Special Brooklyn Navy Yard District

Environmental Assessment Statement

CEQR # 19DME011K



Prepared for:
Building 77 QALICB, Inc. (a subsidiary of the
Brooklyn Navy Yard Development Corporation) and the
New York City Department of Small Business Services

Prepared by:
Philip Habib & Associates

June 4, 2021

Special Brooklyn Navy Yard District

Environmental Assessment Statement

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ENVIRONMENTAL ASSESSMENT STATEMENT
LONG FORM

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

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

Part I: GENERAL INFORMATION

PROJECT NAME Special Brooklyn Navy Yard District

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency)	BSA REFERENCE NUMBER (if applicable)
19DME011K	
ULURP REFERENCE NUMBER (if applicable)	OTHER REFERENCE NUMBER(S) (if applicable) (*e.g.*, legislative intro, CAPA)
210463ZRK & 210462ZMK	

2a. *Lead Agency Information*	**2b. *Applicant Information***
NAME OF LEAD AGENCY **Office of the Deputy Mayor for Housing and Economic Development**	NAME OF APPLICANT **Building 77 QALICB, Inc. (a subsidiary of the ground lessee), together with the New York City Department of Small Business Services**
NAME OF LEAD AGENCY CONTACT PERSON **Hilary Semel, Assistant to the Mayor**	NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON **Shani Leibowitz, Brooklyn Navy Yard Development Corporation (BNYDC)**
ADDRESS **100 Gold Street, 2nd Floor**	ADDRESS **Building 77, 141 Flushing Avenue, Suite 801**
CITY **New York** STATE **NY** ZIP **10038**	CITY **Brooklyn** STATE **NY** ZIP **11205**
TELEPHONE **212-788-6805** EMAIL **hsemel@cityhall.nyc.gov**	TELEPHONE **718-796-2517** EMAIL **SLeibowitz@bnydc.org**

3. *Action Classification and Type*

SEQRA Classification

☐ UNLISTED ☒ TYPE I: Specify Category (see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended): **6 NYCRR Part 617.4(b)(9)**

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

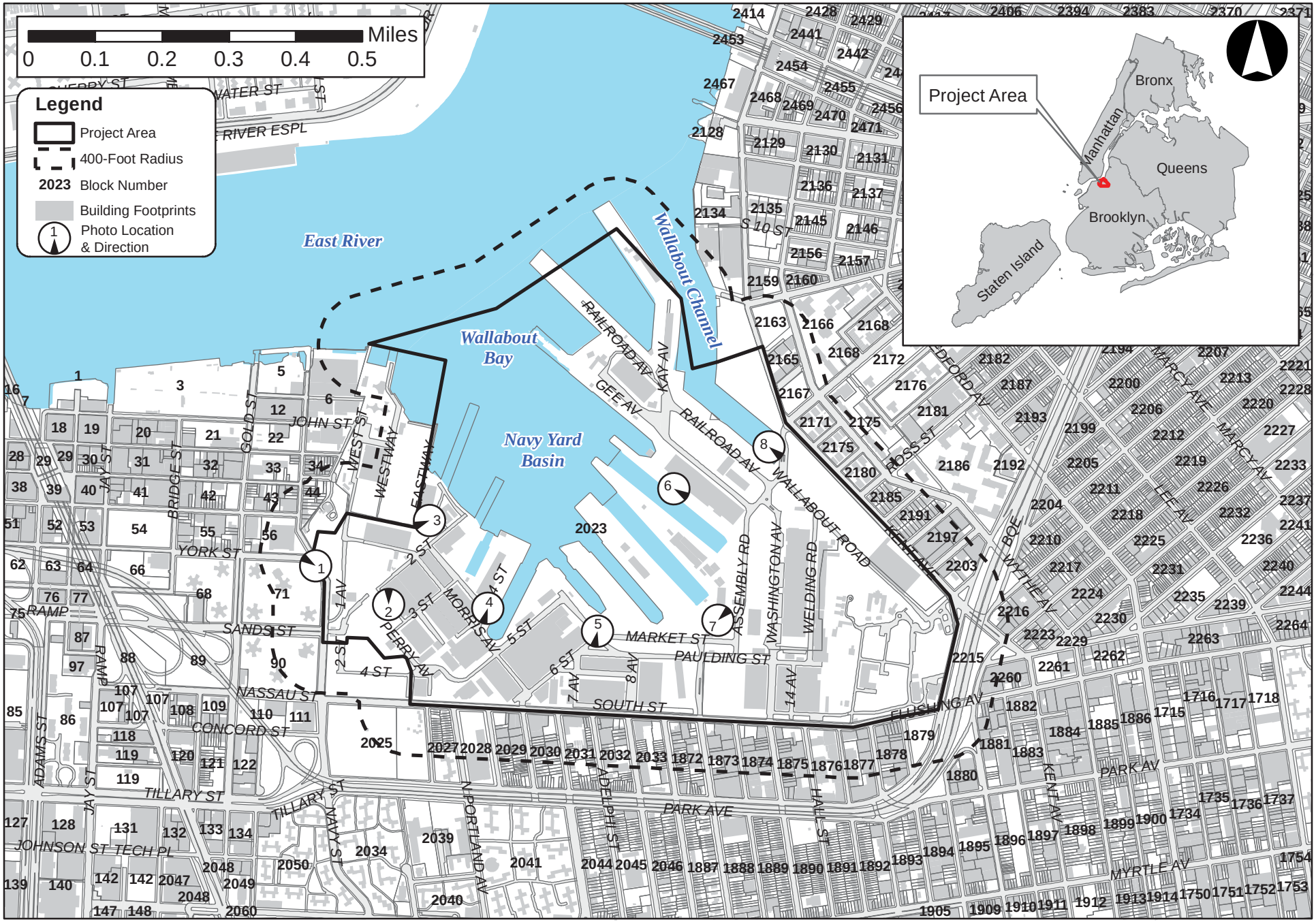
☒ LOCALIZED ACTION, SITE SPECIFIC ☐ LOCALIZED ACTION, SMALL AREA ☐ GENERIC ACTION

4. *Project Description*

Building 77 QALICB, Inc. (the "Applicant"), together with the New York City Department of Small Business Services (NYCSBS) as Co-Applicant, are seeking zoning map and text amendments (collectively, the "Proposed Actions") to facilitate certain recommendations of the Brooklyn Navy Yard Master Plan. The Project Area encompasses the majority of Brooklyn Block 2023, Lots 1 and 150 (other than a small portion of Lot 1 located in the water and a smaller irregular-shaped portion of Lot 1 located in the southwest corner of the Project Area), and is generally bounded by Kent Avenue to the east, Flushing Avenue to the south, and Navy Street to the west (refer to Figure 1). The Proposed Actions include: (1) A zoning text amendment to create the Special Brooklyn Navy Yard District (the "Special District") with special use, bulk, parking and loading, and publicly accessible space regulations; and (2) A zoning map amendment to map the Special District over the Project Area and change an R6B, M1-2, and portions of an M3-1 district within the Project Area to an M2-1 district.

The Proposed Actions would introduce tailored zoning regulations to facilitate and refine the further development of a modern manufacturing campus at the Brooklyn Navy Yard (the "Yard" or "BNY") by the approximately 4.6 million square feet (sf) of zoning floor area projected to occur at the Yard over the next 10 to 15 years by rationalizing parking and loading controls, allowing the introduction of compatible community facility and commercial uses to complement the core industrial use of the BNY, establishing public access areas in connection with development in certain areas at the perimeter of the Yard, and modifying height and setback regulations in defined areas of the Yard, modify waterfront regulations, and other bulk controls in manners compatible with modern industrial development and the surrounding context.

Refer to Attachment A, "Project Description" for further discussion.



Special Brooklyn Navy Yard District

Figure 1
Project Location

Project Location

BOROUGH **Brooklyn**	COMMUNITY DISTRICT(S) **2**	STREET ADDRESS **N/A**
TAX BLOCK(S) AND LOT(S) **Most of Block 2023, Lots 1 and 150**		ZIP CODE **11205**
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS **Kent Avenue to the east, Williamsburg Street West to the southeast, Flushing Avenue to the south, and Navy Street to the west (refer to Figure 1).**		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY **M3-1, M1-2, and R6B**		ZONING SECTIONAL MAP NUMBER **12d**

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

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

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

☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

Board of Standards and Appeals: ☐ YES ☒ NO

☐ VARIANCE (use)
☐ VARIANCE (bulk)
☐ SPECIAL PERMIT (if appropriate, specify type: ☐ modification; ☐ renewal; ☐ other); EXPIRATION DATE:
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION

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

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

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

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

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

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

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

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

☒ SITE LOCATION MAP ☒ 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

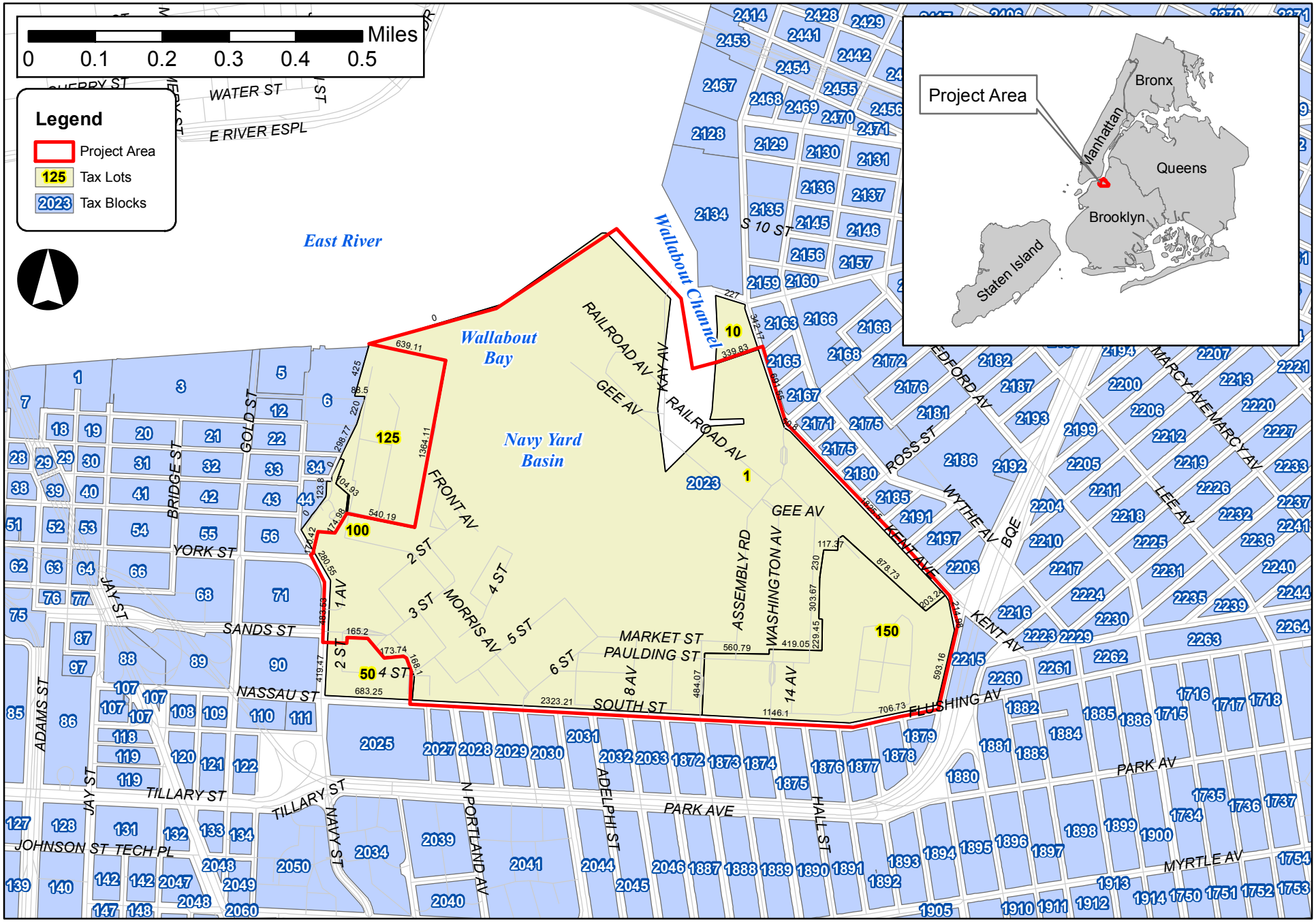
Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): **12,121,894 sf**
Waterbody area (sq. ft.) and type: **3,193,578 sf**
Roads, buildings, and other paved surfaces (sq. ft.): **8,928,316 sf**
Other, describe (sq. ft.): **N/A**

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

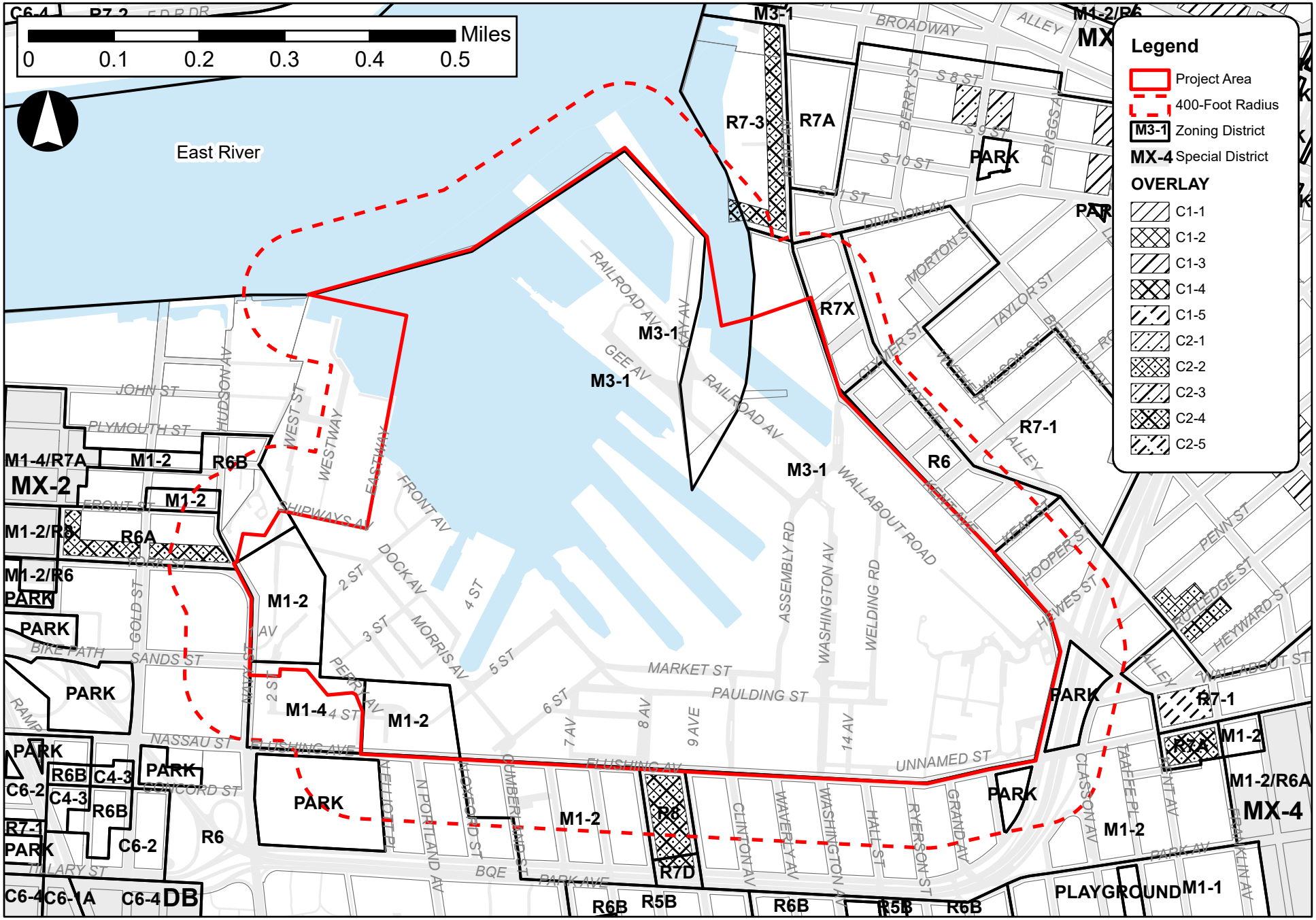
SIZE OF PROJECT TO BE DEVELOPED (gross square feet): **4,611,962 gsf**
NUMBER OF BUILDINGS: **7**
GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): **Projected Site 1: 2,511,635 gsf; Projected Site 2: 851,207 gsf; Projected Site 3: 1,249,120 gsf**
HEIGHT OF EACH BUILDING (ft.): **Projected Site 1: 315-375 feet; Projected Site 2: 395 feet; Projected Site 3: 325 feet**
NUMBER OF STORIES OF EACH BUILDING: **Projected Site 1: 16-20 stories; Projected Site 2: 20 stories; Projected Site 3: 16 stories**

Does the proposed project involve changes in zoning on one or more sites? ☒ YES ☐ NO



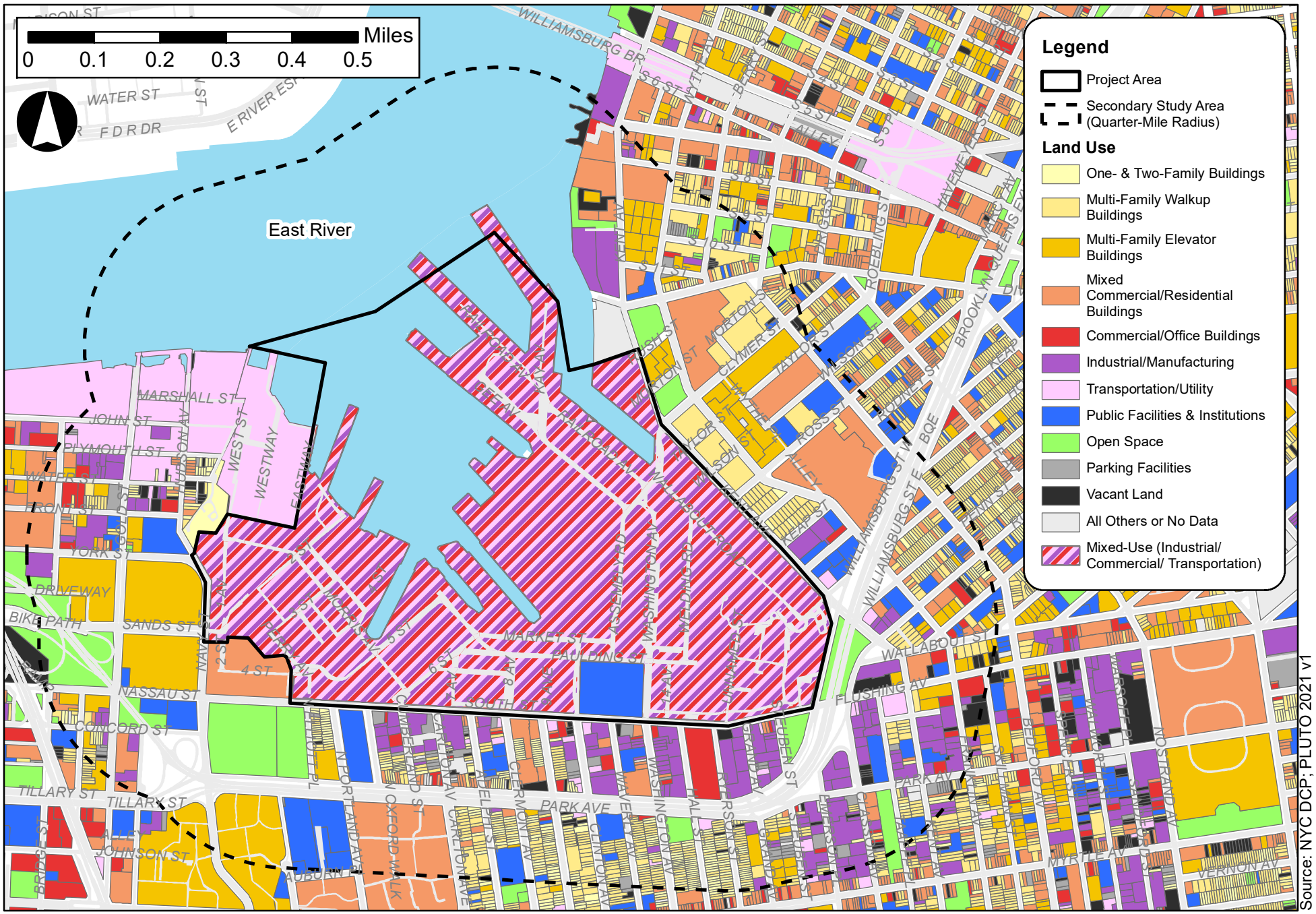
Special Brooklyn Navy Yard District

Figure 2
Tax Map



Special Brooklyn Navy Yard District

Figure 3
Existing Zoning



Special Brooklyn Navy Yard District

Figure 4
Study Area Land Uses



1. View southeast from Navy Street near York Street



2. View south from 3rd Street toward Downtown Brooklyn



3. View north of 2nd Street



4. View northeast from 4th Street & Morris Avenue.

Special Brooklyn Navy Yard District

Figure 5a
Project Area Photos



5. View north from Market Street



6. View northwest near Gee Avenue



7. View southwest from the intersection of Assembly Road and Market Street



8. View northwest from the intersection of Wallabout Road and Washington Avenue

If "yes," specify: The total square feet owned or controlled by the applicant: **0 sf**
The total square feet not owned or controlled by the applicant: **12,121,894 sf**

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

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

AREA OF TEMPORARY DISTURBANCE: **TBD** sq. ft. (width x length) VOLUME OF DISTURBANCE: **TBD** cubic ft. (width x length x depth)

AREA OF PERMANENT DISTURBANCE: **TBD** sq. ft. (width x length)

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): **2030**

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: **Up to 24 months per building**

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: **Refer to Attachment J, "Construction."**

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

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

DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

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

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Describe type of residential structures				
No. of dwelling units				
No. of low- to moderate-income units				
Gross floor area (sq. ft.)				
Commercial	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type (retail, office, other)	**Office & local retail**	**Office & local retail**	**Office, local retail, destination retail, & health club**	**+ Destination retail & health club**
Gross floor area (sq. ft.)	**725,000 gsf**	**1,608,000 gsf**	**1,530,191 gsf**	**- 77,809 gsf commercial space** ***- 75,937 gsf office*** ***- 91,874 gsf local retail*** ***+ 50,000 gsf destination retail*** ***+ 40,000 gsf health club***
Manufacturing/Industrial	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Type of use	**Industrial & storage/ warehouse, as well as media, film, and TV production**	**Industrial & storage/ warehouse, as well as media, film, and TV production**	**Industrial & storage/ warehouse, as well as media, film, and TV production**	**No change in uses**
Gross floor area (sq. ft.)	**4,829,481 gsf**	**8,555,443 gsf**	**7,886,252 gsf**	**- 672,191 gsf manufacturing/ industrial space**
Open storage area (sq. ft.)	**500,000 sf**	**0 sf**	**0 sf**	**No change**
If any unenclosed activities, specify:	**Open laydown area for a modular building fabricator**	**N/A**	**N/A**	**No change**
Community Facility	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Type	**Museum & academic uses**	**Museum & academic uses**	**Museum & academic uses**	
Gross floor area (sq. ft.)	**99,752 gsf**	**99,752 gsf**	**849,752 gsf**	**+ 750,000 gsf community facility:** ***+ 650,000 gsf academic*** ***+ 100,000 gsf museum***
Vacant Land	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:				

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Publicly Accessible Open Space	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):	**1.7 acres at the Naval Memorial Landscape and plazas adjacent to Buildings 77 and 92**	**1.7 acres at the Naval Memorial Landscape and plazas adjacent to Buildings 77 and 92**	**1.7 acres at the Naval Memorial Landscape and plazas adjacent to Buildings 77 and 92, and publicly accessible space in the Navy Subdistrict (approx. 35,000 sf), Flushing Avenue (approx. 36,350 sf), and Barge Basin Subdistrict (approx. 118,454 sf)**	**+ Publicly accessible space in the Navy Subdistrict (35,000 sf), Flushing Avenue (36,350 sf), and Barge Basin Subdistrict (18,454 sf)**
Other Land Uses	☒ YES ☒ NO	☒ YES ☒ NO	☒ YES ☒ NO	
If "yes," describe:	**Dry docks**	**Dry docks**	**Dry docks**	**No change**
PARKING				
Garages	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. of public spaces	**0**	**0**	**0**	**No change**
No. of accessory spaces	**460 spaces**	**7,132 spaces**	**TBD**	**A reduction in accessory parking spaces**
Operating hours	**24/7**	**24/7**	**24/7**	**No change**
Attended or non-attended	**Attended**	**TBD**	**TBD**	
Lots	☒ YES ☐ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If "yes," specify the following:				
No. of public spaces	**0**	**0**	**0**	**No change**
No. of accessory spaces	**3,040 spaces**	**3,040 spaces**	**3,040 spaces**	**No change**
Operating hours	**24/7**	**24/7**	**24/7**	**No change**
Other (includes street parking)	☒ YES ☐ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If "yes," describe:	**NYPD Tow Pound + DOJ Warehouse**	**NYPD Tow Pound + DOJ Warehouse**	**None**	**Relocation of the NYPD Tow Pound and DOJ Warehouse**
POPULATION				
Residents	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," specify number:				
Briefly explain how the number of residents was calculated:				
Businesses	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. and type	**Over 450 industrial, community facility, and commercial businesses**	**500 industrial, community facility, and commercial businesses**	**500 industrial, community facility, and commercial businesses**	**- Industrial - Commercial offices - Local retail + Destination retail + Health club + Academic + Museum**

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
No. and type of workers by business	**Approximately 11,000 industrial, community facility, and commercial employees**	**Approximately 20,100 industrial, community facility, and commercial employees**	**Approximately 19,400 industrial, community facility, and commercial employees**	**- 1,120 industrial employees - 253 office employees - 126 retail employees + 120 health club employees + 572 academic employees + 100 museum employees**
No. and type of non-residents who are not workers	**0**	**0**	**0**	**No change**
Briefly explain how the number of businesses was calculated:	**Existing estimates provided by the BNYDC; Increments based on standard rates of 1 worker per 600 sf industrial space; 1 worker per 300 sf office space; 1 worker per 333 sf retail/health club space; 1 worker per 1,000 sf museum space; 1 worker per 11 university students; and 1 worker per 6 high school students.**			
Other (students, visitors, concert-goers, *etc.*)	☒ YES ☐ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If any, specify type and number:	**Approx. 420 university students, 300 high school students, TBD museum visitors and retail shoppers**	**Approx. 420 university students, 300 high school students, TBD museum visitors and retail shoppers**	**Approx. 4,420 university students, 1,550 high school students, TBD museum visitors, health club visitors, & retail shoppers**	**+ 4,000 university students + 1,250 high school students Additional museum visitors, health club visitors, & retail shoppers**
Briefly explain how the number was calculated:	**Existing estimates provided by the BNYDC; Increments based on 2013 *Brooklyn Navy Yard Zoning Override for Academic Uses in 25 Washington Avenue EAS* and 2018 *Brooklyn Navy Yard Building 77 Academic Use Override EAS.***			
ZONING				
Zoning classification	**M3-1, M1-2, and R6B**	**M3-1, M1-2, and R6B**	**M2-1 in the Special BNY District**	**- R6B, M1-2, and portions of M3-1 districts + M2-1 district + Special BNY District**
Maximum amount of floor area that can be developed	**24,062,052 zsf**	**24,062,052 zsf**	**24,062,052 zsf**	**No Change**
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	**Land Use: Mix of predominantly residential, commercial and industrial uses Zoning: M1-2, M1-4, M3-1, R6, R6B, R7X, and R8 Districts**	**Land Use: Mix of predominantly residential, commercial and industrial uses Zoning: M1-2, M1-4, M3-1, R6, R6B, R7X, and R8 Districts**	**Land Use: Mix of predominantly residential, commercial and industrial uses Zoning: M1-2, M1-4, M3-1, R6, R6B, R7X, and R8 Districts**	**No Change**
Attach any additional information that may be needed to describe the project. If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

Part II: TECHNICAL ANALYSIS

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

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

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

	YES	NO
○ Is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it?	☐	☐
iv. Indirect Business Displacement		
○ Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	☐	☐
○ Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	☐	☐
v. Effects on Industry		
○ Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?	☐	☐
○ Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?	☐	☐
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, health care facilities, day care centers, police stations, or fire stations?	☒	☐
(b) Indirect Effects		
i. Child Care Centers		
○ Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project result in a collective utilization rate of the group child care/Head Start centers in the study area that is greater than 100 percent?	☐	☐
○ If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
ii. Libraries		
○ Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	☐	☐
○ If "yes," would the additional population impair the delivery of library services in the study area?	☐	☐
iii. Public Schools		
○ Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project result in a collective utilization rate of the elementary and/or intermediate schools in the study area that is equal to or greater than 100 percent?	☐	☐
○ If "yes," would the project increase this collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
iv. Health Care Facilities		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of health care facilities in the area?	☐	☐
v. Fire and Police Protection		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of fire or police protection in the area?	☐	☐
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
(c) If "yes," would the project generate more than 50 additional residents or 125 additional employees?	☐	☐
(d) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
(e) If "yes," would the project generate more than 350 additional residents or 750 additional employees?	☐	☐
(f) If the project is located in an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☐	☒
(g) If "yes" to questions (c), (e), or (f) above, attach supporting information to answer the following:		
○ If in an under-served area, would the project result in a decrease in the open space ratio by more than 1 percent?	☐	☐

	YES	NO
○ If in an area that is not under-served, would the project result in a decrease in the open space ratio by more than 5 percent?	☐	☐
○ If "yes," are there qualitative considerations, such as the quality of open space, that need to be considered? Please specify:	☐	☐
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow would reach any sunlight-sensitive resource at any time of the year. **See Attachment D.**		
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☒	☐
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. **See Attachment E.**		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☐	☒
(c) If "yes" to either of the above, please provide the information requested in Chapter 10. **See Attachment F.**		
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☒	☐
○ If "yes," list the resources and attach supporting information on whether the project would affect any of these resources. **See Attachment B.**		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Form and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☒	☐
(b) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☐	☒
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☒	☐
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☒	☐
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☒	☐
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: **See Attachment B.**	☒	☐
(i) Based on the Phase I Assessment, is a Phase II Investigation needed?	☒	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒

	YES	NO
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☐	☒
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than that listed in Table 13-1 in Chapter 13?	☐	☒
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☐	☒
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☐	☐
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☐	☒
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation.		
11. *SOLID WASTE AND SANITATION SERVICES*: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week): **710,317 lbs/week**		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☒	☐
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
○ If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	☐	☐
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): **2,056,555,762 MBtu**		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the appropriate screening analyses, attach back up data as needed for each stage, and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☒	☐
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☒
○ Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☒	☐
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway/rail trips per station or line?	☒	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☒	☐
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☒	☐
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☒	☐
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed)	☒	☐
(c) Does the proposed project involve multiple buildings on the project site?	☒	☐
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. **See Attachment H.**		
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒

	YES	NO
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) Would the proposed project result in the development of 350,000 square feet or more?	☐	☒
(d) If "yes" to any of the above, would the project require a GHG emissions assessment based on guidance in Chapter 18?	☐	☐
○ If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (See Local Law 22 of 2008; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	☐	☐
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☐	☒
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. **See Attachment I.**		
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☒	☐
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary. **See Attachment B.**		
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 B.**		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☒	☐
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☐	☒
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☐	☒
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☒	☐
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☒	☐
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☒	☐
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☒	☐
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☒	☐
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. **See Attachment J.**		

20. *APPLICANT'S CERTIFICATION*

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

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

APPLICANT/REPRESENTATIVE NAME	SIGNATURE	DATE
Philip Habib, P.E.		6/4/21

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

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

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

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

IMPACT CATEGORY	Potentially Significant Adverse Impact – YES	Potentially Significant Adverse Impact – 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.

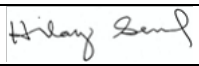
3. Check determination to be issued by the lead agency:

☐ **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 **Assistant to the Mayor**	LEAD AGENCY **Office of the Deputy Mayor for Housing and Economic Development**
NAME **Hilary Semel**	DATE **June 4, 2021**
SIGNATURE 	

ATTACHMENT A
PROJECT DESCRIPTION

I. INTRODUCTION

Building 77 QALICB, Inc. (the "Applicant"), together with the New York City Department of Small Business Services (NYCSBS) as Co-Applicant, are seeking zoning map and text amendments (collectively, the "Proposed Actions") to facilitate certain recommendations of the Brooklyn Navy Yard Master Plan. The Project Area encompasses the majority of Brooklyn Block 2023, Lots 1 and 150 (other than a small portion of Lot 1 located in the water and a smaller irregular-shaped portion of Lot 1 located in the southwest corner of the Project Area) and is generally bounded by Kent Avenue to the east, Flushing Avenue to the south, and Navy Street to the west (refer to **Figure A-1a**). The Proposed Actions include:

- (1) A zoning text amendment to create the Special Brooklyn Navy Yard District (the "Special District") with special use, bulk, parking and loading, and publicly accessible space regulations; and

- (2) A zoning map amendment to map the Special District over the Project Area and change an R6B, M1-2, and portions of an M3-1 district within the Project Area to an M2-1 district.

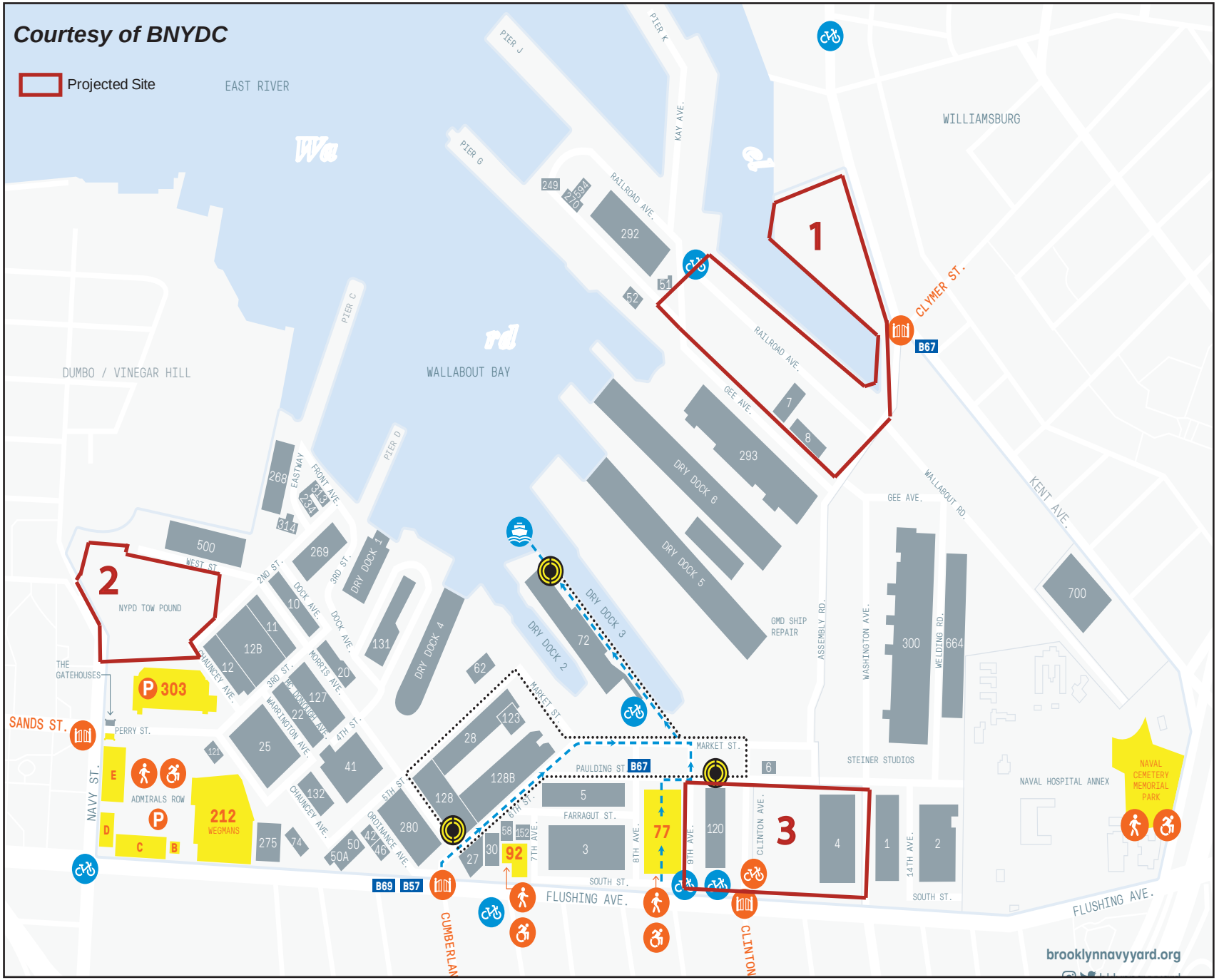
The Proposed Actions would introduce tailored zoning regulations to facilitate and refine the further development of a modern manufacturing campus at the Brooklyn Navy Yard (the "Yard" or "BNY") by the approximately 4.6 million square feet (sf) of zoning floor area projected to occur at the Yard over the next 10 to 15 years. In particular, the proposed regulations would: rationalize parking and loading controls; allow for the introduction of compatible community facility and commercial uses to complement the core industrial use of the BNY; establish public access area requirements in connection with development in certain areas at the perimeter of the Yard; and modify height and setback regulations in defined areas of the Yard, modify waterfront regulations, and other bulk controls in manners compatible with modern industrial development and the surrounding context.

This attachment provides a summary and description of the Proposed Actions, including the Project Area location, existing conditions in the Project Area, project purpose and need, project description, No-Action assumptions, reasonable worst-case development scenario (RWCDS) with the Proposed Actions, and the governmental approvals required. The attached supplemental studies examine the potential for the Proposed Actions to result in impacts in any City Environmental Quality Review (CEQR) technical areas, including separate attachments with analyses of land use, zoning, and public policy; shadows; historic and cultural resources; urban design and visual resources; transportation; air quality; noise; and construction in **Attachments C** through **J**, respectively. All other preliminary screening assessments are summarized in **Attachment B, "Supplemental Screening."**



Special Brooklyn Navy Yard District

Figure A-1a
Project Location



Special Brooklyn Navy Yard District

Figure A-1b
Existing BNY Buildings

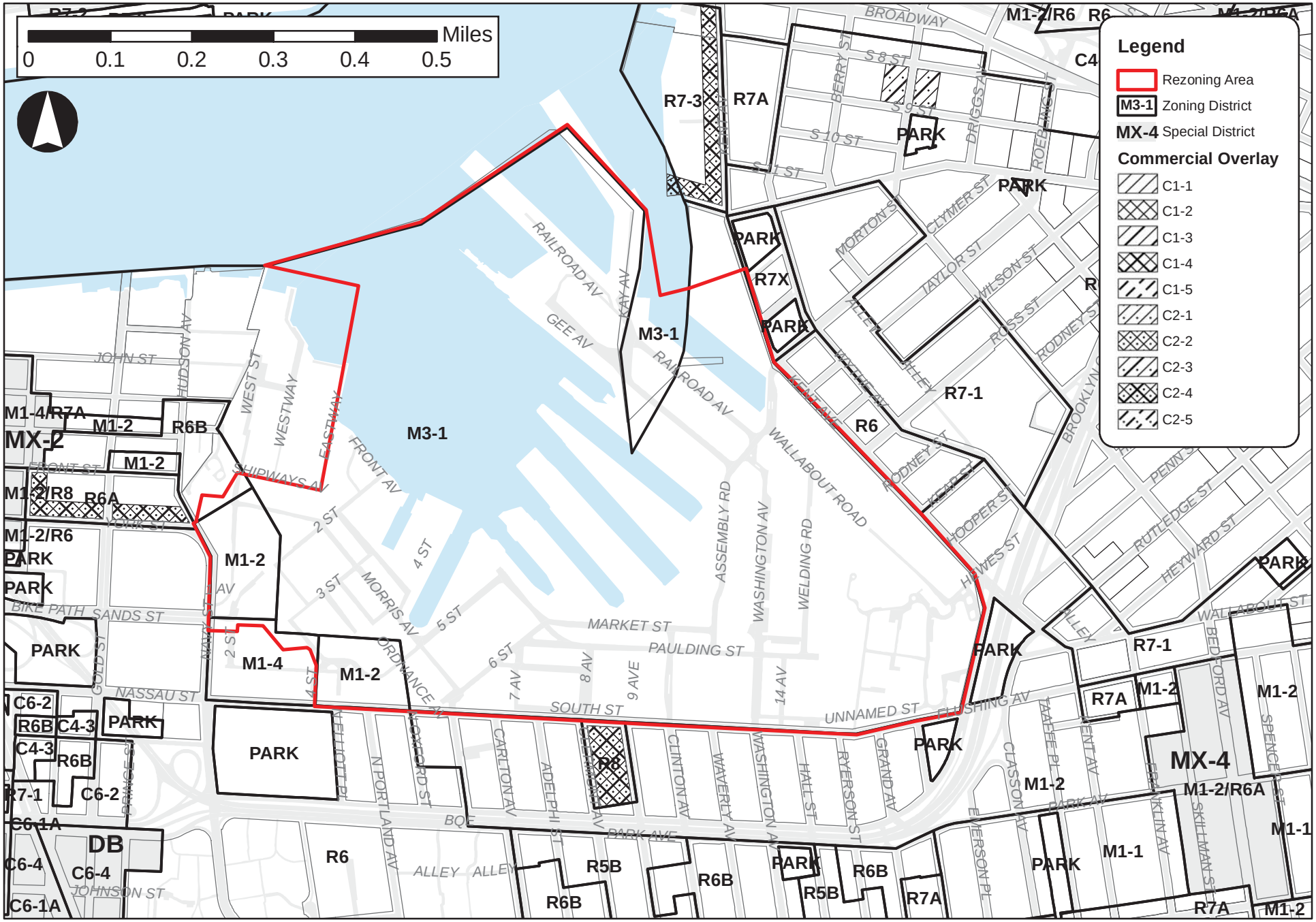
II. BACKGROUND AND EXISTING CONDITIONS

Project Area

The Project Area encompasses the entirety of Brooklyn Block 2023, Lots 1 and 150, except for a small portion of Lot 1 located in the water and a smaller, irregular-shaped portion of Lot 1 located in the southwest corner of the Project Area. The Project Area comprises a combined total area of 11,848,929 sf (approximately 272 acres) landward of the U.S. bulkhead line. In addition, 182,097 sf (approximately 4.2 acres) of area between the U.S. bulkhead line and the New York City pierhead line is covered by land, piers, and platforms, and generates floor area under the New York City Zoning Resolution. The Project Area is currently occupied by approximately 5.7 million sf of mixed commercial, industrial, and institutional uses across over 80 buildings ranging from one to 15 stories in height. The Project Area is bounded by Kent Avenue to the northeast, Williamsburg Street West to the southeast, Flushing Avenue to the south, Navy Street to the west, and the Wallabout Channel and Navy Yard Basin of the East River to the north (see **Figure A-1a**).

As presented in **Figure A-2**, the Project Area is predominantly zoned M3-1, with small portions of the Project Area zoned M1-2 and even smaller portions zoned R6B. M3-1 zoning districts permit manufacturing, warehouse, automotive uses, many commercial uses, and heavy industrial uses. Manufacturing and commercial development within M3-1 districts can be built to a maximum floor area ratio (FAR) of 2.0. M1-2 zoning districts permit a maximum FAR of 2.0 for manufacturing and commercial uses and 4.8 for permitted community facility uses. M1-2 districts are intended for light industry; however, heavy industrial uses are permitted in M1 districts as long as they meet the performance standards associated with M1 zones. Community facility uses allowed as-of-right in M1 zones are limited to diagnostic and ambulatory care facilities, houses of worship, and museums affiliated with a studio in proximity to the museum. Residential use is prohibited in M3-1 and M1-2 zones, and all commercial uses are generally allowed in these districts except for hotels, which can be constructed with a Special Permit in M1 districts and certain larger retail establishments. Lastly, an approximately 36,500-sf area along the western edge of the Project Area is zoned R6B; this R6B district represents approximately 0.3 percent of the Project Area. R6B districts permit residential and community facility uses up to 2.0 FAR. Industrial and commercial uses are not permitted in R6B districts. Under existing zoning, 23,990,052 zoning sf (zsf) of commercial and manufacturing use is permitted on the Project Area. After accounting for the existing buildings, over 18 million zsf of unused development potential exists today.

While the Project Area is subject to Chapter 2 of Article VI of the Zoning Resolution (Special Regulations Applying in the Waterfront Area), developments in the Project Area have been exempt from waterfront bulk (other than floor area), public access area, and visual corridor requirements because the Project Area is in a manufacturing district and at least 75 percent of the uses on the zoning lot are industrial and manufacturing uses (measured by floor area).



Special Brooklyn Navy Yard District

Figure A-2
Existing Zoning

Brooklyn Navy Yard

The Project Area together with adjacent Block 2023, Lot 50 comprises the Brooklyn Navy Yard. The BNY is owned by the City of New York[1] and managed by the Brooklyn Navy Yard Development Corporation (BNYDC), a not-for-profit corporation. Building 77 QALICB, Inc. is a not-for-profit corporation formed to support and benefit the BNYDC, its sole corporate member. NYCSBS is the City agency charged with managing the City's waterfront assets. BNYDC was formed in 1981 with the mission to create and preserve quality jobs, anchor New York City's modern industrial sector and its businesses, and connect the local community with the resources and economic opportunity at the Yard. The 300-acre industrial park on the Brooklyn waterfront, once the site of one of the nation's most storied naval shipbuilding facilities, is now home to over 450 businesses employing approximately 11,000 people. Tenants include, but are not limited to, entertainment and media; architecture, design, engineering, and construction firms; film and TV production studios; contractors; artists, photographers, and jewelers; furniture-makers; plastics manufacturers and distributors; and food distributors. With its largest expansion currently underway, BNYDC expects that this growth will redefine 21st century manufacturing. To ensure that the local community benefits from the Yard's economic development initiatives and success, the BNYDC provides community programs and workforce development services for local residents that match job seekers to opportunities with Yard businesses and strengthen its bonds with the surrounding communities. Annually, its on-site Employment Center places about 500 local residents in jobs both within and outside of the Yard and over 200 students in internships.

The BNY is also a designated Industrial Business Zone (IBZ). Since 2006, 21 IBZs have been created across the City where expanded business services are available for industrial and manufacturing business. The goal of the IBZs is to foster high performing business districts by creating competitive advantages over locating in areas outside New York City. The IBZs are supported by tax credits for relocating within them, zone-specific planning efforts, and direct business assistance from Industrial Providers of New York City Business Solutions Industrial and Transportation.

On May 22, 2014, 236 acres of the Brooklyn Navy Yard were listed on the State/National Register of Historic Places (S/NR, the "Brooklyn Navy Yard Historic District"). The historic district includes the largest intact area that was associated with the shipyard during the period of significance, from 1805/1806 to 1945. In addition, there are three individual city landmarks within the BNY that have been designated by the New York City Landmarks Preservation Commission (LPC): Dry Dock #1, the Surgeon's House, and the U.S. Naval Hospital Building.

Recent and Anticipated Developments in the BNY

Over the past decade, BNYDC has announced several new developments within the Yard that are presently underway or recently completed. These developments include Admirals Row, Dock 72, the Green Manufacturing Center (GMC), Steiner Media Campus, 399 Sands Street (renamed 303 Sands), Building 77 and Building 127. With the exception of the GMC and Building 127 (as-of-right building rehabilitations and conversions) and 399 Sands Street (as-of-right new construction), all of these developments have required discretionary approvals. Specifically, among other actions, the Admirals Row development required zoning map and text amendments and a Special Permit (approved in 2011) to (1)

[1] The City of New York owns the entirety of the Brooklyn Navy Yard except for one, approximately five-acre parcel occupying a portion of Lot 150 that is owned by the federal government and occupied by the U.S. Department of Justice, Bureau of Prisons.

reduce required accessory parking requirements; (2) waive yard requirements; (3) allow larger signage; (4) allow larger accessory group parking facilities; (5) remove the limit on retail floor area; and (6) exempt the development from waterfront public access and visual corridor requirements. Subsequently, in 2014, a Mayoral override was granted to permit an academic use within the Steiner Campus's Building 1 (aka 25WA). In 2016, a Mayoral override was granted to reduce the required accessory parking requirements for the Dock 72 office building. Lastly, in 2017 and 2018, Mayoral overrides were granted for the rehabilitation of Building 77 to (1) allow larger signage than permitted as-of-right; and (2) allow academic uses to occupy a portion of the building.

Recent Planning Studies in the BNY

Brooklyn Navy Yard Transportation Strategic Plan

In 2015, BNYDC commissioned a *Transportation Strategic Plan* to improve access to the Yard, control parking demand, and meet the needs of the Yard's growing tenant base. The *Transportation Strategic Plan* identified a series of recommendations, which were outlined in a phased implementation plan. Improvements outlined in the plan that have been implemented in the Yard include increasing shuttle frequency and hours of operation; creating new, more efficient shuttle routes; creating a shuttle tracking app; leasing new, more efficient shuttle vehicles; improving shuttle branding; installing shuttle signage and shelters; introducing ferry connections; upgrading bike networks; improving the streetscapes along key Yard access corridors; increasing the cost of Yard parking permits; efficiently increasing BNY parking capacity; installing on-site Citi Bike stations; implementing car sharing and autonomous vehicles; and extending the Brooklyn Waterfront Greenway around the Yard.

Brooklyn Navy Yard Industrial Park Strategic Plan

In 2016, BNYDC commissioned an *Industrial Park Strategic Plan* to anticipate future demands and opportunities, understand the shift in the global and local manufacturing landscape, and aim to determine how best to align with future business needs, tap into new markets, and provide the necessary infrastructure, leasing strategies, and business services for future growth. The *Industrial Park Strategic Plan* identified three goals: (1) create and preserve quality jobs; (2) connect the local community with the Yard's resources; and (3) anchor the City's industrial sector. The plan further identified key tenant archetypes to grow, retain, and/or cultivate in the next phase of the Yard's growth: innovative manufacturers, producers for the City, traditional manufacturers, media producers, and artists.

Brooklyn Navy Yard Master Plan: BNY 2030

In 2018, BNYDC completed its *Brooklyn Navy Yard Master Plan* ("*BNY 2030"*). Building off the two strategic plans, *BNY 2030* defined four overarching visions for the Yard: (1) increase Yard employment to 30,000 by 2030 (a 10,000-employee increase over anticipated 2020 conditions); (2) promote vertical manufacturing development; (3) enhance industrial operations, while integrating the BNY into the fabric of the surrounding community; and (4) enhance the Yard's dynamic campus through innovative urban design.

BNY 2030 built off the strategic plans' recommendations to establish an ideal tenant mix for future growth, comprised of 7,500 new manufacturing jobs (including producers of the City, innovative manufacturers, and traditional manufacturers), 2,000 new creative office employees, and 500 new employees in the amenities and services sector (e.g., museum/cultural institutions, retail, and showrooms

and maker spaces). To accommodate the planned employment growth, *BNY 2030* identified three near term sites within the Yard: the Kent Avenue site, the Navy Street site, and the Flushing Avenue site, which are detailed further below under "*Section V: Analysis Framework and RWCDS*."

Surrounding Area

The Project Area abuts three neighborhoods: Vinegar Hill (to the west), Wallabout (to the south), and South Williamsburg (to the east). A mix of uses and built forms are present in the surrounding area.

One portion of the Yard is not included in the Project Area: Lot 50, located at the northeast corner of Navy Street and Flushing Avenue. The lot was recently developed with a new mixed-use manufacturing, commercial office, retail, and parking development pursuant to a Special Permit approved in 2011 (the Admirals Row development). Outside of the Yard, light industrial and utility uses generally immediately abut the Yard to the northwest, south, and southeast, with residential uses found in the South Williamsburg and Vinegar Hill neighborhoods to the west and east, respectively.

Heavier industrial/utility uses are located within the M3-1 district that lines the waterfront blocks to the northwest of the Project Area and include the Red Hook Water Pollution Control Plant and neighboring Consolidated Edison (Con Ed) facilities. Lighter industrial uses are present in the M1-2 district mapped to the south and southeast of the Project Area and are often interspersed with commercial uses in multi-tenanted buildings.

Residential uses in the surrounding area vary substantially, ranging from one- and two-family rowhouses up to four stories in height along the east side of Kent Avenue to the tower-in-the-park style New York City Housing Authority (NYCHA) Farragut Houses located west of Navy Street. There are also several recently constructed residential and mixed-use residential/commercial buildings in the surrounding area, including the Navy Green development (constructed between 2009 and 2015), which comprises a majority of the block bounded by Flushing, Clermont, Vanderbilt, and Park avenues, and the Schaefer Landing development (completed in 2003), located along the East River, just north of the intersection of Kent Avenue and South 11th Street.

There are several public parks located adjacent to the Project Area, including the 10.39-acre Commodore Barry Park (located at the southwest corner of Navy Street and Flushing Avenue) and the 1.93-acre Roberto Clemente Ballfield and 1.08-acre Jacob's Ladder Playground (both located on the block bounded by Kent, Division, and Wythe avenues and Clymer Street).

The surrounding area is located between the Williamsburg and Manhattan Bridges, which provide connections to Manhattan by car, bike, and foot, and is intersected by the Brooklyn Queens Expressway, which connects to Queens and south Brooklyn. The area offers several mass transit options. The B57, B62, B67, and B69 bus routes have stops in the vicinity of the Project Area, which, together with the BNY's shuttle service, provide connections to multiple subway stations located beyond the immediate area, such as the York Street subway station serving the F subway line, High Street subway station serving the A/C subway lines, and Atlantic Terminal/Atlantic Avenue-Barclays Center railroad and subway station serving the Long Island Rail Road and 2/3/4/5/B/D/N/Q/R subway lines, as well as numerous other subway stations. The NYC Ferry Astoria Route stops near the center of the Project Area and provides access to Lower Manhattan, Western Queens, Roosevelt Island, and the Upper East Side. There are also approximately six Citi Bike stations within the area surrounding the BNY.

III. THE PROPOSED ACTIONS

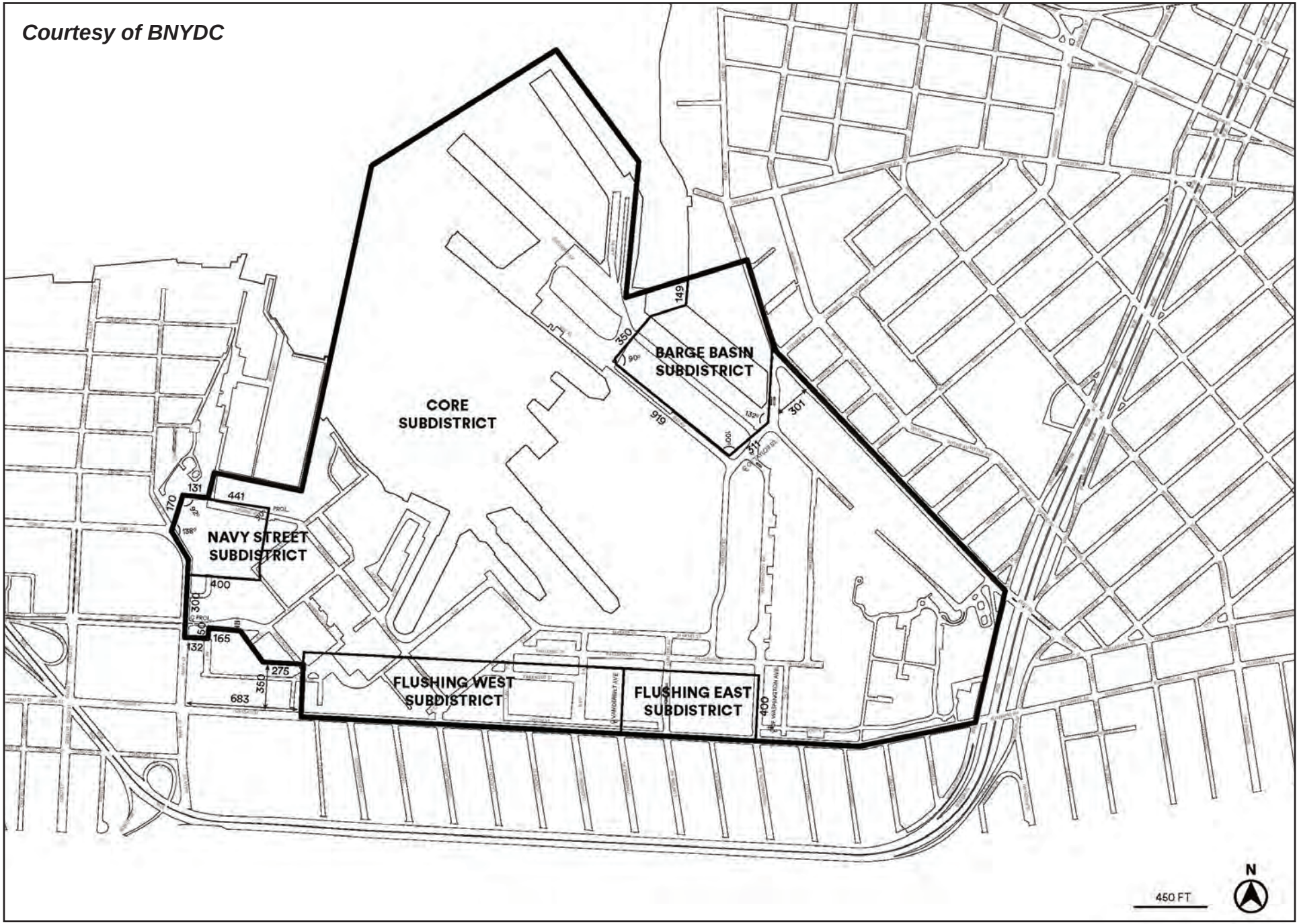
The Applicants are seeking zoning map and text amendments to carry out the recommendations outlined in *BNY 2030* in a manner that, among other things, (i) does not require excessive parking and loading facilities and (ii) permits more supporting community facility and retail uses than present zoning allows.

Zoning Text Amendments

The proposed zoning text amendments would create a new Special BNY District (as Chapter 4 of ZR Article XIV) with use, bulk, parking/loading, ground floor measures, and public space regulations tailored to facilitate the development of a modern industrial campus. The Special District text would include the following key features:

1) Subdistricts (Proposed ZR Section 144-04). Four subdistricts would be created within the Special District: a Navy Street Subdistrict along the western perimeter of the Yard (approximately 506,466 sf); a Flushing Subdistrict along the southern perimeter of the Yard (approximately 954,000 sf); a Barge Basin Subdistrict located along Kent Avenue on both sides of the Barge Basin (approximately 510,005 sf); and a Core Subdistrict comprising the remainder of the Special District (see **Figure A-3**). The Flushing Subdistrict would contain two subareas – a Flushing East Subarea, to the east of Vanderbilt Avenue where new development is expected, and a Flushing West Subarea, to the west of Vanderbilt Avenue that is more developed today and thus less likely to experience significant new construction. The Barge Basin Subdistrict would also have two subareas – a Barge Basin East Subarea and a Barge Basin West Subarea – located on opposite sides of the Barge Basin and both of which are expected to experience development in the future. The Navy Street Subdistrict would include a Navy Street Central Subarea, where development is anticipated in the future. The Navy Street Subdistrict, the Flushing Subdistrict, and the Barge Basin Subdistrict are identified as the "Perimeter Subdistricts" in the proposed Special District text. Within the public-facing Perimeter Subdistricts, a variety of commercial and community facility uses would be permitted, special bulk controls would apply in certain areas, and public space would be required in connection with new development. This land use approach would facilitate a public-facing transition zone between the BNY and the surrounding communities. Maps included as an Appendix to the Special District text would show the location of the Subdistricts and Subareas.

2) Inapplicability of Waterfront Controls (Proposed ZR Section 144-05). While the Yard is located on a "waterfront block" within the meaning of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area), most of the controls included in the Chapter do not apply to the BNY today due the Yard's current use "predominantly" for Use Group 16 heavy commercial, Use Group 17 and 18 manufacturing, and water-dependent uses. Moreover, application of many of the Article VI, Chapter 2 controls would not be consistent with the Master Plan or the ongoing development of the Yard as a modern industrial campus. As examples, the overall height and base height controls included in Article VI, Chapter 2 are inconsistent with the larger manufacturing buildings existing at the Yard today, and would not allow for the vertically-integrated manufacturing and creative office buildings envisioned by the Master Plan. Similarly, requirements for waterfront yards and waterfront public access areas throughout the Yard would interfere with the use of the shoreline for the variety of industrial and commercial tenants – including water-dependent businesses – operating in the BNY today and expected to operate in the future. Therefore, the



Special Brooklyn Navy Yard District

Figure A-3
Proposed Special District Subdistricts

zoning text amendment would make the requirements of Article VI, Chapter 2 inapplicable within the Special District, except as specifically set forth in the Special District text.

3) Uses (Proposed ZR Section 144-10). Zoning regulations for M2 manufacturing districts do not permit Use Group 3A "Colleges or universities," "Schools," "Libraries, museums or non-commercial art galleries," physical culture or health establishments, or other Use Group 3A uses. Similarly, a variety of retail uses, including certain Use Group 6C, 9A, 10A, and 12B retail establishments are not permitted. To facilitate the Proposed Development, the Special District text would modify ZR Section 42-10 (Uses Permitted as of Right) to the permit community facility uses in Use Group 3A without sleeping accommodations, and commercial uses in Use Groups 6C, 9A, 10A, and 12B not otherwise allowed in M2-1 zones in the Perimeter Subdistricts. These additional uses would be limited to a maximum floor area of 300,000 sf in each Perimeter Subdistrict with the additional commercial uses limited to no more than 100,000 sf of floor area in each Perimeter Subdistrict to ensure that the additional uses remain complementary to the industrial character of the Yard (Proposed ZR Section 144-212). Permitting these new uses in the Perimeter Subdistricts would enable the Proposed Development to provide more amenities and services to Yard workers and attract visitors to select areas of the campus, helping to integrate the BNY into the fabric of the surrounding community while maintaining most of the Yard as a center for industry. The zoning text would limit the overall amount of these additional uses allowed in any Subdistrict to assure that the uses would remain supportive of the overall industrial and jobs-creating mission of the BNY.

   The Special District text would also permit Use Group 3A colleges or universities and schools in the Core Subdistrict by New York City Planning Commission (CPC) authorization to facilitate synergies between academia and the industrial and maritime uses that are predominant in the BNY, provided that the CPC determines such academic use has a program compatible with a tenant or industrial operation of the Yard and does not interfere with the industrial use of the Yard (Proposed ZR Section 144-151). In some cases, co-locating academic facilities near maritime and industrial tenants in the Core Subdistrict would provide the best opportunity for hands-on learning and career development. While these new uses would be limited in scale, the new use regulations would facilitate the BNYDC's mandate under its lease with the City to "establish facilities to create and improve job opportunities," "provide additional employment," and "provide facilities for the training of persons in the acquisition of such skills as will prepare them to obtain employment." The CPC authorization would ensure that any future academic programs have a functional connection to a Yard tenant or Yard operations, and that any environmental concern with locating a school or university within a M3 zoning district is adequately addressed.

   The Special District would also allow for distilleries and breweries within the BNY without regard to performance standards set forth in Section 42-27 (Performance Standards Regulating Fire and Explosive Standards). The Yard houses these uses today, and today's regulatory standards allow for this use to operate in a safe manner. Finally, the Special District text would allow for health clubs in the Yard as an as of right Use Group 9A use.

   The Special District text would require that development on piers and platforms comply with the "WD" (Water Dependent) use provisions of ZR Section 62-24 (Uses on Piers and Platforms) while allowing the existing uses in these areas to be considered conforming uses to allow the long-standing tenants within the Yard to continue to upgrade their businesses. Application of this

Section would also have the result of limiting the height of any development other than developments for water-dependent uses to a height of 30 feet.

4) Bulk (Proposed ZR Section 144-20).

a. Height and Setback (Proposed ZR Section 144-23). Existing standard height and setback regulations do not necessarily produce building envelopes that are appropriate for the Yard's perimeter given the surrounding context. On Flushing Avenue, buildings are permitted to be located at the street line and rise without setback to a height of 60 feet or four stories, above which the height is governed by a sky exposure plane; these controls would not result in building forms that are compatible with nearby high street wall buildings that are set back from the street line. Around the Barge Basin, existing bulk controls do not easily accommodate the large, double height, flexible manufacturing spaces envisioned for the Proposed Development, nor do they promote visual access to the waterfront. To facilitate the Proposed Development, the Special District text would modify the requirements of ZR Section 43-30 (Height and Setback Regulations) in the Flushing East Subarea and replace this Section entirely in the Barge Basin Subdistrict with special height and setback controls. ZR Section 43-30 would apply in all other locations.

In the Flushing East Subarea, development would be required to set back a minimum of 50 feet from the Flushing Avenue street line, and because of the significant setback, the Special District text would provide that the portion of Flushing Avenue adjacent to this Subarea would be considered a wide street for purposes of applying the underlying height and setback controls of ZR Section 43-20 (Height and Setback Regulations). In addition, while not strictly a height and setback control, the Flushing East Subarea controls would also establish view corridor requirements within the Subarea, one commencing at the intersection of Vanderbilt Avenue with Flushing Avenue, and a second at the intersection of Flushing Avenue with either Clinton Avenue or Waverly Avenue.

Because of the unique configuration of the parcels in the Barge Basin Subdistrict, and the relationship of this Subdistrict to the waterfront, the Special District text would make the underlying controls of ZR Section 43-20 (Height and Setback Regulations) inapplicable in all respects, and would replace the underlying controls with a defined set of base, setback, sky exposure plane, and tower controls for portions of buildings exceeding the sky exposure plane. The Barge Basin controls would include:

- A requirement for a setback along the Kent Avenue frontage wide enough to create a 15-foot sidewalk along the western side of Kent Avenue. Any setback area would be improved as a sidewalk to the New York City Department of Transportation (DOT) standards.
- A requirement for a setback of 40 feet adjacent to the Barge Basin in the Barge Basin East Subarea and a setback of 50 feet adjacent to the Barge Basin in the Barge Basin West Subarea.
- A requirement that at least 70 percent of the length of the building base be located within eight feet of the Barge Basin setback lines and the Kent Avenue frontage to a height of two stories or 30 feet, whichever is lower.

- An 85-foot-tall maximum base height to allow for the extra-large double-height flexible production spaces included in the Master Plan along with loading, parking, and building support in the base.
- A building setback of 30 feet above the base height on the Barge Basin frontages and of 15 feet on the Kent Avenue frontage of the buildings.
- A sky exposure plane of 5.6 vertical feet for every horizontal foot of run above the base height on each of the Barge Basin, Kent Avenue, and southern boundary frontages to assure light and air to the surroundings.
- A right to build "towers" that extend beyond the sky exposure plane, provided that all such tower portions occupy not more than 40 percent of the lot area of Barge Basin East Subarea or the Barge Basin West Subarea, as relevant, and that the primary frontage of any such tower portion facing the Barge Basin has a width of no more than 200 feet. In addition, in order to avoid an overly long unarticulated streetwall facing public access areas, the Special District text would require that the base building facades facing the Barge Basin incorporate recesses or projections within the lower two floors or lowest 30 feet of the base height, whichever is less, for at least 20 percent and not more than 50 percent of the building façade area.

b. Yards (Proposed ZR Section 144-22). Because of the irregular arrangement of buildings at the BNY today and the absence of immediate neighbors over much of the Special District requiring light and air, ZR Section 43-20 (Yard Regulations) would be inapplicable in the Special District, and no yard requirements would apply.

c. Floor Area (Proposed ZR Section 144-21). The maximum permitted floor area for all uses in the Special District would be 2.0 FAR as set forth in ZR Section 43-12 (Maximum Floor Area Ratio), subject to the further floor area ratio caps for the additional community facility and retail uses allowed by the Special District text. With regard to calculating permitted floor area, the Special District text would expressly provide that ZR Sections 62-31 (Bulk Computations on Waterfront Zoning Lots) and 62-326 (Buildings in Manufacturing Districts) would be applicable in the Special District. This would make it clear that the overall development potential of the BNY would not increase as a result of the Proposed Actions.

d. Shoreline Setback (Proposed ZR Section 144-24). In order to provide opportunities to address sea level rise through design and resiliency measures, the Special District text would require that buildings of less than 5,000 sf and buildings containing water-dependent uses be set back from the Yard's shoreline. Development may be located closer to the shoreline by CPC Chair certification based on a showing that either (i) the development has been designed with resiliency measures to a height of 58 inches above the current mean high water line for the Yard; or (ii) that an area-wide resiliency plan has been prepared for the Yard and that the development will incorporate measures that are part of the plan or is in an area where protective measures from the resiliency plan are in place.

e. Special Permit for Bulk Modifications (Proposed ZR Section 144-25). In order to allow for adjustments to the Special District bulk regulations to respond to future conditions, the Special District would allow for adjustments to applicable bulk controls, other than floor area, by special permit based on findings that the modifications further the needs and objectives of the Special District, will result in better site planning, will allow for adequate light and air to adjoining publicly accessible areas, and will not unduly increase the bulk of any building to the detriment of occupants of the building or nearby blocks.

5) Publicly Accessible Space (Proposed ZR Section 144-30). As noted above, the Yard is currently exempt from visual corridor requirements under ZR Section 62-51 (Applicability of Visual Corridor Requirements) and exempt from waterfront public access area requirements under paragraph (a) of ZR Section 62-52 (Applicability of Waterfront Public Access Area Requirements) because the Yard is predominantly developed with Use Group 16 through 18 and water-dependent uses. This is not expected to change in the future, nor would public access throughout the Yard be appropriate given the nature of the Yard industries and the maritime uses occupying most of the waterfront. However, creating publicly accessible space in connection with development at defined locations at the Yard, where safe and not inconsistent with the industrial and maritime operations, is part of the Master Plan. The Special District text would require that publicly accessible space be provided in connection with new development in each the Navy Street Central Subarea, Flushing East Subarea, Barge Basin East Subarea, and Barge Basin West Subarea other than small structures having floor area of no more than five percent of the lot area of a Subdistrict and accessory to existing Use Group 11, 16, 17, or 18 uses at the Yard. The amount of open space required for the Navy Street Central Subarea would be 15 percent of the lot area of the Subarea (or 35,000 sf), and the Special District text would establish dimension, seating, and planting requirements for the space. For the Flushing East Subdistrict, the Special District text would require that an area with a 50-foot depth between Flushing Avenue and any development be improved as a publicly accessible plaza, with seating, plantings, and other amenities. In the Barge Basin Subdistrict, the Special District text would require that 20 percent of the lot area of the Barge Basin West Subarea and 30 percent of the Barge Basin East Subarea be improved as public access areas (66,000 sf and 52,400 sf, respectively), including a minimum 40-foot walkway along the eastern edge of the Barge Basin, a minimum 50-foot walkway along the western edge of the Barge Basin and pedestrian connections from Kent Avenue along a 30-foot walkway at the northern end of the Barge Basin East Subarea and a plaza area at the southern end of the Barge Basin East Subarea.

To ensure that the Navy Street Central Subarea and Barge Basin Subdistrict public access areas are built in proportion to development within the Subdistricts, the Special District text would allow for the phased construction of the public access areas in these locations. The phasing plan would require that the public access areas be built out in a proportionate manner to the amount of development being built, and that the required public space would be accessible from a public street or other publicly accessible open area, or for the Barge Basin West Subarea, the private street at the southern end of the Barge Basin.

Because the BNY is owned by the City, the design of the publicly accessible spaces (as well as all new structures developed in the Project Area) will be subject to review and approval by the New York City Public Design Commission. Plans for the public access areas would also be filed with the New York City Department of City Planning (DCP), demonstrating compliance with the zoning text requirements through a CPC Chair certification. The Special District text would require the owners

of these publicly accessible spaces to provide for their maintenance and operation, including but not limited to repairs, litter control, and the care and replacement of vegetation. All publicly accessible areas would be open to the public from 6:00 AM to 10:00 PM from April 15th to October 31st, and from 7:00 AM to 8:00 PM from November 1st to April 14th, except when required to be closed for repairs. These areas would also have signage at entry points to indicate that the spaces are open to the public.

6) Ground Floor Use, Transparency, and Screening (Proposed ZR Section 144-50). In order to create an attractive and engaging façade condition in areas where the Proposed Development is adjacent to public access areas required by the Special District text, the text would require that 50 percent of the ground floor frontages adjacent to the public access areas be occupied by floor area.

   Transparency requirements would also apply in these areas based on the surface area subject to the wrapping requirements, with transparency required at a rate of 50 percent of surface area where commercial use other than Use Group 11 or 16 is located in the required ground floor area, and at a rate of 25 percent of surface area where Use Group 11, 16, 17 or 18 is located behind the required ground floor area. The provisions of ZR Section 37-361 (Blank wall thresholds) for Type I blank walls would apply to the remaining portions of these ground floor facades and would extend for 50 feet along the adjoining facades.

7) Parking and Loading (Proposed ZR Section 144-50). Existing parking regulations impose very high parking requirements that are inconsistent with actual parking demand, the goals of the Transportation Plan, and the City's policy goals of promoting public-transit-oriented development and reducing reliance on automobiles. Additionally, only approximately 80 percent of the Yard's parking spaces are utilized today. Existing loading regulations also require more, and larger, loading berths than are needed. These regulations impose unnecessary costs on development.

   To ensure that excessive parking and loading are avoided in connection with the Proposed Development, the Special District text would make Article IV, Chapter 4 (Accessory Off-Street Parking and Loading Regulations) inapplicable to the Special District except where specifically set forth in the Special District. With regard to required parking, the Special Permit text would make ZR Section 44-21 (General Provisions) applicable, but would eliminate any parking requirement if a traffic demand management plan (the "TDM Plan") documenting modes of travel to the Yard, identifying and evaluating strategies to reduce reliance on automobiles, and encouraging the use of sustainable, alternative methods of transportation is maintained. The TDM Plan would establish a program of alternative transportation measures and will include ongoing survey and reporting criteria to assess the effectiveness of the plan. The TDM Plan is expected to evolve over time to respond to changes in travel patterns and to incorporate additional modes of transportation and technologies, with the goal of making additional parking at the Yard unnecessary. Surveys and other means will be employed to collect data related to travel modes, parking utilization, parking counts, and bicycle counts at the Yard annually and reported on not less than every three years and made available on a public website. The owner or ground tenant of the Yard would submit an affidavit every three years confirming the ongoing existence of the TDM Plan, or if the TDM Plan no longer exists, the date of its termination. Accessory parking would be permitted under the Special District text.

   The Special District text would eliminate today's excessive loading berth requirements, allowing the Yard to tailor its loading facility to align with actual needs of its tenants. To limit the impact of

loading operations on the surrounding neighborhoods, the Special District text would limit the number of curb cuts accessing loading berths directly from the surrounding streets to no more than one in the Navy Street Central Subarea, in the Flushing East Subarea, and in the Barge Basin East Subarea. Additional curb cuts would be allowed in the Barge Basin East Subarea by CPC Chair certification, confirming that DOT has approved the additional curb cut. The proposed controls would significantly reduce the number of curb cuts for loading from that allowed under current zoning, while permitting fully functional manufacturing buildings.

The Special District text would require that bicycle parking be provided in the amounts required by ZR Section 44-60 (Bicycle Parking). However, in order to accommodate a variety of bike parking options and maximize use of spaces across the Project Area, the text would allow for 50 percent of the spaces to be open. This adjustment is generally consistent with the bike parking controls applicable to academic campuses and would be in keeping with the way cyclists to the Yard park their bikes today.

8) Ancillary Provisions. The zoning text amendment would also amend:
    a. ZR Section 11-122 (Districts established) to acknowledge the establishment of the Special Brooklyn Navy Yard District;
    b. ZR Section 12-10 (Definitions) to include the Special Brooklyn Navy Yard District as a defined term;
    c. ZR Section 14-44 (Special Zoning Districts Where Certain Sidewalk Cafes Are Permitted) to include the Special District in the list of special districts in order to continue to allow enclosed and unenclosed sidewalk cafes in the same manner as they are today; and
    d. ZR Section 62-13 (Applicability of District Regulations) to include the Special District in the list of special districts where the provisions of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area) do not apply, except as expressly set forth in the Special District text.

The foregoing controls are necessary to ensure that the Proposed Development can proceed with an appropriate mix of uses and building forms, public space, and reasonable parking and loading requirements to implement the Master Plan and the goals of the BNY.

Zoning Map Amendments

In addition to mapping the proposed Special BNY District, the Proposed Actions would rezone a portion of the Yard that is currently zoned R6B, M1-2, and M3-1 to M2-1 zoning.[13] The rezoning of the R6B district to an M2-1 (BNY) district would correct the zoning district boundaries established by the 1998 Vinegar Hill Rezoning to ensure that manufacturing and commercial uses are permitted in this portion of the Yard, consistent with City policy for the BNY and the mission of the BNYDC. The rezoning of portions of the Yard's perimeter M1-2 and M3-1 districts to M2-1 would establish a consistent zoning district designation for areas of the Yard expected to experience significant development in the next decade with somewhat higher performance standards than the M3 zoning and providing a transition zone between the Yard's

[13] The Special District would exclude the portion of the BNY known as Admirals Row (Block 2023, Lot 50) because Admirals Row was recently developed as a discrete large-scale general development pursuant to multiple discretionary actions. Admirals Row has a unique character compared to the remainder of the Yard, with more than half of Admirals Row's floor area designated for retail use, and anchored around a destination supermarket, and therefore is not included within the Special District boundaries.

core and the surrounding neighborhoods. The M2-1 zoning, together with the proposed Special District text, would also allow for the targeted introduction of community facility and additional commercial uses compatible with the goals of the Master Plan and the overarching role of the BNY as a modern manufacturing campus. Permitting these uses within the more public-facing Perimeter Subdistricts portion of the BNY would also attract and serve residents and workers in the surrounding communities.

IV. PROJECT PURPOSE AND NEED

The proposed Special BNY District is intended to further the goals of *BNY 2030,* the BNYDC's Master Plan for the Brooklyn Navy Yard, and would acknowledge the Yard's unique character, tailoring the applicable zoning regulations to address certain site conditions. The Proposed Actions would allow the BNYDC to carry out the vision of *BNY 2030,* which include becoming a leader in vertical manufacturing development, enhancing industrial operations while integrating the Yard into the fabric of the surrounding communities, and enhancing the Yard's dynamic campus through innovative urban design.

As noted above in ***Section II****: "Background and Existing Conditions,"* two Mayoral overrides have been recently granted to permit academic uses in the Yard. The Mayoral overrides have allowed for piecemeal approvals, but prohibit the as-of-right development of additional community facility uses in other locations within the Yard. The proposed modifications to underlying use regulations would allow for limited community facility uses to be permitted as-of-right within the Yard, which would be in keeping with the BNYDC's goal of ensuring that the local community benefits from the Yard's economic development initiatives and successes. New community facility uses, such as museums and academic institutions, would further integrate the Yard with the surrounding area and provide for unique and valuable learning opportunities and exposure to manufacturing sectors. In addition, the Proposed Actions would allow physical culture/health establishments and a limited number of larger retail uses in the Yard as-of-right; these uses would serve as an asset to existing and future BNY employees, as well as residents in the surrounding community. In particular, the larger retail would allow for retail showrooms associated with the Yard's manufacturing tenants.

Underlying accessory parking regulations are outdated and inappropriate for the increasingly transit-accessible Yard and the increased transit- and non-auto travel patterns of existing and future Yard employees. As an example, existing M3-1 parking requirements for office uses require one parking space per 300 sf of office floor area; based on the average office employee density of three employees per 1,000 sf, this existing parking requirement assumes that 100 percent of office employees drive to work. The excessiveness of underlying parking regulations has also been demonstrated by recent approvals that have reduced underlying parking regulations; however, these previous actions were approved on a case-by-case basis, and do not address the fact that the underlying requirements are outdated and inappropriate. Further, the proposed reduced parking requirements are supportive of the sustainability objectives of the BNY's *Transportation Strategic Plan*. To ensure that excessive parking and loading are avoided in connection with the Proposed Development, the Special District text would make existing parking regulations inapplicable to the Special District except where specifically set forth in the Special District. With regard to required parking, the Special Permit text would make ZR Section 44-21 (General Provisions) applicable, but would eliminate any parking requirement if a TDM Plan is completed, including undertaking surveys of transportation modes, and make these materials available to DCP and the public.

Moreover, underlying loading berth requirements, both in terms of number and minimum size are not reflective of current manufacturing or commercial trends, which typically generate fewer large trucks. Based on extensive surveys conducted at the Yard and in comparable locations, it was determined that the lower loading berth requirements would be more appropriate for the Yard. In order to provide the excessive amount of parking and loading pursuant to existing zoning would require a significant amount of land and building area, which limits BNYDC's flexibility to utilize land in the Yard to drive ongoing job creation. The proposed Special BNY District parking and loading regulations would ensure that excessive and unutilized parking and loading is not provided, allowing for more space within the Yard to be used for job-generating development.

Additionally, the Proposed Actions would provide publicly-accessible open space along the frontages of new developments along the Project Area's perimeter. This includes open space along Navy Street in the Navy Street Central Subarea, open space along Flushing Avenue in the Flushing Subdistrict and waterfront open space on either side of the Barge Basin and pedestrian connections from Kent Avenue at the northern end and the southern end of the Barge Basin East Subarea. The Special District text will specify requirements for pedestrian circulation paths, seating, lighting and amenities. In addition, in order to ensure that the Navy Street Central Subarea and Barge Basin Subdistrict public access areas area built in proportion to manner development within the Subdistricts, the Special District text would allow for the phased construction of the public access areas in these locations.

V. ANALYSIS FRAMEWORK AND RWCDS

Analysis Year

In order to assess the potential effects of the Proposed Actions, a RWCDS for both the future without the Proposed Actions ("No-Action") and the future with the Proposed Actions ("With-Action") conditions will be analyzed. The RWCDS uses a 2030 build year for analysis purposes. As outlined in *BNY 2030,* 2030 represents the anticipated completion date of the next phase of BNY development, at which point Yard employment is expected to increase to 30,000 workers.

The future No-Action and With-Action scenarios identify the amount, type, and location of development that is expected to occur by 2030 without and with approval of the Proposed Actions. The incremental difference between the future No-Action and future With-Action scenarios is the basis for the impact category analyses of this Environmental Assessment Statement (EAS).

Development Site Criteria

In projecting the amount and location of new development that would occur in the BNY with implementation of the Proposed Actions, several factors have been considered in identifying likely development sites. These include development proposals from *BNY 2030*, past and current development trends, and *CEQR Technical Manual* development site criteria. Generally, for large or area-wide rezonings that create a broad range of development opportunities, new development can be expected to occur on selected, rather than all, sites within the proposed rezoning area.

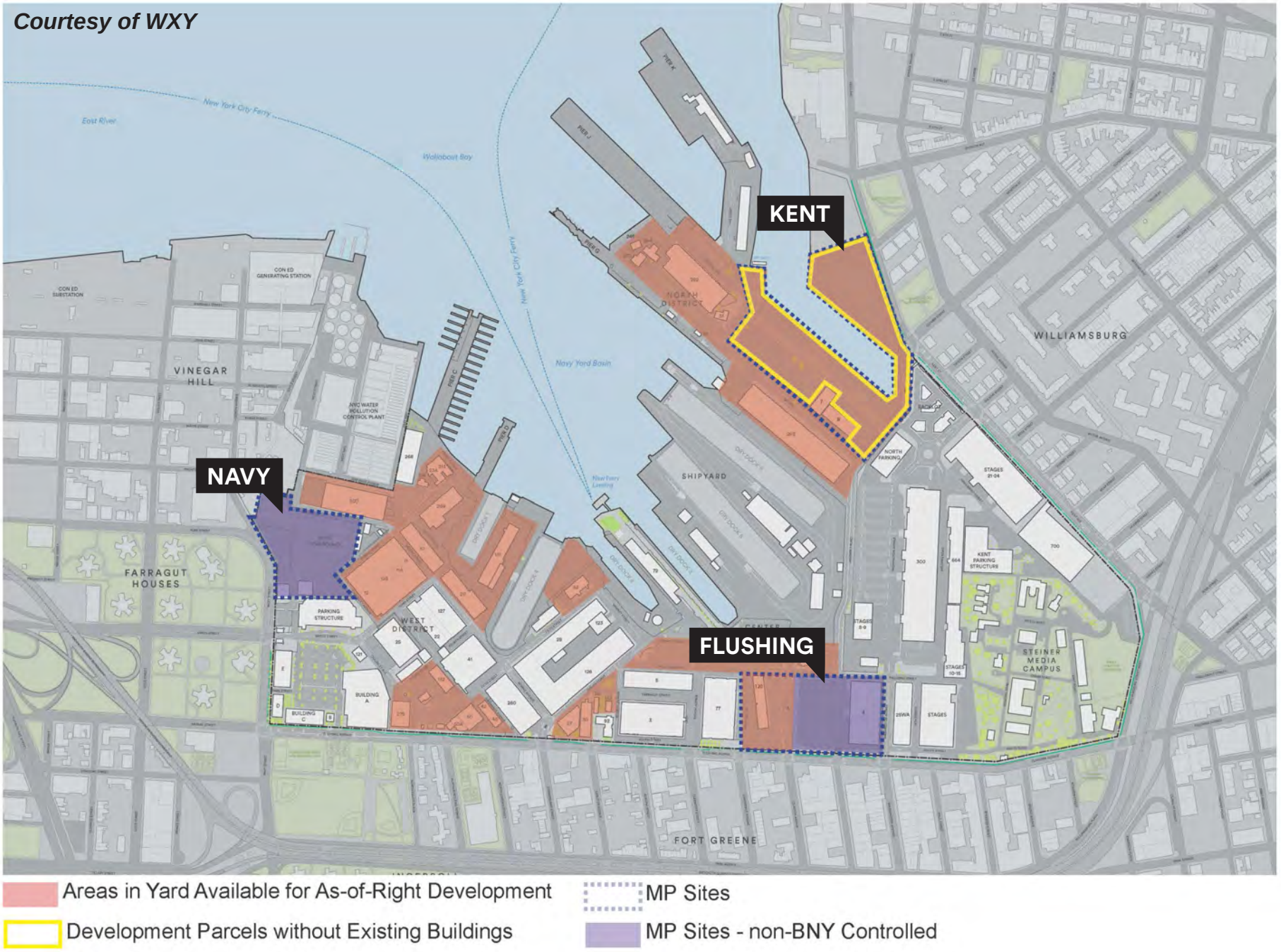
Identification of Development Sites

There is no specific proposed development as a result of the Proposed Actions, which would not increase the maximum allowable floor area in the Project Area, but rather, would facilitate the allocation of the Yard's permitted floor area to different uses. The Proposed Actions would therefore acknowledge the unique character of the Yard and tailor the applicable zoning regulations to address certain specific site conditions, such as actual parking needs and the infeasibility of providing open space on the working waterfront. As such, the Proposed Actions are not expected to result in new development density beyond that which is permitted as-of-right or that would be expected to occur with or without the Proposed Actions.

