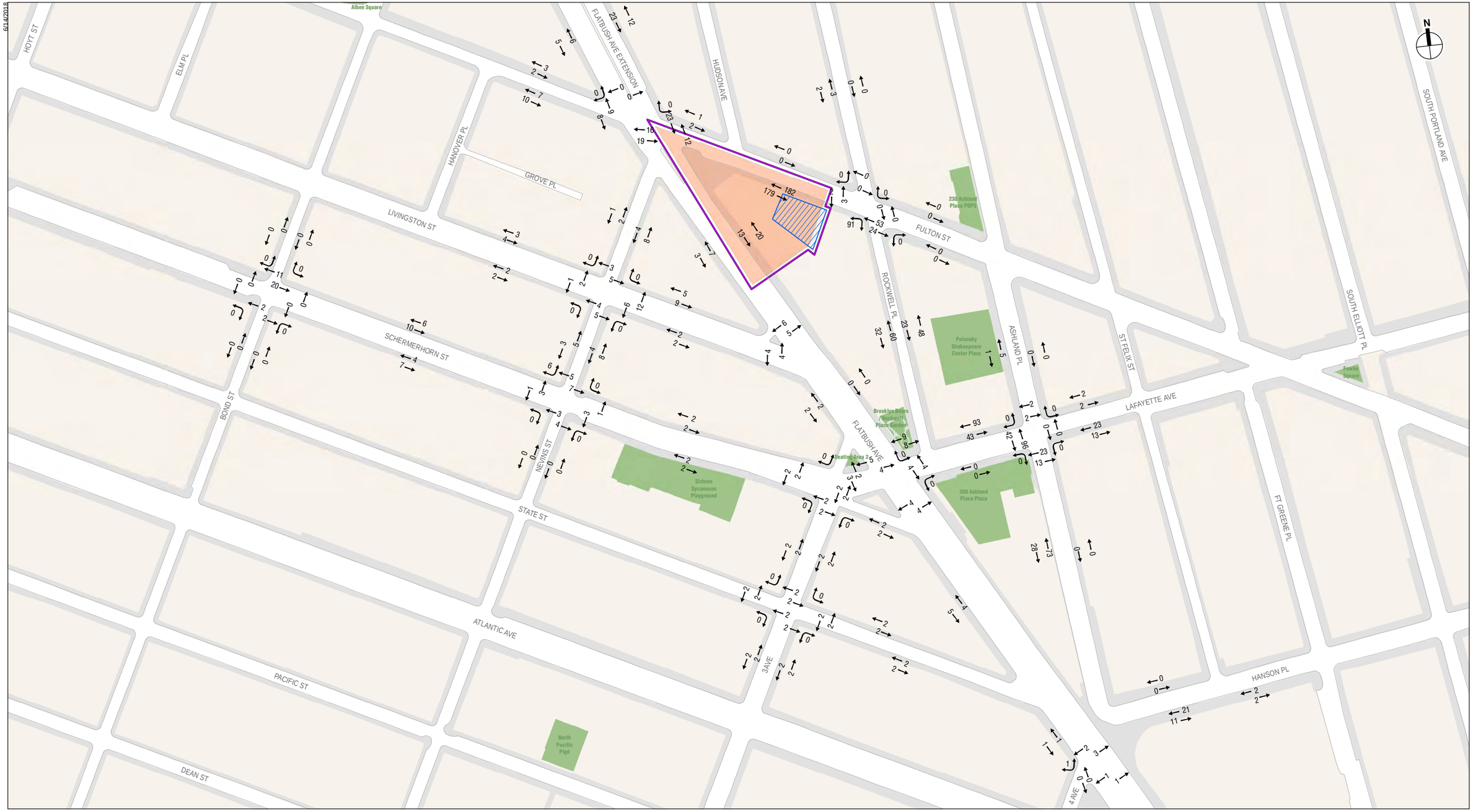
Rezoning Area

0 400 FEET

570 FULTON STREET REZONING

No Action Project Generated Pedestrian Trips
Weekday PM Peak Hour
Figure G-3

6/14/2018



Project Area

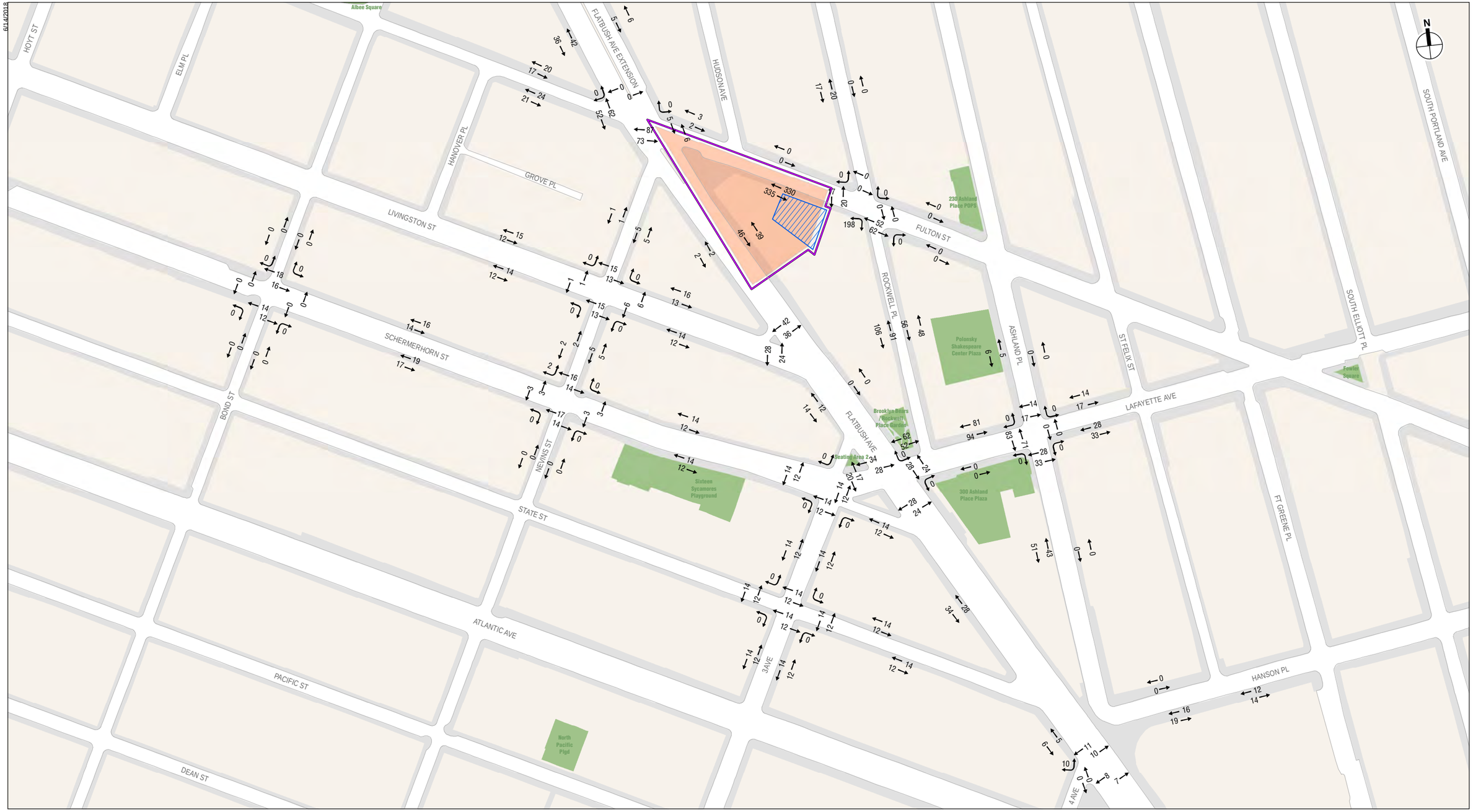
Development Site

Rezoning Area

570 FULTON STREET REZONING

With Action Project Generated Pedestrian Trips
Weekday AM Peak Hour
Figure G-4

6/14/2018



Project Area

Development Site

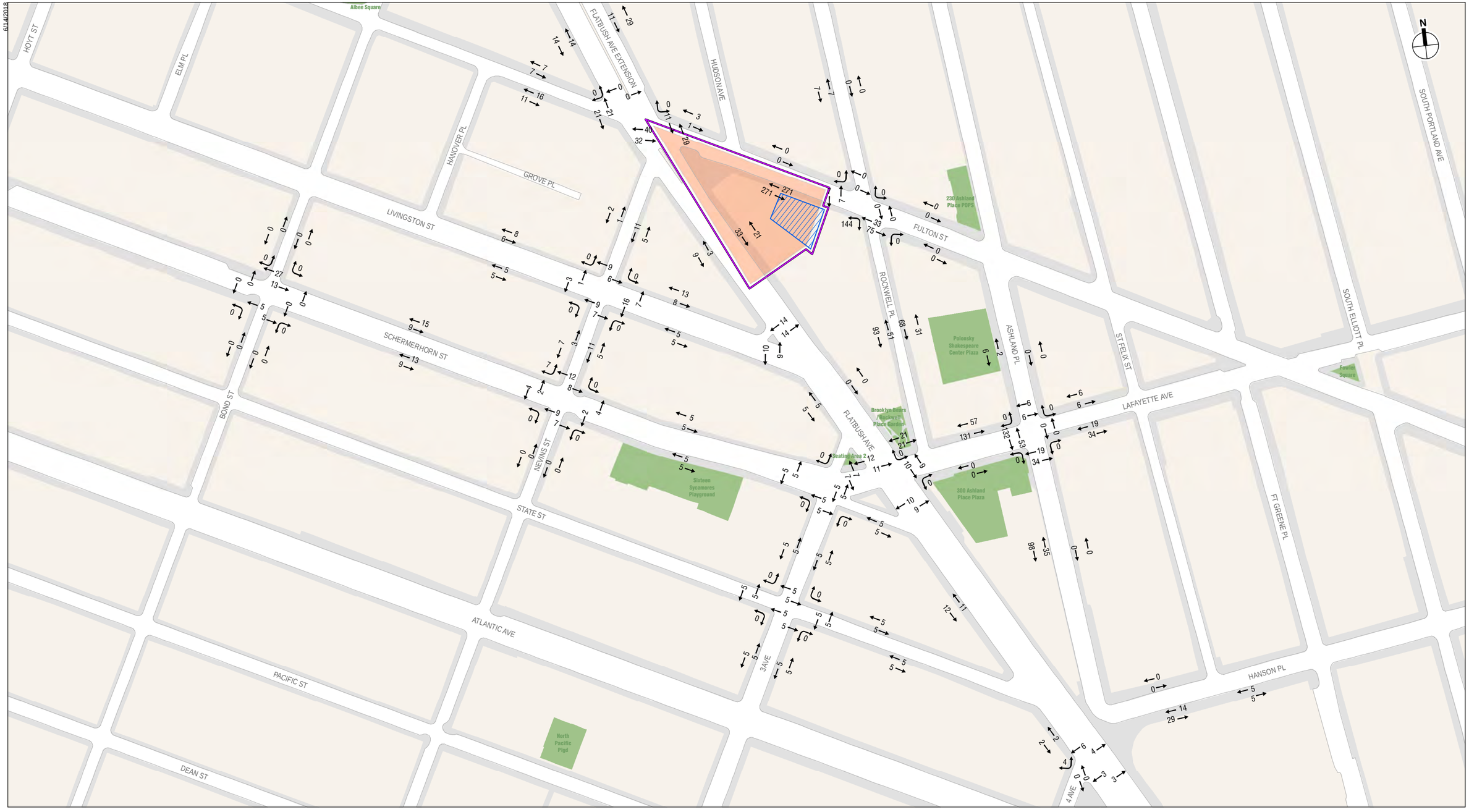
Rezoning Area

0 400 FEET

570 FULTON STREET REZONING

With Action Project Generated Pedestrian Trips
Weekday Midday Peak Hour
Figure G-5

6/14/2018



Project Area

Development Site

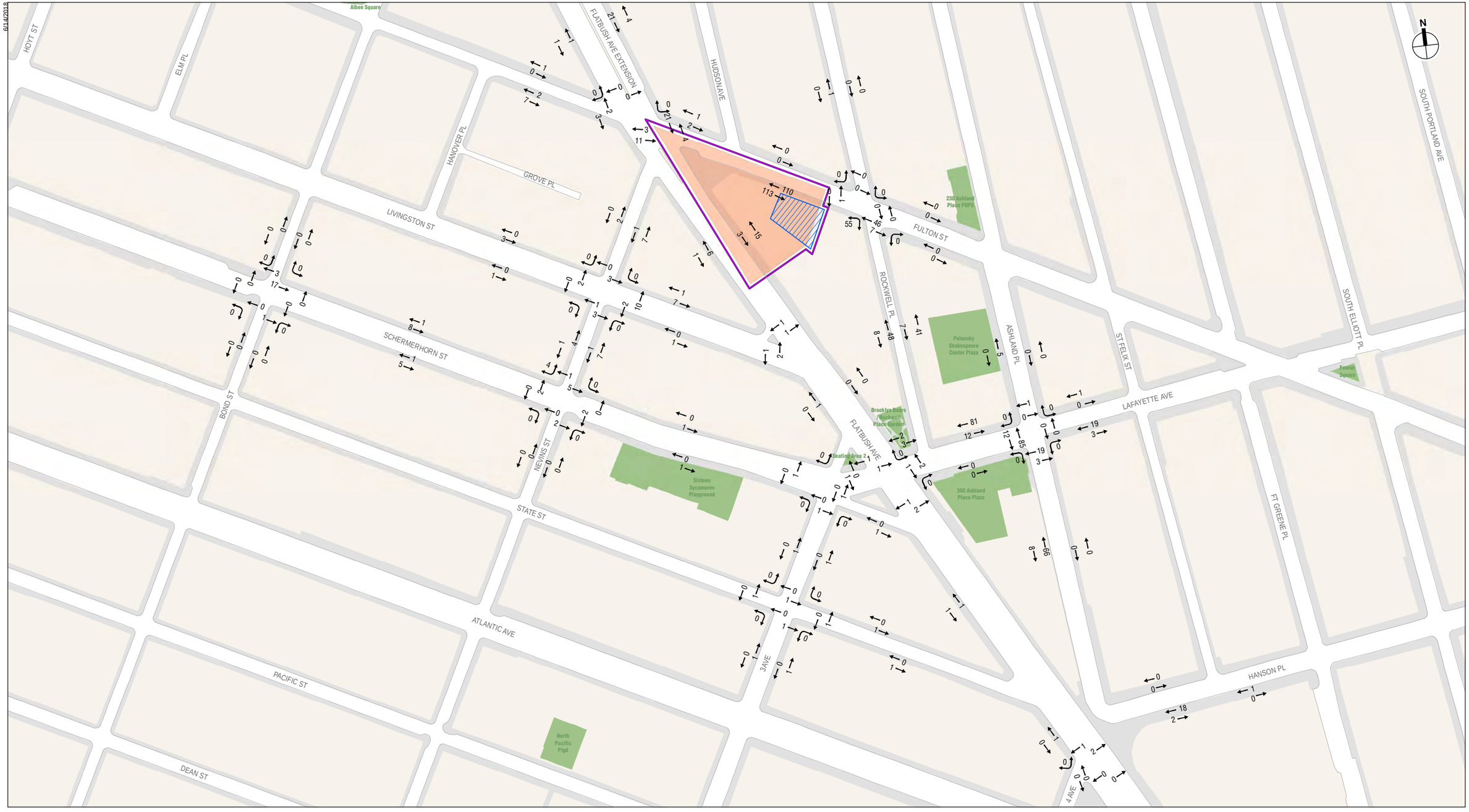
Rezoning Area

0 400 FEET

570 FULTON STREET REZONING

With Action Project Generated Pedestrian Trips
Weekday PM Peak Hour
Figure G-6

6/14/2018



Project Area

Development Site

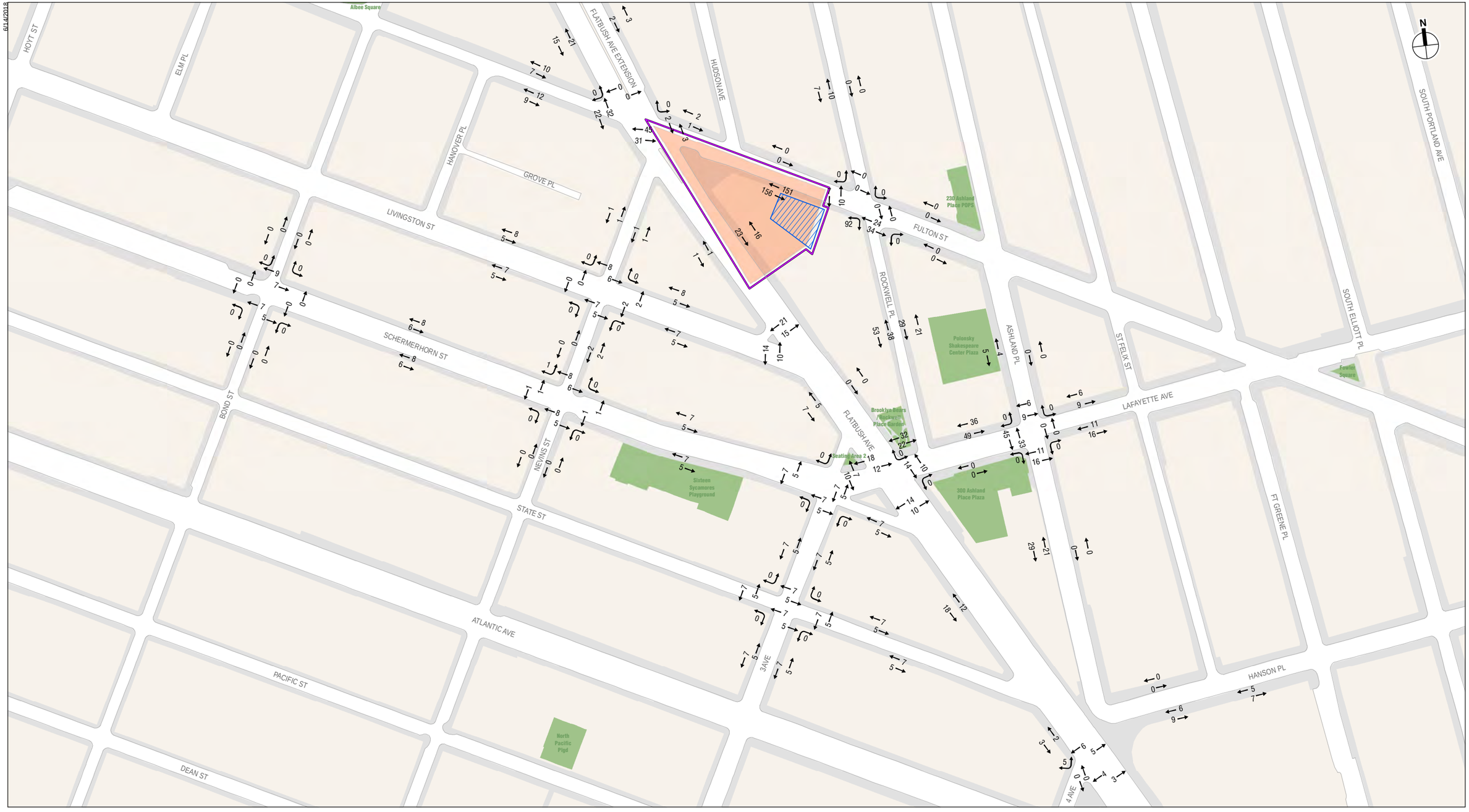
Rezoning Area

0 400 FEET

570 FULTON STREET REZONING

With Action Incremental Pedestrian Trips
Weekday AM Peak Hour
Figure G-7

6/14/2018



Project Area

Development Site

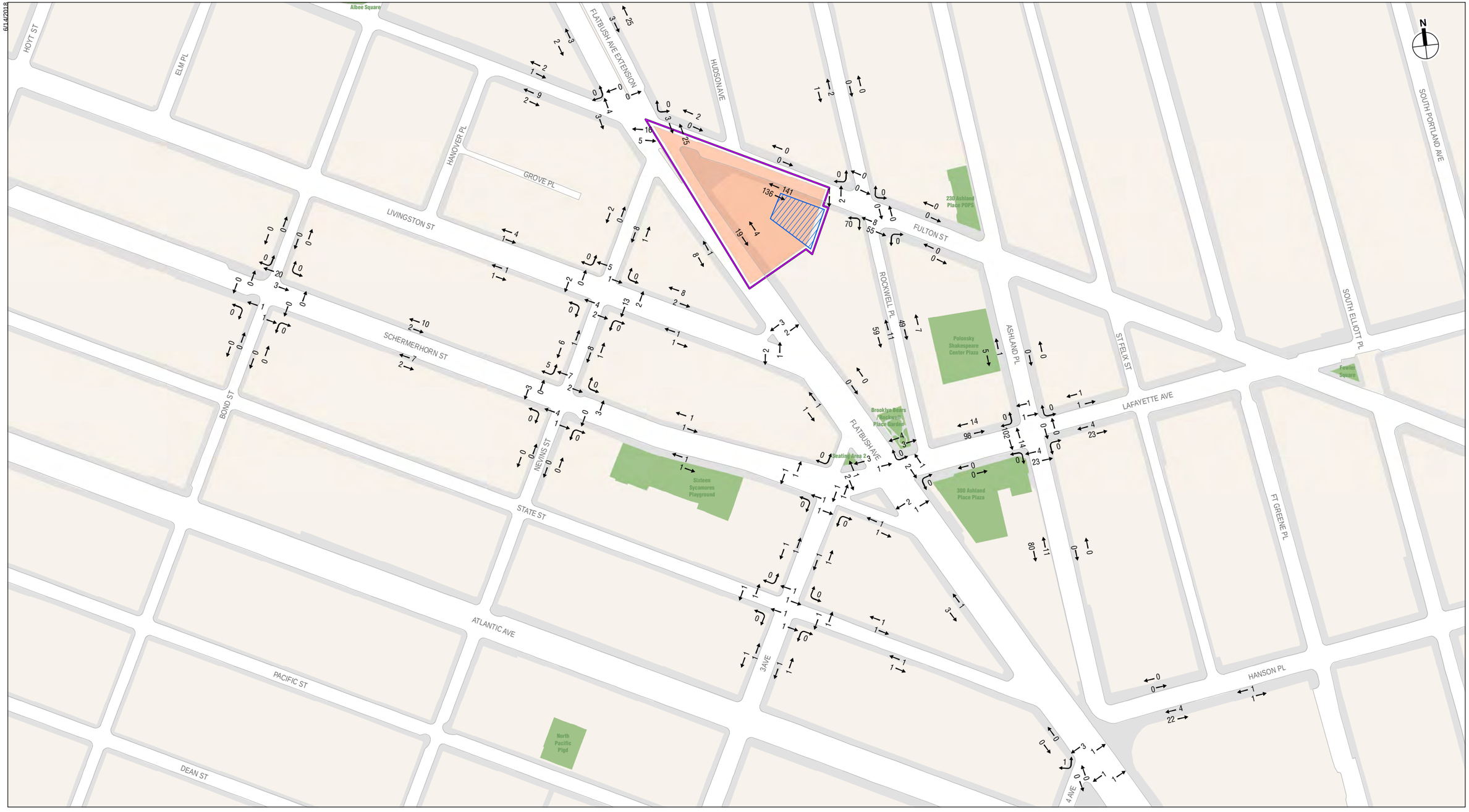
Rezoning Area

0 400 FEET

570 FULTON STREET REZONING

With Action Incremental Pedestrian Trips
Weekday Midday Peak Hour
Figure G-8

6/14/2018



Project Area

Development Site

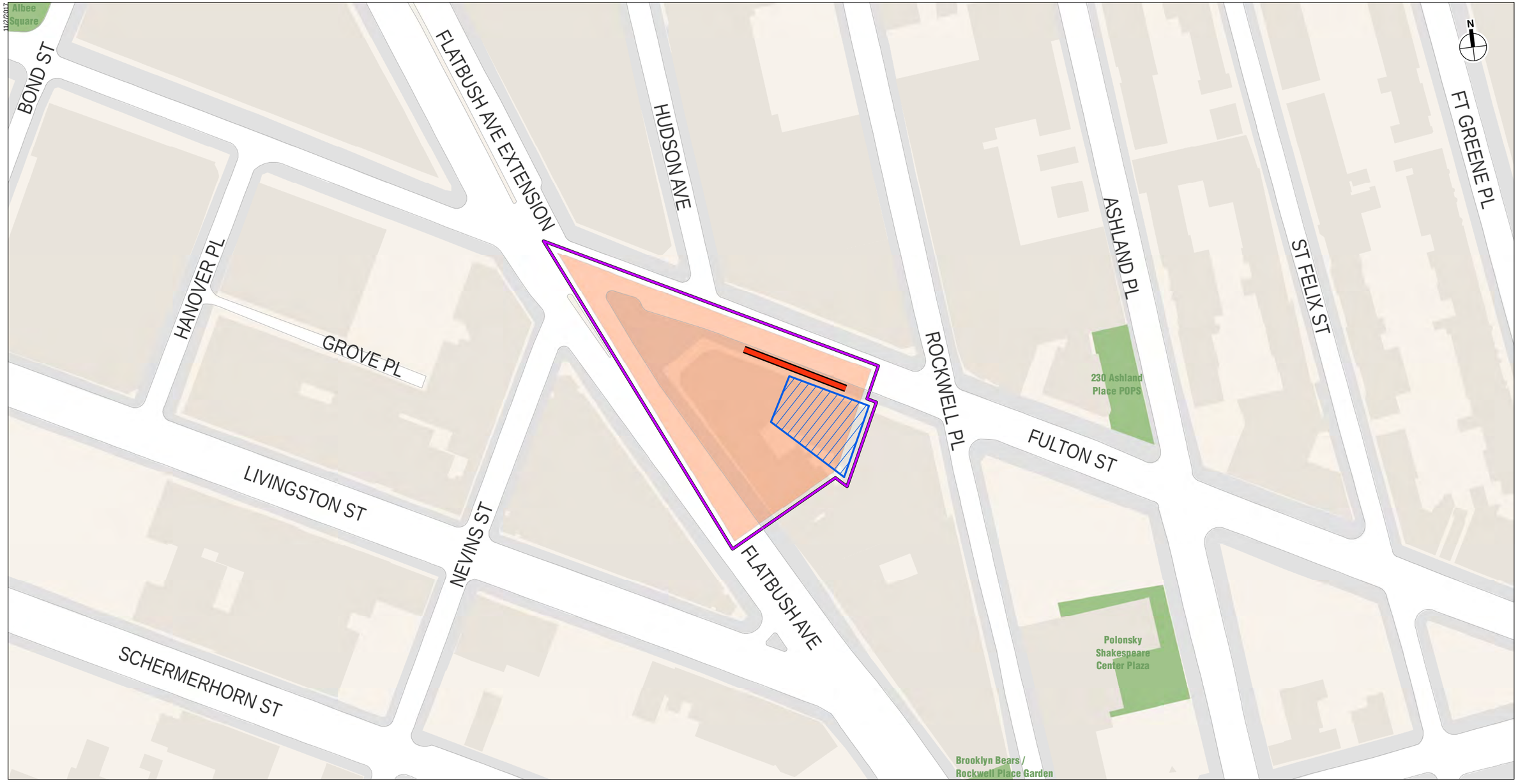
Rezoning Area

0 400 FEET

570 FULTON STREET REZONING

With Action Incremental Pedestrian Trips
Weekday PM Peak Hour
Figure G-9

11/2/2017



Project Area

Development Site

Rezoning Area

Pedestrian Analysis Location

Sidewalk

0 400 FEET

570 FULTON STREET REZONING

Pedestrian Analysis Location
Figure G-10

Table G-6 (cont'd)
Pedestrian Level 2 Screening Analysis Results

Pedestrian Elements	Weekday			Selected Analysis Location
	AM	Midday	PM	
Flatbush Avenue and Lafayette Avenue				
North Sidewalk along Lafayette Avenue between Flatbush Avenue and Rockwell Place	5	54	7	
South Sidewalk along Lafayette Avenue between Flatbush Avenue and Ashland Place	0	0	0	
East Sidewalk along Flatbush Avenue between Lafayette Avenue and Schermerhorn Street	1	17	3	
South Sidewalk along Lafayette Avenue between Flatbush Avenue and 3rd Avenue	1	12	2	
Northeast Corner	5	54	7	
Southeast Corner	6	48	6	
Northwest Corner	3	47	7	
North Crosswalk	2	30	4	
South Crosswalk	3	24	3	
East Crosswalk	3	24	3	
West Crosswalk	1	17	3	
Fulton Street and Rockwell Place				
East Sidewalk along Rockwell Place between Fulton Street and DeKalb Avenue	0	0	0	
West Sidewalk along Rockwell Place between Fulton Street and DeKalb Avenue	1	17	3	
North Sidewalk along Fulton Street between Rockwell Place and Ashland Place	0	0	0	
South Sidewalk along Fulton Street between Rockwell Place and Ashland Place	0	0	0	
East Sidewalk along Rockwell Place between Fulton Street and Lafayette Avenue	48	50	56	
West Sidewalk along Rockwell Place between Fulton Street and Lafayette Avenue	56	91	70	
North Sidewalk along Fulton Street between Rockwell Place and Hudson Avenue	0	0	0	
South Sidewalk along Fulton Street between Rockwell Place and Flatbush Avenue	223	307	277	✓
Northeast Corner	0	0	0	
Southeast Corner	53	58	63	
Northwest Corner	1	17	3	
Southwest Corner	109	167	136	
North Crosswalk	0	0	0	
South Crosswalk	53	58	63	
East Crosswalk	0	0	0	
West Crosswalk	1	17	3	
Lafayette Avenue and Ashland Place				
East Sidewalk along Ashland Place between Lafayette Avenue and Fulton Street	0	0	0	
West Sidewalk along Ashland Place between Lafayette Avenue and Fulton Street	5	9	6	
North Sidewalk along Lafayette Avenue between Ashland Place and Saint Felix Street	1	15	2	
South Sidewalk along Lafayette Avenue between Ashland Place and Saint Felix Street	22	27	27	
North Sidewalk along Lafayette Avenue between Ashland Place and Rockwell Place	93	85	112	
South Sidewalk along Lafayette Avenue between Ashland Place and Rockwell Place	0	0	0	
East Sidewalk along Ashland Place between Lafayette Avenue and Hanson Place	0	0	0	
West Sidewalk along Ashland Place between Lafayette Avenue and Hanson Place	74	50	91	
Northeast Corner	1	15	2	
Southeast Corner	22	27	27	
Northwest Corner	98	93	118	
Southwest Corner	119	105	143	
North Crosswalk	1	15	2	
South Crosswalk	22	27	27	
East Crosswalk	0	0	0	
West Crosswalk	97	78	116	

Notes: ✓ denotes pedestrian elements selected for detailed analysis.

C. TRANSPORTATION ANALYSIS METHODOLOGIES

PEDESTRIAN OPERATIONS

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

The primary performance measure for sidewalks and walkways is pedestrian space, expressed as square feet per pedestrian (SFP), which is an indicator of the quality of pedestrian movement and comfort. The calculation of the sidewalk SFP is based on the pedestrian volumes by direction, the effective sidewalk or walkway width, and average walking speed. The SFP forms the basis for a sidewalk level of service (LOS) analysis. The determination of sidewalk LOS is also dependent on whether the pedestrian flow being analyzed is best described as "non-platoon" or "platoon." Non-platoon flow occurs when pedestrian volume within the peak 15-minute period is relatively uniform, whereas, platoon flow occurs when pedestrian volumes vary significantly with the peak 15-minute period. Such variation typically occurs near bus stops, subway stations, and/or where adjacent crosswalks account for much of the walkway's pedestrian volume.

The LOS standards for sidewalks are summarized in **Table G-7**. The *CEQR Technical Manual* specifies the acceptable LOS in Central Business District (CBD) areas as mid-LOS D or better (minimum of 31.5 SFP platoon flows for sidewalks) in CBD settings, which include the study area.

Table G-7
LOS Criteria for Sidewalks

LOS	Sidewalks	
	Non-Platoon Flow	**Platoon Flow**
A	> 60 SFP	> 530 SFP
B	> 40 and ≤ 60 SFP	> 90 and ≤ 530 SFP
C	> 24 and ≤ 40 SFP	> 40 and ≤ 90 SFP
D	> 15 and ≤ 24 SFP	> 23 and ≤ 40 SFP
E	> 8 and ≤ 15 SFP	> 11 and ≤ 23 SFP
F	≤ 8 SFP	≤ 11 SFP

Sources: New York City Mayor's Office of Environmental Coordination, *CEQR Technical Manual*.

SIGNIFICANT IMPACT CRITERIA

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

Sidewalks

There are two sliding-scale formulas for determining significant sidewalk impacts. For non-platoon flow, the determination of significant sidewalk impacts is based on the sliding scale using the following formula: $Y \geq X/9.0 - 0.31$, where Y is the decrease in pedestrian space in SFP and X is the No Action pedestrian space in SFP. For platoon flow, the sliding-scale formula is $Y \geq X/(9.5 - 0.321)$. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, these formulas would apply only if the With Action pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas. **Table G-8** summarizes the sliding scale guidance provided by the *CEQR Technical Manual* for determining potential significant sidewalk impacts.

Table G-8
Significant Impact Guidance for Sidewalks

Non-Platoon Flow				Platoon Flow			
Sliding Scale Formula: *Y ≥ X/9.0 – 0.31*				Sliding Scale Formula: *Y ≥ X/(9.5 – 0.321)*			
Non-CBD Areas		CBD Areas		Non-CBD Areas		CBD Areas	
No Action Ped. Space (X, SFP)	With Action Ped. Space Reduc. (Y, SFP)	No Action Ped. Space (X, SFP)	With Action Ped. Space Reduc. (Y, SFP)	No Action Ped. Space (X, SFP)	With Action Ped. Space Reduc. (Y, SFP)	No Action Ped. Space (X, SFP)	With Action Ped. Space Reduc. (Y, SFP)
–	–	–	–	43.5 to 44.3	≥ 4.3	–	–
–	–	–	–	42.5 to 43.4	≥ 4.2	–	–
–	–	–	–	41.6 to 42.4	≥ 4.1	–	–
–	–	–	–	40.6 to 41.5	≥ 4.0	–	–
–	–	–	–	39.7 to 40.5	≥ 3.9	–	–
–	–	–	–	38.7 to 39.6	≥ 3.8	38.7 to 39.2	≥ 3.8
–	–	–	–	37.8 to 38.6	≥ 3.7	37.8 to 38.6	≥ 3.7
–	–	–	–	36.8 to 37.7	≥ 3.6	36.8 to 37.7	≥ 3.6
–	–	–	–	35.9 to 36.7	≥ 3.5	35.9 to 36.7	≥ 3.5
–	–	–	–	34.9 to 35.8	≥ 3.4	34.9 to 35.8	≥ 3.4
–	–	–	–	34.0 to 34.8	≥ 3.3	34.0 to 34.8	≥ 3.3
–	–	–	–	33.0 to 33.9	≥ 3.2	33.0 to 33.9	≥ 3.2
–	–	–	–	32.1 to 32.9	≥ 3.1	32.1 to 32.9	≥ 3.1
–	–	–	–	31.1 to 32.0	≥ 3.0	31.1 to 32.0	≥ 3.0
–	–	–	–	30.2 to 31.0	≥ 2.9	30.2 to 31.0	≥ 2.9
–	–	–	–	29.2 to 30.1	≥ 2.8	29.2 to 30.1	≥ 2.8
25.8 to 26.6	≥ 2.6	–	–	28.3 to 29.1	≥ 2.7	28.3 to 29.1	≥ 2.7
24.9 to 25.7	≥ 2.5	–	–	27.3 to 28.2	≥ 2.6	27.3 to 28.2	≥ 2.6
24.0 to 24.8	≥ 2.4	–	–	26.4 to 27.2	≥ 2.5	26.4 to 27.2	≥ 2.5
23.1 to 23.9	≥ 2.3	–	–	25.4 to 26.3	≥ 2.4	25.4 to 26.3	≥ 2.4
22.2 to 23.0	≥ 2.2	–	–	24.5 to 25.3	≥ 2.3	24.5 to 25.3	≥ 2.3
21.3 to 22.1	≥ 2.1	21.3 to 21.5	≥ 2.1	23.5 to 24.4	≥ 2.2	23.5 to 24.4	≥ 2.2
20.4 to 21.2	≥ 2.0	20.4 to 21.2	≥ 2.0	22.6 to 23.4	≥ 2.1	22.6 to 23.4	≥ 2.1
19.5 to 20.3	≥ 1.9	19.5 to 20.3	≥ 1.9	21.6 to 22.5	≥ 2.0	21.6 to 22.5	≥ 2.0
18.6 to 19.4	≥ 1.8	18.6 to 19.4	≥ 1.8	20.7 to 21.5	≥ 1.9	20.7 to 21.5	≥ 1.9
17.7 to 18.5	≥ 1.7	17.7 to 18.5	≥ 1.7	19.7 to 20.6	≥ 1.8	19.7 to 20.6	≥ 1.8
16.8 to 17.6	≥ 1.6	16.8 to 17.6	≥ 1.6	18.8 to 19.6	≥ 1.7	18.8 to 19.6	≥ 1.7
15.9 to 16.7	≥ 1.5	15.9 to 16.7	≥ 1.5	17.8 to 18.7	≥ 1.6	17.8 to 18.7	≥ 1.6
15.0 to 15.8	≥ 1.4	15.0 to 15.8	≥ 1.4	16.9 to 17.7	≥ 1.5	16.9 to 17.7	≥ 1.5
14.1 to 14.9	≥ 1.3	14.1 to 14.9	≥ 1.3	15.9 to 16.8	≥ 1.4	15.9 to 16.8	≥ 1.4
13.2 to 14.0	≥ 1.2	13.2 to 14.0	≥ 1.2	15.0 to 15.8	≥ 1.3	15.0 to 15.8	≥ 1.3
12.3 to 13.1	≥ 1.1	12.3 to 13.1	≥ 1.1	14.0 to 14.9	≥ 1.2	14.0 to 14.9	≥ 1.2
11.4 to 12.2	≥ 1.0	11.4 to 12.2	≥ 1.0	13.1 to 13.9	≥ 1.1	13.1 to 13.9	≥ 1.1
10.5 to 11.3	≥ 0.9	10.5 to 11.3	≥ 0.9	12.1 to 13.0	≥ 1.0	12.1 to 13.0	≥ 1.0
9.6 to 10.4	≥ 0.8	9.6 to 10.4	≥ 0.8	11.2 to 12.0	≥ 0.9	11.2 to 12.0	≥ 0.9
8.7 to 9.5	≥ 0.7	8.7 to 9.5	≥ 0.7	10.2 to 11.1	≥ 0.8	10.2 to 11.1	≥ 0.8
7.8 to 8.6	≥ 0.6	7.8 to 8.6	≥ 0.6	9.3 to 10.1	≥ 0.7	9.3 to 10.1	≥ 0.7
6.9 to 7.7	≥ 0.5	6.9 to 7.7	≥ 0.5	8.3 to 9.2	≥ 0.6	8.3 to 9.2	≥ 0.6
6.0 to 6.8	≥ 0.4	6.0 to 6.8	≥ 0.4	7.4 to 8.2	≥ 0.5	7.4 to 8.2	≥ 0.5
5.1 to 5.9	≥ 0.3	5.1 to 5.9	≥ 0.3	6.4 to 7.3	≥ 0.4	6.4 to 7.3	≥ 0.4
< 5.1	≥ 0.2	< 5.1	≥ 0.2	< 6.4	≥ 0.3	< 6.4	≥ 0.3

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

D. DETAILED PEDESTRIAN ANALYSIS

As described above in Section B, "Preliminary Analysis Methodology and Screening Assessment," Level 1 and Level 2 screening analyses were prepared to identify the pedestrian elements warranted a detailed analysis. Based on the assignment of pedestrian trips, one sidewalk was selected for analysis for the weekday AM, midday, and PM peak hours.

2017 EXISTING CONDITIONS

Pedestrian data were collected in October 2017 in accordance with procedures outlined in the *CEQR Technical Manual* during the weekday hours of 7:00 AM to 10:00 AM, 11:00 AM to 2:00 PM, and 4:00 PM to 7:00 PM.

STREET-LEVEL PEDESTRIAN OPERATIONS

Based on the collected data, the analysis peak hours were determined to be during the weekday hours of 7:45 AM to 8:45 AM, 1:00 PM to 2:00 PM, and 6:00 PM to 7:00 PM. The existing physical and operational characteristics of the study area sidewalk were collected during construction on an adjacent property, and therefore the sidewalk had temporarily augmented geometries during the existing data collection. This existing condition is noted in the pedestrian analysis tables below; the analysis sidewalk will have updated geometry measurements in the No Action and With Action conditions analyses.

The existing peak-hour pedestrian volumes are shown in **Figures G-11 through G-13**. As shown in **Table G-9**, the sidewalk analysis location currently operates at favorable LOS B during all three peak hours.

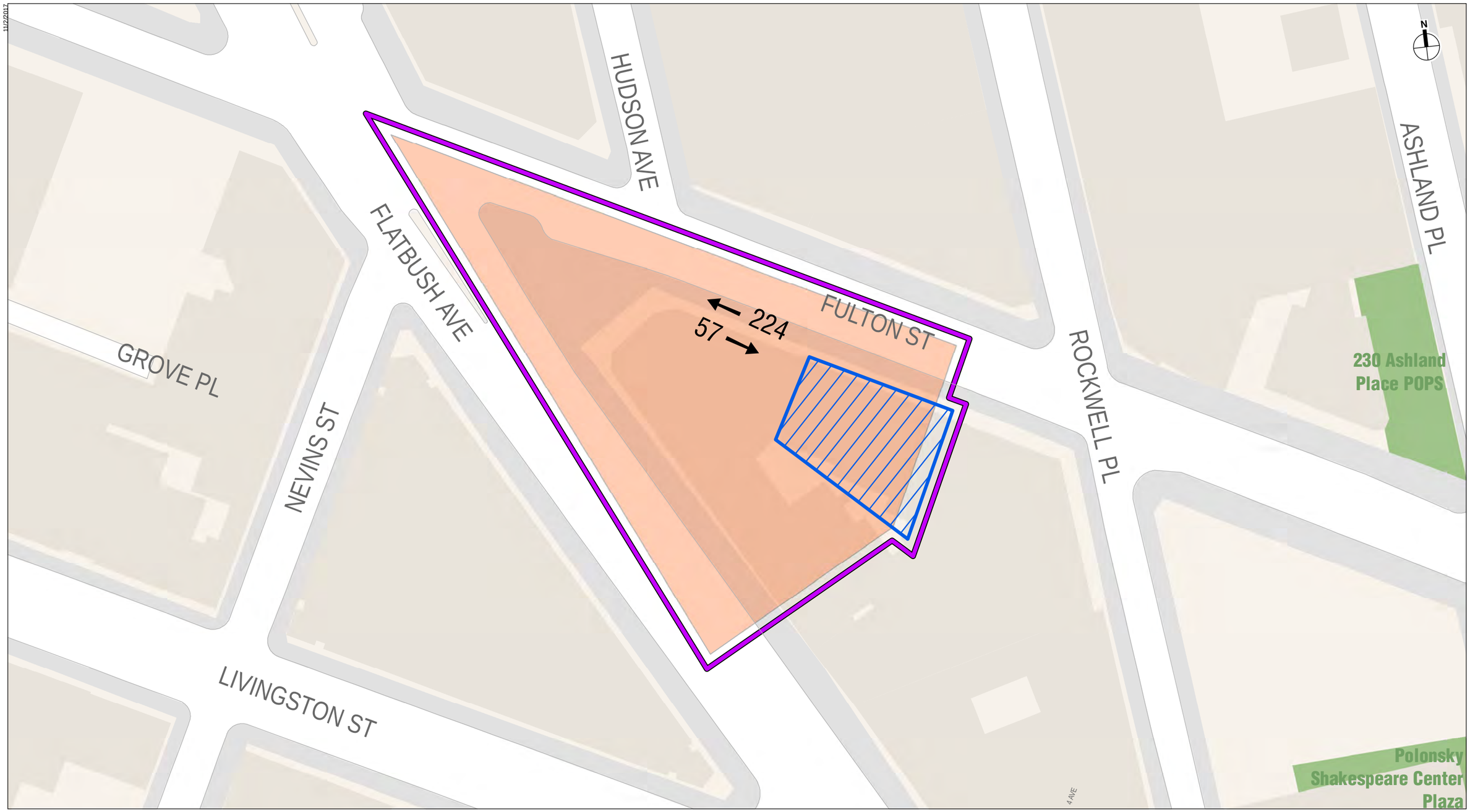
Table G-9
2017 Existing Conditions: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	Platoon LOS
Weekday AM Peak Hour						
South Sidewalk along Fulton Street between Flatbush Avenue and Rockwell Place*	South	2.5	281	0.95	133.38	B
Weekday Midday Peak Hour						
South Sidewalk along Fulton Street between Flatbush Avenue and Rockwell Place*	South	2.5	150	0.80	210.38	B
Weekday PM Peak Hour						
South Sidewalk along Fulton Street between Flatbush Avenue and Rockwell Place*	South	2.5	279	0.78	110.75	B
Note: *Sidewalk geometry affected by construction in existing conditions.						