The first step in establishing the development scenario for the Proposed Actions was to identify those sites where new development could be reasonably expected to occur. **Figure A-4** illustrates areas in the BNY available for as-of-right development. For conservative analysis purposes, large development sites along the perimeter of the Yard were chosen. These sites would accommodate large building footprints as well as bulks and densities that would be visible to the surrounding community, as opposed to smaller developments scattered throughout the yard with buildings that would be shorter and therefore result in less visible urban design and shadows impacts. Moreover, assuming smaller developments scattered throughout the Yard would also spread out development densities, diminishing potential transportation impacts. As such, larger development sites along the perimeter of the Yard would maximize the potential effects of development facilitated by the Proposed Actions, thereby providing a conservative analysis framework for CEQR purposes.

As shown in **Figure A-4**, in order to be as conservative as possible pursuant to CEQR, *BNY 2030* identified three potential illustrative sites within the Yard that could accommodate the entirety of BNYDC's target expansion plan of increasing Yard employment to 30,000 by 2030: the Kent Avenue Site ("Projected Site 1"), the Navy Street Site ("Projected Site 2"), and the Flushing Avenue Site ("Projected Site 3"). Those three sites were therefore selected for analysis purposes under the With-Action condition. Although the anticipated development could be accommodated elsewhere within the BNY, those three sites represent the RWCDS for CEQR analysis purposes because: (1) the Proposed Actions would not increase the permitted FAR pursuant to underlying zoning; (2) increasing employment to 30,000 represents the reasonable worst-case Yard expansion by 2030 and hence the maximum development potential under the With-Action condition; (3) the three illustrative sites identified in *BNY 2030* represent the sites most likely to be developed in the future with the Proposed Actions; and (4) the three sites would be more visible to the public than development located further from the Yard edge. Therefore, for CEQR analysis purposes, the RWCDS for the With-Action assumes that no additional sites are expected to be developed in the Yard by the 2030 analysis year.

Projected Site 2 (Navy Street Site) is currently occupied entirely by an existing New York City Police Department (NYPD) tow pound administrative building and surface parking area, and Projected Site 3 (Flushing Avenue Site) is partially owned by the federal government and occupied by a Department of Justice (DOJ) warehouse building (also known as BNY Building 4, as shown in **Figure A-1b**). While development is expected to occur on those two sites in the with-Action condition in conjunction with the Proposed Actions, for conservative analysis purposes, it is assumed that the existing NYPD tow pound on Projected Site 2 and the DOJ warehouse building on Projected Site 3 would remain under the No-Action condition, as relocation of these two facilities would require actions by a third party. Therefore, the No-Action scenario assumes that some of the projected development would alternatively occur on other sites



Special Brooklyn Navy Yard District

Figure A-4

Areas in BNY Available for As-of-Right Development

within the Yard. As shown in **Figure A-5**, it is conservatively assumed that, in the No-Action condition, the development slated for both the Navy Street and Flushing Avenue Sites would be comprised of several smaller buildings located further in the Yard (the Navy Street Alternate Sites and the Flushing Avenue Alternate Sites, respectively), leaving the existing NYPD tow pound and DOJ warehouse unchanged. The Navy Street Alternate Sites ("No-Action Site 2") and the Flushing Avenue Alternate Sites ("No-Action Site 3") are detailed further below. In the With-Action condition, in conjunction with the Proposed Actions, it is expected that agreements between the BNYDC and the NYPD/DOJ would be memorialized, allowing for the relocation of the NYPD tow pound and DOJ warehouse, and the redevelopment of these sites under the jurisdiction of the BNYDC.

Existing Conditions

Kent Avenue Site (Projected Site 1)

Projected Site 1 totals approximately 505,000 sf in land area along the eastern border of the Project Area (refer to **Figure A-4**), and is completely under the control of the BNYDC. Projected Site 1 is bordered by Kent Avenue to the east, Assembly Road to the southeast, and Gee Avenue to the southwest. Within the site is a waterway called the Barge Basin that terminates at Assembly Road. Projected Site 1 is currently used for a combination of truck parking and as a laydown area for a modular building fabricator and contains two structures (also known as BNY Buildings 7 and 8, as shown in **Figure A-1b**), which are both used by Steiner Studios for set storage.

Navy Street Alternate Sites (No-Action Site 2)

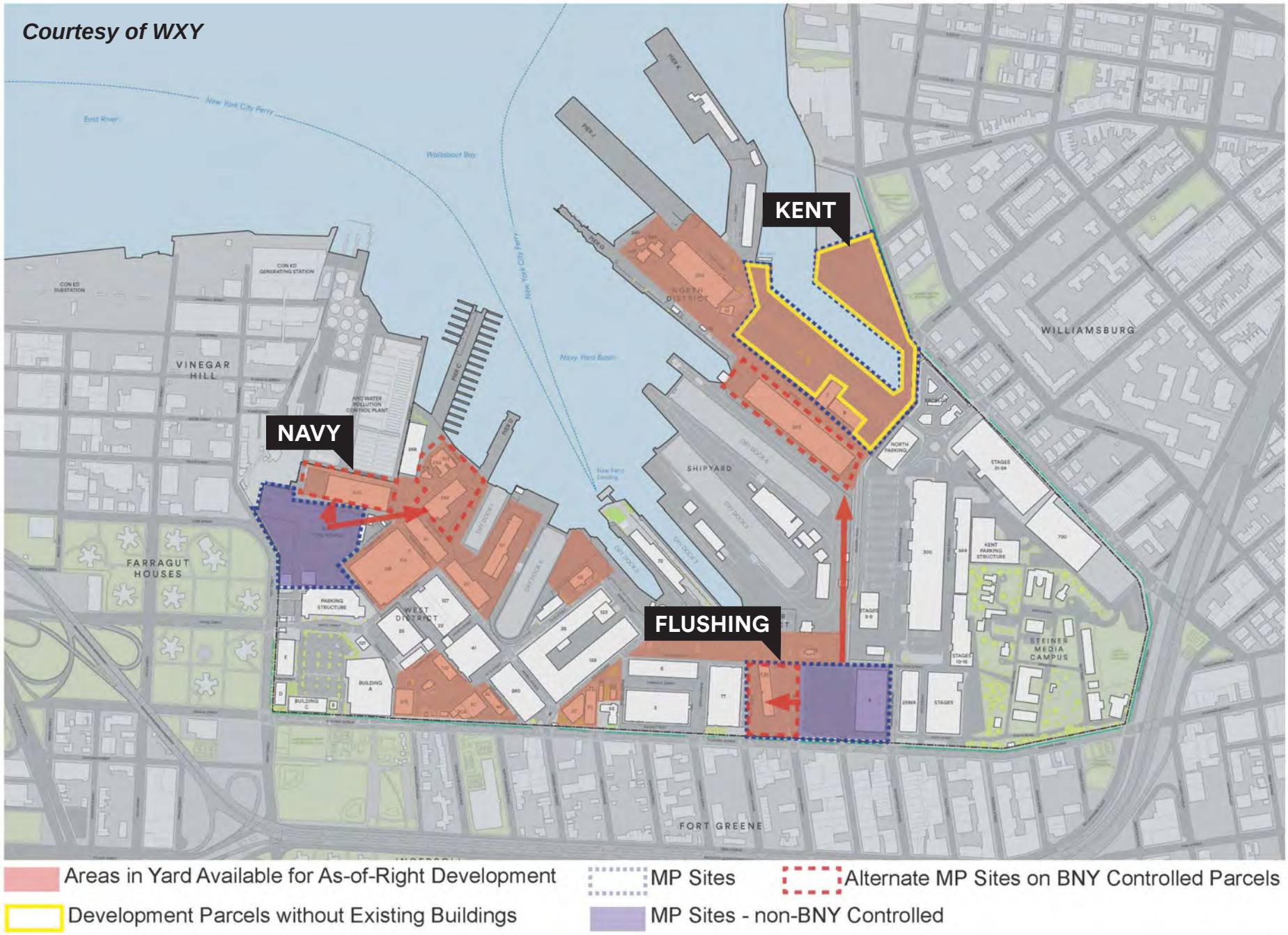
The Navy Street Alternate Sites total approximately 93,774 sf in land area in the western section of the Project Area, with frontages on the internal (non-public) Yard roadways of West Street, Ship Ways Avenue, 2nd Street, Dock Avenue, 3rd Street, Eastway, and Front Avenue (refer to **Figure A-5**). The Navy Street Alternate Sites are currently occupied by five BNY buildings (Nos. 234, 269, 313, 314, and 500, as shown in **Figure A-1b**), which contain a variety of commercial and industrial tenants.

Navy Street Site (Projected Site 2)

Projected Site 2 totals approximately 232,000 sf in land area along the western border of the Project Area and has frontage on Navy Street to the west, as well as the internal (non-public) Yard roadways of 2nd Street and Morris Avenue to the east and north, respectively (refer to **Figure A-4**). Projected Site 2 is currently occupied by two uses: (1) an NYPD tow pound administrative building and surface parking area, and (2) a small structure and associated surface parking lot for the Department of Citywide Administrative Services (DCAS).

Flushing Avenue Alternate Sites (No-Action Site 3)

The Flushing Avenue Alternate Sites total approximately 168,845 sf in land area, and are located partially along the southern border of the Project Area and partially in the in the northeastern section of the Project Area. As shown in **Figure A-5**, the southern building would have frontages on Flushing Avenue to the south and Paulding Street (an internal/non-public Yard roadway) to the north, and the northern building would have frontages on the internal (non-public) Yard roadways of Gee Avenue and Assembly Road. The


Courtesy of WXY
KENT
NAVY
FLUSHING
WILLIAMSBURG
VINEGAR HILL
FARRAGUT HOUSES
FORT GREENE
SHIPYARD
NORTH DISTRICT
WEST DISTRICT
STEINER MEDIA CAMPUS
East River
New York City Ferry
Wallabout Bay
Navy Yard Basin
Areas in Yard Available for As-of-Right Development
MP Sites
Alternate MP Sites on BNY Controlled Parcels
Development Parcels without Existing Buildings
MP Sites - non-BNY Controlled

Flushing Avenue Alternate Sites are currently occupied by BNY Buildings 120 and 293 (refer to **Figure A-1b**), which contain multiple commercial and industrial tenants, as well as surface parking.

Flushing Avenue Site (Projected Site 3)

Projected Site 3 totals approximately 267,000 sf in land area along the southern border of the Project Area and has frontage on Flushing Avenue to the south and Paulding Street (an internal/non-public Yard roadway) to the north (refer to **Figure A-4**). Projected Site 3 is currently occupied by the existing two-story Building 120 (currently occupied by multiple industrial tenants), surface parking, and a DOJ warehouse building (also known as BNY Building 4, as shown in **Figure A-1b**).

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

In the No-Action Condition, the requested zoning map and text amendments would not be approved. Development within the Yard would continue to occur on an as-of-right basis in similar amounts and densities as would occur with the Proposed Actions in keeping with BNYDC's mission to create and preserve quality jobs, anchor New York City's modern industrial sector and its businesses, and connect the local community with resources and economic opportunity at the Yard. To meet this goal, it is anticipated that a combined approximately 4.6 million sf of new industrial and commercial development would occur on three sites (Projected Site 1, No-Action Site 2, and No-Action Site 3) in the 2030 No-Action Condition. See **Table A-1** below for a breakdown of the anticipated No-Action development on these sites.

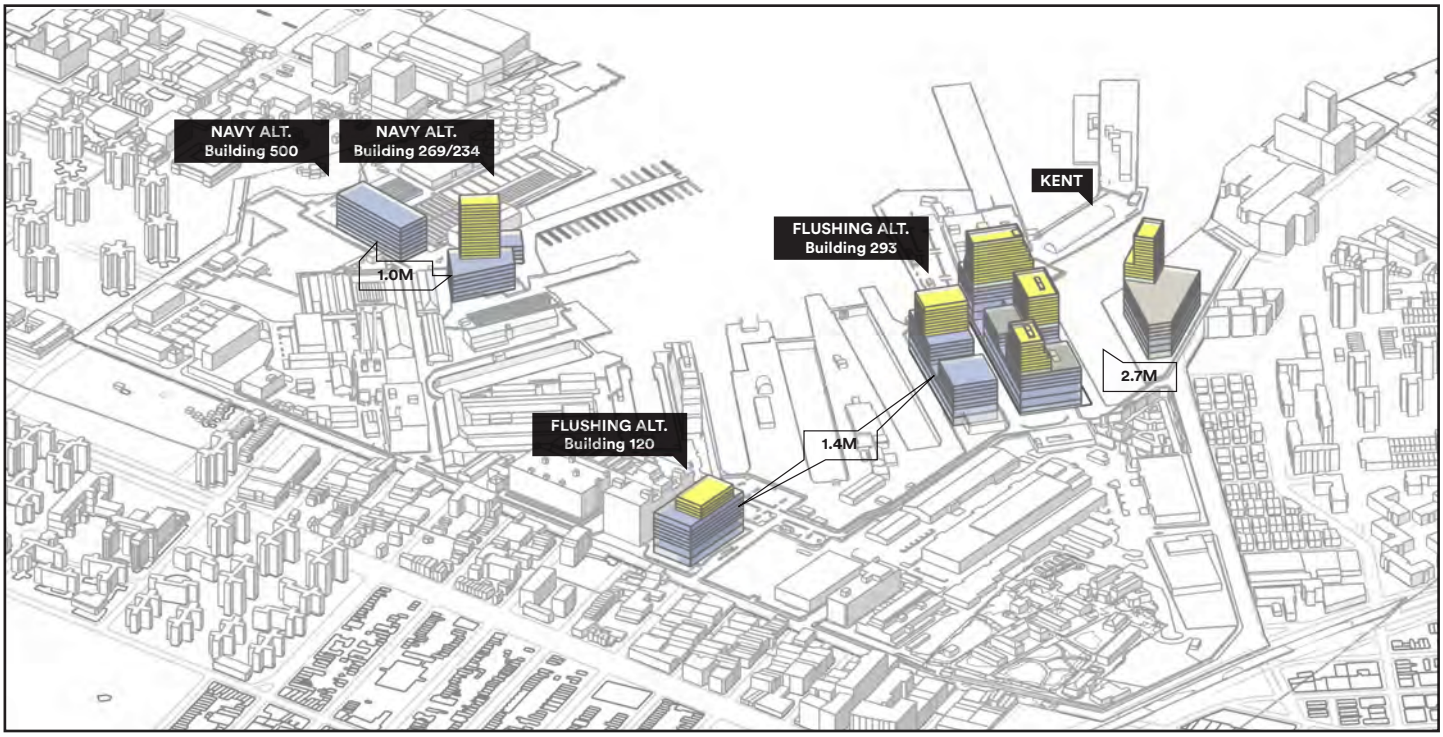
Kent Avenue Site (Projected Site 1)

In the future without the Proposed Actions, three buildings would be constructed on Projected Site 1. Each building would contain a seven-story base, built out to the parcel line and topped with a nine- to 12-story tower (see **Figure A-6**). The buildings on Projected Site 1 would fit within the existing permitted building envelopes, and would total approximately 2,511,635 gsf (not including parking), including approximately 2,036,635 gsf of industrial space, 416,083 gsf of office space, and 58,918 gsf of retail space.

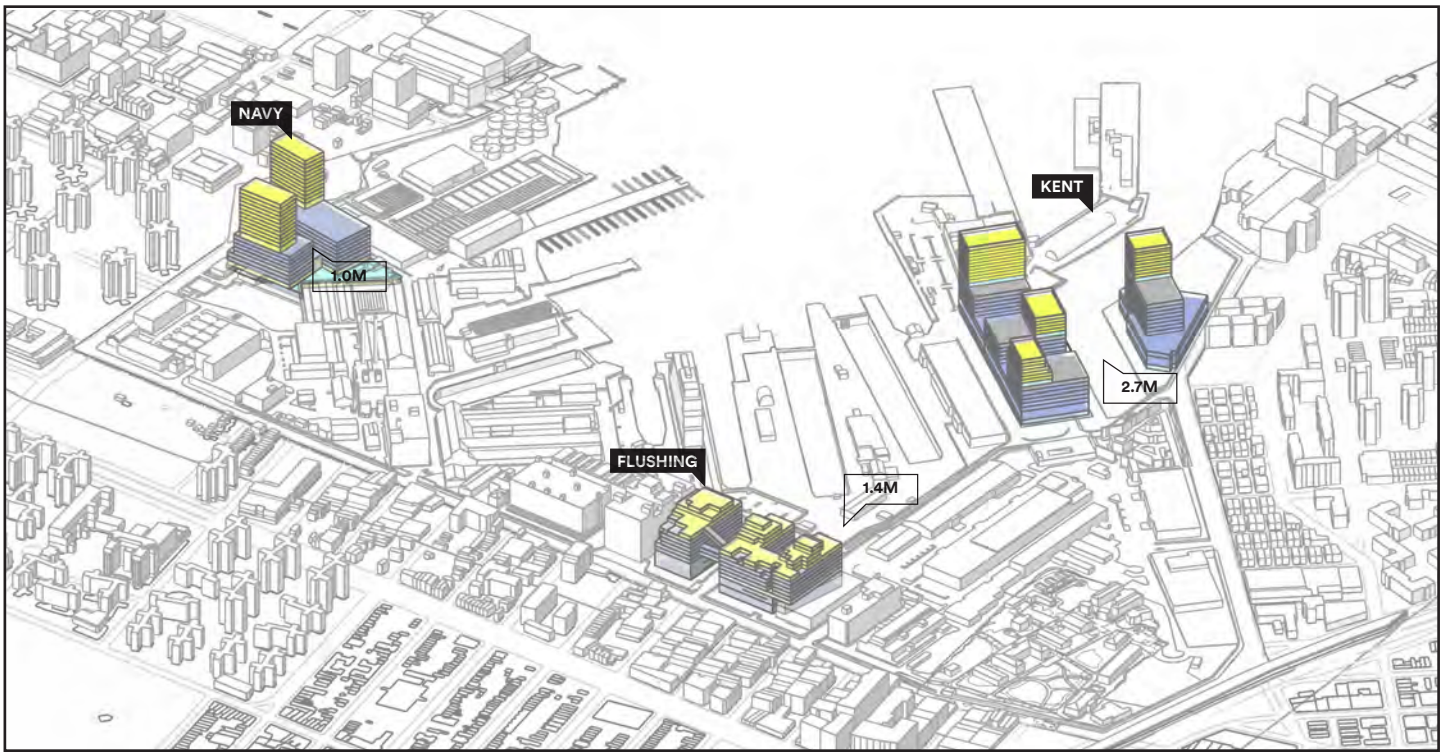
Navy Street Alternate Sites (No-Action Site 2)

As noted above, for conservative analysis purposes, it is assumed that the existing NYPD tow pound administrative building and surface parking area on the Navy Street Site (Projected Site 2) would remain as is under the No-Action condition, as relocation would require discretionary actions. Therefore, as shown in **Figure A-5**, it is conservatively assumed that, in the No-Action condition, the development slated for the Navy Street Site would be comprised of several smaller buildings located further in the Yard (the Navy Street Alternate Sites, or No-Action Site 2).

In the future without the Proposed Actions, two buildings would be constructed on No-Action Site 2. As shown in **Figure A-6**, the westernmost building would be eight stories tall, and the northernmost building would contain a six-story based topped with a 17-story tower. The buildings on No-Action Site 2 would fit within the existing permitted building envelopes, and would total approximately 851,207 gsf (not including parking), including approximately 671,207 gsf of industrial space, 121,744 gsf of office space, and 58,256 gsf of retail space.



NO-ACTION



Images courtesy of WXY

WITH-ACTION

Table A-1: Anticipated No-Action Condition

Site	Use	No-Action Condition New Development (gsf)	Existing Parking Requirements			Required Number of Parking Spaces
Projected Site 1 (Kent Avenue)	Industrial	2,036,635	1 space per	1000	SF	2,037
	Office	416,083	1 space per	300	SF	1,387
	Retail	58,918	1 space per	300	SF	196
	Total	*2,511,635*				*3,620*
No-Action Site 2 (Navy Street Alternate)	Industrial	671,207	1 space per	1000	SF	671
	Office	121,744	1 space per	300	SF	406
	Retail	58,256	1 space per	300	SF	194
	Total	*851,207*				*1,271*
Projected Site 2 (Navy Street)	Industrial	-	-			-
	Office	-	-			-
	Retail	-	-			-
	Total	-	-			-
No-Action Site 3 (Flushing Avenue Alternate)	Industrial	1,021,120	1 space per	1000	SF	1,021
	Office	193,300	1 space per	300	SF	644
	Retail	34,700	1 space per	300	SF	116
	Total	*1,249,120*				*1,781*
Projected Site 3 (Flushing Avenue)	Industrial	-	-			-
	Office	-	-			-
	Retail	-	-			-
	Total	-	-			-
Total No-Action New Development	**Industrial**	**3,728,962**				**3,729**
	Office	**731,127**				**2,437**
	Retail	**151,874**				**506**
	Total	***4,611,962***				***6,672***

Navy Street Site (Projected Site 2)

Under the No-Action condition, no changes would occur on Projected Site 2. It would continue to be occupied by the NYPD tow pound administrative building and surface parking area, and a small structure and associated surface parking lot for DCAS, as under existing conditions.

Flushing Avenue Alternate Sites (No-Action Site 3)

As noted above, for conservative analysis purposes, it is assumed that the existing DOJ warehouse on the eastern portion of the Flushing Avenue Site (Projected Site 3) would remain as is under the No-Action condition, as relocation would require discretionary actions. Therefore, as shown in **Figure A-5**, it is conservatively assumed that, in the No-Action condition, the development slated for the eastern portion of the Flushing Avenue Site would be located further in the Yard.

In the future without the Proposed Actions, two buildings would be constructed on No-Action Site 3. Each building would contain an eight-story base, built out to the street line. As shown in **Figure A-6**, the southern building would be topped with a four-story tower, and the northern building would be topped with a nine-story tower. The buildings on No-Action Site 3 would total approximately 1,249,120 gsf (not

including parking), including approximately 1,021,120 gsf of industrial space, 193,300 gsf of office space, and 34,700 gsf of retail space.

Flushing Avenue Site (Projected Site 3)

As detailed above, under the No-Action condition, Building 120 in the western portion of Projected Site 3 (which is also a part of No-Action Site 3 as shown in **Figure A-5**) would be demolished and redeveloped. No changes would occur on the eastern portion of Projected Site 3 which would continue to be occupied by a DOJ warehouse in BNY Building 4 in the No-Action condition, as under existing conditions.

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

In the 2030 With-Action Condition, the Proposed Actions would be approved. The Proposed Actions would not result in new development density beyond that which is permitted as-of-right. Rather, the Proposed Actions would acknowledge the unique character of the Yard and tailor the applicable zoning regulations to address certain site conditions, such as parking and waterfront public space. As such, as shown in **Table A-2**, a combined total of 4,611,962 sf of non-parking floor area would be developed in the BNY in the future with the Proposed Actions. A somewhat different mixture of uses would be developed in the Project Area than under No-Action conditions.

For conservative analysis purposes, the With-Action Condition community facility uses are assumed to comprise predominantly academic uses, as well as a museum on Projected Site 2. It is expected that these uses would generate new users in the Yard, as opposed to other community facility uses that would be permitted, such as day care facilities, which would be smaller in size and largely utilized by existing office and industrial workers in the Yard, and therefore, would not generate significant numbers of new trips.

Kent Avenue Site (Projected Site 1)

In the future with the Proposed Actions, three buildings would be constructed on Projected Site 1. Each building would contain a seven-story base, built out to the parcel line and topped with a nine- to 13-story tower (see **Figure A-6**). The buildings would total approximately 2,511,635 gsf (not including parking), including approximately 1,825,011 gsf of industrial space, 436,624 gsf of commercial (office and retail) space, and 250,000 gsf of community facility (academic) space. It is anticipated that one curb cut would be provided along Kent Avenue for parking and loading access to the site. A total of approximately 118,454 gsf of open space would be provided on the site along the Barge Basin.

Navy Street Alternate Sites (No-Action Site 2)

In the future with the Proposed Actions, no changes would occur on No-Action Site 2. The Navy Street Alternate Sites would continue to be occupied by five BNY buildings (Nos. 234, 269, 313, 314, and 500), comprised of a variety of commercial and industrial tenants, as under existing conditions.

Navy Street Site (Projected Site 2)

In the With-Action condition, in conjunction with the Proposed Actions, it is expected that an agreement between the BNYDC and the NYPD would be memorialized, allowing for the relocation of the NYPD tow pound on Projected Site 2 and the redevelopment of this site under the jurisdiction of the BNYDC. In the

future with the Proposed Actions, two buildings would be constructed on Projected Site 2. As shown in **Figure A-6**, the westernmost building would be eight-stories tall, and the northernmost building would contain a seven-story based topped with a 13-story tower. The buildings would total approximately 851,207 gsf (not including parking), including approximately 458,590 gsf of industrial space, 142,617 gsf of commercial (office and retail) space, and 250,000 gsf of community facility (academic and museum) space. Approximately 35,000 gsf of open space would be provided on site.

Table A-2: Proposed With-Action Condition

Site	Use	With-Action Condition New Development (gsf)
Projected Site 1 (Kent Avenue)	Industrial	1,825,011
	Commercial	436,624
	Community Facility	250,000
	Total	*2,511,635*
No-Action Site 2 (Navy Street Alternate)	Industrial	-
	Commercial	-
	Community Facility	-
	Total	-
Projected Site 2 (Navy Street)	Industrial	458,590
	Commercial	142,617
	Community Facility	250,000
	Total	*851,207*
No-Action Site 3 (Flushing Avenue Alternate)	Industrial	-
	Commercial	-
	Community Facility	-
	Total	-
Projected Site 3 (Flushing Avenue)	Industrial	773,170
	Commercial	225,950
	Community Facility	250,000
	Total	*1,249,120*
Total With-Action	**Industrial**	**3,056,771**
	Commercial	**805,191**
	Community Facility	**750,000**
	Total	***4,611,962***

Flushing Avenue Alternate Sites (No-Action Site 3)

As detailed below, in the future with the Proposed Actions, Building 120 in the southern portion of No-Action Site 3 (which is also a part of Projected Site 3 as shown in **Figure A-5**) would be demolished and redeveloped. No changes would occur on the northern portion of the Flushing Avenue Alternate Sites, which would continue to be occupied by BNY Building 293, as under existing conditions.

Flushing Avenue Site (Projected Site 3)

In the With-Action condition, in conjunction with the Proposed Actions, it is expected that an agreement between the BNYDC and the DOJ would be memorialized, allowing for the relocation of the DOJ warehouse, and the redevelopment of this site under the jurisdiction of the BNYDC. In the future with the Proposed Actions, two buildings would be constructed on Projected Site 3. Each building would rise 16-stories, built out to the street line (refer to **Figure A-6**). The buildings would total approximately 1,249,120 gsf (not including parking), including approximately 773,170 gsf of industrial space, 225,950 gsf of commercial (office, retail, and health club) space, and 250,000 gsf of community facility (academic) space. Approximately 36,350 gsf of open space would be provided on site.

Incremental Change Between the No-Action and With-Action Conditions

As presented in **Table A-3**, the Proposed Actions would facilitate the incremental development of 750,000 sf of community facility floor area and net reductions of 672,191 sf of industrial floor area and 77,809 sf of commercial floor area in the BNY, as compared to 2030 conditions without the Proposed Actions. As also presented in **Table A-3**, under the RWCDS, the types of commercial uses present in the Project Area would vary between the two scenarios. Specifically, it is assumed that a greater proportion of the commercial uses would comprise non-office uses in the With-Action Condition and that a health club would occupy a portion of Projected Site 3. Moreover, approximately 25,000 sf of destination retail is expected on both Projected Sites 1 and 2 in the future with the Proposed Actions. As a result, the Proposed Actions would result in a net increase of 40,000 sf of health club floor area and 50,000 sf of destination retail, as well as a net reduction of 75,937 sf of office uses and 91,874 sf of local retail (see **Table A-3**).

VI. REQUIRED APPROVALS

The Applicants are requesting zoning map and text amendments, which are discretionary public actions that are subject to the Uniform Land Use Review Procedure (ULURP) and public review pursuant to Section 201 of the New York City Charter, respectively, and CEQR.

The City's ULURP process, mandated by Sections 197-c and 197-d of the New York City Charter, is designed to allow public review of ULURP applications at four levels: Community Board (CB), Borough President, the New York City Planning Commission (CPC), and the City Council. The procedure has mandated time limits for review at each stage to ensure a maximum review period of approximately seven months. The process begins with certification by the New York City Department of City Planning (DCP) that the ULURP application is complete. The application is then referred to the relevant Community Board (in this case Brooklyn CB 2). The Community Board has up to 60 days to review and discuss the proposal, hold a public hearing, and adopt an advisory resolution on the ULURP application. The Borough President then has up to 30 days to review the application. CPC then has up to 60 days, during which time a public hearing is held on the ULURP application. If CPC approves, the application is then forwarded to the City Council, which has 50 days to review and act on the land use applications. If the City Council proposes amendments to the land use applications, the 50-day time frame is tolled for up to 15 days to allow CPC to determine whether the proposed changes are within the scope of the initial application.

Table A-3: Comparison of Future No-Action and With-Action Conditions

Site	Use	No-Action Condition New Development (gsf)	With-Action Condition New Development (gsf)	Incremental New Development (gsf)
Projected Site 1 (Kent Avenue)	Industrial	2,036,635	1,825,011	-211,624
	Commercial	475,000	436,624	-38,376
	Office	*416,083*	*386,624*	*-29,459*
	Local Retail	*58,918*	*25,000*	*-33,918*
	Destination Retail	*0*	*25,000*	*+25,000*
	Health Club	*0*	*0*	*0*
	Community Facility	0	250,000	+250,000
	Academic	*0*	*250,000*	*+250,000*
	Museum	*0*	*0*	*0*
	Total	**2,511,635**	**2,511,635**	**0**
No-Action Site 2 (Navy Street Alternate) + Projected Site 2 (Navy Street)	Industrial	671,207	458,590	-212,617
	Commercial	180,000	142,617	-37,383
	Office	*121,744*	*92,616*	*-29,128*
	Local Retail	*58,256*	*25,000*	*-33,256*
	Destination Retail	*0*	*25,000*	*+25,000*
	Health Club	*0*	*0*	*0*
	Community Facility	0	250,000	+250,000
	Academic	*0*	*150,000*	*+150,000*
	Museum	*0*	*100,000*	*+100,000*
	Total	**851,207**	**851,207**	**0**
No-Action Site 3 (Flushing Avenue Alternate) + Projected Site 3 (Flushing Avenue)	Industrial	1,021,120	773,170	-247,950
	Commercial	228,000	225,950	-2,050
	Office	*193,300*	*175,950*	*-17,350*
	Local Retail	*34,700*	*10,000*	*-20,600*
	Destination Retail	*0*	*0*	*0*
	Health Club	*0*	*40,000*	*+40,000*
	Community Facility	0	250,000	+250,000
	Academic	*0*	*250,000*	*+250,000*
	Museum	*0*	*0*	*0*
	Total	**1,249,120**	**1,249,120**	**0**
Total Non-Parking gsf	**Industrial**	**3,728,962**	**3,056,771**	**-672,191**
	Commercial	**883,000**	**805,191**	**-77,809**
	Office	***731,127***	***655,190***	***-75,937***
	Local Retail	***151,874***	***60,000***	***-91,874***
	Destination Retail	***0***	***50,000***	***+50,000***
	Health Club	***0***	***40,000***	***+40,000***
	Community Facility	**0**	**750,000**	**+750,000**
	Academic	***0***	***650,000***	***+650,000***
	Museum	***0***	***100,000***	***+100,000***
	Total	**4,611,962**	**4,611,962**	**0**

CEQR is a process by which agencies review discretionary actions for the purpose of identifying the effects those actions may have on the environment. The City of New York established CEQR regulations in accordance with the New York State Environmental Quality Review Act (SEQRA). In addition, the City has published a guidance manual for environmental review, the *CEQR Technical Manual*. CEQR rules guide environmental review through the following steps:

- *Establish a Lead Agency*. Under CEQR, the "lead agency" is the public entity responsible for conducting environmental review. The Mayor's Office for Environmental Coordination (MOEC) is serving as the lead agency for this project.
- *Environmental Review and Determination of Significance*. The lead agency will determine whether the Proposed Actions may have a significant impact on the environmental. To do so, an EAS must be prepared. This EAS will be reviewed by the lead agency, which will determine if the Proposed Actions and development would result in any significant adverse impacts on the environment.

ATTACHMENT B
SUPPLEMENTAL SCREENING

I. INTRODUCTION

This Environmental Assessment Statement (EAS) has been prepared in accordance with the guidelines and methodologies presented in the 2020 *City Environmental Quality Review* (CEQR) *Technical Manual*. For each technical area, thresholds are defined, which, if met or exceeded, require that a detailed technical analysis be undertaken. Using these guidelines, preliminary analyses were conducted for all aspects of the Proposed Actions to determine whether detailed analyses of any technical areas would be appropriate.

Table B-1 identifies for each CEQR technical area whether (a) the potential for impacts can be screened out based on the EAS Form, Part II, Technical Analyses; (b) the potential for impacts can be screened out based on a supplemental screening provided herein per the *CEQR Technical Manual*; or (c) a more detailed assessment is required to make an impact determination.

Table B-1: Summary of CEQR Technical Areas Screening

Technical Area	Screened out per EAS Form	Screened out per Supplemental Screening	Detailed Analysis Required
Land Use, Zoning, & Public Policy			X
Socioeconomic Conditions	X		
Community Facilities		X	
Open Space	X		
Shadows			X
Historic & Cultural Resources			X
Urban Design & Visual Resources			X
Natural Resources		X	
Hazardous Materials		X	
Water & Sewer Infrastructure	X		
Solid Waste & Sanitation Services		X	
Energy	X		
Transportation			X
Air Quality			X
Greenhouse Gas Emissions	X		
Noise			X
Public Health		X	
Neighborhood Character		X	
Construction			X

The technical areas that included a "Yes" answer in Part II of the EAS form were land use, zoning, and public policy; community facilities; shadows; historic and cultural resources; urban design and visual resources; natural resources; hazardous materials; solid waste and sanitation services; transportation; air quality; noise; public health; neighborhood character; and construction. As such, a supplemental screening assessment using CEQR guidelines for each of the aforementioned analysis areas is provided in this attachment. All remaining technical areas detailed in the *CEQR Technical Manual* were not deemed to require supplemental screening, as they do not trigger initial CEQR thresholds and are unlikely to result in significant adverse impacts.

Detailed assessments were not required for community facilities; natural resources; hazardous materials; solid waste and sanitation services; public health; and neighborhood character, as they do not trigger initial CEQR thresholds and are unlikely to result in significant adverse impacts.

Based on the preliminary screenings, detailed assessments of the Proposed Actions are required in the areas of land use, zoning, and public policy; shadows; historic and cultural resources; urban design and visual resources; transportation; air quality; noise; and construction. These analyses are provided in **Attachments C** through **J**.

II. SUPPLEMENTAL SCREENING

Land Use, Zoning & Public Policy

The Proposed Actions would not result in any significant adverse impacts to land use, zoning, or public policy. Refer to **Attachment C, "Land Use, Zoning, & Public Policy,"** for further discussion.

Community Facilities

As detailed in the *CEQR Technical Manual*, a community facilities assessment is warranted if an action has the potential to result in either direct or indirect effects on community facilities. If a proposed action would physically alter a community facility, whether by displacement of the facility or other physical changes, this "direct" effect triggers the need to assess the service delivery of the facility and the potential effect that the physical change may have on that service delivery. In addition, under CEQR, "temporary direct" effects are considered when a temporary closing of a community facility is required. Temporary closing of a community facility may occur due to construction in that location, among other reasons. New population added to an area because of a proposed action would use existing services, which may result in potential "indirect" effects on service delivery. Depending on the size, income characteristics, and age distribution of the new population, there may be effects on public schools, libraries, or publicly funded child care centers.

Direct Effects Assessment

The Proposed Actions would not directly displace or otherwise directly affect any public schools, child care centers, libraries, health care facilities, or fire protection services facilities. As detailed further in **Attachment A, "Project Description,"** there is an existing New York City Police Department (NYPD) tow pound administrative building and surface parking area on the Navy Street Site (Projected Site 2) that

would remain under No-Action Conditions. In the future with the Proposed Actions, it is expected that an agreement between the Brooklyn Navy Yard Development Corporation (BNYDC) and the NYPD would be memorialized, allowing for the relocation of the NYPD tow pound, and the redevelopment of this site under the jurisdiction of the BNYDC. The relocation of the NYPD tow pound would not result in any significant adverse direct effects to this community facility use, as the tow pound administrative building and surface parking would be relocated elsewhere pursuant to extensive discussion and agreement between NYPD and the BNYDC, and is not expected to result in a loss in capacity or other negative effects to the facility. Moreover, it should be noted that as the existing tow pound is an administrative NYPD facility, it does not have any direct bearing on police protection services. As such, its relocation in the future with the Proposed Actions would have no impacts on police protection services in and around the Project Area. Therefore, the Proposed Actions would not result in any significant adverse direct effects to community facilities or services, and further analysis is not warranted.

Indirect Effects Assessment

The Proposed Actions would not result in any significant adverse indirect impacts on community facilities or services. The Proposed Actions would not facilitate the development of any residential units in the Project Area. Therefore, as per CEQR guidance thresholds, the Proposed Actions would not have the potential to result in any significant adverse effects on elementary, intermediate, or high schools, libraries, or child care services, and detailed analyses of public schools, libraries, and publicly funded child care services are not warranted. Moreover, the Proposed Actions would not create a sizeable new neighborhood as compared to No-Action Conditions, and therefore, detailed analyses of indirect impacts on police, fire, or health care services are also not warranted.

Shadows

The Proposed Actions would not result in any significant adverse shadows impacts. Refer to **Attachment D, "Shadows,"** for further discussion.

Historic & Cultural Resources

The Proposed Actions would not result in any significant adverse impacts to historic or cultural resources. Refer to **Attachment E, "Historic & Cultural Resources,"** for further discussion.

Urban Design & Visual Resources

The Proposed Actions would not result in any significant adverse impacts to urban design or visual resources. Refer to **Attachment F, "Urban Design & Visual Resources,"** for further discussion.

Natural Resources

According to the *CEQR Technical Manual,* two conditions determine whether an adverse impact on a natural resource might occur and, therefore, whether an assessment may be appropriate: the presence of a natural resource on or near the site of the project, and the potential disturbance of that resource caused by the project.

The Project Area is a disturbed urban setting located in an industrially developed portion of Brooklyn. The Environmental Impact Statement (EIS) for the disposal of the NAVSTA Brooklyn (the BNY) that was completed in 2000 stated that "there are no records indicating the presence of any federal- or state-listed endangered or threatened species at the NAVSTA Brooklyn site." However, the Project Area is located adjacent to the East River, a surface water resource, which is classified as a tidal wetland by New York State. The U.S. Fish and Wildlife Wetland Mapper also classifies the East River as an "estuarine subtidal wetland." Subtidal areas are continuously submerged, and unconsolidated bottoms have at least 25 percent cover of particles smaller than seven centimeters (cm) and less than 30 percent vegetative cover.

Assessment

While the Project Area would facilitate development adjacent to the East River, a natural resource, as defined by the *CEQR Technical Manual*, the Projected Sites and immediately adjacent areas are located within a disturbed urban setting substantially devoid of natural features. As described in **Attachment A, "Project Description,"** all of the identified development sites are currently paved and/or occupied by existing structures. None of the sites have a "built resource" that is known to contain or may be used as a habitat by a protected species. The Proposed Actions would not involve the disruption of subsurface conditions that might affect the function or value of an adjacent or nearby natural resource. Therefore, the Proposed Actions would not result in significant adverse impacts to natural resources and no further analysis is required.

Hazardous Materials

A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds (VOCs and SVOCs), methane, polychlorinated biphenyls (PCBs), and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive, or toxic). According to the *CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when: (a) elevated levels of hazardous materials exist on a site; (b) an action would increase the risk of human or environmental exposure to hazardous materials; or (c) an action would introduce a population to hazardous materials exposure from off-site sources.

A hazardous materials assessment is warranted when activities associated with a proposed action could lead to increased exposure, including (but not limited to) the introduction of a new population to an existing building or site containing hazardous materials, excavation, dewatering, grading, or other construction activities on a contaminated site, construction activities in existing buildings that disturb the building slab and sub-surface soils, and demolition of buildings and structures that include hazardous materials.

Assessment

The majority of the Project Area is subject to New York State Department of Environmental Conservation (NYSDEC) Site Management, enforced by executed Site Management Plans (SMPs) and Environmental Easements. There are two SMPs for the Yard, both dated June 2018, which dictate institutional and engineering controls for the BNY. The Environmental Easements, dated August 3, 2017 and June 26, 2018, are enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project

leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineering structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions.

All of the Project Area included in Lot 1 (except for minor exclusion areas that BNYDC and NYSDEC intend to bring under site management) is subject to the SMPs. The Project Area included in Lot 150, including the portion of the Flushing Avenue Site (Projected Site 3) that is currently owned by the federal government and occupied by a Department of Justice (DOJ) warehouse building (see **Attachment A, "Project Description"** for more details) is not under site management. However, the Finding of Suitability to Transfer (FOST, 2000) as part of the site transfer from the federal government to BNYDC includes Environmental Covenants, Conditions, Reservations and Restrictions for that area. In the future with the Proposed Actions, it is expected that an agreement between BNYDC and DOJ would be memorialized, allowing for the redevelopment of this site under the jurisdiction of BNYDC. In the future with the Proposed Actions, BNYDC would work with NYSDEC to incorporate that site, which is a portion of Lot 150, into the SMPs in order to avoid any impacts related to potential hazardous materials on the site. In the event the site is not incorporated into the SMP, BNYDC would ensure that development is reviewed by the New York City Department of Environmental Protection (NYCDEP) to ensure that future development of that portion of the site would be completed in a manner protective of human health and the environment.

As such, any construction facilitated by the Proposed Actions would be subject to the implemented NYSDEC SMPs and Environmental Easement of the BNY and would therefore not result in any significant adverse hazardous materials impacts.

Solid Waste & Sanitation Services

As outlined in the *CEQR Technical Manual*, a solid waste assessment determines whether a proposed project would cause a substantial increase in solid waste production that would overburden available waste management capacity or otherwise be inconsistent with the Solid Waste Management Plan (SWMP) or with State policy related to the City's integrated solid waste management system. Few projects have the potential to generate substantial amounts of solid waste (50 tons per week or more) and, therefore, most projects would not result in a significant adverse impact.

Assessment

As presented in **Table B-2** below, while the Projected Sites would generate a total of 710,317 pounds of solid waste per week in the With-Action Condition, this would represent a net reduction of 134,263 pounds per week from the No-Action Condition. As such, the Proposed Actions would not have the potential to generate substantial amounts of incremental solid waste, and no further analysis is warranted as significant adverse impacts are not expected.

Table B-2: Solid Waste Generation: No-Action vs. With-Action Condition in the Project Area

Land Use	Rate	No-Action Condition		With-Action Condition		Increment (lbs/wk)
		Employees/ Students/sf	Lbs/wk	Employees/ Students/sf	Lbs/wk	
Industrial	125 lbs/wk/employee	6,215 emp.	776,875	5,095 emp.	636,875	-140,000
Office	13 lbs/wk/employee	2,437 emp.	31,681	2,184 emp.	28,392	-3,289
Retail / Health Club	79 lbs/wk/employee	456 emp.	36,024	330 emp.	26,070	-9,954
University	1 lb/wk/student	0	0	4,000 students	4,000	+4,00
High School	2 lbs/wk/student	0	0	1,250 students	2,500	+2,500
Museum	0.03 lbs/wk/sf	0	0	100,000 sf	3,000	+3,000
		Totals	***844,580***		***710,317***	***-134,263***

Source: 2020 *CEQR Technical Manual.*

Transportation

The Proposed Actions would not result in any significant adverse transportation impacts. Refer to **Attachment G, "Transportation,"** for further discussion.

Air Quality

The Proposed Actions would not result in any significant adverse air quality impacts. Refer to **Attachment H, "Air Quality,"** for further discussion.

Noise

The Proposed Actions would not result in any significant adverse noise impacts. Refer to **Attachment I, "Noise,"** for further discussion.

Public Health

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

According to the *CEQR Technical Manual*, a public health assessment may be warranted if a project results in (a) increased vehicular traffic or emissions from stationary sources resulting in significant adverse air quality impacts; (b) increased exposure to heavy metals and other contaminants in soil/dust resulting in significant adverse impacts, or the presence of contamination from historic spills or releases of substances that might have affected or might affect groundwater to be used as a source of drinking water; (c) solid waste management practices that could attract vermin and result in an increase in pest populations; (d) potential significant adverse impacts to sensitive receptors from noise and odors; (e) vapor infiltration

from contaminants within a building or underlying soil that may result in significant adverse hazardous materials or air quality impacts; (f) exceedances of accepted federal, state, or local standards; or (g) other actions that might not exceed the preceding thresholds but might, nonetheless, result in significant health concerns.

As detailed in this EAS, the Proposed Actions would not result in significant adverse impacts in the areas of air quality, water quality, hazardous materials, or noise. Therefore, the Proposed Actions do not have the potential to result in significant adverse public health impacts, and no further assessment is warranted.

Neighborhood Character

Neighborhood character is an amalgam of various elements that give neighborhoods their distinct "personality." According to the *CEQR Technical Manual*, a preliminary assessment may be appropriate if a project has the potential to result in significant adverse impacts in certain technical areas or modern effects on several of the elements that define a neighborhood's character. As presented in this EAS, significant adverse impacts on land use, zoning, and public policy; socioeconomic conditions; open space; shadows; historic and cultural resources; urban design and visual resources; transportation; and noise are not expected.

As presented in **Attachment C, "Land Use, Zoning, & Public Policy,"** the Proposed Actions would allow for new land uses within the Yard that would complement existing uses in the Yard and would be consistent with the mix of land uses present outside of the Yard. New community facility uses, such as museums and academic institutions, would further integrate the Yard with the surrounding area and provide for unique and valuable learning opportunities and exposure to manufacturing sectors. The new land uses introduced as a result of the Proposed Actions would not represent a significant adverse neighborhood character impact. The proposed limitations on the floor area that could be devoted to community facility uses would ensure that the industrial character of the Yard would remain.

The Proposed Actions are similarly not expected to result in moderate effects in the areas of shadows, historic and cultural resources, or urban design and visual resources that could affect neighborhood character. Furthermore, as presented in **Attachment F, "Urban Design & Visual Resources,"** the Proposed Actions would not result in any additional density being developed within the Yard as compared to the No-Action Condition. Additionally, development facilitated by the Proposed Actions is expected to positively affect the urban design of the area and improve the pedestrian experience, through the redevelopment of underutilized sites in the BNY with mixed-use developments that would reactive these sites, provide publicly accessible open space, and establish new visual connections to the waterfront for the surrounding community.

As detailed in **Attachment F, "Transportation,"** the anticipated level of new transportation demand generated by the Proposed Actions is not expected to result in significant adverse impacts to traffic, parking, transit, or pedestrian conditions in the vicinity of the Project Area. Additionally, as discussed in **Attachment H, "Noise,"** noise from the increased traffic volumes generated by the Proposed Actions would not cause significant adverse noise impacts, as the relative increases in noise levels would fall below the applicable *CEQR Technical Manual* significant adverse impact threshold. As such, the new transportation demand generated by the Proposed Actions would not represent a significant adverse neighborhood character impact.

Lastly, as presented in the EAS Form and summarized in **Table B-1** above, the Proposed Actions would not trigger a preliminary impact assessment in the areas of socioeconomic conditions or open space. Therefore, the Proposed Actions are not expected to result in moderate changes in these technical areas that could have a significant effect on neighborhood character, and further analysis is not warranted.

Construction

The Proposed Actions would not result in any significant adverse construction impacts. Refer to **Attachment J, "Construction,"** for further discussion.

ATTACHMENT C
LAND USE, ZONING, & PUBLIC POLICY

I. INTRODUCTION

Per 2020 *City Environmental Quality Review* (CEQR) *Technical Manual* guidance, a land use analysis evaluates the land use and development trends in the area that may be affected by a proposed project and determines whether that proposed project is compatible with those conditions or may affect them. Similarly, the analysis considers the proposed project's compliance with, and effect on the area's zoning and other applicable public policies.

As detailed in **Attachment A, "Project Description,"** the Applicants are seeking zoning map and text amendments (collectively, the "Proposed Actions") to facilitate certain recommendations of the Brooklyn Navy Yard Master Plan. The Project Area encompasses the majority of Brooklyn Block 2023, Lots 1 and 150[1] and is generally bounded by Kent Avenue to the east, Flushing Avenue to the south, and Navy Street to the west (refer to **Figure C-1**). The Proposed Actions include:

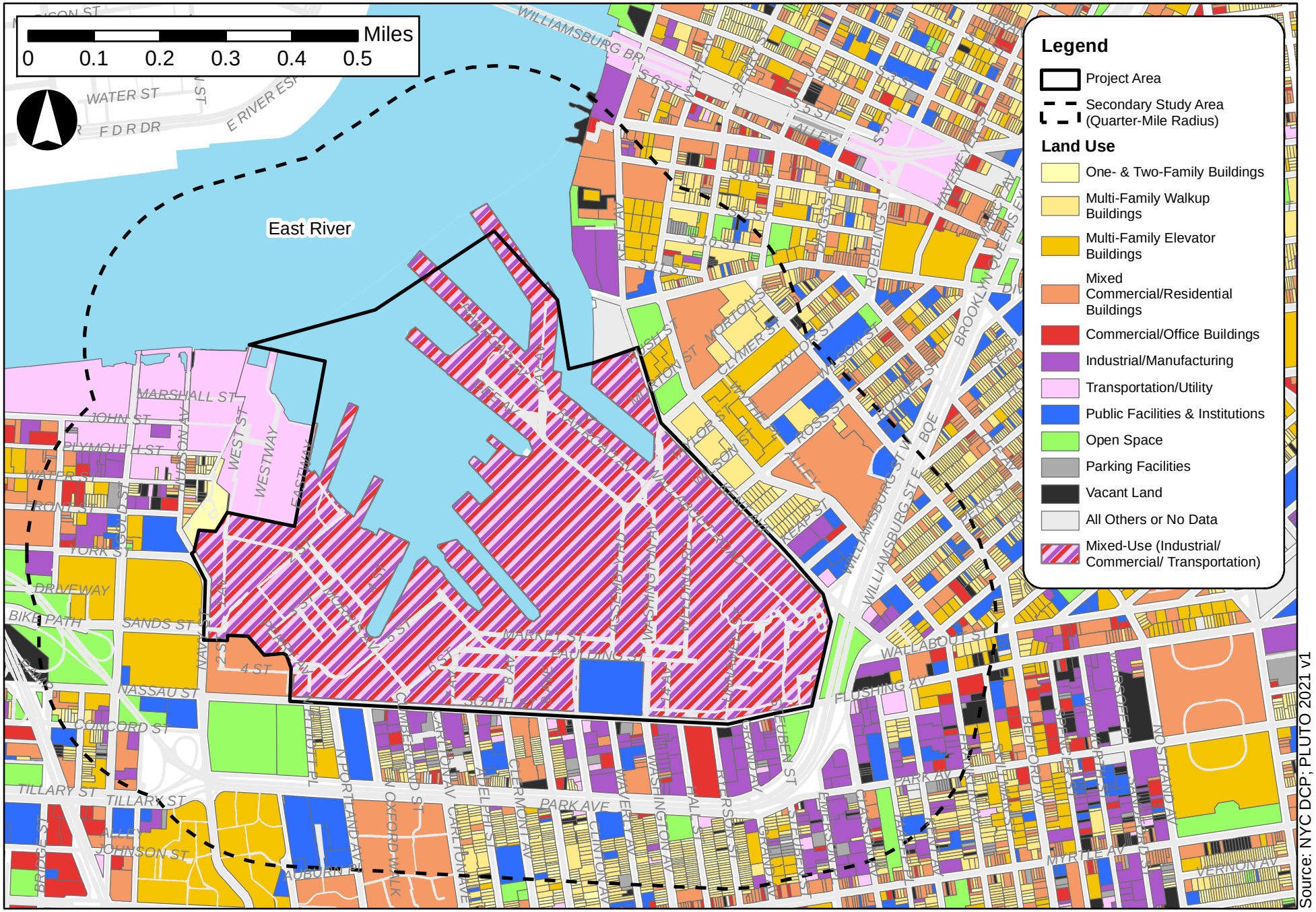
- (1) A zoning text amendment to create the Special Brooklyn Navy Yard District (the "Special District") with special use, bulk, parking and loading, and publicly accessible space regulations; and
- (2) A zoning map amendment to map the Special District over the Project Area and change an R6B, M1-2, and portions of an M3-1 district within the Project Area to an M2-1 district.

The Proposed Actions would introduce tailored zoning regulations to facilitate and refine the further development of a modern manufacturing campus at the Brooklyn Navy Yard (the "Yard" or "BNY") by the approximately 4.6 million square feet (sf) of zoning floor area projected to occur at the Yard over the next 10 to 15 years by rationalizing parking and loading controls, allowing the introduction of compatible community facility and commercial uses to complement the core industrial use of the BNY, establishing public access areas in connection with development in certain areas at the perimeter of the Yard, and modifying height and setback regulations in defined areas of the Yard, modify waterfront regulations, and other bulk controls in manners compatible with modern industrial development and the surrounding context.

II. METHODOLOGY

As noted above, the Proposed Actions include zoning actions, which have the potential to affect land use, zoning, and public policy. Land use, zoning, and public policy are addressed and analyzed for two geographical areas for the Proposed Actions. For this assessment, the primary study area encompasses the Project Area, comprising the majority of Brooklyn Block 2023, Lot 1 and 150. The secondary study area encompasses areas that have the potential to experience indirect impacts as a result of the Proposed

[1] As detailed further in **Attachment A, "Project Description,"** the Project Area encompasses the entirety of Tax Lots 1 and 150 on Brooklyn Block 2023 except for a small portion of Lot 1 located in the water and a smaller, irregular-shaped portion of Lot 1 located in the southwest corner of the Project Area.



Special Brooklyn Navy Yard District

Figure C-1
Study Area Land Uses

Actions. The secondary study area extends an approximate quarter-mile radius from the boundary of the primary study area. Both the primary and secondary study areas have been established in accordance with *CEQR Technical Manual* guidance and are shown in **Figure C-1**.

The analysis of land use, zoning, and public policy first provides a description of the existing land use, zoning, and public policy conditions in the study areas. Existing land uses in the primary and secondary study area were determined based on the New York City Primary Land Use Tax Lot Output (PLUTO) data 2020 v5, confirmed by Philip Habib & Associates (PHA) field visits. New York City Zoning and Land Use (ZoLa), New York City Zoning maps, and the Zoning Resolution of the City of New York (ZR) were consulted to describe existing zoning districts in the study areas. Relevant public policy documents recognized by the New York City Department of City Planning (DCP) and other City agencies were utilized to describe existing public policies pertaining to the primary and secondary study areas.

Next, the analysis projects land use, zoning, and public policy conditions in the 2030 analysis year without the Proposed Actions. This is the "No-Action" or "future without the Proposed Actions" condition, which is developed by identifying planned or anticipated developments and other relevant changes anticipated to occur in the primary and secondary study areas within this timeframe. The No-Action condition describes the baseline conditions in the study areas against which the Proposed Actions' incremental changes are measured. Finally, the analysis projects land use, zoning, and public policy conditions in 2030 with the completion of the Proposed Project. This is the "With-Action" or "future with the Proposed Actions" condition.

IV. PRELIMINARY ASSESSMENT

Land Use & Zoning

A preliminary assessment, which includes a basic description of existing and future land use and zoning, should be provided for all projects that would affect land use or would change the zoning on a site, regardless of the project's anticipated effects. As the Proposed Actions involve zoning map and text amendments, a detailed assessment of land use and zoning is warranted and provided below in "***Section V**: Detailed Assessment*."

Public Policy

According to the *CEQR Technical Manual*, a project that would be located within areas governed by public policies controlling land use, or that has the potential to substantially affect land use regulation or policy controlling land use, requires an analysis of public policy. A preliminary assessment of public policy should identify and describe any public policies, including formal plans or published reports that pertain to the study area. If the proposed action could potentially alter or conflict with identified policies, a detailed assessment should be conducted; otherwise, no further analysis of public policy is necessary.

As the Project Area is located within the Brooklyn Navy Yard Industrial Business Zone (IBZ) and the City's Coastal Zone, and is considered a large, publicly-sponsored project, a detailed assessment of public policies is warranted and is provided below. Additionally, the Project Area is located within the State/National Register of Historic Places (S/NR)-listed Brooklyn Navy Yard Historic District, and as such, a detailed historic and cultural resources assessment is provided in **Attachment E, "Historic & Cultural**

Resources." As detailed therein, the Proposed Actions would not result in any significant adverse impacts to historic or cultural resources.

V. DETAILED ASSESSMENT

Existing Conditions

Land Use

Primary Study Area (Project Area)

As presented in **Figure C-1**, the Project Area encompasses the majority of Brooklyn Block 2023, Lots 1 and 150, which comprise a combined total area of 11,848,929 square feet (sf) landward of the U.S. bulkhead line. In addition, 182,097 sf of area between the U.S. bulkhead line and the New York City pierhead line is covered by land, piers, and platforms and generates floor area under the New York City ZR. The Project Area is currently occupied by approximately 5.7 million sf of mixed commercial, industrial, and institutional uses across over 80 buildings ranging from one to 15 stories. A discussion of the land uses present on the reasonable worst-case development scenario (RWCDS) sites is provided below.

Projected Site 1 (Kent Avenue Site)

Projected Site 1 totals approximately 505,000 sf in land area along the eastern border of the Project Area (refer to **Figure A-4** in **Attachment A, "Project Description"**), and is completely under the control of the Brooklyn Navy Yard Development Corporation (BNYDC). Projected Site 1 is bordered by Kent Avenue to the east, Assembly Road to the southeast, and Gee Avenue to the southwest. Within the site is a waterway called the Barge Basin that terminates at Assembly Road. Projected Site 1 is currently used for a combination of truck parking and as a laydown area for a modular building fabricator and contains two structures (also known as BNY Buildings 7 and 8, as shown in **Figure A-1b** in **Attachment A**), which are both used by Steiner Studios for set storage.

No-Action Site 2 (Navy Street Alternate Sites)

The Navy Street Alternate Sites total approximately 93,774 sf in land area in the western section of the Project Area, with frontages on the internal (non-public) Yard roadways of West Street, Ship Ways Avenue, 2nd Street, Dock Avenue, 3rd Street, Eastway, and Front Avenue (refer to **Figure A-4** in **Attachment A**). The Navy Street Alternate Sites are currently occupied by five BNY buildings (Nos. 234, 269, 313, 314, and 500, as shown in **Figure A-1b** in **Attachment A**), which contain a variety of commercial and industrial tenants.

Projected Site 2 (Navy Street Site)

Projected Site 2 totals approximately 232,000 sf in land area along the western border of the Project Area and has frontage on Navy Street to the west, as well as the internal (non-public) Yard roadways of 2nd Street and Morris Avenue to the east and north, respectively (refer to **Figure A-4** in **Attachment A**). Projected Site 2 is currently occupied by two uses: (1) an New York City Police Department (NYPD) tow

pound administrative building and surface parking area, and (2) a small structure and associated surface parking lot for the Department of Citywide Administrative Services (DCAS).

No-Action Site 3 (Flushing Avenue Alternate Sites)

The Flushing Avenue Alternate Sites total approximately 168,845 sf in land area, and are located partially along the southern border of the Project Area and partially in the in the northeastern section of the Project Area. As shown in **Figure A-4** in **Attachment A**, the southern building would have frontages on Flushing Avenue to the south and Paulding Street (an internal/non-public Yard roadway) to the north, and the northern building would have frontages on the internal (non-public) Yard roadways of Gee Avenue and Assembly Road. The Flushing Avenue Alternate Sites are currently occupied by BNY Buildings 120 and 293 (refer to **Figure A-1b** in **Attachment A**), which contain multiple commercial and industrial tenants, as well as surface parking.

Projected Site 3 (Flushing Avenue Site)

Projected Site 3 totals approximately 267,000 sf in land area along the southern border of the Project Area and has frontage on Flushing Avenue to the south and Paulding Street (an internal/non-public Yard roadway) to the north (refer to **Figure A-4** in **Attachment A**). Projected Site 3 is currently occupied by the existing two-story Building 120 (currently occupied by multiple industrial tenants), surface parking, and a Department of Justice (DOJ) warehouse building (also known as BNY Building 4, as shown in **Figure A-1b** in **Attachment A**).

Secondary Study Area

The Project Area abuts three neighborhoods: Vinegar Hill to the west, Wallabout to the south, and South Williamsburg to the east. As detailed in **Table C-1**, the quarter-mile secondary study area surrounding the Project Area contains a variety of land uses. Residential and mixed residential/commercial uses comprise approximately 66.4 percent of total lots and approximately 61.1 percent of total built area in the secondary study area, but only comprise approximately 42.3 percent of the secondary study area's total lot area. Residential uses in the surrounding area vary substantially, ranging from one- and two-family rowhouses up to four stories in height along the east side of Kent Avenue to the tower-in-the-park style New York City Housing Authority (NYCHA) Farragut Houses located west of Navy Street (see **Figure C-1**). There are also several recently constructed residential and mixed-use residential/commercial buildings in the surrounding area, including the Navy Green development (constructed between 2009 and 2015), which comprises the majority of the block bounded by Flushing, Clermont, Vanderbilt, and Park avenues, and the Schaefer's Landing development (completed in 2003), located along the East River, just north of the intersection of Kent Avenue and South 11th Street.

Commercial uses and public facilities/institutions comprise 2.5 and 18.0 percent of the total secondary study area lot area, respectively, and 5.7 and 11.3 of total secondary study area building area, respectively (see **Table C-1**). As presented in **Figure C-1**, commercial uses are found intermittently throughout the secondary study area and generally occupy smaller lots. Public facilities and institutions in the area tend to occupy larger lots and include several schools, a Boys' and Girls' club, religious institutions, social services organizations, a fire house, and a library.

As detailed in **Table C-1**, industrial/manufacturing uses and transportation/utility uses in the secondary study area comprise approximately 10.2 and 12.4 percent of secondary study area lots and approximately 14.0 and 0.7 percent of built square footage, respectively. As shown in **Figure C-1**, heavier industrial/utility uses are located within the M3-1 district that lines the waterfront blocks to the northwest of the Project Area, and include the Red Hook Water Pollution Control Plant (WPCP) (located directly adjacent to the Project Area to the northwest) and neighboring Consolidated Edison (Con Edison) properties. Lighter industrial uses are present in the M1-2 district mapped to the south and southeast of the Project Area and are often interspersed with commercial uses in multi-tenanted buildings.

Table C-1: Secondary Study Area Land Uses[1]

Land Use	Lots		Lot Area		Building Area	
	Number	Percentage (%)	Number (sf)	Percentage (%)	Number (sf)	Percentage (%)
Residential	873	58.0	4,345,880	27.7	8,954,032	38.6
One- & Two-Family	*324*	*21.5*	*688,170*	*4.4*	*769,692*	*3.3*
Multifamily Walkup	*480*	*31.9*	*1,610,222*	*10.3*	*2,977,673*	*12.8*
Multifamily Elevator	*69*	*4.6*	*2,047,488*	*13.1*	*5,206,667*	*22.5*
Mixed Commercial/ Residential	127	8.4	2,292,949	14.6	6,715,579	29.0
Commercial/Office	40	2.7	389,266	2.5	1,315,919	5.7
Industrial/Manufacturing	147	9.8	1,598,163	10.2	3,250,174	14.0
Transportation/Utility	34	2.3	1,939,647	12.4	171,452	0.7
Public Facilities & Institutions	65	4.3	2,822,237	18.0	2,615,529	11.3
Open Space	27	1.8	1,337,819	8.5	117,588	0.5
Parking Facilities	82	5.4	277,493	1.8	50,100	0.2
Vacant	91	6.0	609,698	3.9	0	0.0
All Others or No Data	19	1.3	56,324	0.4	200	0.0
Total	**1,505**	**100.0**	**15,669,476**	100.0	**23,190,373**	100.0

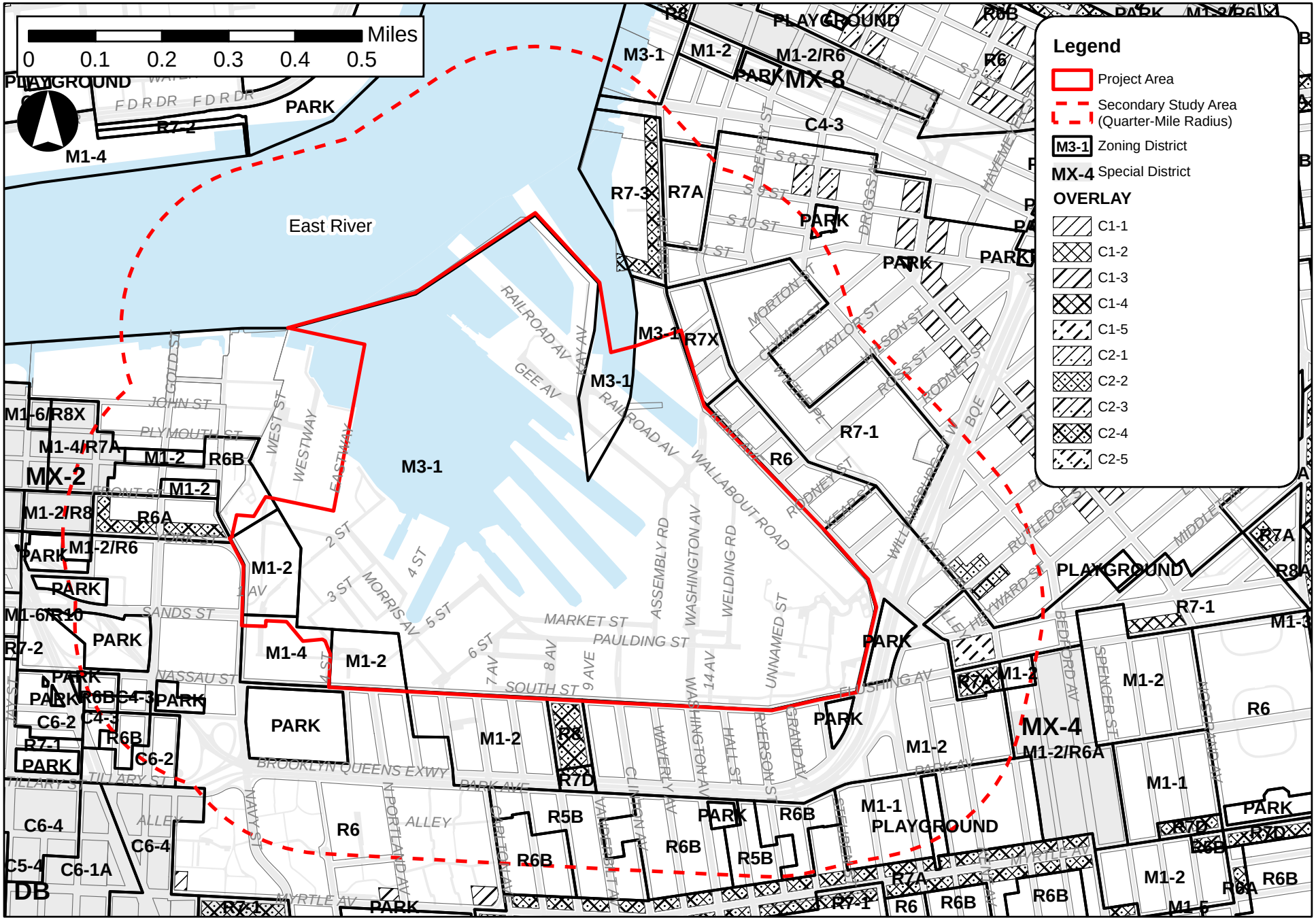
Source: DCP's PLUTO 2020v8.
Note: [1] Reflects totals for all lots with a minimum of 50 percent of their lot area within the quarter-mile secondary study area, excluding the Project Area (see **Figure C-1**).

There are also 27 lots in the secondary study area that are occupied by open space uses (representing 1.8 percent of total lots and 8.5 percent of lot area as detailed in **Table C-1**). Public parks in close proximity to the Project Area include the 10.39-acre Commodore Barry Park located at the southwest corner of Navy Street and Flushing Avenue, and the 1.93-acre Roberto Clemente Ballfield and 1.08-acre Jacob's Ladder Playground located on the block bounded by Kent, Division, and Wythe avenues and Clymer Street.

Zoning

Primary Study Area (Project Area)

As illustrated in **Figure C-2**, the Project Area is predominantly zoned M3-1, with small portions of the Project Area zoned M1-2 and even smaller portions zoned R6B.



Special Brooklyn Navy Yard District

Figure C-2
Existing Zoning

M3-1

M3 districts are designated for areas with heavy industries that generate noise, traffic or pollutants. Typical uses include power plants, solid waste transfer facilities and recycling plants, and fuel supply depots. Even in M3 districts, uses with potential nuisance effects are required to conform to minimum performance standards as set forth in the Zoning Resolution. Certain commercial uses, including office space, trade schools for adults, driving schools, and business schools, are permitted. Pursuant to the recently approved Self-Storage Text Amendment, self-storage facilities are only permitted by New York City Planning Commission (CPC) Special Permit, unless a certain amount of ground floor industrial space is also provided. No new residences are permitted in M3 districts, and community facility uses are limited. Manufacturing and commercial development within M3-1 districts can be built to a maximum FAR of 2.0.

Building heights in M3-1 districts are governed by a sky exposure plane, which begins at a height of 60 feet, or four stories, whichever is less, above the street line. In general, developments in M3 districts are required to provide a minimum 20-foot-deep rear yard or a rear yard equivalent of 40 feet for through-lots.

M3-1 districts are subject to parking and loading requirements based on the type of use and size of an establishment. A summary of the applicable parking and loading requirements by use is provided in **Table C-2**, below.

Table C-2: Selected M3-1 and M1-2 Parking and Loading Requirements

Land Use	M3-1 Parking Requirements[1]	M1-2 Parking Requirements[1]	Loading Requirements
Storage	1 per 2,000 sf or 1 per 3 employees[2,3]	1 per 2,000 sf or 1 per 3 employees[2,3]	1 dock/25,000 sf 2 docks/40,000 sf 3 docks/60,000 sf 4 docks/80,000 sf[5]
Manufacturing or Semi-Industrial Uses	1 per 1,000 sf or 1 per 3 employees[3,4,5]	1 per 1,000 sf or 1 per 3 employees[3,4,5]	1 dock/25,000 sf 2 docks/40,000 sf 3 docks/60,000 sf
General Retail	1 per 300 sf	1 per 300 sf	1 dock/25,000 sf 2 docks/40,000 sf 3 docks/60,000 sf
Service Uses (Office)	1 per 300 sf	1 per 300 sf	1 dock/100,000 sf 2 docks/300,000 sf

Notes: [1] The parking requirement may be waived if a project requires less than 15 spaces.
[2] Whichever requires fewer parking spaces.
[3] For outdoor industrial/storage uses, lot area is used in place of floor area.
[4] Whichever requires more parking spaces.
[5] Special provisions apply to the expansion of existing manufacturing buildings.

M1-2

M1 districts typically permit light industrial uses, such as woodworking shops, repair shops, and wholesale service facilities and self-storage facilities. Nearly all industrial uses are allowed in M1 districts if they meet stringent performance standards, including maximum permitted noise levels and odor, dust, or noxious matter emissions. In addition, stricter noise standards apply of M1-2 zoning districts that adjoin residential districts; this applies to both Project Area M1-2 districts. Offices and most retail uses are also permitted;

however, many retail establishments are limited to 10,000 sf unless a CPC Special Permit is obtained. Pursuant to the recently approved Self-Storage Text Amendment, self-storage facilities are only permitted in designated manufacturing districts by CPC Special Permit, unless a certain amount of ground floor industrial spaces is also provided. In addition, pursuant to the recently approved M1 Hotel Text Amendment, hotels are also only permitted in M1 districts by CPC Special Permit. Community facility uses allowed as-of-right in M1-2 zones are limited to diagnostic and ambulatory care facilities, houses of worship, and museums affiliated with a studio in proximity to the museum. Schools are permitted by Special Permit from the New York City Board of Standards and Appeals (BSA) and hospitals, museums, and certain other community facilities are permitted by CPC Special Permit. Residential use is not permitted.

M1-2 zoning districts permit a maximum FAR of 2.0 of manufacturing and commercial uses and 4.8 for permitted community facility uses. Building heights in M1-2 districts are governed by a sky exposure plane, which begins at a height of 60 feet, or four stories, whichever is less, above the street line. In general, developments in M1 districts are required to provide a minimum 20-foot-deep rear yard or a rear yard equivalent of 40 feet for through-lots.

As summarized in **Table C-2**, M1-2 districts are subject to parking and loading requirements based on the type of use and size of an establishment.

R6B

As illustrated in **Figure C-2**, an approximately 36,500-sf area along the western edge of the Project Area is zoned R6B; this R6B district represents approximately 0.3 percent of the Project Area. R6B districts are often traditional rowhouse districts, which preserve the scale and harmonious streetscape of neighborhoods of four-story attached buildings developed during the 19th century. Many of these houses are set back from the street with stoops and small front yards that are typical of Brooklyn's "brownstone" neighborhoods. The maximum residential and community facility FAR of 2.0 and the mandatory Quality Housing regulations also accommodate apartment buildings at a similar four- to five-story scale; commercial and industrial uses are not permitted in R6B districts. The base height of a new building before setback must be between 30 and 40 feet; the maximum building height is 50 feet. Off-street parking is generally required for 50 percent of dwelling units (DUs).

Waterfront Zoning

The Project Area is also subject to the Special Regulations Applying in the Waterfront Area set forth in Chapter 2 of ZR Article VI, though many of the controls do not apply in the Project Area due to its predominately industrial character. These regulations are intended to, among other things, promote physical and visual access to and along the waterfront; encourage water dependent uses along the City's waterfront; and protect natural resources in environmentally sensitive areas along the shore. The regulations establish special use, bulk, and visual corridor/public access provisions for the waterfront area, generally defined as the geographical area have a boundary coincident with or seaward of the shoreline. However, developments are exempt from waterfront public access area and visual corridor requirements if they are in a manufacturing district and at least 75 percent of the uses on the zoning lot are industrial and manufacturing uses (Use Groups 16, 17, and 18) measured by floor area, or, in the case of open uses, lot area; waterfront bulk regulations do not apply if a development is predominantly industrial. Because the mix of uses in the Yard is predominantly industrial, development at the Yard has not been subject to waterfront bulk, public access area, and visual corridor regulations to date.

Table C-3: Primary and Secondary Study Area Zoning Districts

Name	Definition/General Use	Maximum FAR
Commercial Districts		
C1-5, C2-2, C2-4 (overlays)	C1 and C2 commercial overlays are mapped within residential districts along streets that serve local retail needs. In mixed-use buildings, commercial uses are limited to two floors and must always be located below residential uses. C2 commercial overlays permit a slightly wider range of uses than C1 districts.	R & CF: Same as underlying R district; C: 1.0 within R1-R5 districts & 2.0 within R6-R10 districts; M: 0.0
C4-3	C4 districts are mapped in regional commercial centers that are located outside of the central business districts and typically comprise commercial uses that serve a larger region. Use Groups 5, 6, 8-10, and 12 are permitted in C4 districts. C4-3 districts are R6 equivalent districts.	R: 0.78-2.43[1]; C: 3.4; CF: 4.8; M: 0.0
C6-2	C6 districts permit a wide range of high-bulk commercial uses requiring a central location. C6-2 districts are R8 equivalent districts and are typically mapped in areas outside central business cores, while C6-4 districts are R10 equivalent districts and are typically mapped within the City's major business districts.	R: 094-6.02[2]; C: 6.0[3]; CF: 6.5; M: 0.0
C6-4		R: 10.0[3]; C: 10.0[3]; CF: 10.0; M: 0.0
Manufacturing Districts		
M1-1	M1 districts are often buffers between M2 or M3 districts and adjacent residential or commercial districts. M1 districts typically include light industrial uses, which must meet the stringent M1 performance standards. M1-1, M1-2, and M1-4 have varying bulk, parking, and loading requirements.	R: 0.0; C: 1.0; CF: 2.4[4]; M: 1.0
M1-2		R: 0.0; C: 2.0; CF: 4.8[4]; M: 2.0
M1-4		R: 0.0; C: 2.0; CF: 6.5[4]; M: 2.0
M3-1	M3 districts are designated for areas with heavy industries that generate noise, traffic, or pollutants. Typical uses include power plants, solid waste transfer facilities, and recycling plants.	R: 0.0; C: 2.0; CF: 0.0; M: 2.0
Residential Districts		
R5B	R5B districts are contextual residential districts typically characterized by 3-story rowhouses.	R: 1.35; C: 0.0; CF: 2.0; M: 0.0
R6	R6 districts are widely mapped in built-up, medium-density areas. Developers can choose between Height Factor and optional Quality Housing bulk regulations.	R: 0.78-2.43[1]; C: 0.0; CF: 4.8; M: 0.0
R6A	R6A districts are contextual residential districts that produce high lot coverage with 6- to 6-story apartment buildings set at or near the street line.	R: 3.0; C: 0.0; CF: 2.0; M: 0.0
R6B	R6B districts are contextual residential districts and are often traditional rowhouse districts.	R: 2.0; C: 0.0; CF: 3.0; M: 0.0
R7A	R7A contextual districts typically produce high lot coverage and 7- to 9-story apartment buildings.	R: 4.0; C: 0.0; CF: 4.0; M: 0.0
R7X	R7X contextual residential districts typically produce taller, bulkier buildings than R7A and R7B districts, with a maximum base height of 60 to 85 feet and a maximum building height of 125 feet.	R: 5.0; C: 0.0; CF: 5.0; M: 0.0
R7-1	R7 districts are medium-density apartment house districts. Developers can choose between Height Factor and optional Quality Housing bulk regulations. R7-3 districts are mapped in some waterfront areas.	R: 0.87-3.44[5]; C: 0.0; CF: 4.8; M: 0.0
R7-3		R: 5.0; C: 0.0; CF: 5.0; M: 0.0
R8	R8 districts are high-density residential districts. Developers can choose between Height Factor and optional Quality Housing bulk regulations, producing apartment buildings ranging from mid-rise, 8- to 10-story buildings to much taller buildings set back from the street.	R: 0.94-6.02[2]; C: 0.0; CF: 6.5; M: 0.0
Special Districts		
DB	The Special Downtown Brooklyn (DB) District establishes special height and setback regulations and urban design guidelines to promote and support the continued growth of Downtown Brooklyn.	
MX-2 & MX-4	The Special Mixed-Use (MX) district was established in 1997 to encourage investment in, and enhance the vitality of, existing neighborhoods with mixed residential and industrial uses in close proximity and create expanded opportunities for new mixed-use communities.	

Source: New York City Zoning Resolution.

Notes: R=Residential; C=Commercial; CF=Community Facility; M=Manufacturing. Refer to **Figure C-2**.

[1] 3.0 FAR on wide streets outside Manhattan Core; 2.43 FAR on wide streets within Manhattan Core; 2.2 FAR on narrow streets (under the Quality Housing Program).

[2] 7.2 FAR on wide streets outside Manhattan Core under Quality Housing Program.

[3] Up to 20 percent increase for public plaza bonus.

[4] Community facility uses allowed as-of-right in M1 districts are limited to diagnostic and ambulatory care facilities, houses of worship, and museums affiliated with a studio in proximity to the museum.

[5] 4.0 FAR on wide streets outside Manhattan Core; 3.44 FAR on wide streets within Manhattan Core and on narrow streets (under the Quality Housing Program)

Secondary Study Area

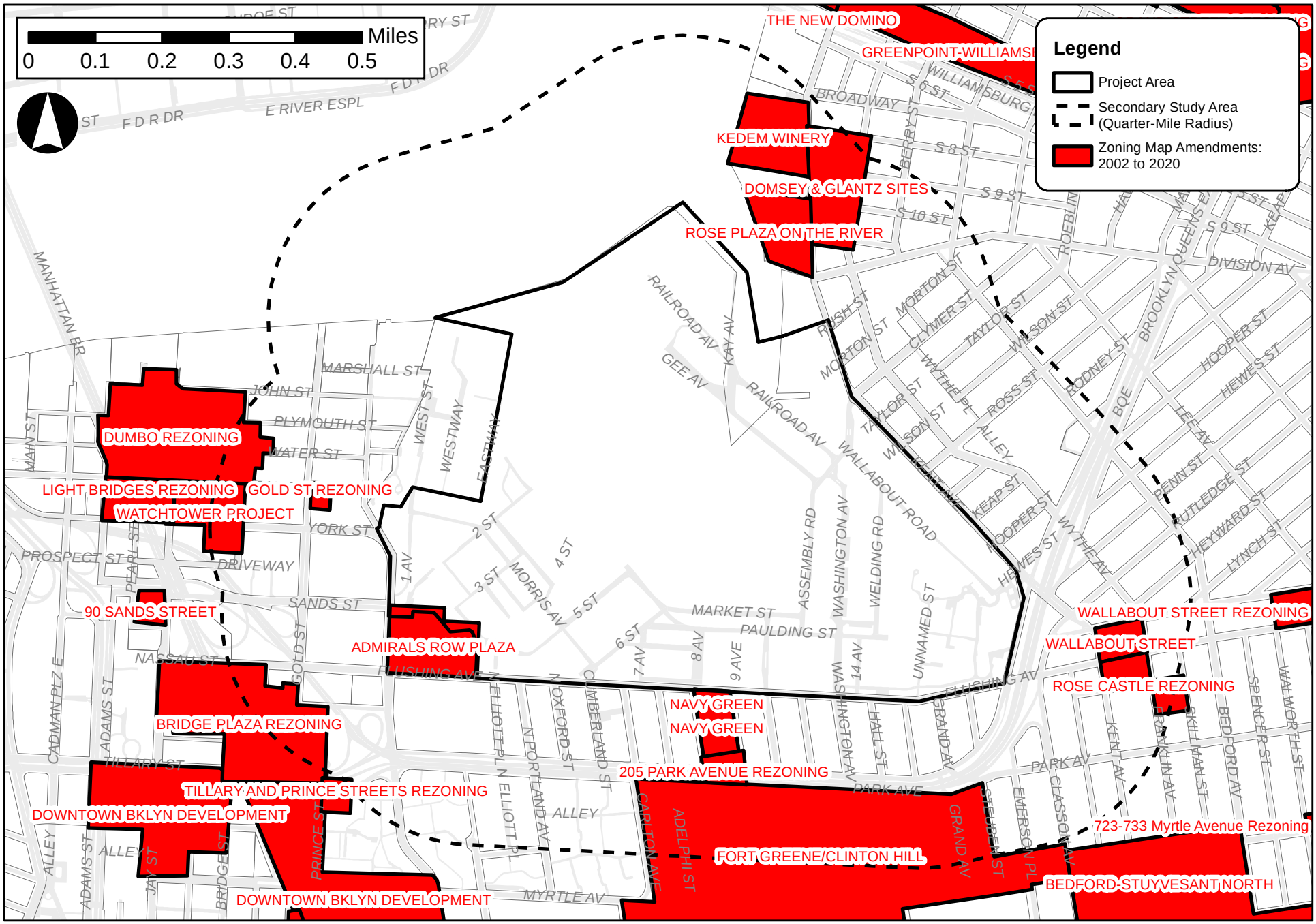
As detailed in **Table C-3**, the secondary study area encompasses a variety of zoning districts. As presented in **Figure C-2**, the area to the east of the Project Area is generally zoned for residential uses, with manufacturing zoning districts are mapped directly adjacent to the Project Area to both the west and south; a Special Mixed-Use (MX-2) District is mapped at the western border of the secondary study area, and a Special Mixed-Use (MX-4) District is mapped at the southeastern border of the secondary study area. Commercial districts are limited to the southwestern edge of the secondary study area, a portion of which is located within the Special Downtown Brooklyn (DB) District. C1-5, C2-2, and C2-4 commercial overlays are also found intermittently throughout the secondary study area. A summary of the applicable secondary study area zoning regulations is provided in **Table C-3.**

Recent Zoning Actions

Over the past decade, the Deputy Mayor for Housing and Economic Development has approved four overrides of the ZR at the BNY, including:

- In 2013, the Deputy Mayor approved an override of ZR Section 42-12 to permit approximately 70,000 sf of Use Group 3A "colleges and universities" use at 25 Washington Street in an M3-1 district in the southeastern corner of the Yard near Flushing Avenue, where such use is prohibited. The zoning override facilitated the establishment of the Brooklyn College Barry R. Feirstein Graduate School of Cinema within the Steiner Studios Media Campus at the Yard centered along Washington Street, promoting synergies between media-focused college and university programs and film-related industrial uses.
- In 2015, the Deputy Mayor granted a request to override ZR Section 44-21 to reduce accessory parking requirements from 1,849 spaces to 379 spaces for an approximately 555,000 sf commercial office building located along the waterfront in the middle of the Yard, known as Dock 72, to align the development of new parking spaces with maximum anticipated parking demand. It should be noted that, to date, parking demand associated with Dock 72 has been significantly lower than the 379 spaces provided in connection with this override, with an average occupancy of 40 vehicles with a third of the building leased.
- In 2017, the Deputy Mayor approved an override of ZR Section 42-533, which restricts the total surface area of an illuminated sign in an M3-1 district to 500 sf, to permit the installation of a 675-sf illuminated sign at Building 77 on Flushing Avenue between Clermont and Vanderbilt Avenues, that would be appropriate and proportional given the scale of the 18-story, approximately one-million sf Building 77.
- In 2018, the Deputy Mayor granted a request to override ZR Section 42-12 to facilitate the establishment of an approximately 62,000 sf Use Group 3A school at Building 77 located at the southern boundary of the Yard at 141 Flushing Avenue in an M3-1 district, where such use is prohibited. The zoning override facilitated the establishment of the Brooklyn STEAM Center, an innovative career and technical education program that prepares 11th and 12th grade high school students from eight local public high schools to thrive in the fields of science, technology, engineering, arts, and math. Students receive hands-on industry exposure to Yard tenants, many of whom provide instruction at the school.