FUTURE WITHOUT THE PROPOSED PROJECT

No Action condition pedestrian volumes were estimated by increasing existing pedestrian levels to reflect expected growth in overall travel through and within the study area. As per CEQR guidelines, an annual background growth rate of 0.25 percent was assumed for the years 2017 to 2021. A total of 41 development projects expected to occur in the No Action condition (No Build projects) were identified as being planned for the ¼-mile study area. However, some of these projects are modest in size and would not be substantial trip generators. In addition, many of the No Build projects' pedestrian trips would not gravitate to the selected analysis location. After reviewing the development programs for each of the No Build projects, it was determined that background growth will address the increase in traffic and pedestrian levels for 16 of the small- to moderate-sized projects in the study area, and 12 of the projects would have no pedestrian trip overlay with the selected analysis location. For the other No Build projects, person and vehicle trips were estimated and incorporated into the No Action analyses. **Table G-10** and **Figure G-14** summarize the projects that were accounted for in this future 2021 baseline, including those that were considered as part of the study area background growth. The No Action peak-hour pedestrian volumes for analysis are shown in **Figures G-15 through G-17**.

11/2/2017



Project Area

Development Site

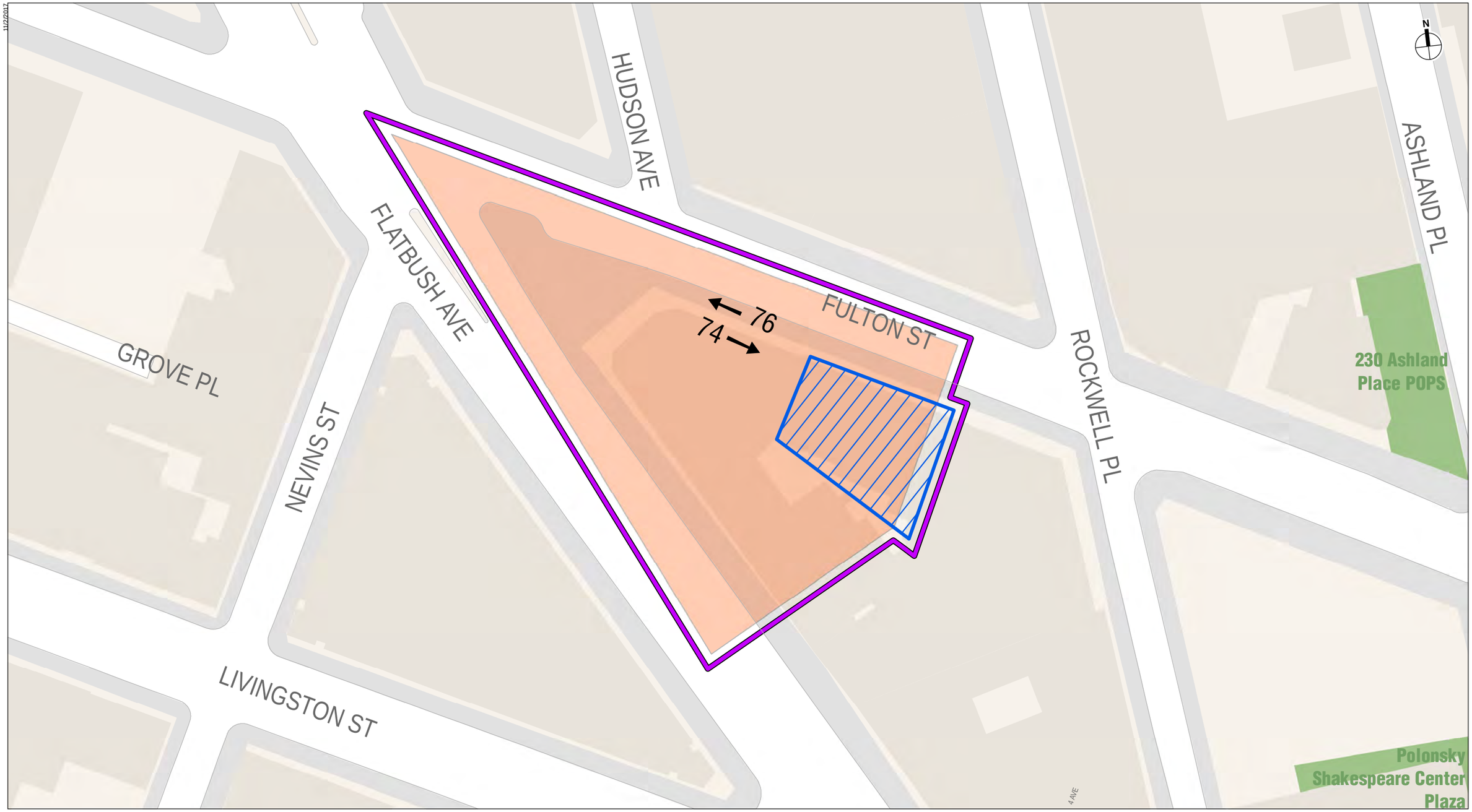
Rezoning Area

0 100 FEET

570 FULTON STREET REZONING

2017 Existing Pedestrian Volumes
Weekday AM Peak Hour
Figure G-11

11/2/2017



Project Area

Development Site

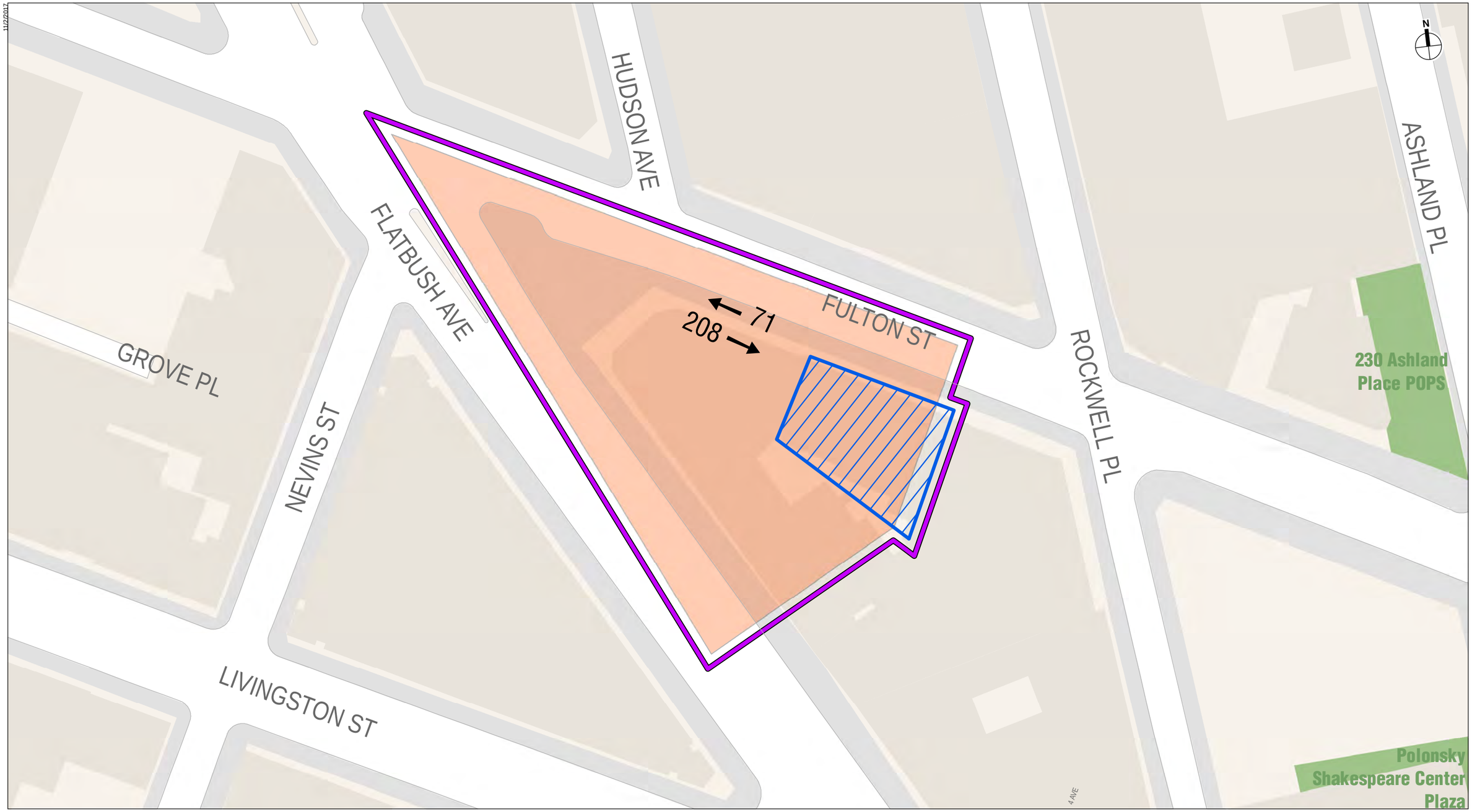
Rezoning Area

0 100 FEET

570 FULTON STREET REZONING

2017 Existing Pedestrian Volumes
Weekday Midday Peak Hour
Figure G-12

11/2/2017



Project Area

Development Site

Rezoning Area

0 100 FEET

570 FULTON STREET REZONING

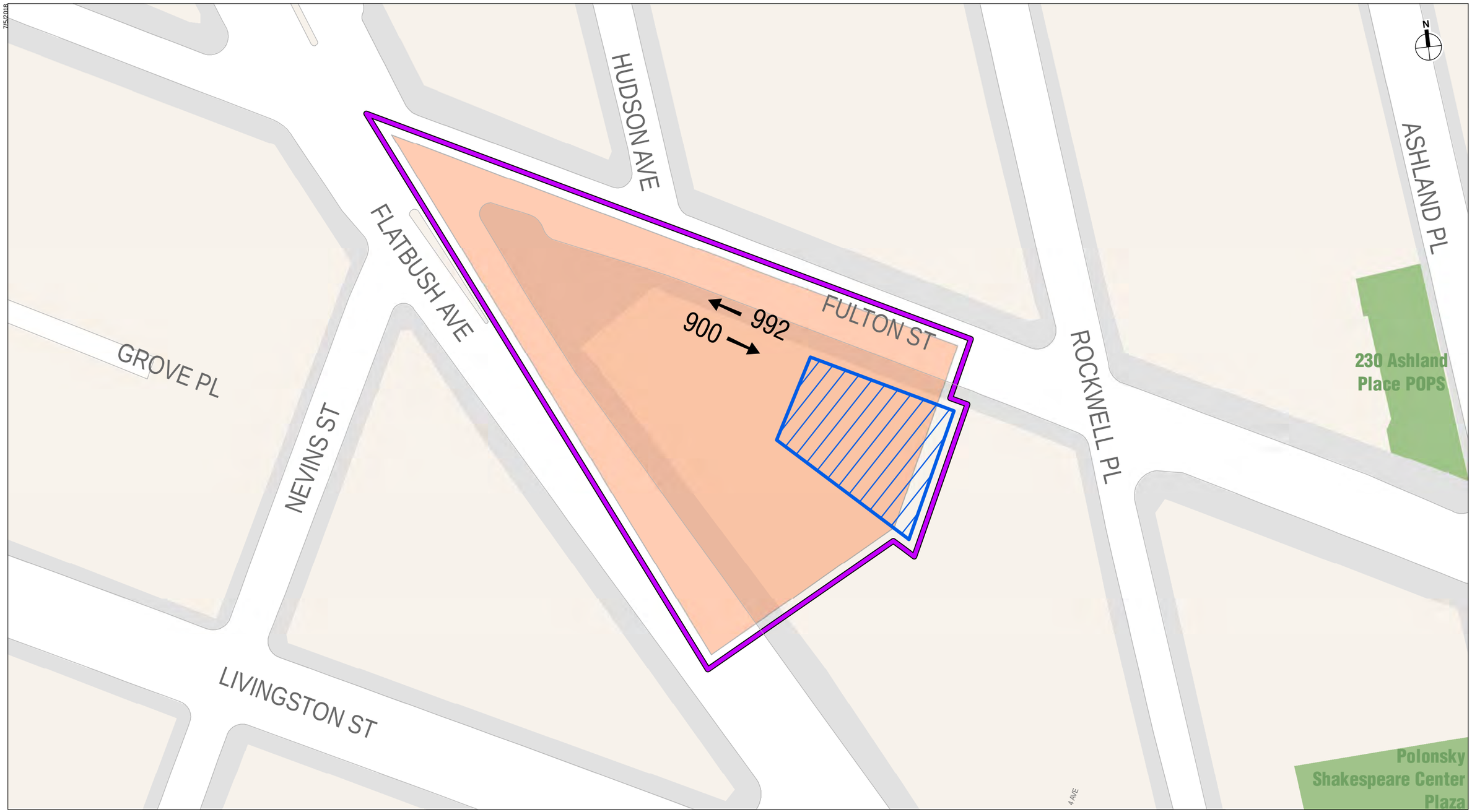
2017 Existing Pedestrian Volumes
Weekday PM Peak Hour
Figure G-13