Additionally, as presented in **Figure C-3,** numerous zoning map amendments have been approved in the secondary study area in recent years. A description of these approved zoning map amendments is



Special Brooklyn Navy Yard District

Figure C-3
Zoning Map Changes (2002-2020)

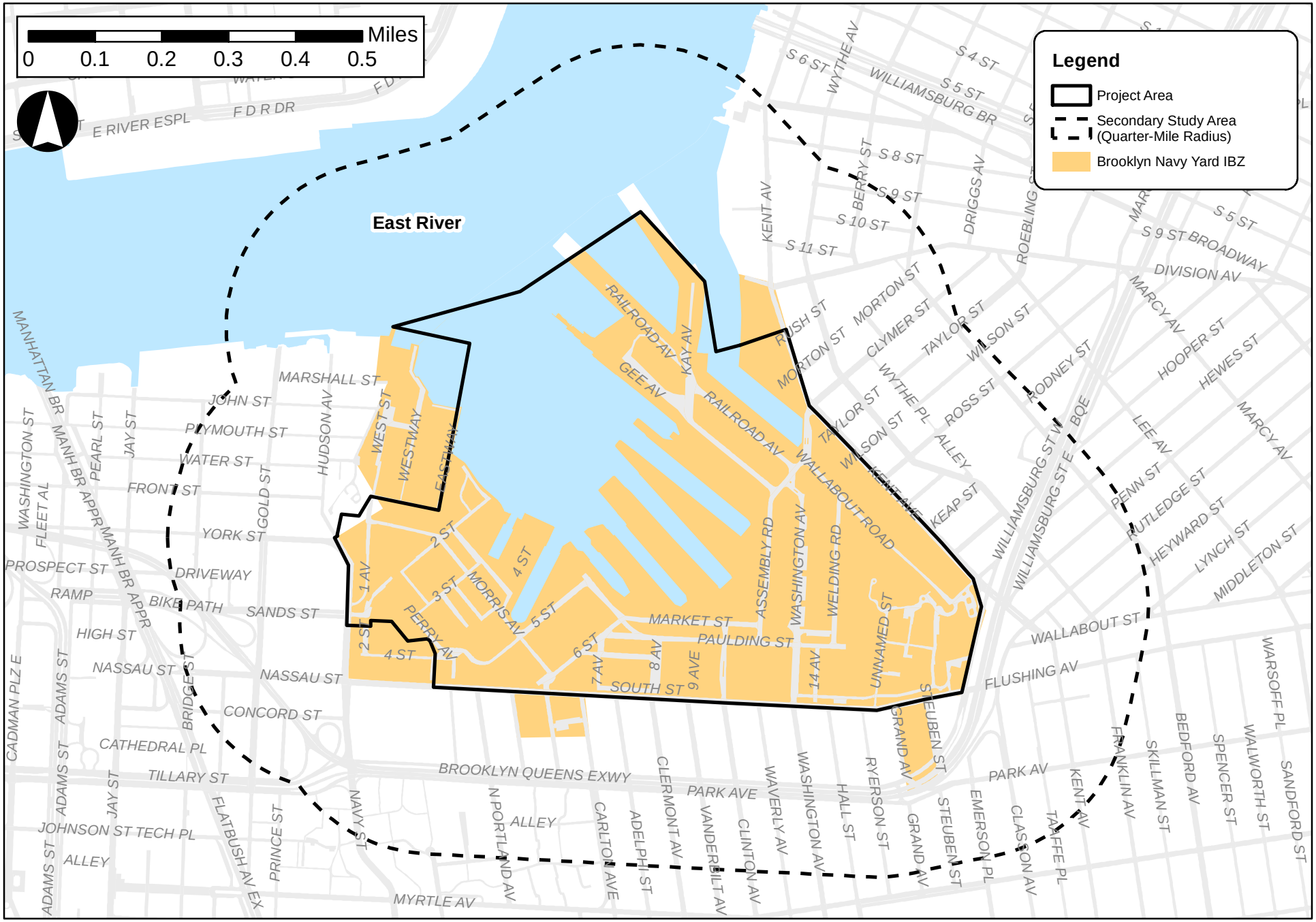
provided below. Many of the recent secondary study area zoning actions rezoned manufacturing districts to residential, commercial, and/or mixed-use districts.

- Domsey & Glatz Sites (ULURP No. 000087 ZMK, approved in 2002): Rezoned the area bounded by Kent and Wythe avenues and South 8th and South 11th streets from M3-1 to R7-A.
- Bridge Plaza Rezoning (ULURP No. 020263ZMK, approved in 2003): Rezoned eight-block area bounded by Jay, Nassau, Prince, and Tillary streets from M1-1 to C4-3, C6-2, and R6B.
- Gold Street Rezoning (ULURP No. 030289ZMK, approved in 2004): Rezoned 99 Gold Street from M1-2 to R6A.
- Watchtower Project (ULURP No. 040215ZMK, approved in 2004): Rezoned 85 Jay Street from M1-2 to M1-2/R8 and M1-2/R6, and established the Special Mixed-Use (MX-2) District.
- Kedem Winery (ULURP No. 020518ZMK, approved in 2006): Rezoned 420-430 Kent Avenue from C4-3 and M3-1 to R7-3 and R7-3/C2-4.
- Fort Greene/Clinton Hill Rezoning (ULURP No. 070430ZMK, approved in 2007): Rezoned all or portions of 99 blocks bounded by Park, Classon, Atlantic, and Carlton avenues, Ashland Place, and Fort Greene Park from R6, R7-1, R7-2, and M1-1 to R5B, R6B, R6A, and R7A.
- DUMBO Rezoning (ULURP No. 090310ZMK, approved in 2009): DCP initiative that rezoned 12 blocks from M1-2 and M3-1 to M1-4/R7A and M1-4/R8A and extended the Special Mixed-Use (MX-2) District.
- Navy Green (ULURP No. 090444ZMK, approved in 2009): Rezoned the block bounded by Flushing, Clermont, Vanderbilt, and Park avenues from M1-2 to R8/C2-4.
- Rose Plaza on the River (ULURP No. 080339ZMK, approved in 2010): Rezoned 470-490 Kent Avenue from M3-1 to R7-3 and R7-3/C2-4.
- Admirals Row Plaza (ULURP No. 110382ZMK, approved in 2011): BNYDC initiative that rezoned a portion of the BNY (Block 2023, Lot 50 and p/o Lot 1) from M1-2 to M1-4.
- Wallabout Street (ULURP No. 110390ZMK, approved in 2012): Rezoned 74 Wallabout Street from M1-2 to R7-1/C1-5.
- Rose Castle Rezoning (ULURP No. 160221ZMK, approved in 2017): Rezoned a portion of two blocks from M1-2 to R7A/C2-4 and M1-2/R6A and established the Special Mixed-Use (MX-4) District.
- Tillary and Prince Street Rezoning (ULURP No. 170400ZMK, approved in 2017): Rezoned part of the block bounded by Tillary, Navy, and Prince streets and Myrtle Avenue from R6 to C6-4.
- 205 Park Avenue Rezoning (ULURP No. 170164ZMK, approved in 2018): Rezoned part of Park Avenue bounded by Vanderbilt and Clermont Avenues from M1-2 to R7D/C2-4.
- 90 Sands Street (ULURP No. 200059ZMK, approved in 2020): Rezoned 90 Sands Street from M1-6 to an MX (M1-6/R10) District, and mapped a Mandatory Inclusionary Housing (MIH) Area.

Public Policy

Brooklyn Navy Yard Industrial Business Zone (IBZ)

As presented in **Figure C-4**, the entirety of the Project Area and portions of the secondary study area are located within the Brooklyn Navy Yard IBZ. Since 2006, 21 IBZs have been created across the City where expanded business services are available for industrial and manufacturing businesses. This designation is intended to foster high-performing business districts by creating competitive advantages for locating in areas within New York City. The IBZs are supported by tax credits for relocating within them, zone-specific



Special Brooklyn Navy Yard District

Figure C-4

Brooklyn Navy Yard Industrial Business Zone

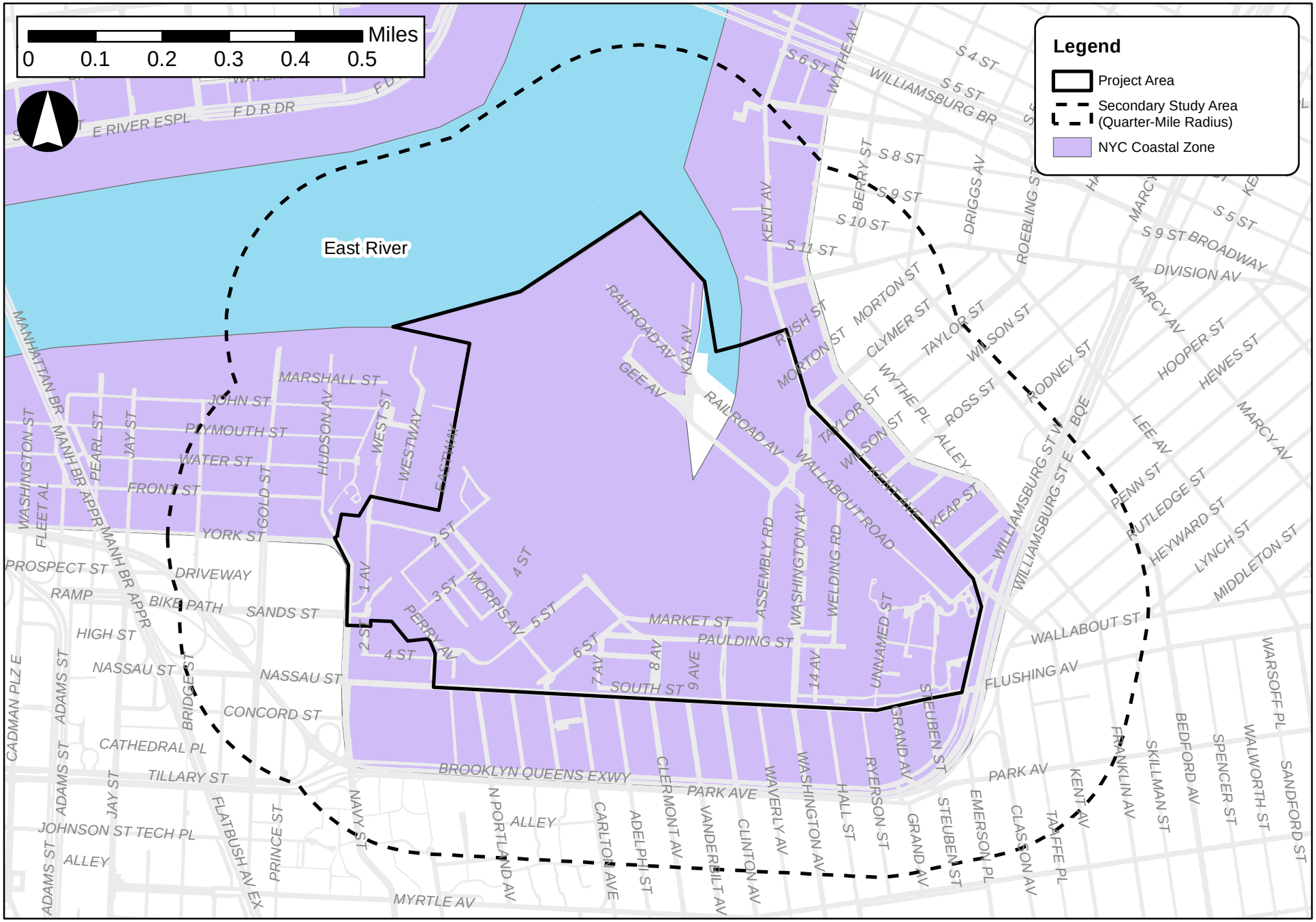
planning efforts, and direct business assistance for Industrial Providers of New York City Business Solutions Industrial and Transportation.

Waterfront Revitalization Program (WRP)

Projects that are located within the designated boundaries of New York City's Coastal Zone must be assessed for their consistency with the City's Waterfront Revitalization Program (WRP). The federal Coastal Zone Management Act (CZMA) of 1972 was enacted to support and protect the distinctive character of the waterfront and to set forth standard policies for reviewing proposed development projects along coastlines. The program responded to City, State, and Federal concerns about the deterioration and inappropriate use of the waterfront. In accordance with the CZMA, New York State adopted its own Coastal Management Program (CMP), which provides for local implementation when a municipality adopts a local waterfront revitalization program, as is the case in New York City. The New York City WRP is the City's principal coastal zone management tool. The WRP was originally adopted in 1982 and approved by the New York State Department of State (NYSDOS) for inclusion in the New York State CMP. The WRP encourages coordination among all levels of government to promote sound waterfront planning and requires consideration of the program's goals in making land use decisions. NYSDOS administers the program at the State level, and the New York City Department of City Planning (NYCDCP) administers it in the city. The WRP was revised and approved by the City Council in October 1999. In August 2002, NYSDOS and federal authorities (i.e., the U.S. Army Corps of Engineers [USACE] and the U.S. Fish and Wildlife Service [USFWS]) adopted the city's ten WRP policies for most of the properties located within its boundaries.

In October 2013, the City Council approved revisions to the WRP in order to proactively advance the long-term goals laid out in Vision 2020: The New York City Comprehensive Waterfront Plan, released in 2011. The changes solidify New York City's leadership in the area of sustainability and climate resilience planning as one of the first major cities in the U.S. to incorporate climate change considerations into its Coastal Zone Management Program. They also promote a range of ecological objectives and strategies, facilitate interagency review of permitting to preserve and enhance maritime infrastructure, and support a thriving, sustainable working waterfront. The NYSDOS approved the revisions to the WRP on February 3, 2016. The U.S. Secretary of Commerce concurred with the State's request to incorporate the WRP into the New York State CMP.

In 2013, the New York City Panel on Climate Change (NPCC) released a report (Climate Risk Information 2013: Observations, Climate Change Projections, and Maps) outlining New York City-specific climate change projections to help respond to climate change and accomplish OneNYC and PlaNYC goals, which are described below. The 2013 NPCC report predicted future city temperatures, precipitations, sea levels, and extreme event frequency for the 2020s and 2050s. Subsequently, in January 2015, the Second NPCC (NPCC2) released an updated report that presented the full work of the NPCC2 from January 2013 to 2015 and includes temperature, precipitation, sea level, and extreme event frequency predictions for the 2081 to 2100 time period. While updated maps and data are anticipated for further refinement of the projections in the future, current projections are useful for present planning purposes and to facilitate decision-making in the present that can reduce existing and near-term risks without impeding the ability to take more informed adaptive actions in the future. Specifically, the NPCC2 report predicts that mean annual temperatures will increase by 2.0 to 2.8˚F, 4.1 to 5.7˚F, 5.3 to 8.8˚F, and 5.8 to 10.3˚F by the 2020s, 2050s, 2080s, and 2100, respectively; total annual precipitation will rise by 1 to 8 percent, 4 to 11 percent, 5 to 13 percent, and -1 to +19 percent by the 2020s, 2050s, 2080s, and 2100, respectively; sea level will rise by 4 to 8 inches, 11 to 21 inches, 18 to 39 inches, and 22 to 50 inches by the 2020s, 2050s, 2080s, and



Special Brooklyn Navy Yard District

Figure C-5

New York City Coastal Zone Boundaries

2100, respectively; heat waves and heavy downpours are also very likely to become more frequent, more intense, and longer in duration, with coastal flooding very likely to increase in frequency, extent, and elevation.

As the Project Area is located in the City's Coastal Zone, the Proposed Actions must be assessed for consistency with the policies of the City's Local Waterfront Revitalization Program (LWRP). In accordance with the guidance of the 2020 *CEQR Technical Manual*, a Consistency Assessment Form (CAF) was prepared for the Proposed Actions, which is provided in **Appendix 2** and summarized in *Section VI: "Conclusions"* below.

Sustainability & OneNYC

As detailed in the 2020 *CEQR Technical Manual*, until sustainability goals are more clearly defined through the incorporation of initiatives into codes, regulations, and specific policies, there are few sustainability standards to apply appropriately in assessing a proposed project for the purposes of CEQR. To ensure that publicly sponsored projects align with the broader sustainability priorities and goals the City has set for itself, it is appropriate that the *OneNYC* initiatives (detailed below) be considered. If a publicly-sponsored project is, itself, implementing a *OneNYC* initiative, a detailed sustainability assessment would likely be inappropriate.

In April 2015, Mayor Bill de Blasio released *OneNYC*, a comprehensive plan for a sustainable and resilient city for all New Yorkers that speaks to the profound social, economic, and environmental challenges faced. *OneNYC* is the update to the sustainability plan for the city started under the Bloomberg administration, previously known as *PlaNYC 2030: A Greener, Greater New York*. Growth, sustainability, and resiliency remain at the core of *OneNYC*, but with the poverty rate remaining high and income inequality continuing to grow, the de Blasio administration added equity as a guiding principle throughout the plan. In addition to the focuses of population growth; aging infrastructure; and global climate change, *OneNYC* brings new attention to ensuring the voices of all New Yorkers are heard and to cooperating and coordinating with regional counterparts. Since the 2011 and 2013 updates of *PlanNYC*, the City has made considerable progress towards reaching original goals and completing initiatives. *OneNYC* includes updates on the progress towards the 2011 sustainability initiatives and 2013 resiliency initiatives and also sets additional goals and outlines new initiatives under the organization of four visions: growth, equity, resiliency, and sustainability.

Goals of the plan are to make New York City:

- A Growing, Thriving City—by fostering industry expansion and cultivation, promoting job growth, creating and preserving affordable housing, supporting the development of vibrant neighborhoods, increasing investment in job training, expanding high-speed wireless networks, and investing in infrastructure.
- A Just and Equitable City—by raising the minimum wage, expanding early childhood education, improving health outcomes, making streets safer, and improving access to government services.
- A Sustainable City—by reducing greenhouse gas emissions, diverting organics from landfills to attain Zero Waste, remediating contaminated land, and improving access to parks.
- A Resilient City—by making buildings more energy efficient, making infrastructure more adaptable and resilient, and strengthening coastal defenses.

Industrial Action Plan

In November 2015, Mayor Bill de Blasio and then-City Council Speaker Melissa Mark-Viverito unveiled a plan, backed by more than $115 million in newly-announced City funding, to modernize the City's industrial policy. The Plan is intended to further three major goals: protect and strengthen core industrial areas; invest in the long-term development of industrial and manufacturing businesses; and prepare New Yorkers for the industrial and manufacturing jobs of the future. The 10 strategies to achieve these goals are outlined below:

- *Invest in City-owned industrial assets.* As part of the ten-year Capital Plan, the City will invest a total of $442 million in City-owned industrial properties at Brooklyn Army Terminal, the Brooklyn Navy Yard, Sunset Park, and Hunts Point.
- *Limit new hotels and personal storage in core industrial areas to reduce use conflicts and support diverse economic growth.* The Administration will create new Special Permits that will be required for any hotel development in M1 districts for any self-storage facility in certain manufacturing districts.
- *Create new models for flexible workspace and innovation districts.* The Administration will work with stakeholders to develop a framework for "Innovation Districts" that comprise a mix of light industrial, commercial, and limited residential development.
- *Strengthen core industrial areas.* The Administration and the Council have committed to prohibit private rezonings to allow residential uses in IBZs to curb speculation.
- *Create an industrial and manufacturing fund to spur development.* The fund will provide $64 million in City loans and grants to fuel the creation of approximately 1,200 new jobs.
- *Launch Advanced Manufacturing Network "Futureworks NYC," including the creation of a new Advanced Manufacturing Center.* The City will create an Advanced Manufacturing Center with shared workspaces and equipment that will serve as a cornerstone of "Futureworks NYC," which will feature a network of citywide resources to promote advanced manufacturing.
- *Expand Brownfields Jumpstart Program to industrial properties.* The program will help businesses enroll in the NYS Brownfield Cleanup Program and provide grants to industrial and manufacturing businesses.
- *Relaunch the Industrial Business Solutions Providers network.* This New York City Small Business Services (SBS) program will provide critical support to businesses in the City's IBZs and collect real-time data that will enable the City to refine policies and better respond to the evolving needs of industrial and manufacturing businesses.
- *Create industry partnerships to bolster workforce development.* The City will launch a Career Pathways initiative to convene business leaders, services providers, and other stakeholders on workforce training.
- *Establish career centers in IBZs.* SBS will create up to five additional satellite Workforce1 centers in select IBZs with high job density.

Business Improvement Districts (BIDs)

A BID is a not-for-profit organization that delivers services such as sanitation and maintenance, public safety, marketing and promotional programs, capital improvements, and beautification for the area. BIDs are funded by a special assessment billed to commercial properties within their service area. SBS is the lead agency responsible for BID creation and oversight.

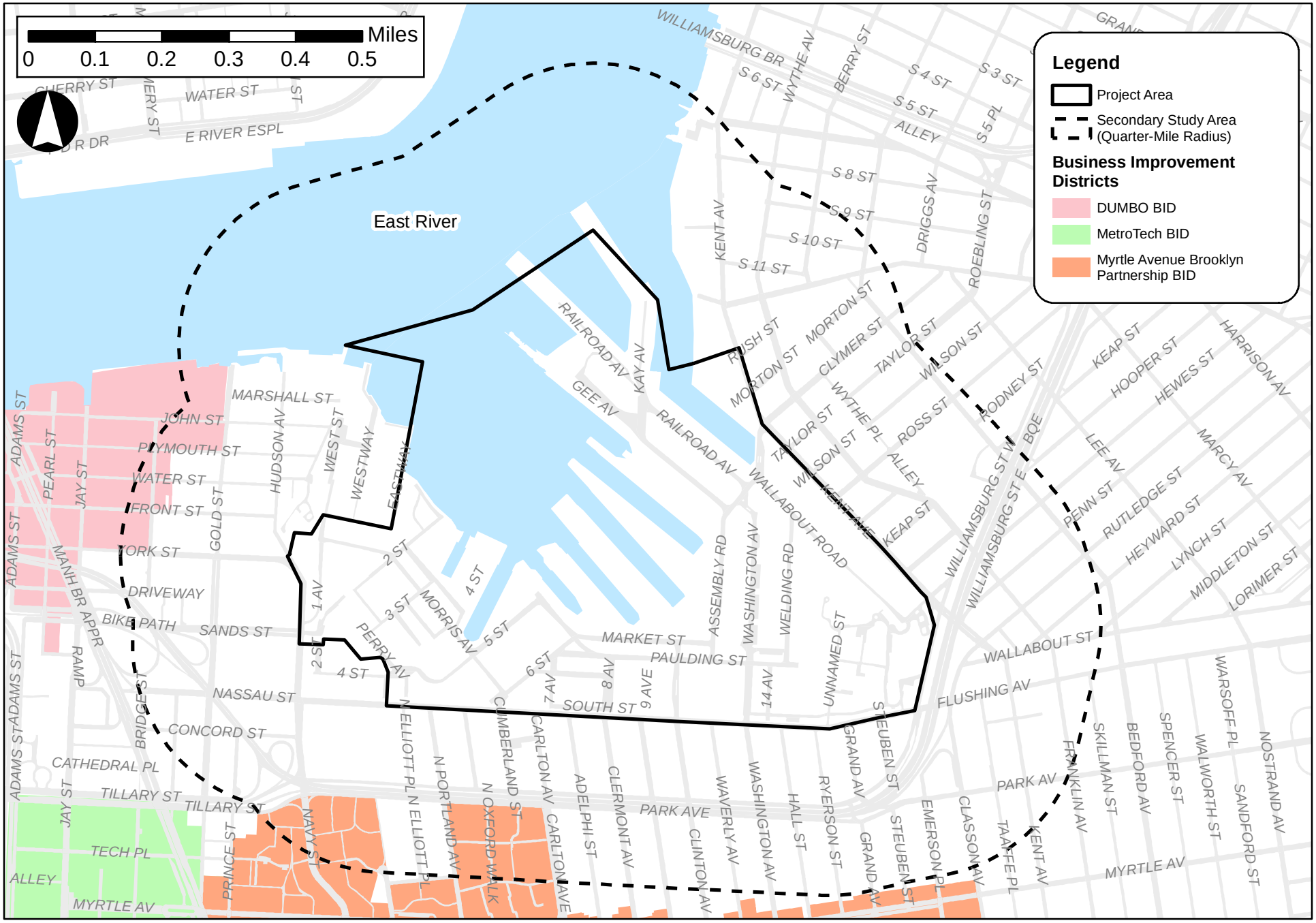
As presented in **Figure C-6,** there are two BIDs partially located within the secondary study area: the DUMBO BID and the Myrtle Avenue Brooklyn Partnership BID. The DUMBO BID was established in December 2005 to provide advocacy, street beautification, neighborhood marketing, and programming of public spaces within the boundaries of the BID. The BID covers a total of 98 block faces spanning Old Fulton Street to the west and Gold Street to the east between the East River to the north and Prospect Street to the south. The Myrtle Avenue Brooklyn Partnership BID was established in April 2005 with the mission of restoring the "Main Street" of the Fort Greene, Clinton Hill, and Wallabout community to a bustling, economically vital neighborhood commercial corridor that provides entrepreneurial, cultural, recreational, and employment opportunities for all those who live, work, study, or have an interest in the area. The BID covers a total of 40 block faces running along Myrtle Avenue from Flatbush Avenue to the west to Classon Avenue to the east and includes Fort Greene Park.

Williamsburg Waterfront 197-a Plan

Section 197-a of the New York City Charter authorizes Community Boards and Borough Boards, as well as the Mayor, the CPC, DCP, and any Borough President to sponsor plans for the development, growth, and improvement of the City. The *Williamsburg Waterfront 197-a Plan* was development by Brooklyn Community Board (CB) 1 and approved by the City Council in 2002. The plan extends along the East River from Bushwick Inlet (North 14th Street) to the point at which the Brooklyn-Queens Expressway (BQE) passes the BNY and is generally two blocks deep along the waterfront. The plan's stated goals are to conform waterfront development to adjacent neighborhoods, increase waterfront access and public open space, promote a clean and safe living and working environment, promote local economic development, and support and strengthen existing diversity.

Urban Renewal Plans (URPs)

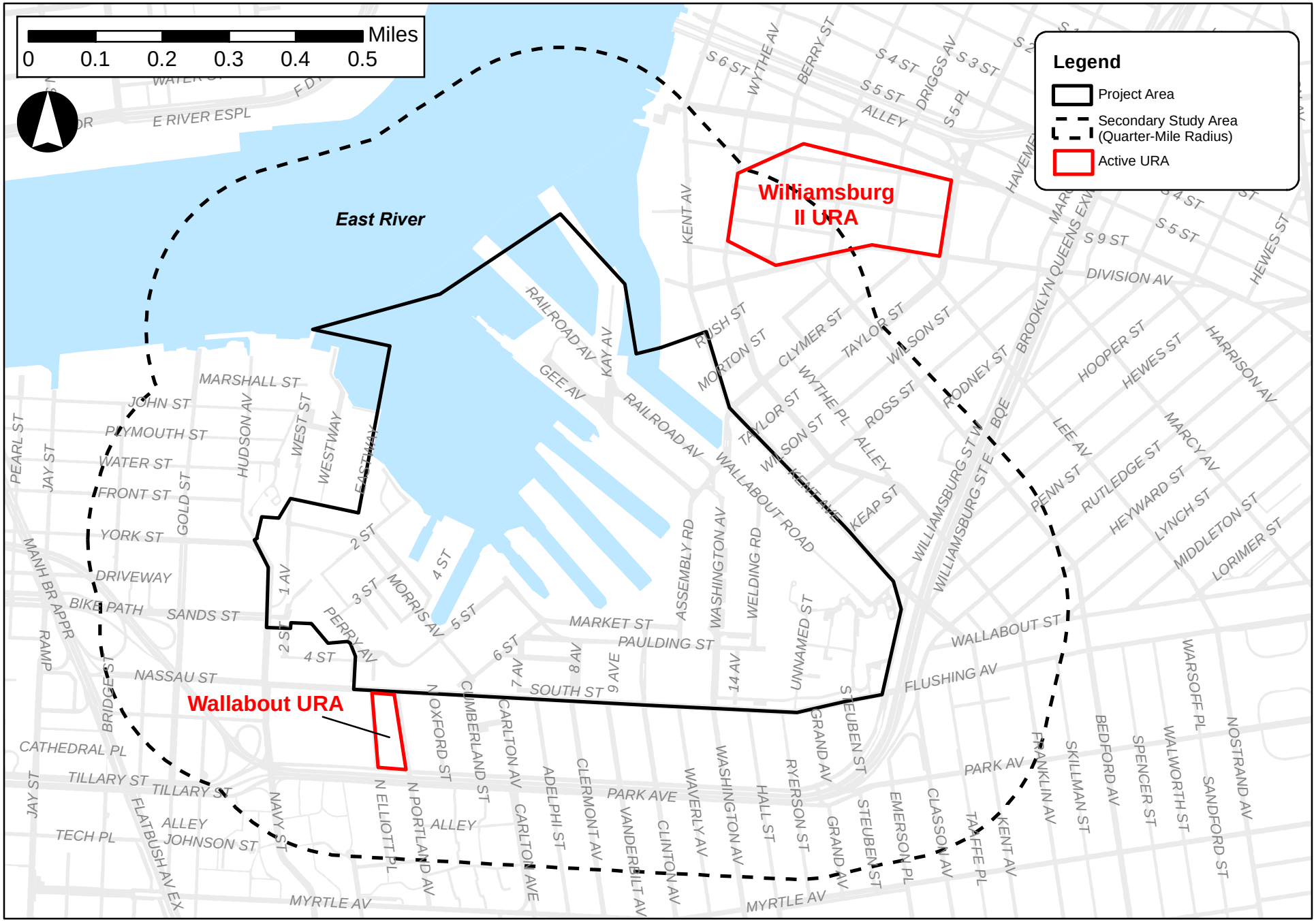
The City of New York has adopted over 150 URPs for City neighborhoods. These plans were typically adopted to get federal funding for acquiring land, relocating the people living there, demolishing the structures, and making way for new public and private development. Plan adoptions started in 1949, and many plans remain active today. As presented in **Figure C-7**, there are two Urban Renewal Areas (URAs) with active URPs located within the secondary study area: the Williamsburg II URA and the Wallabout URA. The Williamsburg II URA encompasses the area generally bounded by Division Avenue to the south, Wythe Avenue to the west, South 8th Street to the north, and Roebling Street to the east. The URP, which was adopted in 1984 and will expire in 2024, designated residential and park uses within the URA. The Wallabout URA encompasses the full block bounded by Park Avenue to the south, North Elliott Place to the west, Flushing Avenue to the north, and North Portland Avenue to the east. The URP was adopted in 1989, permitting new low-rise, low-density housing and community facility uses within the URA, and will expire in 2029.



Special Brooklyn Navy Yard District

Figure C-6

Study Area Business Improvement Districts



Special Brooklyn Navy Yard District

Figure C-7
Active Urban Renewal Areas

Vision Zero

The City's Vision Zero initiative seeks to eliminate all deaths from traffic crashes regardless of whether on foot, bicycle, or inside a motor vehicle. In an effort to drive these fatalities down, the New York City Department of Transportation (NYCDOT) and the NYPD developed a set of five plans, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough's specific challenges to pedestrian safety. These plans pinpoint the conditions and characteristics of pedestrian fatalities and severe injuries; they also identify priority corridors, intersections and areas that disproportionately account for pedestrian fatalities and severe injuries, prioritizing them for safety interventions. The plans outline a series of recommended actions comprised of engineering, enforcement and education measures that intend to alter the physical and behavioral conditions on city streets that lead to pedestrian fatality and injury.

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

Land Use

Primary Study Area (Project Area)

In the No-Action Condition, the requested zoning map and text amendments would not be approved. As detailed in **Attachment A, "Project Description."** development within the Yard would continue to occur on an as-of-right basis in similar amounts and densities as would occur with the Proposed Actions in keeping with BNYDC's mission to create and preserve quality jobs, anchor New York City's modern industrial sector and its businesses, and connect the local community with resources and economic opportunity at the Yard. To meet this goal, it is anticipated that a combined approximately 4.6 million sf of new industrial and commercial development would occur on three sites (Projected Site 1, No-Action Site 2, and No-Action Site 3) in the 2030 No-Action Condition, as detailed below and in **Table C-4**.

Kent Avenue Site (Projected Site 1)

In the future without the Proposed Actions, three buildings would be constructed on Projected Site 1. The buildings on Projected Site 1 would fit within the existing permitted building envelopes, and would total approximately 2,511,635 gsf (not including parking), including approximately 2,036,635 gsf of industrial space, 416,083 gsf of office space, and 58,918 gsf of retail space.

Navy Street Alternate Sites (No-Action Site 2)

Absent the Proposed Actions, two buildings would be constructed on No-Action Site 2. The buildings on No-Action Site 2 would fit within the existing permitted building envelopes, and would total approximately 851,207 gsf (not including parking), including approximately 671,207 gsf of industrial space, 121,744 gsf of office space, and 58,256 gsf of retail space.

Navy Street Site (Projected Site 2)

Under the No-Action condition, no changes would occur on Projected Site 2. It would continue to be occupied by the NYPD tow pound administrative building and surface parking area, and a small structure and associated surface parking lot for DCAS, as under existing conditions.

Flushing Avenue Alternate Sites (No-Action Site 3)

In the future without the Proposed Actions, Building 120 in the southern portion of No-Action Site 3 (which is also part of Projected Site 3) would be demolished, and two buildings would be constructed on No-Action Site 3. The buildings on No-Action Site 3 would total approximately 1,249,120 gsf (not including parking), including approximately 1,021,120 gsf of industrial space, 193,300 gsf of office space, and 34,700 gsf of retail space.

Flushing Avenue Site (Projected Site 3)

As detailed above, under the No-Action condition, Building 120 in the western portion of Projected Site 3 (which is also a part of No-Action Site 3) would be demolished and redeveloped. No changes would occur on the eastern portion of Projected Site 3 which would continue to be occupied by a DOJ warehouse in BNY Building 4 in the No-Action condition, as under existing conditions.

Secondary Study Area

As detailed in **Table C-4** and illustrated in **Figure C-8**, there are 12 known and anticipated No-Action developments in the secondary study area, including seven predominately residential buildings, one commercial (retail and office) development, a 37-room hotel, and three mixed-use projects consisting of commercial, residential, and/or community facility spaces, as well as a 196-space public parking garage at 500 Kent Avenue. As detailed in **Table C-4**, these No-Action developments will result in additions and new buildings within the secondary study area ranging in height from four to 23 stories.

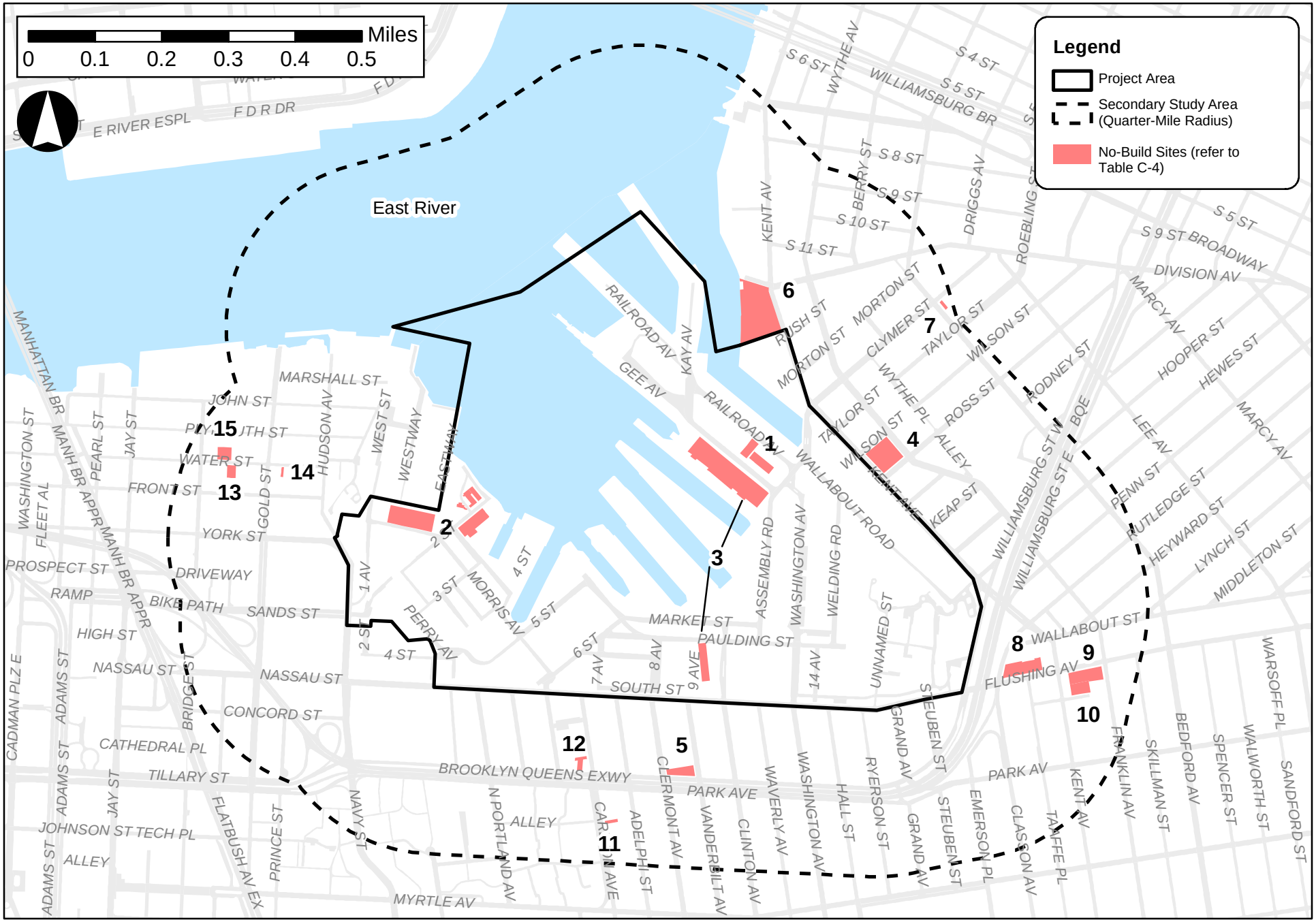
Zoning

Primary Study Area (Project Area)

In the No-Action Condition, the Project Area would not be rezoned and would remain M3-1, M1-2, and R6B without a special district designation, and the zoning controls applicable to the underlying districts would apply. In the absence of the Proposed Actions, it is possible that additional zoning actions may be sought in the Project Area in order to achieve objectives similar to those of the Proposed Actions, such as reducing parking requirements or permitting additional uses in the Project Area. However, these discretionary actions would be subject to review and approval by the City.

Secondary Study Area

There is one known rezoning proposal in the secondary study area expected prior to 2030: the proposed rezoning of Block 2023, Lot 10 at 500 Kent Avenue from M3-1 to M1-5, to facilitate the development of a 23-story commercial building (No-Action Site #6 in **Table C-4** below).



Special Brooklyn Navy Yard District

Figure C-8
Study Area No-Action Developments

Table C-4: Anticipated No-Action Developments in the Primary and Secondary Study Areas

Map No.[1]	Location	Anticipated Development
Primary Study Area (Project Area)		
1	Projected Site 1 (Kent Avenue Site)	3 mixed-use industrial/commercial buildings with 2,036,635 gsf of industrial uses & 475,000 gsf of commercial uses
2	No-Action Site 2 (Navy Street Alternate Sites)	2 mixed-use industrial/commercial buildings with 671,207 gsf of industrial uses & 180,000 gsf of commercial uses
3	No-Action Site 3 (Flushing Avenue Alternative Sites)	2 mixed-use industrial/commercial buildings with 1,021,120 gsf of industrial uses & 228,000 gsf of commercial uses
Secondary Study Area		
4	609 Kent Avenue	2-story addition to existing multi-family residential building
5	205 Park Avenue / 58 Vanderbilt Avenue	9-story mixed-use building with 90 DUs, 9,168 sf of commercial space, and 1,157 sf of community facility space
6	500 Kent Avenue	23-story commercial building with 593,435 sf of office, 20,476 sf of local retail, and 196-space public parking garage
7	493 Bedford Avenue	6-story residential building with 6 DUs
8	347 Flushing Avenue	7-story mixed-use building with 56,095 sf of retail and office space, 81,489 sf of community facility, and 316 parking spaces
9	378 Flushing Avenue	7-story residential building with 75 DUs and 84 parking spaces
10	31 Little Nassau Street	9-story mixed-use building with 86 DUs, 9,933 sf of local retail, and 32 parking spaces
11	85 Carlton Avenue	4-story residential building with 7 DUs
12	143 Park Avenue	5-story hotel with 37 rooms
13	250 Water Street	5-story residential building with 3 DUs
14	288 Water Street	5-story residential building with 9 DUs
15	DUMBO Rezoning Projected Development Site 14	31-DU residential building

Sources: BNYDC; DCP's Land Use and CEQR Application Tracking System (LUCATS); New York City Department of Buildings (DOB) Building Information System (BIS); PHA Site Visits.
Note: [1] Refer to **Figure C-8.**

Public Policy

In the future without the Proposed Actions, no changes to public policy are expected in either the Project Area or the quarter-mile secondary study area.

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

Land Use

Primary Study Area (Project Area)

In the 2030 With-Action Condition, the Proposed Actions would be approved. The Proposed Actions would not result in new development density beyond that which is permitted as-of-right. Rather, the Proposed Actions would acknowledge the unique character of the Yard and tailor the applicable zoning regulations to address certain site conditions, such as parking and waterfront public space. As such, a combined total of 4,611,962 sf of non-parking floor area would be developed in the BNY in the future with the Proposed

Actions. A somewhat different mixture of uses would be developed in the Project Area than under No-Action conditions.

As detailed in **Attachment A, "Project Description,"** with approval of the Proposed Actions, newly-permitted community facility and commercial uses up to 300,000 sf per Sub-District (including up to 100,000 sf of new commercial uses per Sub-District) would be permitted as-of-right. For RWCDS analysis purposes, it is assumed that each of the Projected Sites would include 250,000 sf of community facility space, resulting in a total of 750,000 sf of community facility floor area, replacing industrial uses that could occupy these spaces as-of-right in the 2030 No-Action Condition, as well as 50,000 sf of total local retail/destination retail/health club area.

For conservative analysis purposes, the With-Action Condition community facility uses are assumed to comprise predominantly academic uses, as well as a museum on Projected Site 2. It is expected that these uses would generate new users in the Yard, as opposed to other community facility uses that would be permitted, such as day care facilities, which would be smaller in size and largely utilized by existing office and industrial workers in the Yard, and therefore, would not generate significant numbers of new trips.

As presented in **Table C-5**, the Proposed Actions would facilitate the incremental development of 750,000 sf of community facility floor area and net reductions of 672,191 sf of industrial floor area and 77,809 sf of commercial floor area in the BNY, as compared to 2030 conditions without the Proposed Actions. As also presented in **Table C-5**, under the RWCDS, the types of commercial uses present in the Project Area would vary between the two scenarios. Specifically, it is assumed that a greater proportion of the commercial uses would comprise non-office uses in the With-Action Condition and that a health club would occupy a portion of Projected Site 3. Moreover, approximately 25,000 sf of destination retail is expected on both Projected Sites 1 and 2 in the future with the Proposed Actions. As a result, the Proposed Actions would result in a net increase of 40,000 sf of health club floor area and 50,000 sf of destination retail, as well as a net reduction of 75,937 sf of office uses and 91,874 sf of local retail (see **Table C-5**).

Table C-5: Comparison of Future No-Action and With-Action Conditions in the Project Area

Land Use	No-Action Condition New Development (gsf)	With-Action Condition New Development (gsf)	Incremental New Development (gsf)
Industrial	3,728,962	3,056,771	-672,191
Commercial	883,000	805,191	-77,809
- *Office*	*731,127*	*655,190*	*-75,937*
- *Local Retail*	*151,874*	*60,000*	*-91,874*
- *Destination Retail*	*0*	*50,000*	*+50,000*
- *Health Club*	*0*	*40,000*	*+40,000*
Community Facility	0	750,000	+750,000
- *Academic*	*0*	*650,000*	*+650,000*
- *Museum*	*0*	*100,000*	*+100,000*
Total	**4,611,962**	**4,611,962**	**0**

Note: Table does not include parking square footages.

Kent Avenue Site (Projected Site 1)

In the future with the Proposed Actions, three buildings would be constructed on Projected Site 1. Each building would contain a seven-story base, built out to the parcel line and topped with a nine- to 13-story

tower. The buildings would total approximately 2,511,635 gsf (not including parking), including approximately 1,825,011 gsf of industrial space, 436,624 gsf of commercial (office and retail) space, and 250,000 gsf of community facility (academic) space. The buildings would contain a total of 387 parking spaces. It is expected that the ground floors would be predominately occupied by retail and manufacturing space. It is anticipated that one curb cut would be provided along Kent Avenue for parking and loading access to the site. A total of approximately 118,454 gsf of open space would be provided on the site along the Barge Basin.

Navy Street Alternate Sites (No-Action Site 2)

Absent the Proposed Actions, no changes would occur on No-Action Site 2. The Navy Street Alternate Sites would continue to be occupied by five BNY buildings (Nos. 234, 269, 313, 314, and 500), comprised of a variety of commercial and industrial tenants, as under existing conditions.

Navy Street Site (Projected Site 2)

In the With-Action condition, in conjunction with the Proposed Actions, it is expected that an agreement between the BNYDC and the NYPD would be memorialized, allowing for the relocation of the NYPD tow pound on Projected Site 2 and the redevelopment of this site under the jurisdiction of the BNYDC. In the future with the Proposed Actions, two buildings would be constructed on Projected Site 2. The westernmost building would be eight-stories tall, and the northernmost building would contain a seven-story based topped with a 13-story tower. The buildings would total approximately 851,207 gsf (not including parking), including approximately 458,590 gsf of industrial space, 142,617 gsf of commercial (office and retail) space, and 250,000 gsf of community facility (academic and museum) space. The buildings would contain a total of 253 parking spaces. It is expected that the ground floors would be predominately occupied by retail and community facility space. Approximately 35,000 gsf of open space would be provided on site.

Flushing Avenue Alternate Sites (No-Action Site 3)

In the future with the Proposed Actions, Building 120 in the southern portion of No-Action Site 3 (which is also a part of Projected Site 3) would be demolished and redeveloped. No changes would occur on the northern portion of the Flushing Avenue Alternate Sites, which would continue to be occupied by BNY Building 293, as under existing conditions.

Flushing Avenue Site (Projected Site 3)

In the With-Action condition, in conjunction with the Proposed Actions, it is expected that an agreement between the BNYDC and the DOJ would be memorialized, allowing for the relocation of the DOJ warehouse, and the redevelopment of this site under the jurisdiction of the BNYDC. In the future with the Proposed Actions, two buildings would be constructed on Projected Site 3. Each building would rise 16-stories, built out to the street line. The buildings would total approximately 1,249,120 gsf (not including parking), including approximately 773,170 gsf of industrial space, 225,950 gsf of commercial (office, retail, and health club) space, and 250,000 gsf of community facility (academic) space. The buildings would contain a total of 154 parking spaces. It is expected that the ground floors would be predominately occupied by retail and manufacturing facility space. Approximately 36,350 gsf of open space would be provided on site.

Secondary Study Area

The Proposed Actions would not result in any additional development or introduce any new land uses in the surrounding quarter-mile secondary study area.

Zoning

Primary Study Area (Project Area)

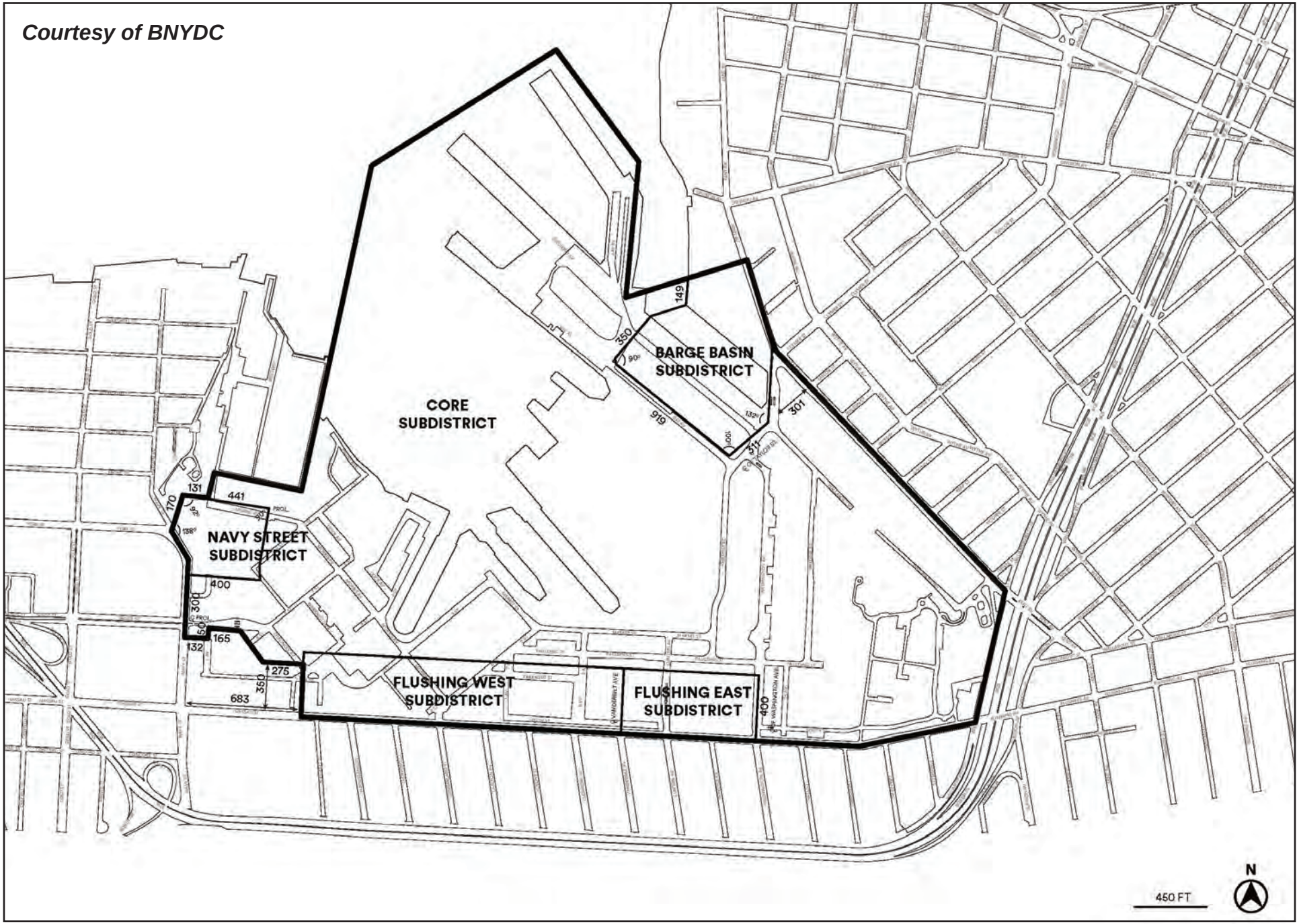
In the With-Action Condition, the requested zoning map and text amendments would be approved. A summary of the proposed zoning changes is provided below.

Zoning Text Amendments

The proposed zoning text amendments would create a new Special BNY District (as Chapter 4, of ZR Article XIV) with use, bulk, parking/loading, ground floor measures, and public space regulations tailored to facilitate the development of a modern industrial campus. The Special District would include the following key features:

1) Subdistricts. Four subdistricts would be created within the Special District: a Navy Street Subdistrict along the western perimeter of the Yard; a Flushing Subdistrict along the southern perimeter of the Yard; a Barge Basin Subdistrict located along Kent Avenue on both sides of the Barge Basin; and a Core Subdistrict comprising the remainder of the Special District (see **Figure C-9**). The Flushing Subdistrict would contain two subareas – a Flushing East Subarea, to the east of Vanderbilt Avenue where new development is expected, and a Flushing West Subarea, to the west of Vanderbilt Avenue that is more developed today and thus less likely to experience significant new construction. The Barge Basin Subdistrict would also have two subareas – a Barge Basin East Subarea and a Barge Basin West Subarea – located on opposite sides of the Barge Basin and both of which are expected to experience development in the future. The Navy Street Subdistrict would include a Navy Street Central Subarea, where development is anticipated in the future. The Navy Street Subdistrict, the Flushing Subdistrict, and the Barge Basin Subdistrict are identified as the "Perimeter Subdistricts" in the proposed Special District text. Within the public-facing Perimeter Subdistricts, a variety of commercial and community facility uses would be permitted, special bulk controls would apply in certain areas, and public space would be required in connection with new development. This land use approach would facilitate a public-facing transition zone between the BNY and the surrounding communities. Maps included as an Appendix to the Special District text would show the location of the Subdistricts and Subareas.

2) Inapplicability of Waterfront Controls. While the Yard is located on a "waterfront block" within the meaning of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area), most of the controls included in the Chapter do not apply to the BNY today due the Yard's current use "predominantly" for Use Group 16 heavy commercial, Use Group 17 and 18 manufacturing, and water-dependent uses. Moreover, application of many of the Article VI, Chapter 2 controls would not be consistent with the Master Plan or the ongoing development of the Yard as a modern industrial campus. As examples, the overall height and base height controls included in Article VI, Chapter 2 are inconsistent with the larger manufacturing buildings existing at the Yard today, and would not allow for the vertically-integrated manufacturing and creative office buildings



Special Brooklyn Navy Yard District

Figure C-9
Proposed Special District Subdistricts

envisioned by the Master Plan. Similarly, requirements for waterfront yards and waterfront public access areas throughout the Yard would interfere with the use of the shoreline for the variety of industrial and commercial tenants – including water-dependent businesses – operating in the BNY today and expected to operate in the future. Therefore, the zoning text amendment would make the requirements of Article VI, Chapter 2 inapplicable within the Special District, except as specifically set forth in the Special District text.

3) Uses. Zoning regulations for M2 manufacturing districts do not permit Use Group 3A "Colleges or universities," "Schools," "Libraries, museums or non-commercial art galleries," physical culture or health establishments, or other Use Group 3A uses. Similarly, a variety of retail uses, including certain Use Group 6C, 9A, 10A, and 12B retail establishments are not permitted. To facilitate the Proposed Development, the Special District text would modify ZR Section 42-10 (Uses Permitted as of Right) to the permit community facility uses in Use Group 3A without sleeping accommodations, and commercial uses in Use Groups 6C, 9A, 10A, and 12B not otherwise allowed in M2-1 zones in the Perimeter Subdistricts. These additional uses would be limited to a maximum floor area of 300,000 sf in each Perimeter Subdistrict with the additional commercial uses limited to no more than 100,000 sf of floor area in each Perimeter Subdistrict to ensure that the additional uses remain complementary to the industrial character of the Yard. Permitting these new uses in the Perimeter Subdistricts would enable the Proposed Development to provide more amenities and services to Yard workers and attract visitors to select areas of the campus, helping to integrate the BNY into the fabric of the surrounding community while maintaining most of the Yard as a center for industry. The zoning text would limit the overall amount of these additional uses allowed in any Subdistrict to assure that the uses would remain supportive of the overall industrial and jobs-creating mission of the BNY.

   The Special District text would also permit Use Group 3A colleges or universities and schools in the Core Subdistrict by New York City Planning Commission (CPC) authorization to facilitate synergies between academia and the industrial and maritime uses that are predominant in the BNY, provided that the CPC determines such academic use has a program compatible with a tenant or industrial operation at the Yard and does not interfere with the industrial use of the Yard. In some cases, co-locating academic facilities near maritime and industrial tenants in the Core Subdistrict would provide the best opportunity for hands-on learning and career development. While these new uses would be limited in scale, the new use regulations would facilitate the BNYDC's mandate under its lease with the City to "establish facilities to create and improve job opportunities," "provide additional employment," and "provide facilities for the training of persons in the acquisition of such skills as will prepare them to obtain employment." The CPC authorization would ensure that any future academic programs have a functional connection to a Yard tenant or Yard operations, and that any environmental concern with locating a school or university within a M3 zoning district is adequately addressed.

   The Special District would also allow for distilleries and breweries within the BNY without regard to performance standards set forth in Section 42-27 (Performance Standards Regulating Fire and Explosive Standards). The Yard houses these uses today, and today's regulatory standards allow for this use to operate in a safe manner. Finally the Special District text would allow for health clubs in the Yard as an as of right Use Group 9A use.

   The Special District text would require development on piers and platforms comply with the "WD" (Water Dependent) use provisions of ZR Section 62-24 (Uses on Piers and Platforms) while

allowing the existing uses in these areas to be considered conforming uses to allow the long standing tenants within the Yard to continue to upgrade their businesses. Application of this Section would also have the result of limiting the height of any development other than developments for water-dependent uses to a height of 30 feet.

4) Bulk.
   a. Height and Setback. Existing standard height and setback regulations do not necessarily produce building envelopes that are appropriate for the Yard's perimeter given the surrounding context. On Flushing Avenue, buildings are permitted to be located at the street line and rise without setback to a height of 60 feet or four stories, above which the height is governed by a sky exposure plane; these controls would not result in building forms that are compatible with nearby high street wall buildings that are set back from the street line. Around the Barge Basin, existing bulk controls do not easily accommodate the large, double height, flexible manufacturing spaces envisioned for the Proposed Development, nor do they promote visual access to the waterfront. To facilitate the Proposed Development, the Special District text would modify the requirements of ZR Section 43-30 (Height and Setback Regulations) in the Flushing East Subarea and replace this Section entirely in the Barge Basin Subdistrict with special height and setback controls. ZR Section 43-30 would apply in all other locations.

      In the Flushing East Subarea, development would be required to set back a minimum of 50 feet from the Flushing Avenue street line, and because of the significant setback, the Special District text would provide that the portion of Flushing Avenue adjacent to this Subarea would be considered a wide street for purposes of applying the underlying height and setback controls of ZR Section 43-20 (Height and Setback Regulations). In addition, while not strictly a height and setback control, the Flushing East Subarea controls would also establish view corridor requirements within the Subarea, one commencing at the intersection of Vanderbilt Avenue with Flushing Avenue, and a second at the intersection of Flushing Avenue with either Clinton Avenue or Waverly Avenue.

      Because of the unique configuration of the parcels in the Barge Basin Subdistrict, and the relationship of this Subdistrict to the waterfront, the Special District text would make the underlying controls of ZR Section 43-20 (Height and Setback Regulations) inapplicable in all respects, and would replace the underlying controls with a defined set of base, setback, sky exposure plane, and tower controls for portions of buildings exceeding the sky exposure plane. The Barge Basin controls would include:

      - A requirement for a setback along the Kent Avenue frontage wide enough to create a 15-foot sidewalk along the western side of Kent Avenue. Any setback area would be improved as a sidewalk to New York City Department of Transportation (DOT) standards.
      - A requirement for a setback of 40 feet adjacent to the Barge Basin in the Barge Basin East Subarea and a setback of 50 feet adjacent to the Barge Basin in the Barge Basin West Subarea.
      - A requirement that at least 70 percent of the length of the building base be located within eight feet of the Barge Basin setback lines and the Kent Avenue frontage to a height of two stories or 30 feet, whichever is lower.

- An 85-foot-tall maximum base height to allow for the extra-large double-height flexible production spaces included in the Master Plan along with loading, parking, and building support in the base.
- A building setback of 30 feet above the base height on both the Barge Basin frontages and of 15 feet on the Kent Avenue frontage of the buildings.
- A sky exposure plane of 5.6 vertical feet for every horizontal foot of run above the base height on each of the Barge Basin, Kent Avenue, and southern boundary frontages to assure light and air to the surroundings.
- A right to build "towers" that extend beyond the sky exposure plane, provided that all such tower portions occupy not more than 40 percent of the lot area of Barge Basin East Subarea or the Barge Basin West Subarea, as relevant, and that the primary frontage of any such tower portion facing the Barge Basin has a width of no more than 200 feet.

- In addition, in order to avoid an overly long unarticulated streetwall facing public access areas, the Special District text would require that the base building facades facing the Barge Basin incorporate recesses or projections within the lower two floors or lowest 30 feet of the base height, whichever is less, for at least 20 percent and not more than 50 percent of the building façade area.

b. Yards. Because of the irregular arrangement of buildings at the BNY today and the absence of immediate neighbors over much of the Special District requiring light and air, ZR Section 43-20 (Yard Regulations) would be inapplicable in the Special District, and no yard requirements would apply.

c. Floor Area. The maximum permitted floor area for all uses in the Special District would be 2.0 FAR as set forth in ZR Section 43-12 (Maximum Floor Area Ratio), subject to the further floor area ratio caps for the additional community facility and retail uses allowed by the Special District text. With regard to calculating permitted floor area, the Special District text would expressly provide that ZR Sections 62-31 (Bulk Computations on Waterfront Zoning Lots) and 62-326 (Buildings in Manufacturing Districts) would be applicable in the Special District. This would make it clear that the overall development potential of the BNY would not increase as a result of the Proposed Actions.

d. Shoreline Setback. In order to provide opportunities to address sea level rise through design and resiliency measures, the Special District text would require that buildings of less than 5,000 sf and buildings containing water-dependent uses be set back from the Yard's shoreline. Development may be located closer to the shoreline by CPC Chair certification based on a showing that either (i) the development has been designed with resiliency measures that protect the adjacent shoreline to a height of 58 inches above the current mean high water line for the Yard; or (ii) that an area-wide resiliency plan has been prepared for the Yard and that the development will incorporate measures that are part of the plan or is in an area where protective measures from the resiliency plan are in place to the above design elevation.

e. Special Permit for Bulk Modifications. In order to allow for adjustments to the Special District bulk regulations to respond to future conditions, the Special District would allow for

adjustments to applicable bulk controls, other than floor area, by special permit based on findings that the modifications further the needs and objectives of the Special District, will result in better site planning, will allow for adequate light and air to adjoining publicly accessible areas, and will not unduly increase the bulk of any building to the detriment of occupants of the building or nearby blocks.

5. Publicly Accessible Space. As noted above, the Yard is currently exempt from visual corridor requirements under ZR Section 62-51 (Applicability of Visual Corridor Requirements) and exempt from waterfront public access area requirements under paragraph (a) of ZR Section 62-52 (Applicability of Waterfront Public Access Area Requirements) because the Yard is predominantly developed with Use Group 16 through 18 and water-dependent uses. This is not expected to change in the future, nor would public access throughout the Yard be appropriate given the nature of the Yard industries and the maritime uses occupying most of the waterfront. However, creating publicly accessible space in connection with development at defined locations at the Yard, where safe and not inconsistent with the industrial and maritime operations, is part of the Master Plan. The Special District text would require that publicly accessible space be provided in connection with new development in each the Navy Street Central Subarea, Flushing East Subarea, Barge Basin East Subarea, and Barge Basin West Subarea other than small structures having floor area of no more than five percent of the lot area of a Subdistrict and accessory to existing Use Group 11, 16, 17, or 18 uses at the Yard. The amount of open space required for the Navy Street Central Subarea would be 15 percent of the lot area of the Subarea (or 35,000 sf), and the Special District text would establish minimum dimension, seating, and planting requirements for the space. For the Flushing East Subdistrict, the Special District text would require that an area with a 50-foot depth between Flushing Avenue and any development be improved as a publicly accessible plaza, with seating, plantings, and other amenities. In the Barge Basin Subdistrict, the Special District text would require that 20 percent of the lot area of the Barge Basin West Subarea and 30 percent of the Barge Basin East Subarea be improved as public access areas (66,000 sf and 52,400 sf, respectively), including a minimum 40-foot walkway along the eastern edge of the Barge Basin, a minimum 50-foot walkway along the western edge of the Barge Basin and pedestrian connections from Kent Avenue along a 30-foot walkway at the northern end of the Barge Basin East Subarea and a plaza area at the southern end of the Barge Basin East Subarea.

   To ensure that the Navy Street Central Subarea and Barge Basin Subdistrict public access areas are built in proportion to development within the Subdistricts, the Special District text would allow for the phased construction of the public access areas in these locations. The phasing plan would require that the public access areas be built out in a proportionate manner to the amount of development being built, and that the required public space would be accessible from a public street or other publicly accessible open area, or for the Barge Basin West Subarea, the private street at the southern end of the Barge Basin.

   Because the BNY is owned by the City, the design of the publicly accessible spaces (as well as all new structures developed in the Project Area) areas will be subject to review and approval by the New York City Public Design Commission. Plans for the public access areas would also be filed with the New York City Department of City Planning (DCP), demonstrating compliance with the zoning text requirements through a CPC Chair certification. The Special District text would require the owners of these publicly accessible spaces to provide for their maintenance and operation, including but not limited to repairs, litter control, and the care and replacement of vegetation. All publicly accessible areas would be open to the public from 6:00 AM to 10:00 PM from April 15th

to October 31st, and from 7:00 AM to 8:00 PM from November 1st to April 14th, except when required to be closed for repairs. These areas would also have signage at entry points to indicate that the spaces are open to the public.

6. Ground Floor Use, Transparency, and Screening. In order to create an attractive and engaging façade condition in areas where the Proposed Development is adjacent to public access areas required by the Special District text, the text would require that 50 percent of the ground floor frontages adjacent to the public access areas be occupied by floor area.

   Transparency requirements would also apply in these areas based on the surface area subject to the wrapping requirements, with transparency required at a rate of 50 percent of surface area where commercial use other than Use Group 11 or 16 is located in the required ground floor area, and at a rate of 25 percent of surface area where Use Group 11, 16, 17 or 18 is located behind the required ground floor area. The provisions of ZR Section 37-361 (Blank wall thresholds) for Type I blank walls would apply to the remaining portions of these ground floor facades and would extend for 50 feet along the adjoining facades.

7. Parking and Loading. Existing parking regulations impose very high parking requirements that are inconsistent with actual parking demand, the goals of the Transportation Plan, and the City's policy goals of promoting public-transit-oriented development and reducing reliance on automobiles. Additionally, only approximately 80 percent of the Yard's parking spaces are utilized today. Existing loading regulations also require more, and larger, loading berths than are needed. These regulations impose unnecessary costs on development.

   To ensure that excessive parking and loading are avoided in connection with the Proposed Development, the Special District text would make Article IV, Chapter 4 (Accessory Off-Street Parking and Loading Regulations) inapplicable to the Special District except where specifically set forth in the Special District. With regard to required parking, the Special Permit text would make ZR Section 44-21 (General Provisions) applicable, but would eliminate the requirement if a traffic demand management plan (the "TDM Plan") documenting modes of travel to the Yard, identifying and evaluating strategies to reduce reliance on automobiles, and encouraging the use of sustainable, alternative methods of transportation is maintained. The TDM Plan would establish a program of alternative transportation measures and would include ongoing survey and reporting criteria to assess the effectiveness of the plan. The TDM Plan is expected to evolve over time to respond to changes in travel patterns and to incorporate additional modes of transportation and technologies, with the goal of making additional parking at the Yard unnecessary. Surveys and other means will be employed to collect data related to travel modes, parking utilization, parking counts, and bicycle counts at the Yard annually and reported on not less than every three years and made available on a public website. The owner or ground tenant of the Yard would submit an affidavit every three years confirming the ongoing existence of the TDM Plan, or if the TDM Plan no longer exists, the date of its termination. Accessory parking would be permitted under the Special District text.

   The Special District text would eliminate today's excessive loading berth requirements, allowing the Yard to tailor its loading facility to align with actual needs of its tenants. To limit the impact of loading operations on the surrounding neighborhoods, the Special District text would limit the number of curb cuts accessing loading berths directly from the surrounding streets to no more than one in the Navy Street Central Subarea, in the Flushing East Subarea, and in the Barge Basin

East Subarea. Additional curb cuts would be allowed in the Barge Basin East Subarea by CPC Chair certification, confirming that DOT has approved the additional curb cut. The proposed controls would significantly reduce the number of curb cuts for loading from that allowed under current zoning, while permitting fully functional manufacturing buildings.

The Special District text would require that bicycle parking be provided in the amounts required by ZR Section 44-60 (Bicycle Parking). However, in order to accommodate a variety of bike parking options and maximize use of spaces across the Project Area, the text would allow for 50 percent of the spaces to be open. This adjustment is generally consistent with the bike parking controls applicable to academic campuses and would be in keeping with the way cyclists to the Yard park their bikes today.

8. Ancillary Provisions. The zoning text amendment would also amend:

   a. ZR Section 11-122 (Districts established) to acknowledge the establishment of the Special Brooklyn Navy Yard District;

   b. ZR Section 12-10 (Definitions) to include the Special Brooklyn Navy Yard District as a defined term;

   c. ZR Section 14-44 (Special Zoning Districts Where Certain Sidewalk Cafes Are Permitted) to include the Special District in the list of special districts in order to continue to allow enclosed and unenclosed sidewalk cafes in the same manner as they are today; and

   d. ZR Section 62-13 (Applicability of District Regulations) to include the Special District in the list of special districts where the provisions of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area) do not apply, except as expressly set forth in the Special District text.

Zoning Map Amendments

In addition to mapping the proposed Special BNY District, the Proposed Actions would rezone a portion of the Yard that is currently zoned R6B, M1-2, and M3-1 to M2-1 zoning.[13] The rezoning of the R6B district to an M2-1 (BNY) district would correct the zoning district boundaries established by the 1998 Vinegar Hill Rezoning to ensure that manufacturing and commercial uses are permitted in this portion of the Yard, consistent with City policy for the BNY and the mission of the BNYDC. The rezoning of portions of the Yard's perimeter M1-2 and M3-1 districts to M2-1 would establish a consistent zoning district designation for areas of the Yard expected to experience significant development in the next decade with somewhat higher performance standards than the M3 zoning and providing a transition zone between the Yard's core and the surrounding neighborhoods. The M2-1 zoning, together with the proposed Special District text, would also allow for the targeted introduction of community facility and additional commercial uses compatible with the goals of the Master Plan and the overarching role of the BNY as a modern manufacturing campus. Permitting these uses within the more public-facing Perimeter Subdistricts portion of the BNY would also attract and serve residents and workers in the surrounding communities.

[13] The Special District would exclude the portion of the BNY known as Admirals Row (Block 2023, Lot 50) because Admirals Row was recently developed as a discrete large-scale general development pursuant to multiple discretionary actions. Admirals Row has a unique character compared to the remainder of the Yard, with more than half of Admirals Row's floor area designated for retail use, and anchored around a destination supermarket, and therefore is not included within the Special District boundaries.

Secondary Study Area

The Proposed Actions would not result in any changes to zoning in the Secondary Study Area. The consistency of the Proposed Actions with zoning in the Secondary Study Area is discussed in the "Assessment" section, below.

Public Policy

No changes to public policies pertaining to the primary or secondary study areas are proposed as part of the Proposed Actions. The consistency of the Proposed Actions on the applicable Project Area and secondary study area public policies are discussed below.

VI. CONCLUSIONS

Land Use & Zoning

The Proposed Actions would not result in any significant adverse impacts to land use or zoning. In the With-Action Condition, approximately 4.6 million sf of primarily commercial and industrial floor area would continue to be developed at the Yard; however, a broader mix of uses would occur. In particular, 750,000 sf of community facility floor area (including 650,000 sf of academic uses and a 100,000-sf museum), an additional 50,000 sf of destination retail, and a 40,000-sf health club would be introduced in the Project Area, in addition to a net reduction of 652,191 sf of industrial floor area, 75,937 sf of office uses, and 91,874 sf of local retail uses as compared to the No-Action Condition.

The proposed Special BNY District is intended to strengthen the BNY's status as a modern industrial campus. The Proposed Actions would introduce a limited set of new uses that are complementary to the BNY's predominantly industrial uses. For example, new health club uses, as well as halls for catering and events, would serve as an amenity for BNY employees and local residents. Academic and museum institutions would provide valuable learning opportunities and exposure to manufacturing sectors. Additional retail uses, including showroom space, would provide a market for Yard manufacturers to sell their products. These changes would maintain the appeal of the BNY as a place to work. While the Proposed Actions would result in a net reduction of 672,191 sf of industrial floor area under the With-Action Condition, over three million sf of industrial uses would be developed on the three Projected Sites in the With-Action Condition, and the proposed limitations on the floor area that could be devoted to commercial and community facility uses would ensure that the predominately industrial character of the Yard would remain.

Other aspects of the proposed Special BNY District would simply tailor zoning regulations to address the Yard's unique character. Because of the irregular arrangement of building existing in the Yard and the absence of immediate neighbors over much of the proposed Special District, Yard regulations would be inapplicable to the area. Moreover, parking and loading controls would be changes in the Project Area in order to limit unnecessary parking and promote alternate modes of transportation. The Proposed Actions would also introduce much-needed publicly accessible open space along the frontages of new developments along the Project Area's perimeter. This includes open space along Navy Street and in the Navy Street Central Subarea, open space along Flushing Avenue in the Flushing Subdistrict, and waterfront

open space on either side of the Barge Basin and pedestrian connections from Kent Avenue at the northern end and the southern end of the Barge Basin East Subarea.

The Proposed Actions would not change the FAR of the BNY or result in any new development density compared to the No-Action Condition. The bulk regulations that are proposed would clarify the Yard and sky exposure plane controls applicable to an unusually large single zoning lot. For example, it would be impractical to require an open area to be maintained along an entire frontage of the Yard in order to apply the alternate sky exposure plane ratio. The proposed elimination of the applicability of waterfront zoning regulations would allow greater flexibility in the phasing of the Yard's future development and acknowledge the unique character of the Yard. The proposed Special BNY District's public space requirements would ensure that new publicly-accessible open space would be provided in connection with development on all three Projected Sites, including adjacent to the Barge Basin inlet, further integrating the Yard into the surrounding community and providing for public space that would showcase the industrial character of the Yard. Lastly, while the Proposed Actions would rezone a small portion of the Yard from R6B, M1-2, and M3-1 to M2-1, the proposed change would affect approximately 0.3 percent of the Project Area, would not change the maximum permitted FAR of the Yard, and would not allow for new uses in the Yard that do not exist today.

Overall, the Proposed Actions can be expected to strengthen the BNY as a leader in modern manufacturing, while integrating the Yard into the fabric of the surrounding communities and enhancing the Yard's dynamic campus through innovative urban design. The proposed land uses would complement existing uses in the Project Area and would be consistent with the present and emerging mix of land uses throughout the secondary study area. Thus, the Proposed Actions would not result in a significant adverse impact on land use or zoning in the primary or secondary study areas, in accordance with *CEQR Technical Manual* methodology.

Public Policy

Brooklyn Navy Yard IBZ

The Proposed Actions are compatible with the goals of the IBZ policies to support and retain industrial and manufacturing businesses, and the Proposed Actions would not generate any residential components. The Proposed Actions would result in a net reduction in industrial floor area in the Yard compared to the No-Action Condition. However, the Proposed Actions would introduce new complementary uses that would strengthen the BNY as a modern industrial campus that appeals to prospective tenants; provide opportunities for students and local residents to learn about manufacturing and connect to job opportunities; and create markets for goods produced at the Yard. These features are consistent with the IBZ's goal of creating business districts.

Waterfront Revitalization Program (WRP)

As noted above, the Proposed Actions must be assessed for their consistency with the policies of the WRP, as they affect zoning regulations in the Project Area. As mentioned above, the WRP incorporates waterfront policies in a manner consistent with the goals set forth in *Vision 2020: The New York City Comprehensive Waterfront Plan* (per the 2020 *CEQR Technical Manual*). The WRP includes policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. The WRP Consistency

Assessment Form (CAF), which is provided in **Appendix 2**, lists the WRP policies and indicates whether the Proposed Actions would promote or hinder each policy, or if that policy would be acceptable. This section provides additional information for the policies that have been checked "promote" or "hinder" in the WRP CAF.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

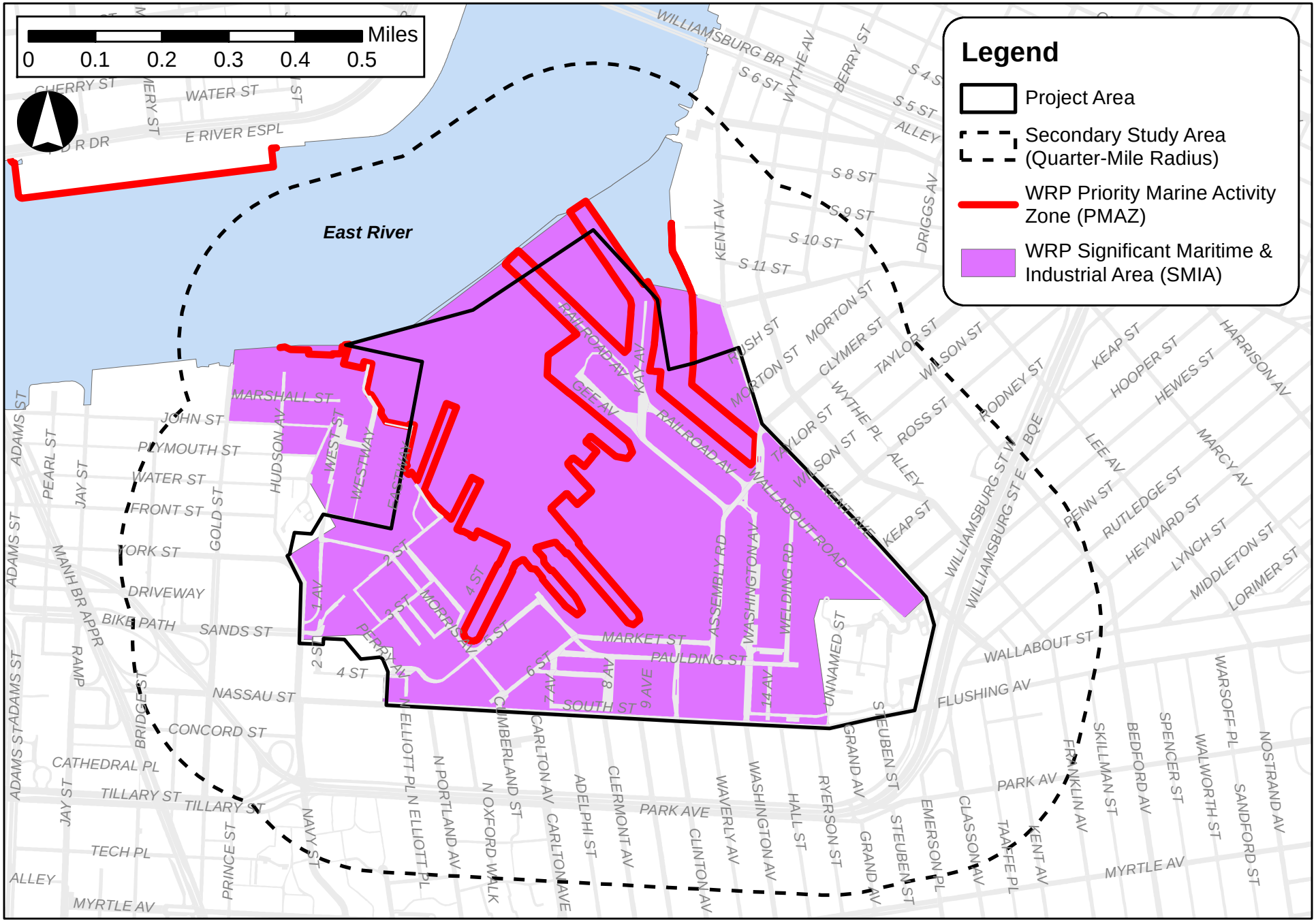
Policy 2.1: Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

As detailed above, the Proposed Actions include changes to waterfront controls. While the BNY is located on a "waterfront block" within the meaning of ZR Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area), most of the controls included in the chapter do not apply to the BNY today due to the Yard's current use "predominately" for Use Group 16 heavy commercial, Use Group 17 and 18 manufacturing, and water-dependent uses. Moreover, association of many of the Article VI, Chapter 2 controls would not be consistent with the Master Plan or on the ongoing development of the Yard as a modern industrial campus. The zoning text amendment would make the requirements of Article VI, Chapter 2 inapplicable within the Special District, except as specifically set forth in the Special District text.

As shown in **Figure C-10**, a substantial portion of the Project Area is located in the BNY Significant Maritime and Industrial Area (SMIA). The BNY is one of seven SMIAs in the City, which were designated to protect and encourage concentrated working waterfront uses. Within these areas, the goals of the WRP are to support maritime and industrial activity.

As explained above, the Proposed Actions would continue to allow for commercial and industrial uses and would introduce a limited set of new uses that are complementary to an industrial site, thereby enhancing the BNY as a modern industrial campus. The Projected Sites are located in public-facing areas of the Yard and would not interfere with any nearby working waterfront areas, and would therefore be compatible with the surrounding working waterfront areas. As detailed above, the Special District text would require that development on piers and platforms comply with the water-dependent use provisions of ZR Section 62-24 while allowing the existing uses in these areas to be considered conforming uses to allow the long-standing tenants within the Yard to continue to upgrade their businesses. Application of this Section would also have the result of limiting the height of any development other than developments for water-dependent uses to a height of 30 feet. Further, introducing institutional uses would maximize opportunities for students to find industrial employment and match their learning venues with places of potential employment. New health club and additional retail uses would support the continued success of existing Yard businesses, including retail showroom spaces for BNY industrial tenants.

Moreover, as detailed in the Policy 2.5 discussion below and illustrated in **Figure C-10**, the waterfront of the BNY is a Priority Marine Activity Zone (PMAZ). Per Policy 3.5, within the PMAZ, in-kind, in-place replacement and repair of bulkheads, docks, piers, wharves, and other maritime infrastructure should be considered consistent; actions which would preclude the subsequent use or future adaptation of the shoreline for vessel docking, berthing, or tie-up should be discouraged; and priority should be given towards shoreline design, erosion prevention, and flood control measures that allow for water-dependent uses. BNYDC would continue to replace and repair, in-kind and in-place, bulkheads, docks, piers, wharves and other maritime infrastructure in the BNY PMAZ irrespective of the Proposed Actions. The only Projected Site on the BNY waterfront within the PMAZ is the Kent Avenue Site (Projected Site 1), which would be redeveloped in both the No-Action and With-Action conditions. The redevelopment will not



Special Brooklyn Navy Yard District

Figure C-10
WRP SMIA & PMAZ Boundaries

preclude opportunities for water-dependent uses at the Site and will not preclude future adaptation for erosion prevention or flood control measures. The remainder of the BNY waterfront PMAZ would continue to be used as a working waterfront, and the Proposed Actions would not preclude the continued use or future adaptation of this shoreline for vessel docking, berthing, tie-ups, and other water-dependent uses.

Therefore, the Proposed Actions would promote industrial uses in the Project Area, consistent with this policy.

> *Policy 2.5: Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.*

Refer to the Policy 6.2 discussion below. As detailed therein, the Proposed Actions would support WRP Policy 2.5

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.