570 FULTON STREET REZONING

No Build Projects
Figure G-14

7/5/2018



Project Area

Development Site

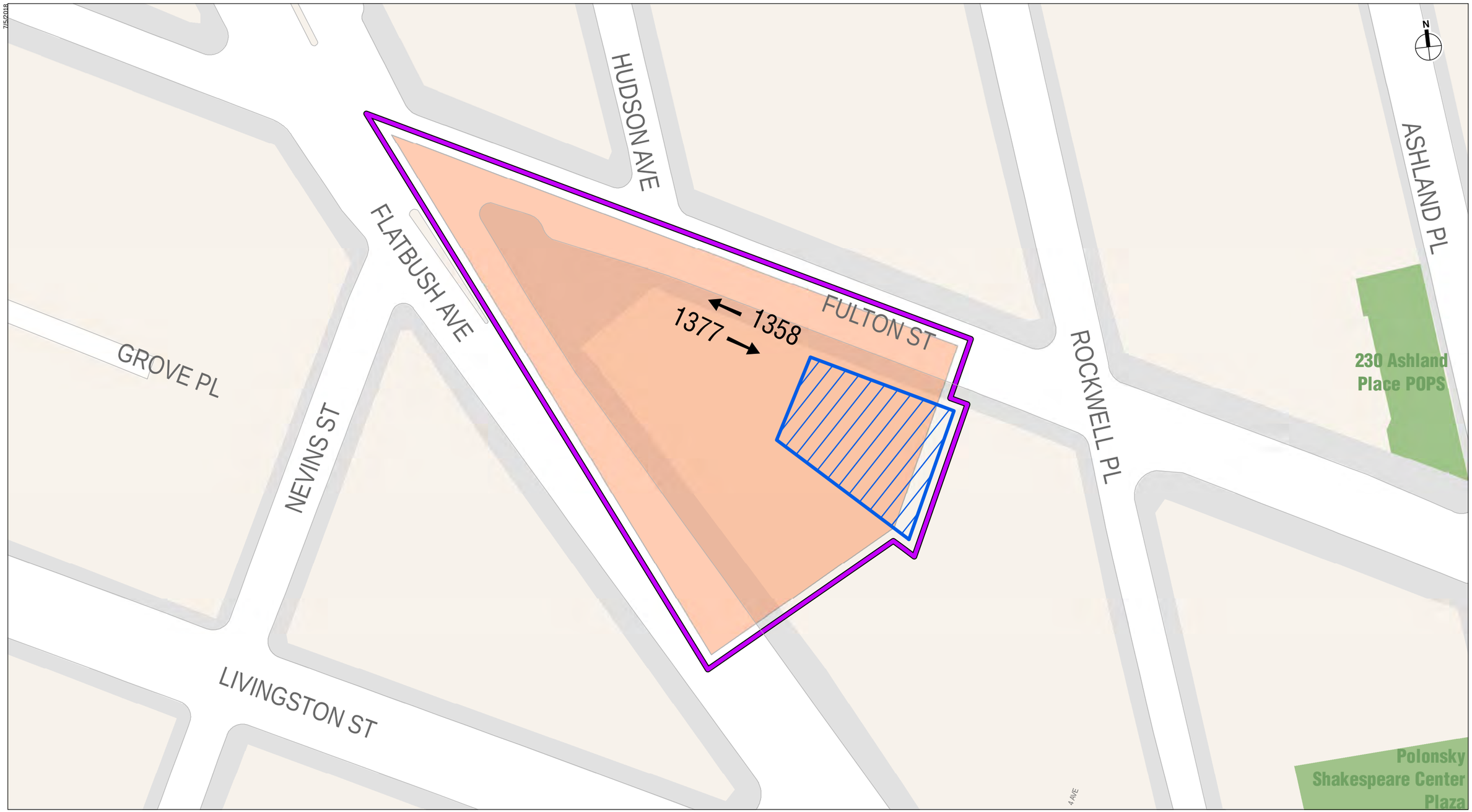
Rezoning Area

0 100 FEET

570 FULTON STREET REZONING

2021 No Action Pedestrian Volumes
Weekday AM Peak Hour
Figure G-15

7/5/2018



Project Area

Development Site

Rezoning Area

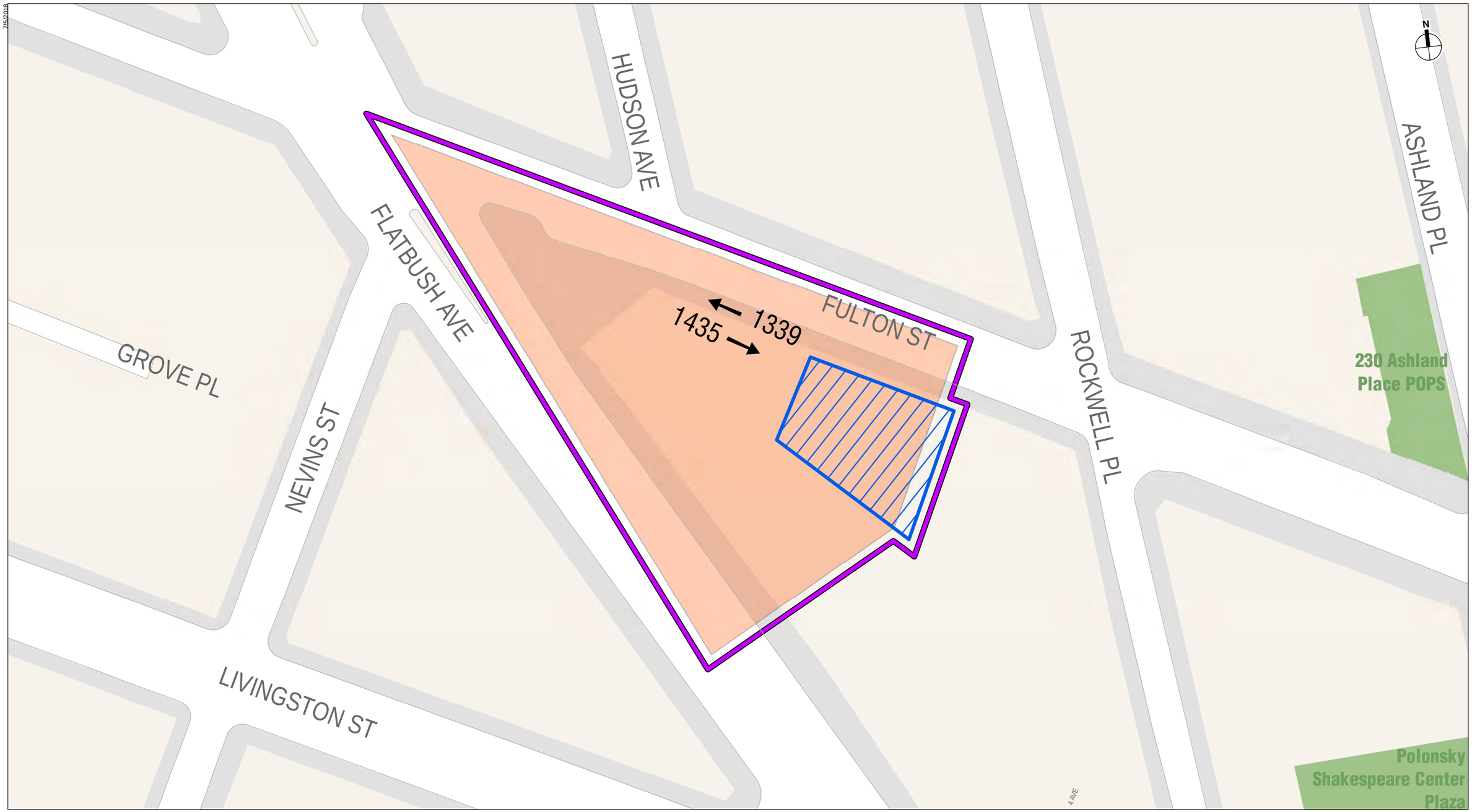
0 100 FEET

570 FULTON STREET REZONING

2021 No Action Pedestrian Volumes
Weekday Midday Peak Hour

Figure G-16

7/5/2018



Project Area

Development Site

Rezoning Area

0 100 FEET

570 FULTON STREET REZONING

2021 No Action Pedestrian Volumes
Weekday PM Peak Hour
Figure G-17

Table G-10
No Build Projects Expected to be Complete by 2021

Map Ref. No.[1]	Project Name/ Address	Development Program	Transportation Assumptions	Status/ Build Year[2]
Development Projects Within ¼-Mile				
1	1 Flatbush Avenue	Mixed commercial/residential: 19,140 gsf retail, 183 DUs	Transportation assumptions from *CEQR Technical Manual*, *Atlantic Yards Arena and Redevelopment Project FSEIS*, DOT Trip Generation and Mode Choice Survey, and 2011-2015 ACS 5-Year JTW estimates	2021
2	625 Fulton Street	Mixed commercial/residential: 42,000 gsf retail, 723 DUs	Transportation assumptions from *CEQR Technical Manual*, *Atlantic Yards Arena and Redevelopment Project FSEIS*, 2011-2015 ACS 5-Year JTW estimates, *East New York Rezoning FEIS* (2016), and *Gateway Estates II FEIS (2009)*	2021
3	540 Fulton Street	Mixed commercial/residential: 48,296 gsf office, 48,296 gsf retail, 327 DUs	Transportation assumptions from *CEQR Technical Manual*, *Atlantic Yards Arena and Redevelopment Project FSEIS*, DOT Trip Generation and Mode Choice Survey, 2011-2015 ACS 5-Year JTW estimates, *East New York Rezoning FEIS* (2016), and *Gateway Estates II FEIS* (2009)	2021
4	41 Flatbush Avenue	Commercial: 275,000 gsf office	See project site 3, above	2021
5	8 Nevins Street	Mixed commercial/residential: 6,657 gsf retail, 147 DUs	See project site 1, above	2021
6	250 Ashland Place	Mixed commercial/residential: 24,292 gsf retail, 584 DUs	See project site 1, above	2018
7	651 Fulton Street	Interior renovation of an event space	Included in background growth	2017
8	333 Schermerhorn Street	Mixed commercial/residential: 34,823 gsf retail, 750 DUs	See project site 1, above	2018
9	319 Schermerhorn Street	Mixed commercial/residential: 5,100 gsf retail, 74 DUs	Included in background growth	2021
10	93 Rockwell Place	Commercial: 138,563 gsf office	See project site 3, above	2021
11	15 Lafayette Avenue / 280 Ashland Place	Mixed commercial/residential: 2,622 gsf retail, 16,498 gsf community facility, 123 DUs	Transportation assumptions from *CEQR Technical Manual*, *Atlantic Yards Arena and Redevelopment Project FSEIS*, *East New York Rezoning FEIS* (2016), DOT Trip Generation and Mode Choice Survey, and 2011-2015 ACS 5-Year Estimates JTW estimates	2018
12	620 Fulton Street	Commercial: 20,000 gsf retail, 52,301 gsf office, 60,615 gsf community facility	Transportation assumptions from *CEQR Technical Manual*, *Atlantic Yards Arena and Redevelopment Project FSEIS*, *East New York Rezoning FEIS*, DOT Trip Generation and Mode Choice Survey, and 2011-2015 ACS 5-Year Estimates JTW estimates	2018
13	52 Saint Felix Street	Residential: 2 DUs	Included in background growth	2018
14	22 Saint Felix Street	Residential: 1 DUs	Included in background growth	2018
15	285 Schermerhorn Street	Mixed commercial/residential: 13,684 gsf retail, 105 DUs	See project site 1, above	2021
16	50 Nevins Street	Mixed commercial/residential: 3,800 gsf retail, 128 DUs	No pedestrian trips through study area[3]	2019
17	33 Bond Street / 300 Livingston	Mixed commercial/residential: 29,806 gsf retail, 714 DUs	See project site 1, above	2017

Table G-10 (cont'd)
No Build Projects Expected to be Complete by 2021

Map Ref. No.[1]	Project Name/ Address	Development Program	Transportation Assumptions	Status/ Build Year[2]
18	9 DeKalb Avenue	Mixed commercial/residential: 92,694 gsf retail, 417 DUs	See project site 1, above	2020
19	300 Ashland Place	Mixed commercial/residential: 20,116 gsf retail, 45,644 gsf community facility, 379 DUs	No pedestrian trips through study area	2018
20	30 Fort Greene Place	Residential: 3 DUs	Included in background growth	2021
21	37 Lafayette Avenue	Mixed commercial/residential: 6,473 gsf retail, 210 gsf community facility, 6 DUs	Included in background growth	2021
22	401-405 State Street	Mixed commercial/residential: 6,000 gsf community facility, 7 DUs	Included in background growth	2021
23	61 Bond Street	Commercial: 154,947 gsf retail	No pedestrian trips through study area	2018
24	130 Saint Felix Street	Residential: 40 DUs	Included in background growth	2021
25	465 Pacific Street	Mixed commercial/residential: 15,000 gsf retail, 30 DUs	No pedestrian trips through study area	2021
26	436 Albee Square	Mixed commercial/residential: 23,740 gsf retail, 150 DUs	No pedestrian trips through study area	2021
27	505 Pacific Street	Mixed commercial/residential: 56,488 gsf retail, 29 DUs	No pedestrian trips through study area	2018
28	11 Hoyt Street	Mixed commercial/residential: 99,652 gsf retail, 476 DUs	No pedestrian trips through study area	2021
29	95-99 DeKalb Avenue	155,000 gsf community facility	No pedestrian trips through study area	2021
30	39 South Elliott Place	Residential: 2 DUs	Included in background growth	2018
31	420 Albee Square	Commercial: 14,000 gsf retail, 73,023 gsf office, 60,656 gsf community facility	No pedestrian trips through study area	2021
32	3 South Elliott Place	Residential: 3 DUs	Included in background growth	2021
33	138 Willoughby Street	Mixed commercial/residential: 502,460 gsf retail, 480 DUs	No pedestrian trips through study area	2021
34	237 Duffield Street	Mixed commercial/residential: 4,773 gsf retail, 110 DUs	No pedestrian trips through study area	2017
35	386 State Street	Residential: 2 DUs	Included in background growth	2021
36	211 Schermerhorn Street	Mixed commercial/residential: 6,308 gsf retail, 68 DUs	Included in background growth	2021
37	112 Fleet Place	Residential: 20 DUs	Included in background growth	2021
38	408 Albee Square	Commercial: 1,776gsf retail	Included in background growth	2021
39	45 Hoyt Street / 210 Livingston Street	Mixed commercial/residential: 16,562 gsf retail, 368 DUs	No pedestrian trips through study area	2017
40	147 Saint Felix Street	Residential: 2 DUs	Included in background growth	2021
41	24 4th Avenue	Mixed commercial/residential: 6,657 gsf retail, 72 DUs	Included in background growth	2021

Notes:
[1] See **Figure G-14.**
[2] Projects that are currently under construction are assumed to be complete by 2017; projects for which an expected date of completion date is not available are assumed to be complete by the proposed development's 2021build year.
[3] Projects situated in locations to which pedestrian trips would gravitate away from the analyzed pedestrian element in the study area are assumed to not result in any pedestrian trip overlay.

STREET-LEVEL PEDESTRIAN OPERATIONS

As outlined above under existing conditions, during data collection, the analysis sidewalk was partially closed to facilitate construction activities. In order to analyze this element, physical characteristics (such as sidewalk widths and street furniture) were assumed to be restored to those in existence prior to its partial closure. The total sidewalk width used in the No Action and With

Action analyses was determined by reviewing available geometries gathered prior to the beginning of adjacent construction activities, and the street furniture used to develop the sidewalk effective width were identified with archival photographs of the sidewalk.

As shown in **Table G-11**, the sidewalk analysis location will operate at acceptable LOS C service levels in the 2021 No Action condition during all three peak hours.

Table G-11
2021 No Action Condition: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	Platoon LOS
Weekday AM Peak Hour						
South Sidewalk along Fulton Street between Flatbush Avenue and Rockwell Place	South	11	1,892	0.95	86.80	C
Weekday Midday Peak Hour						
South Sidewalk along Fulton Street between Flatbush Avenue and Rockwell Place	South	11	2,735	0.80	49.76	C
Weekday PM Peak Hour						
South Sidewalk along Fulton Street between Flatbush Avenue and Rockwell Place	South	11	2,774	0.78	48.12	C

FUTURE WITH THE PROPOSED PROJECT

Project-generated pedestrian volumes were assigned to the pedestrian network considering current land uses in the area, population distribution, available transit services, and surrounding pedestrian facilities. The hourly incremental pedestrian volumes presented above in Section B, "Level 2 Screening Assessment," were added to the projected 2021 No Action volumes to generate the 2021 With Action pedestrian volumes for analysis (see **Figures G-18 through G-20**).

STREET-LEVEL PEDESTRIAN OPERATIONS

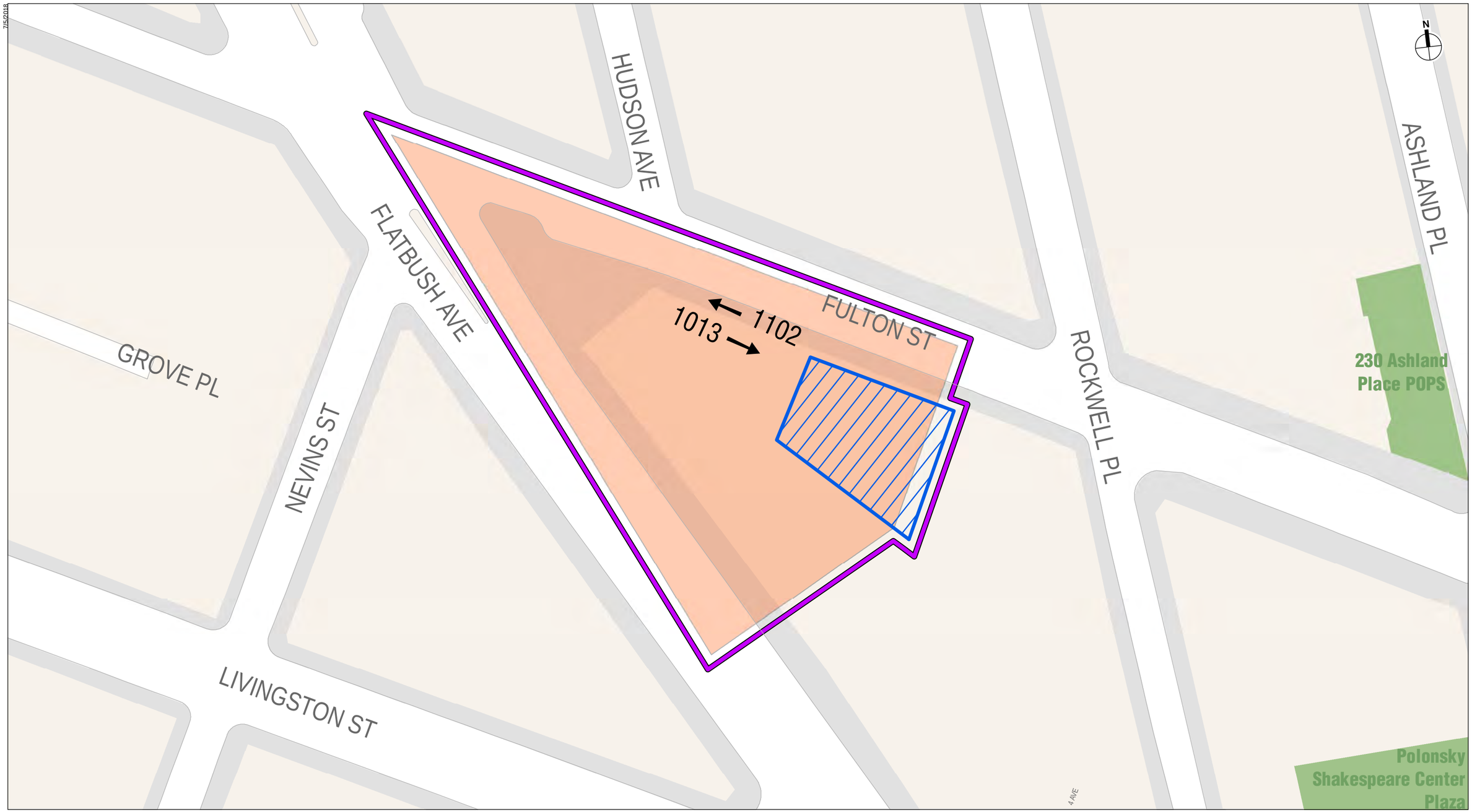
As shown in **Table G-12**, the sidewalk analysis location will continue to operate at acceptable LOS C service levels in the 2021 With Action condition during all three peak hours. Therefore, the Proposed Project would not result in any significant adverse pedestrian impacts.

Table G-12
2021 With Action Condition: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	SFP	Platoon LOS
Weekday AM Peak Hour						
South Sidewalk along Fulton Street between Flatbush Avenue and Rockwell Place	South	11	2,115	0.95	77.51	C
Weekday Midday Peak Hour						
South Sidewalk along Fulton Street between Flatbush Avenue and Rockwell Place	South	11	3,042	0.80	44.51	C
Weekday PM Peak Hour						
South Sidewalk along Fulton Street between Flatbush Avenue and Rockwell Place	South	11	3,051	0.78	43.54	C

✷

7/5/2018



Project Area

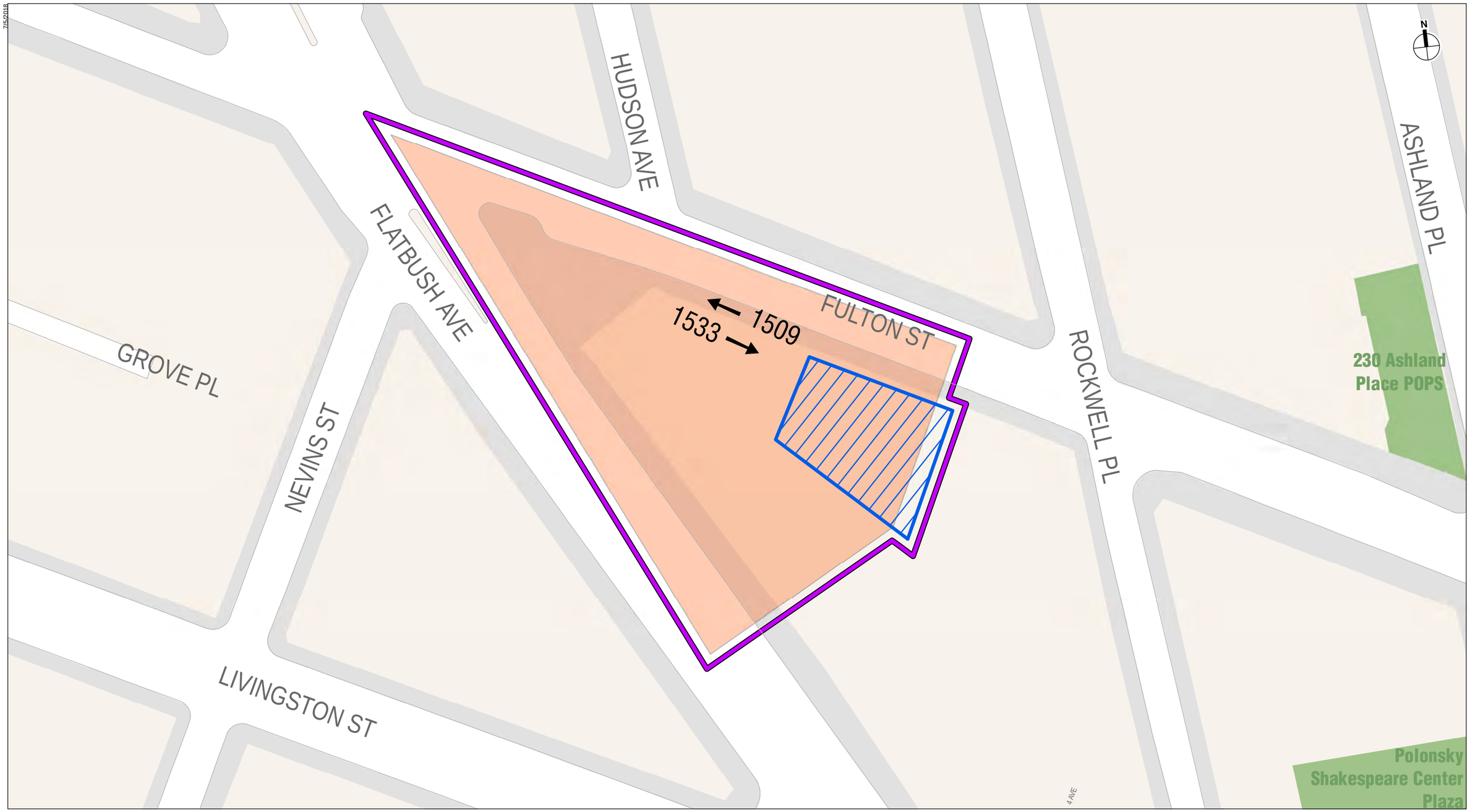
Development Site

Rezoning Area

570 FULTON STREET REZONING

2021 With Action Pedestrian Volumes
Weekday AM Peak Hour
Figure G-18

7/5/2018



Project Area

Development Site

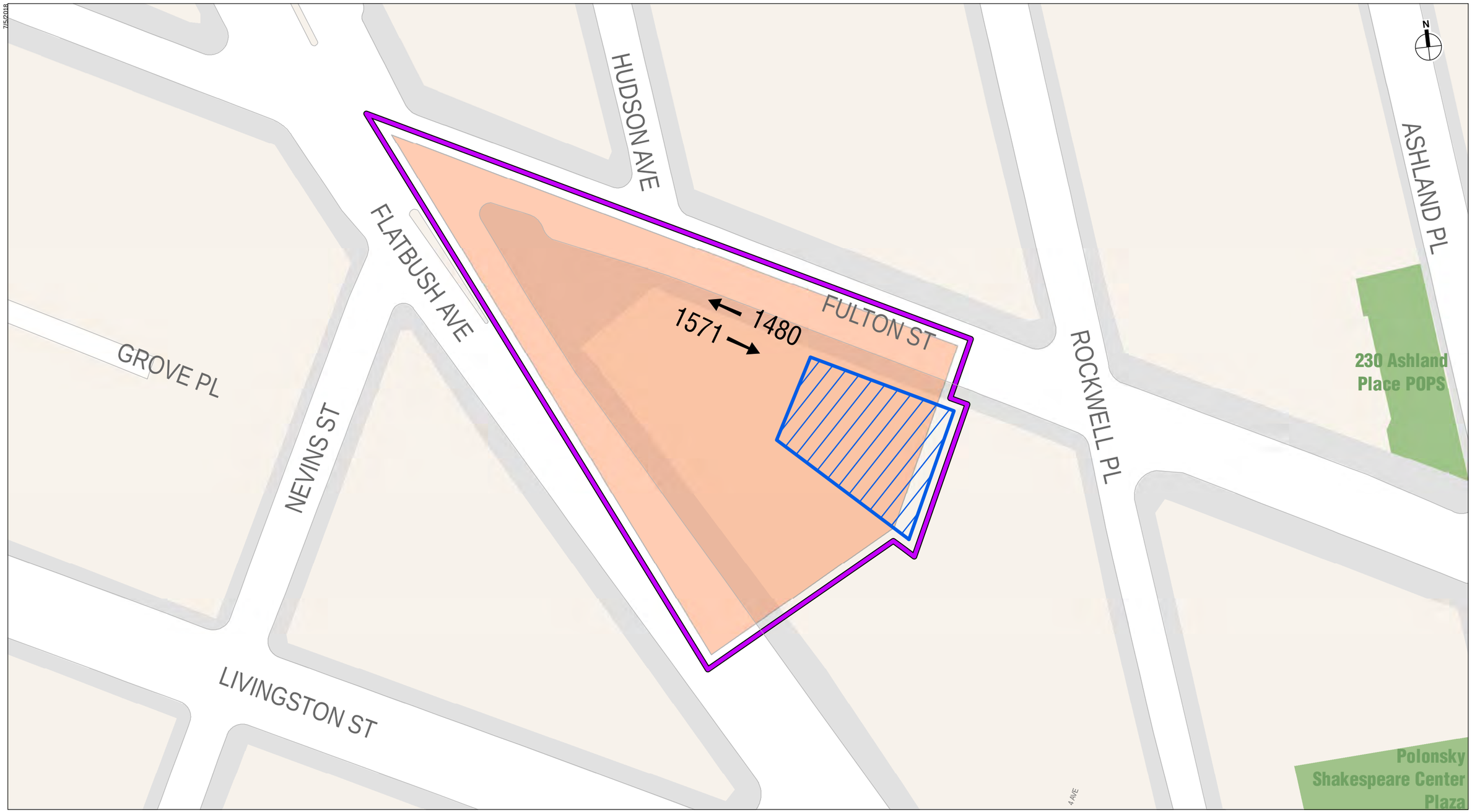
Rezoning Area

0 100 FEET

570 FULTON STREET REZONING

2021 With Action Pedestrian Volumes
Weekday Midday Peak Hour
Figure G-19

7/5/2018



Project Area

Development Site

Rezoning Area

0 100 FEET

570 FULTON STREET REZONING

2021 With Action Pedestrian Volumes
Weekday PM Peak Hour
Figure G-20

A. INTRODUCTION

This attachment assesses the potential for air quality impacts associated with the Proposed Actions. The Proposed Project is not expected to significantly alter traffic conditions. As discussed in Attachment G, "Transportation," the incremental trips generated by the Proposed Project would be 24, 14, and 25 vehicle trips—primarily automobiles—during the weekday AM, midday, and PM peak hours, respectively. Since the Proposed Project would not exceed any thresholds defined in the 2014 *City Environmental Quality Review (CEQR) Technical Manual* for traffic analysis, the Proposed Project would not exceed the carbon monoxide (CO) screening threshold defined in the *CEQR Technical Manual* (160 auto trips for peak-hour trips at nearby intersections in the study area. A screening analysis was performed for particulate matter (PM) which determined that the emissions equivalent would not exceed the City's threshold of 12 to 23 heavy-duty vehicles, depending on roadway type. Therefore, no mobile source analysis is required.

The Proposed Project includes the development of a 40-story mixed-use development with residential, office, and retail space located at 570 Fulton Street in Downtown Brooklyn, and the potential commercial enlargement of up to three stories on a portion of Lot 24. Since the Proposed Project would include natural gas-fired heat and hot water systems, a stationary source analysis was conducted to evaluate the potential impact from these sources on air quality. Additionally, the Proposed Project would be located within 1,000 feet of one large emission source, which was also evaluated.

As discussed in detail below, the maximum predicted pollutant concentrations and concentration increments from stationary sources with the Proposed Project would be below the corresponding *de minimis* criteria and ambient air quality standards. The analysis of nearby large and major sources of emissions determined that these sources would not cause significant adverse air quality impact on the Proposed Project. Therefore, the Proposed Project would not result in any significant adverse impacts on air quality.

B. METHODOLOGY

OVERVIEW AND APPROACH

Stationary source analyses were conducted using the methodology described in the *CEQR Technical Manual* to assess air quality impacts associated with emissions from the Proposed Project's heat and hot water systems. The primary pollutant of concern when burning natural gas is nitrogen dioxide (NO_2), and PM was also evaluated.

A review of nearby large sources identified one large source, the Brooklyn Technical High School, within 1,000 feet of the Proposed Project; therefore, the potential impact from that source on the Proposed Project was also conducted per *CEQR Technical Manual* guidance. This source fires

No. 4 fuel oil.[1] In addition to NO_2 and PM, fuel oil sources also produce sulfur dioxide (SO_2) which may be of concern.

The screening analysis of the potential impact from the Proposed Project's heat and hot water systems applied the U.S. Environmental Protection Agency's (EPA) AERSCREEN model to evaluate potential NO_2 and PM less than 2.5 micrometers in diameter ($PM_{2.5}$). The screening analysis of the emission from the Brooklyn Technical High School system did not pass for 1-hour average NO_2 and annual average $PM_{2.5}$; therefore, a refined analysis was prepared using a detailed dispersion model to evaluate the potential for 1-hour and annual average NO_2 and 24-hour and annual average $PM_{2.5}$ impacts**.** Although SO_2 did pass screening, a detailed analysis of SO_2 was undertaken as well at the request of the New York City Department of City Planning (DCP).

Potential NO_2 and SO_2 concentrations, added to representative background concentrations in the area, were compared with the National Ambient Air Quality Standards (NAAQS). Potential 24-hour and annual average incremental concentrations of $PM_{2.5}$ were compared with the $PM_{2.5}$ *de minimis* criteria defined in the *CEQR Technical Manual:*

- Predicted increase of more than half the difference between the background concentration and the 24-hour standard;
- Annual average $PM_{2.5}$ concentration increments which are predicted to be greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources); or
- Annual average $PM_{2.5}$ concentration increments, which are predicted to be greater than 0.3 $\mu g/m^3$ at a discrete location (elevated or ground level).

HEAT AND HOT WATER SYSTEMS

AERSCREEN ANALYSIS

Potential NO_2 and $PM_{2.5}$ impacts from heat and hot water system's emissions associated with the Proposed Project and the potential enlargement at Lot 24, or the Potential Enlargement Site, were initially evaluated using the latest version of EPA's AERSCREEN model (version 16216). The AERSCREEN model projects worst-case 1-hour average concentrations downwind from a point, area, or volume source, and longer period averages are estimated by multiplying the 1-hour results by persistence factors established by EPA or provided in the *CEQR Technical Manual*. AERSCREEN generates application-specific worst-case meteorology using representative minimum and maximum ambient air temperatures, and site-specific surface characteristics such as albedo, Bowen ratio, and surface roughness length. The AERSCREEN model was used to calculate worst-case ambient concentrations of NO_2 and $PM_{2.5}$ from the Proposed Project downwind of the stack.

The model incorporates the Plume Rise Model Enhancements (PRIME) downwash algorithm, which is designed to predict concentrations in the "cavity region" (i.e., the area around a structure which under certain conditions may affect an exhaust plume, causing a portion of the plume to become entrained in a recirculation region). AERSCREEN uses the Building Profile Input Program for PRIME (BPIPPRM) to provide a detailed analysis of downwash influences on a direction-specific basis. AERSCREEN also incorporates AERMOD's complex terrain algorithms

[1] Email from Kit Liang, NYCDEP. October 6, 2017.

and utilizes the AERMAP terrain processor to account for the actual terrain in the vicinity of the source on a direction-specific basis.

The AERSCREEN model was run both with and without the influence of building downwash, using urban diffusion coefficients that were based on a review of land use maps of the area. Other model options were selected based on EPA guidance.

Maximum 1-hour and annual average NO_2 concentrations were estimated using an NO_2 to NO_x ratios of 0.8 and 0.75, respectively—the recommended default ambient ratio per EPA guidance.

AERMOD ANALYSIS

Since the AERSCREEN screening analysis failed without restrictions on Lot 24, further analysis was performed using the refined American meteorological Society (AMS) / EPA Regulatory Model (AERMOD) dispersion model.[2] AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources and source types. AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatment of the boundary layer theory and understanding of turbulence and dispersion, and includes handling of the plume interaction with terrain. AERMOD is EPA's preferred regulatory stationary source model.

AERMOD calculates pollutant concentrations from simulated sources (e.g., exhaust stacks) based on hourly meteorological data and surface characteristics, and has the capability to calculate pollutant concentrations at locations where the plume from the exhaust stack is affected by the aerodynamic wakes and eddies (downwash) produced by nearby structures. The analysis of potential impacts from exhaust stacks assumed stack tip downwash, urban dispersion and surface roughness length, and elimination of calms.

AERMOD also incorporates the algorithms from the PRIME model (described above for AERSCREEN), and BPIPPRM was used to determine the projected building dimensions for modeling with the building downwash algorithm enabled. The modeling of plume downwash accounts for all obstructions within a radius equal to five obstruction heights of the stack.

The analysis was prepared both with and without downwash in order to assess the worst-case impacts at elevated locations close to the height of the source, which would occur without downwash, as well as the worst-case impacts at lower elevations and ground level, which would occur with downwash, consistent with the *CEQR Technical Manual* guidance.

For the analysis of the 1-hour average NO_2 concentration from the building's heating and hot water systems, AERMOD's Plume Volume Molar Ratio Method (PVMRM) module was used to analyze chemical transformation within the model. PVMRM incorporates hourly background ozone concentrations to estimate NO_x transformation within the source plume. The model applied ozone concentrations measured in 2012–2016 at the nearest available New York State Department of Environmental Conservation (NYSDEC) ozone monitoring station—the Queens College monitoring station in Queens. An initial NO_2 to NO_x ratio of 10 percent at the source exhaust stack was assumed for boilers, which is considered representative.

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[2] EPA. *AERMOD Implementation Guide*. 454/B-16-013. December 2016.
EPA. AERMOD Model Formulation and Evaluation. 454/R-17-001. May 2017. and
EPA. User's Guide for the AMS/EPA Regulatory Model (AERMOD). 454/B-16-011. December 2016.

Five years of surface meteorological data collected at LaGuardia Airport (2012–2016) and concurrent upper air data collected at Brookhaven, New York were used in the analysis.

Emission Rates and Stack Parameters

Annual emissions rates for heating and hot water systems were calculated based on fuel consumption estimates, using energy intensity estimates based on type of development and size of the buildings (227,598 gross square feet [gsf] for the Proposed Project and 48,980 gsf for the potential enlargement on Lot 24) as recommended in the *CEQR Technical Manual*, and applying emission factors for natural gas-fired boilers.[3] For the potential enlargement on Lot 24, since the screening initially indicated potential impacts when applying the default energy intensity for existing commercial buildings from the *CEQR Technical Manual*, an estimate of actual energy intensity which would be similar to that achieved under the current building energy code was applied, and the size of the system was included as a requirement under the proposed (E) Designation. The analysis assumed the potential building on Lot 24 would have a fuel consumption factor of 33.9 standard cubic feet of natural gas per gsf. This would result in a maximum firing capacity for the heating and hot water system of 0.71 million British thermal units (MMBtu) per hour.

$PM_{2.5}$ emissions include both the filterable and condensable components. The short-term emission rates for both pollutants were calculated by scaling the annual emissions to account for a 100-day heating season. The exhaust from the heating and hot water systems was conservatively assumed to be vented through a single stack located on the roof of the building at a height of 3 feet above the roof height at approximately 509 feet above grade. An alternative stack height of 3 feet above the bulkhead at approximately 549 feet above grade was also analyzed.

To calculate exhaust velocity, the fuel consumption of the Proposed Project and the potential Lot 24 building were multiplied by EPA's fuel factor for natural gas,[4] providing the exhaust flow rate at standard temperature. The flow rate is then corrected for the exhaust temperature, and exhaust velocity is then calculated based on the stack diameter. Assumptions for stack diameter and exhaust temperature for the proposed systems were obtained from a survey of boiler exhaust data prepared and provided by New York City Department of Environmental Protection (DEP),[5] and were used to calculate the exhaust velocity. The emission rates and exhaust stack parameters used in the modeling analyses are presented in **Table H-1**.

[3] EPA. Compilation of Air Pollutant Emission Factors AP-42. 5th Ed., V. I, Ch. 1.4. September, 1998.

[4] EPA. *Standards of Performance for New Stationary Sources.* 40 CFR Chapter I Subchapter C Part 60. Appendix A-7, Table 19-2. 2013.

[5] DEP. *Boiler Database*. Personal communication from Mitchell Wimbish on August 11, 2017.

Table H-1
Exhaust Stack Parameters and Emission Rates
for the Proposed Project's Heat and Hot Water Systems

Stack Parameter	Proposed Project	Lot 24[2]
Height (feet)	509.3 [3]	118
Diameter (feet)[1]	3.2	2.0
Exhaust Velocity (meters/second)[1]	0.96	0.40
Exhaust Temperature (degrees Fahrenheit)[1]	308	426
Emission Rate (grams/second)		
NO_2 (1-hour average)[4]	0.026	0.0032
NO_2 (Annual average)	0.0097	0.0009
$PM_{2.5}$ (24-hour average)	0.0054	0.0007
$PM_{2.5}$ (Annual average)	0.0015	0.0002

Note:
[1] Stack parameters are based on boiler specifications from DEP Boiler Permit Database.
[2] Assumes system capacity of 0.71 MMBtu/hr.
[3] This stack height represents the worst case stack height (to be located three feet above the roof). An alternative location at 549 feet above grade was also evaluated.
[4] Assumes the use of low NO_x burners (30 ppm). Some potential stack location scenarios were analyzed assuming 50 ppm low NO_x burners, at a rate of 0.035 g/s, which results in conservatively high concentrations.

Background Concentrations

To estimate the maximum projected total 1-hour average NO_2 concentration at a given receptor, background concentrations were developed following EPA's "second tier" detailed approach. The methodology used to determine the total 1-hour NO_2 concentrations from the facility was based on adding the monitored background to modeled concentrations, as follows: hourly modeled concentrations from the boilers were first added to the seasonal hourly background monitored concentrations; then the highest combined daily 1-hour NO_2 concentration was determined at each location and the 98th percentile daily 1-hour maximum concentration for each modeled year was calculated within the AERMOD model; finally the 98th percentile concentrations were averaged over the latest 5 years.

An annual NO_2 background concentration of 32.9 µg/m^3 from the Queens College 2 monitoring station was used to estimate the maximum total NO_2 annual concentration with the Proposed Project based on the 5-year maximum (2012–2016).

$PM_{2.5}$ impacts are assessed on an incremental basis and compared with the $PM_{2.5}$ *de minimis* criteria. The $PM_{2.5}$ 24-hour average background concentration of 19.6 µg/m^3 from the Division Street ambient monitoring station (based on the 98th percentile concentration, averaged over the years 2014–2016) was used to establish the *de minimis* value of 7.7 µg/m^3.

Receptor Placement

Receptors (locations at which concentrations are projected) generally include operable windows in residential or other buildings, air intakes, and publicly accessible open space locations, as applicable. The nearest building of similar or greater height to the Proposed Project would be located at a distance of approximately 87 feet. The nearest receptor to the potential enlargement would be the Proposed Project at 570 Fulton Street located at a distance of 21.1 feet. Discrete receptors were modeled along existing and proposed building façades to represent potentially sensitive locations such as operable windows and intake vents. Rows of receptors at spaced intervals on the modeled

buildings were analyzed at multiple elevations. A broad ground-level grid was also included to identify potential concentrations at publicly accessible locations in the surrounding area.

LARGE OR MAJOR SOURCES (NEAR THE PROPOSED PROJECT)

The *CEQR Technical Manual* requires an analysis of the potential impact on projects in cases where a project may result in sensitive uses being located near a "large" or "major" emissions source. Major sources are defined as those located at facilities that have a NYSDEC Title V or Prevention of Significant Deterioration air permit, while large sources are defined as those located at facilities that require a state facility permit.

To assess the potential effects of these types of existing sources on the proposed development, a review of existing permitted facilities was conducted. Within a 1,000-foot study area boundary (the distance referenced in the *CEQR Technical Manual*), sources permitted under the NYSDEC's Title V and state facility permits programs were considered. One facility with state facility permits was identified: Brooklyn Technical High School, located at 29 Fort Greene Place, with an exhaust stack located at a distance of approximately 930.5 feet from the Development Site, and 972 feet from the potential commercial enlargement on Lot 24. According to the permit, Brooklyn Technical High School operates two 21 MMBtu/hour boilers, each burning No. 4 fuel oil. The boilers are ducted through a common stack. The facility NO_x emissions are capped at 25 tons per year as per the state facility permit.

The Brooklyn Hospital Center, which has a NYSDEC State Facility Permit, was also identified as being within 1,000 feet of the Project Area. However, the emission stack associated with this source was determined to be approximately 1,121 feet from the Project Area. Therefore, since it is greater than 1,000 feet in distance, this source was not analyzed.

MODEL SELECTION AND APPROACH

An AERSCREEN screening analysis was undertaken for the Brooklyn Technical High School following the methodology described above for heat and hot water systems. Since the screening analysis for NO_2 and $PM_{2.5}$ thresholds did not pass, further analysis was performed using the refined AERMOD dispersion model for all pollutants of concern.

Emission Rates and Stack Parameters

The potential impact of emissions from the Brooklyn Technical High School's systems on pollutant concentrations at the Development Site was estimated. Maximum boiler capacity for each unit were attained directly from the NYSDEC State Facility permit for this facility. Short-term (1-hour, 3-hour, and 24-hour averaging period) emissions rates were based on these capacities and applying the EPA's *Compilations of Air Pollutant Emission Factors (AP-42*)[6] emission factors for No. 4 fuel oil-fired boilers. Annual emission rates were estimated based on the annual fuel usage attained from the annual compliance report submitted to NYSDEC. The emission rates and stack parameters used in the analysis are presented in **Table H-2**.

[6] EPA. *Compilations of Air Pollutant Emission Factors.* AP-42, 5th Ed., Volume I, Chapter 1. November 10, 2016.

Table H-2
Stack Parameters and Emission Rates
for the Brooklyn Technical High School Systems

Stack Parameter	Value
Number of operating units	2
Height (feet)	183(1)
Diameter (feet)	5.5(1)(2)
Exhaust Velocity (meters/second)	1.25 / 0.63 (3)
Exhaust Temperature (degrees Fahrenheit)	307.8
Emission Rate (grams/second)	
NO_x (1-hour)	0.706
NO_x (Annual)	0.356
SO_2 (1-hour)	0.00794
SO_2 (3-hour)	0.00794
$PM_{2.5}$ (24-hour)	0.110
$PM_{2.5}$ (Annual)	0.055

Notes:
[1] The stack parameters are from the state facility permit.
[2] The boilers exhaust through a common stack, and emissions presented are combined emissions for both boilers.
[3] The exhaust velocity represent the boilers operating at full load and the annual average load, respectively.

Background Concentrations

The maximum estimated increase in 1-hour average NO_2 and 1-hour average SO_2 concentrations at the proposed development due to the boilers at Brooklyn Technical High School were added to the background concentrations to estimate total air quality potential concentrations at the proposed development. Similar to the analysis of the HVAC systems, background concentrations were developed following EPA's "second tier" detailed approach. The methodology used to determine the total 1-hour NO_2 concentrations from the facility was based on adding the monitored background to modeled concentrations, as follows: hourly modeled concentrations from the boilers were first added to the seasonal hourly background monitored concentrations; then the highest combined daily 1-hour NO_2 concentration was determined at each location and the 98th percentile daily 1-hour maximum concentration for each modeled year was calculated within the AERMOD model; finally the 98th percentile concentrations were averaged over the latest 5 years. The 1-hour average SO_2 concentration is based on the 3-year average of the annual 99th percentile of the daily maximum 1-hour SO_2 concentrations. $PM_{2.5}$ concentrations were compared with $PM_{2.5}$ *de minimis* criteria.

Receptor Placement

Discrete receptors were modeled along the façade of the proposed development to represent operable window locations, intake vents, and otherwise accessible locations such as terraces. The proposed development was located at a distance of 930.5 feet from the emissions source.

C. ANALYSIS RESULTS

HEAT AND HOT WATER SYSTEMS (PROPOSED PROJECT AND POTENTIAL ENLARGEMENT)

The results of the AERMOD analysis for 1-hour average NO_2 and 24-hour and annual average $PM_{2.5}$ are presented in **Table H-3** for receptors most affected by the Proposed Project and **Table H-4** for receptors most affected by the potential enlargement on Lot 24. Note that all results

include both sources as appropriate. The Proposed Project and the potential enlargement's heating and hot water systems would not result in any significant adverse air quality impacts.

Table H-3
Maximum Modeled Pollutant Concentrations
Development Site's Heat and Hot Water Systems (µg/m^3)

Pollutant	Averaging Period	Maximum Modeled Impact	Background	Total Concentration	Criterion
NO_2	1-hour	172.8[3]	N/A	172.8	188[2]
	Annual	0.95[3]	32.9	33.8	100[4]
$PM_{2.5}$	24-hour	6.6	N/A	N/A	7.7[5]
	Annual	0.19	N/A	N/A	0.3[6]

Notes:
N/A—Not Applicable
Totals may not sum due to rounding with appropriate precision.
[1] The 1-hour average NO_2 concentration is estimated using PVMRM and assumes the use of low NO_x burners.
[2] 1-hour average NO_2 NAAQS.
[3] The annual average NO_2 concentration is estimated using NO_2 to NO_x ratio of 0.75 as per EPA guidance and assumes the use of low NO_x burners.
[4] Annual average NO_2 NAAQS.
[5] $PM_{2.5}$ *de minimis* criteria—24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 µg/m3.
[6] $PM_{2.5}$ *de minimis* criteria—annual (discrete receptor).

Table H-4
Maximum Modeled Pollutant Concentrations
Potential Enlargement Site's Heat and Hot Water Systems (µg/m^3)

Pollutant	Averaging Period	Maximum Modeled Impact	Background	Total Concentration	Criterion
NO_2	1-hour	159.1[1]	N/A	159.1	188[2]
	Annual	0.67[3]	32.9	33.6	100[4]
$PM_{2.5}$	24-hour	7.0	N/A	N/A	7.7[5]
	Annual	0.20	N/A	N/A	0.3[6]

Notes:
N/A—Not Applicable
Totals may not sum due to rounding with appropriate precision.
[1] The 1-hour average NO_2 concentration is estimated using PVMRM and assumes the use of low NO_x burners.
[2] 1-hour average NO_2 NAAQS.
[3] The annual average NO_2 concentration is estimated using NO_2 to NO_x ratio of 0.75 as per EPA guidance and assumes the use of low NO_x burners.
[4] Annual average NO_2 NAAQS.
[5] $PM_{2.5}$ *de minimis* criteria—24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 µg/m3.
[6] $PM_{2.5}$ *de minimis* criteria—annual (discrete receptor).

PROPOSED (E) DESIGNATION REQUIREMENTS

To avoid significant adverse impacts, restrictions would be required for the Development Site's combustion equipment and for the potential commercial enlargement on Lot 24.

To ensure that there are no significant adverse impacts of NO_2 or $PM_{2.5}$ from the Proposed Actions, certain restrictions would be required through the mapping of an (E) Designation for air quality on the Project Area (Block 2106 Lot 35) regarding fuel type, exhaust stack location, and systems.