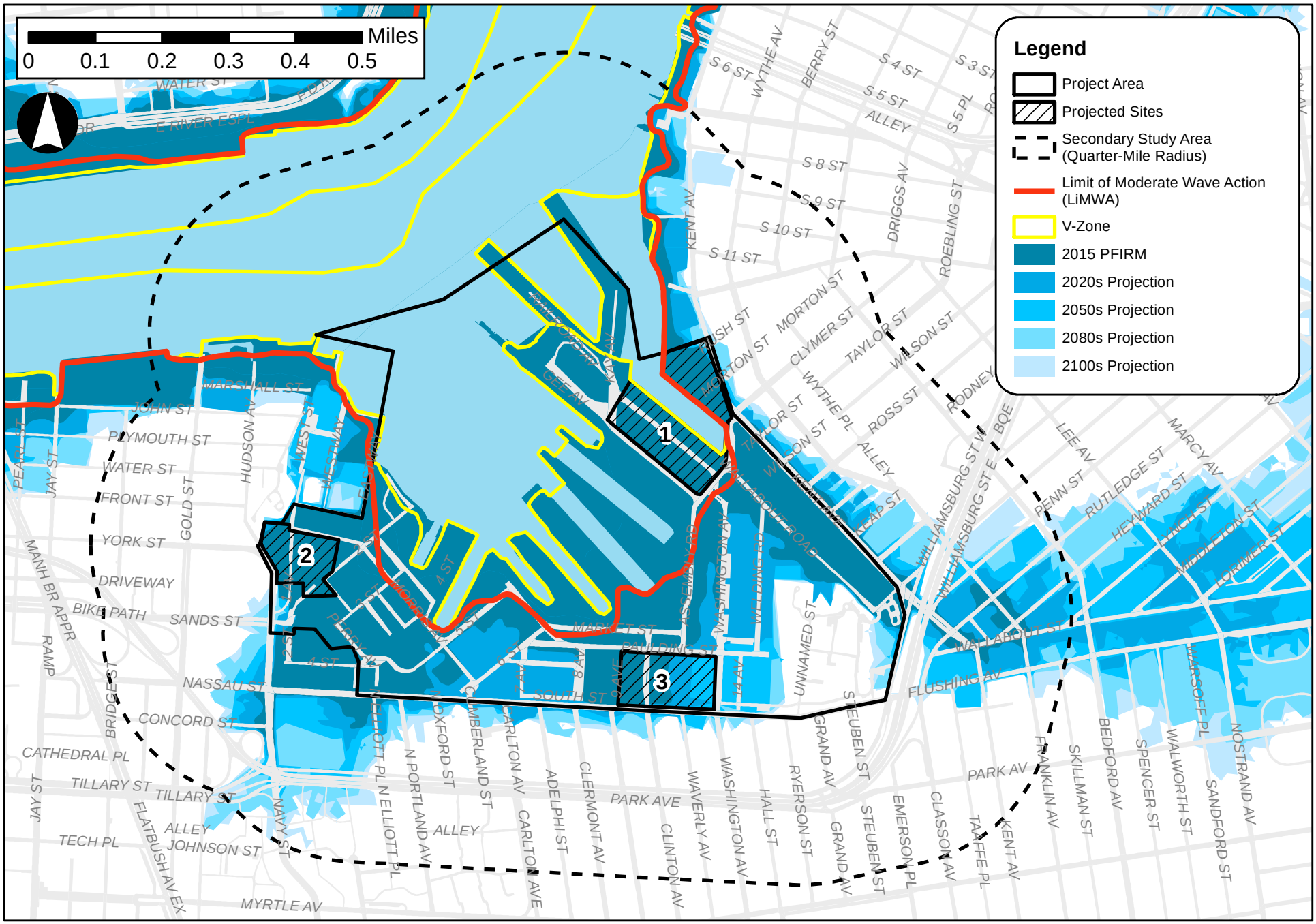
> *Policy 3.5: In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.*

As shown in **Figure C-10**, the waterfront of the BNY is a Priority Marine Activity Zone (PMAZ). As detailed in the discussion regarding Policy 2.1 above, the Proposed Actions would support Policy 3.5.

Policy 6: Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.

> *Policy 6.1: Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.*

Development in the Project Area would comply with flood-resistant construction requirements to minimize losses from flooding. As shown in **Figure C-11**, the majority of the Project Area is located in the existing 100-year floodplain as defined by the Federal Emergency Management Agency (FEMA) Revised Preliminary Flood Insurance Rate Maps (PFIRMs). Projected Sites 1 and 2 are almost entirely located within the current 100-year floodplain, while only the western half of Projected Site 3 is within the current 100-year floodplain. In addition, Projected Site 1 is partially within the Limit of Moderate Wave Action (LiMWA) as illustrated in **Figure C-11**. The majority of the Project Area adjacent to the waterfront is located within the AE zone (Area of Moderate Wave Action), which is defined by FEMA as an area that has at least a one percent annual chance of being flooded, but where wave heights are less than three feet. Flood-resistant construction, including freeboard, would be required for all development on these sites under both the No-Action and With-Action Conditions. Specifically, pursuant to Appendix G of the Building Code, all actively used floors located below the currently applicable 100-year floodplain elevations would need to be dry-floodproofed, and one foot of freeboard above the currently applicable 100-year floodplain elevations would be required, thereby allowing an additional margin of safety against more severe storms and substantially reducing flood risks. The Proposed Actions would not prevent development on these sites from meeting these Building Code requirements.



Special Brooklyn Navy Yard District

Figure C-11
NPCC 100-Year Floodplain Projections

Policy 6.2: *Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in the* New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms*) into the planning and design of projects in the City's Coastal Zone.*

As outlined in *The New York City Waterfront Revitalization Program Climate Change Adaptation Guidance* document, for programmatic, non-site-specific actions (such as area-wide zoning text amendments), the general methodology approach should be utilized to assess a project or action's consistency with Policy 6.2 of the WRP. The general methodology consists of the following steps:

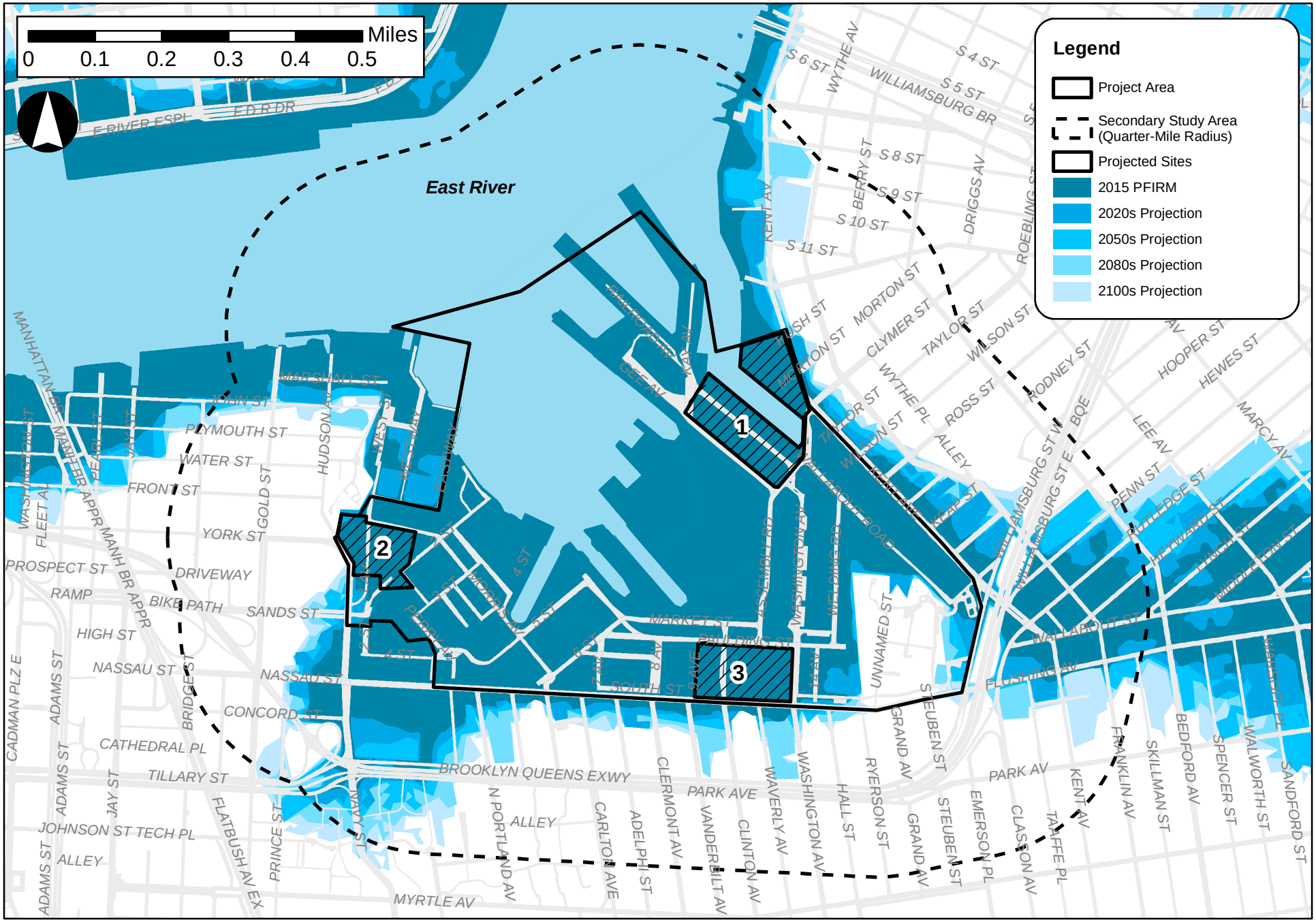
1. *Identify vulnerabilities and consequences.* The goal of this first step is to assess the project's vulnerabilities to future coastal hazards and what potential consequences may be.
    a. *Assess the project area's exposure to current and future flood risk.*
    b. *Identify if the project or action would facilitate the development of any vulnerable, critical, or potentially hazardous features within areas exposed to flooding from Mean Higher High Water or 1 percent Annual Chance Flood by the 2050s under the 90th percentile of sea level rise projections.*
2. *Identify adaptive strategies.* The goal of Step 2 is to assess how the vulnerabilities and consequences identified in Step 1 are addressed through the project's design and planning. Step 2 assesses how applicable codes and regulations, planned flood damage reduction elements and adaptive measures, or likely future infrastructure investments (beyond the scope of the proposed project) would or would not reduce potential flood damage for any proposed vulnerable, critical, or potentially hazardous feature.
3. *Assess policy consistency.* The final step is to assess whether the project is consistent with Policy 6.2 of the WRP.

An assessment of the Proposed Actions' consistency with Policy 6.2, pursuant to the general methodology outlined above, is provided below.

Identify Vulnerably and Consequences

If a Project Area or affected geography is outside the 2050s 1% annual chance floodplain, no further analysis is needed. As noted in response to Policy 6.1, above, portions of all of the Projected Sites fall within the current one percent annual chance floodplain and, therefore, are considered susceptible to rising sea levels resulting from climate change. As shown in **Figure C-11**, based on future 100-year flood zone projections, all of Projected Site 1 is expected to be within the 100-year floodplain by the 2080s, all of Projected Site 2 is expected to be within the 100-year floodplain by the 2020s, and all of Projected Site 3 is expected to be within the 100-year floodplain by the 2050s. **Figure C-12** shows future 500-year flood zone projections in the Project Area. **Figure C-13** illustrates the future high-end sea level rise projections for the 2020s, 2050s, and 2080s based on the NPCC's projections.

The Projected Sites are located in an "AE" One Percent Annual Chance Flood Zone; Projected Site 1 has base flood elevations (BFEs) of +11 and +12 feet North American Vertical Datum (NAVD), while Projected Sites 2 and 3 have BFEs of +11 feet NAVD. Based on a review of the NYC Flood Hazard Mapper application, Projected Site 1's BFE is up to eight feet above ground elevation, while the BFE for Projected Sites 2 and 3 is up to four feet above ground elevation. FEMA identifies the Coastal A Zone as a sub-zone of the A-Zone where wave heights are expected to be between 1.5 and three feet high. The zone is indicated by

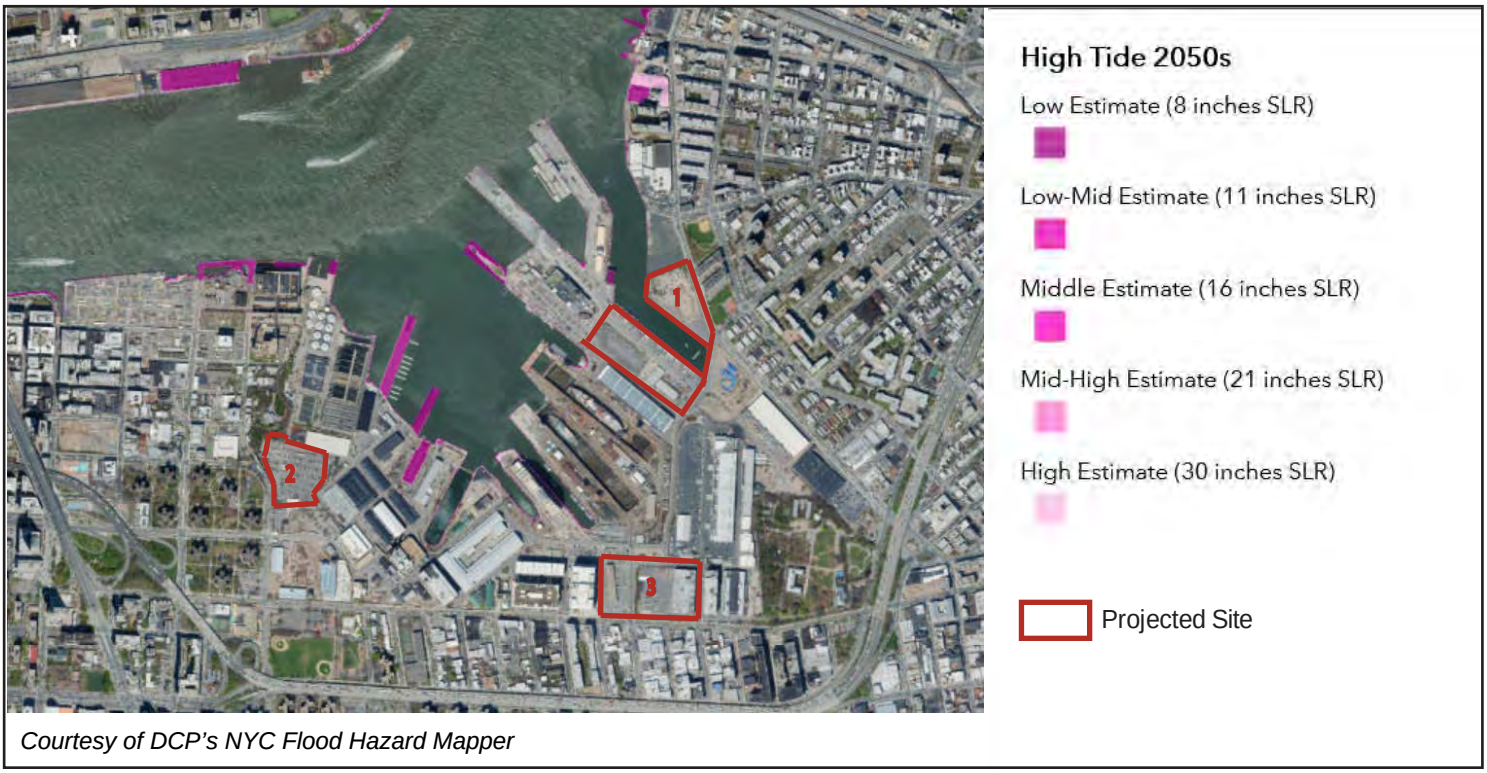


Special Brooklyn Navy Yard District

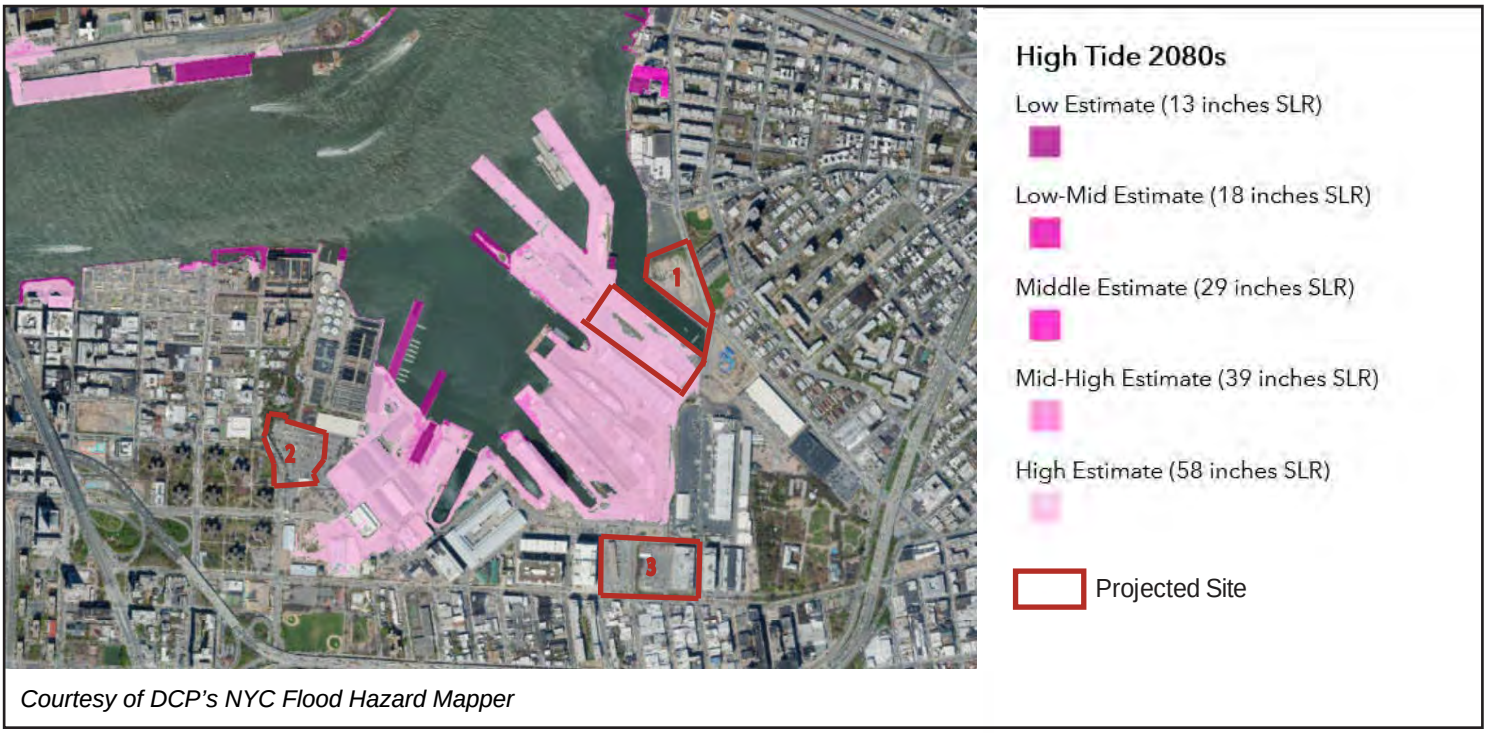
Figure C-12

NPCC 500-Year Floodplain Projections

NPCC Sea Level Rise Projections



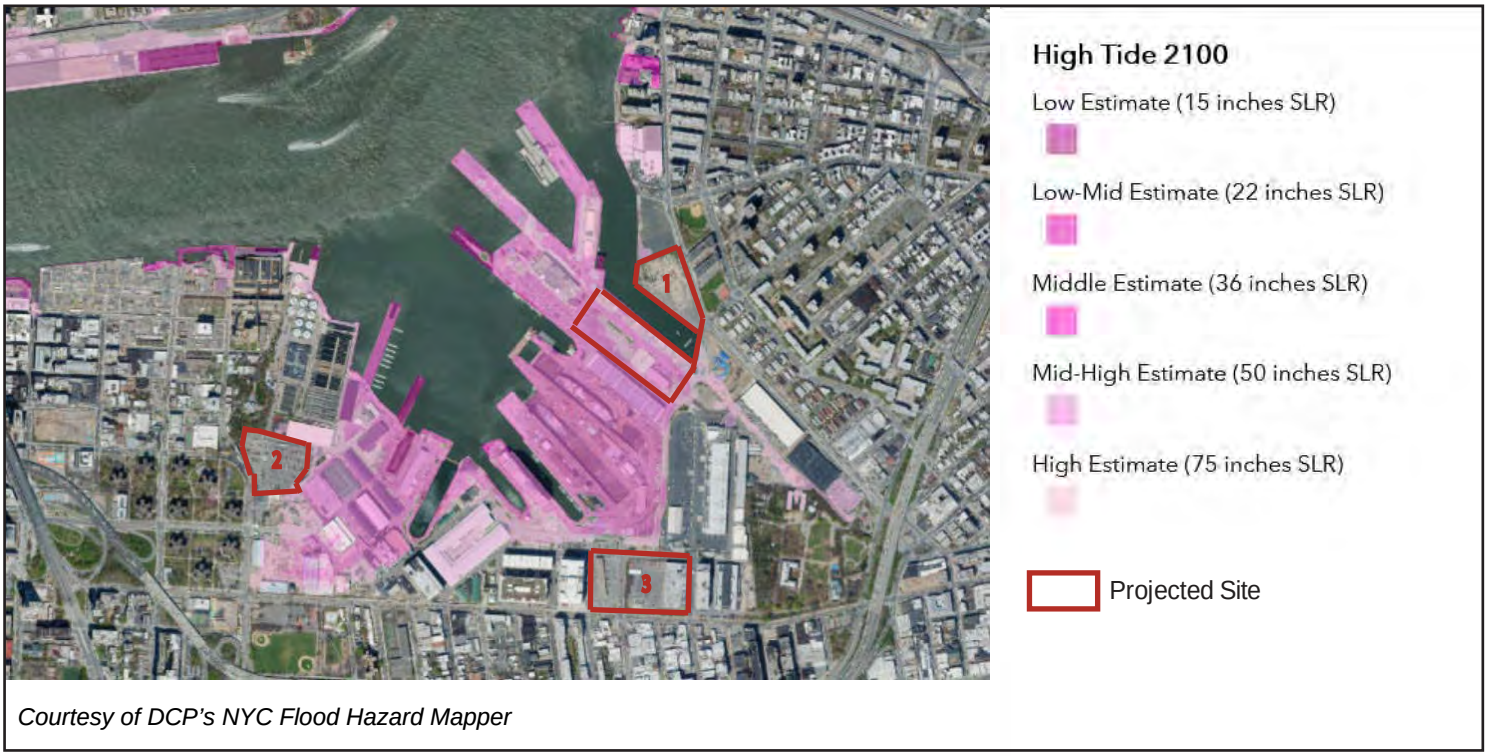
Courtesy of DCP's NYC Flood Hazard Mapper



Courtesy of DCP's NYC Flood Hazard Mapper

Figure C-13

NPCC Sea Level Rise Projections



Courtesy of DCP's NYC Flood Hazard Mapper

the LiMWA line on the latest FEMA FIRMs, which is illustrated in **Figure C-11**. As construction in Coastal A Zones in New York City may be subject to additional Building Code Appendix G requirements, any No-Action or With-Action development in the Yard's Coastal A Zone would be required to incorporate these additional measures irrespective of the Proposed Actions.

Of the three Projected Sites, one site (Projected Site 1) is located on the shoreline. Based on (1) the current ground elevations of site; (2) the current mean higher high water (MHHW) elevation at the Williamsburg Bridge station (+2.14 NAVD); and (3) the sea level rise projected for the 2050s (up to +2.68 and +4.51 NAVD under the low (tenth percentile) and high (90th percentile) estimates, respectively, portions of Projected Site 1 are expected to be flooded by the 2050s MHHW.

As detailed above, Projected Site 1 is anticipated to be developed with industrial, commercial, and community facility uses. Portions of Projected Site 1 are anticipated to be exposed to MHHW by the 2050s under the 90th percentile estimates. Therefore, industrial, commercial, and community facility uses, in addition to associated critical features (e.g., utilities and building support technologies), would be exposed to flood hazards.

Identify Adaptive Strategies

As discussed under Policy 6.1, above, development in the Project Area would comply with flood-resistant construction requirements to minimize losses from flooding. Construction on the three Projected Sites is expected to occur over a more than ten-year period, so each building would be required to meet the standards of the New York City Building Code and Best Available Flood Hazard Data available from FEMA at the time of each site's construction, incorporating consideration of climate change and sea level rise into the planning and design of the waterfront development and infrastructure facilitated by the Proposed Actions. In addition, the buildings would be designed with parking and loading on the lower floors to reduce flood risks to uses that are more sensitive, such as workplace areas and critical mechanical, electrical and plumbing (MEP) systems.

In addition to the three Projected Sites, a 30-foot setback from the shoreline will be required for any new non-water dependent (WD) buildings or structures along the Project Area's waterfront (within the Core Subdistrict). The setback will ensure new buildings do not preclude the future shoreline strategies that may be needed to address the long-term tidal flood risks threatening the entirety of the Project Area.

Assess Policy Consistency

As detailed above, the Proposed Actions would not preclude the incorporation of adaptive strategies for future climate change and seal level rise in the Project Area. Rather, all new vulnerable features of development in the future with the Proposed Actions would be protected through flood-damage reduction elements, such as flood-resistant construction, and could incorporate future adaptive measures as construction technologies evolve, and the Proposed Actions would include the development of permanent, passive flood protection along the shoreline immediately adjacent to the Kent Avenue Site (Projected Site 1) to address severe flood risks to the Proposed Development and other areas of the Yard. Therefore, the Proposed Actions would advance Policy 6.2.

Policy 8: Provide public access to, from, and along New York City's coastal waters.

Policy 8.1: Preserve, protect, maintain, and enhance physical, visual, and recreational access to the waterfront.

The Proposed Actions would enhance physical and visual access to the waterfront by requiring that publicly accessible space be provided in connection with new development in each the Navy Street Central Subarea, Flushing East Subarea, Barge Basin East Subarea, and Barge Basin West Subarea. The amount of open space required for the Navy Street Central Subarea would be 15 percent of the lot area of the Subarea (or 35,000 sf), and the Special District text would establish minimum dimension, seating, and planting requirements for the space. For the Flushing East Subdistrict, the Special District text would require that an area with a 50-foot depth between Flushing Avenue and any development be improved as a publicly accessible plaza, with seating, plantings, and other amenities.

In the Barge Basin Subdistrict, the Special District text would require that 20 percent of the lot area of the Barge Basin West Subarea and 30 percent of the Barge Basin East Subarea be improved as public access areas (66,000 sf and 52,400 sf, respectively), including a minimum 40-foot walkway along the eastern edge of the Barge Basin, a minimum 50-foot walkway along the western edge of the Barge Basin and pedestrian connections from Kent Avenue along a 30-foot walkway at the northern end of the Barge Basin East Subarea and a plaza area at the southern end of the Barge Basin East Subarea.

To ensure that the Navy Street Central Subarea and Barge Basin Subdistrict public access areas are built in proportion to development within the Subdistricts, the Special District text would allow for the phased construction of the public access areas in these locations. The phasing plan would require that the public access areas be built out in a proportionate manner to the amount of development being built, and that the required public space would be accessible from a public street or other publicly accessible open area, or for the Barge Basin West Subarea, the private street at the southern end of the Barge Basin.

Because the BNY is owned by the City, the design of the publicly accessible spaces (as well as all new structures developed in the Project Area) will be subject to review and approval by the New York City Public Design Commission. Plans for the public access areas would also be filed with DCP, demonstrating compliance with the zoning text requirements through a CPC Chair certification. The Special District text would require the owners of these publicly accessible spaces to provide for their maintenance and operation, including but not limited to repairs, litter control, and the care and replacement of vegetation. All publicly accessible areas would be open to the public from 6:00 AM to 10:00 PM from April 15th to October 31st, and from 7:00 AM to 8:00 PM from November 1st to April 14th, except when required to be closed for repairs. These areas would also have signage at entry points to indicate that the spaces are open to the public. Therefore, the Proposed Actions would promote WRP Policy 8.1.

Policy 8.2: Incorporate public access into new public and private development where compatible with proposed land use and coastal location.

See response to Policy 8.1, above. The Proposed Actions would incorporate public access to the waterfront while allowing the development and operation of industrial uses without posing safety risks.

As detailed in the WRP, all development on the shoreline, including industrial development, that received public financial assistance or is on publicly owned land should, to the extent practicable, provide some form of public access, unless (a) public access would be inconsistent with the functional and operational

needs of the proposed facility and would create risk to public safety and/or security, or (b) public areas would not be safely accessible from upland areas and other public access areas. When public access cannot be included as a component of a public project, site and design of the project should be in a manner that does not preclude the future development of public access. Additionally, the development of public access within private development in industrially zoned areas should be encouraged where there is no identified risk to the public health and safety or to industrial operations. In areas where industrial land limits upland communities' access to the water, limited public access points and street-end parks located within or adjacent to the seaward termination of public streets may be compatible with the nearby industrial uses. Where waterfront public access would endanger public health or safety, alternative strategies to provide public access should be encouraged, including access points or public overlooks that visually connect people to maritime activity.

As detailed above, existing zoning regulations do not require publicly accessible space at Yard as it is predominantly developed with Use Group 16 through 18 and water-dependent uses. This is not expected to change in the future, nor would public access throughout the Yard be appropriate given the nature of the Yard industries and the maritime uses occupying most of the waterfront. However, creating publicly accessible space in connection with development at defined locations at the Yard, where safe and not inconsistent with the industrial and maritime operations, is part of the Master Plan. The Special District text would require that publicly accessible space be provided in connection with new development in each the Navy Street Central Subarea, Flushing East Subarea, Barge Basin East Subarea, and Barge Basin West Subarea. The Special District text would establish minimum dimension, seating, planting, lighting, and/or amenity requirements for the spaces, along with upland pedestrian connections to the Barge Basin Subdistrict.

Moreover, because the BNY is owned by the City, the design of the publicly accessible spaces (as well as all new structures developed in the Project Area) will be subject to review and approval by the New York City Public Design Commission. Plans for the public access areas would also be filed with DCP, demonstrating compliance with the zoning text requirements through a CPC Chair certification. The Special District text would require the owners of these publicly accessible spaces to provide for their maintenance and operation, including but not limited to repairs, litter control, and the care and replacement of vegetation. Therefore, the Proposed Actions would promote WRP Policy 8.1.

Policy 8.3: Provide visual access to the waterfront where physically practical.

Under existing conditions, visual access to the waterfront is not feasible in much of the Project Area because it is obstructed by a perimeter fence that is necessary to maintain campus security. The Proposed Actions would modify enclosure requirements applicable in manufacturing districts, which would create more opportunities for rooftop space that could provide visual access to the waterfront. Additionally, as stated in Policy 8.1, above, the Proposed Actions would incorporate public access to the waterfront, and the Flushing East Subarea controls would establish visual corridor requirements within the Subarea, one commencing at the intersection of Vanderbilt Avenue with Flushing Avenue, and a second at the intersection of Flushing Avenue with either Clinton Avenue or Waverly Avenue.

Policy 8.4: Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.

The Project Area is owned by the City of New York. The Proposed Actions would replace existing waterfront regulations, which do not require any public access areas in the Project Area, because the BNY

is a manufacturing district and at least 75 percent of the uses in the zoning lot are industrial and manufacturing uses. Instead, new zoning regulations would require waterfront public space in connection with new development adjacent to the Barge Basin, where the balance between industrial activity and public space can be achieved. Refer to Policy 8.1 above for further discussion.

Policy 8.6: Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.

See response to Policies 8.1, above. The Proposed Actions would facilitate the development of inviting public open spaces in the BNY that would not occur in the absence of the Proposed Actions.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

Policy 9.1: Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

As detailed above, the Proposed Actions would improve the visual quality of the BNY's historic and working waterfront through the development of publicly accessible space in the Navy Subdistrict, Flushing East Subarea, and Barge Basin Subdistrict. It is expected that the Navy and Flushing areas would be public plazas, while the Flushing East Subarea public space would also include visual corridors to provide views into the Yard towards the waterfront. Moreover, the Barge Basin Subdistrict would incorporate additional elements to take advantage of the proximity of the Subdistrict to the waterfront, including a shore public walkway on either side of the Barge Basin, upland connections from Kent Avenue, and an entry plaza on the southern end of the Basin. With these improvements, the Proposed Actions would promote WRP Policy 9.1.

Policy 10: Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.

Policy 10.1: Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.

The Project Area is rich in historic resources, particularly those that illustrate the importance of the coastline in American history and in the development of New York City. The majority of the Project Area is located within the S/NR-listed Brooklyn Navy Yard Historic District. In addition, the Project Area includes three LPC-designated individual landmarks: Dry Dock #1, the Old United States Naval Hospital, and the Surgeon's House. As discussed in **Attachment E, "Historic & Cultural Resources,"** the Proposed Actions would not adversely affect these historic resources through direct or indirect effects.

Industrial Action Plan

The Proposed Actions would advance the Industrial Action Plan. As explained above, the Proposed Actions would facilitate investment in the BNY, a City-owned industrial asset, and create new industrial and manufacturing jobs.

Sustainability & OneNYC

As detailed in the 2020 *CEQR Technical Manual* and summarized above, to ensure that publicly sponsored projects align with the broader sustainability priorities and goal the City has set for itself, it is appropriate that *OneNYC* initiatives be considered. If a publicly sponsored project is, itself, implementing a *OneNYC* initiative, a detailed sustainability assessment would likely be inappropriate. The Proposed Actions would foster industry expansion and cultivation, promote job growth, and increase investment in job training in the BNY, thereby implementing the *OneNYC* initiatives of a growing, thriving city. Therefore, the Proposed Actions would promote *OneNYC*'s goals of creating a more sustainable and resilient City, and as such, no further sustainability assessment is warranted.

Business Improvement Districts (BIDs)

The Proposed Actions are specific to the BNY, and would not result in any changes to the DUMBO BID or Myrtle Avenue Brooklyn Partnership BID. These two study area BIDs would continue to deliver area-specific services to their respective districts, as under existing and No-Action conditions.

Williamsburg Waterfront 197-a Plan

The Proposed Actions would not result in any direct effects in the secondary study area, and would not conflict with the goals of the Williamsburg Waterfront 197-a Plan.

Urban Renewal Plans (URPs)

As the Proposed Actions are area-specific to the Yard, they would not result in any changes to the Williamsburg II URA or Wallabout URA in the secondary study area or conflict with the respective URPs.

Vision Zero

An evaluation of vehicular and pedestrian safety for the Project Area and surrounding study area is provided in **Attachment G, "Transportation."** As detailed therein, *Vision Zero* identifies Flushing Avenue to the south of the Yard as a "Priority Corridor." No intersections located within the study areas were identified as high accident locations; however, the intersections of Navy Street and Sands Street, and Washington Avenue and Flushing Avenue experienced five or more pedestrian/bicyclist crashes in one year. Therefore, the Applicants will coordinate with DOT to assess whether or not additional safety measures should be implemented at either intersection in the future with the Proposed Actions, promoting the policies laid out in *Vision Zero.*

ATTACHMENT D
SHADOWS

I. INTRODUCTION

According to the 2020 *City Environmental Quality Review* (CEQR) *Technical Manual*, an adverse shadows impact is considered to occur when an incremental shadow from a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight exposure, thereby significantly altering the public's use of the resource, or threatens the viability of vegetation or other resources. Pursuant to *CEQR Technical Manual* guidance, sunlight-sensitive resources of concern are those resources that depend on sunlight, or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. Sunlight-sensitive resources can include publicly accessible open spaces, architectural resources, natural resources, and Greenstreets. In general, shadows on city streets, sidewalks, buildings, or project-generated open spaces are not considered significant under CEQR. In addition, shadows occurring within an hour and a half of sunrise or sunset generally are not considered significant under CEQR.

According to the *CEQR Technical Manual*, a shadows assessment is required only if a proposed action would result in structures (or additions to existing structures) of 50 feet or more and/or be located adjacent to, or across the street from, a sunlight-sensitive resource. As described in **Attachment A, "Project Description,"** the Proposed Actions would not result in new development density beyond that which is permitted as-of-right. Rather, the Proposed Actions would acknowledge the unique character of the Brooklyn Navy Yard (the "BNY" or the "Yard") and tailor the applicable zoning regulations to address certain site conditions, such as parking and waterfront public space. A combined total of 4,611,962 gross square feet (gsf) of non-parking floor area would be developed in the BNY in the future with the Proposed Actions. In the future with the Proposed Actions, three buildings would be constructed on Projected Site 1. Each building would contain a seven-story base, built out to the parcel line and topped with a nine- to 13-story tower. In the future with the Proposed Actions, two buildings would be constructed on Projected Site 2. The westernmost building would be eight-stories tall, and the northernmost building would contain a seven-story based topped with a 13-story tower. In the future with the Proposed Actions, two buildings would be constructed on Projected Site 3. Each building would rise 16-stories, built out to the street line. As the Proposed Actions include zoning text and map amendments that would modify the allowable bulk within the Project Area, further shadows analysis is warranted. The change in the building bulk in the Project Area could result in new incremental shadows, and therefore, this attachment assesses the potential for the Proposed Actions and subsequent development to result in a significant adverse shadow impact on any sunlight-sensitive resources.

II. METHODOLOGY

According to the *CEQR Technical Manual*, the longest shadow a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height. For projects resulting in structures less than 50 feet tall, a shadow assessment is generally not necessary, unless the site is adjacent to a park, historic

resource, or important natural feature (if the feature that makes the structure significant depends on sunlight).

First, a preliminary screening assessment must be conducted to ascertain whether shadows resulting from a project could reach any sunlight-sensitive resource at any time of year. The *CEQR Technical Manual* defines sunlight-sensitive resources as those resources that depend on sunlight or for which direct sunlight is necessary to maintain the resource's usability or architectural integrity. The following are considered sunlight-sensitive resources:

- *Public open space* (e.g., parks, playgrounds, plazas, schoolyards, greenways, and landscaped medians with seating). Planted areas within unused portions or roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources. The use of vegetation in an open space establishes its sensitivity to shadows. This sensitivity is assessed for both (1) warm-weather dependent features, like wading pools and sandboxes, or vegetation that could be affected by loss of sunlight during the growing season (i.e., March through October); and (2) features, such as benches, that could be affected by a loss of winter sunlight. Uses that rely on sunlight include: passive use, such as sitting or sunning; active use, such as playfields or paved courts; and such activities as gardening, or children's wading pools and sprinklers. Where lawns are actively used, the turf requires extensive sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants, and plots in community gardens. Generally, four to six hours a day of sunlight, particularly in the growing season, is a minimum requirement.

- *Features of historic architectural resources that depend on sunlight for their enjoyment by the public.* Only the sunlight-sensitive features are considered, as opposed to the entire architectural resource. Sunlight-sensitive features include the following: design elements that are part of a recognized architectural style that depends on the contrast between light and dark (e.g., deep recesses or voids, such as open galleries, arcades, recessed balconies, deep window reveals, and prominent rustication); elaborate, highly carved ornamentation; stained glass windows; exterior building materials and color that depend on direct sunlight for visual character (e.g., the polychromy [multicolored] features found on Victorian Gothic Revival or Art Deco facades); historic landscapes, such as scenic landmarks, including vegetation recognized as an historic feature of the landscape; and structural 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 water bodies, wetlands, or designated resources, such as coastal fish and wildlife habitats.

The preliminary screening assessment consists of three tiers of analysis. The first tier determines a simple radius around the Project Area representing the longest shadow that could be cast. If there are sunlight-sensitive resources within the radius, the analysis proceeds to the second tier, which reduces the area that could be affected by project-generated shadows by accounting for a specific range of angles that can never receive shade in New York City due to the path of the sun in the northern hemisphere. If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by new shadows by looking at specific representative days of the year 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 project. In accordance with the *CEQR Technical Manual*, shadows on sunlight-sensitive resources of concern were modeled for four representative days of the year. For the New York City area, the months of interest for an open space resource encompass the growing season (i.e., March through October) and one month between November and February representing a cold-weather month (usually December). Representative days for the growing season are generally the March 21 vernal equinox (or the September 21 autumnal equinox, which is approximately the same), the June 21 summer solstice, and a spring or summer day halfway between the summer solstice and equinoxes, such as May 6 or August 6 (which are approximately the same). For the cold-weather months, the December 21 winter solstice is included to demonstrate conditions when open space users rely most heavily on available sunlight warmth. As these months and days are representative of the full range of possible shadows, they are also used for assessing shadows on sunlight-sensitive historic and natural resources. The *CEQR Technical Manual* defines the temporal limits of a shadow analysis period to fall from an hour and a half after sunrise to an hour and a half before sunset.

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 result of the analysis and assessment are documented with graphics, a table of incremental shadow durations, and narrative text. As described in the *CEQR Technical Manual*, an incremental shadow is generally not considered significant when its duration is no longer than 10 minutes at any time of year and the resource continues to receive substantial direct sunlight. A significant shadow impact generally occurs when an incremental shadow of ten minutes or longer falls on a sunlight-sensitive resource and results in one of the following:

- *Vegetation:* a substantial reduction in sunlight available to sunlight-sensitive features of the resource to less than the minimum time necessary for its survival (when there would be sufficient sunlight in the future without the project) or a reduction in direct sunlight exposure where the sensitive feature of the resource is already subject to substandard sunlight (i.e., less than the minimum time necessary for its survival).

- *Historic and cultural resources:* a substantial reduction in sunlight available for the enjoyment or appreciation of the sunlight-sensitive features of an historic or cultural resource.

- *Open space utilization:* a substantial reduction in the usability of open space as a result of increased shadow, including information regarding anticipated new users and the open space's utilization rates throughout the affected time periods.

- *For any sunlight-sensitive feature of a resource:* complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource, when the complete elimination results in substantial effects on the survival, enjoyment, or, in the case of open space or natural resources, the use of the resource.

In general, a significant adverse shadows impact occurs when the incremental shadows added by a proposed building fall on a sunlight-sensitive resource and substantially reduce or completely eliminate direct sunlight exposure, thereby significantly altering the public's use of the resource or threatening the viability of vegetation or other natural resources.

III. PRELIMINARY SCREENING

Tier 1 Screening Assessment

According to the 2*020 CEQR Technical Manual*, the longest shadow that a structure will cast in New York City, except for periods close to dawn or dusk, is 4.3 times its height and occurs on December 21 (the winter solstice). The height of the buildings developed as a result of the Proposed Actions were used to determine the longest shadow study area (Tier 1 Assessment). Within this longest shadow study area, there are several sunlight-sensitive resources (refer to **Table D-1** and **Figure D-1**). Therefore, further screening is warranted in order to determine whether these resources would be affected by project-generated shadows.

Table D-1: Sunlight-Sensitive Resources in the Tier I Assessment Area

Map No.*	Sunlight-Sensitive Resource
1	Bridge Park
2	Trinity Park
3	East River
4	Naval Cemetery Landscape
5	Steuben Playground
6	Roberto Clemente Ballfield
7	Jacob's Ladder Playground
8	Epiphany Playground
9	Golconda Skate Park and Playground
10	Commodore Barry Park
11	Oxport Playground
12	Washington Hall Park
13	Bedford Playground
14	Roebling Playground

*Refer to **Figure D-1**

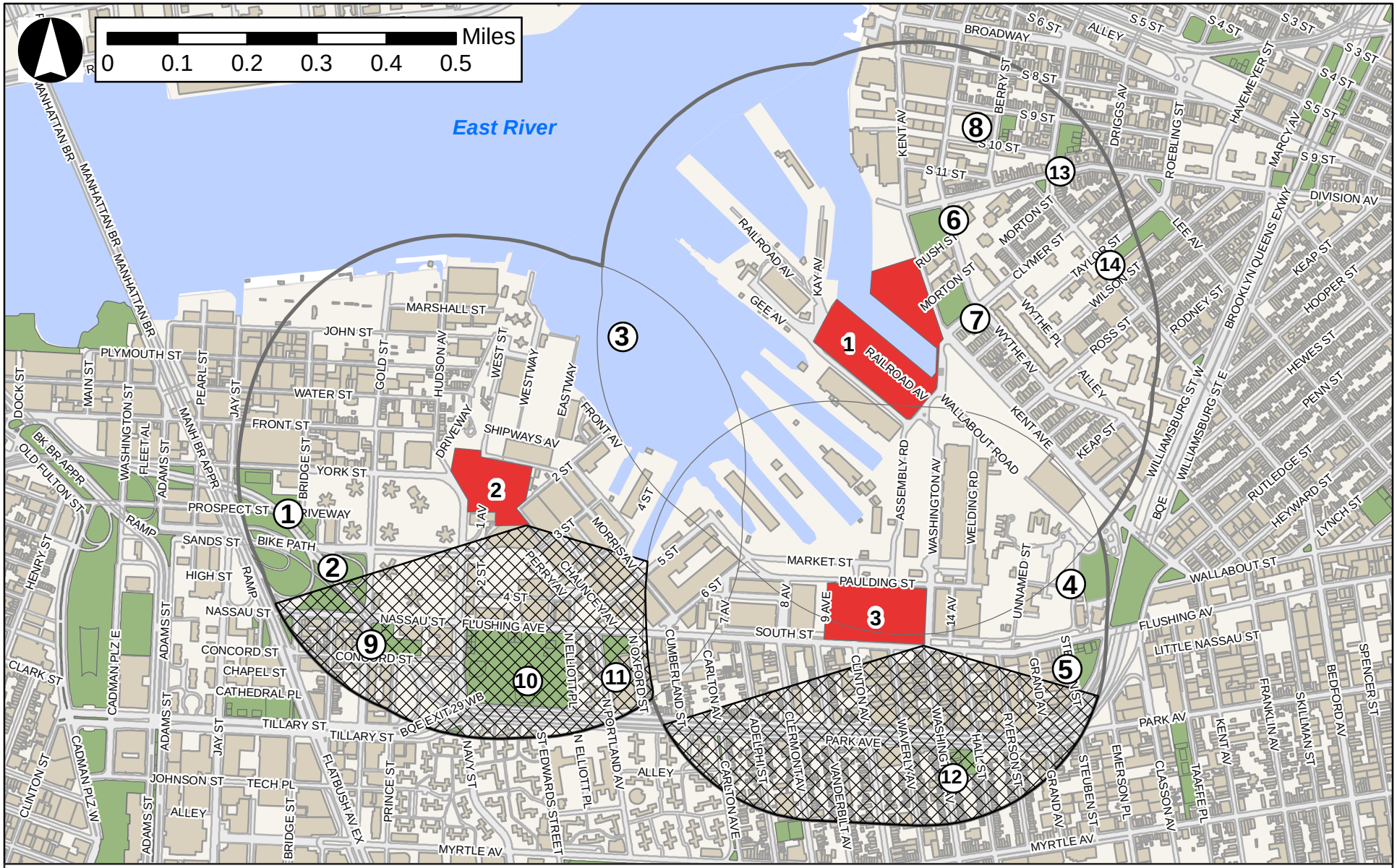
Tier 2 Screening Assessment

Due to the path of the sun across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given development site. In New York City, this area lies between -108 and +108 degrees from true north. The purpose of the Tier 2 screening is to determine whether the sunlight-sensitive resources identified in the Tier 1 screening are located within portions of the longest shadow study area that can receive shade from the proposed building.

As presented in **Figure D-1**, portions of Bridge Park, Trinity Park, the East River, Steuben Playground, Roberto Clemente Ballfield, Jacob's Ladder Playground, Epiphany Playground, Bedford Playground, and Roebling Playground would fall within the maximum shadow radius. Based on the Tier 2 Screening Assessment, it cannot be ruled out that the Proposed Actions would not cast shadows on these locations.

Tier 3 Screening Assessment

According to the *CEQR Technical Manual*, a Tier 3 screening assessment should be performed to determine if, in the absence of intervening buildings, shadows resulting from a proposed project could



Special Brooklyn Navy Yard District

Figure D-1
Tier I & II Shadows Screening

reach a sunlight-sensitive resource, thereby warranting a detailed shadows analysis. The Tier 3 screening assessment is used to determine if shadows resulting from a proposed project can reach a sunlight-sensitive resource at any time between 1.5 hours after sunrise and 1.5 hours before sunset on representative analysis dates.

As project-generated shadows could reach nearby sunlight-sensitive resources, a Tier 3 assessment was performed using three-dimensional (3D) computer mapping software. The 3D model was used to calculate and display project-generated shadows on individual representative analysis dates. The model contained 3D representations of the elements in the base map used in the preceding assessments and a 3D model of the With-Action developments. At this stage of the assessment, surrounding buildings and structures within the study area were not included in the model so that it may be determined whether project-generated shadows would reach any sunlight-sensitive resources.

Figures D-2a and **D-2b** illustrate the range of project-generated shadows that could occur in the absence of existing buildings on the four representative analysis days. The Tier 3 analysis shows that Bridge Park, Trinity Park, the East River, Steuben Playground, Roberto Clemente Ballfield, Jacob's Ladder Playground, and Epiphany Playground would receive project-generated shadows in the absence of intervening buildings (**see Table D-2**). Therefore, a detailed shadow analysis is required to determine the extent and duration of project-generated incremental shadows on these sunlight-sensitive resources.

Table D-2: Tier 3 Shadow Screening Assessment Results

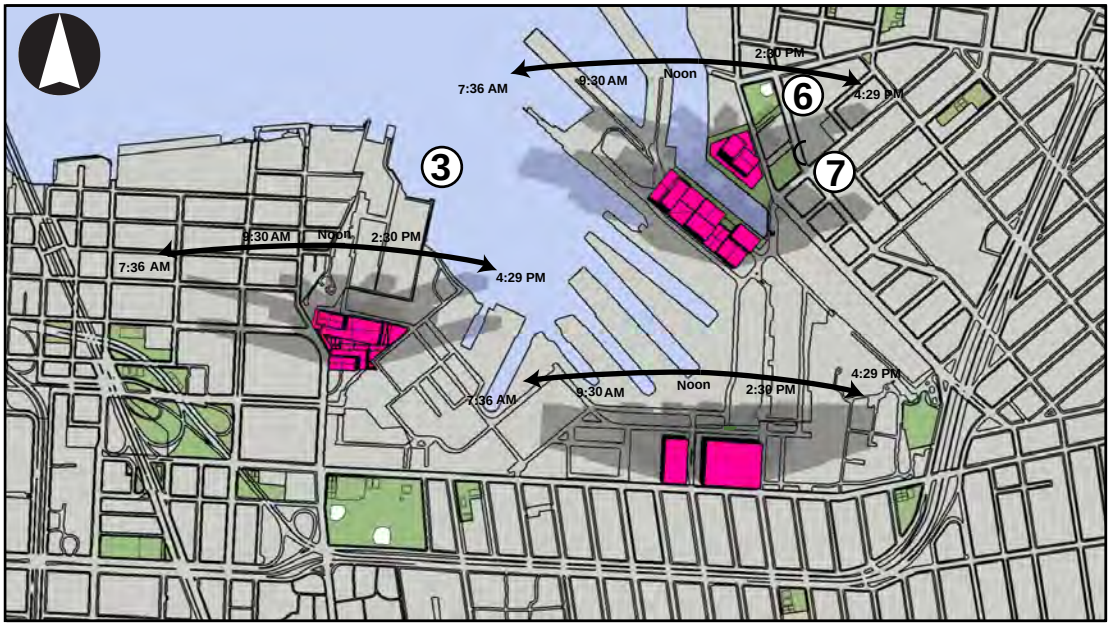
Map No.[1]	Resource Name	March 21/Sept. 21 7:36 AM – 4:29 PM	May 6/August 6 6:27 AM – 5:18 PM	June 21 5:57 AM – 6:01 PM	December 21 8:51 AM – 2:53 PM	Analysis Days
1	Bridge Park	Not Shaded	Not Shaded	Shaded	Not Shaded	1
2	Trinity Park	Not Shaded	Not Shaded	Shaded	Not Shaded	1
3	East River	Shaded	Shaded	Shaded	Shaded	4
4	Naval Cemetery Landscape	Not Shaded	Not Shaded	Not Shaded	Not Shaded	0
5	Steuben Playground	Not Shaded	Not Shaded	Shaded	Not Shaded	1
6	Roberto Clemente Ballfield	Shaded	Shaded	Shaded	Shaded	4
7	Jacob's Ladder Playground	Shaded	Shaded	Shaded	Shaded	4
8	Epiphany Playground	Not Shaded	Not Shaded	Not Shaded	Shaded	1
13	Bedford Playground	Not Shaded	Not Shaded	Not Shaded	Not Shaded	0
14	Roebling Playground	Not Shaded	Not Shaded	Not Shaded	Not Shaded	0

Note: [1]Numbers keyed to **Figures D-1** and **D-2**.

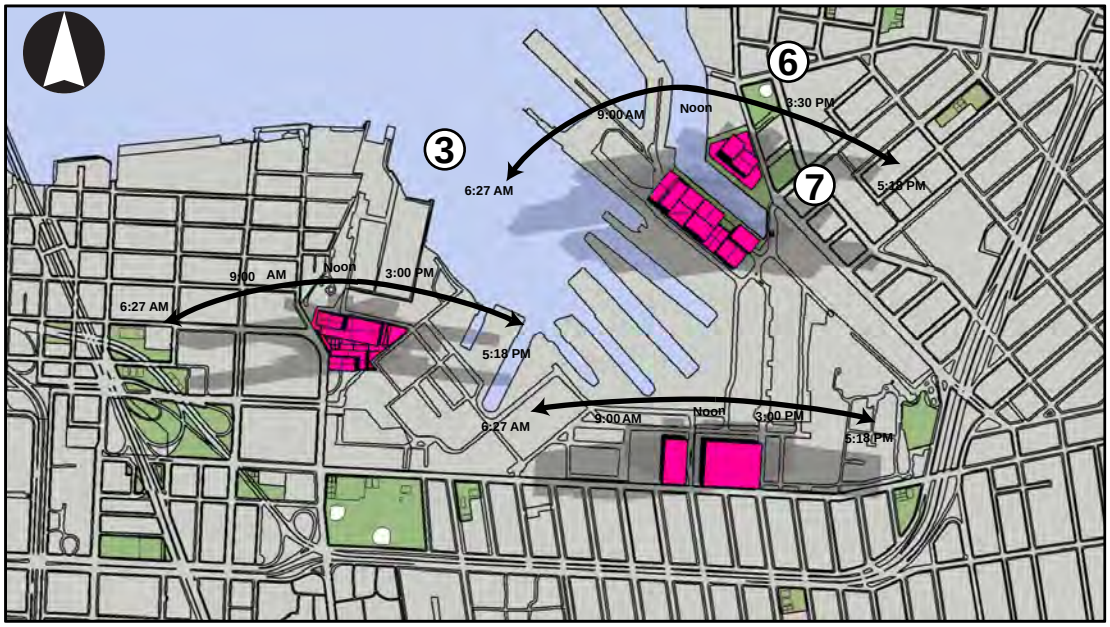
IV. DETAILED ANALYSIS OF SHADOW IMPACTS

Shadows Analysis

Per CEQR guidance, shadows analyses were performed for the five sunlight-sensitive resource identified above on four representative days of the year: March 21/September 21, the equinoxes; May 6, the midpoint between the summer solstice and the equinox (and equivalent to August 6); June 21, the summer solstice and the longest day of the year; and December 21, the winter solstice and shortest day of the year. These four representative days indicate the range of potential shadows over the course of the year. CEQR guidance defines the temporal limits of a shadow analysis period to fall from an hour and a half after sunrise to an hour and a half before sunset. **Table D-3** below summarizes the entry and exit



MARCH 21/SEPTEMBER 21



MAY 6/AUGUST 6

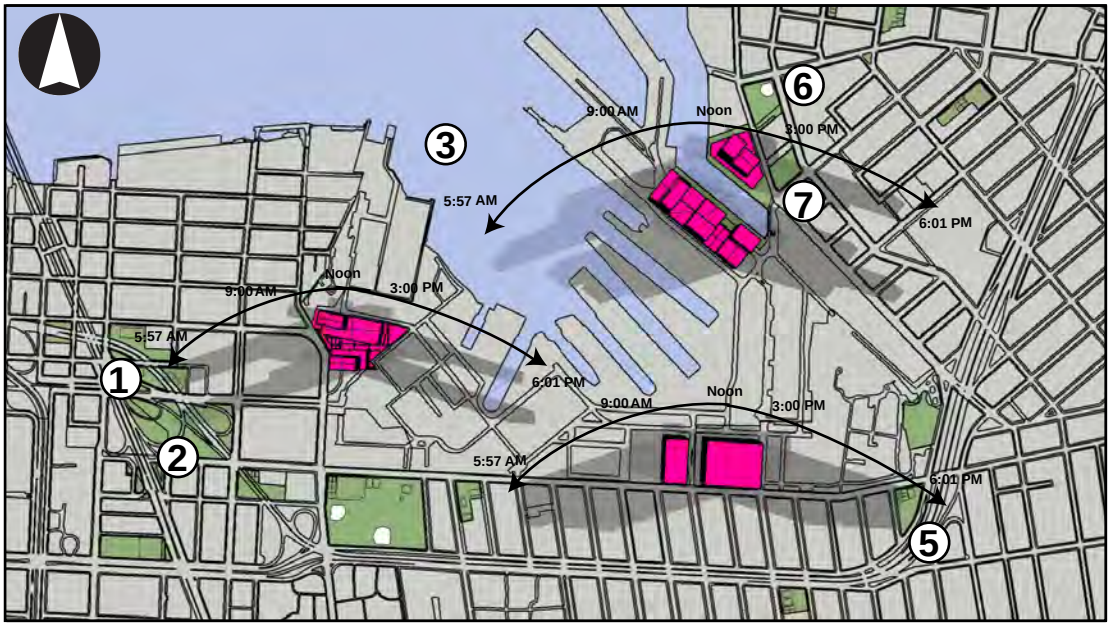
With-Action Development

① Sunlight-Sensitive Resource

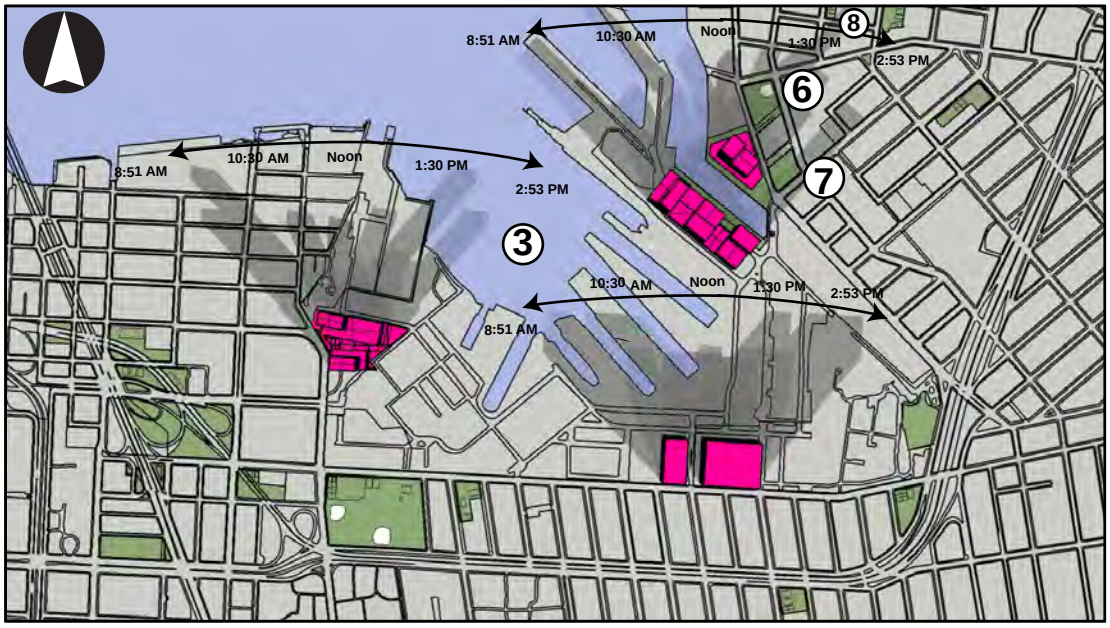
Project-Generated Shadow

Note: Resources keyed to Table D-1

Figure D-2b
Tier 3 Screening



JUNE 21



DECEMBER 21

With-Action Development

1 **Sunlight-Sensitive Resource**

Project-Generated Shadow

Note: Resources keyed to Table D-1

times and total duration of project-generated incremental shadows on each of the sunlight-sensitive resources.

Table D-3: Duration of Incremental Shadows on Sunlight Sensitive Resources

No. [1]	Sunlight-Sensitive Resource	Shadow Enter-Exit/ Incremental Shadow Duration	Analysis Days			
			March 21/Sept. 21	May 6/August 6	June 21	December 21
			7:36 AM – 4:29 PM	6:27 AM – 5:18 PM	5:57 AM – 6:01 PM	8:51 AM – 2:53 PM
1	Bridge Park	Shadow enter-exit time	-	-	5:57 – 6:10 AM	-
		Incremental shadow duration	-	-	13 minutes	-
2	Trinity Park	Shadow enter-exit time	-	-	5:57 – 6:18 AM	-
		Incremental shadow duration	-	-	21 minutes	-
3	East River (Projected Site 1)	Shadow enter-exit time	7:36 AM – 4:29 PM	6:27 – 5:18 PM	5:57 – 11:14 AM 12:06 – 6:01 PM	8:51 AM – 2:35 PM
		Incremental shadow duration	8 hours 53 minutes	10 hours 51 minutes	11 hours 12 minutes	5 hours 44 minutes
3	East River (Projected Site 2)	Shadow enter-exit time	-	-	-	8:51 AM – 1:54 PM
		Incremental shadow duration	-	-	-	5 hours 3 minutes
3	East River (Projected Site 3)	Shadow enter-exit time	4:13 – 4:29 PM	5:09 – 5:18 PM	5:32 – 6:01 PM	2:11 – 2:53 PM
		Incremental shadow duration	16 minutes	9 minutes	29 minutes	42 minutes
5	Steuben Playground	Shadow enter-exit time	-	-	5:58 – 6:01 PM	-
		Incremental shadow duration	-	-	3 minutes	-
6	Roberto Clemente Ballfield	Shadow enter-exit time	12:50 – 2:42 PM 4:01 – 4:29 PM	1:19 – 2:29 PM	-	11:32 AM – 2:00 PM 2:27 – 2:53 PM
		Incremental shadow duration	2 hours 20 minutes	1 hour 10 minutes	-	2 hours 54 minutes
7	Jacob's Ladder Playground	Shadow enter-exit time	3:21 – 3:41 PM	2:53 – 4:39 PM	2:54 – 5:04 PM	12:42 – 2:39 PM
		Incremental shadow duration	20 minutes	1 hour 46 minutes	2 hours 10 minutes	1 hour 57 minutes
8	Epiphany Playground	Shadow enter-exit time	-	-	-	-
		Incremental shadow duration	-	-	-	-

Note: All times are Eastern Standard Time; Daylight Savings Time was not accounted for per *2020 CEQR Technical Manual* guidance.
The table indicates the entry and exit times and total duration of incremental shadow for each sunlight-sensitive resource. Cells in gray indicate that no incremental shadow would reach the sunlight-sensitive resource on the respective analysis day.

As shown in **Table D-3**, incremental shadows would reach six of the seven sunlight-sensitive resources identified in the Tier 3 assessment (**Table D-2**). Incremental shadows from the Proposed Actions are discussed for each sunlight-sensitive resource below.

Bridge Park

Bridge Park is an approximately 1.93-acre park that is bounded by Prospect Street to the north, Sands Street to the south, and the Manhattan Bridge approach to the west. Bridge Park contains paved area, handball courts, and basketball courts. As shown in **Table D-3**, incremental shadows would reach this open space on the June 21 analysis day.

June 21

As shown in **Table D-3**, incremental shadows as a result of the Proposed Actions would be located over this sunlight-sensitive resource for approximately 13 minutes from 5:57 – 6:10 AM. Incremental shadows as a result of the Proposed Actions would be located over a small portion of the park and would move to the southeast before exiting the sunlight-sensitive resource at approximately 6:10 AM (refer to **Figure D-3**).

Assessment

As shown in **Figure D-3** and in **Table D-3**, given the size and limited duration of incremental shadows on Bridge Park, it is unlikely that the Proposed Actions would negatively affect the utilization, enjoyment, and vegetation found within Bridge Park. Therefore, the incremental shadows resulting from the Proposed Actions are not anticipated to result in a significant adverse impact on Bridge Park.

Trinity Park

Trinity Park is an approximately 6.3-acre park that is located in the area bounded by Sands Street to the north, Gold Street to the east, Nassau Street to the south, and the Manhattan Bridge to the west. Trinity Park contains benches, tables, and vegetation. Only the area that has frontage on Nassau Street contains benches/tables etc. The other areas of the park only include vegetation. As shown in **Table D-3**, incremental shadows would reach this sunlight-sensitive resource in the morning of the June 21 analysis day.

June 21

As shown in **Table D-3**, incremental shadows as a result of the Proposed Actions would be located over this sunlight-sensitive resource for approximately 21 minutes from 5:57 – 6:18 AM. Incremental shadows as a result of the Proposed Actions would be located over the northeast portion of the park and would move to the east before exiting the sunlight-sensitive resource at approximately 6:18 AM (refer to **Figure D-3**).

Assessment

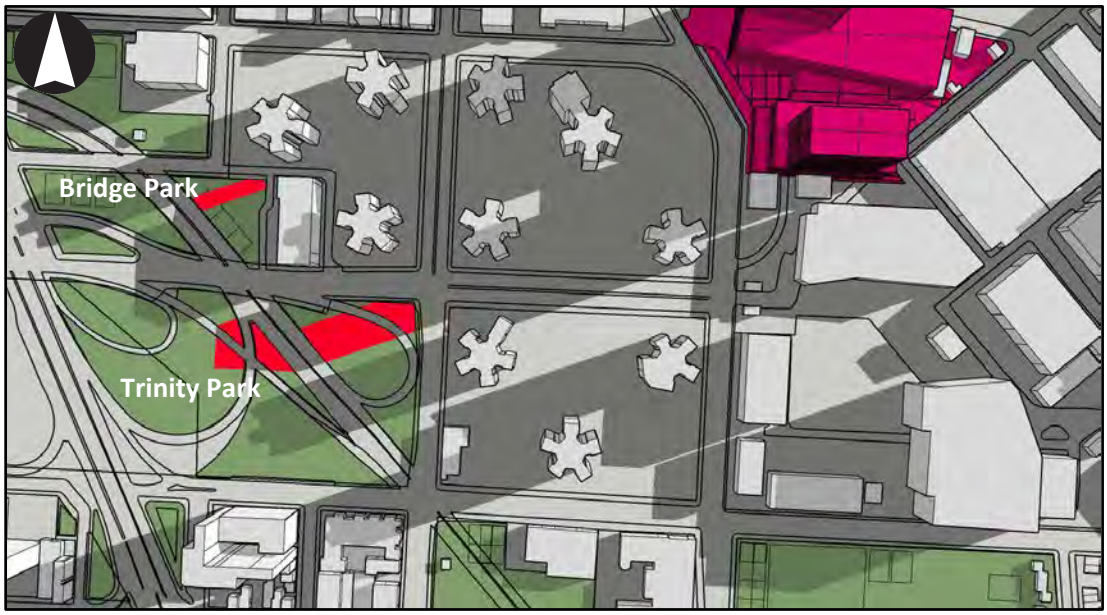
As shown in **Figure D-3** and in **Table D-3**, given the size and limited duration of incremental shadows on Trinity Park, it is unlikely that incremental shadows would negatively affect the utilization, enjoyment, and vegetation found within Trinity Park. Therefore, the incremental shadows resulting from the Proposed Actions are not anticipated to result in a significant adverse impact on Trinity Park.

East River

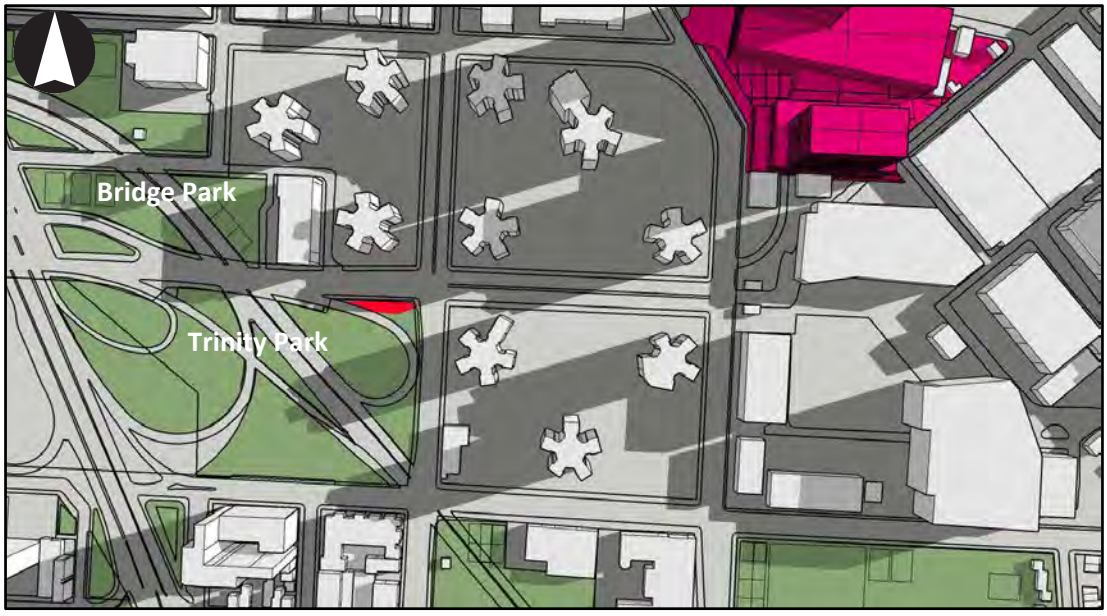
The nearest waterbody in proximity to the With-Action development is the East River. The East River is a salt-water tidal estuary that connects Upper New York Bay to the south and Long Island Sound to the north. The lower East River is classified by the NYSDEC as a Class I water, with aquatic life suspected to exist within this portion of the East River. As shown in **Figure D-1**, portions of the East River and Navy Yard Basin would be cast in project-generated shadows on each of the four analysis days.

Figure D-3

Bridge Park & Trinity Park
Incremental Shadows on June 21



5:57 AM



6:15 AM

With-Action Development

Open Space

Incremental Shadow

March 21/September 21

On the March 21/September 21 analysis day, the With-Action development would cast shadows east and westward across adjacent areas of the river, particularly in the morning hours (from Projected Site 1) and in the afternoon (from Projected Sites 1 and 2) (refer to **Figures D-4a** through **D-4c**). Incremental shadows would exist over the East River at the beginning of the analysis day (7:36 AM). As the morning progresses, incremental shadows from the With-Action development would move eastward throughout the analysis day until 4:29 PM (refer to **Table D-3**). **Table D-3** outlines the duration of incremental shadow on the East River from each Projected Site. Incremental shadows from the With-Action development would exist over the East River for a total of approximately eight hours and 53 minutes. As shown in **Figures D-4a** through **D-4c**, the size of incremental shadow on the East River would be limited. Incremental shadows would not affect any specific area of this sunlight-sensitive resource.

May 6/August 6

On the May 6/August 6 analysis day, incremental shadows from the With-Action development would be cast over the East River for the entire analysis day (6:27 AM – 5:18 PM), for a total of approximately 10 hours and 51 minutes. As shown in **Figures D-4d** through **D-4f**, incremental shadows from the With-Action development would move to the east from the morning to the afternoon hours. Though the duration of incremental shadow coverage would be for an extended period of time, as shown in **Figures D-4d** through **D-4f**, the size of incremental shadow coverage would be limited.

June 21

On the June 21, incremental shadows from the With-Action development would be cast over the East River from approximately 5:57 – 11:14 AM and from 12:06 – 6:01 PM (approximately 11 hour and 12 minutes). As shown in **Figures D-4g** through **D-4i**, the size of incremental shadow coverage would be limited. Incremental shadows would move eastward until the end of the analysis day.

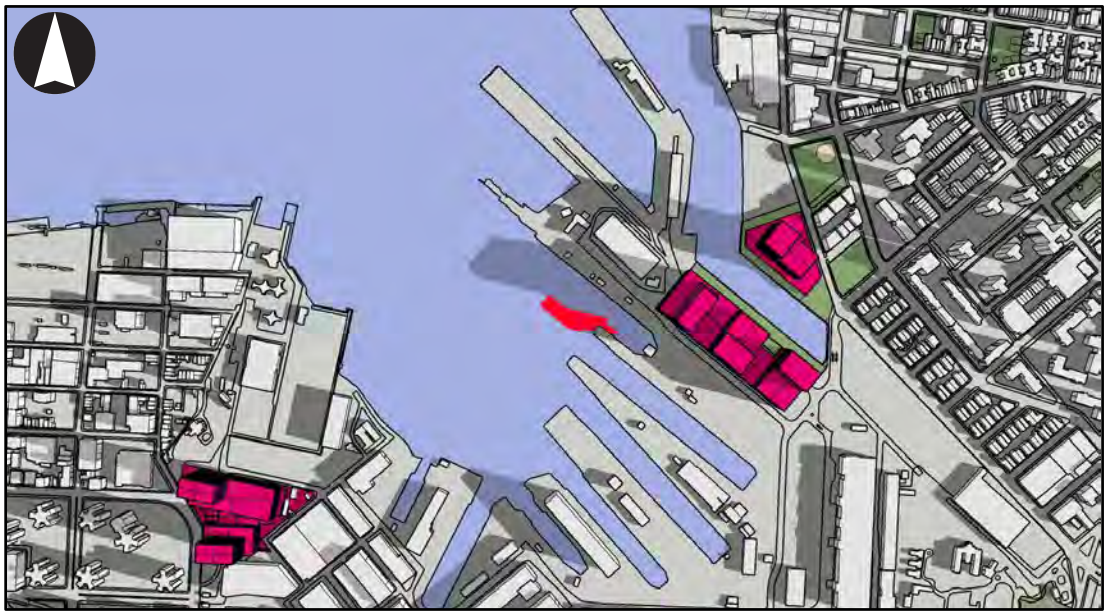
December 21

On the December 21 analysis day incremental shadows because of the With-Action development would be cast on the East River for the entire analysis day from approximately 8:51 AM – 2:53 PM for a total of 6 hours 2 minutes.

Assessment

The current moves swiftly in the East River and would move phytoplankton and other natural elements quickly through the area to be affected by any incremental shadows. Therefore, project-generated shadows would not be expected to affect primary productivity. It is important to note that this area of the East River is a degraded natural resource and does not consistently meet standards for good ecological health. The East River currently retains a "Class I, Impaired designation" under NYSDEC regulations regarding recreational uses and fish consumption, meaning communities surrounding the river cannot fully utilize this natural resource. Furthermore, any wildlife present in the area is tolerant of urban conditions and low-quality habitat. Due to the limited size of incremental shadows would not affect one specific area of the East River (refer to **Figures D-4a** through **D-4l**). Areas that would receive the longest durations of new shadow would continue to receive more than four hours of direct sunlight in parts of

Figure D-4a
East River
Incremental Shadows on March 21/September 21



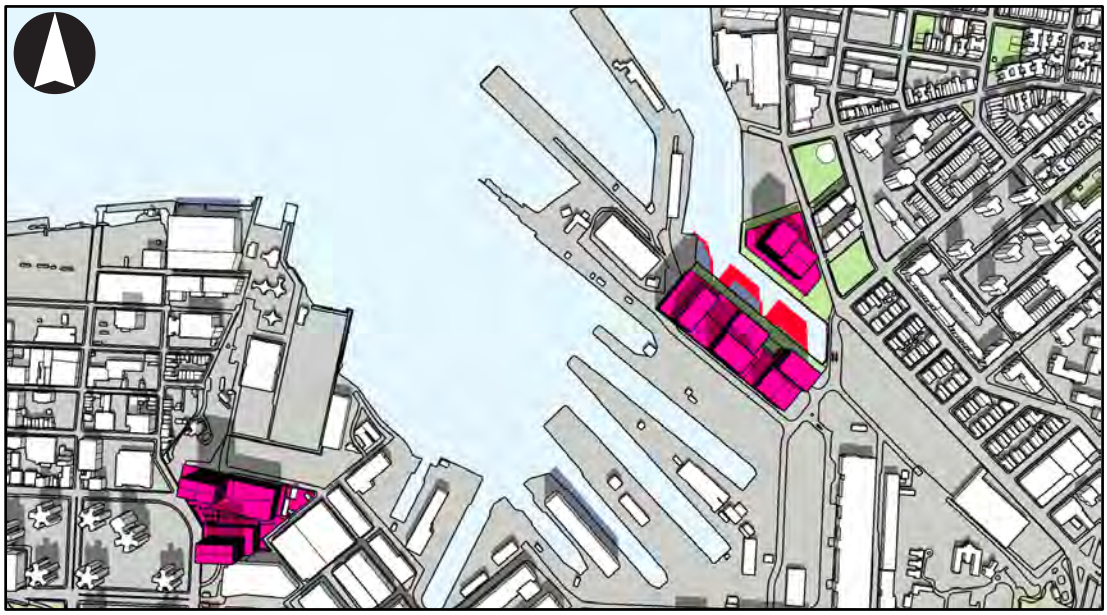
7:36 AM



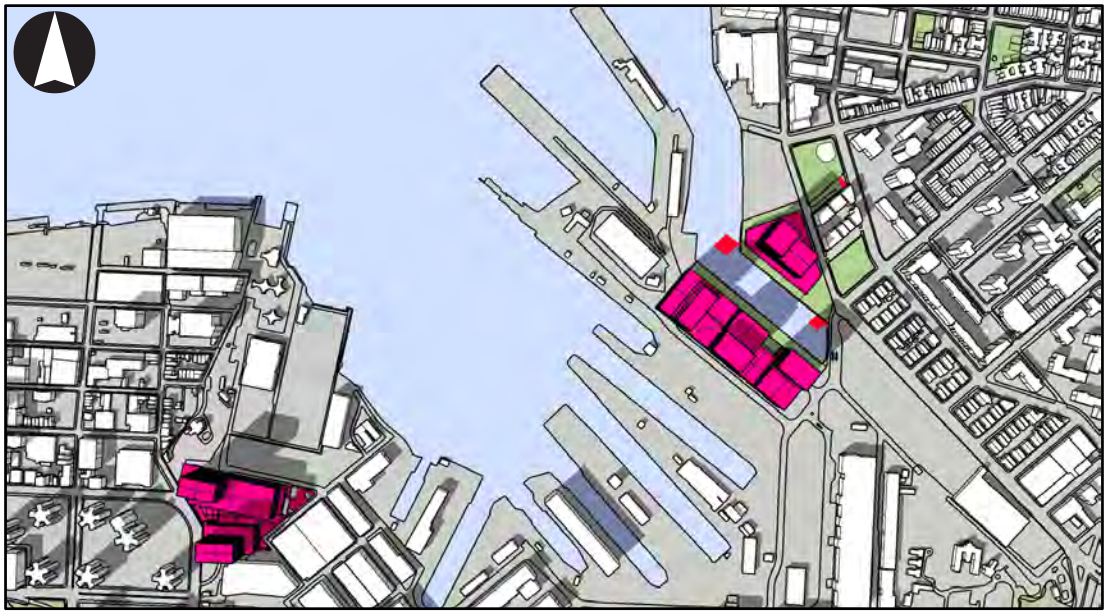
9:30 AM

With-Action Development | Open Space | East River | Incremental Shadow

Figure D-4b
East River
Incremental Shadows on March 21/September 21



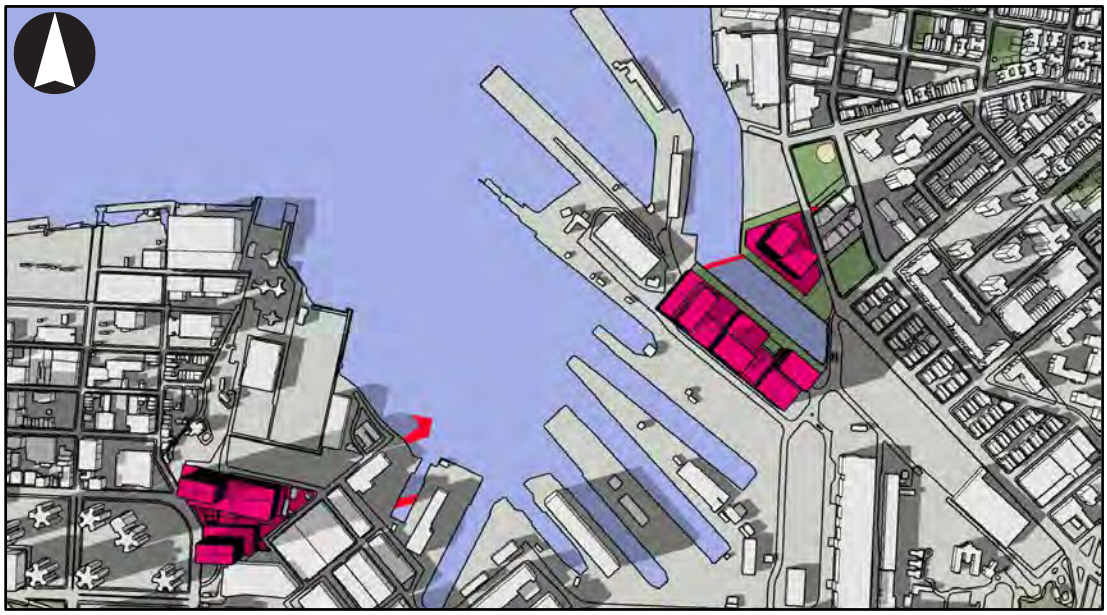
12:00 PM



2:30 PM

With-Action Development | Open Space | East River | Incremental Shadow

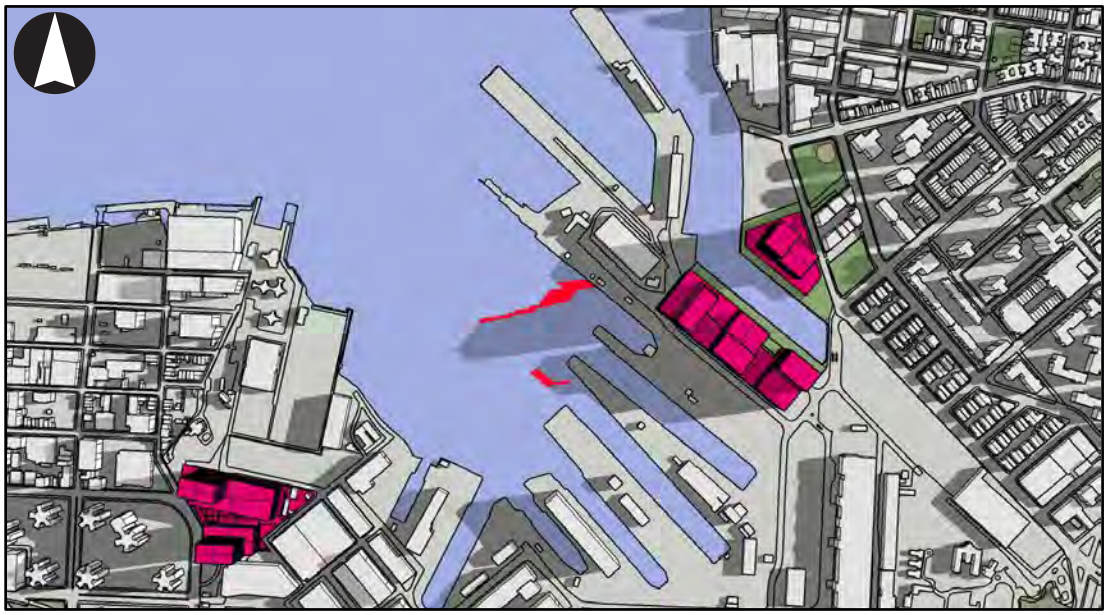
Figure D-4b
East River
Incremental Shadows on March 21/September 21