The (E) Designation would be applied to the Development Site and Potential Enlargement Site as E-490. The requirements of the (E) Designation would be as follows:

Development Site (Block 2106, Lot 35)

To avoid any potential significant air quality impacts, any new development on Block 2106, Lot 35 must utilize only natural gas in any fossil fuel-fired heating and hot water system, the systems shall be fitted with low NO_x (30 ppm) burners, and ensure that fossil fuel-fired heating and hot water exhaust stack(s) be at least 509 feet above grade. Exhaust stacks must also be located at least 20 feet from the lot line of Lot 35 facing Rockwell Place at least 30 feet from the lot line of Lot 35 facing Fulton Street.

Potential Enlargement Site (Block 2106, p/o Lot 24)

To avoid any potential significant air quality impacts, any new development on Block 2106, Lot 24 must utilize only natural gas in any fossil fuel-fired heating and hot water system. The systems shall have a total maximum firing capacity of 0.71 MMBtu per hour, be fitted with low NO_x (30 ppm) burners, and ensure that fossil fuel-fired heating and hot water exhaust stack(s) be at least 118 feet above grade. Exhaust stacks must also be located at least 55 feet from the lot line of Lot 24 facing 570 Fulton Street and at least 50 feet from the northern lot line of Lot 24 facing the intersection of Fulton Street and Flatbush Avenue.

LARGE OR MAJOR SOURCES (NEAR THE PROPOSED PROJECT)

The results of the AERMOD analyses evaluating the potential impact of the Brooklyn Technical High School system on air quality at the Development Site are presented in **Table H-5**. The large source's heating and hot water system would not result in any significant adverse air quality impacts on the Proposed Project.

Table H-5
Maximum Modeled Pollutant Concentrations at the Development Site from Brooklyn Technical High School Systems (µg/m³)

Pollutant	Averaging Period	Maximum Modeled Impact	Background	Total Concentration	NAAQS / *De Minimis*
NO_2	1-hour	154(1)	N/A	154	188(2)
	Annual	1.2(3)	32.9	34.1	100(2)
SO_2	1-hour	1.3	24.8	26.1	196(2)
	3-hour	0.9	89.0	89.9	1,300(2)
$PM_{2.5}$	24-hour	2.81	N/A	N/A	7.7(4)
	Annual	0.178	N/A	N/A	0.3(5)

Notes:
N/A—Not Applicable
[1] The 1-hour average NO_2 concentration is estimated using PVMRM and assumes the use of low NO_x burners.
[2] NAAQS.
[3] The annual average NO_2 concentration is estimated using NO_2 to NO_x ratio of 0.75 as per EPA guidance.
[4] $PM_{2.5}$ *de minimis* criteria—24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 µg/m³.
[5] $PM_{2.5}$ *de minimis* criteria—annual (discrete receptor).

D. NO SPECIAL PERMIT SCENARIO

Under the No Special Permit scenario, the Proposed Project building would be taller, potentially up to 655 feet above grade, and narrower. Since the developed area would be the same size, emissions from the heat and hot water system would be the same but would be emitted at a higher elevation. Since the proposed building would be substantially taller than neighboring buildings, the potential impact of the system's emissions would be less than the results presented in Section C, "Analysis Results," assuming the same (E) Designation requirements are applied, and would not result in a significant adverse impact on air quality.

To ensure that there are no significant adverse impacts of NO_2 or $PM_{2.5}$ from the Proposed Actions under the No Special Permit Scenario, certain restrictions would be required through the mapping of an (E) Designation for air quality on the Development Site (Block 2106 Lot 35) regarding fuel type, exhaust stack location, and systems. The (E) Designation would be applied to the Development Site and Potential Enlargement Site as E-490. The requirements of the (E) Designation would be as follows:

Development Site (Block 2106, Lot 35)

> *To avoid any potential significant air quality impacts, any new development on Block 2106, Lot 35 must utilize only natural gas in any fossil fuel-fired heating and hot water system, the systems shall be fitted with low NO_x (30 ppm) burners, and ensure that fossil fuel-fired heating and hot water exhaust stack(s) be at least 658 feet above grade. Exhaust stacks must also be located at least 20 feet from the lot line of Lot 35 facing Rockwell Place at least 30 feet from the lot line of Lot 35 facing Fulton Street.*

Potential Enlargement Site (Block 2106, p/o Lot 24)

> *To avoid any potential significant air quality impacts, any new development on Block 2106, Lot 24 must utilize only natural gas in any fossil fuel-fired heating and hot water system. The systems shall have a total maximum firing capacity of 0.71 MMBtu per hour, be fitted with low NO_x (30 ppm) burners, and ensure that fossil fuel-fired heating and hot water exhaust stack(s) be at least 118 feet above grade. Exhaust stacks must also be located at least 55 feet from the lot line of Lot 24 facing 570 Fulton Street and at least 50 feet from the northern lot line of Lot 24 facing the intersection of Fulton Street and Flatbush Avenue.*

The potential impact of the Brooklyn Technical High School system (large source) on the Proposed Project under the No Special Permit Scenario would be the same as described above and would not have a significant adverse impact on air quality at the Development Site. ✷

Attachment I: Noise

A. INTRODUCTION

This attachment considers the potential for the Proposed Actions to result in significant adverse noise impacts. As discussed in Attachment A, "Project Description," the Proposed Project involves the construction of a new mixed-use residential and commercial office building at 570 Fulton Street in Downtown Brooklyn, Community District 2.

According to the guidelines established in the 2014 *City Environmental Quality Review* (*CEQR) Technical Manual*, an initial noise impact screening considers whether a proposed action would generate any mobile or stationary source noise, or be located in an area with high ambient noise levels. A noise analysis examines an action for its potential effects on sensitive noise receptors, and the effects on the interior noise levels of residential, commercial, and institutional uses.

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

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

B. ACOUSTICAL FUNDAMENTALS

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

A-WEIGHTED SOUND LEVEL (DBA)

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

Table I-1
Common Noise Levels

Sound Source	(dBA)
Military jet, air raid siren	130
Amplified rock music	110
Jet takeoff at 500 meters	100
Freight train at 30 meters	95
Train horn at 30 meters	90
Heavy truck at 15 meters	80–90
Busy city street, loud shout	80
Busy traffic intersection	70–80
Highway traffic at 15 meters, train	70
Predominantly industrial area	60
Light car traffic at 15 meters, city or commercial areas, or residential areas close to industry	50–60
Background noise in an office	50
Suburban areas with medium-density transportation	40–50
Public library	40
Soft whisper at 5 meters	30
Threshold of hearing	0

Note: A 10 dBA increase in level appears to double the loudness, and a 10 dBA decrease halves the apparent loudness.
Sources: Cowan, James P. *Handbook of Environmental Acoustics,* Van Nostrand Reinhold, New York, 1994. Egan, M. David, Architectural Acoustics. McGraw-Hill Book Company, 1988.

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

SOUND LEVEL DESCRIPTORS

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

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

For purposes of the Proposed Actions, the L_{10} descriptor has been selected as the noise descriptors to be used to satisfy applicable interior noise criteria. The 1-hour L_{10} is the noise

descriptor used in the *CEQR Technical Manual* noise exposure guidelines for City environmental impact review classification.

C. NOISE STANDARDS AND CRITERIA

NEW YORK CEQR NOISE CRITERIA

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

Table I-2
Noise Exposure Guidelines For Use in City Environmental Impact Review

Receptor Type	Time Period	Acceptable General External Exposure	Airport[3] Exposure	Marginally Acceptable General External Exposure	Airport[3] Exposure	Marginally Unacceptable General External Exposure	Airport[3] Exposure	Clearly Unacceptable General External Exposure	Airport[3] Exposure
Outdoor area requiring serenity and quiet[2]		$L_{10} \leq 55$ dBA	---------- Ldn ≤ 60 dBA ----------	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Hospital, nursing home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA	---------- 60 < Ldn ≤ 65 dBA ----------	$65 < L_{10} \leq 80$ dBA	(i) 65 < Ldn ≤ 70 dBA, (II) 70 ≤ Ldn	$L_{10} > 80$ dBA	---------- Ldn ≤ 75 dBA ----------
Residence, residential hotel, or motel	7 AM to 10 PM	$L_{10} \leq 65$ dBA		$65 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
	10 PM to 7 AM	$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, outpatient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)	
Commercial or office		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10PM)	
Industrial, public areas only[4]	Note 4	Note 4		Note 4		Note 4		Note 4	

Notes:
(i) In addition, any new activity shall not increase the ambient noise level by 3 dBA or more; (ii) *CEQR Technical Manual* noise criteria for train noise are similar to the above aircraft noise standards: the noise category for train noise is found by taking the L_{dn} value for such train noise to be an L_{dn} (L_{dn} contour) value.

Table Notes:
[1] Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.
[2] Tracts of land where serenity and quiet are extraordinarily important and serve an important public need, and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
[3] One may use 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).

Source:
New York City Department of Environmental Protection (adopted policy 1983).

The *CEQR Technical Manual* defines attenuation requirements for buildings based on exterior noise level (see **Table I-3**). Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA or lower for sensitive noise uses and interior noise levels of 50 dBA or lower for commercial/office uses and are determined based on exterior $L_{10(1)}$ noise levels.

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

	Marginally Unacceptable				Clearly Unacceptable
Noise Level With Proposed Action	$70 < L_{10} \leq 73$	$73 < L_{10} \leq 76$	$76 < L_{10} \leq 78$	$78 < L_{10} \leq 80$	$80 < L_{10}$
Attenuation[A]	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	$36 + (L_{10} - 80)$[B] dBA

Notes:
[A] The above composite window-wall attenuation values are for residential dwellings. Commercial uses would be 5 dBA 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 dBA increments for L_{10} values greater than 80 dBA.
Source:
New York City Department of Environmental Protection.

D. EXISTING NOISE LEVELS

Existing noise levels at the Development Site were measured at receptor Site 1, located along the Development Site frontage on Fulton Street between Hudson Avenue and Rockwell Place, and at receptor Site 2, located on Flatbush Avenue near Livingston Street (see **Figure I-1).**

At the receptor sites, the existing noise levels were measured for 20-minute periods during the three weekday peak periods—AM (8:00 AM to 9:00 AM), midday (MD) (12:00 PM to 1:00 PM), and PM (5:00 PM to 6:00 PM). Measurements were performed on October 4, 2017.

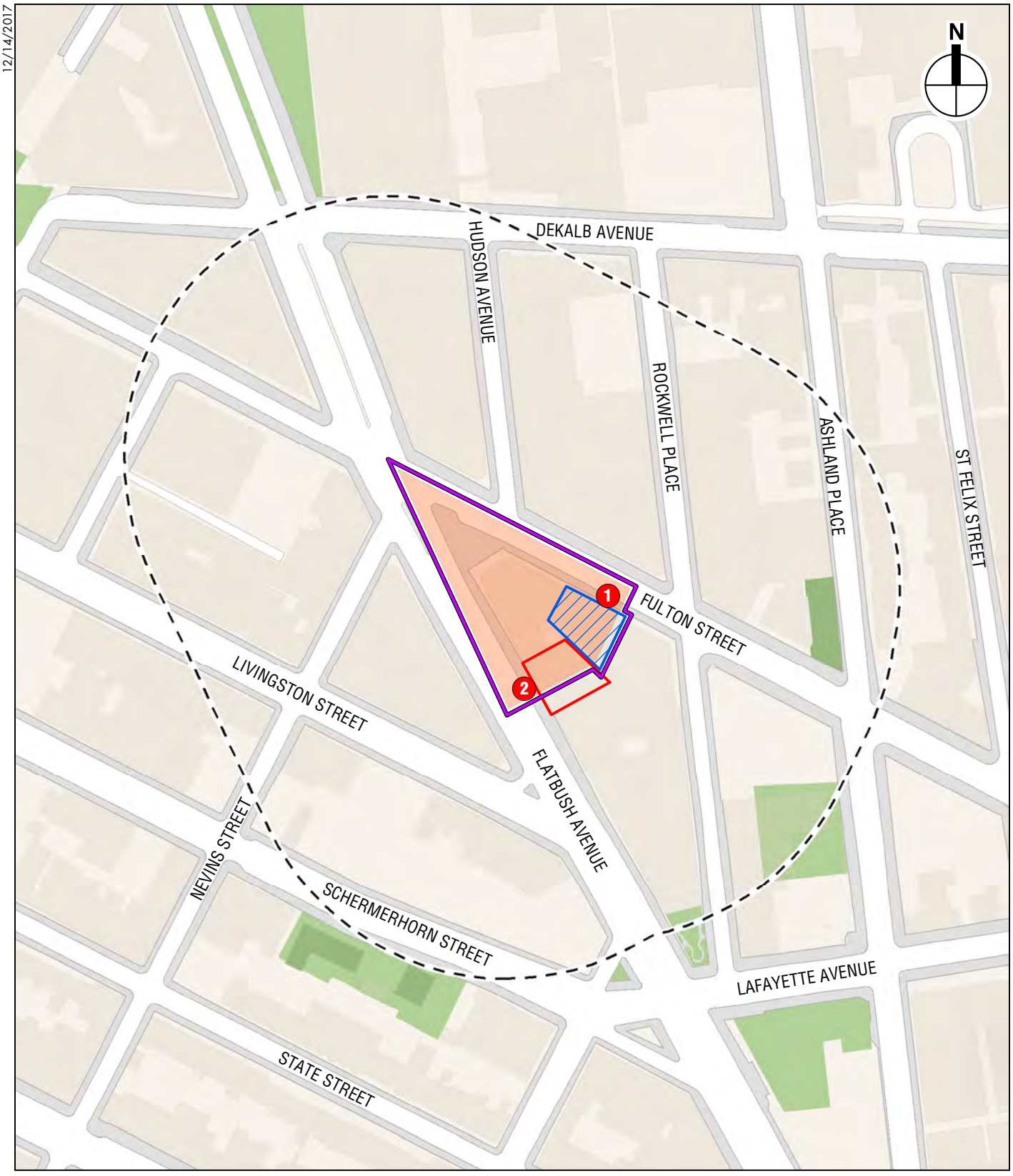
EQUIPMENT USED DURING NOISE MONITORING

Measurements were performed using a Brüel & Kjær Type 2260 Sound Level Meter (SLM), a Brüel & Kjær Type 4189 ½ inch microphone, and a Brüel & Kjær Sound Level Type 4231 Calibrator. The Brüel & Kjær SLM is a Type 1 instrument according to ANSI Standard S1.4-1983 (R2006). The SLM has a laboratory calibration date within one year of the date of the measurements, as is standard practice. At the receptor sites, the microphone was mounted on a tripod at a height of approximately 5 feet above the ground. The microphone was mounted away from any large reflecting surfaces that could affect the sound level measurements. The SLM was calibrated before and after readings with a Brüel & Kjær Type 4231 Sound Level Calibrator. Measurements at the location were made on the A-scale (dBA). The data were digitally recorded by the SLM 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 the sound measurements except for calibration. All measurement procedures were based on the guidelines outlined in ANSI Standard S1.13-2005.

NOISE MEASUREMENT RESULTS

The results of the peak-hour existing noise level measurements conducted at the Development Site are summarized in **Table I-4**.

12/14/2017



Project Area
Development Site
Potential Enlargement
Rezoning Area
Study Area (400-foot boundary)

1 *Noise Receptor Location*

0 200 FEET

570 FULTON STREET REZONING

Noise Survey Location
Figure I-1

Table I-4
Existing Noise Levels in dBA

Site	Location	Time Period	L_{eq}	L_1	L_{10}	L_{50}	L_{90}
1	570 Fulton Street, between Hudson Avenue and Rockwell Place	AM	74.3	82.5	77.5	72.3	69.1
		MD	70.3	78.8	73.0	68.3	63.9
		PM	71.4	80.6	74.5	68.9	64.3
2	Flatbush Avenue, near Livingston Street	AM	75.0	83.4	78.2	72.7	67.2
		MD	74.1	82.9	77.1	71.4	67.4
		PM	73.9	82.2	77.0	71.3	68.0

Note: Noise measurements were performed by AKRF, Inc. on October 4, 2017.

At the receptor sites, vehicular traffic was the dominant noise source. Measured levels are moderate to relatively high and reflect the level of vehicular activity on the adjacent roadways. In terms of the CEQR criteria, the existing noise levels at Site 1 and 2 are in the "marginally unacceptable" category.

E. NOISE ATTENUATION MEASURES

As shown in **Table I-3**, the *CEQR Technical Manual* has set noise attenuation quantities for buildings based on exterior $L_{10(1)}$ noise levels in order to maintain interior noise levels of 45 dBA or lower for residential uses and interior noise levels of 50 dBA or lower for commercial/office uses. The results of the building attenuation analysis are summarized in **Table I-5**.

Table I-5
CEQR Building Attenuation Requirements in dBA

Location	Receptor Site	Maximum L_{10}	Attenuation Required[1]
Development Site	1	77.5	33
Potential Enlargement (Lot 24)	2	78.2	35

Note: (1) Attenuation values are shown for residential, educational, and child care uses; commercial, administrative/office uses would require 5 dBA less attenuation.

To implement the attenuation requirements at the Development Site and the potential enlargement site, an (E) designation for noise would be applied specifying the appropriate amount of window/wall attenuation. The (E) Designation would be applied to the Development Site and potential enlargement site as E-490. The text of the (E) designation would be as follows:

> *To ensure an acceptable interior noise environment, the building façade(s) of future development must provide minimum composite building façade attenuation as shown in Table I-5, in order to maintain an interior L_{10} noise level not greater than 45 dBA for residential, educational, and child care uses or not greater than 50 dBA for commercial, administrative, and office uses. To maintain a closed-window condition in these areas, an alternate means of ventilation that brings outside air into the building without degrading the acoustical performance of the building façade(s) must also be provided.*

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is made up of each part. Normally, a building façade is composed of the wall, glazing, and any vents or louvers for HVAC systems in various ratios of area. The Proposed Project and potential enlargement would be designed to provide a composite Outdoor-Indoor Transmission Class (OITC) rating greater than or equal to the attenuation requirements listed in **Table I-5**. The OITC classification is defined by ASTM International (ASTM E1332-10) and provides a single-number rating that is used for designing a

building façade including walls, doors, glazing, and combinations thereof. The OITC rating is designed to evaluate building elements by their ability to reduce the overall loudness of ground and air transportation noise.

By adhering to the design guidelines specified in the Noise (E) Designation described above, building façades to be developed as a result of the Proposed Actions would provide sufficient attenuation to achieve the *CEQR Technical Manual* interior noise level guidelines of 45 dBA L_{10} for residential or community facility uses and 50 dBA L_{10} for commercial uses.

F. MECHANICAL SYSTEM

The building mechanical systems (i.e., heating, ventilation, and air conditioning systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. ✷

APPENDIX A
Agency Correspondence

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / LA-CEQR-K
Project: 570 FLATBUSH REDEVELOPMENT
Date received: 10/11/2017

Properties with no Archaeological significance:

1) ADDRESS: 1317 FLATBUSH AVENUE, BBL: 3021060026
2) ADDRESS: 570 FULTON STREET, BBL: 3021060035
3) ADDRESS: 25 FLATBUSH AVENUE, BBL: 3021060024

Gina Santucci

10/24/2017

SIGNATURE DATE

Gina Santucci, Environmental Review Coordinator

File Name: 32853_FSO_DNP_10182017.doc

NYC Environmental Protection

Vincent Sapienza, P.E.
Commissioner

Angela Licata
Deputy Commissioner of Sustainability

59-17 Junction Blvd.
Flushing, NY 11373

Tel. (718) 595-4398
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alicata@dep.nyc.gov

March 30, 2018

Robert Dobruskin
Director, Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

Re: 570 Fulton Street Rezoning
Block 2106, Lots 26, 35, and p/o 24
CEQR # 18DCP111K

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed the February 2018 Phase II Environmental Site Investigation (Phase II) prepared by AKRF, Inc. on behalf of 570 Fulton Street Property LLC (applicant) for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment, zoning text amendments, a special permit, and a certification from the New York City Department of City Planning (DCP) to facilitate the development of a 40-story, mixed-use residential and commercial office building containing 139 dwelling units, 89,846 gross square feet (gsf) of office space, and 12,433 gsf of retail space (proposed project) on Lot 35 of the Development Site (Lots 24, 26, and 35). Lot 35 is currently occupied with a three-story commercial which would be demolished in order to construct the proposed project. Under the With Action condition, the 19-story mixed-use building currently under construction on Lot 26 would not be altered as a result of these changes. Although unlikely, the rezoning could result in a potential three-story enlargement to the existing five-story commercial building on Lot 24 which would not result in any ground disturbance activities. The proposed project is bounded by Fulton Street to the north, Rockwell Place to the east, Lafayette Avenue to the south, and Flatbush Avenue to the west in the Downtown neighborhood of Brooklyn Community District 2.

During the February 2018 fieldwork, Eastern Environmental Service Corp. of Manorville, NY advanced five (5) soil borings (SB-1 to SB-5) to a depth of approximately 15 to 36 feet below grade surface (bgs). Groundwater was encountered at approximately 30 feet bgs. Two soil samples were collected from each soil boring. One sample was collected from 0-2 feet bgs and the other sample was collected from the two-foot interval above the proposed foundation depth of approximately 15 feet bgs. Groundwater samples were collected from borings SB-1 and SB-5. Soil and groundwater samples were analyzed for volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, pesticides by EPA Method 8081, polychlorinated biphenyls

(PCBs) by EPA Method 8082, and Target Analyte List (TAL) metals (total and dissolved for groundwater samples). Three soil vapor samples (SV-1 to SV-3) were collected and analyzed for VOCs by EPA Method TO-15.

The soil analytical results revealed VOCs, SVOCs, pesticides, PCBs, and metals were either non-detect (ND) or below their New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives.

The groundwater analytical results revealed VOCs, SVOCs, pesticides, and PCBs were either ND or below their NYSDEC Technical and Operational Guidance Series Class GA Ambient Water Quality Standards and Guidance Values (AWQS). One metal (sodium) was detected above the NYSDEC AWQS.