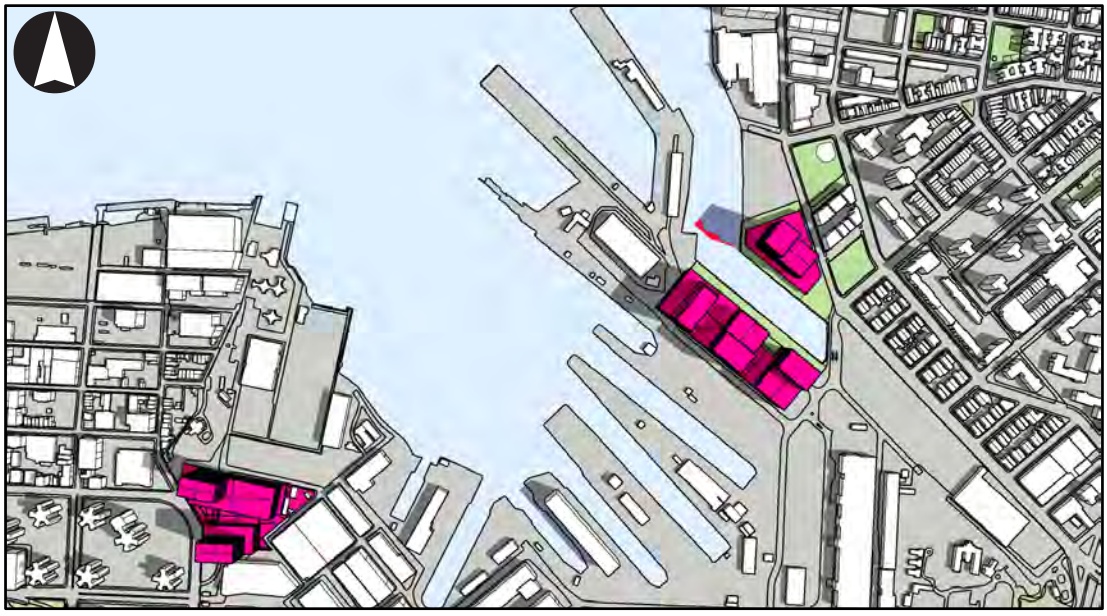
4:29 PM

With-Action Development | Open Space | East River | Incremental Shadow

Figure D-4b
East River
Incremental Shadows on May 6/August 6



6:27 AM



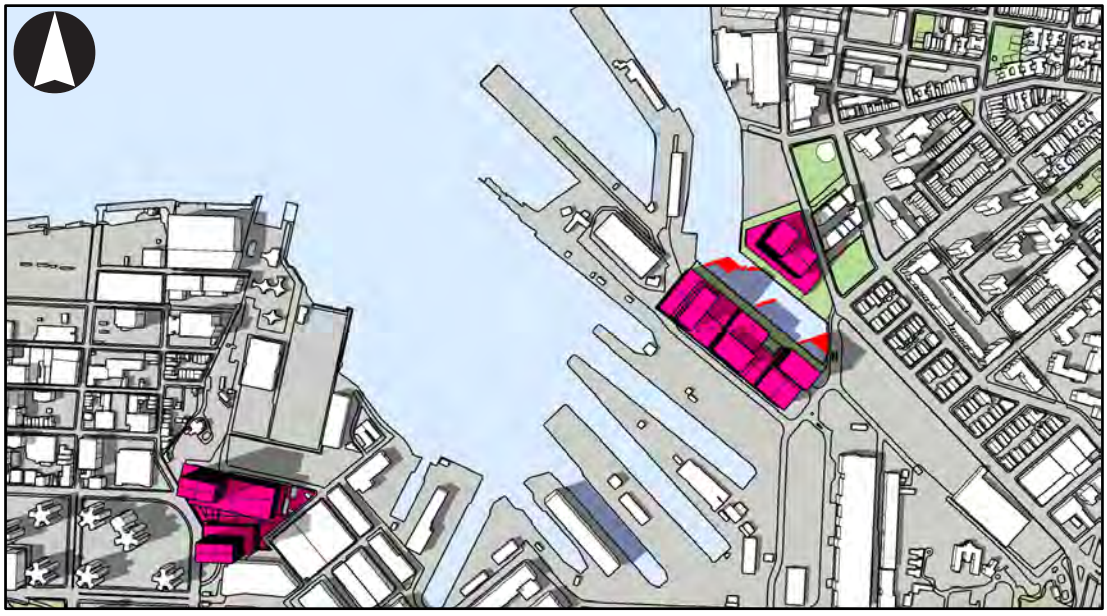
9:00 AM

With-Action Development | Open Space | East River | Incremental Shadow

Figure D-4e
East River
Incremental Shadows on May 6/August 6



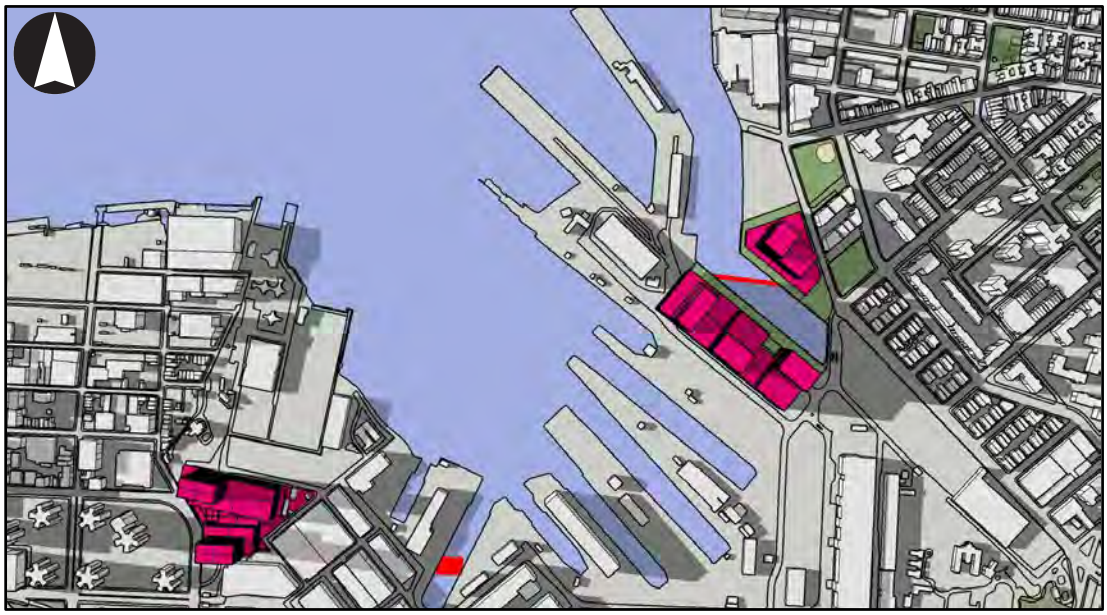
12:00 PM



3:00 PM

With-Action Development
Open Space
East River
Incremental Shadow

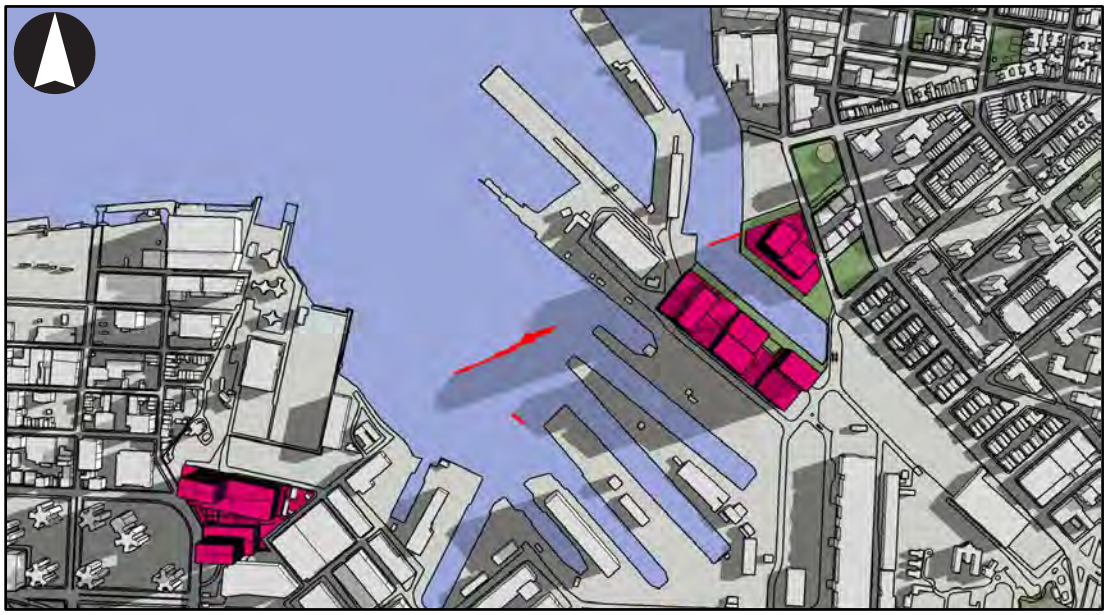
Figure D-4f
East River
Incremental Shadows on May 6/August 6



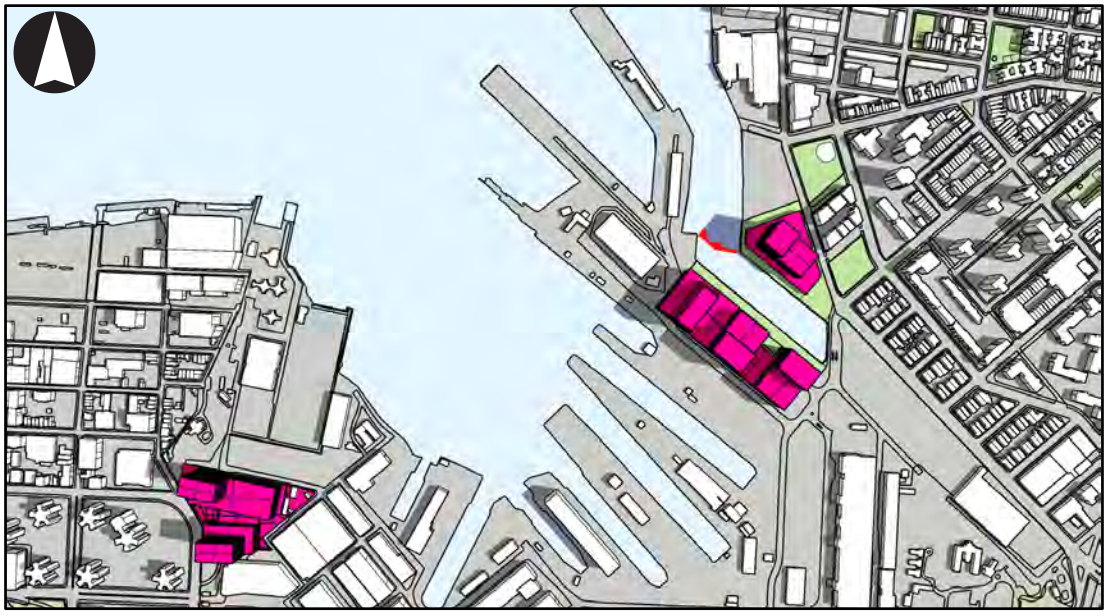
5:18 PM

With-Action Development | Open Space | East River | Incremental Shadow

Figure D-4g
East River
Incremental Shadows on June 21



5:57 AM



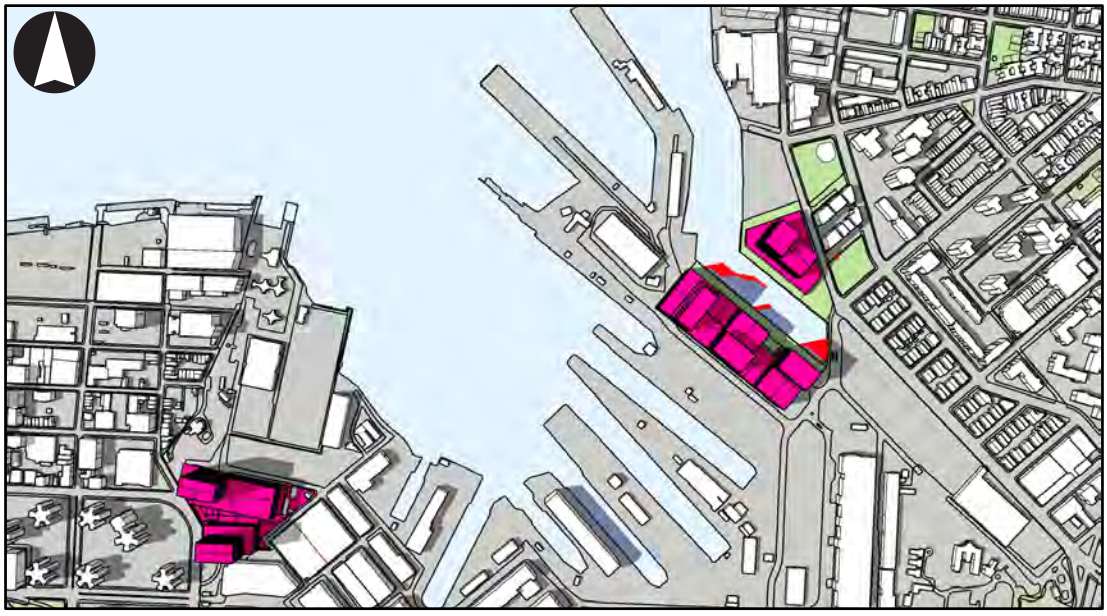
9:00 AM

With-Action Development | Open Space | East River | Incremental Shadow

Figure D-4h
East River
Incremental Shadows on June 21



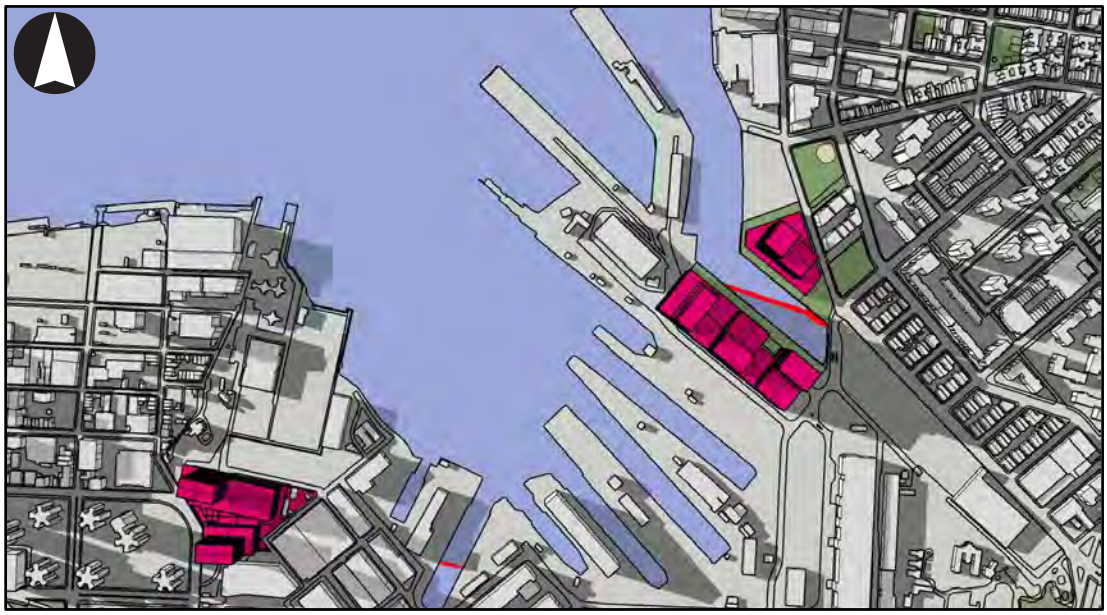
12:30 PM



3:00 PM

With-Action Development | Open Space | East River | Incremental Shadow

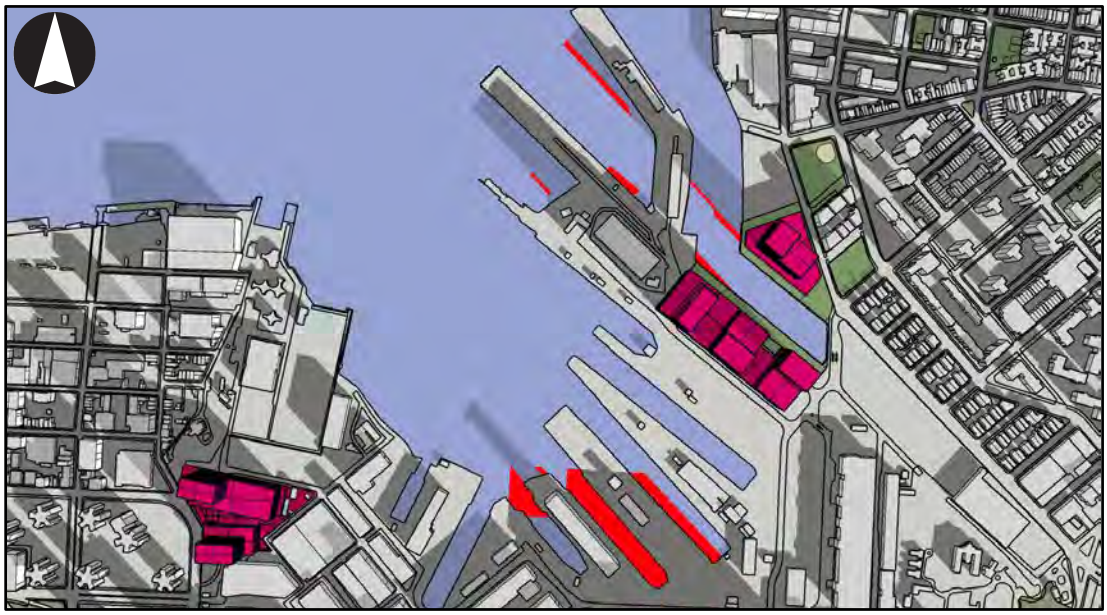
Figure D-4f
East River
Incremental Shadows on June 21



6:01 PM

With-Action Development
Open Space
East River
Incremental Shadow

Figure D-4j
East River
Incremental Shadows on December 21



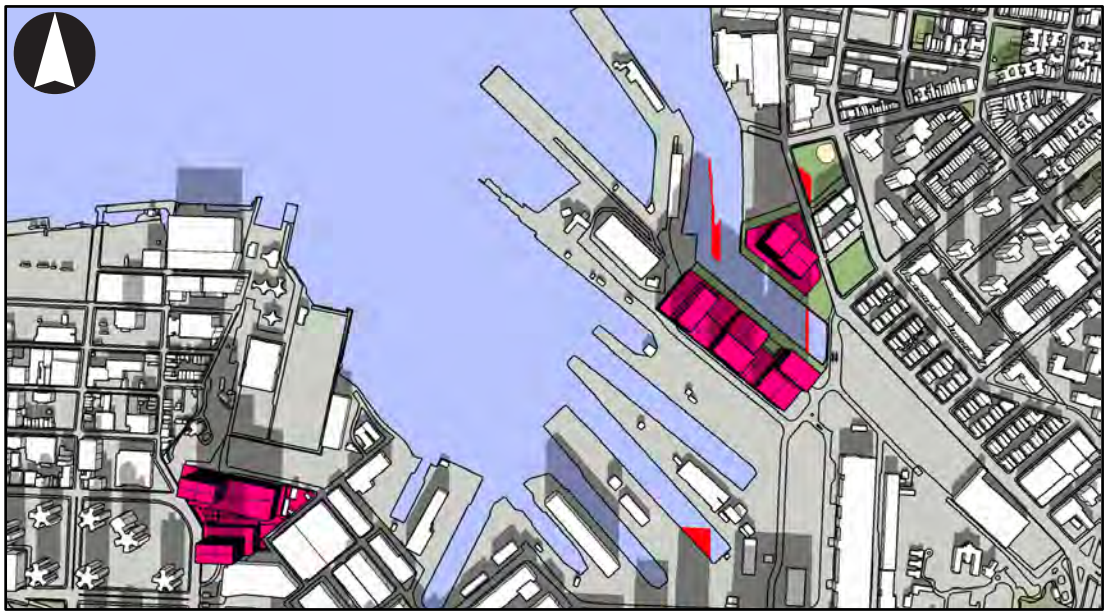
8:51 AM



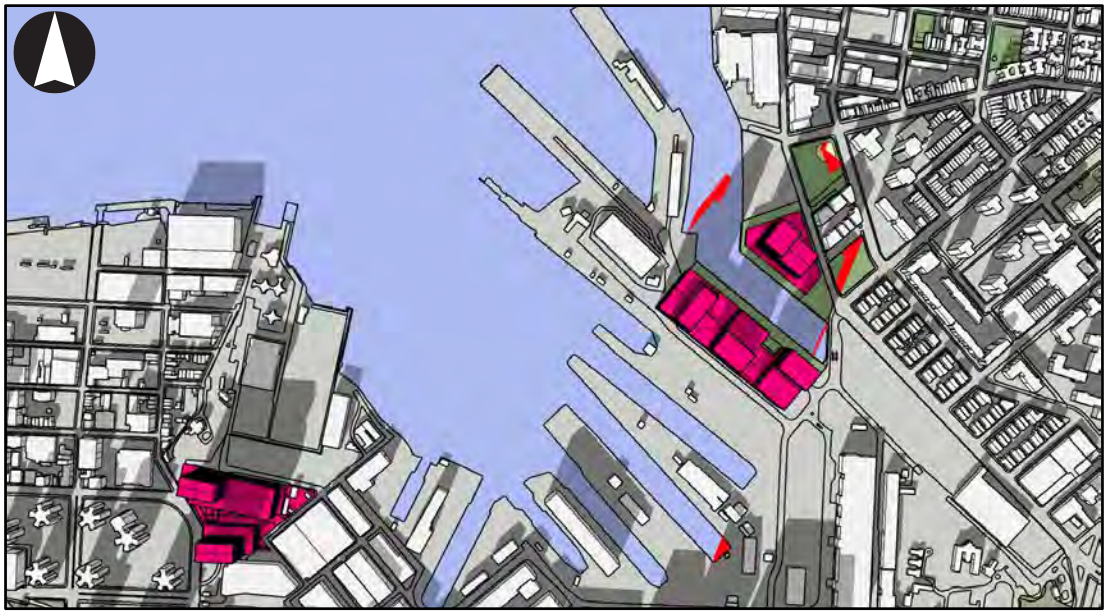
10:30 AM

With-Action Development | Open Space | East River | Incremental Shadow

Figure D-4k
East River
Incremental Shadows on December 21



12:00 PM



1:30 PM

With-Action Development | Open Space | East River | Incremental Shadow

Figure D-4l
East River
Incremental Shadows on December 21



2:53 PM

With-Action Development | Open Space | East River | Incremental Shadow

the morning and afternoon. Therefore, as the extent and duration of the incremental shadows would (1) not significantly reduce direct sunlight exposure on the natural resource, and (2) would not significantly alter the public's use of the East River or threaten the viability of vegetation or other resources, incremental shadows on the East River as a result of the Proposed Actions would not be considered a significant adverse impact, in accordance with *CEQR Technical Manual* methodology.

Steuben Playground

Steuben Playground is an approximately 1.17-acre open space resource located on the south side of Flushing Avenue between Steuben Street and Williamsburg Street West. This open space resource includes concrete game tables, basketball and handball courts, a playground, and fitness equipment. Incremental shadows as a result of the Proposed Actions would reach this sunlight-sensitive resource on one analysis day.

June 21

As shown in **Table D-3**, on the June 21 analysis day, incremental shadows from the With-Action development at Projected Site 3 would reach Steuben Playground for approximately three minutes (5:58 – 6:01 PM). Incremental shadow would be located in the northwestern corner of the open space (refer to **Figure D-5**).

Assessment

As discussed above, incremental shadows from the With-Action development would reach the open space on the June 21 analysis day for approximately three minutes (5:58 – 6:01 PM). As the extent and duration of the incremental shadows would (1) not significantly reduce direct sunlight exposure on the open space resource, and (2) would not significantly alter the public's use of the open space nor threaten the viability of vegetation or other resources, incremental shadows on Steuben Playground as a result of the Proposed Actions would not be considered a significant adverse impact, in accordance with *CEQR Technical Manual* methodology.

Roberto Clemente Playground

Roberto Clemente Playground is a 1.93-acre park located on Kent Avenue south of Division Avenue. Roberto Clemente Playground contains a baseball field, benches, and other recreational area. Incremental shadow from the With-Action development at Projected Site 1 would reach this sunlight-sensitive resource on three analysis days (refer to **Table D-3**).

March 21/September 21

On the March 21/September 21 analysis day, incremental shadow from the With-Action development at Projected Site 1 would occur over the sunlight-sensitive resource from approximately 12:50 – 2:42 PM and from 4:01 – 4:29 PM for a total of approximately two hours and 20 minutes (refer to **Table D-3**). As shown in **Figures D-6a** and **D-6b**, incremental shadow would be limited in size and would move eastward throughout the analysis day. The area to be cast in incremental shadow is occupied by open lawn, vegetation, walking/running trails, and benches.

Naval Cemetery Landscape & Steuben Playground
Incremental Shadows on June 21



6:01 PM

With-Action Development

Open Space

Incremental Shadow

Roberto Clemente Ballfield & Jacob's Ladder Playground
Incremental Shadows on March 21/September 21



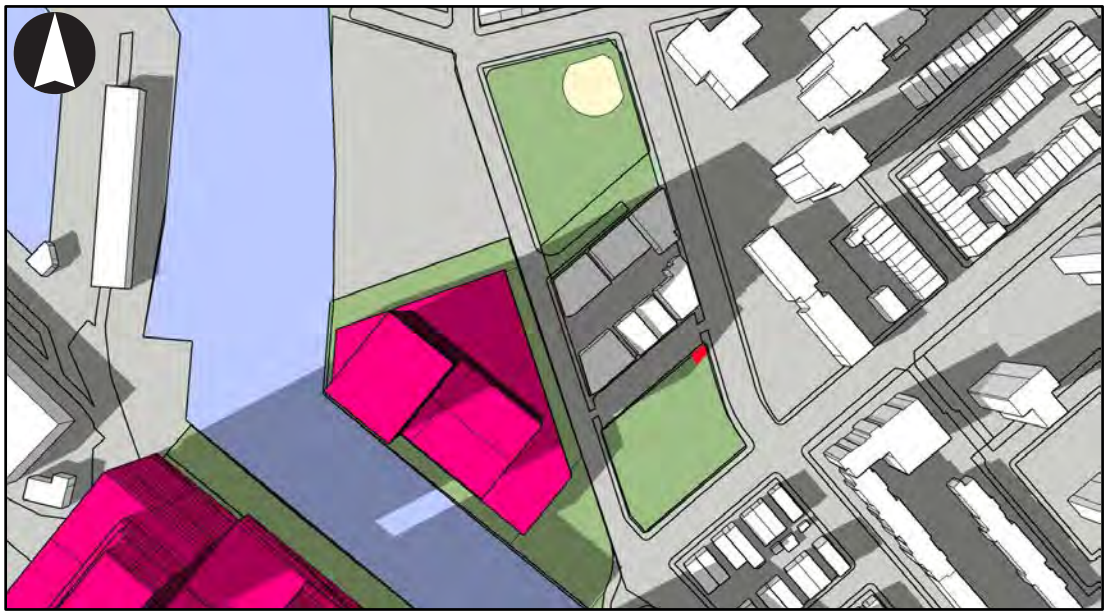
1:15 PM



2:15 PM

With-Action Development | Open Space | East River | Incremental Shadow

Roberto Clemente Ballfield & Jacob's Ladder Playground
Incremental Shadows on March 21/September 21



3:30 PM



4:15 PM

With-Action Development | Open Space | East River | Incremental Shadow

May 6/August 6

On the May 6/August 6 analysis day, incremental shadow from the With-Action development at Projected Site 1 would occur over the sunlight-sensitive resource from 1:19 – 2:29 PM for a total of approximately one hour 10 minutes (refer to **Table D-3**). As shown in **Figure D-6c**, incremental shadow would be extremely limited in size and would move eastward as the analysis day progresses. Incremental shadow would be located in the southern portion of the sunlight-sensitive resource. The area to be cast in incremental shadow is occupied by vegetation and a small portion of open lawn.

December 21

On the December 21 analysis day, incremental shadow from the With-Action development at Projected Site 1 would be cast from approximately 11:32 AM – 2:00 PM and 2:27 – 2:53 PM (approximately 2 hours 54 minutes). As shown in **Figure D-6g** and **D-6h**, incremental shadows from the With-Action development at Projected Site 1 would be limited to the northwestern corner of the sunlight-sensitive resource and would be limited in size. Incremental shadow would cover areas occupied by vegetation, a walking/running trail, open lawn, and portions of the baseball field's outfield.

Assessment

Incremental shadows as a result of the Proposed Actions would reach Roberto Clemente Ballfield on three of the four representative analysis days. Incremental shadow duration would be limited, ranging from 1 hour 10 minutes on the May 6/August 6 analysis day (1:19 – 2:29 PM) to 2 hours 54 minutes on the December 21 analysis day (11:32 AM – 2:00 PM and 2:27 – 2:53 PM). During the growing season, shadow coverage would generally be limited to the northwestern portion of the open space and would not be cast on a single part of the park for any extended period of time, allowing the open space's sunlight-sensitive resources to receive at least the four- to six-hour minimum of direct sunlight specified in the *CEQR Technical Manual*. Vegetation in the park would not be significantly threatened (see **Figures D-6a** through **D-6c**). The area to be cast in incremental shadow during the growing season is outside of the baseball field and occupied by walking/running trails, benches, and other open lawn area. As shown in **Figures D-6a** through **D-6c**, incremental shadow coverage over this area would be limited in size and would therefore not negatively impact utilization of this area of the open space. On December 21, which is outside the growing season in New York City, shadow coverage would be concentrated on the northwestern portion of the open space (see **Figure D-6g and D-6h**). This incremental shadow would cover areas occupied by vegetation, a walking/running trail, open lawn, and portions of the baseball field's outfield. As shadows are not static and move from west to east throughout the day, the park's sunlight-sensitive features would continue to receive direct sunlight on these four representative analysis days.

On each of the three analysis days in which incremental shadow would be cast on the Roberto Clemente Ballfield, most of the open space's sunlight-sensitive features would continue to receive direct sunlight. Incremental shadow would not be cast over any single feature of the open space resource for an extended period of time in a way that would significantly affect the utilization or enjoyment of this open space resource. Therefore, as the extent and duration of the incremental shadows would (1) not significantly reduce direct sunlight exposure on any of the sunlight-sensitive resources found within this open space, and (2) would not significantly alter the public's use of the park or threaten the viability of vegetation or other resources, incremental shadows on the Roberto Clemente Ballfield as a result of the Proposed

Roberto Clemente Ballfield & Jacob's Ladder Playground
Incremental Shadows on May 6/August 6



1:20 PM



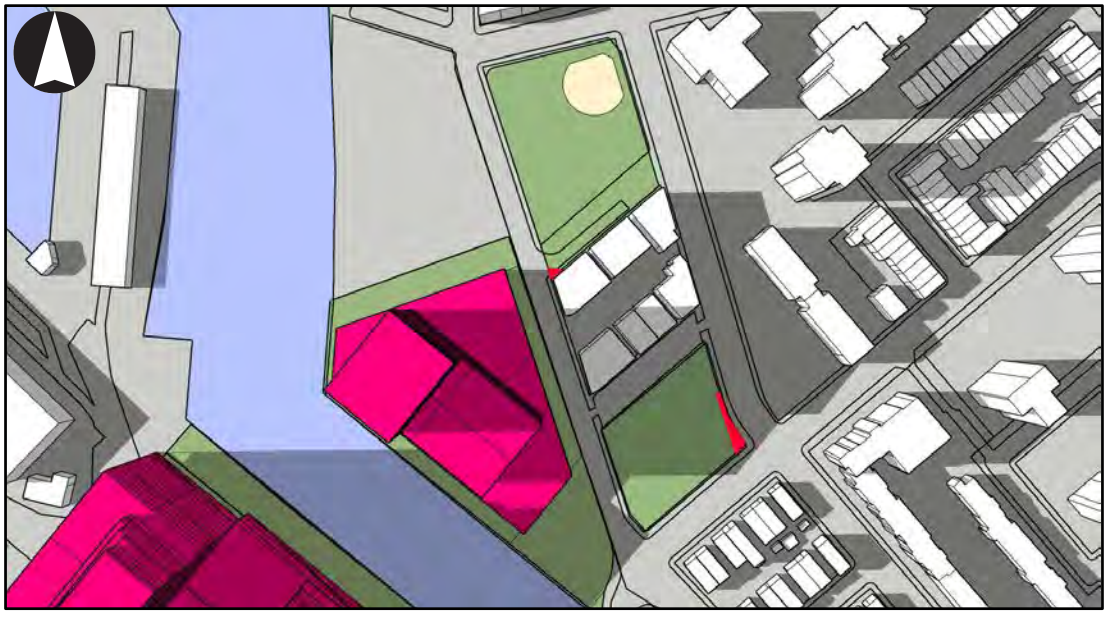
2:20 PM

With-Action Development | Open Space | East River | Incremental Shadow

Roberto Clemente Ballfield & Jacob's Ladder Playground
Incremental Shadows on May 6/August 6



3:15 PM



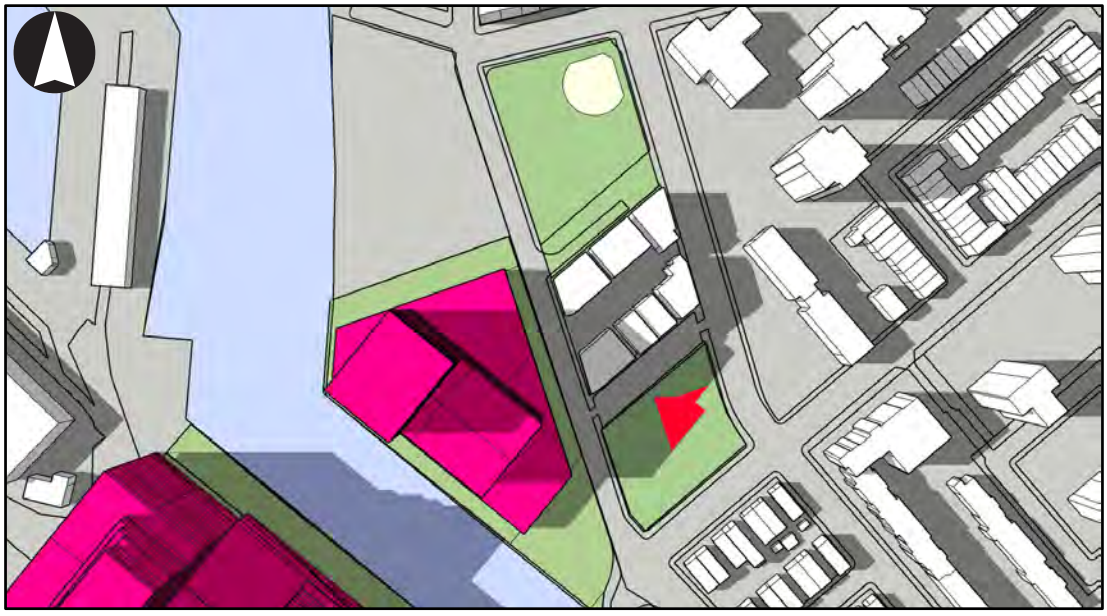
4:30 PM

With-Action Development | Open Space | East River | Incremental Shadow

Roberto Clemente Ballfield & Jacob's Ladder Playground
Incremental Shadows on June 21



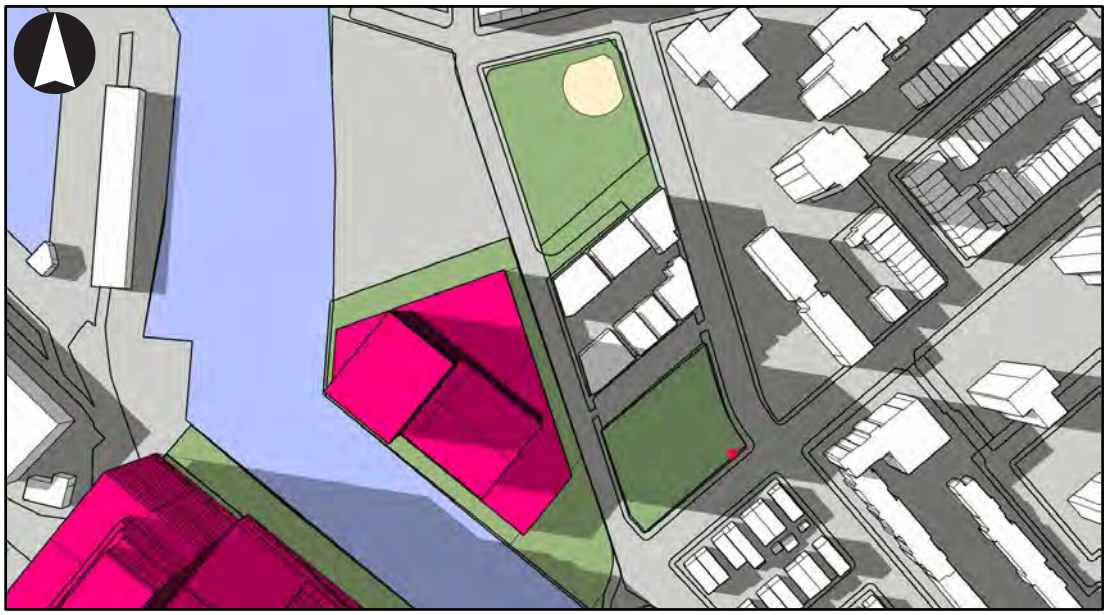
3:00 PM



4:00 PM

With-Action Development | Open Space | East River | Incremental Shadow

Roberto Clemente Ballfield & Jacob's Ladder Playground
Incremental Shadows on June 21



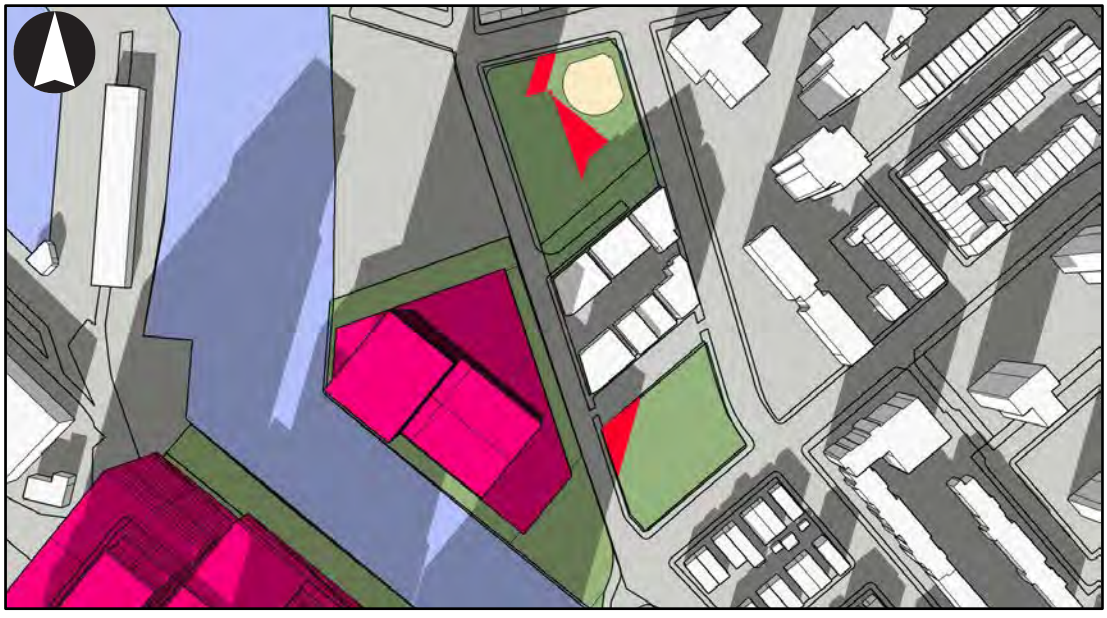
5:00 PM

With-Action Development
Open Space
East River
Incremental Shadow

Roberto Clemente Ballfield & Jacob's Ladder Playground
Incremental Shadows on December 21



12:00 PM



1:00 PM

With-Action Development | Open Space | East River | Incremental Shadow

Roberto Clemente Ballfield & Jacob's Ladder Playground
Incremental Shadows on December 21



2:00 PM



2:53 PM

With-Action Development | Open Space | East River | Incremental Shadow

Actions would not be considered a significant adverse impact, in accordance with *CEQR Technical Manual* methodology.

Jacob's Ladders Playground

Jacob's Ladders Playground is a 1.08-acre playground located east of Kent Avenue and north of Clymer Street. The open space features spray showers, benches, and open grass fields. Incremental shadow from the With-Action development at Projected Site 1 would reach this sunlight-sensitive resource on each of the four analysis days (refer to **Table D-3**).

March 21/September 21

On the March 21/September 21 analysis day, incremental shadow from the With-Action development at Projected Site 1 would occur over the sunlight-sensitive resource from approximately 3:21 – 3:41 PM for a total of approximately 20 minutes (refer to **Table D-3**). As shown in **Figure D-6b**, incremental shadow would be limited in size and would be located at the northern corner of the open space, which is currently occupied by vegetation and open lawn.

May 6/August 6

On the May 6/August 6 analysis day, incremental shadows from the With-Action development would be cast over Jacob's Ladders Playground for a total of approximately 1 hour and 46 minutes (approximately 2:53 – 4:39 PM). As shown in **Figure D-6d**, incremental shadows from the With-Action development would initially be located along the northern lot line of the open space. In the next hour the incremental shadow would move eastward before exiting the open space in the eastern corner of the open space at 4:39 PM. Incremental shadow on this analysis day would be limited in size, and similar to the March 21/September 21 analysis day, would be cast over an area occupied by vegetation and open lawn.

June 21

As shown in **Table D-3**, on the June 21 analysis day, incremental shadows from the With-Action development at Projected Site 1 would reach Jacob's Ladders Playground for approximately 2 hours and 10 minutes (2:54 – 5:04 PM). Incremental shadow would be located in the northern half of the open space (refer to **Figure D-6e** and **D-6f**), which is occupied by benches, walking/running trails, and the spray shower. As the afternoon progresses, incremental shadow coverage would decrease due to the shadow that would be cast by the No-Action development at Projected Site 1 (refer to **Figure D-6f**).

December 21

On the December 21 analysis day, incremental shadow from the With-Action development at Projected Site 1 would be cast over this sunlight-sensitive resource from approximately 12:42 – 2:39 PM (approximately 1 hour and 57 minutes). As shown in **Figure D-6g** and **D-6h**, incremental shadows from the With-Action development at Projected Site 1 would enter the open space in the western corner of the open space and move eastward across the open space. As shown in **Figures D-6g** and **D-6h**, incremental shadow coverage would occur over portions of the lawn in the earlier part of the analysis day and move to portions of the playground/spray shower in the later afternoon. The size of the incremental shadow

would not increase on this analysis day due to the shadow that would be cast by the No-Action development at Projected Site 1.

Assessment

Incremental shadows as a result of the Proposed Actions would reach Jacob's Ladders Playground on each of the four representative analysis days. Incremental shadow duration would range from 20 minutes on the March 21/September 21 analysis day (3:21 – 3:41 PM) to 2 hours and 10 minutes on the June 21 analysis day (2:54 – 5:04 PM). During the growing season, shadow coverage would generally be limited to the northern portions of the open space and would not be cast on a single part of the park for any extended period of time, allowing the open space's sunlight-sensitive resources to receive at least the four- to six-hour minimum of direct sunlight specified in the *CEQR Technical Manual*. Vegetation in the park would not be significantly threatened (see **Figures D-6a** through **D-6f**). During the growing season, incremental shadow would be limited to small portions of the open lawn and portions of the spray shower and playground. Incremental shadow during the growing season would not be cast over any single feature of the open space resource, particularly the spray shower, for an extended period of time in a way that would negatively affect the open space resource's utilization. On December 21, which is outside the growing season in New York City, shadow coverage would move across the open space throughout the day until the end of the analysis day (see **Figure D-6g and D-6h**). Incremental shadow would be cast on portions of the open lawn, spray shower, and playground. As shadows are not static and move from west to east throughout the day, the park's sunlight-sensitive features would continue to receive direct sunlight on these four representative analysis days, particularly in the morning and early afternoon hours.

Therefore, as the extent and duration of the incremental shadows would (1) not significantly reduce direct sunlight exposure on any of the sunlight-sensitive resources found within this open space, and (2) would not significantly alter the public's use of the park or threaten the viability of vegetation or other resources, incremental shadows on the Jacob's Ladders Playground as a result of the Proposed Actions would not be considered a significant adverse impact, in accordance with *CEQR Technical Manual* methodology.

Project-Generated Open Space

As discussed in **Attachment A, "Project Description,"** the Proposed Actions would facilitate the development of approximately 133,617 sf of new waterfront public space. Due to the location of the project-generated open space east and west of the With-Action development at Projected Site 1, the project-generated open space would experience shadows throughout each analysis day. Based on the layout of the project-generated open space, areas receiving direct sunlight would be available throughout each of the four analysis days. Shadows cast by the With-Action development over the project-generated open space would not affect the usability or enjoyment of the open space. During all seasons, the project-generated open space would provide new sunlit areas during times when other open space resources are experiencing areas of incremental shadows from the With-Action development.

V. CONCLUSIONS

A detailed shadows analysis determined that the Proposed Actions would not result in significant adverse shadows impacts. While the Proposed Actions and associated development would cast incremental shadows on Bridge Park, Trinity Park, the East River, Steuben Playground, Roberto Clemente Field, and

Jacob's Ladders Playground, the detailed shadows analysis determined that the duration and coverage of the incremental shadows on each of these sunlight-sensitive resources would be short and relatively small in geographic extent, and therefore, would not have significant adverse effects on any vegetation or adversely affect the usability/enjoyment of any affected sunlight-sensitive resource. Therefore, the Proposed Actions would not result in significant adverse shadow impacts on any sunlight-sensitive resource.

ATTACHMENT E
HISTORIC & CULTURAL RESOURCES

I. INTRODUCTION

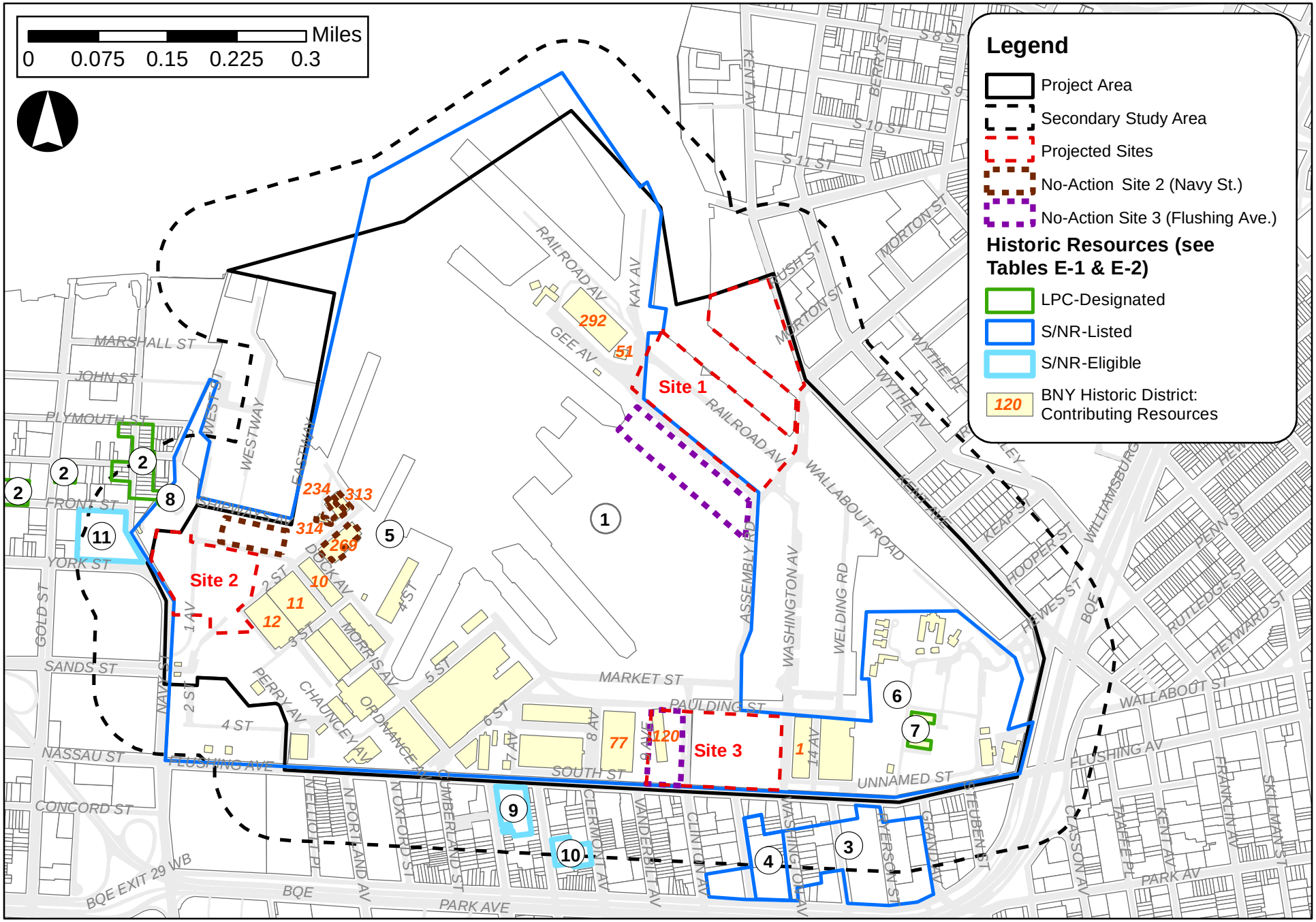
The 2020 *City Environmental Quality Review* (CEQR) *Technical Manual* identifies historic resources as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. This includes designated New York City Landmarks (NYCL); properties calendared for consideration as landmarks by the New York City Landmarks Preservation Commission (LPC); properties listed in the State/National Registers of Historic Places (S/NR) or contained within a district listed in or formally determined eligible for S/NR listing; properties recommended by the New York State Board for listing on the S/NR; National Historic Landmarks (NHLs); and properties not identified by one of the programs listed above, but that meet their eligibility requirements. An assessment of historic/archaeological resources is usually needed for projects that are located adjacent to historic or landmark structures or within historic districts, or projects that require in-ground disturbance, unless such disturbance occurs in an area that has already been excavated.

As discussed in this attachment, the primary study area (the "Project Area") is located in the S/NR-listed Brooklyn Navy Yard Historic District and contains several NYCLs. Therefore, it is necessary to assess the potential impacts of the Proposed Actions on historic architectural resources. According to *CEQR Technical Manual* guidance, impacts on historic architectural resources are considered on those sites affected by the Proposed Actions and in the area surrounding identified development sites. The historic resources study area is therefore defined as the Project Area plus an approximate 400-foot radius around the Project Area (the "Secondary Study Area" as shown in **Figure E-1**), which is typically adequate for the assessment of historic architectural resources in terms of physical, visual, and historical relationships.

Archaeological resources are considered only in those areas where new excavation or ground disturbance is likely and would result in new in-ground disturbance as compared to the No-Action Condition; these are limited to sites that may be developed as a result of the Proposed Actions. Because the Proposed Actions would induce development that could result in new in-ground disturbance in areas identified as potentially sensitive for archaeological resources by the LPC, an assessment of the potential effects of the Proposed Actions on archaeological resources is provided below. .

II. DEVELOPMENT BACKGROUND

Prior to the arrival of European colonists, Brooklyn was inhabited by the Canarsie Indians, a largely autonomous tribe of the Leni Lenape. They called the crescent-shaped bay in the northern portion of the study area "Mahrenhanreck," meaning sandy beach or bay. The site of the BNY was a swampland, with marshes and mudflats nearly reaching what is now Flushing Avenue. During high tide, most of the land that encompasses the present BNY flooded except for two hills to the west and the east of the bay. The western hill, near present day Vinegar Hill, contained a Canarsie settlement named "Rinnegokonck."



Special Brooklyn Navy Yard District

Figure E-1
Historic Resources

In 1637, Joris Jansen de Rapalje purchased 335 acres of land from the Canarsie tribe, including most of the study area, for use as a farm. The Rapalje family emigrated from Wallonia, Belgium, and the land soon became known as "Wallabout." The family retained the greater portion of this original tract for over a century, using it as farmland with a dam and mill. During the Revolutionary War, Wallabout was an anchorage spot for the British fleet and a mooring area for their prison ships. At the conclusion of the war in 1783, the British abandoned the shore, and, as the family members were loyalists, the Rapalje lands were seized by the state. John Jackson and his brothers subsequently purchased much of the land that encompasses the current-day BNY, constructing a shipyard on the site.

The U.S. Navy was founded in 1794, and Congress began considering options for building new ships at government-owned yards rather than at rented or private facilities. In 1800, the Jackson shipyard was put up for auction and purchased by the U.S. Navy. Virtually no activity occurred on the site until the Commandant's House, Quarters A (Resource #8 in **Figure E-1**) was constructed on the western hill of the yard in 1805-06. The War of 1812 brought the first sustained period of activity to the Navy Yard, and by 1815, the surrounding Brooklyn waterfront began to develop rapidly. Brooklyn was incorporated as a village in 1816, and in 1817, Samuel Evans (Commandant of the Navy Yard) and John Little established a ferry from the foot of Little Street to Manhattan, providing transportation for commuting BNY workers.

By the 1820s, port-related businesses were prospering in Brooklyn as a result of successful foreign trade, coastal shipping, and the opening of the Erie Canal in 1825. The busy waterfront attracted craftsmen in trades such as sail-making, carpentry, cabinetry, and rope-making, who were alternately employed by private builders and the Navy Yard as work became available. In the 1826, Laommi Baldwin, Jr., the chief engineer for naval yards in the U.S., created a plan for the development of the BNY, with one broad avenue running northwest-southeast and two cross streets, as well as the outlines of several building sites. Until World War I, nearly all development in the BNY adhered to Baldwin's plan.

The growing navy yard employed an increasingly large number of men, and Brooklyn's population expanded so rapidly in the early decades of the 19th century that it was chartered as a city in 1834. The large population increase coincides with the initial residential development in Vinegar Hill, to the west of the Navy Yard, and in Wallabout, to the south, much of which accommodated laborers in the yard. Rapid development of these neighborhoods continued until the Civil War, as Brooklyn became the third largest urban center in the U.S.

During the Civil War, the BNY played a major role in converting, outfitting, and building ships for use by the Union Navy. These activities solidified the BNY's role as one of the most important shipyards in the country. The increased activity required a large augmentation of Navy Yard personnel: by 1861, there were over 3,700 men working at the yard, and by 1865, employment soared to over 6,200 men.

Significant changes occurred in the study area in the second half of the 19th century. In the years after the Civil War, the Navy and its yards fell into decline. Shipyards like the BNY were poorly suited to handle the transition to the larger iron and steel ships required for modern warfare, and the advent of steam vessels eliminated the need for the skilled craftsmen previously employed in navy yard shipbuilding. Concurrently, the Wallabout neighborhood between Flushing and Park Avenues, to the south of the BNY, transitioned from a residential to a predominately industrial area, paralleling the major industrialization of Brooklyn during this time.

New transportation options during the latter half of the 19th century were also spurring dense residential development in Brooklyn. In 1883, the Brooklyn Bridge opened, and in 1885, Brooklyn's first elevated

railroad, the Lexington Avenue Line, was completed between the Brooklyn Bridge and Broadway, running along York and Navy Streets in the study area. By this time, Vinegar Hill, immediately west of the BNY, had developed into a dense residential and industrial neighborhood anchored by commercial strips on Hudson Avenue. Although immigrants of many backgrounds inhabited the area, it was known as "Irishtown." Most residents worked on the waterfront, in the BNY, or in the expanding industries located in Wallabout.

In 1884, the portion of the BNY just north of Flushing Avenue between Washington Avenue and Ryerson Street was leased to the City of Brooklyn from the Navy, in exchange for the City providing water to the BNY. In 1896, the Wallabout Market opened on the site, eventually becoming Brooklyn's primary food market and, due to its close proximity to shipping centers on the Brooklyn waterfront, one of the largest such markets in the world.

By the early 20th century, Brooklyn was the fourth largest manufacturing center in the country and Wallabout had developed into a significant enclave for large industries. Although Wallabout attracted a variety of industrial businesses, the area's location adjacent to the Wallabout Market resulted in a concentration of factories and warehouses involved with food production, including chocolates, bakery products, and cold storage businesses.

Preparation for World War I lead to increased employment and activity at the BNY. The Yard's workforce grew from 6,000 to 18,000 employees by 1918, as new ships and buildings were constructed. However, similar to other post-war periods, BNY employment dropped in the 1920s and very little new construction occurred on the site. During the 1920s and 1930s, many houses in the Vinegar Hill neighborhood to the west of the BNY were razed for truck storage facilities, parking lots, and warehouses, as well as the Con Ed power plant that still stands today to the northwest of the yard. The BNY and Wallabout neighborhood became known as the "Barbary Coast" during the Great Depression, with flophouses, saloons, gambling dens, and a red-light district providing entertainment for sailors.

Preparations for World War II required the expansion and reconfiguration of the BNY in order to create a first-class, state-of-the-art shipyard. In 1939, the Federal government condemned 21 lots to the west of the yard (which now accommodate the Red Hook Water Pollution Control Plant), and in 1941, the Wallabout Market was demolished. Both of these parcels of land were acquired by the Navy and subsequently redeveloped. The massive transformation of the yard allowed it to be designated a battleship building yard, and as during other war times, employment at the BNY soared.

Following World War II and the Korean War, the BNY and surrounding area fell into decline. The demand for ship production plummeted as new ship construction contracts were awarded to private shipyards that were larger, more efficient, and had modern technology to develop nuclear-powered vessels. From the 1940s to the 1960s, employment at the BNY shrunk from 70,000 workers to fewer than 7,000 workers.

Concurrently, the heavy manufacturing uses of Wallabout had outgrown the area's narrow streets and aging factories, and like other industrial uses in Brooklyn, closed or left the City during the late 1950s and 1960s. Much of the existing population followed the employment base to the suburbs and other areas of the country, resulting in significant abandonment in the area. In 1952, the City razed several blocks of the Vinegar Hill neighborhood in order to build the Farragut Houses. In 1960, the Brooklyn-Queens Expressway (BQE) was completed, cutting through the neighborhood to the south of the study area. A by-product of the post-war urban renewal and highway projects was a massive reconfiguration of the street layout in and around the study area. Additionally, the 1961 Zoning Resolution designated the area for

manufacturing, resulting in the construction and expansion of waste transfer stations, power plants, and sewage treatment centers in the isolated area.

The BNY was closed in 1966, and in the 1970s, Seatrain Inc., a container ship company, moved into the site. However, neither Seatrain nor its successor companies at the BNY were successful, largely due to the need for large ships that couldn't handle the congested rivers, small berths, and low bridges of New York City. As a result, much of the yard became occupied by light industrial uses across various sectors. To the west in Vinegar Hill, many new residents, including a large number of artists, began to move into the inexpensive historic buildings.

During the late 20th century, much of the area immediately east and northeast of the BNY was redeveloped with new residential buildings. In 1974, the Taylor-Wythe Houses were constructed on the blocks bounded by Wythe Avenue, Ross Street, and Clymer Street. Immediately south, the Bedford Gardens complex was completed in 1975. In the 1980s and early 1990s, most of the blocks bounded by Clymer Street, Wythe Avenue, Keap Street, and Kent Avenue were redeveloped with four-story condominium buildings.

Residential development and conversions in the area surrounding the BNY have continued into the 21st century. For example, in 2011, several loft buildings in the Wallabout neighborhood were legally converted into residences, and the Navy Green condominiums at 14-38 Vanderbilt Avenue were completed in 2015-17. However, many of the buildings in the area are still used for small-scale manufacturing or warehousing, creating a unique mixed-use community. Today, the BNY is thriving as a modern, sustainable industrial park with a variety of commercial, manufacturing, and institutional uses. As detailed below, the Yard is undergoing further redevelopment with commercial, industrial, and community facility uses in order to create more job opportunities for New York City.

III. ARCHAEOLOGICAL RESOURCES

Archaeological resources are the physical remnants, usually buried, of past activities on a site. They can include precontact archaeological resources associated with the Native American populations who used or occupied a site, or archaeological resources associated with the historic period, which began with the settlement of Europeans in the New York area beginning in the 17th century. In developed areas and in urban regions, archaeological resources are often disturbed or destroyed by grading, excavation, and the installation and improvement of infrastructure. However, some archaeological resources do survive in an urban environment and are often sealed beneath the surface and protected from further disturbance.

In accordance with *CEQR Technical Manual* guidance, archaeological resources are assessed only in areas where excavation is likely and would result in new in-ground disturbance. In-ground disturbance is any disturbance to an area not previously excavated, including new excavation that is deeper and/or wider than previous excavation on the same site. For projects that would result in new in-ground disturbance, assessment of both prehistoric and historic archaeological resources is appropriate. As detailed in **Attachment A, "Project Description,"** the Proposed Actions would facilitate new in-ground disturbance on two sites in the Project Area: Projected Site 2 (the Navy Street site) and Projected Site 3 (the Flushing Avenue site). As such, an assessment of archaeological resources is necessary for the Proposed Actions.

In a letter dated April 23, 2021 (provided in **Appendix 5**), LPC determined that, based on a review of archaeological sensitivity models and historic maps, there is potential for the recovery of remains from

colonial period burials of prisoners once held on ships in Wallabout Bay, as well as recovery of remains from Civil War occupation. Accordingly, LPC recommended that an archaeology documentary study be performed for the sites experiencing new in-ground disturbance as a result of the Proposed Actions to clarify these initial findings and provide the threshold for the next level of review, if such review is necessary. To ensure that potential archaeological resources are not impacted by project-generated construction, an archaeology documentary study and subsequent archaeological reports and/or testing, as needed, will be completed at Projected Sites 2 and 3 subsequent to the Uniform Land Use Review Procedure (ULURP) process as per the 2018 *Guidelines for Archaeological Work in New York City*. Therefore, the Proposed Actions would not result in any significant adverse archaeological impacts.

IV. ARCHITECTURAL RESOURCES

Criteria & Regulations

Once the study area was determined, an inventory of officially recognized architectural resources was compiled. Criteria for listing on the National Register are in the Code of Federal Regulations, Title 36, Part 63. As noted in the 2020 *CEQR Technical Manual*, Chapter 9, Section 160, LPC has adopted these criteria for use in identifying significant architectural resources for CEQR review. Following these criteria, districts, sites, buildings, structures, and objects are eligible for the State and National Registers if they possess integrity of location, design, setting, materials, workmanship, feeling, and association, and: (1) are associated with events that have made a significant contribution to the broad patterns of history (Criterion A); (2) are associated with significant people (Criterion B); (3) embody distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction (Criterion C); or (4) may yield [archaeological] information important in prehistory or history. Properties younger than 50 years of age are ordinarily not eligible, unless they are of exceptional significance. Official determinations of eligibility are made by the New York State Office of Parks, Recreation & Historic Preservation (OPRHP).

In addition, LPC designates historically significant properties in the City as NYCLs and/or Historic Districts, following the criteria provided in the Local Laws of the City of New York, New York City Charter, Administrative Code, Title 25, Chapter 3. Buildings, properties, or objects are eligible for landmark status when a part is at least 30 years old. Landmarks have a special character or special historical or aesthetic interest or value as part of the development, heritage, or cultural characteristics of the City, State, or nation. There are four types of landmarks: individual landmark, interior landmark, scenic landmark, and historic districts. In addition to identifying architectural resources officially recognized in the study area (referred to herein as known architectural resources), potential architectural resources within the study area were also identified. Once the architectural resources in the study area were identified, the Proposed Actions were assessed for both direct physical effects and indirect visual and contextual effects on architectural resources.

Existing Conditions

Designated Historic Resources

As shown in **Figure E-1**, the Study Area encompasses four historic districts and four individual landmarks designated by the LPC, listed on the S/NR, and/or designated as NHLs. **Table E-1** provides a list of these resources, photos of which are presented in **Figure E-2**. The following provides a brief description of each of the designated historic resources identified in the Study Area. Please refer to **Appendix 4** for additional information regarding the existing conditions of each Projected and No-Action Site.

Table E-1: Designated Historic Resources

Map No.[1]	Name	Address	Block, Lot	NHL[2]	S/NR[3]	NYCL[4]	Location
1	Brooklyn Navy Yard Historic District	Roughly bounded by Navy Street, Flushing Avenue, Kent Avenue, and the East River	2023, 1, 50, 100 + 150		X		Project Area
2	Vinegar Hill Historic District	Hudson Avenue between Front and Plymouth Streets; 69-73 Gold Street; and Front Street between Bridge and Gold Streets	Multiple			X	Secondary Study Area
3	Wallabout Industrial Historic District	Roughly bounded by Clinton Avenue, Flushing Avenue, Grand Avenue, and the BQE	Multiple		X		Secondary Study Area
4	Rockwood Chocolate Factory Historic District	54-88 Washington Avenue; 13-53 Waverly Avenue; and 255-275 Park Avenue	Multiple		X		Secondary Study Area
5	Dry Dock #1	Dock Street at Third Street	2023, p/o 1		X[5]	X	Project Area
6	Surgeon's House	Flushing Avenue opposite Ryerson Street	2023, p/o 150		X[5]	X	Project Area
7	Old United States Naval Hospital	Hospital Road between Squibb Place and Oman Road	2023, p/o 150		X[5]	X	Project Area
8	Commandant's House, Quarters A	Hudson Avenue and Evans Street	2023, 100	X	X[5]	X	Secondary Study Area

Notes:

[1] Refer to **Figure E-1**.

[2] Designated a National Historic Landmark.

[3] Listed on the New York State and National Registers of Historic Places.

[4] Designated a New York City Landmark.

[5] Considered a contributing resource in the S/NR-listed Brooklyn Navy Yard Historic District.

Designated Historic Districts

1. Brooklyn Navy Yard Historic District (S/NR-Listed): *Roughly bounded by Navy Street, Flushing Avenue, Kent Avenue, and the East River (Block 2023, Lots 1, 50, 100, + 150)*

As shown in **Figure E-1**, the majority of the Project Area is located within the Brooklyn Navy Yard Historic District, which encompasses 236 acres and includes the largest intact area associated with the shipyard during the period of significance, from the construction of the Yard's first commandant's quarters in 1805-

06, to the Yard's decommissioning in 1966. The BNY Historic District is generally bounded by Wallabout Bay and the East River to the north and Flushing Avenue (the BNY's consistent boundary over time) to the south. To the west, the boundary generally follows the border of the BNY as indicated on historic maps, but excludes a section of the northwest corner that lost integrity when it was redeveloped into the Red Hook Water Pollution Control Plant (WPCP) in 1987. To the east, the boundary is irregular and was drawn to exclude the area that was historically part of the BNY but has suffered a near complete loss of integrity.

The BNY Historic District includes resources representing six significant periods of the BNY's history, which correspond with important periods in the history of the U.S. Navy itself. As it exists today, the BNY Historic District most clearly illustrates the site's significance during World War II, when it reached its largest and most fully developed extent. However, its plan retains features dating to its establishment in 1801, and its pattern of development can be understood despite changes in time, land use, configuration, and naval technology.

As presented in **Figures E-2a** and **E-2b**, buildings in the BNY Historic District include several basic types: fabrication and shop buildings, warehouses, office buildings, officers' quarters and barracks, service buildings, and hospital buildings. Structures in the district include piers, dry docks, and cranes. Objects in the district include flagpoles and monuments. The majority of the district's buildings are of brick, steel-framed, or reinforced-concrete construction, and a smaller number are of granite or wood-framed construction. Most buildings are from one to three stories, with a smaller number of buildings that range from six to 18 stories. The buildings incorporate a variety of styles and influences, including Greek Revival, Romanesque Revival, Italianate, Second Empire, American Round-Arch, Art Deco, Moderne, as well as modern industrial design. Although many buildings have undergone alterations, relatively few alterations have been sufficiently major to obscure the buildings' historic character. In terms of circulation, remnants of the internal rail system—primarily in the form of partially exposed tracks—are also found at various points in the district.

The Brooklyn Navy Yard Historic District is divided into three functional groupings, which are roughly distinguished by geographical area and period(s) of development: (1) the residential sections of the Commandant's House and grounds and Officer's Row, at the western edge of the district; (2) the shipyard, in the center of the district; and (3) the U.S. Naval Hospital campus within the Naval Annex, in the southeastern corner of the district.

2. Vinegar Hill Historic District (LPC-Designated): ***Hudson Avenue between Front and Plymouth Streets; 69-73 Gold Street; and Front Street between Bridge and Gold Streets***

The Vinegar Hill Historic District encompasses portions of six blocks fronting Front Street (midblock between Bridge and Gold streets), Gold Street (along and south of Water Street), and Hudson Avenue (between Front and Plymouth streets); as presented in **Figure E-1**, the easternmost portion of the Vinegar Hill Historic District is located within the Secondary Study Area. The Vinegar Hill Historic District, which comprises small groups of brick, Greek-Revival rowhouses (see **Figure E-2c**), is a residential remnant of the early 19th-century neighborhood that occupied the blocks between Brooklyn Bridge and the Brooklyn Navy Yard. By the late 19th century, the neighborhood became known by the popular name "Irishtown" because of the large number of Irish residents, although other ethnic groups also lived in the area. Industrial expansion and transportation improvements in the early 20th century resulted in the demolition of many of the original structures. The houses that survive within the Vinegar Hill Historic District retain their historic architectural character and create a distinct sense of place, recalling a significant era in Brooklyn's history.



1. View southeast on Gee Avenue of BNY Building 292 and Site 1.



2. View southeast on Railroad Avenue of BNY Building 292 and Site 1.





3 + 4. View southwest on 2nd Street from Morris Avenue, with BNY Buildings 11, 11A, 12, and 12B to the left and Site 2 to the right.



5. View northwest from 5th Street of BNY Buildings 20, 41, 127, and 131.



6. View west on Paulding Street of Site 3 and BNY Buildings 77 and 120.





7 + 8. Front and side facades of BNY Building 120 and surrounding Site 3, with BNY Building 77 in the background.



5. Looking north along Hudson Avenue from Evans Street in the Vinegar Hill Historic District.



6. Buildings on the eastern side of Hudson Avenue in the Vinegar Hill Historic District.



7. Looking northeast along Hudson Avenue from north of Front Street in the Vinegar Hill Historic District.

3. Wallabout Industrial Historic District (S/NR-Listed): ***Roughly bounded by Clinton Avenue, Flushing Avenue, Grand Avenue, and the BQE***

The Wallabout Industrial Historic District comprises 40 contributing building located on parts of five blocks partially located within the Secondary Study Area (refer to **Figure E-1**). The industrial buildings of the Historic District face onto Clinton, Waverly, Washington, Grand, and Flushing Avenues, Hall and Ryerson Streets, and Park Place (encompassing buildings in the S/NR-Listed Rockwood Chocolate Factory Historic District, discussed below). The buildings in the historic district (shown in **Figure E-2d**, Photos 8 and 9) were all built as factories, industrial warehouses, or related uses, or, in one case, as tenements later converted into an industrial warehouse. The buildings illustrate the history of late 19th and early 20th-century American industrial architecture, moving from buildings of mill construction built in the 1890s to buildings of reinforced concrete erected up to World War II, when building in the district ceased.

The Wallabout Industrial Historic District represents an important cluster of buildings that reflect the paramount importance of industry in Brooklyn as both the independent city and, after 1898, as the borough of Brooklyn developed into one of America's major industrial centers. The buildings are also representative examples of industrial architecture from this period, including brick buildings with load-bearing walls and a significant cluster of reinforced-concreate factories. Several of these industrial buildings and complexes were constructed by companies that were leaders in their fields and/or were designed by nationally significant architecture and engineering firms.

4. Rockwood Chocolate Factory Historic District (S/NR-Listed): ***54-88 Washington Avenue; 13-53 Waverly Avenue; and 255-275 Park Avenue***

As shown in **Figure E-1**, the Rockwood Chocolate Factory Historic District is located within the Wallabout Industrial Historic District, detailed above. The Rockwood Chocolate Factory is architecturally and historically significant as an intact representative example of a late 19th to early 20th-century factory complex in Brooklyn. The Rockwood Chocolate Company was one of many food-related industries that developed on the periphery of the Wallabout Market in the 1890s; it constructed 17 buildings on the site between 1891 and 1928. As shown in **Figure E-2d** (Photos 10 and 11), these buildings were constructed in multiple styles (by several different architects, including J.G. Glover, the Parfitt Brothers, and Ernest Flagg), but the majority of the buildings on the site show the influence of the Romanesque Revival and the Second Renaissance Revival periods. The complex retains a strong visual cohesiveness as a result of the use of complementary building materials and decorative elements during the multiple phases of development. The Rockwood Chocolate Company prospered on the site until the 1950s, becoming one of the largest chocolate-manufacturing and cocoa-processing facilities of its kind in the world.

Designated Individual Landmarks

5. Dry Dock #1 (LPC-Designated; Located in the S/NR-Listed Brooklyn Navy Yard Historic District): ***Dock Street at Third Street (Block 2023, p/o Lot 1)***

As presented in **Figure E-1**, Dry Dock #1 is located within the Project Area at the northeasterly prolongation of Third Street; it is located within the shipyard section of the S/NR-listed Brooklyn Navy Yard Historic District. Dry docks are great chambers below water level used for the repair and construction of ships. The construction of Dry Dock #1 was one of the great feats of American engineering in the first half of the 19th century, overcoming great problems, including dealing with the difficult site where collapsing cofferdams, underground springs, and quicksand undermined the foundation. The Dry Dock,



8. Looking south along Ryerson Street from Flushing Avenue in the Wallabout Industrial Historic District.



9. Looking south along Hall Street from Flushing Avenue in the Wallabout Industrial Historic District.



10. Northeast corner of Waverly and Park Avenues in the Rockwood Chocolate Factory Historic District.



11. Northwest corner of Washington and Park Avenues in the Rockwood Chocolate Factory Historic District.

shown in **Figure E-2e** (Photo 12), was primarily the work of William J. McAlpine, a prominent figure in American engineering. Upon completion in 1851, Dry Dock #1 was the first permanent dry dock in the New York area, bringing the Naval Shipyard in New York up to par with the navy yards in Boston and Norfolk. For over 150 years, the granite walls of Dry Dock #1 have remained in good condition, functioning without need of major repairs, while other, newer dry docks have had their brick or concrete walls disintegrate and crumble. Dry Dock #1 also features a floating gate at the river, which can be raised and floated free to one side, eliminating the need for hinges and, thus, permitting the largest possible ships to enter.

6. Surgeon's House (LPC-Designated; Located in the S/NR-Listed Brooklyn Navy Yard Historic District): *Flushing Avenue opposite Ryerson Street (Block 2023, p/o Lot 150)*

As presented in **Figure E-1**, the Surgeon's House is located on Lot 150 within the Project Area; it is located within the U.S. Naval Hospital campus section of the S/NR-listed Brooklyn Navy Yard Historic District. The Surgeon's House dates from the Civil War and was built as the quarters of the head surgeon of the U.S. Marine Hospital. The property on which the Surgeon's House is located was originally farmland; it was sold to the U.S. Navy in in 1824. With the outbreak of the Civil War, the Brooklyn Navy Yard immediately began to expand its activities, including meeting the war-time demands of the wounded and ill Navy men who began arriving in New York. The Surgeon's House (shown in **Figure E-2e**, Photo 13) was built for the chief surgeon of the U.S. Naval Hospital in 1863 and is constructed of brick with a concave mansard roof that shows the influence of the French Second Empire style in the U.S. The structure was designed by True W. Collins and Charles Hastings.

7. Old United States Naval Hospital (LPC-Designated; Located in the S/NR-Listed Brooklyn Navy Yard Historic District): *Hospital Road between Squibb Place and Oman Road (Block 2023, p/o Lot 150)*

As presented in **Figure E-1**, the Old U.S. Naval Hospital Building is located on Lot 150 within the Project Area; it is located within the U.S. Naval Hospital campus of the S/NR-listed Brooklyn Navy Yard Historic District. Like the Surgeon's House, the Old U.S. Naval Hospital Building was originally located on farmland that was sold to the U.S. Navy in 1824. Constructed in 1830-1838, with wings added in 1840 and circa 1862, it was designed by Martin E. Thompson, one of the most prominent architects of the pre-Civil War period. As shown in **Figure E-2e** (Photo 14), the Greek Revival-style building is built of Westchester Marble and is distinguished by eight square stone piers along its main façade.

8. Commandant's House, Quarters A (NHL; LPC-Designated; Located in the S/NR-Listed Brooklyn Navy Yard Historic District): *Hudson Avenue and Evans Street (Block 2023, Lot 100)*

As presented in **Figure E-1**, the Commandant's House, Quarters A is located immediately west of the project area, but within the S/NR-listed Brooklyn Navy Yard Historic District. The Commandant's House, Quarters A (shown in **Figure E-2e**, Photo 15) is a two-story frame house that was built for the chief officer of the Naval Yard in 1805-06 and represents the Federal Style of architecture at its zenith. The building is one of the only buildings in the five boroughs attributed to the eminent architect Charles Bulfich, in association with John McComb, Jr., and features many interesting architectural details, including round-headed dormer windows and a cornice.



12. Dry Dock #1 (Resource 5)



13. Surgeon's House (Resource 6)



14. Old U.S. Naval Hospital (Resource 7)



15. Commandant's House, Quarters A (Resource 8)

Potential Historic Resources

The Study Area was also assessed to identify any potential historic architectural resources that are not designated or listed landmarks. According to the *CEQR Technical Manual*, historic resources can be considered significant if they meet the criteria for listing on the S/NR, established by the U.S. Secretary of the Interior, or criteria for local designation set forth in the New York City Landmarks Law. The S/NR criteria address both historic and architectural significance: a property may be associated with significant events or persons or may be a notable representation of a particular architectural style or the work of an important architect or builder. Similarly, the criteria of the New York City Landmarks Law include historical, architectural, aesthetic, and cultural value.

As shown in **Figure E-1**, there are three properties eligible for listing on the S/NR in the Secondary Study Area. **Table E-2** provides a list of these resources, photos of which are presented in **Figure E-3**. The following provides a brief description of each of the potential historic resources identified.

Table E-2: Potential Historic Resources

Map No.[1]	Name	Address	Block, Lot	S/NR-Eligible[3]	NYCL-Eligible[4]	Location
9	Former Oxley, Giddings, & Enos Factory	One Carlton Avenue	2031, 16	X		Secondary Study Area
10	Sacred Heart R.C. Church Complex	37 Adelphi Street / 28 Clermont Avenue	2032, 5	X		Secondary Study Area
11	P.S. 307	209 York Street	56, 7	X		Secondary Study Area

Notes:

[1] Refer to **Figure E-1**.

[2] Eligible for listing on the New York State and National Registers of Historic Places.

[3] Potentially eligible for designation by the New York City Landmarks Preservation Commission.

Eligible Individual Landmarks

9. Former Oxley, Giddings, & Enos Factory (S/NR-Eligible): ***One Carlton Avenue (Block 2031, Lot 16)***

As presented in **Figure E-1**, the Former Oxley, Giddings, & Enos Factory is located in the Secondary Study Area on Flushing Avenue between Carlton Avenue and Adelphi Street. Oxley, Giddings, & Enos was a very successful gas light manufacturing company, specializing in ornate brass chandeliers and wall lighting. Their six-story, Victorian Gothic Revival-style factory was designed by William Field & Son and constructed in 1886. As shown in **Figure E-3** (Photo 1), the brick building has segmental-arched window openings and brick corbelling in the parapet. The building survives as an intact example of industrial architecture in Brooklyn.



1. Former Oxley, Giddings, and Enos Factory



2. Sacred Heart Roman Catholic Church



3. P.S. 307



4. P.S. 307

10. Sacred Heart Roman Catholic (R.C.) Church Complex (S/NR-Eligible): *37 Adelphi Street / 28 Clermont Avenue (Block 2032, Lot 5)*

As presented in **Figure E-1**, the Sacred Heart R.C. Church Complex is located in the Secondary Study Area and fronts both Clermont Avenue and Adelphi Street between Park and Flushing Avenues. The High Victorian Gothic-style church, shown in **Figure E-3** (Photo 2), was constructed in 1874-77 and designed by Thomas F. Houghton, a major designer of Catholic churches in Brooklyn during the second half of the 19th century. Established as a parish in 1871, Sacred Heart served a largely working-class Irish immigrant community. In addition to the church, the complex includes three contributing ancillary buildings: a Second Empire-style rectory located behind the church on Adelphi Street and constructed in 1876; the Houghton-designed Sacred Heart Institutes, located on Adelphi Street and constructed in 1887; and a convent on Clermont Avenue.

11. Public School (P.S.) 307 (S/NR-Eligible): *209 York Street (Block 56, Lot 7)*

As presented in **Figure E-1**, P.S. 307 (also known as the Daniel Hale Williams School) is located in the Secondary Study Area at 209 York Street. The three-story, square-plan building was designed by architect Francis Keally and constructed in 1965. As shown in **Figure E-3** (Photos 3 and 4), the steel-frame building has brick exterior walls and decorative limestone elements. The school is a representative example of the post-war wave of school construction undertaken by the New York City Board of Education and shows the influence of European Modernism in its low-slung horizontal volumes, flat roof, and horizontal bands of windows, punctuated by vertical entry and stair pavilions at the south elevation.

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

Under the No-Action Condition, the status of historic resources could change. S/NR-eligible architectural resources could be listed in the Registers, and properties found eligible for consideration for designation as NYCLs could be calendared and/or designated. It is also possible, given the Proposed Actions' analysis year of 2030, that additional sites could be identified as architectural resources in this time frame. Changes to the historic resources identified above or to their settings could also occur irrespective of the Proposed Actions. Future projects could affect the settings of architectural resources. It is possible that some architectural resources in the Study Area could deteriorate, while others could be restored. In addition, future projects could accidentally damage architectural resources through adjacent construction.

Properties that are designated NYCLs are protected under the New York City Landmarks Law, which requires LPC review and approval before any alteration or demolition of those resources can occur. All properties within LPC-designated historic districts also require LPC approvals prior to new construction, enlargement, or demolition. LPC may disapprove modifications that it determines are not appropriate. Properties that have been calendared for consideration for designation as NYCLs are also afforded a measure of protection insofar as, due to their calendared status, permits may not be issued by DOB for any structural alteration to the buildings for any work requiring a building permit, without consultation with and the concurrence of LPC.

The New York City Building Code provides some measures of protection for all properties against accidental damage from adjacent construction by requiring that all buildings, lots, and service facilities adjacent to foundation and earthwork areas be protected and supported. Additional protective measures

apply to designated NYCLs and S/NR-listed historic buildings located within 90 linear feet of a proposed construction site. For these structures, the New York City Department of Buildings (DOB)'s Technical Policy and Procedure Notice (TPPN) #10/88 applies. TPPN #10/88 supplements the standard building protections afforded by the Building Code by requiring, among other things, a monitoring program to reduce the likelihood of construction damage to adjacent NYCL-designated or S/NR-listed historic resources (within 90 feet) and to detect at an early stage the beginnings of damage so that construction procedures can be changed. The procedures and protections of DOB's TPPN #10/88 would apply to any alteration, enlargement, or demolition taking place in the No-Action Condition.

Additionally, historic resources that are listed on the S/NR or that have been found eligible for listing are given a measure of protection from the effects of federally-sponsored or federally-assisted projects under Section 106 of the National Historic Preservation Act and are similarly protected against impacts resulting from state-sponsored or state-assisted projects under the New York State Historic Preservation Act. Although preservation is not mandated, federal agencies must attempt to avoid adverse impacts on such resources through a notice, review, and consultation process. Private property owners using private funds can, however, alter or demolish their S/NR-listed or S/NR-eligible properties without such a review process.

Anticipated Developments in the No-Action Condition

Primary Study Area (Project Area)

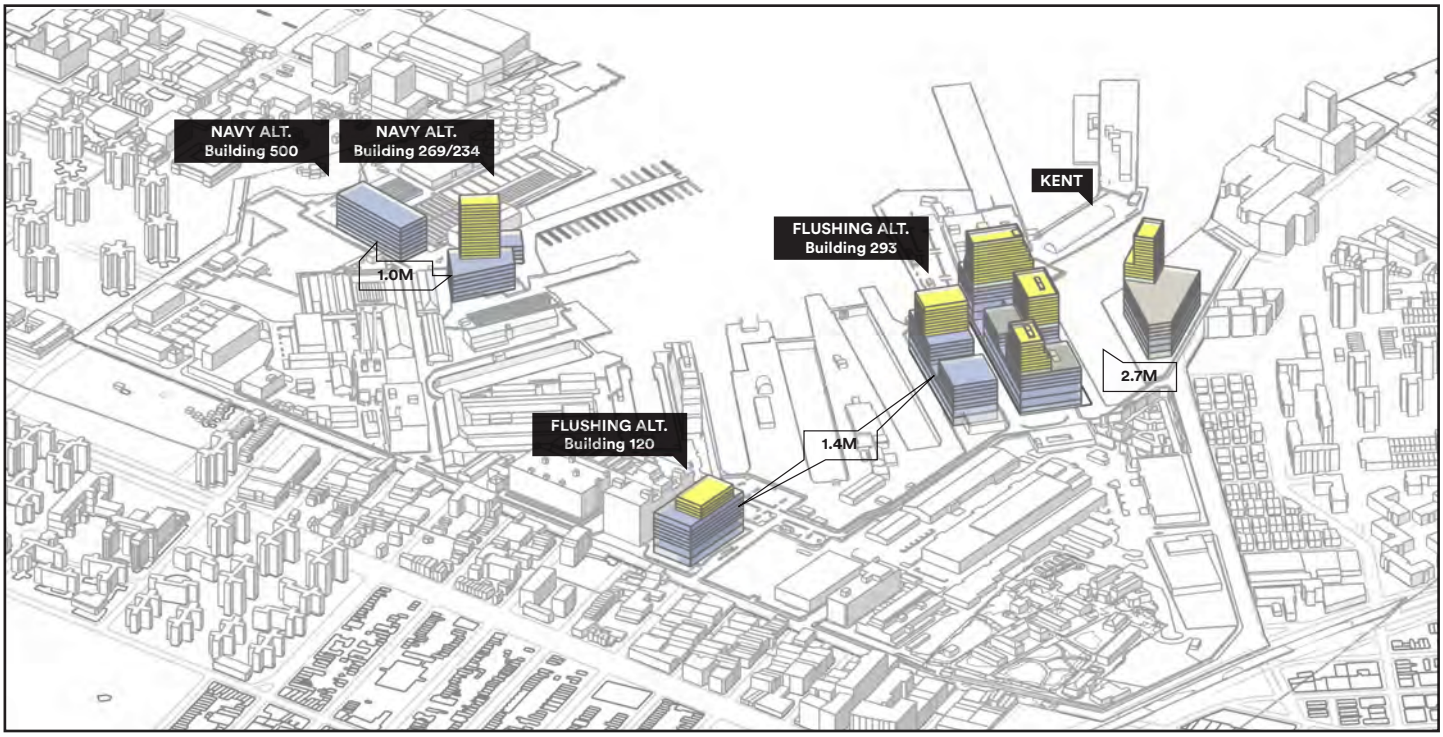
As detailed in **Attachment A, "Project Description,"** in the No-Action Condition, the requested zoning map and text amendments would not be approved. Development would continue within the BNY on an as-of-right basis in similar amounts and densities as would occur with the Proposed Actions in keeping with the Brooklyn Navy Yard Development Corporation (BNYDC)'s mission to create and preserve quality jobs, anchor New York City's modern industrial sector and its businesses, and connect the local community with resources and economic opportunity at the Yard. To meet this goal, it is anticipated that a combined approximately 4.6 million sf of new industrial and commercial development would occur on three sites (Projected Site 1, No-Action Site 2, and No-Action Site 3 in **Figure E-1**) in the 2030 No-Action Condition. As anticipated No-Action development in the Yard would be located within and adjacent to the S/NR-listed Brooklyn Navy Yard Historic District, this No-Action construction would be subject to DOB's TPPN #10/88 detailed above.

It is expected that, in the No-Action Condition, the three as-of-right No-Action projects in the BNY detailed below would be completed, altering the settings of the surrounding historic district, including the demolition of BNY Buildings 120, 234, 269, 313, and 314 (refer to **Figure E-1**), which are contributing resources in the S/NR-listed Brooklyn Navy Yard Historic District.