The soil vapor analytical results revealed several VOCs (1,2,4-trimethylbenzene, 1,2,4-trimethylbenzene, acetone, chloroform, carbon disulfide, carbon tetrachloride, chloromethane, dichlorodifluoromethane, isopropanol, methyl methacrylate, methylene chloride, tetrachloroethene, tetrehydrofuran, trichloroethene, trichlorofluoromethane, 2-butanone, 2-hexanone, 4-methyl-2-pentanone, ethanol, cyclohexane, benzene, ethyl benzene, n-hexane, heptane, o-xylene, p/m-xylene, p-ethyl toluene, propylene, and toluene) were detected.

Based upon our review of the submitted documentation, we have the following comments and recommendations to DCP:

- DCP should inform the applicant that a vapor barrier should be incorporated into the design plans of the proposed construction project.

- DCP should instruct the applicant to develop and submit a Remedial Action Plan (RAP) for the proposed project for review and approval. The RAP should delineate the requirements for items including: disposal and transportation of contaminated soils; soil stockpiling; dust control; de-watering; removal/closure of underground storage tanks and/or aboveground storage tanks in accordance with NYSDEC regulations; engineering controls; and capping with concrete/asphalt and/or imported clean fill. The manufacturer's specifications of the proposed vapor barrier should be included.

- DCP should instruct the applicant to submit a site-specific Construction Health and Safety Plan (CHASP) on the basis of possible exposure of workers and/or community to contaminants from the proposed project.

- DCP should instruct the applicant that for all areas, which will be landscaped or covered with grass (not capped), a minimum of two (2) feet of DEP approved clean fill/top soil must be imported from an approved facility/source and graded across all landscaped/grass covered areas of the sites not capped with concrete/asphalt. The clean fill/top soil must be segregated at the source/facility, have qualified environmental personnel collect representative samples at a frequency of one (1) sample for every 250 cubic yards, analyze the samples for Target Compound List VOCs by EPA Method 8260, SVOCs by EPA Method 8270, pesticides by EPA Method 8081, PCBs by EPA Method 8082, and TAL metals by a New York State

Department of Health Environmental Laboratory Approval Program certified laboratory, compared to NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs. Upon completion of the investigation activities, the applicant should submit a detailed clean soil report to DEP for review and approval prior to importation and placement on-site. The report should include, at a minimum, an executive summary, narrative of the field activities, laboratory data, and comparison of soil analytical results (i.e., NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs).

- DCP should instruct the applicant that soil disturbance should not occur without DEP's written approval of the RAP and CHASP.

Future correspondence and submittals related to this project should include the following CEQR # **18DCP111K**. If you have any questions, you may contact me at (718) 595-4358.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
T. Estesen
M. Wimbish
W. Pugliese – DCP
O. Abinader – DCP

NYC Environmental Protection

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May 10, 2018

Robert Dobruskin
Director, Environmental Assessment and Review Division
New York City Department of City Planning
120 Broadway, 31st Floor
New York, NY 10271

Re: 570 Fulton Street Rezoning
Block 2106, Lots 26, 35, and p/o 24
CEQR # 18DCP111K

Dear Mr. Dobruskin:

The New York City Department of Environmental Protection, Bureau of Sustainability (DEP) has reviewed April 2018 Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) prepared by AKRF, Inc. on behalf of 570 Fulton Street Property LLC (applicant) for the above referenced project. It is our understanding that the applicant is seeking a zoning map amendment, zoning text amendments, a special permit, and a certification from the New York City Department of City Planning (DCP) to facilitate the development of a 40-story, mixed-use residential and commercial office building containing 139 dwelling units, 89,846 gross square feet (gsf) of office space, and 12,433 gsf of retail space (proposed project) on Lot 35 of the Development Site (Lots 24, 26, and 35). Lot 35 is currently occupied with a three-story commercial which would be demolished in order to construct the proposed project. Under the With Action condition, the 19-story mixed-use building currently under construction on Lot 26 would not be altered as a result of these changes. Although unlikely, the rezoning could result in a potential three-story enlargement to the existing five-story commercial building on Lot 24 which would not result in any ground disturbance activities. The proposed project is bounded by Fulton Street to the north, Rockwell Place to the east, Lafayette Avenue to the south, and Flatbush Avenue to the west in the Downtown neighborhood of Brooklyn Community District 2.

The April 2018 RAP proposes the handling, transportation, and off-site disposal of soil in accordance with New York State Department of Environmental Conservation (NYSDEC) requirements; removal of underground storage tanks in accordance with NYSDEC requirements; soil stockpiled will be covered with polyethylene sheeting; dust control; if dewatering is necessary, it will be conducted in accordance with a New York City Department of Environmental Protection Bureau of Wastewater Treatment Wastewater Quality Control Permit; installation of a vapor barrier consisting of a 20-mil reinforced membrane Raven Vaporblock VBP20 applied to the underside of new foundation slabs and the outside of the perimeter sub-grade walls; and if the proposed project changes to include at or below grade landscaped areas, any

such landscaping would have a minimum 2- foot "soil cap" consisting of either clean fill or existing Site soils meeting the criteria for imported clean fill. The April 2018 CHASP addresses worker and community health and safety during redevelopment.

Based upon our review of the submitted documentation, we have the following comments and recommendations to DCP:

DEP finds the April 2018 RAP and CHASP for the proposed project acceptable. DCP should instruct the applicant that at the completion of the project, a Professional Engineer (P.E.) certified Remedial Closure Report should be submitted to DEP for review and approval for the proposed project. The P.E. certified Remedial Closure Report should indicate that all remedial requirements have been properly implemented (i.e., installation of vapor barrier; transportation/disposal manifests for removal and disposal of soil in accordance with NYSDEC regulations; and two feet of DEP approved certified clean fill/top soil capping requirement in any landscaped/grass covered areas not capped with concrete/asphalt, etc.).

Future correspondence and submittals related to this project should include the following CEQR # **18DCP111K**. If you have any questions, you may contact Mohammad Khaja-Moinuddin at (718) 595-4445.

Sincerely,

Wei Yu
Deputy Director, Hazardous Materials

c: R. Weissbard
M. Khaja-Moinuddin
T. Estesen
M. Wimbish
W. Pugliese – DCP
O. Abinader – DCP

APPENDIX B
Phase I ESA Executive Summary

Hydro Tech Environmental, Corp.

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Phase I Environmental Site Assessment Report

570 Fulton Street
Brooklyn, New York



Prepared For:

Slate Property Group
850 Third Avenue – Suite 16B
New York, NY 10022

September 8, 2015

Hydro Tech Job No. 150226

Phase I Environmental Site Assessment Report

570 Fulton Street
Brooklyn, New York

September 8, 2015

Hydro Tech Environmental, Corp. appreciates the opportunity to work for Slate Property Group at the property located at 570 Fulton Street in Brooklyn, New York.

Should you require any additional information or have any comments regarding the contents of this report, please feel free to contact our office at your convenience.

We declare that, to the best of my professional knowledge and belief, Hydro Tech personnel meet the definition of an environmental professional as defined in §312.10 of 40 C.F.R. Part 312, and we have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

Very Truly Yours,

Hydro Tech Environmental, Corp.

X Morgan Violette
Morgan Violette
Project Geologist

X
Mark E. Robbins, C.P.G., C.E.I.
Principal

ENVIRONMENTAL ASSESSMENT ASSOCIATION
MARK E. ROBBINS
EAA
Certified Environmental Inspector
Member # EA-MER112014
EST 1991

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1.0 EXECUTIVE SUMMARY

Hydro Tech Environmental, Corp. (Hydro Tech) has performed a Phase I Environmental Site Assessment (Phase I ESA) at the Subject Property located at 570 Fulton Street in Brooklyn, New York. The Phase I ESA was performed to meet or surpass the American Standard of Testing Materials Standard for Phase I Environmental Site Assessments E 1527-13. The purpose of the assessment was to characterize the environmental quality of the Subject Property through the identification of Recognized Environmental Conditions. All work was performed under the supervision of a Hydro Tech Project Manager and under the guidance of a Hydro Tech geologist.

The results of the Phase I Environmental Site Assessment are contained in this report. The Phase I Environmental Site Assessment has revealed the following Recognized Environmental Condition(s) at the Subject Property:

- The presence of active black mold growth (§6.0).

No effort has been made to perform any investigation beyond what is included in this Report. The observations and conclusions included herein summarize the results of the Phase I Environmental Site Assessment up to the date of the fieldwork and the date of this Report.

The following sections provide the details and specific information pertaining to the various components of the Phase I Environmental Site Assessment.

2.0 INTRODUCTION & SCOPE OF WORK

2.1 Introduction

Hydro Tech Environmental, Corp. (Hydro Tech, HTE, the "*Preparer*") has been retained by Slate Property Group (the "*User*") to perform a Phase I Environmental Site Assessment (ESA, Assessment) at the property located at 570 Fulton Street in Brooklyn, New York. The User is the "*Prospective Owner*" of the property. The Phase I was prepared for due diligence purposes towards a future purchase transaction of the property. The property will hereafter be referred to as the "*Subject Property*".

The purpose of a Phase I Assessment is to characterize the environmental quality of the Subject Property through the determination of the presence of Recognized Environmental Conditions (RECs). As defined by the American Society of Testing and Materials (ASTM), a REC is, "the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment." (ASTM E 1527-13, §1.1.1). As defined by the ASTM, a Controlled Recognized Environmental Condition (CREC) is, "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls." (ASTM E 1527-13, §3.2.18). Adjacent and surrounding sites are evaluated as part of a Phase I Assessment with regards to conditions that may indicate high probability of the migration of hazardous substances or petroleum products to a property. As defined by ASTM, migrate/migration is, "the movement of hazardous substances or petroleum products in any form, including, for example, solid and liquid at the surface or subsurface, and vapor in the subsurface." (ASTM E 1527-13, §3.2.56).

To this end, Hydro Tech has collected information through a number of sources including, but not limited to: a property and neighborhood inspection by trained environmental personnel, a review of historical and current information collected from various federal, state, county and municipal agencies and personnel interviews with Site representatives. Recommendations are offered where prudent. Firms subcontracted by Hydro Tech and the User may have collected some information used in this report. Some or all of the Assessment has been performed or supervised by environmental professionals as required by 40 C.F.R. Part 310. The procurement of Title and Judicial Records for Environmental Liens and/or Activity and Use Limitations ("AULs") by HTE is beyond the scope of this practice (ASTM E 1527-13) and investigation.

2.2 Scope of Work

The general activities of the Phase I Assessment included the performance of the following tasks:

1. A detailed inspection of the Site and its general vicinity.
2. A review of all reasonably ascertainable regulatory agency documents.
3. A neighborhood hazardous waste survey utilizing Federal and State databases.
4. A review and evaluation of reasonably ascertainable geologic and hydrogeologic reference materials.
5. Interviews with representatives of the Site.
6. The preparation of a Phase I Environmental Site Assessment Report.

The Phase I ESA was performed in accordance with ASTM E 1527 except where noted in Section 2.3 and Hydro Tech's Proposal. As required by ASTM, the User has supplied information that has been relied upon by Hydro Tech in the rendering of findings, conclusions and opinions, except where indicated in Section 2.3 or elsewhere in the report.

2.3 Limitations and Exceptions & Data Gaps

In addition to those items outlined by ASTM E 1527, asbestos, radon, lead-based paint and lead in water were also considered in the scope of work. While this Phase I Assessment provides information with respect to both asbestos and lead-based paint, the presence of these materials can only be confirmed through the collection and analysis of bulk samples.

This report is not intended to serve as a full or complete asbestos survey or lead-based paint survey. These surveys are commonly performed for the purpose of building demolition/renovation or the recognition/identification of any building materials that may contain asbestos or lead-based paint and it is recommended that they be performed prior to any such work.

Business Environmental Risks have not been considered and are not included in the scope of work. This Phase I Assessment is not intended to address the soil/groundwater quality at the Subject Property for general Site characterization or waste disposal purposes. This Phase I Assessment in not intended to evaluate the fair market price of the property if it is not affected by hazardous or petroleum products.

Portions of this report have been prepared utilizing information provided by third party sources or the user. As such, Hydro Tech relies upon these sources and has recorded findings, conclusions and opinions based upon this information. Hydro Tech cannot attest to the accuracy of this information but where possible had attempted to verify the information.

This Phase I ESA Report is not intended to serve or be construed as a regulatory compliance report for the property. This Phase I ESA report does not evaluate vapor intrusion. No legal opinions are provided with this report.

It should be noted that the United States Environmental Protection Agency (USEPA) has determined in their final ruling (40 C.F.R. Part 312, Standards and Practices for All Appropriate Inquires) of December 30, 2013 that "persons conducting all appropriate inquiries may use the procedures included in the ASTM E 1527-13 standard to comply with today's final rule." Therefore, while all appropriate inquiry could be considered satisfied as this ESA was prepared in exceedances(s) of the ASTM E 1527-13 standard, persons attempting to utilize this ESA while seeking one of the Comprehensive Environmental Response, Compensation, and Liability Act's (CERCLA's) Limited Liability Protections (LLPs) must note that; a) they will not maintain CERCLA liability protections unless they also comply with all of the continuing obligations established under the statute that are beyond the scope of this practice (ASTM E 1527-13) and investigation; and b) in order to qualify for one of the CERCLA LLPs, the person commissioning the Phase I Environmental Site Assessment must have provided site-specific information (if available) to Hydro Tech before the date of this ESA, otherwise a determination could be made that all appropriate inquiry is not complete.

As defined by ASTM, a Data Gap is defined as an inability to obtain information during the Phase I process, as required under the Standard, despite a good faith effort by the Environmental Professional to obtain this information. The Phase I ESA report must contain information pertaining to Data Gap(s) and evaluate their relative significance.

The following table provides a breakdown of the Data Gap(s) encountered and their relative significance.

Data Gap	**Significance**
Site History – not conducted to time of first development and/or 5 year intervals.	Low – unlikely to alter conclusions due to findings of other resource(s).
No environmental lien provided.	Low – unlikely to alter conclusions due to findings of other resource(s).
Municipal Records – FOIAs not returned as of date of report.	Unknown – Any FOIA responses that alter the conclusions of the report will be provided upon receipt.

Due to other historical information obtained over the course of this investigation, Hydro Tech does not consider these data failures/data gaps significant, as they appear unlikely to have affected potential Recognized Environmental Conditions at the Subject Property.

3.0 SUBJECT PROPERTY DESCRIPTION

3.1 Subject Property Vicinity

The Subject Property is located on the south side of Fulton Street, between Rockwell Place to the east and Flatbush Avenue to the west, in the borough of Brooklyn, New York. The borough of Brooklyn is situated in the southeast portion of New York City.

The vicinity of the Subject Property consists of commercial and residential properties. The ground surfaces in the vicinity of the Site consist of asphalt, bare soil and concrete.

3.2 Subject Property Description

The Subject Property is identified as 570 Fulton Street, Brooklyn, NY. The Subject Property is 7,192 square feet in area and is occupied by a vacant 3-story office building most recently operated by SCO Family of Services (a child services organization). The building is currently partially occupied by Nicholas Brooklyn, a variety store. The building has two full separate basements and one subbasement located in the southeast portion of the Subject Property. The building is heated by two (2) roof-mounted HVAC natural gas units. **Appendix A** provides photographs of the Subject Property.

Access to the Subject Property is via Fulton Street to the north. The Subject Property is connected to the municipal water, sewer, gas and electric services. These services enter from Fulton Street.

The topography of the Subject Property and its vicinity is generally level. **Figure 1** provides a Site Plan.

3.3 Adjacent Land Use

The Subject Property is located in a residential and commercial area. The following properties were identified immediately adjacent to the Subject Property:

Direction	Adjacent Parcel	Surrounding Parcels
North	3-story commercial building (Health First and Dollar Deal)	Residential / Commercial
South	10-story commercial building (Extra Space Storage)	Residential / Commercial
East	42-story residential building	Residential / Commercial
West	Construction site	Residential / Commercial

Hydro Tech does not believe that the present uses of any adjacent properties identified above should impact upon the environmental quality of the Subject Property.

Hydro Tech does not believe that any of the surrounding parcels should impact upon the environmental quality of the Subject Property.

3.4 Proximity to Environmentally Sensitive Areas

The results of the Site inspection and an evaluation of the United States Geological Survey (USGS) 7.5 Minute Topographic Map containing the properties indicate there are four (4) sensitive receptors present within a ⅛-mile radius of the Subject Property: Brooklyn Hospital Center – Rockwell, Rainbow Heights Club Community Testing Program, Central Brooklyn Medical Group and Metropolitan Corporate Academy. Hydro Tech does not believe that the Subject Property should adversely impact upon the sensitive receptors.

3.5 Environmental Setting

The Site is located in northwestern portion of Brooklyn, New York. The elevation of the Subject Property is approximately 34 feet above mean sea level (USGS 7.5-Minute Brooklyn, New York Quadrangle, 2013).

Brooklyn, New York is located in the western portion of Long Island. Long Island consists of a wedge-shaped mass of unconsolidated deposits that overlie ancient basement rock.

The thickness of these deposits ranges from approximately 100 feet on the Island's north shore to approximately 2,000 feet in some portions of the south shore. These deposits contain ground water that is the sole source of drinking water for the Island's over 3.1 million residents.

The major landforms of Long Island of importance to the hydrologic system are the moraines and outwash plains, which originated from glacial activity. The moraines represent the farthest extent of the glacial advances. The moraines consist of till, which is a poorly sorted mixture of sand, silt, clay, gravel and boulders. The till is poor to moderately permeable in most areas. Outwash plains are located to the south of the moraines. The outwash plains were formed by the action of glacial melt water streams, which eroded the headland material of the moraines and laid down deposits of well-sorted sands, silts and gravels. These outwash deposits have a moderate to high permeability.

The **Upper Glacial Aquifer** is the uppermost hydrogeologic unit. This aquifer encompasses the moraine and outwash deposits, in addition to some localized lacustrine, marine and reworked materials. A relatively high horizontal hydraulic conductivity and a low vertical hydraulic conductivity characterize the outwash plain portion of this unit. Since the water table is situated in the Upper Glacial Aquifer.

The **Magothy Formation** directly underlies the Upper Glacial Aquifer in the vicinity of the site. This formation is a Cretaceous coastal-shelf deposit, which consists principally of layers of sand and gravel with some interbedded clay. This formation ranges from moderate to highly permeable. A clay layer in some parts of Long Island confines the uppermost portion of the aquifer. The Magothy is Long Island's principal aquifer for public water supply. The United States Environmental Protection Agency (USEPA) has classified the Long Island aquifer system as a sole source aquifer.

The **Raritan Formation** is the deepest unit and rests directly above the bedrock units. This formation is comprised of a sand member (**Lloyd Aquifer**) and a clay member (**Raritan Clay**). The Lloyd sand extends southward from Flushing Bay to the Atlantic Ocean. The thickness of the sand member ranges in depth from 200 to 800 feet below sea level and increases in thickness to the southeast. The clay member acts as an aquitard confining the lower Lloyd aquifer between the clay and the underlying bedrock.

Long Island has a humid, temperate climate that is strongly influenced by the Long Island Sound and the Atlantic Ocean. These bodies of water temper extremes of heat in summer and cold in winters. Climate affects the formation of soil through its influence on chemical, biological and physical processes. The amount and content of rainwater, as it percolates through the soil, chemically alters the composition of the soils. Chemical and biological processes are also affected by temperature changes. The physical weathering of the soil and rocks is affected by freezing.

The soils of Long Island are relatively young, having developed since the last recession of glaciation approximately 25,000 years ago. Over thousands of years, the minerals in the bedrock debris slowly decayed and disintegrated, providing the necessary substrate to support biological activity. Rock-forming minerals such as feldspars and micas, that are rich in potassium and aluminum, release their important elements as they are converted to clays. Soils formed in glacial drift are commonly known as loam, a mixture of sand, silt and clay.

The soils of Long Island formed three distinct soil horizons or zones on glacial deposits. The lowest horizon, designated as the C-horizon, is similar in composition to the transported glacial rock debris. The B-horizon is above the C-horizon and consists of sediments that have been considerably altered from their C-horizon source. Vadose zone water percolates through the B-horizon, carrying compounds of clay, iron, aluminum oxides, carbonates and humic acid. These materials are redeposited within the lower portions of the B-horizon, and form the zone of accumulation. The zone of accumulation may also be the zone of ground water saturation.

The zone of leaching is found in the A-horizon, which is the upper, organic-rich and life sustaining layer with abundant roots and organic matter at the surface. The A-horizon is distinct from the underlying B & C-horizons because it is darker and more friable.

Differentiation in soil horizons are the result of various soils-forming processes such as the physical breakdown of particles, the leaching of salts, the accumulation of organic matter and the chemical weathering of primary minerals. The chemical weathering of primary minerals occurs through processes

such as chelation, the formation of silicate clay minerals and the translocation of silicate clay minerals by percolating water from one horizon to another and the accumulation of iron.

According to the USGS Long Island Depth to Water Viewer, the depth to groundwater at the Site is approximately 26 feet. According to the USGS Groundwater Conditions Map, the regional groundwater flow direction in the vicinity of the Site is toward the northeast in the direction of the East River.

4.0 HISTORICAL USE

4.1 Sanborn Maps

Sanborn Fire Rate Insurance Maps for the Subject Property and its vicinity dated 1887, 1904, 1915, 1938, 1950, 1969, 1977, 1979 through 1982, 1986 through 1989, 1991, 1992, 1993, 1995, 1996, and 2001 through 2007 were obtained from EDR and evaluated in order to establish the history of the Site. **Appendix B** provides a copy of the Sanborn Fire Rate Insurance Maps:

Date	Subject Property Shown As	Surrounding area
1887 - 1904	2-story store	Residential/Commercial
1915 - 1938	3-story store	Residential/Commercial
1950 - 1996	3-story store now joined with 564 Fulton Street	Residential/Commercial
2001 – 2007	3-story health center	Residential/Commercial

4.2 City Directory Search

In order to further assess the property's history, available City Directory files were obtained from EDR for review. The City Directories document known occupants of specific properties and sorted by individual addresses. **Appendix C** provides a copy of the City Directory Search.