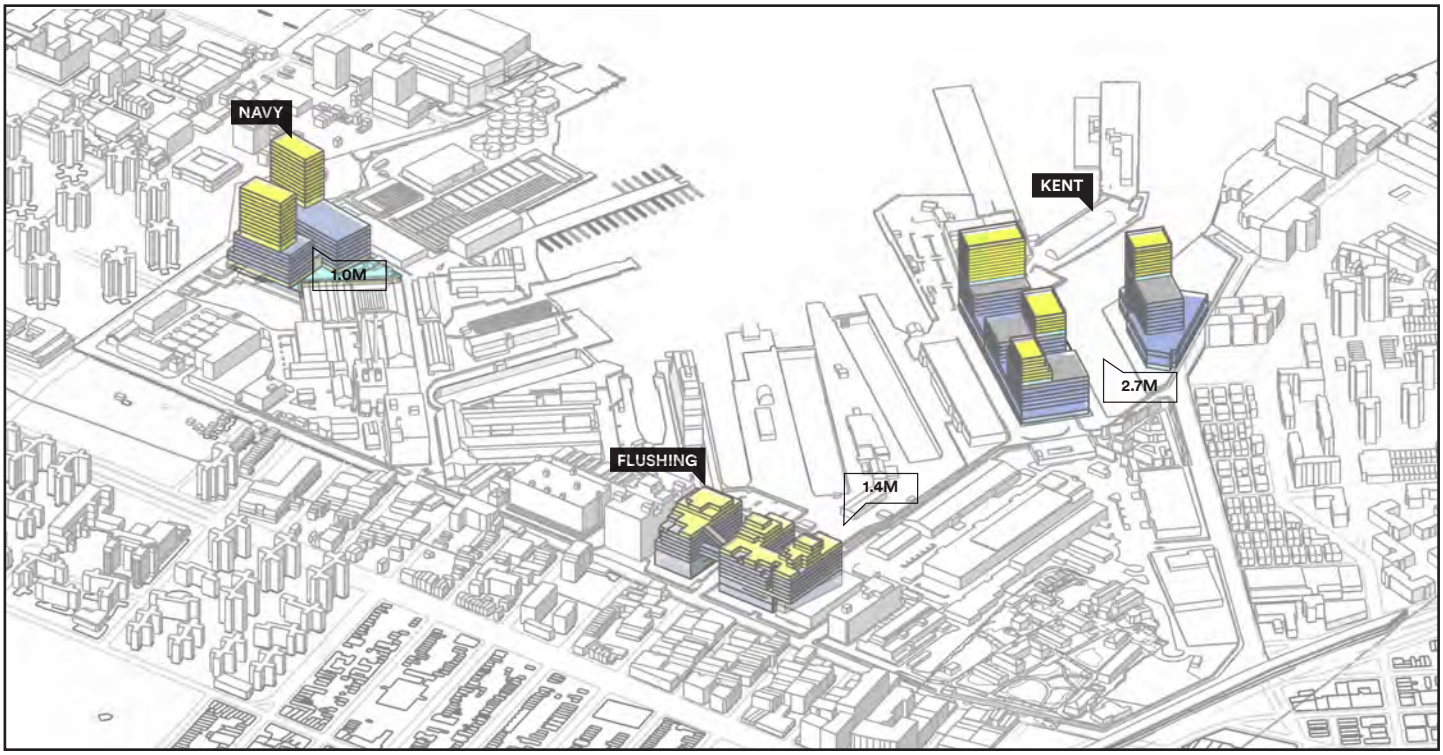
Kent Avenue Site (Projected Site 1)

As shown in **Figure E-1**, only a small portion of Projected Site 1 is located in the S/NR-listed Brooklyn Navy Yard Historic District, and the site does not contain any historic structures that contribute to the historic district (see **Appendix 4**). Under the No-Action Condition, it is anticipated that the Kent Avenue site would be redeveloped with three industrial and commercial buildings that would fit within the existing permitted building envelopes. As illustrated in **Figure E-4**, each building would contain a seven-story base, built out to the parcel line and topped with a nine- to 12-story tower. The buildings would total approximately

Figure E-4
No-Action vs. With-Action Conditions



NO-ACTION



Images courtesy of WXY

WITH-ACTION

2,511,635 gross square feet (gsf) (not including parking), including approximately 2,036,635 gsf of industrial space, 416,083 gsf of office space, and 58,918 gsf of retail space.

Navy Street Alternate Sites (No-Action Site 2)

No-Action Site 2 is currently occupied by five BNY buildings (Nos. 234, 269, 313, 314, and 500). As illustrated in **Figure E-1** and **Appendix 4**, Buildings 234, 269, 313, and 314 are contributing resources in the S/NR-listed Brooklyn Navy Yard Historic District. Buildings 234 and 313 were constructed as motor generator sub-station no. 6 in 1929 and a ship superintendent's office in 1942. Building 269 was constructed as sub-assembly shop no. 2 in 1941-42, and Building 314 was constructed as a canteen in 1942. In the future without the Proposed Actions, all four of these historic buildings, as well as BNY Building 500, would be demolished. Two buildings with industrial and commercial space would be constructed on the site, fitting within the existing permitted building envelopes. As illustrated in **Figure E-4**, the westernmost building would be eight stories tall, and the northernmost building would contain a six-story based topped with a 17-story tower. The buildings would total approximately 851,207 gsf (not including parking), including approximately 671,207 gsf of industrial space, 121,744 gsf of office space, and 58,256 gsf of retail space.

Navy Street Site (Projected Site 2)

Under the No-Action condition, no changes would occur on Projected Site 2. It would continue to be occupied by the New York City Police Department (NYPD) tow pound administrative building and surface parking area, and a small structure and associated surface parking lot for the Department of Citywide Administrative Services (DCAS), as under existing conditions (refer to **Appendix 4**).

Flushing Avenue Alternate Sites (No-Action Site 3)

No-Action Site 3 is currently occupied by two BNY buildings (Nos. 120 and 293). As illustrated in **Figure E-1** and **Appendix 4**, Building 120 is a contributing historic resource in the S/NR-listed Brooklyn Navy Yard Historic District. Originally constructed in 1899 as an oil storehouse, Building 120 is a two-story, rectangular, gable-roofed brick building (refer to **Figure E-2a**). In the future without the Proposed Actions, the two existing BNY buildings on No-Action Site 3, including Building 120, would be demolished. Subsequently, two buildings with industrial and commercial space would be constructed on the site. As illustrated in **Figure E-4**, each building would contain an eight-story base, built out to the street line. The southern building would be topped with a four-story tower, and the northern building would be topped with a nine-story tower. The buildings would total approximately 1,249,120 gsf (not including parking), including approximately 1,021,120 gsf of industrial space, 193,300 gsf of office space, and 34,700 gsf of retail space.

Flushing Avenue Site (Projected Site 3)

As detailed above, under the No-Action condition, the historic Building 120 in the western portion of Projected Site 3 (which is also a part of No-Action Site 3 as shown in **Figure E-1**) would be demolished and redeveloped. No changes would occur on the eastern portion of Projected Site 3 which would continue to be occupied by a Department of Justice (DOJ) warehouse in BNY Building 4 in the No-Action condition, as under existing conditions.

Secondary Study Area

As detailed in **Attachment C, "Land Use, Zoning, & Public Policy,"** there are three projects under construction or planned to be built within the 400-foot secondary study area in the future without the Proposed Actions, each of which with the potential to alter the setting of the S/NR-listed Brooklyn Navy Yard Historic District. To the east of the Project Area, a two-story addition to an existing four-story building is planned at 609 Kent Avenue and a seven-story mixed-use building is planned at 347 Flushing Avenue. Additionally, the property at 500 Kent Avenue on the southwest corner of Kent and Division Avenues, immediately north of the Project Area, is expected to be redeveloped with a 23-story commercial building in the future without the Proposed Actions. The construction of 500 Kent Avenue could significantly change the context and setting of buildings in the nearby S/NR-listed Brooklyn Navy Yard Historic District in the No-Action Condition.

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

According to the 2020 *CEQR Technical Manual*, generally, if a proposed action would impact those characteristics that make a resource eligible for NYCL designation or S/NR listing, this could be a significant adverse impact. As described above, the designated and potential historic resources in the Study Area are significant for their architectural quality and for their local and national historic value. This section assesses the Proposed Actions' potential to result in significant adverse impacts on the identified architectural resources outlined above. The Proposed Actions were assessed in accordance with guidance established in the *CEQR Technical Manual* (Chapter 9, Section 420) to determine (a) whether there would be a physical change to any historic resource as a result of the Proposed Actions; (b) whether there would be a physical change to the setting of any historic resource, such as context or visual prominence as a result of the Proposed Actions; and (c) if the answer to (a) or (b) is yes, whether the change is likely to diminish the qualities of the resource that make it important. Whereas this attachment focuses specifically on the Proposed Actions' effects on the visual context of historic resources, an assessment of the Proposed Actions' effect on the urban design and visual character of the study area in general is provided separately in **Attachment F, "Urban Design & Visual Resources."**

In the 2030 With-Action Condition, the Proposed Actions would be approved. As detailed in **Attachment A, "Project Description,"** the Proposed Actions include (1) a zoning text amendment to create the Special Brooklyn Navy Yard District (the "Special District") with special use, bulk, parking and loading, and publicly accessible space regulations; and (2) a zoning map amendment to map the Special District over the Project Area and change an R6B, M1-2, and portions of an M3-1 district within the Project Area to an M2-1 district. The Proposed Actions would introduce tailored zoning regulations to facilitate and refine the further development of a modern manufacturing campus at the BNY by the approximately 4.6 million sf of zoning floor area projected to occur at the Yard over the next 10 to 15 years by rationalizing parking and loading controls, allowing the introduction of compatible community facility and commercial uses to complement the core industrial use of the BNY, establishing public access area requirements in connection with development in certain areas at the perimeter of the Yard, and modifying height and setback regulations in defined areas of the Yard and other bulk controls in manners compatible with modern industrial development and the surrounding context.

The Proposed Actions would not result in new development density beyond that which is permitted as-of-right. Rather, the Proposed Actions would acknowledge the unique character of the Yard and tailor the applicable zoning regulations to address certain site conditions, such as parking and waterfront public

space. A somewhat different mixture of uses would be developed in the Project Area than under No-Action conditions.

Kent Avenue Site (Projected Site 1)

In the future with the Proposed Actions, three buildings with industrial, commercial, and community facility spaces would be constructed on Projected Site 1. Each building would contain a seven-story base, built out to the parcel line and topped with a nine- to 13-story tower (refer to **Figure E-4**). The buildings would total approximately 2,511,635 gsf (not including parking), including approximately 1,825,011 gsf of industrial space, 436,624 gsf of commercial (office and retail) space, and 250,000 gsf of community facility (academic) space. A total of approximately 118,454 gsf of open space would be provided on the site along the Barge Basin.

Navy Street Alternate Sites (No-Action Site 2)

In the future with the Proposed Actions, no changes would occur on No-Action Site 2. The Navy Street Alternate Sites would continue to be occupied by BNY Buildings 234, 269, 313, 314, and 500.

Navy Street Site (Projected Site 2)

In the With-Action Condition, two buildings with industrial, commercial, and community facility spaces would be constructed on Projected Site 2. As shown in **Figure E-4**, the westernmost building would be eight-stories tall, and the northernmost building would contain a seven-story based topped with a 13-story tower. The buildings would total approximately 851,207 gsf (not including parking), including approximately 458,590 gsf of industrial space, 142,617 gsf of commercial (office and retail) space, and 250,000 gsf of community facility (academic and museum) space. Approximately 35,000 gsf of open space would be provided on site.

Flushing Avenue Alternate Sites (No-Action Site 3)

As detailed below, in the future with the Proposed Actions, Building 120 in the southern portion of No-Action Site 3 (which is also a part of Projected Site 3 as shown in **Figure E-1**) would be demolished and redeveloped. No changes would occur on the northern portion of the Flushing Avenue Alternate Sites, which would continue to be occupied by BNY Building 293, as under existing conditions.

Flushing Avenue Site (Projected Site 3)

In the With-Action condition, Building 120, which is a contributing resource in the S/NR-listed Brooklyn Navy Yard Historic District, would be demolished, as under No-Action conditions. Subsequently, two buildings with industrial, commercial, and community facility spaces would be constructed on Projected Site 3. Each building would rise 16-stories, built out to the street line (refer to **Figure E-4**). The buildings would total approximately 1,249,120 gsf (not including parking), including approximately 773,170 gsf of industrial space, 225,950 gsf of commercial (office, retail, and health club) space, and 250,000 gsf of community facility (academic) space. Approximately 36,350 gsf of open space would be provided on site.

V. CONCLUSIONS

Direct (Physical) Effects

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

The Proposed Actions would not result in any significant adverse direct or physical impacts to historic architectural resources. As detailed above, there are five buildings on the identified development sites which are contributing resources in the S/NR-listed Brooklyn Navy Yard Historic District: BNY Buildings 120, 234, 269, 313, and 314. Under the No-Action Condition, all five of these buildings would be demolished. In the future with the Proposed Actions, only Building 120 would be demolished; Buildings 234, 313, 314, and 269 would remain intact as under existing conditions. The Proposed Actions would not result in the demolition or alteration of any historic architectural resources as compared to the No-Action Condition, but rather, would result in the preservation of several contributing buildings in the S/NR-listed Brooklyn Navy Yard Historic District.

For conservative analysis purposes the RWCDS for the Proposed Actions focuses on the identified development sites; however, additional buildings could be demolished in the Yard under both the No-Action and With-Action scenarios. Nevertheless, the Proposed Actions would not make the demolition of historic buildings any more likely in the Yard. It should be noted that, if a historic building were to be demolished within the S/NR-listed Brooklyn Navy Yard Historic District, and the project included state or federal funding, BNYDC would consult with SHPO prior to demolition.

Indirect (Contextual) Effects

According to the 2020 *CEQR Technical Manual*, possible impacts to architectural resources may include isolation of the property from, or alteration of, its setting or visual relationship with the streetscape. This includes changes to the resource's visual prominence so that it no longer conforms to the streetscape in terms of height, footprint, or setback; is no longer part of an open setting; or can no longer be seen as part of a significant view corridor. Significant indirect impacts can occur if a proposed action would cause a change in the characteristics of a property that qualifies it for listing on the S/NR or for designation as a NYCL.

The Proposed Actions would not result in significant adverse indirect impacts on historic architectural resources. As detailed above, the Proposed Actions would facilitate development on Projected Sites 1, 2, and 3 as compared to Projected Site 1 and No-Action Sites 2 and 3 in the No-Action Condition. Under both scenarios, the Proposed Developments would alter the context and setting of the surrounding S/NR-listed Brooklyn Navy Yard Historic District and nearby landmarks and historic districts both within and adjacent to the Yard. However, the Proposed Developments would not change the visual settings of these historic resources so as to affect those characteristics that make them eligible for listing on the S/NR or designation as NYCLs. The Project Area and surrounding study area are dense urban environments with multiple existing and planned mid-rise and high-rise buildings that form the backdrop of surrounding historic architectural resources. The Proposed Developments would not alter the relationship of any

identified historic architectural resources to the streetscape, as all streets in the Project Area and study area would remain open and all historic resources' relationships to the street would remain unchanged in the future with the Proposed Actions. Additionally, the designs of the new buildings would be compatible with the character of the Yard.

As shown in the illustrative renderings provided in **Figure F-10** in **Attachment F, "Urban Design & Visual Resources,"**, in the future with the Proposed Actions, the taller With-Action buildings on Projected Site 1 would be visible behind BNY Building 51 (Garbage Incinerator: 1938), Building 292 (Production Utility Building: 1942), and Building 713 (Transfer Bridge: 1941), all of which are contributing resources in the S/NR-listed Brooklyn Navy Yard Historic District (refer to **Figure E-2a**). The Proposed Development on the Projected Site 2 would be adjacent to contributing BNY Building 10 (Dry Dock #1 Engine/Pump House: 1849-51), Building 11/11A (Smithery and Forge Shop: circa 1855), Building 12 (Plumbers and Boiler Shop: circa 1855), Building 12A (Pipe and Copper Shop: 1940), and the Commandant's House (Resource #8). The With-Action buildings on the Projected Site 2 would also create a new backdrop for the S/NR-eligible P.S. 307 building (Resource #11) as well as the contributing BNY Building 20 (Iron Plating Shop: 1865), Building 41 (Central Power Plant: 1941), Building 127 (Boat Storehouse: 1903), and Building 131 (Construction & Repair Storehouse and Shops: 1902) (refer to **Figure E-2b**). The Proposed Development on Projected Site 3 would be adjacent to contributing BNY Building 1 (Materials Testing Laboratory: 1941-42) and Building 77 (General Storehouse Administration Building: 1942), and would also be visible from vantage points in the S/NR-listed Wallabout Industrial and Rockwood Chocolate Factory Historic Districts to the south of the Project Area (Resources #3 and #4 in **Figure E-1**). Although these changes would alter the setting and visual context of these historic resources, no primary facades, significant architectural ornamentation, or notable features of these historic architectural resources would be obstructed by the Proposed Developments. Moreover, development facilitated by the Proposed Actions would not eliminate existing significant public views of any historic architectural resources, which would continue to remain visible in view corridors on adjacent public streets and sidewalks.

The Proposed Actions would not result in development that would diminish the qualities that make the S/NR-listed Brooklyn Navy Yard Historic District or any other surrounding landmarks or historic districts historically and architecturally significant. As such, the Proposed Actions would not result in any significant adverse indirect or contextual impacts on historic architectural resources.

Construction-Related Effects

Any new construction taking place within historic districts or adjacent to individual landmarks has the potential to cause damage to contributing buildings to those historic resources from ground-borne construction vibrations. As noted above, the New York City Building Code provides some measure of protection for all properties against accidental damage from adjacent construction by requiring that all buildings, lots, and service facilities adjacent to foundation and earthwork areas be protected and supported. Additional protective measures apply to LPC-designated and S/NR-listed historic resources located within 90 linear feet of a proposed construction site. For these structures, DOB's TPPN #10/88 applies. TPPN #10/88 supplements the standard building protections afforded by the Building Code by requiring, among other things, a monitoring program to reduce the likelihood of construction damage to adjacent LPC-designated or S/NR-listed resources (within 90 feet) and to detect at an early stage the beginnings of damage so that construction procedures can be changed.

As the Project Area encompasses the S/NR-listed Brooklyn Navy Yard Historic District, any construction facilitated by the Proposed Actions would be subject to TPPN #10/88. Under the TPPN, a construction

protection plan would be provided to the LPC for review and approval prior to any work in the Project Area. The construction protection plan would take into account the guidance provided in the *CEQR Technical Manual*, Chapter 9, Section 523, "Construction Protection Plan." As such, no construction-related impacts on historic resources would occur as a result of the Proposed Actions.

Shadows

As detailed in **Attachment D, "Shadows,"** project-generated shadows would not reach any sunlight-sensitive historic resources. Therefore, the Proposed Actions would not result in any significant adverse shadows impacts on historic resources.

ATTACHMENT F
URBAN DESIGN & VISUAL RESOURCES

I. INTRODUCTION

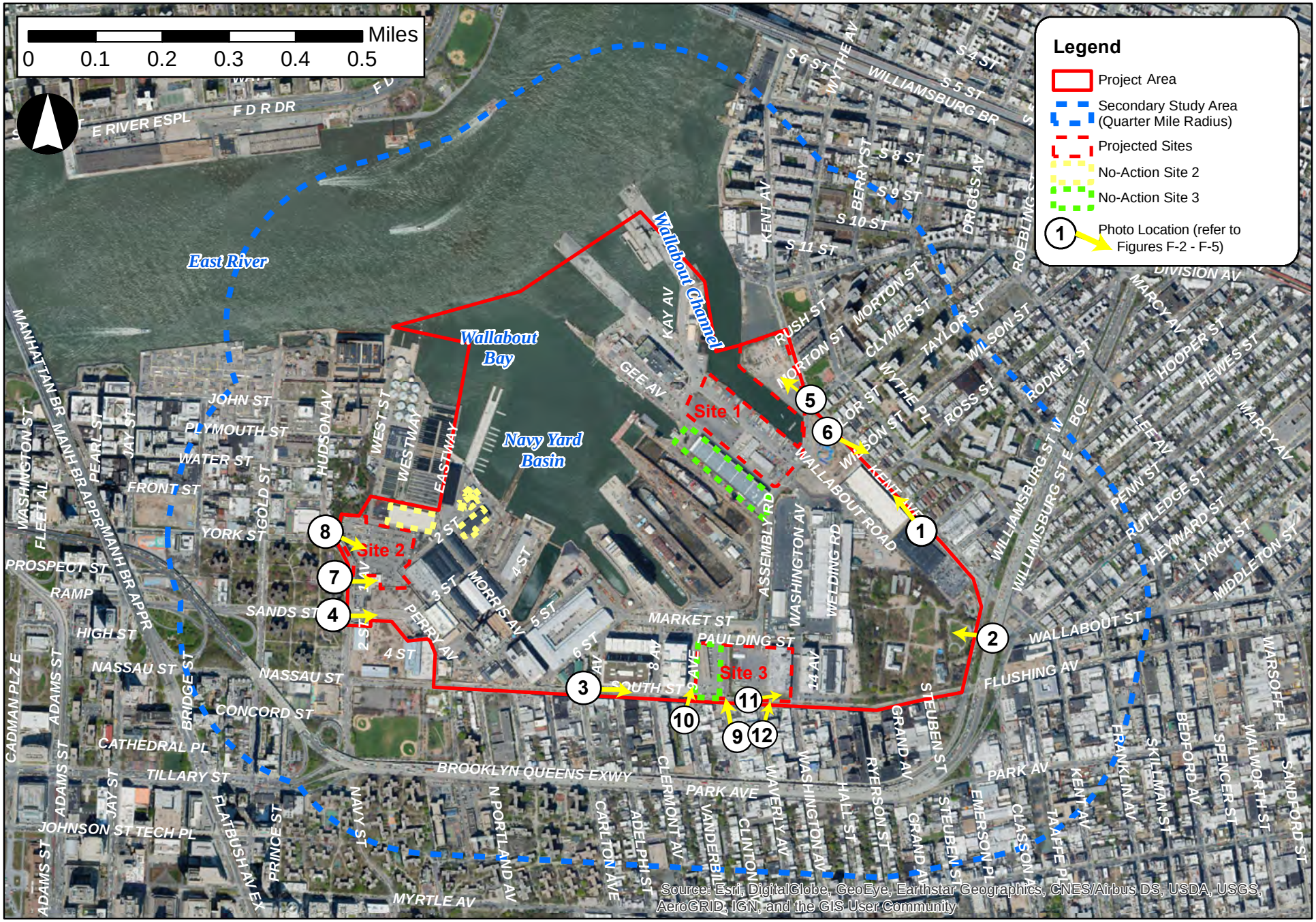
Per the 2020 *City Environmental Quality Review* (CEQR) *Technical Manual*, urban design is defined as the totality of components – including streets, buildings, open spaces, wind, natural resources, and visual resources – that may affect a pedestrian's experience of public space. A visual resource is defined as 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. In an urban design and visual resources assessment pursuant to CEQR, one considers whether and how a project may change the visual experience of a pedestrian, focusing on the components of the project that may have the potential to significantly and adversely affect the arrangement, appearance, and functionality of the built and natural environment. The analysis provided below addresses urban design characteristics and visual resources for existing conditions, the future without the Proposed Actions (the No-Action condition), and the future with the Proposed Actions (the With-Action condition).

As detailed in **Attachment A, "Project Description,"** the Applicants are seeking zoning map and text amendments (collectively, the "Proposed Actions") to facilitate certain recommendations of the Brooklyn Navy Yard Master Plan. The Project Area encompasses the majority of Brooklyn Block 2023, Lots 1 and 150[1] and is generally bounded by Kent Avenue to the east, Flushing Avenue to the south, and Navy Street to the west (refer to **Figure F-1**). The Proposed Actions include:

- (1) A zoning text amendment to create the Special Brooklyn Navy Yard District (the "Special District") with special use, bulk, parking and loading, and publicly accessible space regulations; and
- (2) A zoning map amendment to map the Special District over the Project Area and change an R6B, M1-2, and portions of an M3-1 district within the Project Area to an M2-1 district.

The Proposed Actions would introduce tailored zoning regulations to facilitate and refine the further development of a modern manufacturing campus at the Brooklyn Navy Yard (the "Yard" or "BNY") by the approximately 4.6 million square feet (sf) of zoning floor area projected to occur at the Yard over the next 10 to 15 years. In particular, the proposed regulations would rationalize parking and loading controls; allow for the introduction of compatible community facility and commercial uses to complement the core industrial use of the BNY; establish public access area requirements in connection with development in certain areas at the perimeter of the Yard; and modify height and setback regulations in defined areas of the Yard, modify waterfront regulations, and other bulk controls in manners compatible with modern industrial development and the surrounding context.

[1] As detailed further in **Attachment A, "Project Description,"** the Project Area encompasses the entirety of Tax Lots 1 and 150 on Brooklyn Block 2023 except for a small portion of Lot 1 located in the water and a smaller, irregular-shaped portion of Lot 1 located in the southwest corner of the Project Area.



Special Brooklyn Navy Yard District

Figure F-1

Urban Design Study Area & Photo Key Map

II. METHODOLOGY

In general, an assessment of urban design is needed when a project may have effects on one or more of the elements that contribute to a pedestrian's experience of public space. These elements, the totality of which defines the concept of urban design, are described below:

- ***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 streetscape between cars, bicycles, transit, and sidewalk is critical to making a successful streetscape, as is the careful design of street furniture, grade, materials uses, and permanent fixtures, including plantings, street lights, fire hydrants, curb cuts, and newsstands.

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

- ***Visual Resources.*** A visual resource is the connection from the public realm to significant natural or built features, including, but not limited to, views of the waterfront, public parks, public art, statues or sculptures, landmark structures or districts, otherwise distinct buildings or groups of buildings that may be iconic or historic, and natural resources.

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

- ***Natural Features.*** Natural features include vegetation (i.e., trees, shrubs, grasses, etc.), geologic, topographic, and aquatic features. Rock out-croppings, street slopes, or varied ground elevation, beaches, or wetlands may help define the overall visual character of an area.

- ***Wind.*** Channelized wind pressure from between tall buildings and downwashed wind pressure from parallel tall buildings may cause winds that jeopardize pedestrian safety. "Downwashed" wind is wind that is propelled downward by an intervening structure, such as a high-rise building, that causes high wind speeds at the street level.

A pedestrian wind condition analysis is not warranted for the Proposed Actions pursuant to *CEQR Technical Manual* methodology. As stated in the *CEQR Technical Manual*, construction of large buildings at locations that experience high wind conditions may result in an exacerbation of wind conditions due to "channelization" or "downwash" effects that may affect pedestrian safety. The need for a wind analysis is based on a number of factors, including whether the location is exposed to high wind conditions, such as along west and northwest-facing waterfronts, as well as the size and orientation of the buildings that are proposed to be constructed. As shown in **Figure F-1**, Projected Site 1 (the Kent Avenue Site), which is expected to be developed under both the No-Action and With-Action Conditions, is located adjacent to the East River waterfront. However, the additional floors that would be constructed on the site as a result

of the Proposed Actions are not expected to significantly alter pedestrian wind conditions in the vicinity of the site. Additionally, as shown in **Figure F-1**, neither Projected Site 2 (the Navy Street Site) nor Projected Site 3 (the Flushing Avenue Site) are adjacent to the waterfront, as they are both tucked inland in the BNY campus. Therefore, neither With-Action development would be exposed to high wind conditions. As such, a detailed pedestrian wind conditions analysis is not warranted for the Proposed Actions pursuant to *CEQR Technical Manual* methodology.

Study Areas

The study areas for the assessment of urban design and visual resources correspond to the areas where the Proposed Actions may influence land use patterns and the built environment, and the consistent with those used for the land use analysis. For visual resources, the view corridors within the study area from which such resources are publicly viewable have been identified. The urban design analysis considers both a primary study area, coterminous with the boundaries of the Project Area, and a secondary study area, which extends approximately a quarter-mile from the Project Area (refer to **Figure F-1**).

III. PRELIMINARY ASSESSMENT

According to the *CEQR Technical Manual*, a preliminary assessment 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, including the following: (1) projects or actions that permit the modification of yard, height, and setback requirements; and (2) projects or actions that result in an increase in built floor area beyond what would be allowed as-of-right or in the future without the Proposed Actions. Beyond a preliminary assessment, a detailed analysis may be needed for projects or actions that potentially obstruct view corridors, compete with icons in the skyline, or make substantial alteration to the streetscape of a neighborhood by noticeably changing the scale of buildings. Detailed analyses are generally appropriate for rezonings that include changes in height and setback requirements. As such, a detailed analysis of the Proposed Actions is provided below.

IV. DETAILED ASSESSMENT

Existing Conditions

Urban Design

Primary Study Area (Project Area)

As presented in **Figure F-1**, the Project Area is generally bounded by Navy Street to the west, Flushing Avenue to the south, Kent Avenue to the east, and the East River and Wallabout Bay to the north. The Yard is not accessible to the general public and is largely surrounded by fencing and walls, including brick walls, low brick walls with iron fencing above, iron fencing, chain-link fencing, stone walls, and stone walls with chain-link fencing above. As such, public views of the Yard are limited to obstructed views through the fencing and limited views from the Yard's gates.

As presented in **Figure F-2**, while a two-way bike lane was recently added along Kent Avenue (in the streetbed along the existing sidewalk), the pedestrian experience along this street is rather desolate, with no street trees, deteriorated crosswalks, and few buildings present along the street frontage. The buildings that are located along Kent Avenue are austere soundstage buildings with minimal to no fenestration. Loading activities for one of the sound stage buildings are also present along Kent Avenue. North of the Kent Avenue gate, the existing chain link fencing is rusting and partially covered in black fabric, blocking views into the Yard.

Along Williamsburg Street West, the sidewalk condition varies, and there are several street trees. The modern and minimalist entrance to the recently completed Navy Cemetery open space is located along this segment of the Project Area's Williamsburg Street West frontage. While the rest of the Project Area's Williamsburg Street West frontage is lined with chain-link fencing, the pedestrian experience is less industrial and more green, with vegetation spilling over and through the fencing from inside the Yard (refer to **Figure F-2**).

Flushing Avenue is the longest border of the Project Area. As shown in **Figure F-2**, the easternmost segment has no street trees; however, vegetation spills over the Yard's historic stone walls, which line two to three blocks of the Project Area. To the west (beginning approximately at Ryerson Street), chain-link fencing and recently planted street trees are present, and the internal Yard buildings come into view, including, most notably, the Steiner Studio buildings and Building 77 in views west; surface parking is located between the buildings and is also visible from Flushing Avenue. The pedestrian experience along Flushing Avenue between approximately Clinton and Carlton avenues is one of the few locations along the Yard that provides a consistent experience with taller (up to 15-story) buildings built at or near the street line both within the Yard and across Flushing Avenue. This area was also recently improved with a public open space located between Building 77 and Flushing Avenue. West of Carlton Avenue, a series of historic brick structures are visible through the fencing, two of which are not oriented to the street line. West of Cumberland Street, the Yard buildings visible from the Flushing Avenue public right-of-way vary in size, with surface parking generally located between the buildings and visible from outside of the Yard.

Navy Street features a historic gate (the Sands Street Gate), comprised of two brick structures with turrets (refer to **Figure F-2**). No Yard buildings are located in proximity to Navy Street to the north of the gate, and no street trees exist along this portion of the Project Area's street frontage. Views into the Yard are largely blocked by the tall brick wall that lines this segment of the Project Area's Navy Street frontage; the northernmost portion of the brick wall features a colorful mural.

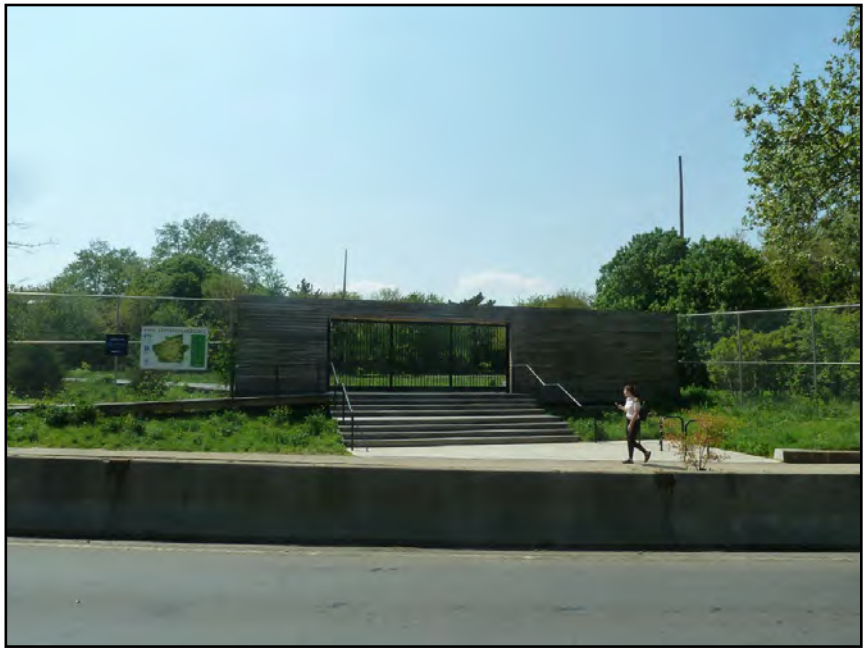
The only three publicly accessible open spaces in the BNY have been constructed in recent years: the forecourt in front of the Building 92 Visitor Center, that has a combination of seating, plantings, and pathways; the forecourt in front of Building 77 that is mostly hardscaped with seating and trees; and the 1.7-acre Naval Memorial Landscape operated by the Brooklyn Greenway Initiative (BGI), which has a boardwalk that meanders through a planted meadow and trees.

Kent Avenue Site (Projected Site 1)

Projected Site 1 totals approximately 505,000 sf in land area along the eastern border of the Project Area. Projected Site 1 is bordered by Kent Avenue to the east, the internal (non-public) Assembly Road to the southeast, and private Gee Avenue to the southwest. Within the site is a waterway called the Barge Basin that terminates at Assembly Road. The site is currently used for a combination of truck parking and as a laydown area for a modular building fabricator, and contains two structures (BNY Buildings 7 and 8, as



1. View north along Kent Avenue at Keap Street



2. View of Naval Cemetery entrance



3. View east of Flushing Avenue at Carlton Avenue



4. View of the Sands Street gate from the intersection of Sands & Navy Streets

Special Brooklyn Navy Yard District

Figure F-2
Project Area Photos

shown in **Figure A-1b** in **Attachment A**). Building 7, totaling 10,687 gsf, and Building 8, totaling 14,187 gsf, are used by Steiner Studios for set storage. As presented in **Figure F-3**, Projected Site 1's Kent Avenue frontage is lined with a chain-link fence. No street trees line the site's Kent Avenue frontage.

Navy Street Alternate Sites (No-Action Site 2)

The Navy Street Alternate Sites total approximately 93,774 sf in land area in the western portion of the Project Area, with frontages on the internal (non-public) Yard roadways of West Street, Ship Ways Avenue, 2nd Street, Dock Avenue, 3rd Street, Eastway, and Front Avenue. The Navy Street Alternate Sites are currently occupied by five BNY buildings (Nos. 234, 269, 313, 314, and 500, as shown in **Figure A-1b** in **Attachment A**), which contain a variety of commercial and industrial tenants. As shown in **Figure F-4**, No-Action Site 2 is not visible from the publicly accessible streets along Navy Street and Hudson Avenue.

Navy Street Site (Projected Site 2)

Projected Site 2 totals approximately 232,000 sf in land area along the western edge of the Project Area and has frontage on Navy Street to the west, as well as the internal (non-public) Yard roadways of 2nd Street and Morris Avenue to the east and north, respectively. The site is currently occupied by a New York City Police Department (NYPD) tow pound administrative building and surface parking area, and a small Department of Citywide Administrative Services (DCAS) structure and associated surface parking lot. Projected Site 2 is notable for its topography, which declines in a southerly direction along Navy Street from a high point at York Street. As shown in **Figure F-4**, the northern portion of Projected Site 2 is largely not visible to the public, due to the presence of a tall solid brick fence, the northernmost portion of which features a mural.

Flushing Avenue Alternate Sites (No-Action Site 3)

The Flushing Avenue Alternate Sites total approximately 168,845 sf in land area, and are located partially along the southern border of the Project Area and partially in the in the northeastern section of the Project Area. No-Action Site 3 is currently occupied by BNY Buildings 120 and 293 (refer to **Figure A-1b** in **Attachment A**), which contain multiple commercial and industrial tenants, as well as surface parking. As shown in **Figure F-5**, Building 120 is visible from the Project Area's Flushing Avenue public street frontage. The two-story, rectangular, gable-roofed brick building is set back from the street at an angle to the Flushing Avenue street line, separated from Flushing Avenue by a surface parking lot. Building 293 is largely not visible to the public, due to the presence of a tall wall made of shipping containers that stretches along Kent Avenue from Wilson Street to Clymer Street. The northernmost portion of the building is visible from locations along Kent Avenue north of Clymer Street along the northeastern portion of the Project Area.

Flushing Avenue Site (Projected Site 3)

Projected Site 3 totals approximately 267,000 sf in land area along the southern border of the Project Area and has frontage on Flushing Avenue to the south and Paulding Street (an internal/non-public Yard roadway) to the north. The site is currently occupied by BNY Building 120 (detailed above), surface parking, and a 60,900-gsf Department of Justice (DOJ) warehouse building (also known as BNY Building 4). As presented in **Figure F-5**, both Projected Site 3 buildings are visible from the Project Area's Flushing Avenue public street frontage (Building 120 is discussed in greater detail above). Building 4 is a simple



5. View of the Manhattan skyline from Kent Avenue near Clymer Street



6. View southeast of the intersection of Kent Avenue and Clymer Street



7. View of the NYPD tow pound entrance



8. View of murals along Hudson Avenue



9. View north of the Clinton Avenue gate from the intersection of Flushing & Clinton Avenues



10. View of the southern and western facades of Building 120



11. View northeast of the existing DOJ building



12. View north of the existing DOJ parking lot

metal structure with minimal fenestration. The building's southern façade (facing Flushing Avenue) includes two loading entrances, and a loading access drive and narrow strip of grass separates the building from the street line. There are no windows on the building's southern façade. Directly west of Building 4 is a surface parking lot, with a narrow strip of overgrown grass separating the lot from the chain-link fence that lines Flushing Avenue.

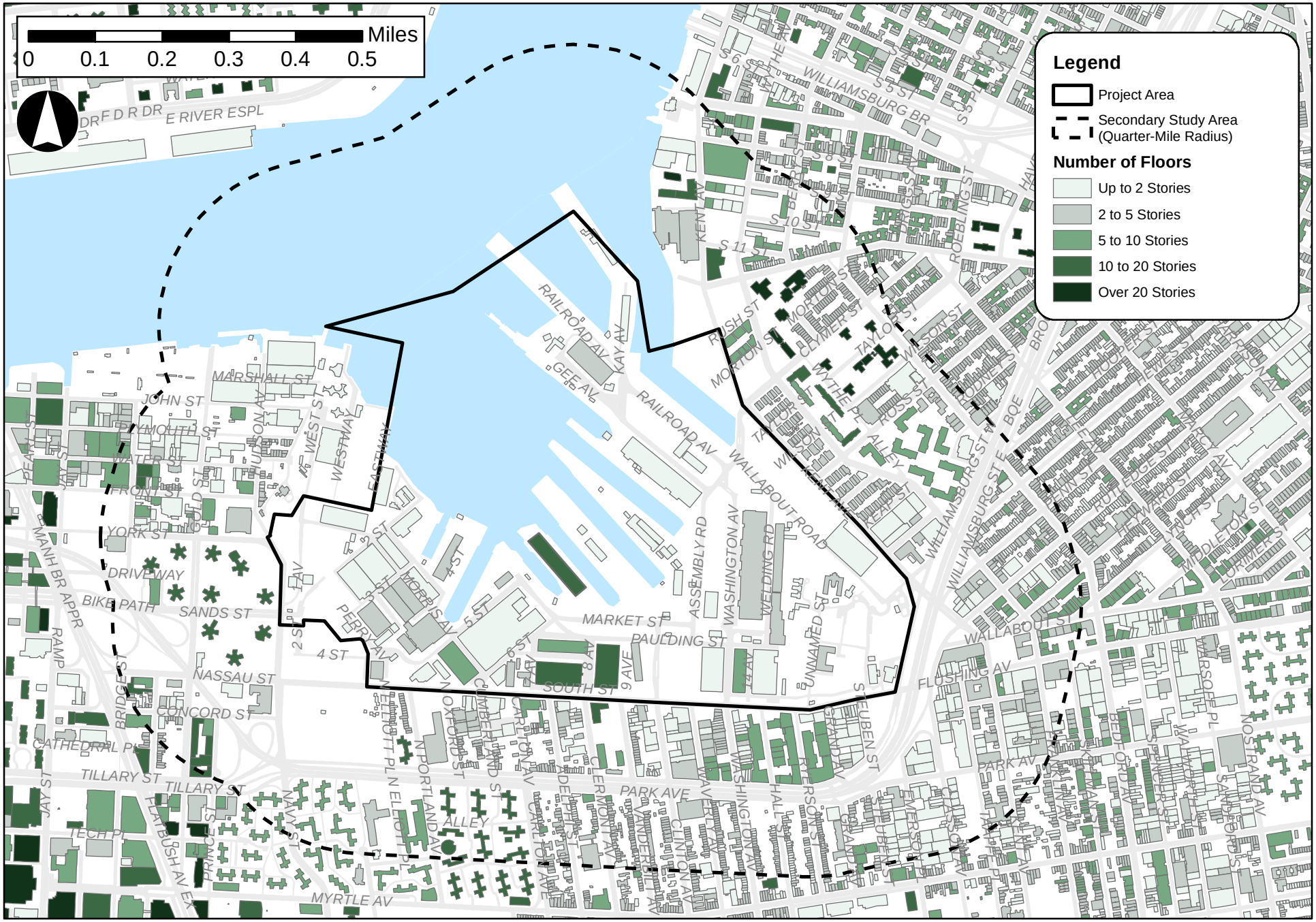
Between the parking lot and Building 120 is the Clinton Avenue Gate, one of the three primary vehicle entries into the Yard. The gate is flanked by two brick walls, each featuring an eagle statue (refer to **Figure F-5**). The brick walls demarcating the entrance also feature BNY signage. A CitiBike station is located immediately beyond the gate, which is visible from the public sidewalk along Flushing Avenue.

Secondary Study Area

As shown in **Figures F-6** and **F-7**, the street network and block shapes vary throughout the secondary study area. West of the Project Area and north of York Street, the blocks are generally rectilinear in shape and oriented east-west. West of the Project Area and south of York Street are a series of superblocks occupied by tower-in-the-park housing developments and open space; the Brooklyn-Queens Expressway (BQE) bisects several of the blocks in this section of the secondary study area. South of the Project Area, blocks are generally consistent, rectilinear, and oriented north-south; exceptions include several superblocks west of Carlton Avenue and south of Park Avenue that are occupied by tower-in-the-park housing developments, and irregularly shaped blocks east of Ryerson Street, due to the route of the BQE. East of the Project Area, blocks between Wallabout Street (to the south) and Division Avenue (to the north) follow a northeast-southwest oriented street grid, bisected by the BQE and also characterized by several superblocks; north of Division Avenue, secondary study area blocks are oriented east-west, with the exception of Kent Avenue, which does not follow the street grid.

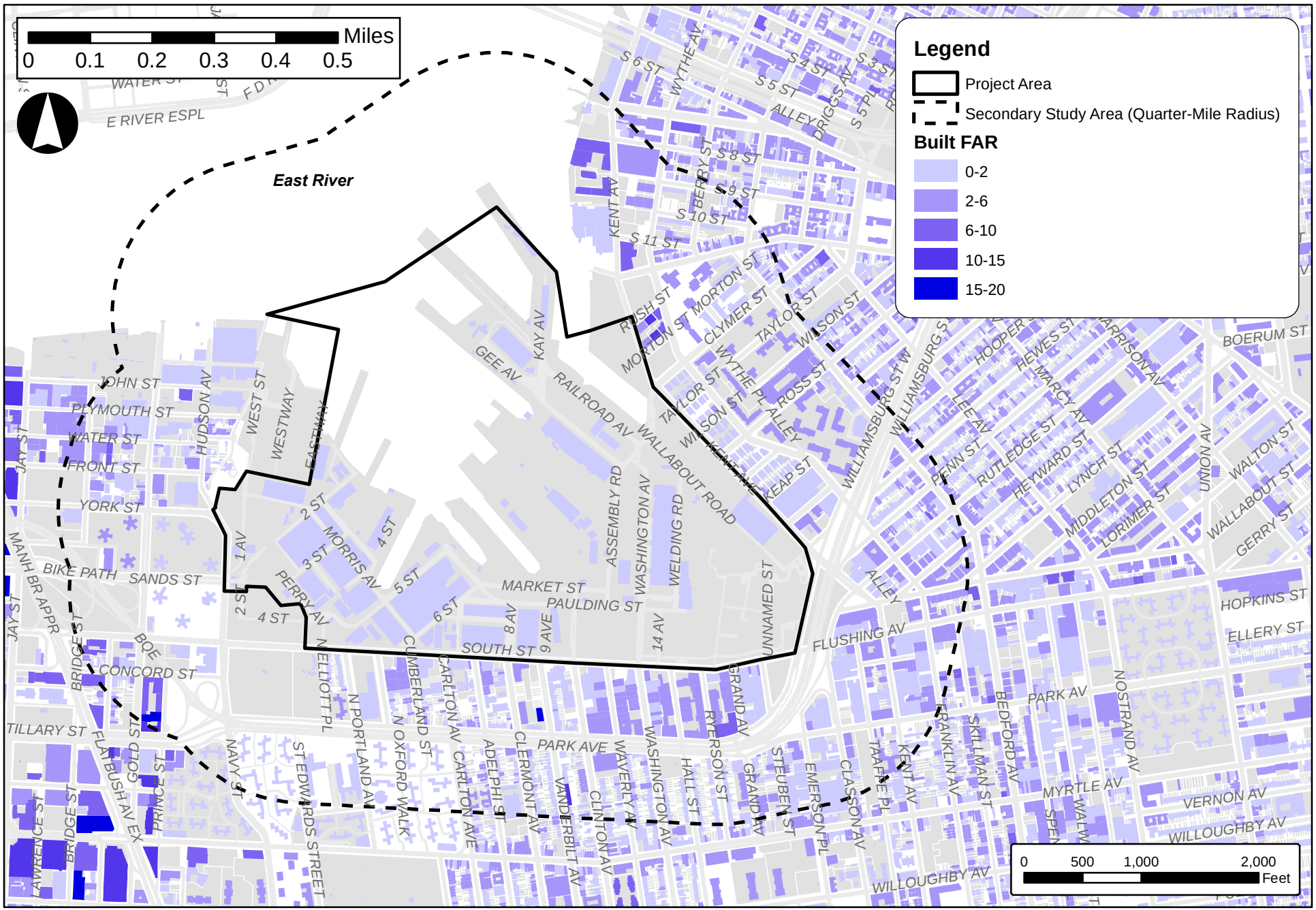
The largest and most trafficked surface streets in the secondary study area are Flushing Avenue, Kent Avenue, Park Avenue, and Sands Street. Currently, road construction is ongoing on parts of Flushing Avenue, Kent Avenue, and Navy Street. Many of the remaining secondary study area streets are one-way and serve predominantly local traffic. The BQE is not at-grade in the secondary study area: the roadway is elevated west of Wythe Avenue and below grade at the eastern edge of the secondary study area (east of Wythe Avenue). As shown in **Figure F-8**, the elevated roadway is a dominating feature of the pedestrian experience in the secondary study area, particularly along Park Avenue, to the south of the Project Area. Other streetscape elements in the secondary study area include standard lampposts, street signage, hydrants, and bicycle racks, as well as residential front yard plantings and fencing, loading docks and vehicles parked on the sidewalk adjacent to industrial and auto-related uses, awnings and outdoor patios adjacent to retail uses, and construction fencing—most notably, adjacent to the Admirals Row development that is under construction at the northeast corner of Navy Street and Flushing Avenue.

As shown in **Figures F-6** and **F-7**, building typologies within the secondary study area also vary substantially, reflecting development trends in the area since 1800. Buildings constructed in the 19th century and early-20th century are generally concentrated to the south of the Project Area, and are residential rowhouses of up to four stories in height, which generally form a consistent streetwall (refer to **Figure F-8**). Clusters of early-19th century industrial buildings are also found to the south of the Project Area. Six- to 25-story tower-in-the-park residential developments constructed between 1939 and 1975 are interspersed throughout the secondary study area, the majority of which are New York City Housing Authority (NYCHA) developments. Most proximate to the Project Area (located to the west of the Project Area) are the NYCHA Farragut Houses (shown in **Figure F-8**), a ten-building development occupying three



Special Brooklyn Navy Yard District

Figure F-6
Study Area Building Heights



Special Brooklyn Navy Yard District

Figure F-7
Study Area Built FAR



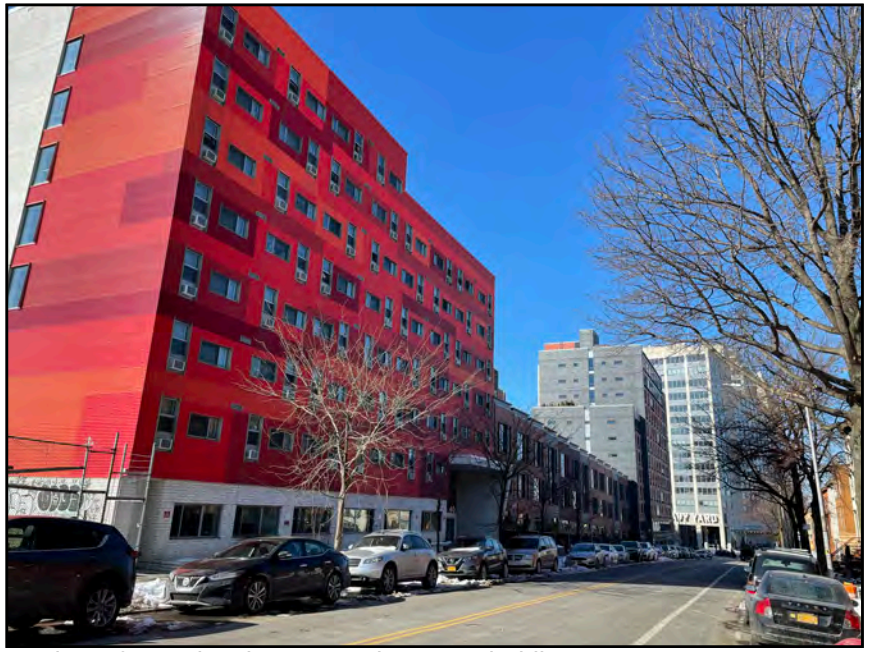
1. View west of Park Avenue at Clermont Avenue



2. View of Navy Green Row Houses



3. View of NYCHA Farragut Houses



4. View of new developments along Vanderbilt Avenue

superblocks along Sands Street between Bridge and Navy streets. During the 1980s and 1990s, the majority of new residential development occurred to the east of the Project Area, with typical building heights of three stories (see, for example, the multiple blocks of multi-family walkup residential buildings constructed between Kent and Wythe avenues between Keap and Clymer streets). Since 2000, several new mixed-use developments have been constructed in the secondary study area, including, most notably, the Navy Green development on Flushing Avenue (which rises to up to 12 stories and is shown in **Figure F-8**), the Schaefer Landing waterfront development along Kent Avenue (which rises to up to 24 stories), and the Admiral's Row development at the corner of Flushing Avenue and Navy Street.

Open spaces in the secondary study area include parks, NYCHA complex grounds, vacant land, and surface parking. Parking facilities are generally located to the south of the Project Area (between Flushing and Park avenues), while vacant land, NYCHA complex grounds, and parks are scattered throughout the secondary study area. The secondary study area's topography varies substantially, as well, with the lowest elevations along the waterfront and the edges of the Yard, increasing in elevation further from Yard.

Visual Resources

Primary Study Area (Project Area)

Visual resources present in the Project Area include both historic resources and the East River, however, as discussed in greater detail below, public views to these resources from the Project Area are limited because the Project Area is largely not publicly accessible.

As discussed in detail in **Attachment E, "Historic & Cultural Resources,"** most of the Project Area is located within the State and National Register of Historic Places (S/NR)-listed Brooklyn Navy Yard Historic District. In addition, the Project Area includes three New York City Landmarks Preservation Commission (LPC)-designated individual landmarks: Dry Dock #1, the Old United States Naval Hospital, and the Surgeon's House. The three LPC-designated resources are not visible from the public thoroughfares lining the Project Area, and only partial views of some of the contributing resources of the S/NR-listed Brooklyn Navy Yard Historic District exist. Buildings 1, 2, 3, 5, 27, 30, 41, 50/50A, 74, 77, 92, 120, 121, 127, 128, 132, 275, 280, and 292, as well as the Sands Street Gate are partially visible along one or more of the Project Area's public street frontages. Additionally, while the East River is a visual resource partially located within the Project Area, it is not visible from most of the Project Area's public street frontages.

Moreover, as detailed above, there are three recently developed public open spaces in the BNY: the Building 77 plaza off of Flushing Avenue, the Naval Memorial Landscape, and the Building 92 museum plaza on Carlton Avenue. Both of these public spaces are important visual resources in the surrounding study area.

Kent Avenue Site (Projected Site 1)

Although located in the S/NR-listed Brooklyn Navy Yard Historic District, Projected Site 1 does not contain any historic structures of visual significant that contribute to the surrounding historic district. Through the chain-link fence that lines Projected Site 1's Kent Avenue frontage, there are limited partial views of the Manhattan skyline as well as nearby internal Yard buildings, some of which are contributing resources in the S/NR-listed historic district, as discussed above (refer to **Figure F-3**). The Barge Basin and East River waterfront are not currently visible to the public from Projected Site 1.

Navy Street Alternate Sites (No-Action Site 2)

Four of the five buildings compromising No-Action Site 2 are contributing historic buildings in the S/NR-listed Brooklyn Navy Historic District: BNY Buildings 234, 269, 313, and 314. However, none of these visual resources can be seen from the public street frontages along Navy Street and Hudson Avenue (as discussed above, No-Action Site 2 is not publicly visible).

Navy Street Site (Projected Site 2)

There are currently no public views of the Barge Basin, East River, or Manhattan skyline from Projected Site 2 (refer to **Figure F-4**). However, there are some partial views of nearby historic buildings considered contributing resources in the S/NR-listed historic district (listed above).

Flushing Avenue Alternate Sites (No-Action Site 3)

As shown in **Figure F-5**, BNY Building 120, a significant visual resource that is a contributing historic building in the S/NR-listed Brooklyn Navy Yard Historic District, is located on Projected Site 3 and can be seen from multiple vantage points along Flushing Avenue. There are also limited partial views of the Manhattan skyline as well as nearby internal Yard buildings, some of which are contributing resources in the S/NR-listed historic district, as discussed above (refer to **Figure F-5**). The East River waterfront is not visible to the public from No-Action Site 3.

Flushing Avenue Site (Projected Site 3)

As detailed above and shown in **Figure F-5**, Building 120 in Projected Site 3 can be seen from multiple vantage points along Flushing Avenue. There are also limited partial views of the Manhattan skyline as well as nearby buildings in the S/NR-listed historic district (discussed above), but no public views of the East River waterfront.

Secondary Study Area

Visual resources in the secondary study area include both historic resources and open space resources. As detailed further in **Attachment E, "Historic & Cultural Resources,"** significant visual historic resources present in the secondary study area include three LPC-designated and/or S/NR-listed individual landmarks (the Commandant's House, the Thomson Meter Company Building, and former P.S. 7); six LPC-designated and/or S/NR-listed historic districts (Vinegar Hill, DUMBO, Brooklyn Navy Yard, Admirals Row, Wallabout, and Wallabout Industrial historic districts); and five S/NR-eligible historic resources (P.S. 307 Daniel Hale Williams School, 1 Carlton Avenue, Brooklyn Public Library-Walt Whitman Branch, Auburn Family Residence/Cumberland Hospital, and Sacred Heart R.C. Church). Open space resources present in the secondary study area include Commodore Barry Park, Bridge Park, Roberto Clemente Ballfield, and several NYCHA open spaces and school playgrounds. In general, the secondary study area visual resources are only visible from points immediately adjacent or in close proximity to the resources.

The three LPC-designated resources located within the Project Area are not visible from the secondary study area, and only partial views of some of the contributing resources of the S/NR-listed Brooklyn Navy Yard Historic District are visible from the secondary study area, as most streets adjacent to the BNY "dead-end" into the Yard, which is largely surrounded by low-rise fences and walls, as discussed above.

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

Primary Study Area (Project Area)

As detailed in **Attachment A, "Project Description,"** in the future without the Proposed Actions, the requested zoning map and text amendments would not be approved. Development within the Yard would continue to occur on an as-of-right basis in similar amounts and densities as would occur with the Proposed Actions in keeping with Brooklyn Navy Yard Development Corporation (BNYDC)'s mission to create and preserve quality jobs, anchor New York City's modern industrial sector and its businesses, and connect the local community with resources and economic opportunity at the Yard. To meet this goal, it is anticipated that a combined approximately 4.6 million sf of new industrial and commercial development would occur on three sites (Projected Site 1, No-Action Site 2, and No-Action Site 3) in the 2030 No-Action Condition.

Kent Avenue Site (Projected Site 1)

In the future without the Proposed Actions, three buildings would be constructed on Projected Site 1. Each building would contain a seven-story base, built out to the parcel line and topped with a nine- to 12-story tower (see **Figure F-9**). The buildings on Projected Site 1 would fit within the existing permitted building envelopes, and would total approximately 2,511,635 gsf (not including parking), including approximately 2,036,635 gsf of industrial space, 416,083 gsf of office space, and 58,918 gsf of retail space. Parking would be accommodated within the lower levels of the No-Action buildings, using stackers.

Navy Street Alternate Sites (No-Action Site 2)

In the No-Action Condition, two buildings would be constructed on No-Action Site 2. As shown in **Figure F-9**, the westernmost building would be eight stories tall, and the northernmost building would contain a six-story based topped with a 17-story tower. The buildings on No-Action Site 2 would fit within the existing permitted building envelopes, and would total approximately 851,207 gsf (not including parking), including approximately 671,207 gsf of industrial space, 121,744 gsf of office space, and 58,256 gsf of retail space. Parking would be accommodated within the lower levels of the No-Action buildings, using stackers.

Navy Street Site (Projected Site 2)

Under the No-Action condition, no changes would occur on Projected Site 2. It would continue to be occupied by the NYPD tow pound administrative building and surface parking area, and a small structure and associated surface parking lot for DCAS, as under existing conditions.

Flushing Avenue Alternate Sites (No-Action Site 3)

In the future without the Proposed Actions, two buildings would be constructed on No-Action Site 3. Each building would contain an eight-story base, built out to the street line. As shown in **Figure F-9**, the southern building would be topped with a four-story tower, and the northern building would be topped with a nine-story tower. The buildings on No-Action Site 3 would total approximately 1,249,120 gsf (not including parking), including approximately 1,021,120 gsf of industrial space, 193,300 gsf of office space,

and 34,700 gsf of retail space. Parking would be accommodated within the lower levels of the No-Action buildings, using stackers.

Flushing Avenue Site (Projected Site 3)

As detailed above, under the No-Action condition, Building 120 in the western portion of Projected Site 3 (which is also a part of No-Action Site 3) would be demolished and redeveloped. No changes would occur on the eastern portion of Projected Site 3 which would continue to be occupied by a DOJ warehouse in BNY Building 4 in the No-Action condition, as under existing conditions.

Secondary Study Area

As detailed in **Attachment C, "Land Use, Zoning, & Public Policy,"** there are there are 12 known and anticipated No-Action developments in the quarter-mile secondary study area, including seven predominately residential buildings, one commercial (retail and office) development, a 37-room hotel, and three mixed-use projects consisting of commercial, residential, and/or community facility spaces, as well as a 196-space public parking garage at 500 Kent Avenue. As detailed in **Table C-4**, these No-Action developments will result in additions and new buildings within the secondary study area ranging in height from four to 23 stories, resulting in new backdrops for existing visual resources in the Project Area and secondary study area, and potentially altering existing views of visual resources in the surrounding area.

Moreover, it is expected that, in the future without the Proposed Actions, the ongoing road construction on parts of Flushing Avenue, Kent Avenue, and Navy Street detailed above would be completed, further improving the streetscapes along these secondary study area thoroughfares.

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

Primary Study Area (Project Area)

In the 2030 With-Action Condition, the Proposed Actions would be approved. The Proposed Actions would not result in new development density beyond that which is permitted as-of-right. Rather, the Proposed Actions would acknowledge the unique character of the Yard and tailor the applicable zoning regulations to address certain site conditions, such as parking and waterfront public space. As such, a combined total of 4,611,962 sf of non-parking floor area would be developed in the BNY in the future with the Proposed Actions, equivalent to the No-Action Condition. However, a somewhat different mixture of uses would be developed in the Project Area in the future with the Proposed Actions than under the No-Action Condition.

Zoning Text Amendments

As detailed further in **Attachment A, "Project Description,"** the proposed zoning text amendments would create a new Special BNY District with use, bulk, parking/loading, ground floor measures, and public space regulations tailored to facilitate the development of a modern industrial campus. The Special District text would include the following key features:

1) Subdistricts. Four subdistricts would be created within the Special District: a Navy Street Subdistrict along the western perimeter of the Yard; a Flushing Subdistrict along the southern perimeter of the Yard; a Barge Basin Subdistrict located along Kent Avenue on both sides of the

Barge Basin; and a Core Subdistrict comprising the remainder of the Special District (see **Figure A-3** in **Attachment A**). The Flushing Subdistrict would contain two subareas – a Flushing East Subarea, to the east of Vanderbilt Avenue where new development is expected, and a Flushing West Subarea, to the west of Vanderbilt Avenue that is more developed today and thus less likely to experience significant new construction. The Barge Basin Subdistrict would have two subareas – a Barge Basin East Subarea and a Barge Basin West Subarea – located on opposite sides of the Barge Basin and both of which are expected to experience development in the future. The Navy Street Subdistrict would include a Navy Street Central Subarea, where development is anticipated in the future. The Navy Street Subdistrict, the Flushing Subdistrict, and the Barge Basin Subdistrict are identified as the "Perimeter Subdistricts" in the proposed Special District text. Within the public-facing Perimeter Subdistricts, a variety of commercial and community facility uses would be permitted, special bulk controls would apply in certain areas, and public space would be required in connection with new development. This land use approach would facilitate a public-facing transition zone between the BNY and the surrounding communities.

2) Inapplicability of Waterfront Controls. While the BNY is located on a "waterfront block" within the meaning of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area), most of the controls included in the Chapter do not apply to the BNY today due to the Yard's current use "predominately" for Use Group 16 heavy commercial, Use Group 17 and 18 manufacturing, and water-dependent uses. Moreover, many of the Article VI, Chapter 2 controls would not be consistent with the Master Plan or on the ongoing development of the Yard as a modern industrial campus. As examples, the overall height and base height controls included in Article VI, Chapter 2 are inconsistent with the larger manufacturing buildings existing at the Yard today, and would not allow for the vertically-integrated manufacturing and creative office buildings envisioned by the Master Plan. Similarly, the Applicants believe that requirements for waterfront yards and waterfront public access areas throughout the Yard would interfere with the use of the shoreline for the variety of industrial and commercial tenants – including water-dependent businesses – operating in the Yard today and expected to operate in the future. Therefore, the zoning text amendment would make the requirements of Article VI, Chapter 2 inapplicable within the Special District, except as specifically set forth in the Special District text.

3) Uses. Zoning regulations for M2 manufacturing districts do not permit Use Group 3A "Colleges or Universities," "Libraries, museums or non-commercial art galleries," physical culture or health establishments, or other Use Group 3A uses. Similarly, a variety of retail uses, including certain Use Group 6C, 9A, 10A, and 12B retail establishments are not permitted. To facilitate the Proposed Development, the Special District text would modify ZR Section 42-10 (Uses Permitted as of Right) to permit community facility uses in Use Group 3A without sleeping accommodations, and commercial uses in Use Groups 6C, 9A, 10A, and 12B not otherwise allowed in M2-1 zones in the Perimeter Subdistricts. These additional uses would be limited to a maximum floor area of 300,000 sf in each Perimeter Subdistrict with the additional commercial uses limited to no more than 100,000 sf of floor area in each Perimeter Subdistrict to assure that the additional uses remain complementary to the industrial character of the Yard. Permitting these new uses in the Perimeter Subdistricts would enable the Proposed Development to provide more amenities and services to Yard workers and attract visitors to select areas of the campus, helping to integrate the BNY into the fabric of the surrounding community while maintaining most of the Yard as a center for industry. The zoning text would limit the overall amount of these additional uses

allowed in any Subdistrict to assure that the uses would remain supportive of the overall industrial and job-creating mission of the BNY.

The Special District text would also permit Use Group 3A colleges or universities and schools in the Core Subdistrict by New York City Planning Commission (CPC) authorization, to facilitate synergies between academia and the industrial and maritime uses that are predominant in the BNY, provided that the CPC determines such academic use has a program compatible with a tenant or industrial operation of the Yard and does not interfere with the industrial use of the Yard. In some cases, co-locating academic facilities near maritime and industrial tenants in the Core Subdistrict would provide the best opportunity for hands-on learning and career development. While these new uses would be limited in scale, the new use regulations would facilitate the BNYDC's mandate under its lease with the City to "establish facilities to create and improve job opportunities," "provide additional employment," and "provide facilities for the training of persons in the acquisition of such skills as will prepare them to obtain employment." The CPC authorization would ensure that any future academic programs have a function connection to a Yard tenant or Yard operations, and that any environmental concern with locating a school or university within an M3 zoning district is adequately addressed.

The Special District would also allow for distilleries and breweries within the BNY without regard to performance standards set forth in ZR Section 42-27 (Performance Standards Regulating Fire and Explosive Standards). The BNY houses these uses today, and today's regulatory standards allow for these uses to operate in a safe manner. Finally, the Special District would allow for health clubs in the Yard as an as of right Use Group 9A use.

The Special District text would require that development on piers and platforms comply with the "WD" (Water Dependent) use provisions of ZR Section 62-24 (Uses on Piers and Platforms) while allowing the existing uses in these areas to be considered conforming uses to allow the long-standing tenants within the BNY to continue to upgrade and expand their businesses. Application of this Section would also have the result of limiting the height of any development other than developments for water-dependent uses to a height of 30 feet.

4) Bulk.
   a. Height and Setback. Existing standard height and setback regulations do not necessarily produce building envelopes that are appropriate for the Yard's perimeter given the surrounding context. On Flushing Avenue, buildings are permitted to be located at the street line and rise without setback to a height of 60 feet or four stories, above which the height is governed by a sky exposure plane; these controls would not result in building forms that are compatible with nearby high street wall buildings that are set back from the street line. Around the Barge Basin, existing bulk controls do not easily accommodate the large, double height, flexible manufacturing spaces envisioned for the Proposed Development, nor do they promote visual access to the waterfront. To facilitate the Proposed Development, the Special District text would modify the requirements of ZR Section 43-30 (Height and Setback Regulations) in the Flushing East Subarea and replace this Section entirely in the Barge Basin Subdistrict with special height and setback controls. ZR Section 43-30 would apply in all other locations.

      In the Flushing East Subarea, development would be required to set back a minimum of 50 feet from the Flushing Avenue street line, and because of the significant setback, the

Special District text would provide that the portion of Flushing Avenue adjacent to this Subarea would be considered a wide street for purposes of applying the underlying height and setback controls of ZR Section 43-20 (Height and Setback Regulations). In addition, while not strictly a height and setback control, the Flushing East Subarea controls would also establish view corridor requirements within the Subarea, one commencing at the intersection of Vanderbilt Avenue with Flushing Avenue, and a second at the intersection of Flushing Avenue with either Clinton Avenue or Waverly Avenue.

Because of the unique configuration of the Parcels in the Barge Basin Subdistrict, and the relationship of this Subdistrict to the waterfront, the Special District text would make the underlying controls of ZR Section 43-20 (Height and Setback Regulations) inapplicable in all respects, and would replace the underlying controls with a defined set of base, setback, sky exposure plane, and tower controls for portions of buildings exceeding the sky exposure plane. The Barge Basin controls would include:

- A requirement for a setback along the Kent Avenue frontage wide enough to create a 15-foot sidewalk along the western side of Kent Avenue. Any setback area would be improved as a sidewalk to the New York City Department of Transportation (DOT) standards.

- A requirement for a setback of 40 feet adjacent to the Barge Basin in the Barge Basin East Subarea and a setback of 50 feet adjacent to the Barge Basin in the Barge Basin West Subarea.

- A requirement that at least 70 percent of the length of the building base be located within eight feet of the Barge Basin setback lines and the Kent Avenue frontage to a height of two stories or 30 feet, whichever is lower.

- An 85-foot-tall maximum base height to allow for the extra-large double-height flexible production spaces included in the Master Plan along with loading, parking, and building support in the base.

- A building setback of 30 feet above the base height on both the Barge Basin and of 15 feet on the Kent Avenue frontage of the buildings.

- A sky exposure plane of 5.6 vertical feet for every horizontal foot of run above the base height on each of the Barge Basin, Kent Avenue, and southern boundary frontages to assure light and air to the surroundings.

- A right to build “towers” that extend beyond the sky exposure plane, provided that all such tower portions occupy not more than 40 percent of the lot area of the Barge Basin East Subarea or the Barge Basin West Subarea, as relevant, and that the primary frontage of any such tower portion facing the Barge Basin has a width of no more than 200 feet.

- In addition, in order to avoid an overly long unarticulated streetwall facing public access areas, the Special District text would require that the base building facades facing the Barge Basin incorporate recesses or projections within the lower two floors or lowest 30 feet of the base height, whichever is less, for at least 20 percent and not more than 50 percent of the building façade area.

b. Yards. Because of the irregular arrangement of buildings at the BNY today and the absence of immediate neighbors over much of the Special District requiring light and air, ZR Section 43-20 (Yard Regulations) would be inapplicable in the Special District, and no yard requirements would apply.

c. Floor Area. The maximum permitted floor area for all uses in the Special District would be 2.0 FAR as set forth in ZR Section 43-12 (Maximum Floor Area Ratio), subject to the further floor area ratio caps for the additional community facility and retail uses allowed by the Special District text. With regard to calculating permitted floor area, the Special District text would expressly provide that ZR Sections 62-31 (Bulk Computations on Waterfront Zoning Lots) and 62-326 (Buildings in Manufacturing Districts) would be applicable in the Special District. This would make it clear that the overall development potential of the BNY would not increase as a result of the Proposed Actions.

d. Shoreline Setback. In order to provide opportunities to address flooding and sea level rise through design and resiliency measures, the Special District text would require that buildings of less than 5,000 sf and buildings containing water-dependent uses be set back from the Yard's shoreline. Development may be located closer to the shoreline by CPC Chair certification based on a showing that either (i) the development has been designed with resiliency measures to a height of 58 inches above the current mean high water line for the Yard; or (ii) that an area-wide resiliency plan has been prepared for the Yard and that the development will incorporate measures that are part of the plan or is in an area where protective measures from the resiliency plan are in place.

e. Special Permit for Bulk Modifications. In order to allow for adjustments to the Special District bulk regulations to respond to future conditions, the Special District would allow for adjustments to applicable bulk controls, other than floor area, by special permit based on findings that the modifications further the needs and objectives of the Special District, will result in better site planning, will allow for adequate light and air to adjoining publicly accessible areas, and will not unduly increase the bulk of any building to the detriment of occupants of the building or nearby blocks.

5) Publicly Accessible Space. As noted above, the Yard is currently exempt from visual corridor requirements under ZR Section 62-51 and exempt from waterfront public access area requirements under paragraph (a) of ZR Section 62-52 because the Yard is predominantly developed with Use Group 16 through 18 and water-dependent uses. The Applicants believe this is not expected to change in the future, nor would public access throughout the Yard be appropriate given the nature of the Yard industries and the maritime uses occupying most of the waterfront. However, creating publicly accessible space in connection with development at defined locations at the Yard, where safe and not inconsistent with the industrial and maritime operations, is part of the Master Plan. The Special District text would require that publicly accessible space be provided in connection with new development in each the Navy Street Central Subarea, Flushing East Subarea, Barge Basin East Subarea, and Barge Basin West Subarea other than small structures having floor area of no more than five percent of the lot area of a Subdistrict and accessory to existing Use Group 11, 16, 17, or 18 uses at the Yard. The amount of open space required for the Navy Street Central Subarea would be 15 percent of the lot area of the Subarea (or 35,000 sf), and the Special District text would establish minimum dimension, seating, and

planting requirements for the space. For the Flushing East Subdistrict, the Special District text would require that an area with a 50-foot depth between Flushing Avenue and any development be improved as a publicly accessible plaza, with seating, plantings, and other amenities. In the Barge Basin Subdistrict, the Special District text would require that 20 percent of the lot area of the Barge Basin West Subarea and 30 percent of the lot area of the Barge Basin East Subarea be improved as public access areas (66,000 sf and 52,400 sf, respectively), including a minimum 40-foot walkway along the eastern edge of a Barge Basin, a minimum-50 foot walkway along the western edge of the Barge Basin and pedestrian connections from Kent Avenue along a 30-foot walkway at the northern end of the Barge Basin East Subarea and a plaza area at the southern end of the Barge Basin East Subarea.

To ensure that the Navy Street Central Subarea and Barge Basin Subdistrict public access areas are built in proportion to development within the Subdistricts, the Special District text would allow for the phased construction of the public access areas in these locations. The phasing plan would require that the public access areas be built out in a proportionate manner to the amount of development being built, and that the required public space would be accessible from a public street or other publicly accessible open area, or for the Barge Basin West Subarea, the private street at the southern end of the Barge Basin.

Because the BNY is owned by the City, the design of the publicly accessible spaces (as well as all new structures developed in the Project Area) will be subject to review and approval by the New York City Public Design Commission. Plans for the public access areas would also be filed with the New York City Department of City Planning (DCP), demonstrating compliance with the zoning text requirements through CPC Chair certification. The Special District text would require the owners of these publicly accessible spaces to provide for their maintenance and operation, including but not limited to repairs, litter control, and the care and replacement of vegetation. All publicly accessible areas would be open to the public from 6:00 AM to 10:00 PM from April 15th to October 31st, and from 7:00 AM to 8:00 PM from November 1st to April 14th, except when required to be closed for repairs. These areas would also have signage at entry points to indicate that the spaces are open to the public.

6) Ground Floor Use, Transparency, and Screening. In order to create an attractive and engaging façade condition in areas where the Proposed Development is adjacent to public access areas required by the Special District text, the text would require that 50 percent of the ground floor frontages adjacent to the public access areas be occupied by floor area.

   Transparency requirements would also apply in these areas based on the surface area subject to the wrapping requirements, with transparency required at a rate of 50 percent of surface area where commercial use other than Use Group 11 or 16 is located in the required ground floor area, and at a rate of 25 percent of surface area where Use Group 11, 16, 17 or 18 is located behind the required ground floor area. The provisions of ZR Section 37-361 (Blank wall thresholds) for Type I blank walls would apply to the remaining portions of these ground floor facades and would extend for 50 feet along the adjoining facades.

7) Parking and Loading. Existing parking regulations impose very high parking requirements that are inconsistent with actual parking demand, the goals of the Transportation Plan, and the City's policy goals of promoting public-transit-oriented development and reducing reliance on automobiles. Additionally, only approximately 80 percent of the Yard's parking spaces are utilized

today. Existing loading regulations also require more, and larger, loading berths than are needed. These regulations impose unnecessary costs on development.

To ensure that excessive parking and loading are avoided in connection with the Proposed Development, the Special District text would make Article IV, Chapter 4 (Accessory Off-Street Parking and Loading Regulations) inapplicable to the Special District except where specifically set forth in the Special District. With regard to required parking, the Special Permit text would make ZR Section 44-21 (General Provisions) applicable, but would eliminate the requirement if a traffic demand management plan (the "TDM Plan") documenting modes of travel to the Yard, identifying and evaluating strategies to reduce reliance on automobiles, and encouraging the use of sustainable, alternative methods of transportation is maintained. The TDM Plan would establish a program of alternative transportation measures and would include ongoing survey and reporting criteria to assess the effectiveness of the plan. The TDM Plan is expected to evolve over time to respond to changes in travel patterns and to incorporate additional modes of transportation and technologies, with the goal of making additional parking at the Yard unnecessary. Surveys and other means will be employed to collect data related to travel modes, parking utilization, parking counts, and bicycle counts at the Yard annually and reported on no less than every three years and made available on a public website. The owner or ground tenant of the Yard would submit an affidavit every three years confirming the ongoing existence of the TDM Plan, or if the TDM Plan no longer exists, the date of its termination. Accessory parking would be permitted under the Special District text.

The Special District text would eliminate today's loading berth requirements, allowing the Yard to tailor its loading facility to align with actual needs of its tenants. To limit the impact of loading operations on the surrounding neighborhoods, the Special District text would limit the number of curb cuts accessing loading berths directly from the surrounding streets to no more than one in the Navy Street Central Subarea, in the Flushing East Subarea, and in the Barge Basin East Subarea. Additional curb cuts would be allowed in the Barge Basin East Subarea by CPC Chair certification, confirming that DOT has approved the additional curb cut. The proposed controls would significantly reduce the number of curb cuts for loading from that allowed under current zoning, while permitting fully functional manufacturing buildings.

The Special District text would require that bicycle parking be provided in the amounts required by ZR Section 44-60 (Bicycle Parking). However, in order to accommodate a variety of bike parking options and maximize use of spaces across the Project Area, the text would allow for 50 percent of the spaces to be open. This adjustment is generally consistent with the bike parking controls applicable to academic campuses and would be in keeping with the way cyclists to the Yard park their bikes today.

10) Ancillary Provisions. The zoning text amendment would also amend:

    a. ZR Section 11-122 (Districts established) to acknowledge the establishment of the Special Brooklyn Navy Yard District;

    b. ZR Section 12-10 (Definitions) to include the Special Brooklyn Navy Yard District as a defined term;

c. ZR Section 14-44 (Special Zoning Districts Where Certain Sidewalk Cafes Are Permitted) to include the Special District in the list of special districts in order to continue to allow enclosed and unenclosed sidewalk cafes in the same manner as they are today; and

d. ZR Section 62-13 (Applicability of District Regulations) to include the Special District in the list of special districts where the provisions of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area) do not apply, except as expressly set forth in the Special District text.

Zoning Map Amendments

In addition to mapping the proposed Special BNY District, the Proposed Actions would rezone a portion of the Yard that is currently zoned R6B, M1-2, and M3-1 to M2-1 zoning. The rezoning of the R6B district to an M2-1 (BNY) district would correct the zoning district boundaries established by the 1998 Vinegar Hill Rezoning to ensure that manufacturing and commercial uses are permitted in this portion of the Yard, consistent with City policy for the BNY and the mission of the BNYDC. The rezoning of portions of the Yard's perimeter M1-2 and M3-1 districts to M2-1 would establish a consistent zoning district designation for areas of the Yard expected to experience significant development in the next decade with somewhat higher performance standards than the M3 zoning and providing a transition zone between the Yard's core and the surrounding neighborhoods. The M2-1 zoning, together with the proposed Special District text, would also allow for the targeted introduction of community facility and additional commercial uses compatible with the goals of the Master Plan and the overarching role of the BNY as a modern manufacturing campus. Permitting these uses within the more public-facing Perimeter Subdistricts portion of the BNY would also attract and serve residents and workers in the surrounding communities.

Kent Avenue Site (Projected Site 1)

In the future with the Proposed Actions, three buildings would be constructed on Projected Site 1. Each building would contain a seven-story base, built out to the parcel line and topped with a nine- to 13-story tower (see **Figures F-9** and **F-10**). The buildings would total approximately 2,511,635 gsf (not including parking), including approximately 1,825,011 gsf of industrial space, 436,624 gsf of commercial (office and retail) space, and 250,000 gsf of community facility (academic) space. The buildings would contain 387 parking spaces. It is expected that the ground floors would be predominately occupied by retail and manufacturing space. It is anticipated that one curb cut would be provided along Kent Avenue for parking and loading access to the site. A total of approximately 118,454 gsf of open space would be provided on the site along the Barge Basin.

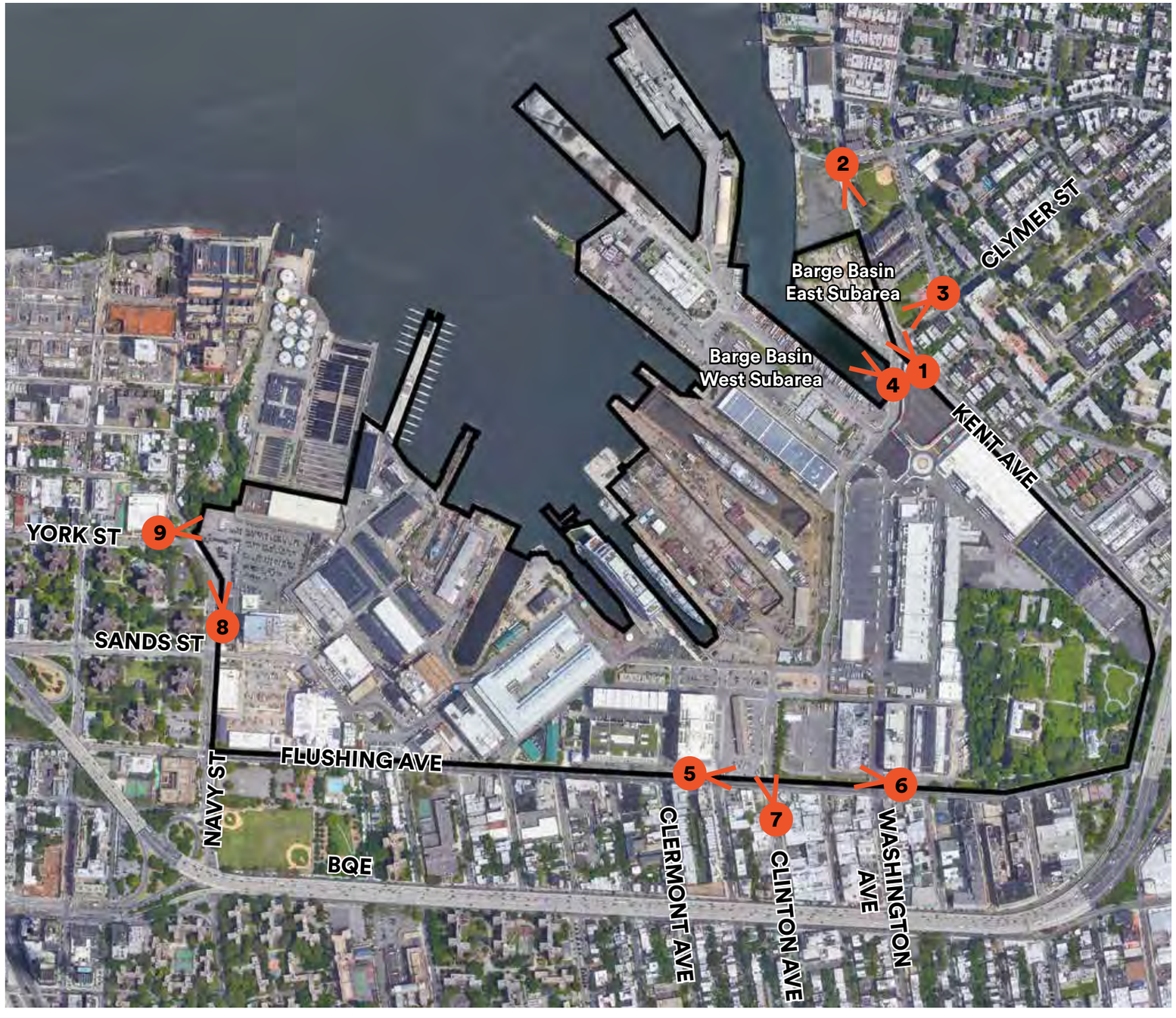
Navy Street Alternate Sites (No-Action Site 2)

In the future with the Proposed Actions, no changes would occur on No-Action Site 2. The Navy Street Alternate Sites would continue to be occupied by five BNY buildings (Nos. 234, 269, 313, 314, and 500), comprised of a variety of commercial and industrial tenants, as under existing conditions.