The following provides a listing of all documented usages of the address 570 Fulton Street:

Date	Use of Subject Property	Surrounding Property Use
1928	Mericas CE Restaurant	Residential/Commercial
1934	Foltis Fischer Inc Main Office	
1960	Buddy Lee Clothes, Home Builders Institute of Long Island	
1965	Buddy Lee Clothes	
1970	Buddy Lee Clothes	
1973	Buddy Lee Clothes	
1976	Buddy Lee Clothes	
1985	Phelps Stokes School	
1992	Caribbean Pavilion, St. Christoper Ottile Administrative Offices	
1997	Caribbean Pavilion, Foster Care Adoption, St. Christopher Ottile	
2000	St. Christopher Ottile	
2005	Nubian Heritage Inc., St. Christopher Ottile	
2008	St. Christopher Ottile, SCO Family of Services	
2013	Bioreference Laboratories Inc., Nicholas Brooklyn, SCO Family of Services	

4.3 Previous Studies

Hydro Tech performed a Phase I Environmental Site Assessment at the Subject Property during August 2014 on behalf of SCO Family of Services. Hydro Tech did not identify any RECs during the August 2014 Phase I ESA.

The Phase I ESA (text only) is provided in **Appendix D.**

4.4 Previous Owners

According to the property listing on Property Shark, documents on file with the NYC Automated City Register Information System (ACRIS) database and the New York City Department of City Planning, the following provides a list of historical owners of the Site:

Year	Name Of Previous Owner(s)
Unknown - 1991	St. Christopher-Ottilie

Year	Name Of Previous Owner(s)
1991 – 2001	NYC Industrial Development Agency
2001 – Present	St. Christopher-Ottilie

4.5 Historic Aerials

Publically available historical aerial photographs for the Subject Property and its vicinity dated 1954, 1966, 1980, 1994, 2004, 2006, 2008, 2009, 2011, 2012 and 2013 were reviewed and evaluated. The following summary provides a summary of this evaluation.

Date	Subject Property Shown As	Surrounding area
1954 – 2013	Existing building located on property.	Developed with residential and commercial buildings

4.6 Historical Use Summary

Based on a review of available information provided and/or obtained for the Subject Property as of the date of this ESA, it appears that the Subject Property was developed prior to 1887 with a 2-story commercial building. The present building was constructed during 1920 and has been altered and renovated from its initial use as a commercial store to its most recent use as an office building, store and medical clinic.

5.0 RECORDS REVIEW

5.1 Environmental Databases

Federal, State, Local and Tribal hazardous waste databases were reviewed with respect to the Subject Property and surrounding properties. ASTM E 1527 specifies the search area for each database. In addition, all orphan sites (those without adequate information for mapping purposes) listed in the database search were also reviewed, evaluated and incorporated (as needed). **Appendix E** provides a copy of the Database Search Results. The following databases, with the appropriate search radius, were reviewed:

ASTM Standard Environmental Record Source	Approx. ASTM Minimum Search Distance (MSD)	Number of Mapped Sites within MSD	Number of Orphan Sites
1. NPL (Superfund) *National Priorities List*	1.0 Mile	1	0
2. Delisted NPL Site *Delisted National Priorities List Site*	0.5 Mile	0	0
3. CERCLIS *Comprehensive Environmental Response Compensation & Liability Information System*	0.5 Mile	0	0
4. CERCLIS NFRAP *CERCLIS No Further Remedial Action Planned Site*	0.5 Mile	0	1
5. RCRA-TSD CORRACTS *Resource Conservation & Recovery Treatment/Storage/Disposal Facility Subject to Corrective Action*	1.0 Mile	0	0
6. RCRA-TSD *Resource Conservation & Recovery Treatment/Storage/Disposal Facility (Non-Corrective Action)*	0.5 Mile	0	0
7. RCRA-LG *Resource Conservation & Recovery Large Quantity Generator*	Site & Adjoining	0	0
8. RCRA-SG *Resource Conservation & Recovery Small Quantity Generator*	Site & Adjoining	0	0
9. ERNS *Emergency Response Notification System*	Property Only	0	0
10. Local / State / Tribal UST, PBS *Registered Storage Tanks*	Site & Adjoining	0	0
11. Local / State / Tribal LTANKS *Leaking Underground Storage Tanks*	0.5 Mile	48	0
12. State Spill Incidents *NYSDEC Spill Sites*	0.125 Mile	44	1
13. Local / State / Tribal SWF *Solid Waste Facility / Landfill*	0.5 Mile	0	1
14. Local / State / Tribal CERCLIS *Inactive Hazardous Waste Disposal Site*	0.5 Mile	0	1
16. Inst. / Engineering Controls *Registry of Institutional and/or Engineering Controls*	Property Only	0	0
17. Voluntary Cleanup Program Sites *Local / State / Tribal VCP Sites*	0.5 Mile	0	6
18. Brownfield Sites *Local / State / Tribal Brownfield Sites*	0.5 Mile	4	0
19. Non-ASTM Record Source(s)	Not Applicable	No MSD has been established by ASTM for these sources	

The review and evaluation of the above Federal and State/Tribal/Local Databases indicates that the Subject Property is not identified in any of the databases.

One (1) site is listed in the National Priorities List (NPL – Superfund) database within a 1-mile radius of the Subject Property. The Gowanus Canal is located 3,086 feet to the southwest and downgradient of the Subject Property. The Gowanus Canal is impacted by contaminated sediments containing PCBs and coal tar residue. Due to its proximity to the Subject Property and its status on the Final NPL, the Gowanus Canal should not impact upon the environmental quality of the Subject Property.

Forty-eight (48) sites are listed in the Leaking Underground Storage Tanks (LTANKs) database within a ½-mile radius of the Subject Property. No LTANK sites are situated adjacent to the Subject Property. Forty-five of the forty-eight LTANK sites have been cleaned up to the satisfaction of the NYSDEC and are considered closed; the remaining 3 LTANK sites are active and located upgradient of the Subject Property. The active LTANK sites are located 797 feet to the northeast, 1,293 feet to the west-northwest and 1,791 feet to the northwest and are all listed due to a tank test failures with no reported impact to groundwater. None of the LTANK sites should impact upon the environmental quality of the Subject Property due to various factors such as their location relative to groundwater flow direction, their current regulatory status, the nature of the spills and/or their proximity to the Subject Property.

Forty-four (44) sites are listed in the New York Spills database within a ⅛-mile radius of the Subject Property. No Spill sites are situated adjacent to the Subject Property. Forty-three of the 44 Spill sites have been cleaned up to the satisfaction of the NYSDEC and are considered closed; the remaining Spill site is located 626 feet to the south-southeast and downgradient of the Subject Property and is listed due to contamination discovered during geotechnical boring activities. None of the New York Spill sites should impact upon the environmental quality of the Subject Property due to various factors such as their location relative to groundwater flow direction, their current regulatory status, the nature of the spills and/or their proximity to the Subject Property.

Four (4) sites are listed in the New York Brownfields database and are located within a ½-mile radius of the Subject Property. One New York State Department of Environmental Conservation (NYSDEC) Brownfield site is located adjacent to the east of the Subject Property at 29 Flatbush Avenue. This property consists of a newly constructed 42-story residential building. Prior to remediation, this Brownfield site operated as a hydraulic-lift parking lot in operation from 1960 to 2004. Chlorinated solvents, semi-volatile organic compounds (SVOCs), metals and pesticides were found to have impacted the soil and groundwater, as well as PCE in the soil vapor at this Brownfield site. All contaminated soil has been excavated and removed, ventilated underground parking garages and vapor barriers have been placed in the new building constructed onsite, and contaminated groundwater is not used for drinking or other purposes. Due to the already completed remediation and engineering controls in place, this Brownfield site should not impact upon the environmental quality of the Subject Property.

A second Brownfield site is located 2,074 feet to the northwest and upgradient of the Subject Property and historically operated as a dry cleaners. Tetrachloroethylene and dichloroethene were found to have impacted the soil, groundwater and soil vapor. All contaminated soil has been excavated and removed to a depth of 25 feet below grade surface and a sub-slab depressurization system (SSDS) and soil vapor extraction system (SVE) were installed to prevent vapor encroachment into a new building developed on the site. Due to the already completed remediation and engineering controls in place and distance from the Subject Property, this Brownfield site should not impact upon the environmental quality of the Subject Property.

A third Brownfield site is located 2,103 feet to the north-northwest and upgradient of the Subject Property and was historically used for commercial purposes; this site applied for the NYSDEC Brownfield Cleanup Program but was denied in 2009. No environmental or health problems were reported for this site. Due to its proximity and lack of reported environmental or health problems, this Brownfield site should not impact upon the environmental quality of the Subject Property.

A fourth Brownfield site is located 2,467 feet to the southeast and downgradient of the Subject Property and was historically used for automotive fuel storage and dispensing purposes and is now developed as a 10-story mixed commercial and residential building. Due to its current developed state and proximity, this Brownfield site should not impact upon the environmental quality of the Subject Property.

A vapor encroachment screening consisting of a Tier 1 evaluation of Potential Vapor Encroachment Conditions (PVEC) was performed in accordance with ASTM E2600-10. A Tier 1 evaluation determines the presence or likely presence of a VEC based upon Federal, State and Local database search results and includes an evaluation of distance, depth to water, potential migration pathways, groundwater flow direction, hydraulic barriers, soil characteristics and other factors impacting soil vapor migration.

The results of the Tier 1 evaluation indicate no dry cleaners of petroleum-impacted sites are located within 100 feet or 30 feet of the Subject Property, respectively.

None of the remaining properties identified in the databases, including Orphan Sites, should impact upon the environmental quality of the Subject Property.

5.2 Municipal Records

FOIA requests were issued to the following municipal agencies with respect to the Subject Property. All reasonably ascertainable municipal records are provided with this report. **Appendix F** provides copies of the municipal documents.

- New York City Department of City Planning
- New York City Department of Building
- New York City Department of Housing Preservation and Development
- New York City Department of Health
- New York City Bureau of Fire Department
- New York State Department of Environmental Conservation
- New York City Department of Environmental Protection

New York City Department of City Planning

A FOIA request was submitted to the New York City Zoning Department. The Tax Map revealed that the Subject Property consists of one (1) lot which is identified as the following:

- Block 2106, Lot 35: 570 Fulton Street, Brooklyn 11217

The New York City Zoning Department indicated that both lots of the Subject Property is zoned for "16C". The Subject Property is not listed as an "E" Designation.

New York City Department of Buildings

All obtainable FOIA documents were obtained via written request or other means. A FOIA request was submitted to the New York City Department of Building (NYCDOB). The Subject Property is defined as one (1) lot by the NYCDOB and is identified as the following:

- Block 2106, Lot 35: 570 Fulton Street, Brooklyn 11217

The NYCDOB file for the Subject Property lists no complaints, seven (7) violations (none open) and no ECB violations. The violations are related boilers and the violations were dismissed because they were incorrectly assigned, as the Subject Property does not have boilers. There are two (2) jobs and twenty (20) actions listed for the Subject Property. The jobs and actions are related to withdrawn applications to install an illuminated business signs, plumbing repair and building notices. There are no Certificates of Occupancy on file for the Subject Property.

New York City Department of Housing Preservation and Development

A FOIA request was submitted to the New York City Department of Housing Preservation and Development (NYCHPD). The NYCHPD indicated that there are no open violations on file for the Subject Property.

New York City Department of Health

A FOIA request was submitted to the New York City Department of Health (NYCDOH). As of the date of this report, the NYCDOH has not provided any information pertaining to our FOIA request. Any information provided by the NYCDOH will be provided as soon as it has been received and evaluated.

New York City Bureau of Fire Prevention

A FOIA request was submitted to the New York City Bureau of Fire Prevention (NYCBFP). As of the date of this report, the NYCBFP has not responded to our search request. Any information provided by the NYCBFP will be provided as soon as it has been received and evaluated.

New York State Department of Environmental Conservation

A FOIA request was submitted to the New York State Department of Environmental Conservation (NYSDEC). As of the date of this report, the NYSDEC has not responded to our search request. Any information provided by the NYSDEC will be provided as soon as it has been received and evaluated.

New York City Department of Environmental Protection

A FOIA request was submitted to the New York City Department of Environmental Protection (NYCDEP). As of the date of this report, the NYCDEP has not responded to our search request. Any information provided by the NYCDEP will be provided as soon as it has been received and evaluated.

6.0 SITE RECONNAISSANCE

Ms. Morgan Violette of Hydro Tech performed the site reconnaissance portion of the Phase I Assessment on September 1, 2015. The weather during the inspection was sunny and approximately 85 degrees Fahrenheit.

Hydro Tech inspected all accessible portions of the Subject Property. The following pertinent information was obtained during the Subject Property Reconnaissance:

1. Industrial Processes

   No evidence of historical industrial processes was observed at the Subject Property.

2. Suspect Asbestos-Containing Materials

   No suspect asbestos-containing materials were observed at the Subject Property.

3. Suspect Lead-Based Paint

   No peeling suspect lead-based paint was observed at the Subject Property.

4. Lead in Water

   The City of New York is provided with potable water from a series of reservoirs located to the north and northwest of the city. The City of New York is responsible for maintaining the quality of this potable water. The Subject Property is served by public water.

5. Drum Storage Areas

   No current or former drum storage areas were observed at the Subject Property.

6. Storage Tanks

   No fill ports were identified at the Subject Property. No vent pipes were identified at the Subject Property.

   No visual evidence of underground storage tanks (USTs) or aboveground storage tanks (ASTs) was identified at the Subject Property. No evidence of former USTs or ASTs were identified at the Subject Property.

7. Subsurface Drainage Structures/Drains/Sumps

   No subsurface drainage structures, such as dry wells, leaching pools or cesspools were observed at the Subject Property. No evidence of former subsurface drainage structures was observed at the Subject Property.

   No evidence of current or former septic/waste water/storm water discharge systems is identified at the Subject Property.

   Six (6) floor drains were observed throughout the Subject Property. No stains, odors or spills were observed in the vicinity of the floor drains. It is reported that the floor drains discharge to the municipal sewer. The 6 floor drains should not impact upon the environmental quality of the Subject Property.

   No evidence of former floor drains was identified at the Subject Property.

   No sump pumps were identified at the Subject Property.

8. PCB-Containing Equipment

   No suspect PCB-containing equipment was identified at the Subject Property.

9. Monitoring / Potable Water Wells

   No potable water wells were identified on the Subject Property.
   No potable water wells were identified at the adjacent properties.
   No monitoring wells were identified on the Subject Property.
   No monitoring wells were identified at the adjacent properties.

10. Mold

    Black mold was observed at the bottom of a wall in the sprinkler room located in the northeastern portion of the Subject Property. The presence of black mold represents a REC.

    No other visual evidence of mold was observed at the Subject Property.

11. Pits, Ponds, or Lagoons

    No waste disposal pits, ponds or lagoons were observed at the Subject Property. No evidence of former pits, ponds, pools of liquid or lagoons were observed at the Subject Property.

12. Wetlands

    No evidence of wetlands or wetlands growth is identified at the Subject Property. The location of the Subject Property and its vicinity do not appear in the USA National Wetlands Inventory.

13. Staining/Stressed Vegetation

    No significant staining was identified at the Subject Property. No stressed vegetation was observed at the Subject Property.

14. Fill / Land Disposal / Solid Waste

    No visual areas of fill or evidence of land disposal of solid waste material(s) were observed at the Subject Property.

15. Engineering Controls

    No engineering controls were noted at the Subject Property.

16. Odors/Air Emissions

    No odors indicative of a petroleum, chemical or hazardous substance spill or release were identified at the Subject Property. No evidence of air emissions or air emission equipment was identified at the Subject Property.

17. Hazardous Substance / Petroleum Containers

    No evidence of suspect hazardous substances or other petroleum containers were identified at the Subject Property.

18. Radon

    USEPA's recommended action level is 4 picoCuries/liter and the average radon gas concentrations predicted in the Brooklyn area is 1.3 picoCuries/liter. Since Brooklyn is located in a Low Radon Potential area, radon gas should not represent a potential environmental concern that would warrant the sampling for radon gas at the Subject Property.

7.0 CLIENT / USER-PROVIDED INFORMATION & INTERVIEWS

7.1 Client / User-Provided Information

During the course of the Phase I Assessment, the Client/User Questionnaire is required to provide specific information. The following provides a breakdown of this information.

1. The client/user provided no records to Hydro Tech's request for information associated with Environmental Liens or Activity and Use Limitations against the property that may have been filed or listed under federal, tribal, state or local law.

2. The client/user reported no specialized or actual knowledge or experience related to any potential Recognized Environmental Conditions at the Subject Property or nearby properties.

3. The client/user did not respond to Hydro Tech's request for information regarding the relationship of the purchase price of the property to fair market value, specifically if it has been adjusted due to the known or potential presence of on-site contamination.

4. Other than provided in Section 7.2, the client/user reported no commonly known information or information within the local community regarding past use(s) of the property (including the storage and/or release of chemicals, hazardous substances, petroleum products, etc.) that could have affected the environmental integrity of the subject site.

5. The client/user could not confirm whether no environmental contamination or cleanups have occurred at the property in the past.

6. Hydro Tech Environmental provided the Questionnaire for the client/user to complete. The questionnaire was not returned.

7.2 Interviews

During the course of the Phase I Assessment, interviews were conducted with key site personnel with respect to the operation and history of the Subject Property. The following key site personnel was interviewed:

- Matthew John – Director of Operations of SCO Family of Services

The following information was provided:

- Mr. John explained the Subject Property operated as a clothing store prior to its current use as an office building, which was purchased approximately thirty years prior;
- Mr. John explained the Subject Property has been vacant for approximately two (2) weeks;
- Mr. John has been associated with the Subject Property for fifteen (15) years and explained the Subject Property has always been heated with natural gas via a roof-mounted HVAC system;
- Mr. John is aware of the previous Phase I conducted by Hydro Tech and is unaware of any other previous studies or spills.

The interview did not reveal the presence of any other potential Recognized Environmental Conditions in connection with the subject site, and did not provide any additional information with respect to the environmental integrity of the subject property that was not obtained from other sources over the course of this investigation.

In addition, although an interview with the former owner(s) was not possible as none were provided to HTE as of the date of this ESA, we do not believe that any such owner(s) would have additional material information regarding the potential for contamination at the property that was not obtained from other sources over the course of this investigation.

8.0 CONCLUSIONS

Hydro Tech has performed a Phase I Environmental Site Assessment at the Subject Property, and has identified the following Recognized Environmental Conditions (RECs):

- The presence of active black mold growth (§6.0).

9.0 CREDENTIALS & DECLARATION

9.1 Credentials

In accordance with ASTM E 1527, the credentials of those personnel directly involved with the production of this report are provided with this report. **Appendix G** provides a copy of the personnel credentials.

9.2 Environmental Professional Declaration

We declare that to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in 40 C.F.R. Part 312. We have the specific qualifications based on education, training and experience to access a property of the nature, history and setting of the Subject Property. Only where indicated we have developed and performed the AAIs in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

10.0 REFERENCES

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11.0 EXCLUSIONS & DISCLAIMERS

The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client. No warranty, expressed or implied, is made whatsoever in connection with this report.

In preparing this report, Hydro Tech Environmental, Corp. may have relied on certain information provided by state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to Hydro Tech Environmental, Corp. at the time of the subject property assessment. Although there may have been some degree of overlap in the information provided by these various sources, Hydro Tech Environmental, Corp. did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this subject property assessment.

No environmental site assessment can wholly eliminate uncertainty regarding the potential for RECs in connection with a Subject Property (ASTM E 1527-13 Section 4.5.1). The intent of an environmental site assessment is to reduce but not eliminate uncertainty regarding the presence of potential RECs within reasonable limits of both time and cost.

Observations were made of the subject property and of structures on the subject property as indicated within the report. Where access to portions of the subject property or to structures on the subject property was unavailable or limited, Hydro Tech Environmental, Corp. renders no opinion as to the presence of non-hazardous or hazardous materials, or to the presence of indirect evidence relating to a non-hazardous or hazardous materials, in that portion of the subject property or structure. In addition, Hydro Tech Environmental, Corp. renders no opinion as to the presence of hazardous materials, or the presence of indirect evidence relating to hazardous materials, where direct observation of the interior walls, floors, or ceiling of a structure on a subject property was obstructed by objects or coverings on or over these surfaces.

Hydro Tech Environmental, Corp. did not perform testing or analyses to determine the presence or concentration of asbestos or lead-based paint at the Subject Property or in the environment of the subject property under the scope of the services performed.

Any water level reading made in test pits, borings, and/or observation wells were made at the times and under the conditions stated in the report. However, it must be noted that fluctuations in the level of groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

Except as noted within the text of the report, no qualitative laboratory testing was performed as part of the subject property assessment. Where an outside laboratory, Hydro Tech Environmental, has conducted such analyses Corp. has relied upon the data provided, and has not conducted an independent evaluation of the reliability of the data.

The conclusions contained in this report are based in part, where noted, upon various types of chemical data and are contingent upon their validity. The data have been reviewed and interpretations were made in the report. As indicated within the report, some of the data may be preliminary "screening" level data, and should be confirmed with quantitative analyses if more specific information is necessary. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, the data should be reviewed, and the conclusions and recommendations presented herein modified accordingly. If in the opinion of the Client/User or any third party claiming reliance on this report, that Hydro Tech was negligent or in breach of contract, such aforementioned parties shall have 6 months from the date of Hydro Tech's visit to make a claim.

This report was prepared solely for the use of the Client/User and is not intended for use by third parties. Unauthorized third parties shall indemnify and hold Hydro Tech harmless against any liability for any loss arising out of, or related to, reliance by any third party on any work performed hereunder, or the contents of this report.