Navy Street Site (Projected Site 2)

In the With-Action condition, two buildings would be constructed on Projected Site 2. As shown in **Figures F-9** and **F-10**, the westernmost building would be eight-stories tall, and the northernmost building would

Map Key



1. Kent Ave, Looking North
2. Kent Ave, Looking South
3. Clymer St, Looking West
4. Barge Bain, Looking North
5. Flushing Ave, Looking East
6. Flushing Ave, Looking West
7. Clinton St, Looking North
8. Navy St, Looking North
9. York St, Looking East

Courtesy of WXY

Projected Site 1 (Kent Avenue Site), Looking North on Kent Avenue

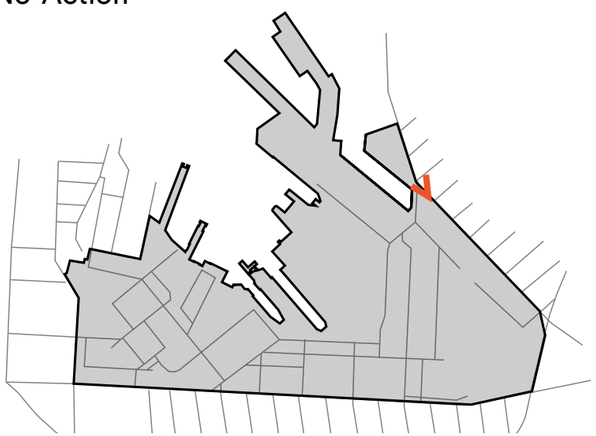
For Illustrative Purposes Only; Courtesy of WXY



No-Action



With-Action



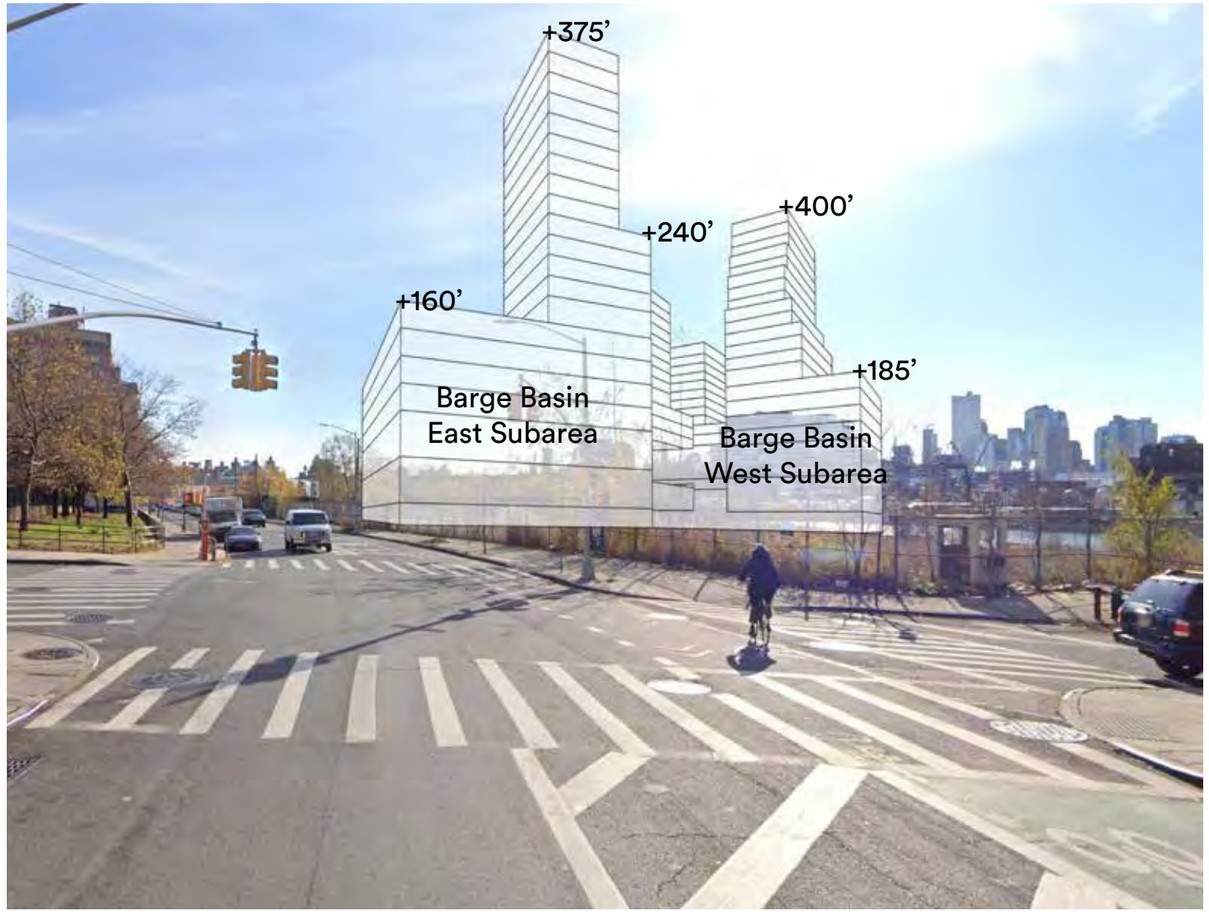
Existing



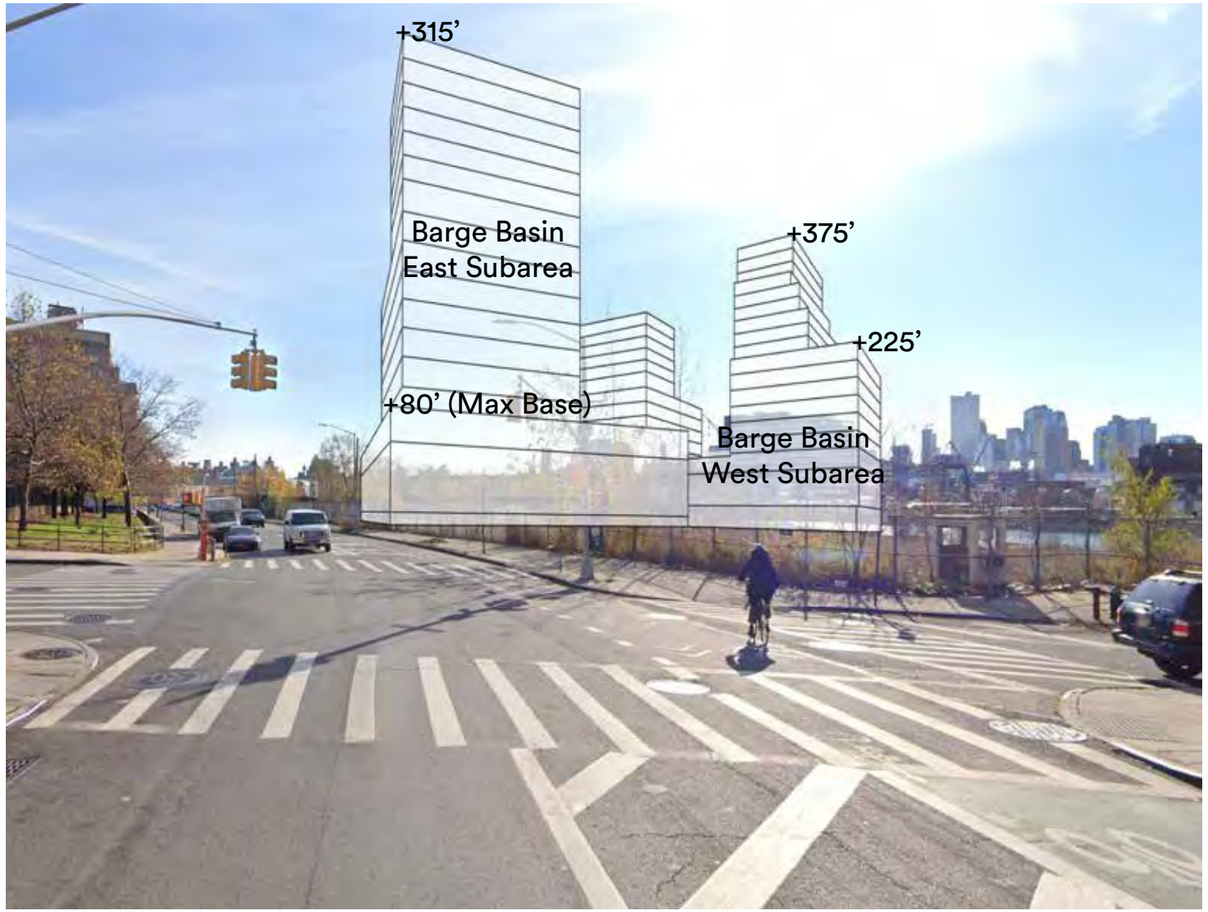
Figure F-10b
No-Action vs. With-Action Comparison

Projected Site 1 (Kent Avenue Site), Looking South on Kent Avenue

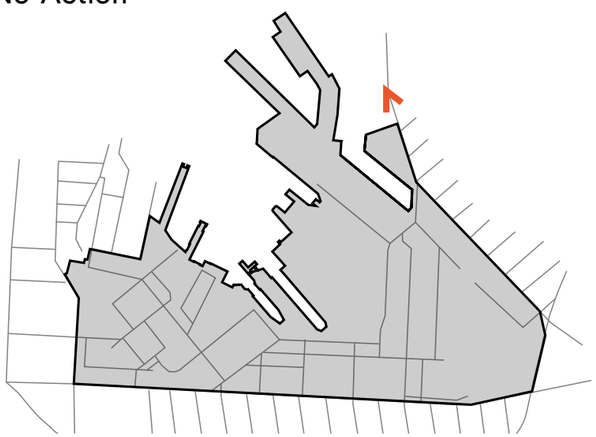
For Illustrative Purposes Only; Courtesy of WXY



No-Action



With-Action





Existing

Special Brooklyn Navy Yard District

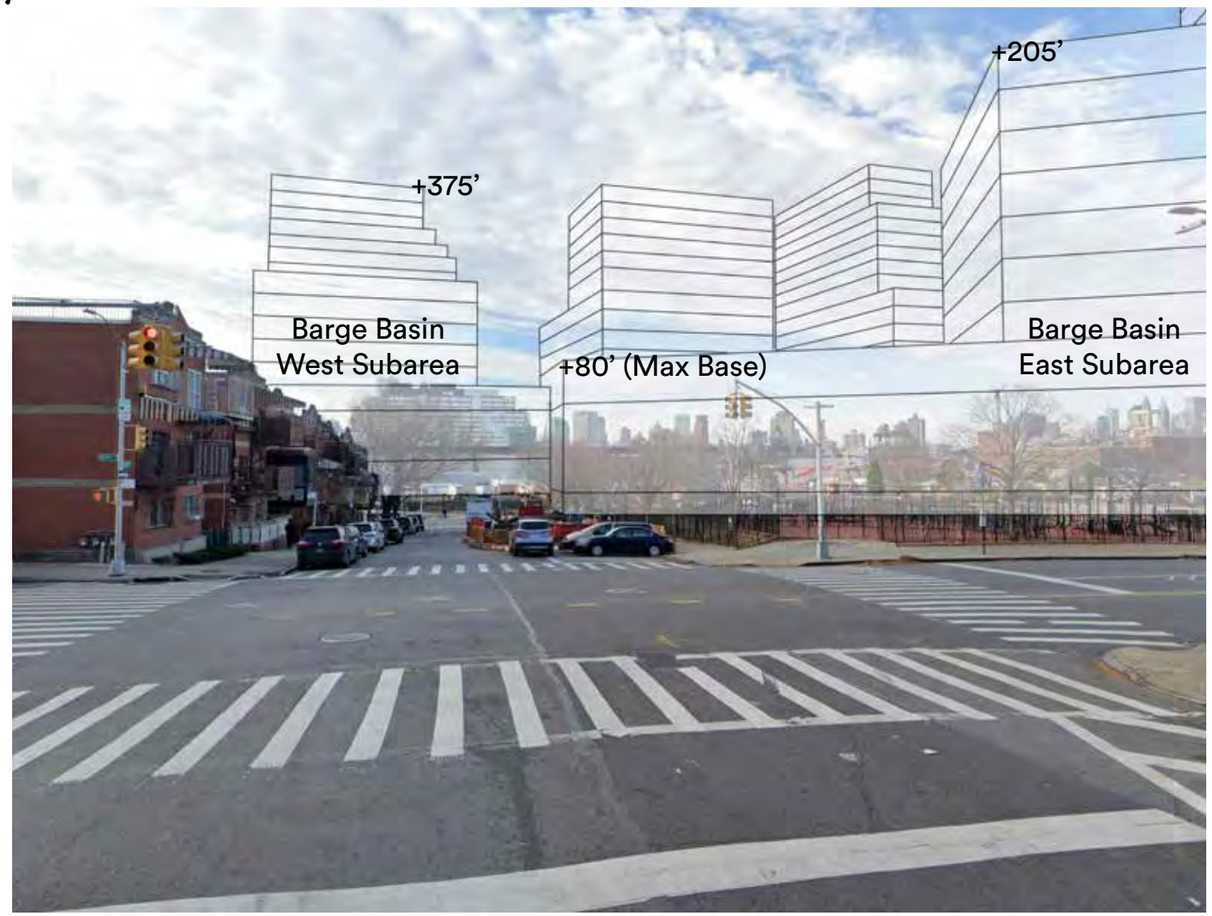
Figure F-10c
No-Action vs. With-Action Comparison

Projected Site 1 (Kent Avenue Street) Looking West from Clymer Street

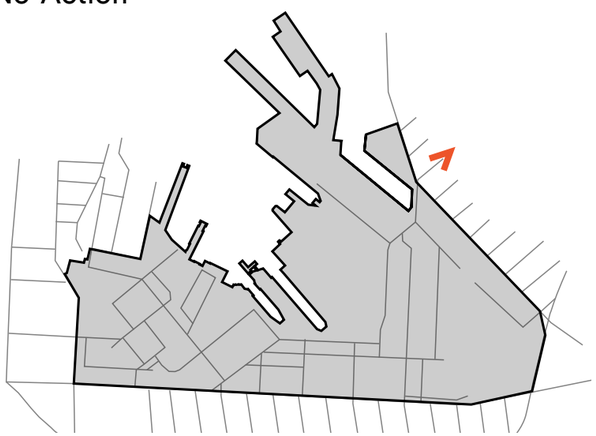
For Illustrative Purposes Only; Courtesy of WXY



No-Action



With-Action





Existing

Special Brooklyn Navy Yard District

Figure F-10d
No-Action vs. With-Action Comparison

Projected Site 1 (Kent Avenue Site) at the Barge Basin, Looking North

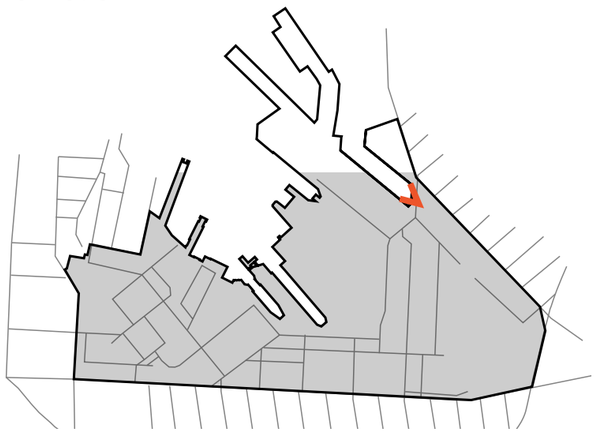
For Illustrative Purposes Only; Courtesy of WXY



No-Action



With-Action



Existing



Projected Site 2 (Navy Street Site), Looking North on Navy Street

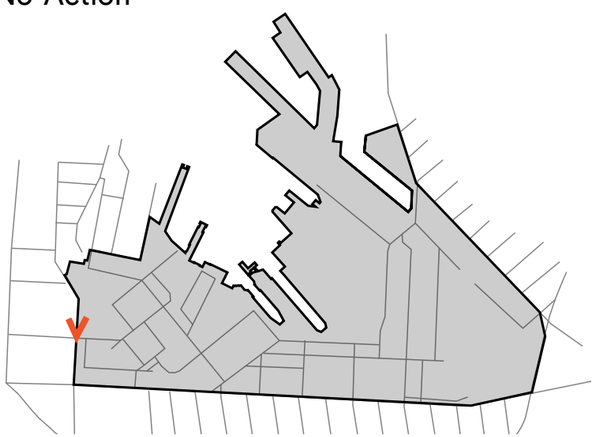
For Illustrative Purposes Only; Courtesy of WXY



No-Action



With-Action





Existing

Special Brooklyn Navy Yard District

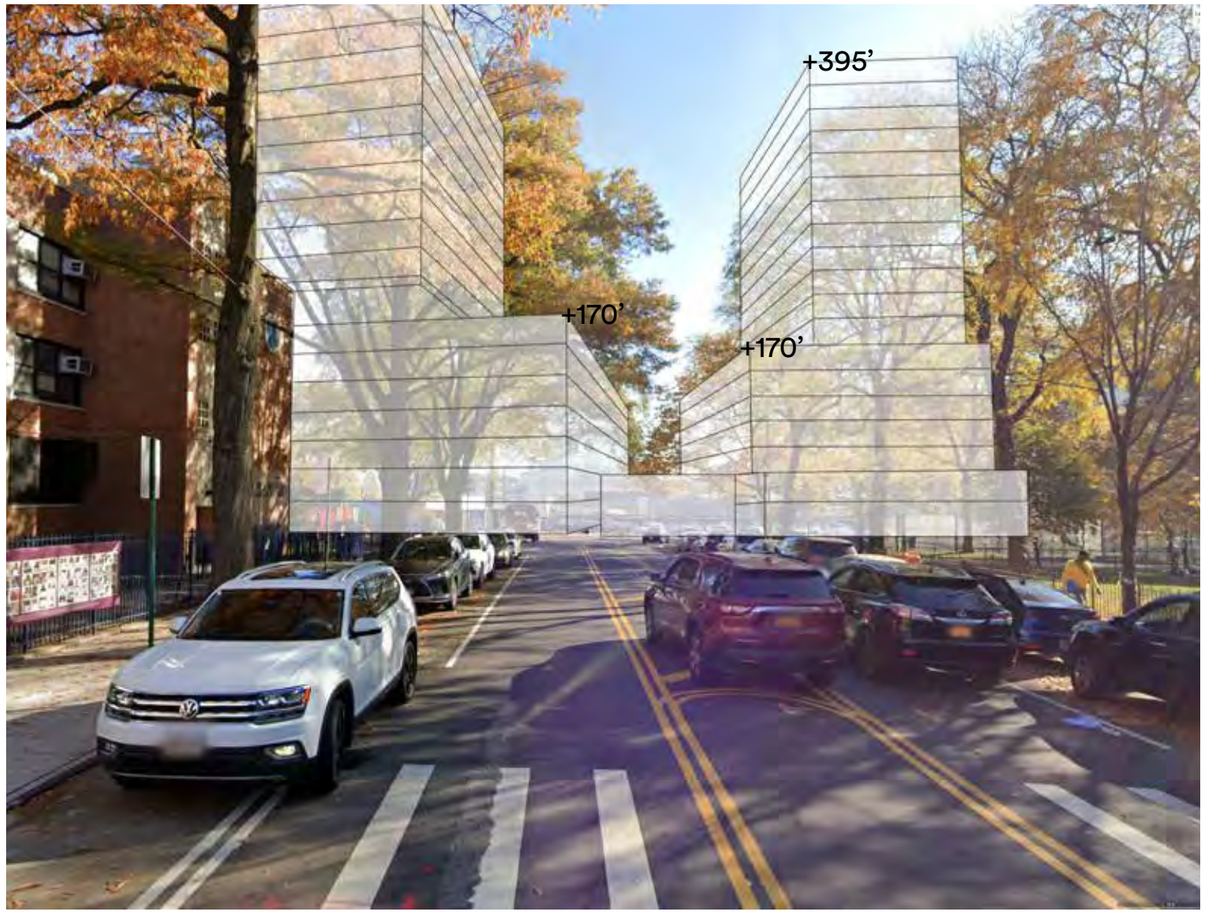
Figure F-10f
No-Action vs. With-Action Comparison

Projected Site 2 (Navy Street Site) Looking East on York Street

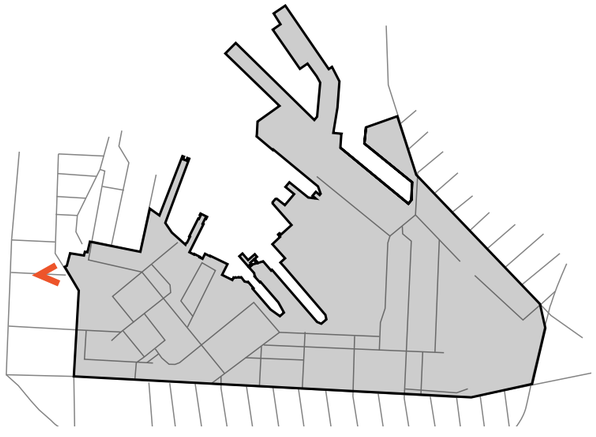
For Illustrative Purposes Only; Courtesy of WXY



No-Action



With-Action





Existing

Special Brooklyn Navy Yard District

Figure F-10g
No-Action vs. With-Action Comparison

contain a seven-story based topped with a 13-story tower. The buildings would total approximately 851,207 gsf (not including parking), including approximately 458,590 gsf of industrial space, 142,617 gsf of commercial (office and retail) space, and 250,000 gsf of community facility (academic and museum) space. The buildings would contain 253 parking spaces. It is expected that the ground floors would be predominately occupied by retail and community facility space. Approximately 35,000 gsf of open space would be provided on site.

Flushing Avenue Alternate Sites (No-Action Site 3)

As detailed below, in the future with the Proposed Actions, Building 120 in the southern portion of No-Action Site 3 (which is also a part of Projected Site 3 as shown in **Figure F-9**) would be demolished and redeveloped. No changes would occur on the northern portion of the Flushing Avenue Alternate Sites, which would continue to be occupied by BNY Building 293, as under existing conditions.

Flushing Avenue Site (Projected Site 3)

In the With-Action condition, two buildings would be constructed on Projected Site 3. Each building would rise 16-stories, built out to the street line (refer to **Figures F-9** and **F-10**). The buildings would total approximately 1,249,120 gsf (not including parking), including approximately 773,170 gsf of industrial space, 225,950 gsf of commercial (office, retail, and health club) space, and 250,000 gsf of community facility (academic) space. The buildings would contain 154 parking spaces. It is expected that the ground floors would be predominately occupied by retail and manufacturing facility space. Approximately 36,350 gsf of open space would be provided on site.

Increment between the No-Action Condition and the With-Action Condition

The Proposed Actions would facilitate the incremental development of 750,000 sf of community facility floor area and net reductions of 672,191 sf of industrial floor area and 77,809 sf of commercial floor area in the BNY, as compared to 2030 conditions without the Proposed Actions. The types of commercial uses present in the Project Area would vary between the two scenarios. Specifically, it is assumed that a greater proportion of the commercial uses would comprise non-office uses in the With-Action Condition and that a health club would occupy a portion of Projected Site 3. Moreover, approximately 25,000 sf of destination retail is expected on both Projected Sites 1 and 2 in the future with the Proposed Actions. As a result, the Proposed Actions would result in a net increase of 40,000 sf of health club floor area and 50,000 sf of destination retail, as well as a net reduction of 75,937 sf of office uses and 91,874 sf of local retail.

Secondary Study Area

The Proposed Actions are area-specific, and would not result in any changes to urban design, including blocks, streets, streetscapes, buildings, open spaces, natural resources, or visual resources in the surrounding quarter-mile secondary study area.

Projected Site 3 (Flushing Avenue Site), Looking East on Flushing Avenue

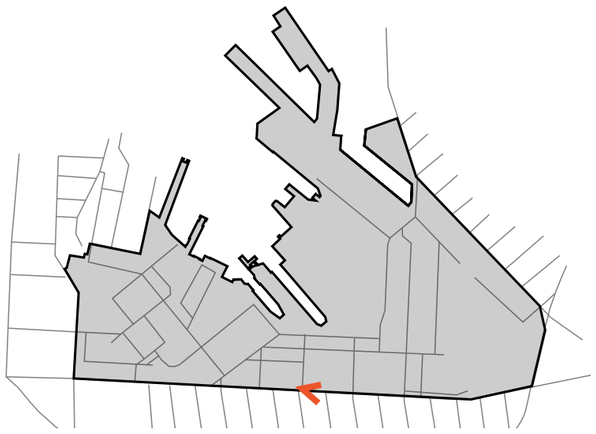
For Illustrative Purposes Only; Courtesy of WXY



No-Action



With-Action





Existing

Special Brooklyn Navy Yard District

Figure F-10h
No-Action vs. With-Action Comparison

Projected Site 3 (Flushing Avenue Site), Looking West on Flushing Avenue

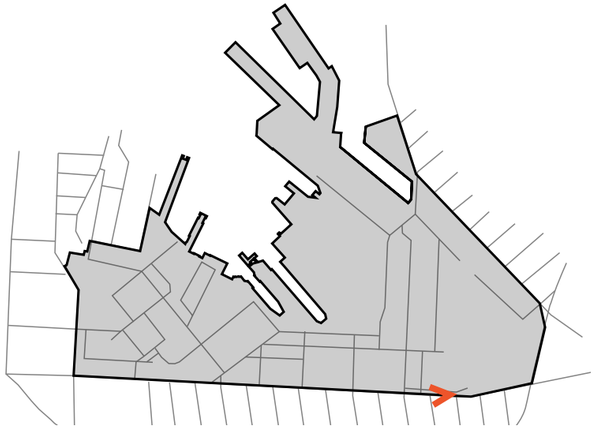
For Illustrative Purposes Only; Courtesy of WXY



No-Action



With-Action





Existing

Projected Site 3 (Flushing Avenue Site) Looking North on Clinton Street

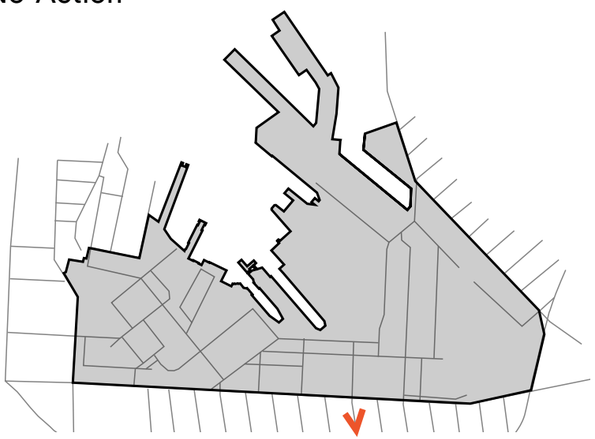
For Illustrative Purposes Only; Courtesy of WXY



No-Action



With-Action





Existing

Figure F-10j
No-Action vs. With-Action Comparison

V. CONCLUSIONS

The Proposed Actions would not result in significant adverse urban design or visual resources impacts in the primary or secondary study areas. The Proposed Actions would facilitate development that is not currently permitted as-of-right in the Project Area, which would create a notable change in the urban design character of the area. Compared to the future without the Proposed Actions, the visual appearance, and thus the pedestrian experience of the Project Area, would change considerably. However, this change would not constitute a significant adverse urban design impact as it would not negatively affect a pedestrian's experience of the Project Area. Rather, development anticipated in the Project Area in the future with the Proposed Actions is expected to positively affect the urban design of the area and improve the pedestrian experience, through the redevelopment of underutilized sites in the BNY with mixed-use developments that would reactive these areas of the BNY, provide publicly accessible open space, and establish new visual connections to the waterfront for the surrounding community.

The Special District text would require that publicly accessible space be provided in connection with new developments proposed in the Navy Street Central Subarea, Flushing East Subarea, Barge Basin East Subarea, and Barge Basin West Subarea. As detailed above, the Special District text would impose minimum size, dimension, seating, planting, lighting, and/or amenity requirements for these areas. The Barge Basin Subdistrict public space would incorporate additional elements to take advantage of the proximity of this Subdistrict to the waterfront, including walkways along the eastern and western edges of the Barge Basin, pedestrian connections, and a plaza area. Moreover, because the BNY is owned by the City, the design of the publicly accessible spaces (as well as all new structures developed in the Project Area) will be subject to review and approval by the New York City Public Design Commission. Plans for the public access areas would also be filed with DCP, demonstrating compliance with the zoning text requirements through a CPC Chair certification. Additionally, all publicly accessible areas would be open to the public from 6:00 AM to 10:00 PM from April 15th to October 31st, and from 7:00 AM to 8:00 PM from November 1st to April 14th, except when required to be closed for repairs. These areas would also have signage at entry points to indicate that the spaces are open to the public.

As detailed further in **Attachment C, "Land Use, Zoning, & Public Policy,"** the Proposed Actions would facilitate the development of a mix of uses in an area with strong demand for these uses. The proposed Special BNY District is intended to strengthen the Yard's status as a modern industrial campus. The Proposed Actions would introduce a limited set of new uses that are complementary to the BNY's predominantly industrial uses. For example, new health club uses would serve as an amenity for BNY employees and local residents. Academic and museum institutions would provide valuable learning opportunities and exposure to manufacturing sectors. Additional retail uses, including showroom space, would provide a market for Yard manufacturers to sell their products. These changes would maintain the appeal of the BNY as a place to work. While the Proposed Actions would result in a net reduction of 672,191 sf of industrial floor area under the With-Action Condition, over three million sf of industrial uses would be developed on the three Projected Sites in the With-Action Condition, and the proposed limitations on the floor area that could be devoted to commercial and community facility uses would ensure that the predominately industrial character of the Yard would remain. Overall, the Proposed Developments, with their open space and somewhat broader mix of uses, would constitute an improvement with respect to land uses as compared to the No-Action development of solely commercial and industrial uses, which wouldn't provide community facility spaces or the public spaces detailed above. The Proposed Actions would facilitate the development of ground-floor commercial and community facility spaces throughout the majority of the three Projected Sites, as opposed to parking garages and

the excessive number of loading berths that would be required in the No-Action Condition. As detailed above, the Special District text would include ground floor transparency and screening requirements to create an attractive and engaging façade condition in areas where the Proposed Development is adjacent to public access areas. As such, the Proposed Developments would activate the streetscapes around the Projected Sites, further enhancing the pedestrian experience in and around the Project Area.

Although the proposed towers on the Projected Sites would be taller than the as-of-right No-Action buildings, the additional height would not result in significant adverse urban design impacts or increased density in the Yard. Moreover, the Proposed Developments would not obstruct any significant view corridors in the primary or secondary study areas, or otherwise adversely alter the context of surrounding visual resources. Rather, as detailed in **Attachment E, "Historic & Cultural Resources,"** the Proposed Actions would preserve four historic BNY buildings that would be demolished in the No-Action Condition. These contributing historic resources in the S/NR-listed Brooklyn Navy Yard Historic District would be preserved as a result of the Proposed Actions. Although some distant public views of the East River, Barge Basin, and Manhattan skyline from Navy Street, Flushing Avenue, and Kent Avenue could be partially obstructed as a result of With-Action development on Projected Sites 1, 2, and 3, more proximate views of these visual resources would be provided in the proposed public spaces detailed above. Moreover, in the future with the Proposed Actions, some of the proposed public access areas would include visual corridors to provide views into the Yard towards the waterfront, which would not be available in the No-Action Condition. Moreover, the Flushing East Subarea controls would also establish view corridor requirements within the Subarea, one commencing at the intersection of Vanderbilt Avenue with Flushing Avenue, and a second at the intersection of Flushing Avenue with either Clinton Avenue or Waverly Avenue. These new vantage points would enhance the pedestrian experience in the Project Area and surrounding secondary study area, creating new and expansive viewsheds of the S/NR-listed Brooklyn Navy Yard Historic District, as well as the East River, Barge Basin, and Manhattan skyline.

ATTACHMENT G
TRANSPORTATION

I. INTRODUCTION

This attachment presents the findings of the analyses of traffic, parking, transit, and pedestrian conditions for the reasonable worst case development scenario (RWCDS). As discussed in **Attachment A, "Project Description,"** Building 77 QALICB, Inc. (the "Applicant"), together with the New York City Department of Small Business Services as Co-Applicant, are seeking zoning map and text amendments (the "Proposed Actions") to carry out the recommendations outlined in the Brooklyn Navy Yard Master Plan (*BNY 2030*). The analysis year for the Proposed Actions is 2030.

Sites within the Brooklyn Navy Yard (BNY) that could facilitate the Brooklyn Navy Yard Development Corporation (BNYDC)'s target expansion plan of increasing Yard employment to 30,000 by 2030 are being analyzed for reasonable worst-case development scenario (RWCDS) purposes. As detailed further in **Attachment A**, it is expected that under the No-Action Condition, the Kent Avenue site (Projected Site 1) would be developed, along with the Navy Street Alternate sites (No-Action Site 2) and the Flushing Avenue Alternate sites (No-Action Site 3). Under 2030 With-Action Conditions, it is assumed that the Kent Avenue site (Projected Site 1), the Navy Street site (Projected Site 2), and the Flushing Avenue site (Projected Site 3) would be developed (refer to **Figure G-1**) with a greater variety of land uses and fewer parking spaces and loading docks, among other changes, as compared to No-Action Conditions (refer to **Attachment A** for further discussion).

As discussed in detail in the *Transportation Planning Factors (TPF)/Travel Demand Forecast (TDF) Memorandum* (see **Appendix 3**), the Proposed Actions do not exceed the *City Environmental Quality Review* (CEQR) *Technical Manual* thresholds for traffic or parking analyses, and therefore, are not anticipated to result in significant adverse impacts. The Proposed Actions would exceed the *CEQR Technical Manual* threshold for detailed transit and pedestrian analyses; however, as discussed below, the Proposed Actions would not result in any significant adverse transit or pedestrian impacts.

II. PRELIMINARY ANALYSIS METHODOLOGY

The 2020 *CEQR Technical Manual* describes a two-level screening procedure for the preparation of a "preliminary analysis" to determine if quantified operational analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation (Level 1) analysis to estimate the number of person and vehicle trips attributable to the Proposed Actions. According to the *CEQR Technical Manual*, if the Proposed Actions are 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 to be performed to estimate the incremental trips that could be incurred at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the Proposed Actions would generate 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 sidewalk, corner area, or crosswalk, then further quantified operational analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, parking, and vehicular and pedestrian safety.



Source: WXY

Special Brooklyn Navy Yard District

Figure G-1

BNY 2030 Master Plan Identified Near-Term Sites

III. LEVEL 1 SCREENING ASSESSMENT

A Level 1 trip generation screening assessment was conducted in order to estimate the number of person and vehicle trips by mode expected to be generated by the Proposed Actions during the weekday AM, school midday, PM, and Saturday midday peak hours. These estimates were then compared to the *CEQR Technical Manual* analysis thresholds of 50 peak hour vehicle trips, 200 peak hour subway/rail riders, 50 peak hour bus riders, and 200 peak hour pedestrian trips to determine if a Level 2 screening and/or quantified operational analyses may be warranted. The travel demand assumptions used for this assessment are discussed below and a detailed travel demand forecast is provided.

Table G-1 below provides a comparison of the 2030 No-Action and 2030 With-Action Conditions identified for analysis purposes, for each of the three Projected Sites. As shown, by 2030, the incremental (net) change that would result from the Proposed Actions is the development of 750,000 sf of community facility floor area and a net reduction of 672,191 square feet (sf) of industrial floor area and 77,809 sf of commercial floor area, as compared to the No-Action Condition. For analysis purposes, the With-Action Condition community facility uses are assumed to include predominantly academic uses (650,000 gsf) on all three sites, as well as a museum (100,000 gsf) on Projected Site 2. Under the RWCDS, it is assumed that a larger proportion of the commercial uses would comprise non-office uses in the With-Action Condition. As a result, the Proposed Actions would result in a net increase of 40,000 sf of health-club floor area and 50,000 sf of destination retail uses, as well as a net reduction of 91,874 sf of local retail uses and 75,937 sf of office uses. Additionally, the Special Permit text would eliminate parking requirements if a traffic demand management plan (the "TDM Plan") documenting modes of travel to the Yard, identifying and evaluating strategies to reduce reliance on automobiles, and encouraging the use of sustainable, alternative methods of transportation is maintained. Therefore, in accordance with the TDM plan, parking will be provided to meet the anticipated demand at each site. As the incremental development would have the potential to exceed *CEQR Technical Manual* analysis thresholds, preliminary travel demand forecasts were prepared.

Transportation Planning Factors

Table G-2 shows the transportation planning factors that were used to forecast the travel demand generated by the proposed uses in the weekday AM, midday, school midday, PM and Saturday midday peak hours, under the With-Action Condition. These include trip generation rates, temporal and directional distributions, mode choice factors, vehicle occupancies, and truck trip factors for the With-Action increment of approximately -672,191 gsf industrial, - 75,937 sf office, -91,874 sf local retail, +50,000 sf destination retail, +40,000 sf health club, +650,000 sf of academic uses, and a +100,000 sf museum. The approximately 650,000 sf of academic uses was assumed to include 400,000 sf of university uses (consisting of approximately 266,667 sf of space dedicated to undergraduate students and approximately 133,333 sf of space dedicated to graduate students) at Projected Sites 1 and 2 and an approximately 250,000-sf high school at Projected Site 3. In addition, it should be noted that the NYC Ferry Astoria Route stops near the center of the Project Area and provides access to Lower Manhattan, Western Queens, Roosevelt Island, and the Upper East Side (refer to **Figure G-4**). As such, the transit mode shares were adjusted for each of the museum, academic and destination retail uses to include a two percent ferry share based on PHA surveys of over 1,000 DUMBO office employees in 2012.

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

Site	Use	No-Action Condition New Development (gsf)	With-Action Condition New Development (gsf)	Incremental New Development (gsf)
Projected Site 1 (Kent Avenue)	Industrial	2,036,635	1,825,011	-211,624
	Commercial	475,000	436,624	-38,376
	Office	*416,083*	*386,624*	*-29,459*
	Local Retail	*58,918*	*25,000*	*-33,918*
	Destination Retail	*0*	*25,000*	*+25,000*
	Health Club	*0*	*0*	*0*
	Community Facility	0	250,000	+250,000
	Academic	*0*	*250,000*	*+250,000*
	Museum	*0*	*0*	*0*
	Total	**2,511,635**	**2,511,635**	**0**
No-Action Site 2 (Navy Street Alternate) + Projected Site 2 (Navy Street)	Industrial	671,207	458,590	-212,617
	Commercial	180,000	142,617	-37,383
	Office	*121,744*	*92,616*	*-29,128*
	Local Retail	*58,256*	*25,000*	*-33,256*
	Destination Retail	*0*	*25,000*	*+25,000*
	Health Club	*0*	*0*	*0*
	Community Facility	0	250,000	+250,000
	Academic	*0*	*150,000*	*+150,000*
	Museum	*0*	*100,000*	*+100,000*
	Total	**851,207**	**851,207**	**0**
No-Action Site 3 (Flushing Avenue Alternate) + Projected Site 3 (Flushing Avenue)	Industrial	1,021,120	773,170	-247,950
	Commercial	228,000	225,950	-2,050
	Office	*193,300*	*175,950*	*-17,350*
	Local Retail	*34,700*	*10,000*	*-20,600*
	Destination Retail	*0*	*0*	*0*
	Health Club	*0*	*40,000*	*+40,000*
	Community Facility	0	250,000	+250,000
	Academic	*0*	*250,000*	*+250,000*
	Museum	*0*	*0*	*0*
	Total	**1,249,120**	**1,249,120**	**0**
Total Non-Parking gsf	**Industrial**	**3,728,962**	**3,056,771**	**-672,191**
	Commercial	**883,000**	**805,191**	**-77,809**
	Office	***731,127***	***655,190***	***-75,937***
	Local Retail	***151,874***	***60,000***	***-91,874***
	Destination Retail	***0***	***50,000***	***+50,000***
	Health Club	***0***	***40,000***	***+40,000***
	Community Facility	**0**	**750,000**	**+750,000**
	Academic	***0***	***650,000***	***+650,000***
	Museum	***0***	***100,000***	***+100,000***
	Total	**4,611,962**	**4,611,962**	**0**

In addition, as a part of the Brooklyn Navy Yard Transportation Strategic Plan, the BNYDC provides a free shuttle service to and from local subway stations for Yard employees on two separate routes. The DUMBO route connects the Yard to both the York Street (F) and High Street (A/C) stations and operated at seven-minute headway in peak hours and 15-minute headway off-peak in the first quarter of 2020, and the Atlantic Terminal route, which connects the Yard to the Atlantic Avenue-Barclays Center (2/3/4/5/B/D/N/Q/R and LIRR) and Clinton-Washington (G) stations and operated at 10-minute headway

Table G-2
Transportation Planning Factors

Land Use:	**Local Retail**	**Office**	**Museum**	**High School**		**University**	**University**	**University**	**Health Club/Gym**	**Industrial Park**	**Destination Retail**
				Students	**Staff**	**Undergraduates**	**Graduates/Professiona**	**Faculty/Staff**			
Size/Units:	-91,874 gsf	-75,937 gsf	100,000 gsf	250,000 gsf	250,000 gsf	266,667 gsf	133,333 gsf	400,000 gsf	40,000 gsf	-672,191 gsf	50,000 gsf
				1,188 students	198 staff					-1,120 employees	
Trip Generation:	(1)	(1)	(1)	(1)	(1)	(6)	(6)	(6)	(1)	(8)	(1)
Weekday	205	18.0	27.0	2.0	2.0	12.9	9.2	5.7	44.7	4.82	78.2
Saturday	240	3.9	20.6			7.16	4.42	1.63	26.1	4.82	92.5
	per 1,000 sf	per 1,000 sf	per 1,000 sf	per student	per staff	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf	per employee	per 1,000 sf
Temporal Distribution:	(1, 18)	(15, 18)	(1, 19)	(1,21)	(1,21)	(6, 20)	(6, 20)	(6, 20)	(1, 18)	(9)	(1, 3)
AM	3.0%	12.0%	1.0%	49.5%	40.0%	16.4%	7.5%	17.6%	4.0%	8.5%	3.0%
MD	19.0%	11.0%	16.0%	0.0%	0.0%	8.0%	5.7%	1.4%	9.0%	5.9%	9.0%
School MD	10.5%	14.3%	8.2%	39.5%	25.0%	8.0%	5.7%	1.4%	8.1%	6.7%	9.8%
PM	10.0%	11.0%	13.0%	10.0%	15.0%	7.1%	12.2%	20.7%	5.0%	8.5%	9.0%
Sat MD	10.0%	13.0%	17.0%	0.0%	0.0%	13.2%	10.7%	8.4%	9.0%	6.7%	11.0%
	(15,16)	(10, 12)	(16,22)	(5,16)	(11)	(14,16)	(14,16)	(10,11)	(7,16)	(12)	(16,17)
Modal Splits:	All Periods	AM/PM/SAT	MD	AM/MD/PM	SAT	All Periods	All Periods	AM/PM/SAT	MD	All Periods	All Periods	AM/MD/PM	SAT
Auto	11.0%	15.1%	2.0%	19.5%	19.5%	15.0%	28.7%	12.0%	12.0%	28.7%	2.0%	5.0%	32.7%	36.0%	40%
Taxi/Drop-Off	0.0%	2.3%	1.0%	10.0%	10.0%	0.0%	0.7%	2.0%	2.0%	0.7%	1.0%	1.0%	3.6%	1.0%	1%
Subway	2.00%	37.2%	7.0%	31.0%	31.0%	38.0%	46.3%	61.00%	61.00%	46.3%	7.0%	3.00%	43.6%	11.00%	8%
Bus	3.00%	11.6%	7.0%	7.0%	7.0%	20.0%	7.7%	9.0%	9.0%	7.7%	7.0%	6.0%	5.5%	27.0%	22%
Ferry	0.0%	1.2%	0.0%	2.0%	2.0%	2.0%	0.6%	2.0%	2.0%	0.6%	0.0%	0.0%	3.6%	2.0%	2.0%
Walk/Other	84.0%	32.6%	83.0%	30.5%	30.5%	25.0%	16.0%	14.0%	14.0%	16.0%	83.0%	85.0%	11.0%	23.0%	27%
	100.0%	100.0%	100%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100%	100.0%	100.0%	100.0%	100.0%
	(2)	(15)	(4)	(5)	(5)	(6)	(6)	(6)	(7)	(2)	(17)
In/Out Splits:	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out
AM	50% 50.0%	89.0% 11.0%	50% 50%	100% 0.0%	100% 0.0%	99% 1.0%	99% 1.0%	100% 0.0%	61% 39.0%	94% 6.0%	61% 39%
MD	47% 53.0%	48.0% 52.0%	63% 37%	50% 50.0%	50% 50.0%	49% 51.0%	82% 18.0%	70% 30.0%	55% 45.0%	39% 61.0%	55% 45%
School MD	47% 53.0%	48.0% 52.0%	63% 37%	0% 100.0%	0% 100.0%	49% 51.0%	82% 18.0%	70% 30.0%	55% 45.0%	39% 61.0%	55% 45%
PM	44% 56.0%	17.0% 83.0%	52% 48%	0% 100.0%	0% 100.0%	13% 87.0%	60% 40.0%	2% 98.0%	29% 71.0%	5% 95.0%	47% 53%
Sat MD	55% 45.0%	50.0% 50.0%	63% 37%			85% 15.0%	86% 14.0%	78% 22.0%	49% 51.0%	60% 40.0%	52% 48%
	(7)	(12)	(22)	(5)	(11,12)	(6)	(6)	(11,12)	(7)	(12)	(17)
Vehicle Occupancy:	Weekday Saturday			Weekday	Weekday						Weekday Saturday
Auto	2.00 2.00	1.33	2.67	1.75	1.10	1.11	1.11	1.10	1.65	1.25	2.00 2.70
Taxi	2.00 2.00	1.20	2.08	1.75	1.20	1.16	1.16	1.20	1.40	1.33	2.00 2.80
Truck Trip Generation:	(1)	(1)	(4)	(5)		(6)			(7)	(1)	(1)
	0.35	0.32	0.05	0.03		0.06			0.29	0.35	0.35
	0.04	0.01	0.01			0.003			0.29	0.04	0.04
	per 1,000 sf	per 1,000 sf	per 1,000 sf	per student		per 1,000 sf			per 1,000 sf	per 1,000 sf	per 1,000 sf
	(1)	(1)	(4)	(5)		(6)			(7)	(1)	(1)
AM	8.0%	10.0%	9.6%	9.6%		9.7%			9.6%	10.0%	8.0%
MD	11.0%	11.0%	11.0%	11.0%		9.1%			11.0%	11.0%	11.0%
PM	2.0%	2.0%	1.0%	1.0%		5.1%			1.0%	2.0%	2.0%
Sat MD	11.0%	11.0%	0.0%			9.1%			0.0%	11.0%	11.0%
	In Out	In Out	In Out	In Out		In Out			In Out	In Out	In Out
All Periods	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%		50.0% 50.0%			50.0% 50.0%	50.0% 50.0%	50.0% 50.0%

Table G-2 (continued)

Transportation Planning Factors

Notes :

(1) *2020 City Environmental Quality Review (CEQR) Technical Manual.*

(2) *25 Kent Avenue EAS,* 2016.

(3) School midday temporal distribution based on parking patterns from the *Admirals Row Plaza FEIS, 2011.*

(4) *West Harlem Rezoning FEIS, 2012.*

(5) *Brooklyn Navy Yard Building 77 Academic Use Override EAS, 2018.*

(6) *NYU Core FEIS, 2012.*

(7) *East New York Rezoning Proposal FEIS, 2016.*

(8) Based on data for Land Use 130 (Industrial Park) from *ITE Trip Generation Manual, 10th Edition.*

(9) Based on temporal data provided by the Brooklyn Navy Yard Development Corporation, 2015.

(10) *Brooklyn Navy Yard Building 72 Zoning Override EAS, 2015*

(11) Based on AASHTO CTPP Reverse journey-to-work 5-Year (2012-2016) data for Brooklyn census tracts 15, 21, 23, 29.01, 185.01, 187, 191, 211, 537, 539, 543, 545, and 547.

(12) BNY Employee Surveys, 2019.

(13) 5% absentee rate applied to High School students

(14) *Steiner Studios Medua Campus FEIS, 2015*

(15) Based on data provided by NYCDOT

(16) Adjusted transit share to reflect area transportation characteristics. Ferry modal split based on PHA DUMBO employeee surveys, 2012.

(17) *Admirals Row Plaza FEIS, 2011.*

(18) School midday temporal distribution based on parking patterns from the *East New York Rezoning Proposal FEIS, 2016* .

(19) School midday temporal distribution based on parking patterns from the *Proposed No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FGEIS, 2004* .

(20) School midday temporal distribution assumed to be the same as the midday temporal distribution, based on parking patterns from the *NYU Core FEIS, 2012* .

(21) Adjusted based on afterschool programming information provided by BNYDC.

(22) *Pier 57 Redevelopment FEIS, 2013.*

in peak hours and 15-minute headway off-peak during the same period. Frequency of service along both routes is expected to increase in the coming years.

As discussed in detail in the *TPF/TDF Memorandum* (refer to **Appendix 3**) the factors in **Table G-2** were based on standard criteria as per the 2020 *CEQR Technical Manual*; 2012-2016 American Association of State Highway Transportation Officials (AASHTO) Census Transportation Planning Products (CTPP) reverse journey-to-work data; data provided by the New York City Department of Transportation (NYCDOT); data collected within the Yard; and factors developed for recent environmental reviews.

Travel Demand Forecast

Based on the planning factors shown in **Table G-2**, a travel demand forecast (Level 1 screening) was prepared for the overall RWCDS, and is shown below in **Table G-3**. **Table G-3** shows the weekday and Saturday peak hour person trips, vehicle trips, transit trips, and walking trips that would be generated by each of the proposed uses in 2030 with the Proposed Actions. A summary of the travel demand forecasts is shown below in **Table G-4**.

As shown in **Table G-3**, the Proposed Actions would generate an incremental increase of 1,566, -1,754, 156, -26, and -758 person trips during the weekday AM, midday, school midday, PM, and Saturday midday peak hours, respectively. During the weekday AM, midday, school midday, PM, and Saturday midday peak hours, the Proposed Actions would generate an increase of 160, -70, 27, 104, and -28 vehicle trips (auto, taxi, and truck combined). The Proposed Actions would also generate an incremental increase of 861, 190, 491, 439, and 163 subway trips in the weekday AM, midday, school midday, PM and Saturday midday peak hours, respectively. As shown in **Table G-4**, the Proposed Actions would also generate an incremental increase of 645, 143, 368, 330, and 122 shuttle trips during the weekday AM, midday, school midday, PM and Saturday midday peak hours, respectively. The Proposed Actions would also generate an incremental increase of 320, 60, 269, 162, and 83 bus trips during the weekday AM, midday, school midday, PM and Saturday midday peak hours, respectively. In addition, the Proposed Actions would generate a total of 1,295, -1,680, 16, -183 and -795 pedestrian trips (including walk-only, subway, and bus trips) in the weekday AM, midday, school midday, PM, and Saturday midday peak hours, respectively. Of these incremental pedestrian trips, 114, -1,930, -744, -784, and -1,041 are walk-only trips during the weekday AM, school midday, PM and Saturday midday peak hours, respectively.

Table G-4: Travel Demand Summary

Peak Hour	Vehicle Trips			Person Trips																	
				Subway Trips[1]			Subway Shuttle Users			Bus Trips			Ferry Trips			Walk/Other Trips			Total Pedestrian Trips[2]		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Weekday AM	181	-21	160	871	-10	861	653	-8	645	314	6	320	25	0	25	261	-147	114	1,446	-151	1,295
Weekday MD	-12	-58	-70	144	46	190	108	35	143	46	14	60	9	3	12	-857	-1,073	-1,930	-667	-1,013	-1,680
Weekday School MD	-18	45	27	91	400	491	68	300	368	51	218	269	5	20	25	-434	-310	-744	-292	308	16
Weekday PM	29	75	104	121	318	439	91	239	330	48	114	162	10	3	13	-379	-405	-784	-210	27	-183
Saturday MD	-7	-21	-28	156	7	163	117	5	122	54	29	83	6	1	7	-555	-486	-1,041	-345	-450	-795

Notes:

1. Includes BNYDC shuttle service users.
2. Does not include ferry users utilizing the in-Yard ferry stop.
3. Vehicle trips do not include shuttle bus trips.

Table G-3
Travel Demand Forecast

		Increment																							
Land Use:		**Local Retail**		**Office**			**Museum**		**High School**			**University**		**University**		**University**		**Health Club/Gym**		**Industrial Park**		**Destination Retail**		**Total**	
									Students		Staff	Undergraduates		Graduates/Professionals		Faculty/Staff									
Size/Units:		-91,874 gsf		-75,937 gsf			100,000 gsf		1,188		198	266,667 gsf		133,333 gsf		400,000 gsf		40,000 gsf		-672,191 gsf		50,000 gsf			
																				-1,120 employees					
Peak Hour Trips:				Employees		Visitors			Students		Staff														
	AM	-408		-166		0	28		1,176		160	566		94		404		54		-462		120		**1,566**	
	MD	-2,566		-154		0	432		0		0	278		72		32		122		-322		352		**-1,754**	
	School MD	-1,420		-198		0	222		940		100	278		72		32		110		-364		384		**156**	
	PM	-1,352		-154		0	352		238		60	246		152		474		68		-462		352		**-26**	
	Sat MD	-1,584		-42		0	352		0		0	254		64		58		72		-364		432		**-758**	
Person Trips:																									
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
AM	**Auto**	-22	-22	-23	-3	0	0	3	3	176	0	46	0	67	0	11	0	116	0	2	1	-142	-9	26	16	**260**	**-14**
	Taxi	0	0	-3	0	0	0	1	1	0	0	1	0	11	0	2	0	3	0	0	0	-16	0	0	0	**-1**	**1**
	Subway	-5	-5	-55	-8	0	0	5	5	447	0	74	0	342	3	57	0	187	0	1	1	-190	-12	8	6	**871**	**-10**
	Bus	-5	-5	-18	-2	0	0	1	1	235	0	12	0	52	0	8	0	31	0	2	1	-25	-1	21	12	**314**	**6**
	Ferry	0	0	-2	0	0	0	0	0	24	0	1	0	11	0	2	0	3	0	0	0	-16	0	2	0	**25**	**0**
	Walk/Other	-172	-172	-47	-5	0	0	4	4	294	0	26	0	80	0	14	0	64	0	28	18	-48	-3	18	11	**261**	**-147**
	Total	-204	-204	-148	-18	0	0	14	14	1,176	0	160	0	563	3	94	0	404	0	33	21	-437	-25	75	45	**1,730**	**-164**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
MD	**Auto**	-132	-150	-2	-2	0	0	53	31	0	0	0	0	16	17	7	2	0	0	3	3	-41	-64	70	58	**-26**	**-105**
	Taxi	0	0	0	0	0	0	27	16	0	0	0	0	3	3	1	0	0	0	1	1	-4	-7	2	2	**30**	**15**
	Subway	-24	-27	-5	-5	0	0	84	50	0	0	0	0	83	86	36	8	2	0	2	2	-55	-86	21	18	**144**	**46**
	Bus	-36	-41	-5	-5	0	0	19	11	0	0	0	0	13	13	5	1	2	0	4	3	-7	-10	51	42	**46**	**14**
	Ferry	0	0	0	0	0	0	5	3	0	0	0	0	3	3	1	0	0	0	0	0	-4	-7	4	4	**9**	**3**
	Walk/Other	-1,014	-1,142	-62	-68	0	0	84	49	0	0	0	0	19	19	9	2	20	8	56	47	-13	-24	44	36	**-857**	**-1,073**
	Total	-1206	-1360	-74	-80	0	0	272	160	0	0	0	0	137	141	59	13	24	8	66	56	-124	-198	192	160	**-654**	**-1,100**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
School MD	**Auto**	-73	-82	-15	-16	0	0	27	16	0	141	0	29	16	17	7	2	6	3	3	2	-47	-73	76	62	**0**	**101**
	Taxi	0	0	-3	-3	0	0	14	8	0	0	0	1	3	3	1	0	0	0	1	0	-6	-9	2	2	**12**	**2**
	Subway	-13	-16	-35	-37	0	0	43	25	0	357	0	45	83	86	37	8	10	5	2	1	-60	-94	24	20	**91**	**400**
	Bus	-21	-23	-11	-13	0	0	10	6	0	188	0	8	13	13	5	1	2	1	4	3	-7	-12	56	46	**51**	**218**
	Ferry	0	0	0	0	0	0	3	2	0	19	0	1	3	3	1	0	0	0	0	0	-6	-9	4	4	**5**	**20**
	Walk/Other	-560	-632	-31	-34	0	0	43	25	0	235	0	16	19	19	8	2	3	2	52	42	-16	-25	48	40	**-434**	**-310**
	Total	-667	-753	-95	-103	0	0	140	82	0	940	0	100	137	141	59	13	21	11	62	48	-142	-222	210	174	**-275**	**431**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
PM	**Auto**	-65	-84	-4	-20	0	0	36	33	0	36	0	17	3	26	11	8	3	133	1	2	-7	-144	60	68	**38**	**75**
	Taxi	0	0	0	-3	0	0	18	17	0	0	0	0	0	5	2	1	0	3	0	0	0	-16	2	2	**22**	**9**
	Subway	-13	-16	-10	-47	0	0	57	52	0	89	0	28	19	131	55	37	5	215	1	1	-11	-192	18	20	**121**	**318**
	Bus	-18	-23	-3	-15	0	0	13	12	0	48	0	5	3	19	8	5	0	35	1	3	0	-25	44	50	**48**	**114**
	Ferry	0	0	0	-2	0	0	4	3	0	5	0	0	0	5	2	1	0	3	0	0	0	-16	4	4	**10**	**3**
	Walk/Other	-499	-634	-8	-42	0	0	55	52	0	60	0	10	5	30	14	8	2	75	17	42	-3	-48	38	42	**-379**	**-405**
	Total	-595	-757	-25	-129	0	0	183	169	0	238	0	60	30	216	92	60	10	464	20	48	-21	-441	166	186	**-140**	**114**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
Sat MD	**Auto**	-96	-78	-3	-3	0	0	43	25	0	0	0	0	26	5	6	1	13	3	2	2	-71	-48	90	82	**10**	**-11**
	Taxi	0	0	0	0	0	0	22	13	0	0	0	0	5	0	1	0	0	0	0	0	-8	-6	2	2	**22**	**9**
	Subway	-18	-14	-8	-8	0	0	69	40	0	0	0	0	132	23	34	5	22	6	1	1	-94	-62	18	16	**156**	**7**
	Bus	-26	-21	-3	-3	0	0	16	9	0	0	0	0	19	3	5	1	3	1	2	2	-12	-9	50	46	**54**	**29**
	Ferry	0	0	0	0	0	0	4	3	0	0	0	0	5	0	1	0	0	0	0	0	-8	-6	4	4	**6**	**1**
	Walk/Other	-732	-599	-7	-7	0	0	68	40	0	0	0	0	31	5	9	1	8	2	31	31	-24	-16	61	57	**-555**	**-486**
	Total	-872	-712	-21	-21	0	0	222	130	0	0	0	0	218	36	56	8	46	12	36	36	-217	-147	225	207	**-307**	**-451**

Table G-3 (continued)
Travel Demand Forecast

		Local Retail		Office				Museum		High School				University		University		University		Health Club/Gym		Industrial Park		Destination Retail		Total	
Vehicle Trips :				Employees		Visitors																					
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
AM	**Auto (Total)**	-12	-12	-18	-3	0	0	1	1	101	0	42	0	61	0	10	0	105	0	1	1	-114	-6	14	8	**191**	**-11**
	Taxi	0	0	-3	0	0	0	0	0	0	0	1	0	9	0	2	0	3	0	0	0	-13	0	0	0	**-1**	**0**
	Taxi Balanced	0	0	-3	-3	0	0	0	0	0	0	1	1	9	9	2	2	3	3	0	0	-13	-13	0	0	**-1**	**-1**
	Truck	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	-12	-12	0	0	**-9**	**-9**
	Total	-12	-12	-21	-6	0	0	1	1	103	2	43	1	70	9	12	2	108	3	2	2	-139	-31	14	8	**181**	**-21**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
MD	**Auto (Total)**	-67	-76	-2	-2	0	0	20	12	0	0	0	0	14	15	7	2	0	0	2	2	-32	-51	36	30	**-22**	**-68**
	Taxi	0	0	0	0	0	0	13	8	0	0	0	0	3	3	1	0	0	0	1	1	-4	-6	2	2	**16**	**8**
	Taxi Balanced	0	0	0	0	0	0	21	21	0	0	0	0	6	6	1	1	0	0	2	2	-10	-10	4	4	**24**	**24**
	Truck	-2	-2	-2	-2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	-13	-13	0	0	**-14**	**-14**
	Total	-69	-78	-4	-4	0	0	41	33	2	2	0	0	20	21	8	3	0	0	5	5	-55	-74	40	34	**-12**	**-58**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
School MD	**Auto (Total)**	-37	-42	-12	-13	0	0	10	6	0	81	0	26	14	15	7	2	6	3	2	1	-38	-58	38	32	**-10**	**53**
	Taxi	0	0	-3	-3	0	0	7	4	0	0	0	1	3	3	1	0	0	0	1	0	-6	-6	2	2	**5**	**1**
	Taxi Balanced	0	0	-6	-6	0	0	11	11	0	0	1	1	6	6	1	1	0	0	1	1	-12	-12	4	4	**6**	**6**
	Truck	-2	-2	-2	-2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	-13	-13	0	0	**-14**	**-14**
	Total	-39	-44	-20	-21	0	0	21	17	2	83	1	27	20	21	8	3	6	3	4	3	-63	-83	42	36	**-18**	**45**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
PM	**Auto (Total)**	-34	-42	-4	-15	0	0	13	12	0	21	0	15	3	23	10	8	3	120	1	1	-6	-115	30	34	**16**	**62**
	Taxi	0	0	0	-3	0	0	9	8	0	0	0	0	0	5	2	1	0	3	0	0	0	-13	2	2	**13**	**3**
	Taxi Balanced	0	0	-3	-3	0	0	17	17	0	0	0	0	5	5	3	3	3	3	0	0	-13	-13	4	4	**16**	**16**
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	-3	0	0	**-3**	**-3**
	Total	-34	-42	-7	-18	0	0	30	29	0	21	0	15	8	28	13	11	6	123	1	1	-22	-131	34	38	**29**	**75**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
Sat MD	**Auto (Total)**	-49	-39	-3	-3	0	0	16	9	0	0	0	0	23	5	6	1	12	3	1	1	-57	-38	34	30	**-17**	**-31**
	Taxi	0	0	0	0	0	0	11	6	0	0	0	0	5	0	1	0	0	0	0	0	-6	-6	0	0	**11**	**0**
	Taxi Balanced	0	0	0	0	0	0	17	17	0	0	0	0	5	5	1	1	0	0	0	0	-12	-12	0	0	**11**	**11**
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	0	0	**-1**	**-1**
	Total	-49	-39	-3	-3	0	0	33	26	0	0	0	0	28	10	7	2	12	3	1	1	-70	-51	34	30	**-7**	**-21**

Note: 25% linked-trip credit applied to local retail and health club uses.

As the number of peak hour vehicle, transit (subway and bus), and pedestrian trips resulting from the Proposed Actions would exceed the *CEQR Technical Manual* analysis thresholds during one or more peak hours, Level 2 assessments were undertaken to identify specific transportation elements where additional detailed analysis may be warranted.

IV. LEVEL 2 SCREENING ASSESSMENT

A Level 2 screening assessment involves the assignment of action-generated trips to the study area's street and transit network, pedestrian elements, and the identification of specific locations where the incremental increase in demand may potentially exceed *CEQR Technical Manual* analysis thresholds and, therefore, require a quantitative analysis. As the incremental traffic, transit, and pedestrian trips generated by the Proposed Actions exceed the *CEQR Technical Manual* thresholds, Level 2 screenings were conducted, and are discussed below.

Traffic

As shown above in **Table G-4**, the Proposed Actions would generate a net total of 160, -70, 27, 104, and -28 vehicle trips during the weekday AM, midday, school midday, PM, and Saturday midday peak hours, respectively. As the *CEQR Technical Manual* Level 1 screening threshold of 50 vehicles is exceeded during the weekday AM and PM peak hours, a Level 2 screening is required for these time periods.

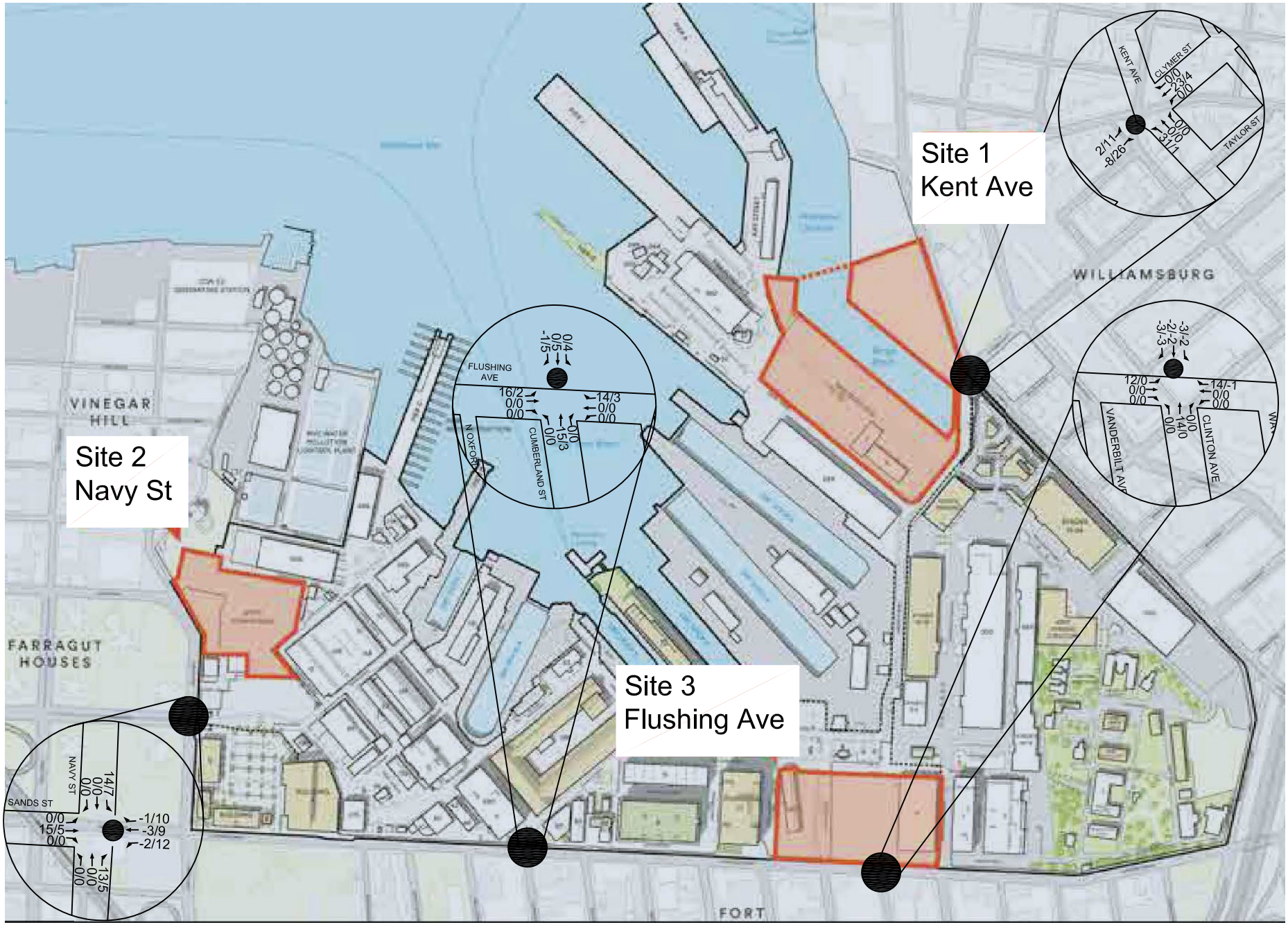
As shown in **Figure G-2**, there are four vehicular entrances to the Yard: (1) along the western frontage at Navy Street and Sands Street; (2) along the southern frontage at Cumberland Street and Flushing Avenue; (3) along the southern frontage at Waverly Avenue and Flushing Avenue; and (4) along the eastern frontage at Kent Avenue and Clymer Street. The origins and destinations for the vehicle trip assignments were based on the Projected Site locations, area arterials, and census data for the surrounding area.

The subsequent Level 2 vehicle trip assignments for the overall Yard are shown below in **Figure G-2** for the weekday AM and PM peak periods. As shown in **Figure G-2**, as the vehicle trips would be distributed amongst the four vehicular entrances, no intersection is expected to experience an increase of 50 or more vehicles during any of the peak hours (refer to **Figure G-2**). Therefore, no significant adverse impacts are expected, and a detailed traffic analysis is not warranted.

Parking

As per the *CEQR Technical Manual*, a detailed parking assessment is not needed if the threshold for traffic analysis is not exceeded. Weekday hourly parking accumulations are provided below in **Tables G-5a, G-5b and G-5c** for Projected Development Sites 1, 2, and 3, respectively. As shown in **Table G-5a**, the parking demand at Projected Development Site 1 would peak with approximately 1,266 spaces in the 11:00 AM – 12:00 PM period. In addition, the parking demand at Projected Development Site 2 would peak with approximately 421 spaces in the 1:00 PM – 2:00 PM period, and the parking demand at Projected Development Site 3 would peak with approximately 527 spaces in the 11:00 AM – 12:00 PM period (refer to **Tables G-5b and G-5c**).

As previously noted, the Special Permit text would eliminate parking requirements if a traffic demand management plan (the "TDM Plan") documenting modes of travel to the Yard, identifying and evaluating strategies to reduce reliance on automobiles, and encouraging the use of sustainable, alternative methods



LEGEND: ● - BNY Vehicular Entrance xx/xx/xx - AM/School MD/PM Traffic Volumes

Special Brooklyn Navy Yard District

Figure G-2

Incremental Traffic Volumes

Table G-5a
Projected Development Site 1 (Kent Avenue) - With-Action Weekday Parking Accumulation

	Industrial 3,042 Employees			Office 386,624 sf			Local Retail 25,000 sf			Academic - University 250,000 sf			Academic - University Staff 250,000 sf			Destination Retail 25,000 sf			Total		
	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation
			91			0			0			0			0			0			91
12-1 AM	13	14	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	14	90
1-2	6	13	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	13	83
2-3	9	13	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	13	79
3-4	12	7	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	7	84
4-5	36	13	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	13	107
5-6	129	26	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129	26	210
6-7	194	49	355	8	0	8	0	0	0	0	0	0	4	0	4	1	0	1	207	49	368
7-8	207	46	516	22	1	29	2	1	1	4	0	4	15	0	19	2	1	2	252	49	571
8-9	307	19	804	84	11	102	3	3	1	44	0	48	65	0	84	7	4	5	510	37	1,044
9-10	165	73	896	37	9	130	7	5	3	14	3	59	21	4	101	11	2	14	255	96	1,203
10-11	114	78	932	13	8	135	7	3	7	12	5	66	6	6	101	13	7	20	165	107	1,261
11-12	100	85	947	6	16	125	7	6	8	13	8	71	5	15	91	15	11	24	146	141	1,266
12-1 PM	88	138	897	5	6	124	19	22	5	13	11	73	0	0	91	18	15	27	143	192	1,217
1-2	117	105	909	6	7	123	15	8	12	8	16	65	3	3	91	15	14	28	164	153	1,228
2-3	100	157	852	54	59	118	11	12	11	13	11	67	4	2	93	19	16	31	201	257	1,172
3-4	90	189	753	13	38	93	5	8	8	5	18	54	6	13	86	14	16	29	133	282	1,023
4-5	85	208	630	10	32	71	6	8	6	5	32	27	5	12	79	14	16	27	125	308	840
5-6	16	310	336	15	72	14	10	12	4	8	19	16	2	75	6	15	17	25	66	505	401
6-7	48	146	238	5	16	3	6	6	4	8	12	12	3	8	1	14	14	25	84	202	283
7-8	39	78	199	4	5	2	4	6	2	4	12	4	2	2	1	10	12	23	63	115	231
8-9	20	44	175	2	4	0	3	4	1	4	8	0	1	2	0	6	14	15	36	76	191
9-10	19	46	148	0	0	0	1	2	0	4	0	4	0	0	0	3	14	4	27	62	156
10-11	2	24	126	0	0	0	0	0	0	0	4	0	0	0	0	1	4	1	3	32	127
11-12	1	36	91	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	37	91
Total	1,917	1,917		284	284		106	106		159	159		142	142		178	178		2,786	2,786	

Note: Overnignt parking use existing 2019 ratio 0.03 cars/employees to assuming in the future condition.

Table G-5b
Projected Development Site 2 (Navy Street) - With-Action Weekday Parking Accumulation

	Industrial 764 Employees			Office 92,616 sf			Local Retail 25,000 sf			Academic - University Student 150,000 sf			Academic - University Staff 150,000 sf			Museum 100,000 sf			Destination Retail 25,000 sf			Total		
	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation
			23			0			0			0			0			0			0			23
12-1 AM	3	4	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	22
1-2	2	3	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	21
2-3	2	3	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	20
3-4	3	2	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	21
4-5	9	3	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	3	27
5-6	32	7	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	7	52
6-7	49	12	89	2	0	2	0	0	0	0	0	0	2	0	2	0	0	0	1	0	1	54	12	94
7-8	52	12	129	8	0	10	2	1	1	2	0	2	9	0	11	0	0	0	2	1	2	75	14	155
8-9	78	5	202	20	3	27	3	3	1	27	0	29	39	0	50	1	1	0	7	4	5	175	16	314
9-10	42	19	225	11	2	36	7	5	3	8	0	37	13	3	60	0	0	0	11	2	14	92	31	375
10-11	28	20	233	3	2	37	7	3	7	9	3	43	6	2	64	5	0	5	13	7	20	71	37	409
11-12	25	21	237	1	4	34	7	6	8	7	5	45	3	8	59	8	2	11	15	11	24	66	57	418
12-1 PM	22	34	225	2	2	34	19	21	6	8	6	47	0	1	58	20	12	19	18	15	27	89	91	416
1-2	29	26	228	1	2	33	15	8	13	5	10	42	2	2	58	9	9	19	15	14	28	76	71	421
2-3	26	39	215	13	14	32	11	12	12	8	6	44	2	0	60	10	6	23	19	16	31	89	93	417
3-4	22	48	189	3	9	26	5	8	9	3	11	36	4	11	53	8	10	21	14	16	29	59	113	363
4-5	21	53	157	2	8	20	6	8	7	3	19	20	3	9	47	8	10	19	14	16	27	57	123	297
5-6	4	78	83	4	17	7	9	12	4	5	12	13	1	45	3	13	12	20	15	17	25	51	193	155
6-7	13	38	58	1	4	4	6	6	4	5	10	8	2	4	1	10	12	18	14	14	25	51	88	118
7-8	9	20	47	1	4	1	4	6	2	2	7	3	1	1	1	5	12	11	10	12	23	32	62	88
8-9	6	11	42	0	1	0	3	4	1	2	5	0	0	1	0	1	12	0	6	14	15	18	48	58
9-10	5	12	35	0	0	0	1	2	0	2	0	2	0	0	0	0	0	0	3	14	4	11	28	41
10-11	1	5	31	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	4	1	2	11	32
11-12	0	8	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	9	23
	483	483		72	72		105	105		96	96		87	87		98	98		178	178		1,119	1,119	

Note: Overnignt parking use existing 2019 ratio 0.03 cars/employees to assuming in the future condition.

Table G-5c
Projected Development Site 3 (Flushing Ave) - With-Action Weekday Parking Accumulation

	Industrial 1,289 Employees			Office 175,950 sf			Local Retail 10,000 sf			Health Club 40,000 sf			Academic - High School Staff 198 staff			Total		
	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation
			39			0			0			0			0			39
12-1 AM	5	6	38	0	0	0	0	0	0	0	0	0	0	0	0	5	6	38
1-2	3	5	36	0	0	0	0	0	0	0	0	0	0	0	0	3	5	36
2-3	4	5	35	0	0	0	0	0	0	0	0	0	0	0	0	4	5	35
3-4	5	3	37	0	0	0	0	0	0	0	0	0	0	0	0	5	3	37
4-5	15	5	47	0	0	0	0	0	0	0	0	0	0	0	0	15	5	47
5-6	55	11	91	0	0	0	0	0	0	0	0	0	0	0	0	55	11	91
6-7	83	21	153	3	0	3	0	0	0	0	0	0	0	0	0	86	21	156
7-8	88	19	222	15	0	18	1	0	1	2	1	1	5	0	5	111	20	247
8-9	130	8	344	38	5	51	2	2	1	1	1	1	43	0	48	214	16	445
9-10	70	31	383	20	4	67	3	2	2	2	3	0	4	0	52	99	40	504
10-11	48	33	398	6	3	70	3	1	4	2	2	0	0	0	52	59	39	524
11-12	42	36	404	3	7	66	3	2	5	2	2	0	0	0	52	50	47	527
12-1 PM	38	58	384	2	3	65	8	9	4	2	2	0	0	0	52	50	72	505
1-2	49	44	389	3	3	65	6	3	7	3	2	1	0	0	52	61	52	514
2-3	42	66	365	25	27	63	4	5	6	2	1	2	0	26	26	73	125	462
3-4	38	81	322	6	21	48	2	3	5	2	3	1	0	0	26	48	108	402
4-5	36	89	269	5	16	37	2	3	4	2	3	0	0	5	21	45	116	331
5-6	7	132	144	7	33	11	4	5	3	1	1	0	0	16	5	19	187	163
6-7	20	64	100	2	7	6	3	3	3	2	2	0	0	5	0	27	81	109
7-8	16	33	83	2	7	1	2	3	2	1	1	0	0	0	0	21	44	86
8-9	9	19	73	1	2	0	1	2	1	1	1	0	0	0	0	12	24	74
9-10	7	20	60	0	0	0	0	1	0	0	0	0	0	0	0	7	21	60
10-11	1	9	52	0	0	0	0	0	0	0	0	0	0	0	0	1	9	52
11-12	1	14	39	0	0	0	0	0	0	0	0	0	0	0	0	1	14	39
	812	812		138	138		44	44		25	25		52	52		1,071	1,071	

Note: Overnignt parking use existing 2019 ratio 0.03 cars/employees to assuming in the future condition.

of transportation is maintained. The TDM Plan would establish a program of alternative transportation measures and would include ongoing survey and reporting criteria to assess the effectiveness of the plan. The TDM Plan is expected to evolve over time to respond to changes in travel patterns and to incorporate additional modes of transportation and technologies, with the goal of making additional parking at the Yard unnecessary. Surveys on travel modes, parking utilization, parking counts, and bicycle counts at the Yard would be conducted no less than every three years and made public. In accordance with the TDM plan, parking will be provided to meet the anticipated demand at each site.

In addition, it should be noted that there are currently approximately 2,017 parking spaces within the BNY available to employees and visitors. These 2,017 parking spaces would remain within the BNY under both No-Action and With-Action conditions. Based on data provided by BNYDC in early 2020 (pre-pandemic), up to approximately 1,600 parking spaces were used daily, for a parking utilization rate of approximately 80%.

Therefore, as the Special District TDM Plan will require that parking is provided to meet the anticipated demand at each site, and the existing parking at the BNY has a daily utilization rate of approximately 80%, no significant adverse impacts are expected, and a detailed parking analysis is not warranted.

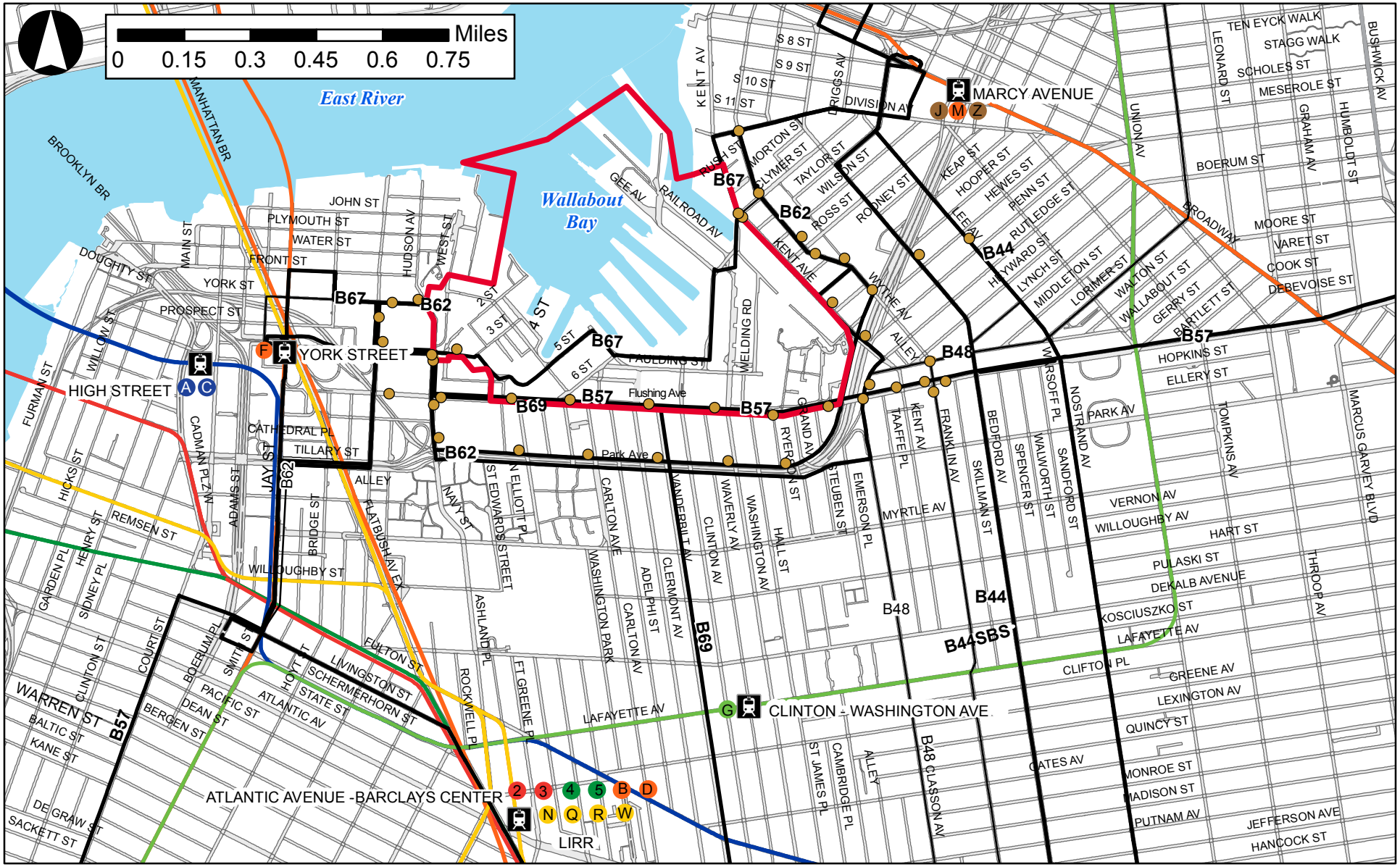
Transit

Subway

According to the general thresholds used by the Metropolitan Transportation Authority (MTA) as specified in the 2020 *CEQR Technical Manual*, detailed transit analyses are not required if the Proposed Actions are projected to result in fewer than 200 peak-hour subway/rail or bus transit riders. Transit analyses typically examine conditions during the weekday AM and PM commuter peak periods, as it is during these times that overall transit demand (and the potential for significant adverse impacts) is generally greatest.

As discussed in the *TPF/TDF Memo*, subway trips were assigned to five subway stations in proximity to the Yard. The York Street (F) and High Street (A,C) subway stations are located approximately 0.4-miles and 0.6-miles west of the Yard, respectively, the Atlantic Avenue-Barclays Center (2,3,4,5,B,D,N,R,Q,W, and Long Island Railroad (LIRR)) and the Clinton-Washington Avenues (G) subway station are located approximately 1.1-miles and 0.7-miles south of the Yard, respectively, and the Marcy Avenue (J,M,Z) subway station located approximately 0.7-miles east of the Yard (refer to **Figure G-3**). As previously mentioned, the BNYDC provides a free shuttle service for Yard employees that connects the Yard to the York Street (F) and High Street (A/C) stations on the DUMBO route and to the Atlantic Avenue-Barclays Center (2/3/4/5/B/D/N/Q/R and LIRR) and Clinton-Washington (G) stations on the Atlantic Terminal route (refer to **Figure G-4**). Frequency of service along both routes is expected to increase in the coming years. Based on employee surveys conducted at the Yard in October and November 2019, approximately 75 percent of employees who travel to the Yard by subway utilize the shuttle service. Although shuttle frequency will increase along both routes by 2030, which is expected to result in an increase in the shuttle utilization along each route, it was conservatively assumed that 75 percent of future employees who travel to the Yard by subway in 2030 would also choose to utilize the shuttle service (refer to **Table G-4**).

Consistent with the TDM plan, the BNY is committed to increasing frequency and capacity along both existing shuttle routes to meet ridership demands. Per the TDM plan, shuttle ridership and capacity will be monitored continuously and changes will be made to the system as needed. The existing shuttle system is not fully utilized, and over the next 10 years (prior to the 2030 build year) the BNY will gradually increase capacity along each route as ridership demand materializes, including increasing frequency by adding



Legend

Project Area · Bus Stops · Bus Routes · Subway Stops · N Q R W · 2 3 · 4 5 · A C · B D F

Trasnportation Strategic Plan - Implemented Components



Source: BNYDC

additional buses to one or more routes. The BNY will increase shuttle capacity prior to the 2030 build year, consistent with the methodology outlined in the TDM plan and the long-term BNY plan to have the shuttle system operate with a 5-minute headway on each route. As such, incremental shuttle bus trips are expected to be negligible (potentially up to a maximum of 1-2 shuttle bus trips per hour, as needed).

As shown in **Table G-6**, the RWCDS would generate approximately 861 and 439 incremental subway person trips (in and out combined) during the weekday AM and PM peak periods, respectively. As shown below in **Table G-6**, the York Street station, where the highest number of peak-hour trips are expected to occur, is expected to experience approximately 300 incremental trips in the AM peak hour. As the incremental demand would exceed the 200-trip *CEQR Technical Manual* threshold at the York Street station during the weekday AM peak hour, a detailed station analysis is required during the weekday AM peak hour. The analysis will account for the key circulation elements (e.g., stairs and fare arrays) expected to be used by concentrations of new RWCDS demand. No other station exceeded the 200-trip *CEQR Technical Manual* threshold.

Subway Line Haul

Based on origin zip code data for Yard employees that travel to/from the York Street Subway station, approximately 65 percent of subway trips at the York Street Station would be in the southbound direction and approximately 35 percent of trips would be in the northbound direction. Therefore, during the AM peak hour, there would be approximately 195 southbound and 105 northbound trips on the F subway line at the York Street Station during the weekday AM peak hour. During the AM peak hour, the northbound (Manhattan-bound) direction is the peak direction on the F subway line. Therefore, it is anticipated that the RWCDS would not generate 200 or more incremental subway trips on the F line in the peak direction, during the AM peak hour. As such, the RWCDS is not expected to result in significant adverse impacts to subway line haul conditions and further analysis would not be warranted.

Table G-6: Net Incremental Peak Hour Subway Trips by Station

Subway Station/Line Summary	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Peak Hour Incremental Subway Trips	871	-10	861	121	318	439
York Street (F)	305	-5	300	42	111	153
High Street (A,C)	200	-3	197	28	73	101
Atlantic Terminal (2,3)	43	0	43	6	16	22
Atlantic Terminal (4,5)	43	0	43	6	16	22
Atlantic Terminal (B,D)	43	0	43	6	16	22
Atlantic Terminal (N,Q,R)	70	-1	69	10	26	36
Clinton-Washington Avenues (G)	106	-1	105	15	39	54
Marcy Avenue (J,M,Z)	61	0	61	8	21	29
Total	871	-10	861	121	318	439

Bus

In addition, the estimated net incremental bus trips generated by the RWCDS during the weekday AM and PM peak hours is shown in **Table G-7**. As previously mentioned, transit analyses examine conditions during the weekday AM and PM commuter peak periods, as it is during these times that overall transit demand (and the potential for significant adverse impacts) is generally greatest.

Table G-7 shows the estimated net incremental bus trips generated by the Proposed Actions during the weekday AM peak hour on each of the six bus routes that operate in close proximity to the Yard (B44, B48, B57, B62, B67, and B69). Bus trips were assigned based on proximity to each Projected Site, and current ridership patterns. As shown in **Table G-6**, the B44 bus route is expected to experience 50 or more new bus trips during the weekday AM and PM peak hours.

Table G-7: Net Incremental Peak Hour Bus Trips by Route

Bus Line	AM			PM		
	In	Out	Total	In	Out	Total
Peak Hour Incremental Bus Trips	314	6	320	48	114	162
B44	170	3	**173**	26	62	**88**
B48	19	0	**19**	3	6	**9**
B57	38	2	**40**	6	14	**20**
B62	38	1	**39**	5	14	**19**
B67	25	0	**25**	4	9	**13**
B69	24	0	**24**	4	9	**13**
Total	314	6	320	48	114	162

Subsequently, the incremental ridership on the B44 bus route was assigned by direction during the weekday AM and PM peak hours, in order to determine if either route will experience an incremental increase of 50 or more new bus trips in a single direction. The directional distributions, which were assigned based on current ridership patterns, are shown below in **Table G-8**. As shown below in **Table G-8**, the B44 bus route is expected to experience an incremental increase of greater than 50 bus trips in each direction during the weekday AM and PM peak hours, and therefore requires further detailed analysis.

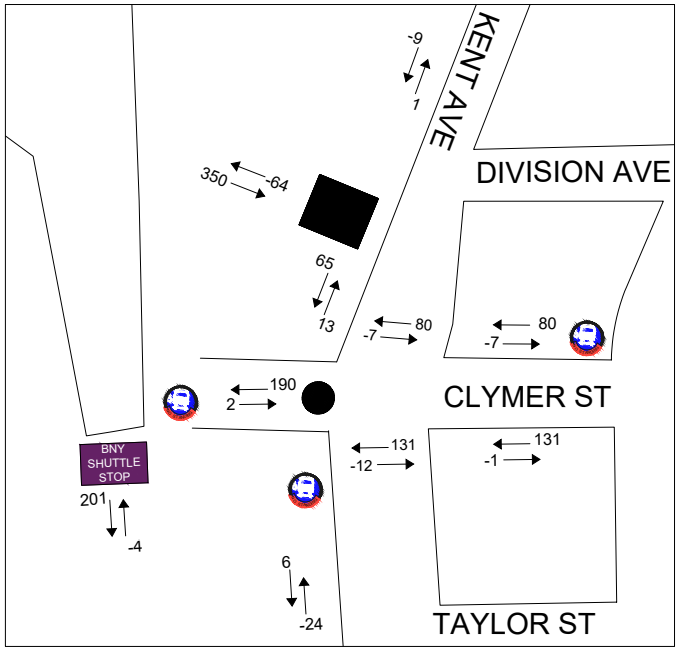
Table G-8: Net Incremental Peak Hour Bus Trips by Direction

Bus Route	Direction	AM	PM
B44	Northbound	95	49
	Southbound	78	39
	Total	173	88

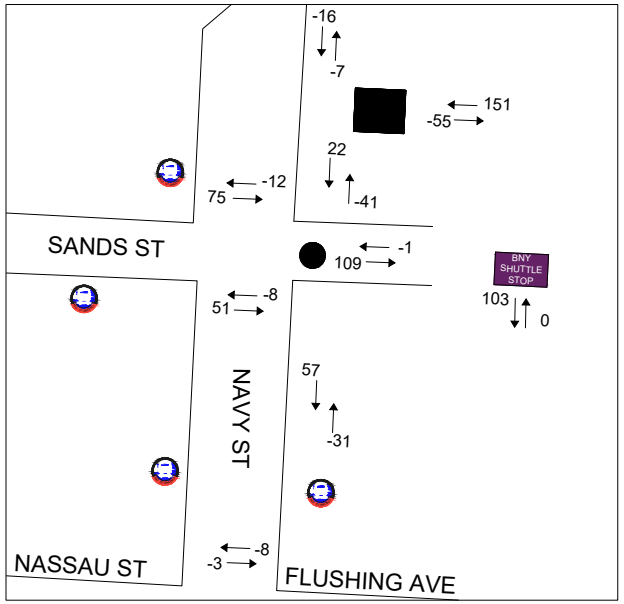
Pedestrians

Many action-generated trips would include a walk component using local sidewalks, street corners, and crosswalks, to access the Project Area. As shown above in **Table G-4**, the Proposed Actions would generate a net total of 1,295, -1,680, 16, -183 and -795 pedestrian trips (including walk-only trips and pedestrians en route to and from subway and bus stops) during the weekday AM, midday, school midday, PM, and Saturday midday peak hours, respectively. As the number of action-generated pedestrian trips would exceed the 200-trip *CEQR Technical Manual* threshold during the weekday school midday, PM, and Saturday midday peak hours, a Level 2 screening is required.

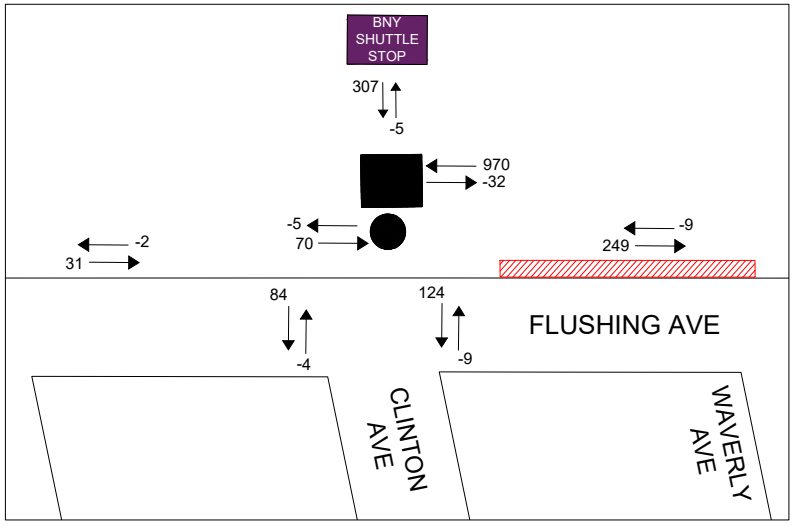
Figure G-5 shows the assignment of action-generated pedestrian trips (walk-only, subway trips not using the BNY shuttle, and bus trips) to pedestrian elements (sidewalks, corner areas, and crosswalks) in the vicinity of each Projected Site, during each peak hour. The origins and destinations for pedestrian trip assignments were based on Projected Site locations, the most direct paths between Yard and local transit



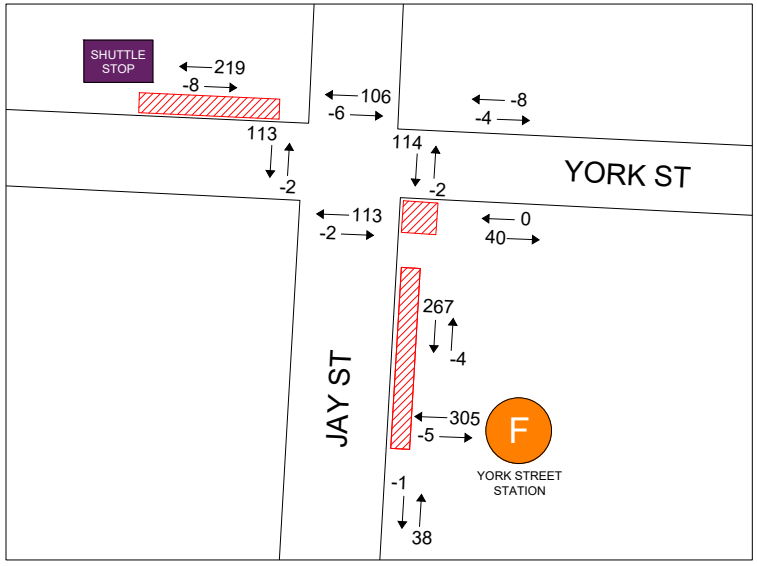
Site 1 - Kent Avenue Site



Site 2 - Navy Street Site



Site 3 - Flushing Avenue Site



York Street Station

LEGEND: ● - BNY Pedestrian Entrance ■ - Projected Development Site xx - AM Pedestrian Volumes ▨ - Analysis Location

Special Brooklyn Navy Yard District

Figure G-5

Incremental Pedestrian Volumes

routes, and population density in proximity to the Yard. As shown in **Figure G-5**, there are pedestrian entrances located both within the Yard for each Projected Site, as well as publically accessible entrances located along the adjacent frontages. The publically accessible entrances are located along Kent Avenue, Navy Street, and Flushing Avenue for Projected Sites 1, 2, and 3, respectively. In addition, there is a pedestrian entrance, with a security checkpoint, located at the intersection of Flushing Avenue and Cumberland Street.

A total of four pedestrian elements, as shown in **Figure G-5** and listed below, would exceed the 200-trip *CEQR Technical Manual* threshold and have been selected for analysis during the weekday AM peak hour. The four analysis locations include three sidewalks and one corner.

Sidewalks:

1. North Sidewalk on York Street between Jay Street and Pearl Street
2. East Sidewalk on Jay Street between York Street and Prospect Street
3. North Sidewalk on Flushing Avenue between Clinton Avenue and Waverly Avenue

Corners:

1. York Street and Jay Street – Southeast corner

V. TRANSPORTATION ANALYSES METHODOLOGIES

Transit

Subway Stations

Analysis Methodology

To determine existing conditions at analyzed subway station elements, data was collected at the York Street (F) subway station in May 2017. The *CEQR Technical Manual* methodology for assessing subway station pedestrian circulation elements (stairs, escalators, and passageways) and fare control elements (regular turnstiles, high entry/exit turnstiles [HEETs], and high exit turnstiles) compares existing and projected pedestrian volumes with the element's design capacity to yield a volume-to-capacity (v/c) ratio. All analyses reflect pedestrian flow volumes over a 15-minute interval during each peak hour. Based on existing pedestrian volumes at area subway stations, the AM peak hour selected for the analysis of subway station conditions is 8:00 AM – 9:00 AM. As noted previously, transit analyses typically focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway and bus systems is usually highest.

Per *CEQR Technical Manual* guidance, the capacity of a stairway or passageway is determined based on four factors: the New York City Transit (NYCT) guideline capacity, the effective width, surging factors, and friction/counter-flow factors, if applicable. NYCT guideline capacity is 10 passengers per foot per minute (pfm) for stairs and 15 pfm for passageways. The effective width of a stair or passageway is the actual width adjusted to reflect pedestrian avoidance of sidewalls and center handrails, if present. A surging factor is applied to existing pedestrian volumes to reflect conditions where pedestrian flows tend to be concentrated (or surged) during shorter periods within the 15-minute analysis interval. This factor, which

is based on the size of the station and the proximity of the pedestrian element to the station platforms, can reduce the calculated capacity by up to 25 percent. Lastly, a friction (or counter-flow) factor reducing calculated capacity by 10 percent is applied where opposing pedestrian flows use the same stair or passageway. No friction factor is applied if the flow is all or predominantly in one direction. By contrast with stairway and passageways, per *CEQR Technical Manual* guidance the capacity of an escalator or turnstile is determined based on only two factors: the NYCT guideline capacity for a 15-minute interval and a surging factor of up to 25 percent.

The estimated v/c ratio is compared to NYCT criteria to determine a level of service (LOS) for the operation of an element. **Table G-9** shows the LOS and corresponding v/c ratios for all subway station elements. Six levels of service are defined with letters A through F. LOS A is representative of free flow conditions without pedestrian conflicts and LOS F depicts severe congestion and queuing.

Significant Impact Criteria

The *CEQR Technical Manual* identifies a significant impact for stairways and passageways in terms of the minimum width increment threshold (WIT) based on the minimum amount of additional capacity that would be required to restore conditions to either their No-Action v/c ratio or to a v/c ratio of 1.00 (LOS C/D), whichever is greater. Stairways that are substantially degraded in level of service or that experience the formation of extensive queues are classified as significantly impacted. Significant adverse stairway or passageway impacts are typically considered to have occurred once the thresholds shown in **Table G-10** are reached or exceeded.

Table G-9: LOS Criteria for Subway Station Elements

LOS	Description	V/C Ratio
A	Free Flow	0.00 to 0.45
B	Fluid Flow	0.45 to 0.70
C	Fluid, somewhat restricted	0.70 to 1.00
D	Crowded, walking speed restricted	1.00 to 1.33
E	Congested, some shuffling and queuing	1.33 to 1.67
F	Severely congested, queued	> 1.67

Source: *CEQR Technical Manual*

Table G-10: Significant Impact Thresholds for Stairways and Passageways

With-Action V/C Ratio	WIT for Significant Impact (inches)	
	Stairway	Passageway
1.00-1.09	8	13
1.10-1.19	7	11.5
1.20-1.29	6	10
1.30-1.39	5	8.5
1.40-1.49	4	6
1.50-1.59	3	4.5
≥1.6	2	3

Source: *CEQR Technical Manual*

For turnstiles, escalators, and high-wheel exit gates, the *CEQR Technical Manual* defines a significant impact as an increase from a No-Action v/c ratio of below 1.00 to a v/c ratio of 1.00 or greater. Where a facility is already at a v/c ratio of 1.00 or greater, a 0.01 change in v/c ratio is considered significant.

Bus

Analysis Methodology

The operating conditions for bus service are measured in terms of the number of passengers carried per bus at the maximum load point for each route. This is determined by dividing the peak hour passenger count by the number of buses during that hour. The bus load levels are compared with the NYCT loading guidelines of 54 passengers for a 40-foot standard bus and 85 passengers for a 60-foot articulated bus. The bus analyses focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the bus system is usually highest. Based on existing ridership patterns, the AM and PM peak hour for bus demand is 7:30 AM – 8:30 AM and 4:30 PM – 5:30 PM, respectively.

Pedestrians

Analysis Methodology

Data on peak period pedestrian flow volumes was collected along the analyzed sidewalk and corner areas in the vicinity of the Project Area in May and June 2018 and May 2021. Peak hours were determined by comparing rolling hourly averages, and the highest 15-minute volumes within the selected peak hours were used for analysis. Based on existing peak pedestrian volumes within the study area, the weekday 8:00 AM – 9:00 AM period was selected for analysis.

Peak 15-minute pedestrian flow conditions during the weekday school midday period are analyzed using the *2000 Highway Capacity Manual* methodology and procedures outlined in the *CEQR Technical Manual*. Using this methodology, the congestion level of pedestrian facilities is determined by considering pedestrian volume, measuring the sidewalk or crosswalk width, determining the available pedestrian capacity and developing a ratio of volume flows to capacity conditions. The resulting ratio is then compared with LOS standards for pedestrian flow, which define a qualitative relationship at a certain pedestrian traffic concentration level. The evaluation of street crosswalks and corners is more complicated as these spaces cannot be treated as corridors due to the time incurred waiting for traffic lights. To evaluate these facilities effectively, a "time-space" analysis methodology is employed which takes into consideration the traffic light cycle at intersections.

LOS standards are based on the average area available per pedestrian during the analysis period, typically expressed as a 15-minute peak period. LOS grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting significant capacity limitations and inconvenience. **Table G-11** defines the LOS criteria for pedestrian crosswalk/corner area and a sidewalk conditions, as based on the *Highway Capacity Manual* methodology.

The analysis of sidewalk conditions includes a "platoon" factor in the calculation of pedestrian flow to more accurately estimate the dynamics of walking. "Platooning" is tendency of pedestrians to move in bunched groups or "platoons" once they cross a street where cross traffic required them to wait. Platooning generally results in a level of service one level poorer than that determined for average flow rates.

Table G-11: Pedestrian Crosswalk/Corner Area and Sidewalk Levels of Service Descriptions

LOS	Crosswalk/Corner	Crosswalk/ Corner Area Criteria (ft^2/ped)	Non-Platoon Sidewalk Criteria (ft^2/ped)	Platoon Sidewalk Criteria (ft^2/ped)
A	(Unrestricted)	> 60	> 60	> 530
B	(Slightly Restricted)	> 40 to 60	> 40 to 60	> 90 to 530
C	(Restricted but fluid)	> 24 to 40	> 24 to 40	> 40 to 90
D	(Restricted, necessary to continuously alter walking stride and direction)	> 15 to 24	> 15 to 24	> 23 to 40
E	(Severely restricted)	> 8 to 15	> 8 to 15	> 11 to 23
F	(Forward progress only by shuffling; no reverse movement possible)	≤ 8	≤ 8	≤ 11

Notes: Based on average conditions for 15 minutes; ft^2/ped – square feet of area per pedestrian
Source: *CEQR Technical Manual*

Significant Impact Criteria

Sidewalks

The *CEQR Technical Manual* impact criteria for a non-central business district (CBD) location are used to identify significant adverse impacts due to the Proposed Actions. These criteria define a significant adverse sidewalk impact to have occurred under platoon conditions if the average pedestrian space under the No-Action Condition is greater than 44.3 square feet/pedestrian (ft^2/ped), and the average pedestrian space under the With-Action Condition is 40.0 ft^2/ped or less (LOS D or worse). If the average pedestrian space under the With-Action Condition is greater than 40.0 ft^2/ped (LOS C or better), the impact should not be considered significant. If the No-Action pedestrian space is between 6.4 and 44.3 ft^2/ped, a reduction in pedestrian space under the With-Action Condition should be considered significant based on **Table G-12**, which shows a sliding-scale that identifies what decrease in pedestrian space is considered a significant impact for a given pedestrian space value in the No-Action Condition. If the reduction in pedestrian space is less than the value in **Table G-12**, the impact is not considered significant. If the average pedestrian space under the No-Action Condition is less than 6.4 ft^2/ped, then a reduction in pedestrian space greater than or equal to 0.3 ft^2/ped, under the With-Action condition, should be considered significant.

Corner Areas and Crosswalks

For non-CBD areas, *CEQR Technical Manual* criteria define a significant adverse corner area or crosswalk impact to have occurred if the average pedestrians space under the No-Action Condition is greater than 26.6 square feet per pedestrian (ft^2/ped) and, under the With-Action Condition, the average pedestrian space decreases to 24 ft^2/ped or less (LOS D or worse). If the pedestrian space under the With-Action Condition is greater than 24 ft^2/ped (LOS C or better), the impact should not be considered significant. If the average pedestrian space under the No-Action Condition is between 5.1 and 26.6 ft^2/ped, a decrease in pedestrian space under the With-Action Condition should be considered significant based on **Table G-13**, which shows a sliding-scale that identifies what decrease in pedestrian space is considered a significant impact for a given amount of pedestrian space in the No-Action Condition. If the decrease in pedestrian space is less than the value in **Table G-13**, the impact is not considered significant. If the average pedestrian space under the No-Action Condition is less than 5.1 ft^2/ped, then a decrease in pedestrian space greater than or equal to 0.2 ft^2/ped should be considered significant.

Table G-12: Impact Criteria for Sidewalks With Platoon Flow in a Non-CBD Location

No-Action Condition Pedestrian Flow (ft^2/ped)			With-Action Conditions Pedestrian Space Reduction to be Considered a Significant Impact (ft^2/ped)
>44.3			With-Action Condition ≤ 40.0
43.5	to	44.3	Reduction ≥ 4.3
42.5	to	43.4	Reduction ≥ 4.2
41.6	to	42.4	Reduction ≥ 4.1
40.6	to	41.5	Reduction ≥ 4.0
39.7	to	40.5	Reduction ≥ 3.9
38.7	to	39.6	Reduction ≥ 3.8
37.8	to	38.6	Reduction ≥ 3.7
36.8	to	37.7	Reduction ≥ 3.6
35.9	to	36.7	Reduction ≥ 3.5
34.9	to	35.8	Reduction ≥ 3.4
34.0	to	34.8	Reduction ≥ 3.3
33.0	to	33.9	Reduction ≥ 3.2
32.1	to	32.9	Reduction ≥ 3.1
31.1	to	32.0	Reduction ≥ 3.0
30.2	to	31.0	Reduction ≥ 2.9
29.2	to	30.1	Reduction ≥ 2.8
28.3	to	29.1	Reduction ≥ 2.7
27.3	to	28.2	Reduction ≥ 2.6
26.4	to	27.2	Reduction ≥ 2.5
25.4	to	26.3	Reduction ≥ 2.4
24.5	to	25.3	Reduction ≥ 2.3
23.5	to	24.4	Reduction ≥ 2.2
22.6	to	23.4	Reduction ≥ 2.1
21.6	to	22.5	Reduction ≥ 2.0
20.7	to	21.5	Reduction ≥ 1.9
19.7	to	20.6	Reduction ≥ 1.8
18.8	to	19.6	Reduction ≥ 1.7
17.8	to	18.7	Reduction ≥ 1.6
16.9	to	17.7	Reduction ≥ 1.5
15.9	to	16.8	Reduction ≥ 1.4
15.0	to	15.8	Reduction ≥ 1.3
14.0	to	14.9	Reduction ≥ 1.2
13.1	to	13.9	Reduction ≥ 1.1
12.1	to	13.0	Reduction ≥ 1.0
11.2	to	12.0	Reduction ≥ 0.9
10.2	to	11.1	Reduction ≥ 0.8
9.3	to	10.1	Reduction ≥ 0.7
8.3	to	9.2	Reduction ≥ 0.6
7.4	to	8.2	Reduction ≥ 0.5
6.4	to	7.3	Reduction ≥ 0.4
<6.4			Reduction ≥ 0.3

Source: *CEQR Technical Manual*

Table G-13: Significant Impact Criteria for Corners & Crosswalks in a Non-CBD Location

No-Action Condition Pedestrian Space (ft^2/ped)			With-Action Condition Pedestrian Space Reduction to be Considered a Significant Impact (ft^2/ped)
> 26.6			With-Action Condition ≤ 24.0
25.8	to	26.6	Reduction ≥ 2.6
24.9	to	25.7	Reduction ≥ 2.5
24.0	to	24.8	Reduction ≥ 2.4
23.1	to	23.9	Reduction ≥ 2.3
22.2	to	23.0	Reduction ≥ 2.2
21.3	to	22.1	Reduction ≥ 2.1
20.4	to	21.2	Reduction ≥ 2.0
19.5	to	20.3	Reduction ≥ 1.9
18.6	to	19.4	Reduction ≥ 1.8
17.7	to	18.5	Reduction ≥ 1.7
16.8	to	17.6	Reduction ≥ 1.6
15.9	to	16.7	Reduction ≥ 1.5
15.0	to	15.8	Reduction ≥ 1.4
14.1	to	14.9	Reduction ≥ 1.3
13.2	to	14.0	Reduction ≥ 1.2
12.3	to	13.1	Reduction ≥ 1.1
11.4	to	12.2	Reduction ≥ 1.0
10.5	to	11.3	Reduction ≥ 0.9
9.6	to	10.4	Reduction ≥ 0.8
8.7	to	9.5	Reduction ≥ 0.7
7.8	to	8.6	Reduction ≥ 0.6
6.9	to	7.7	Reduction ≥ 0.5
6.0	to	6.8	Reduction ≥ 0.4
5.1	to	5.9	Reduction ≥ 0.3
< 5.1			Reduction ≥ 0.2

Source: *CEQR Technical Manual*

Pedestrian and Vehicular Safety Evaluation

Pursuant to *CEQR Technical Manual* guidance, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high crash locations. These are defined as locations where 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, crash trends would be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips. The determination of potential significant safety impacts depends on the type of area where the project site is located, traffic volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety should be identified and coordinated with the Department of Transportation (DOT).

VI. TRANSIT

Existing Conditions

Subway Stations

As discussed above in Section V, "Level 2 Screening Assessment," action-generated trips at the York Street (F) subway station are expected to exceed the 200-trip *CEQR Technical Manual* analysis threshold in the weekday AM peak hour, therefore the York Street (F) subway station was selected for analysis. As shown in **Figure G-6**, the York Street Station is located at the corner of York and Jay streets, with street level access provided by one stair located at the southeast corner of the intersection (S1) leading down to a below-grade mezzanine level. The mezzanine level has one fare array consisting of three standard turnstiles, and one emergency exit. Beyond the fare array is stair P1, which leads to the shared Brooklyn-bound/Manhattan-bound platform. The station contains one island platform.

As the York Street (F) Station only has one entrance, all action-generated subway trips to/from the station would utilize the street-level stair on the east sidewalk of Jay Street, just south of York Street (stair S1). Similarly, once on the mezzanine level, all subway trips would utilize the one fare array and one platform stair (stair P1) located at the station, which leads to the shared Brooklyn-bound/Manhattan-bound platform. **Tables G-14** and **G-15** show the 2017 existing levels of service for stairs and fare arrays at the York Street (F) Station. As shown in **Tables G-14** and **G-15**, the station's street and platform stairs and fare array currently operate at an acceptable LOS B or better during the weekday AM peak hour.

Table G-14: Existing Conditions Stair Analysis at the York Street Subway Station

No.	Station Element/Location	Peak Period	Total Width (Feet)	Effective Width (Feet)	15-Minute Pedestrian Volumes		Entering Surging Factor	Exiting Surging Factor	Friction Factor	V/C	LOS
					Entering	Exiting					
S1	Street Stair	AM	8.83	7.58	243	312	1.00	0.80	0.90	0.62	B
P1	Platform Stair	AM	9.50	8.25	243	312	1.00	0.75	0.90	0.59	B

Notes:
Based on 2020 *CEQR Technical Manual* methodology.
V/C = volume-to-capacity ratio
LOS = level of service

Figure G-6
York Street (F) Subway Station Layout

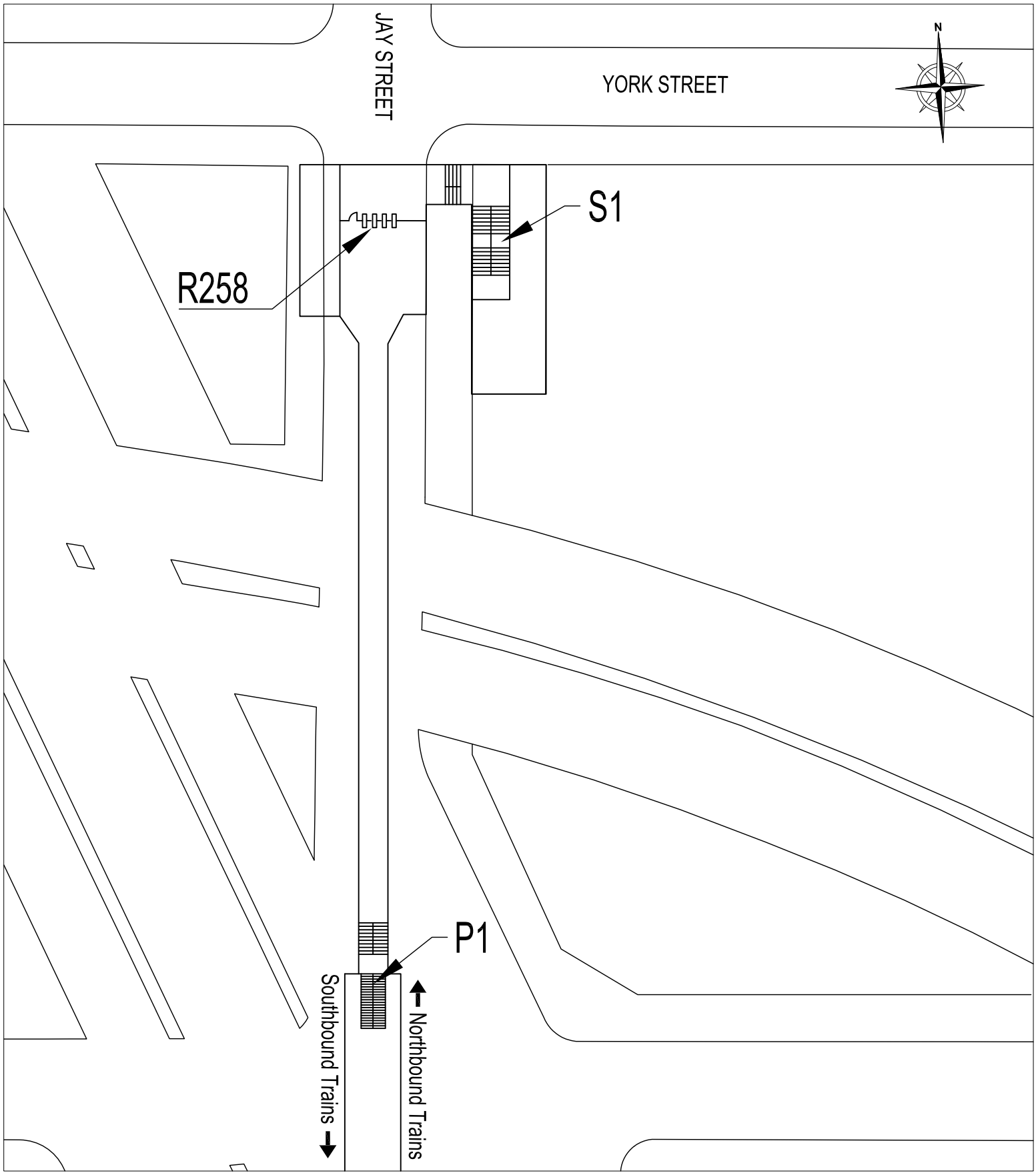


Table G-15: Existing Conditions Fare Analysis at the York Street Subway Station

No.	Station Element/Location	Peak Period	15-Minute Pedestrian Volumes		Entering Surging Factor	Exiting Surging Factor	Friction Factor	V/C	LOS
			Entering	Exiting					
R258	3 Standard Turnstiles	AM	243	312	1.00	0.80	0.90	0.44	A

Notes:
Based on 2020 *CEQR Technical Manual* methodology.
V/C = volume-to-capacity ratio
LOS = level of service

Bus Service

As discussed above in Section V, "Level 2 Screening Assessment," action-generated trips on the northbound and southbound B44 bus routes are expected to exceed the 50-trip *CEQR Technical Manual* analysis threshold in the weekday AM and PM peak hours and were therefore selected for analysis. The local service on the northbound and southbound B44 bus routes are provided by standard MTA buses. **Table G-16** below shows the existing number of buses and ridership at the maximum load point for the northbound and southbound B44 bus routes during the weekday AM and PM peak hours, as per October 2019 ridership data.

Table G-16: Existing Conditions Local Bus Analysis

Peak Hour	Route	Direction	Maximum Load Point	Peak Hour Buses[1]	Peak Hour Passengers[1]	Average Passengers per Bus	Available Capacity[2]
AM	B44	NB	New York Avenue/Fenimore Street	9	397	44	89
		SB	Nostrand Avenue/Flatbush Avenue	14	335	24	421
PM	B44	NB	New York Avenue/Prospect Place	9	316	35	170
		SB	Nostrand Avenue/Linden Boulevard	7	255	36	123

Notes:
[1] Based on most currently available data from NYCT/MTA Bus.
[2] Available capacity based on MTA loading guidelines of 54 passengers per standard bus (B44).

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

Subway Stations

Under the No-Action Condition, demand at the analyzed York Street subway station is expected to increase as a result of the No-Action development projects in the surrounding area and background growth (refer to **Table C-4** in **Attachment C, "Land Use, Zoning, and Public Policy"**). **Tables G-17** and **G-18** show the No-Action AM peak hour operating conditions at the analyzed stairs and fare array, respectively. As shown in **Tables G-17** and **G-18**, the analyzed stairs would operate at an acceptable LOS C and the analyzed fare array would operate at an acceptable LOS B during the AM peak hour, under the 2030 No-Action Condition.

Table G-17: No-Action Condition Stair Analysis at the York Street Subway Station

No.	Station Element/Location	Peak Period	Total Width (Feet)	Effective Width (Feet)	15-Minute Pedestrian Volumes		Entering Surging Factor	Exiting Surging Factor	Friction Factor	V/C	LOS
					Entering	Exiting					
S1	Street Stair	AM	8.83	7.58	270	510	1.00	0.80	0.90	0.89	C
P1	Platform Stair	AM	9.50	8.25	270	510	1.00	0.75	0.90	0.85	C

Notes: Based on 2020 *CEQR Technical Manual* methodology.
V/C = volume-to-capacity ratio
LOS = level of service

Table G-18: No-Action Condition Fare Analysis at the York Street Subway Station

No.	Station Element/Location	Peak Period	15-Minute Pedestrian Volumes		Entering Surging Factor	Exiting Surging Factor	Friction Factor	V/C	LOS
			Entering	Exiting					
R258	3 Standard Turnstiles	AM	270	510	1.00	0.80	0.90	0.60	B

Notes: Based on 2020 *CEQR Technical Manual* methodology.
V/C = volume-to-capacity ratio
LOS = level of service

Bus Service

Demand on the local bus services operating in the vicinity of the Project Area is expected to increase during the 2019 through 2030 period as a result of background growth, as well as demand from new development. As shown in **Table G-19**, existing levels of bus service are expected to be sufficient to provide adequate supply to meet the projected 2030 No-Action Condition on the northbound and southbound B44 bus routes in the AM and PM peak hours.

Table G-19: No-Action Condition Local Bus Analysis

Peak Hour	Route	Direction	Maximum Load Point	Peak Hour Buses[1]	Peak Hour Passengers[2]	Average Passengers per Bus	Available Capacity[3]
AM	B44	NB	New York Avenue/Fenimore Street	9	466	52	20
		SB	Nostrand Avenue/Flatbush Avenue	14	350	25	406
PMe	B44	NB	New York Avenue/Prospect Place	9	454	50	32
		SB	Nostrand Avenue/Linden Boulevard	7	309	44	69

Notes:
[1] Based on most currently available data from NYCT/MTA Bus.
[2] No-Action passenger volumes reflect demand from No-Action development plus background growth rates of 0. 5 percent/year for the 2018-2023 period and 0.25 percent/year for the 2023-2030 period, as per *CEQR Technical Manual* guidance.
[3] Available capacity based on MTA loading guidelines of 54 passengers per standard bus (B44).

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

Subway Stations

As shown in **Table G-5**, the Proposed Actions are expected to generate a net total of 861 new subway trips during the weekday AM peak hour. Based on the distribution discussed above, this would result in approximately 300 incremental subway trips (in and out combined) generated at the York Street subway station, as a result of the Proposed Actions. **Tables G-20** and **G-21** shows conditions at the analyzed stairs and fare arrays at the analyzed York Street (F) subway station in the future with the Proposed Actions. As shown in **Table G-20**, under the With-Action Condition, the stair leading from the mezzanine to street level (S1) would operate at LOS C and the platform stair (P1) is projected to continue to operate at an acceptable LOS C in the AM peak hour. However, stair S1 would not be considered significantly adversely impacted based on *CEQR Technical Manual* impact criteria.

Additionally, as shown in **Table G-21**, the analyzed fare array would continue to operate at an acceptable LOS B during the AM peak hour. Therefore, both of the analyzed stairs and the analyzed fare array would not be considered significantly adversely impacted based on *CEQR Technical Manual* impact criteria.

Table G-20: With-Action Condition Stair Analysis at the York Street Subway Station

No.	Station Element/ Location	Peak Period	Total Width (Feet)	Effective Width (Feet)	15-Minute Pedestrian Volumes		Entering Surging Factor	Exiting Surging Factor	Friction Factor	V/C	LOS	WIT	Impact Threshold
					Entering	Exiting							
S1	Street Stair	AM	8.83	7.58	268	605	1.00	0.80	0.90	1.00	C	0.8	8.0
P1	Platform Stair	AM	9.50	8.25	268	605	1.00	0.75	0.90	0.96	C	--	--

Notes: Based on 2020 *CEQR Technical Manual* methodology.
V/C = volume-to-capacity ratio
LOS = level of service

Table G-21: With-Action Condition Fare Analysis at the York Street Subway Station

No.	Station Element/Location	Peak Period	15-Minute Pedestrian Volumes		Entering Surging Factor	Exiting Surging Factor	Friction Factor	V/C	LOS
			Entering	Exiting					
R258	3 Standard Turnstiles	AM	268	605	1.00	0.80	0.90	0.67	B

Notes: Based on 2020 *CEQR Technical Manual* methodology.
V/C = volume-to-capacity ratio
LOS = level of service

Bus Service

As shown in **Table G-22**, northbound demand on the B44 bus route is expected to increase by approximately 19 and 20 trips at the maximum load point in the weekday AM and PM peak hours, respectively. Similarly, the southbound demand on the B44 bus route is expected to increase by approximately 7 trips at the maximum load point in the weekday PM peak hour. As shown in **Table G-21**, based on projected levels of bus service in the No-Action Condition, there would be sufficient capacity to meet the projected demand on the northbound and southbound B44 bus routes during the AM and PM peak hours in the 2030 With-Action condition. Therefore, the northbound and southbound B44 bus routes would not be considered significantly adversely impacted based on *CEQR Technical Manual* impact criteria.

Table G-22: With-Action Condition Local Bus Analysis

Peak Hour	Route	Direction	Maximum Load Point	Peak Hour Buses[1]	No-Action Available Capacity[2]	Project Increment	Available Capacity w/ Proposed Actions
AM	B44	NB	New York Avenue/Fenimore Street	9	20	19	1
		SB	Nostrand Avenue/Flatbush Avenue	14	406	0	406
PM	B44	NB	New York Avenue/Prospect Place	9	32	20	12
		SB	Nostrand Avenue/Linden Boulevard	7	69	7	62

Notes:
[1] Assumes service levels adjusted to address capacity shortfalls in the No-Action Condition.
[2] Available capacity based on MTA loading guidelines of 54 passengers per standard bus (B44).

VII. PEDESTRIANS

Existing Conditions

As discussed previously in Section V "Level 2 Screening Assessment," three sidewalks and one corner have been selected for analysis as they are locations where action-generated pedestrian trips are expected to exceed the 200-trip *CEQR Technical Manual* analysis threshold during the weekday AM peak hour. As shown previously in **Figure G-5**, the analyzed pedestrian elements are located in the vicinity of the Projected Sites.

Tables G-23 and **G-24** below, show existing average pedestrian space (in square feet per pedestrian) and levels of service at analyzed sidewalks and corner, respectively. As shown in **Tables G-23** and **G-24**, all analyzed pedestrian elements operate at LOS B or better in all peak hours under 2021 existing conditions.

Table G-23: Sidewalk Analysis – Existing Conditions

Location	Sidewalk	Total Width (ft.)	Effective Width (ft.)	Peak Hour Volumes	Average Pedestrian Space (ft^2/pedestrian)	LOS
				AM	AM	AM
Flushing Ave between Waverly Ave & Clinton Ave	West	8.3	2.8	45	846.7	A
Jay St between York St & Prospect St	North	14.2	7.8	663	140.1	B
York St between Jay St & Pearl St	East	10.5	5.7	48	1,328.4	A

Notes:
[1] Methodology based on CEQR Technical Manual guidelines.
[2] LOS – Level of Service

Table G-24: Corner Analysis – Existing Conditions

Location	Corner	Pedestrian Space (SFP)	LOS
		AM	AM
Jay St & York St	SE	182.6	A

Notes:
[1] Methodology based on CEQR Technical Manual guidelines.
[2] LOS – Level of Service

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

Increased pedestrian demand due to background growth was added to existing volumes to determine future volumes without the Proposed Actions. For data collected in 2018, annual compounded background growth rates of 0.50 percent and 0.25 percent were applied to existing travel demand for the 2018 through 2021 period to bring the volumes to an existing year of 2021. Subsequently, an annual compounded background growth rates of 0.50 percent and 0.25 percent were applied to existing travel demand for the 2021 through 2026 period and the 2026 through 2030 periods, respectively, pursuant to *CEQR Technical Manual* criteria. In addition, pedestrian volumes are expected to increase as a result of the No-Action development projects in the surrounding area (see **Table C-4** in **Attachment C, "Land Use, Zoning, and Public Policy"**).

Tables G-25 and **G-26**, below, show the forecasted No-Action average pedestrian space and LOS along the analyzed sidewalks, corners, and crosswalks during the weekday AM peak hour. As shown in **Table G-25**, each analyzed sidewalk would operate at LOS C or better during the weekday AM peak hour under No-Action conditions. Additionally, as shown in **Table G-26**, the analyzed corner would continue to operate at LOS A under No-Action conditions during the weekday AM peak hour.

Table G-25: Sidewalk Analysis – No-Action Conditions

Location	Sidewalk	Total Width (ft.)	Effective Width (ft.)	Peak Hour Volumes	Average Pedestrian Space (ft^2/ped)	LOS
				AM	AM	AM
Flushing Ave between Waverly Ave & Clinton Ave	North	8.3	2.8	387	98	B
Jay St between York St & Prospect St	East	14.2	7.8	1,152	80.2	C
York St between Jay St & Pearl St	North	10.5	5.7	547	116	B

Notes:
[1] Methodology based on CEQR Technical Manual guidelines.
[2] LOS – Level of Service

Table G-26: Corner Analysis – No-Action Conditions

Location	Corner	Pedestrian Space (SFP)	LOS
		AM	AM
Jay St & York St	SE	86.6	A

Notes:
[1] Methodology based on CEQR Technical Manual guidelines.
[2] LOS – Level of Service

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

As discussed previously, the Proposed Actions are expected to generate a net total of 1,295 pedestrian trips (including walk-only, subway and bus trips) during the weekday AM peak hour (refer to **Table G-4**). The assignment of these trips to the analyzed pedestrian elements is shown in **Figures G-5**. These pedestrian volumes were added to the projected No-Action volumes to generate the With-Action pedestrian volumes for analysis.

Tables G-27 and **G-28**, below, show the forecasted With-Action average pedestrian space and LOS along the analyzed sidewalks and corner, respectively, during the weekday AM peak hour. As previously mentioned, all sidewalks would operate at LOS C or better during each of the analyzed peak hours under No-Action conditions. Similarly, under the With-Action conditions, all sidewalks would operate at an acceptable LOS C during the weekday AM peak hour (refer to **Table G-27**). As shown in **Table G-28**, under the With-Action Condition, the southeast corner at the intersection of Jay Street and York Street would continue to operate at LOS A during the weekday AM peak hour.

Table G-27: Sidewalk Analysis – With-Action Conditions

Location	Sidewalk	Total Width (ft.)	Effective Width (ft.)	Project Increment	Peak Hour Volume	Average Pedestrian Space (ft^2/ped)	LOS
				AM	AM	AM	AM
Flushing Ave between Waverly Ave & Clinton Ave	North	8.3	2.8	240	627	59.9	C
Jay St between York St & Prospect St	East	14.2	7.8	263	1,415	65.0	C
York St between Jay St & Pearl St	North	10.5	5.7	211	758	83.5	C

Notes:
[1] Methodology based on *CEQR Technical Manual* guidance.
[2] LOS – Level of Service

Table G-28: Corner Analysis – With-Action Conditions

Location	Corner	Pedestrian Space (SFP)	LOS
		AM	AM
Jay St & York St	SE	65.6	A

Notes:
[1] Methodology based on *CEQR Technical Manual* guidance.
[2] LOS – Level of Service

As shown in **Tables G-27** and **G-28**, under the With-Action Condition, all analyzed pedestrian elements would not exceed *CEQR Technical Manual* thresholds for a significant impact during any of the analyzed peak hours.

VIII. VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

Recent NYCDOT Initiatives

Vision Zero Brooklyn Pedestrian Safety Action Plan

The City's Vision Zero initiative seeks to eliminate all deaths from traffic crashes regardless of whether on foot, bicycle, or inside a motor vehicle. In an effort to drive these fatalities down, NYCDOT and the New York City Police Department (NYPD) developed a set of five plans, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough's specific challenges to pedestrian safety. These plans pinpoint the conditions and characteristics of pedestrian fatalities and severe injuries; they also identify priority corridors, intersections, and areas that disproportionately account for pedestrian fatalities and severe injuries, prioritizing them for safety interventions. The plans outline a series of recommended actions comprised of engineering, enforcement, and education measures that intend to alter the physical and behavioral conditions on City streets that lead to pedestrian fatality and injury.

The *Vision Zero Brooklyn Pedestrian Safety Action Plan* was released on February 19, 2015 and updated in 2019. Flushing Avenue, to the south of the Project Site, was identified as a Priority Corridor and areas of Williamsburg and Downtown Brooklyn, to the east and west of the Project Site, respectively, were identified as Priority Areas. No Priority Intersections were identified in proximity to the Development site. Actions recommended in the *Vision Zero Brooklyn Pedestrian Safety Action Plan* to enhance pedestrian safety in Brooklyn are summarized below.

ENGINEERING AND PLANNING

- Implement at least 50 Vision Zero safety engineering improvements at Priority Corridors, Intersections, and Areas citywide, informed by community input
- Expand exclusive pedestrian crossing time, install expanded speed limit signage, and modify signal timing to reduce off-speak speeding on Priority Corridors and Intersections where feasible
- Expand community outreach and engagement with regard to Priority Corridors, Intersections, and Areas
- Install additional lighting under elevated trains and around other key transit stops

- Install 60 new speed bumps in Brooklyn annually
- Develop additional Neighborhood Slow Zones in Priority Areas
- Coordinate with MTA to ensure bus operations contribute to a safe pedestrian environment
- Expand a bicycle network in Brooklyn that improves safety for all road users
- Proactively design for pedestrian safety in high-growth areas in Brooklyn

ENFORCEMENT

- Deploy speed camera at Priority Corridors, Intersections, and Areas
- Focus enforcement and deploy dedicated resources to Brooklyn NYPD precincts that overlap substantially with Priority Areas
- Prioritize targeted enforcement at all Priority Corridors, Intersections, and Areas annually

EDUCATION AND AWARENESS CAMPAIGNS

- Target child and senior safety education at Priority Corridors and Priority Areas
- Launch multilingual public information campaigns in Priority Areas
- Target intensive street-level outreach at Priority Corridors, Intersections, and Areas

Study Area High Crash Locations

Crash data for intersections in the traffic and pedestrian study areas were obtained from NYCDOT for the three-year period between January 1, 2016 and December 31, 2018 (the most recent three-year period for which data are available). The data quantify the total number of crashes as well as the total number of crashes involving injuries to pedestrians or bicyclists. During the three-year reporting period, a total of 175 crashes and 47 pedestrian/bicyclist-related injury crashes occurred at analyzed study area intersections. None of these crashes involved fatalities. **Table G-29** provides a summary of crashes by intersection during the 2016 to 2018 period, as well as a breakdown of pedestrian and bicycle crashes by year and location.

According to the *CEQR Technical Manual*, a high crash location is one where there were 48 or more reportable and non-reportable crashes or five or more pedestrian/bicyclist-related crashes in any consecutive 12 months within the most recent three-year period for which data are available.

As shown in **Table G-29**, no intersections were found to have experienced a total of 48 or more crashes in any one year nor were any intersections found to have experienced five or more pedestrian/bicyclist injury crashes in one year, except for the intersection of Navy Street and Sands Street.
In addition, as academic uses are proposed, safety improvement measures were investigated for key intersections along the most direct pedestrian paths between the BNY and target destinations, including subway stations and bus stops. The pedestrian safety assessments at these intersections are discussed below:

Navy Street and York Street

As shown in **Table G-29**, this intersection experienced one bicycle crash in 2017 and no pedestrian or bicycle crashes in 2016 and 2018. This intersection is unsignalized with a striped east crosswalk and posted pedestrian crossing signage for the nearby P.S. 307 – Daniel Hale William elementary school.

Navy Street and Sands Street

As shown in **Table G-29**, the intersection of Navy Street and Sands Street experienced two reported pedestrian crashes and three reported bicycle crashes in 2016. This intersection also experienced one and two bicycle injury crashes in 2017 and 2018, respectively. The Navy Street and Sands Street intersection is signalized and is equipped with pedestrian signals. In addition, there is a signed bike route along Navy Street to the south of the intersection, a shared bike lane along Navy Street to the north of the intersection, and a protected bicycle lane along Sands Street to the west of the intersection. The Navy Yard is located to the east of the intersection, adjacent to Navy Street and all four crosswalks at this intersection are striped. Potential improvements at this intersection could include re-striping each approach with high visibility crosswalks.

Table G-29: Accident Data Summary 2016-2018

Intersection		Pedestrian Injury Crashes			Bicycle Injury Crashes			Total Pedestrian/ Bicyclist Injury Crashes			Total Crashes (Reportable + Non-Reportable)		
Roadway 1	**Roadway 2**	**2016**	**2017**	**2018**	**2016**	**2017**	**2018**	**2016**	**2017**	**2018**	**2016**	**2017**	**2018**
Navy St	Sands St	2	0	0	3	1	2	**5**	1	2	8	3	4
	York St	0	0	0	0	1	0	0	1	0	0	2	0
Kent Ave	Clymer St/ Washington Ave	0	0	0	0	0	0	0	0	0	2	1	3
	Divsion Ave	0	0	0	0	0	0	0	0	0	0	2	1
Jay St	York St	0	0	1	0	0	0	0	0	1	1	0	1
Flushing Ave	Nassau St/ Navy St	1	1	0	0	0	3	1	1	3	4	4	10
	North Elliott Pl	0	0	0	0	0	0	0	0	0	3	1	2
	North Portland Ave	0	0	0	1	0	0	1	0	0	2	1	1
	North Oxford St	0	0	0	1	0	0	1	0	0	1	0	2
	Cumberland St	0	0	0	1	1	1	1	1	1	1	2	2
	Carlton Ave	0	0	0	0	0	0	0	0	0	0	0	0
	Adelphi St	0	0	1	0	1	1	0	1	2	0	2	2
	8th Ave/ Clermont Ave	0	0	0	0	0	0	0	0	0	4	0	0
	Vanderbilt Ave	0	1	0	1	0	0	1	1	0	1	3	1
	Clinton Ave	0	0	1	1	1	0	1	1	1	2	2	5
	Waverly Ave	0	0	0	1	0	1	1	0	1	1	0	1
	Washington Ave	0	1	2	2	0	1	2	1	3	6	3	4
	Hall St	0	0	0	1	0	0	1	0	0	2	0	0
	Ryerson St	0	0	0	0	0	0	0	0	0	0	0	1
	Grand Ave	0	0	0	0	0	0	0	0	0	0	0	1
	Steuben St	0	0	0	0	0	0	0	0	0	0	0	2
	Williamsburg St West	0	0	0	4	2	1	4	2	1	9	6	13
Hewes St	Williamsburg St East/ Williamsburg St West	1	0	1	0	0	0	1	0	1	1	0	3
	Kent Ave/ Williamsburg West	0	0	1	0	0	0	0	0	1	6	9	21

Source: NYSDMV/DOT

Navy Street and Flushing Avenue

This intersection experienced one pedestrian crash in both 2016 and 2017 and three bicycle crashes in 2018 (refer to **Table G-29**). There are crosswalks striped at each approach, but the striping is beginning to

fade in some places. Potential improvements at this intersection could include re-striping each approach with high visibility crosswalks.

Flushing Avenue and Williamsburg Street West

The intersection of Flushing Avenue and Williamsburg Street South experienced four, two, and one bicycle injury crashes in 2016, 2017 and 2018, respectively (refer to **Table G-29**). This intersection is signalized and is equipped with pedestrian signals. There is a two-way protected bike path along this section of Williamsburg Street West that is part of the Brooklyn Waterfront Greenway. The bike path along Williamsburg Street West leads to both the Steuben Playground, located at the southwest corner of this intersection, and the greenway along Flushing Avenue. Potential improvements at this intersection could include re-striping the bicycle pavement markings and installing additional bicycle route signage.

Kent Avenue and Hewes Street Williamsburg Street West

As shown in **Table G-29**, this intersection experienced one pedestrian injury crash in 2018. The Kent Avenue and Williamsburg Street West section of the intersection is signalized, equipped with pedestrian signals and has crosswalks striped at each approach. The Kent Avenue and Hewes Street intersection is stop controlled with the east crosswalk striped. To the north of the intersection, the two-way Brooklyn Waterfront Greenway is located along the west curb of Kent Avenue. At the intersection, the Brooklyn Waterfront Greenway turns west onto Williamsburg Street West.

Kent Avenue and Clymer Street

The Kent Avenue and Clymer Street intersection did not experience any pedestrian or bicycle injury crashes between 2016 and 2018 (refer to **Table G-29**). The Kent Avenue Gate, providing vehicular and pedestrian access to the BNY, is located at the western leg of this intersection. Kent Avenue operates as a two-way, north-south street to the south of this intersection, and as a one-way northbound street to the north of this intersection. This intersection is signalized and is equipped with pedestrian signals. Crosswalks are striped at each approach at this intersection and the two-way Brooklyn Waterfront Greenway is located along the west curb of Kent Avenue.

Kent Avenue and Division Avenue

Similar to the Kent Avenue and Clymer Street intersection, this intersection did not experience any pedestrian or bicycle injury crashes between 2016 and 2018 (refer to **Table G-29**). This intersection is signalized and is equipped with pedestrian signals. Crosswalks are striped at each approach at this intersection and the two-way Brooklyn Waterfront Greenway is located along the west curb of Kent Avenue. To the west of this intersection, Division Avenue is a dead-end street.

Flushing Avenue, from Navy Street to Williamsburg Street West

Each of these intersections along Flushing Avenue are located along the southern frontage of the BNY. The BNY has to access points along Flushing Avenue, at Clinton Avenue and Cumberland Street. As shown in **Table G-29**, the intersections of Flushing Avenue and North Elliot Place, Carlton Avenue, 8th Avenue/Clermont Avenue, Ryerson Street, Grand Avenue and Steuben Street each did not experience any pedestrian or bicycle injury crashes between 2016 and 2018. As shown in **Table G-29**, the remaining intersections along this corridor experienced three or fewer pedestrian and bicycle injury crashes in a given year. As previously noted, bike paths are located along both the north and south curbs of Flushing Avenue. Potential improvements along this corridor could include re-striping the bicycle pavement markings and installing additional bicycle route signage.

Lastly, no intersections within the traffic and pedestrian study areas are located within a designated Senior Pedestrian Focus Area (SPFA), which were identified by NYCDOT based on the density of senior pedestrian

(age 65+) crashes resulting in fatalities or severe injuries in a five-year period, as well as variables such as senior trip generators, concentrations of senior centers, and senior housing locations.

IX. CONCLUSIONS

Based on the detailed analyses presented in this attachment, the anticipated level of new transportation demand generated by the Proposed Actions is not expected to result in significant adverse impacts to traffic, parking, transit or pedestrian conditions in the vicinity of the Project Area. As previously discussed, as a result of the Proposed Actions, no intersection is expected to experience an incremental increase of 50 or more vehicles during any of the analyzed peak hour periods. Therefore, the *CEQR Technical Manual* threshold for analysis was not exceeded and a detailed traffic analysis is not warranted as no significant adverse impacts are expected. As per the *CEQR Technical Manual*, a detailed parking assessment is not warranted if the threshold for traffic analysis is not exceeded.

As discussed above in **Section IV:** "Level 2 Screening Assessment," action-generated trips at the York Street (F) subway station are expected to exceed the 200-trip *CEQR Technical Manual* analysis threshold in the weekday AM peak hour, therefore the York Street (F) subway station was selected for analysis. As shown in **Table G-20**, under the With-Action Condition, both the stair leading from the mezzanine to street level (S1) and the platform stair (P1) are projected to continue to operate at an acceptable LOS C or better in the AM peak hour. As shown in **Table G-21**, the analyzed fare array would also continue to operate at an acceptable LOS B during the AM peak hour. Therefore, both of the analyzed stairs and the analyzed fare array would not be considered significantly adversely impacted based on *CEQR Technical Manual* impact criteria. Additionally, the action-generated trips on the northbound and southbound B44 bus route are expected to exceed the 50-trip *CEQR Technical Manual* analysis threshold in the weekday AM and PM peak hours and were selected for analysis. As shown in **Table G-22**, the northbound and southbound B44 bus routes would not be considered significantly adversely impacted based on *CEQR Technical Manual* impact criteria.

As discussed previously in **Section IV:** "Level 2 Screening Assessment," three sidewalks and one corner have been selected for analysis as they are locations where action-generated pedestrian trips are expected to exceed the 200-trip *CEQR Technical Manual* analysis threshold during one or more of the analyzed peak hours. As shown previously in **Figure G-5**, the analyzed pedestrian elements are located in the vicinity of the Projected Sites. As shown in **Tables G-27** and **G-28**, under the With-Action Condition, all analyzed pedestrian elements would not exceed *CEQR Technical Manual* thresholds for a significant impact during any of the analyzed peak hours.

In addition, an evaluation of pedestrian and vehicular safety was conducted in the vicinity of the Project Area. As shown in **Table G-29**, no intersections were found to have experienced 48 or more crashes in any one year. However, the intersection of Navy Street and Sands Street experienced five or more pedestrian/bicyclist injury crashes in one year. The Applicant will coordinate with DOT to assess whether or not additional safety measures should be implemented at either intersection.

ATTACHMENT H
AIR QUALITY

I. INTRODUCTION

Ambient air quality, or the quality of the surrounding air, may be affected by air pollutants produced by motor vehicles, referred to as "mobile sources"; by fixed facilities, usually referenced as "stationary sources"; or by a combination of both. Under City Environmental Quality Review (CEQR), an air quality assessment is to be carried out for actions that could have the potential to result in significant adverse air quality impacts. Per *CEQR Technical Manual* guidance, the introduction of new sensitive uses (i.e., community facility uses) in an existing manufacturing zoning district warrants an assessment of air quality. As detailed in **Attachment A, "Project Description,"** the Proposed Actions would facilitate the development of community facility space in the Project Area, which is currently zoned manufacturing. Therefore, in accordance with the procedures and methodology outlined in Chapter 17, "Air Quality," of the *CEQR Technical Manual*, an air quality assessment for the Proposed Actions has been performed to determine both the Proposed Actions' (and associated reasonable worst-case development scenario's [RWCDS's]) effects on ambient air quality and the effects of ambient air quality on the RWCDS. This analysis estimates the potential impacts of emissions from mobile sources, the heating, ventilation, and air conditioning (HVAC) systems of the RWCDS buildings, and industrial sources and other large/major sources.

As presented in **Attachment A, "Project Description,"** the Applicant is seeking zoning map and text amendments to establish the new Special Brooklyn Navy Yard (BNY) District to carry out the recommendations outlined in the Brooklyn Navy Yard Master Plan (*BNY 2030*). Under the RWCDS With-Action Condition, three Projected Sites within the boundaries of the BNY would be developed with a mix of industrial, commercial, and community facility uses: the Kent Avenue Site (Projected Site 1), the Navy Street site (Projected Site 2), and the Flushing Avenue Site (Projected Site 3) (see **Figure H-1**). Under the RWCDS, two buildings would be constructed on each Projected Site. In the future without the Proposed Actions, buildings of similar size would be expected to be constructed in the same general locations (the Kent Avenue site, Navy Street Alternate sites, and Flushing Avenue Alternate sites, as detailed in **Attachment A**), however (i) the mix of uses would be somewhat different; and (ii) because of a higher parking requirement under current zoning, one or more parking facility structures would be built in the No-Action Condition that would not be built under the RWCDS With-Action Condition.

II. AIR QUALITY REGULATIONS, STANDARDS, AND BENCHMARKS

National and State Air Quality Standards

The Clean Air Act (CAA) requires the U.S. Environmental Protection Agency (EPA) to set NAAQS for air pollutants considered harmful to public health and the environment. The NAAQS establish primary and secondary maximum allowable concentrations of six "criteria" pollutants in outdoor air. The six pollutants are CO, lead, ground-level ozone (O_3), nitrogen dioxide (NO_2), respirable PM, and sulfur dioxide (SO_2). The primary standards represent levels that are required to protect the public health, allowing an adequate margin of safety. The secondary standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the environment. The primary standards are generally either the same as the secondary standards or more restrictive. The NAAQS



Assumed Stack Location
Projected Site
Other Development
Brooklyn Navy Yard

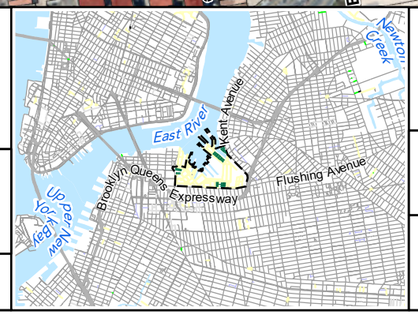
Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-1

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Brooklyn Navy Yard Special District Project Area

wsp

0 500 1,000 Feet

N

are presented in **Table H-1**. NAAQS have been adopted as the ambient air quality standards for the State of New York. New York State also has standards for total suspended PM, settleable particles, non-methane hydrocarbons, 24-hour and annual SO_2, and ozone, which correspond to federal standards that have since been revoked or replaced, and for the non-criteria pollutants beryllium, fluoride, and hydrogen sulfide.

Determining the Significance of Air Quality Impacts

The State Environmental Quality Review Act (SEQRA) regulations and *CEQR Technical Manual* indicate that the significance of a predicted consequence of a project (i.e., whether it is material, substantial, large, or important) should be assessed in connection with its setting (e.g., urban or rural), its probability of occurrence, its duration, its irreversibility, its geographic scope, its magnitude, and the number of people affected.[1] In terms of the magnitude of air quality impacts, any project predicted to increase the concentration of a criteria air pollutant to a level that would exceed the concentrations defined by the NAAQS would be deemed to have a potential significant adverse impact. In addition, threshold levels have been defined for certain pollutants to ensure that concentrations will not be significantly increased and/or to maintain concentrations lower than the NAAQS. Any project predicted to increase the concentrations of these pollutants above the thresholds would be deemed to have a potential significant adverse impact, even in cases where violations of the NAAQS are not predicted.

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

Pollutant	Primary		Secondary		New York State	
	ppm	µg/m^3	ppm	µg/m^3	ppm	µg/m^3
Carbon Monoxide (CO)						
8-Hour Average	9	10,000	None		9	10,000
1-Hour Average	35	40,000			35	40,000
Lead (Pb)						
Rolling 3-Month Average	NA	0.15	NA	0.15	None	
Nitrogen Dioxide (NO_2)						
Maximum 1-Hour Concentration	0.100	188	None		None	
Annual Average	0.053	100	0.053	100	0.04	100
Ozone (O_3)						
8-Hour Average	0.070	N/A	0.070	N/A	None	
Respirable Particulate Matter (PM_{10})						
24-Hour Average	NA	150	NA	150	None	
Fine Respirable Particulate Matter ($PM_{2.5}$)						
Annual Mean	NA	12	NA	15	None	
24-Hour Average	NA	35	NA	35		
Sulfur Dioxide (SO_2)[8]						
Maximum 1-Hour Concentration	0.075	196	NA	NA	None	
Maximum 3-Hour Concentration	NA	NA	0.50	1,300	0.50	1,300

Notes: ppm – parts per million (unit of measure for gases only)
µg/m^3 – micrograms per cubic meter (unit of measure for gases and particles, including lead)
NA – not applicable
All annual periods refer to calendar year.
Sources: 40 CFR Part 50: National Primary and Secondary Ambient Air Quality Standards. https://www.epa.gov/criteria-air-pollutants/naaqs-table; *CEQR* , Chapter 17 Air Quality. http://www.nyc.gov/html/oec/downloads/pdf/2014_ceqr_tm/17_Air_Quality_2014.pdf

[1] *CEQR Technical Manual*, Chapter 1, Section 222, March 2020; & State Environmental Quality Review Regulations, 6 NYCRR §617.7

CO de minimis Criteria

New York City has developed *de minimis* criteria to assess the significance of the increase in CO concentrations that would result from the impact of Proposed Actions, as set forth in the *CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant environmental impact. Significant increases of CO concentrations in New York City are defined as: (1) an increase of 0.5 parts per million (ppm) or more in the maximum eight-hour average CO concentration at a location where the predicted No-Action eight-hour concentration is equal to or between eight and nine ppm; or (2) an increase of more than half the difference between baseline (i.e., No-Action Condition) concentrations and the eight-hour standard, when No-Action Condition concentrations are below 8.0 ppm.

$PM_{2.5}$ de minimis Criteria

The New York State Department of Environmental Conservation (NYSDEC) has published a policy to provide interim direction for evaluating $PM_{2.5}$ impacts.[2] This policy applies only to facilities applying for permits or major permit modifications under SEQRA that emit 15 tons or more annually of PM with a diameter less than ten microns (PM_{10}). The policy states that such a project will be deemed to have a potentially significant adverse impact if the project's maximum impacts are predicted to increase $PM_{2.5}$ concentrations by more than 0.3 µg/m^3 averaged annually or by more than five µg/m^3 on a 24-hour basis. Projects that exceed either the annual or the 24-hour threshold must assess the severity of the impacts, evaluate alternatives, and employ reasonable and necessary mitigation measures to minimize the $PM_{2.5}$ impacts of the source to the maximum extent practicable.

In addition, New York City uses *de minimis* criteria to determine the potential for significant adverse $PM_{2.5}$ impacts under CEQR as follows:

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

Actions under CEQR predicted to increase $PM_{2.5}$ concentrations by more than the above *de minimis* criteria are considered to have a potential significant adverse impact.

[2] CP33/Assessing and Mitigating Impacts of Fine Particulate Emissions, NYSDEC 12/29/2003.

[3]The *CEQR Technical Manual* does not provide an annual average $PM_{2.5}$ *de minimis* criterion for discrete receptors that is specific to mobile source analysis.

III. EXISTING CONDITIONS

Existing concentrations of criteria pollutants at the nearest NYSDEC air quality monitoring station are presented in **Table H-2**. These data were obtained from the 2017-2019 3-year period as reported in NYSDEC's 2019 Ambient Air Quality Report. All data statistical forms and averaging periods are consistent with the definitions of the NAAQS. The data demonstrates that there were no monitored violations of NAAQS.

Table H-2: Representative Monitored Ambient Air Quality Data (2017-2019)

Pollutant	Site Name	Site Address	Units	Averaging Period	Concentration
CO	Queens College 2	65-30 Kissena Blvd. Flushing	ppm	1-hour	1.5
				8-hour	1.1
Ozone	Queens College 2	65-30 Kissena Blvd. Flushing	ppm	8-hour	0.074
SO_2	Queens College 2	65-30 Kissena Blvd. Flushing	ppb	1-hour	5.17
PM_{10}	Queens College 2	65-30 Kissena Blvd. Flushing	µg/m^3	24-hour	28
$PM_{2.5}$	JHS 126	424 Leonard St, Brooklyn	µg/m^3	Annual	7.6
				24-hour	17.8
NO_2	Queens College 2	65-30 Kissena Blvd. Flushing	ppb	Annual	14.18
				1-hour	55.1

Source: https://www.dec.ny.gov/docs/air_pdf/2019airqualreport.pdf

The CAA, as amended in 1990, defines non-attainment areas (NAA) as geographic regions that have been designated as not meeting one or more of the NAAQS. When an area is designated as nonattainment by the EPA, the state is required to develop and implement a State Implementation Plan (SIP), which delineates how a state plans to achieve air quality that meets the NAAQS under the deadlines established by the CAA, followed by a plan for maintaining attainment status once the area is in attainment. **Table H-3** summarizes the attainment status of Kings County for each of the criteria pollutants. As presented in the table, Brooklyn is currently an NAA for the eight-hour ozone standard and maintenance area for CO and $PM_{2.5}$. For the remaining pollutants, the county is considered to be in attainment or insufficient data is available to make a designation of attainment or nonattainment "unclassifiable."

Table H-3: **NAAQS Attainment Status of Kings County**

Pollutant	Current Status	Date Redesignated to Maintenance
Carbon Monoxide (CO)	Maintenance Area	05/20/2002
Lead	Attainment/Unclassifiable	NA
Nitrogen Dioxide (NO_2)	Attainment/Unclassifiable	NA
Eight-hour Ozone (O_3) Standard (2008)	Nonattainment Area	NA
Respirable Particulate Matter (PM_{10})	Attainment/Unclassifiable	NA
Fine Respirable Particulate Matter ($PM_{2.5}$)	Maintenance Area	04/18/2014
Sulfur Dioxide (SO_2)	Attainment/Unclassifiable	NA

Source: EPA Greenbook. https://www.epa.gov/green-book

IV. STATIONARY SOURCE ANALYSIS

HVAC Screening

An HVAC screening analysis was performed for each Projected Site following procedures outlined in the *CEQR Technical Manual*. The nearest existing or proposed building of the same or greater height was analyzed as the potential receptor. It was assumed that exhaust stacks of the RWCDS buildings would be located three feet above roof height (as per the *CEQR Technical Manual*). As each of the Projected Sites would comprise multiple buildings, each building was assumed to have a separate exhaust stack. A worst-case stack location of ten feet from the edge of the building closest to the nearest taller building was assumed.

BNYDC has committed to the use of natural gas in all boiler systems for this project; therefore the screening analyses were performed assuming the use of natural gas only. BNYDC has been using natural gas boiler systems in all recent developments and would do so if they self-develop a building on any of the Projected Sites. BNYDC will require the use of such natural gas boilers in any lease for the building should any building be developed by a third party.

Projected Site 1 (the Kent Avenue Site)

The RWCDS for Projected Site 1 would include two buildings identified as Kent Avenue North and Kent Avenue South, with stack heights of 367 feet and 383 feet respectively, both assumed 3 feet above the roof. **Figure H-2** shows the location for the Kent Avenue North building and the closest building of equal or greater building height (the Kent Avenue South building). **Figure H-3** shows the location for the Kent Avenue South building and the closest building of equal or greater building height (the Navy Street North Building).

Kent Avenue North building has non-parking floor area of 759,400 gross square feet (gsf). *Per CEQR Technical Manual* Air Quality Appendix Figure 17.8, the corresponding screening distance for potential air quality impact is 175 feet or less. There are no similar or higher height buildings within the screening distance and thus further analysis is not required. Kent Avenue South has non-parking floor area of 1,752,235 gsf and the corresponding screening distance for potential air quality impact is 275 feet or less. There are no similar or higher height buildings within the screening distance and thus further analysis is not required.

Table H-4 summarizes the screening analysis results and **Figures H-2** and **H-3** show the HVAC screening nomographs for proposed Site 1 buildings.

Table H-4: HVAC Natural Gas Screening Analysis – Projected Site 1

Projected Site 1 Building ID	Proposed Land Use	Non-Parking Building Floor Area (gsf)	Building Height (feet)	Stack Height (feet)	Nearest Building of Similar or Higher Height		Screening Distance (Feet)	Screen Results (Pass/Fail)
					Building Height (feet)	Distance (feet)		
North	Non-residential	759,400	364	367	380	397.3	175	Pass
South	Non-residential	1,752,235	380	383	375	3,210	275	Pass

Projected Site 2 (the Navy Street Site)

The RWCDS for Projected Site 2 would include two buildings identified as Navy Street North and Navy Street South, each of which would have maximum stack height of 375 feet and of 378 feet respectively, with stacks



- Assumed Stack Location
- Nearest Taller or Similar Height Building
- Projected Site
- Other Development
- Brooklyn Navy Yard

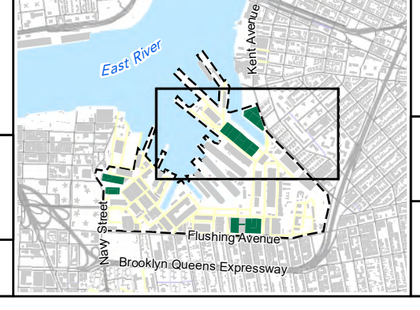
Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-2

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021

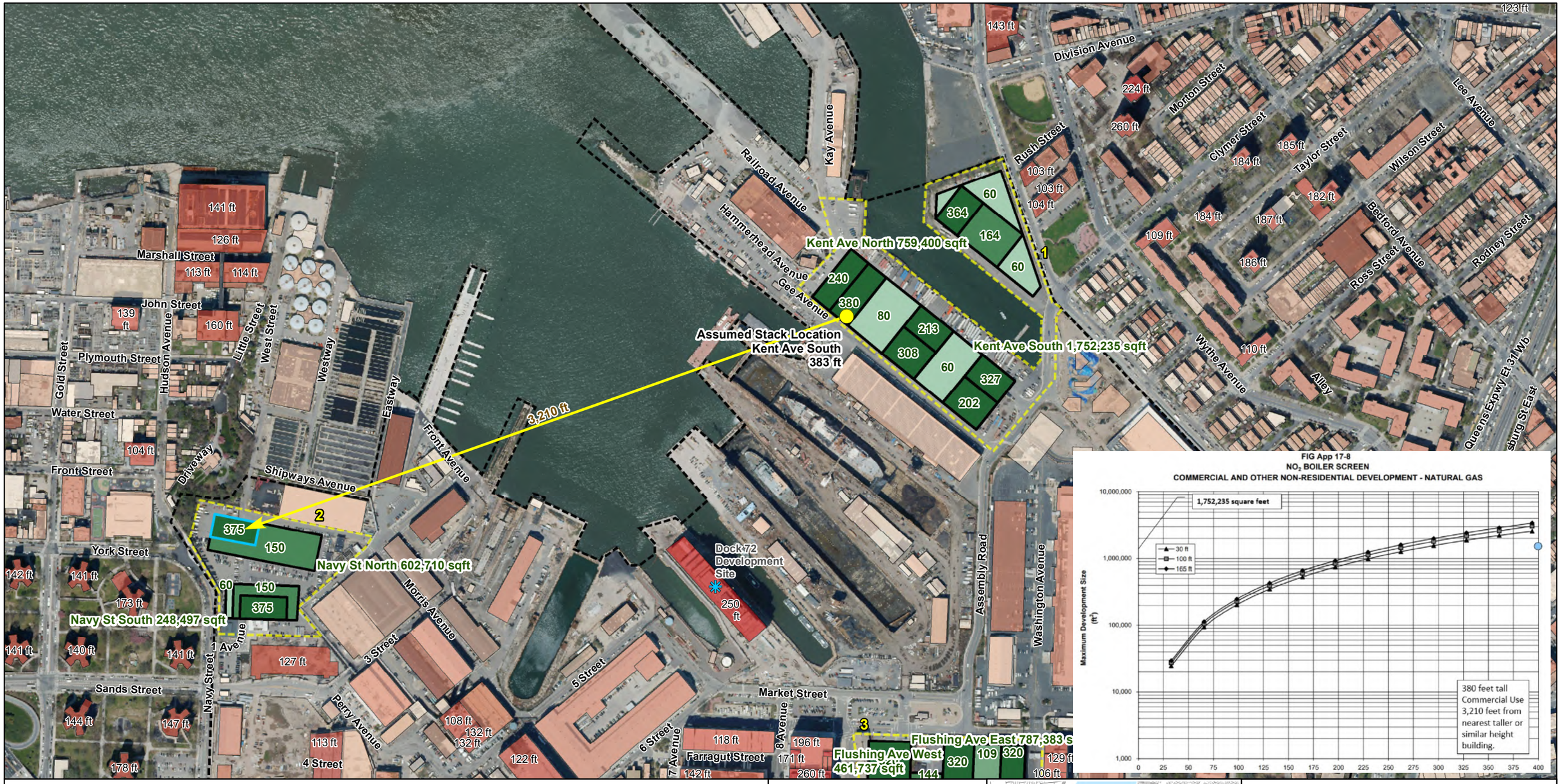


Kent Ave North Development HVAC Screening

wsp

0 200 400 Feet

N



- Assumed Stack Location
- Nearest Taller or Similar Height Building
- Projected Site
- Other Development
- Brooklyn Navy Yard

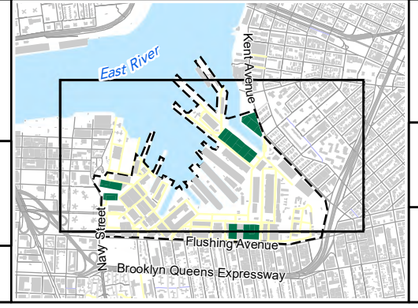
Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-3

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Kent Ave South Development HVAC Screening

wsp

0 400 800 Feet

N

assumed 3 feet above the roofs. **Figure H-4** shows the location for the Navy Street North building and the closest building of equal or greater height (the Navy Street South building). **Figure H-5** shows the location for the Navy Street South building and the closest building of equal or greater height (the Navy Street North building).

Navy Street North building has non-parking floor area of 602,710 gsf. Per *CEQR Technical Manual* Air Quality Appendix Figure 17.8, the corresponding screening distance for potential air quality impact is 160 feet or less. There are no similar or higher height buildings within the screening distance and thus further analysis is not required. Navy Street South has non-parking floor area of 248,497 gsf and the corresponding screening distance for potential air quality impact is 90 feet or less. There are no similar or higher height buildings within the screening distance and thus further analysis is not required.

Table H-5 summarizes the screening analysis results and **Figures H-4** and **H-5** shows the HVAC screening nomographs for proposed Site 2 buildings.

Table H-5: HVAC Natural Gas Screening Analysis – Projected Site 2

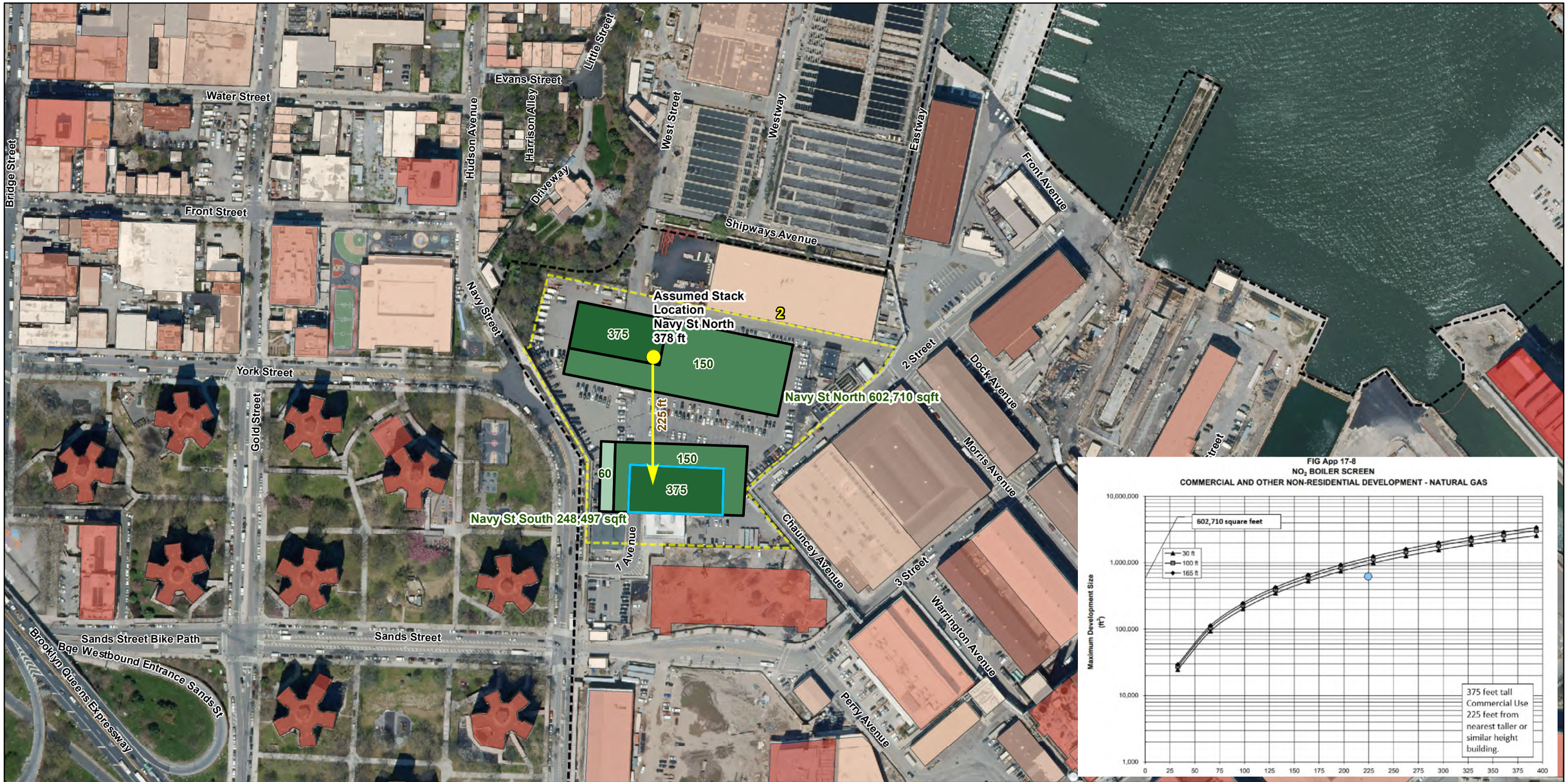
Projected Site 2 Building ID	Proposed Land Use	Building Floor Area (gsf)	Building Height (feet)	Stack Height (feet)	Nearest Building of Similar or Higher Height		Screening Distance (Feet)	Screen Results (Pass/Fail)
					Building Height (feet)	Distance (feet)		
North	Non-residential	602,710	375	378	375	225	160	Pass
South	Non-residential	248,497	375	378	375	225	90	Pass

Projected Site 3 (the Flushing Avenue Site)

The RWCDS for Projected Site 3 would include two buildings identified as Flushing Avenue West and Flushing Avenue East, each of which would have maximum stack heights of 323 feet, assumed 3 feet above the roofs. **Figure H-6** shows the location for the Flushing Avenue East building and the closest building of equal or greater building height (the Flushing Avenue West building). **Figure H-7** shows the location for the Flushing Avenue West building and the closest building of equal or greater building height (the Flushing Avenue East building).

Flushing Avenue East has non-parking floor area of 787,383 gsf. Per *CEQR Technical Manual* Air Quality Appendix Figure 17.8, the corresponding screening distance for potential air quality impact is 175 feet or less. The nearest building of similar or higher height is located within the screening distance and thus a detailed HVAC analysis is required. Flushing Avenue West has non-parking floor area of 461,737 gsf and the corresponding screening distance for potential air quality impact is 140 feet or less. There are no buildings of similar or higher height within the screening distance and thus further analysis is not required.

Table H-6 summarizes the screening analysis results and **Figures H-6** and **H-7** show the HVAC screening nomographs for proposed Site 3 buildings.



- Assumed Stack Location
- Nearest Taller or Similar Height Building
- Projected Site
- Other Development
- Brooklyn Navy Yard

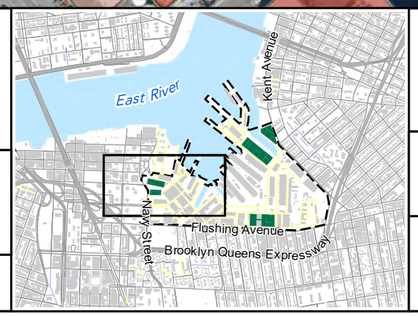
Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-4

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

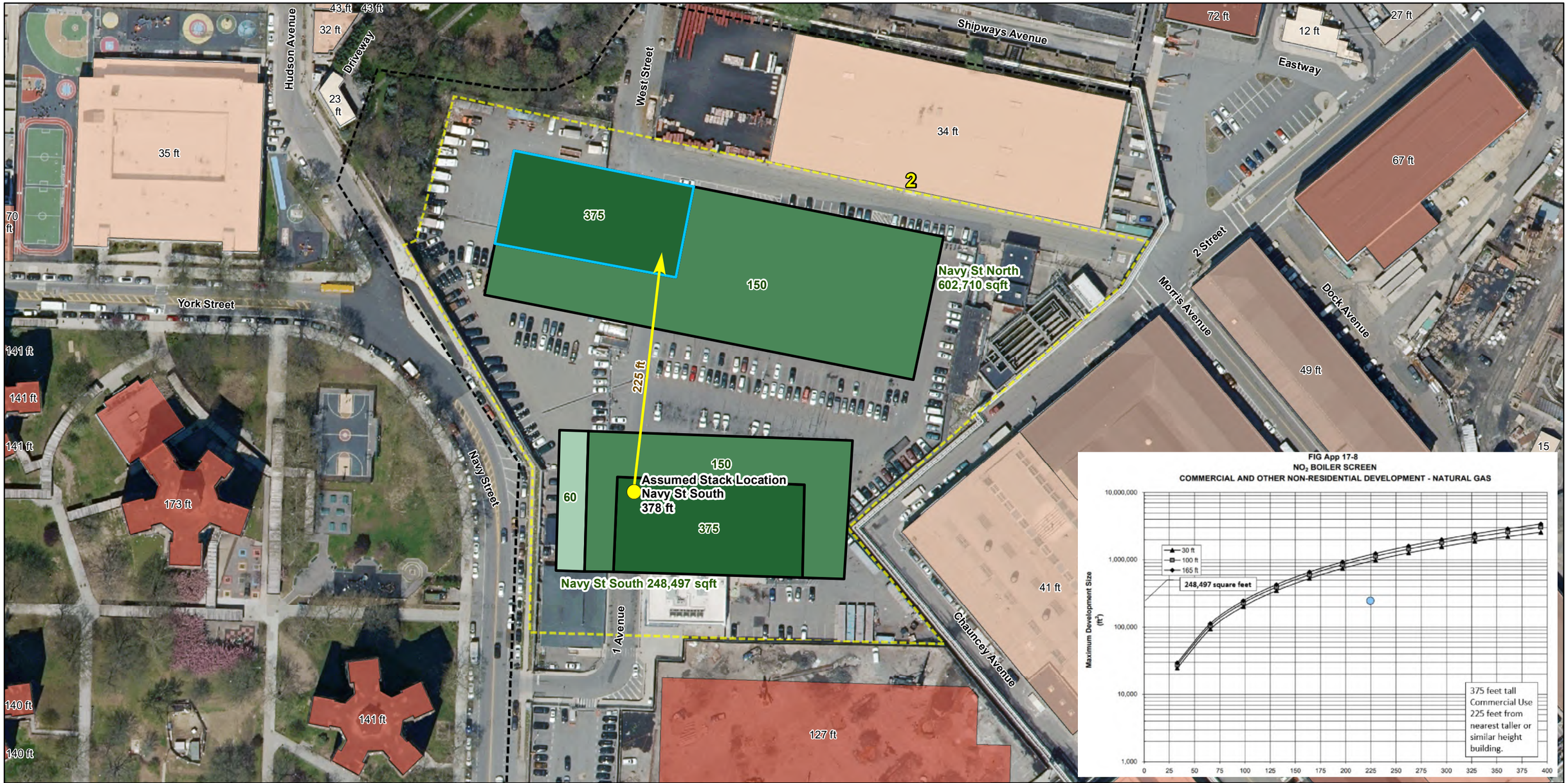
March 22, 2021



Navy St North Development HVAC Screening

wsp

0 200 400 Feet



- Assumed Stack Location
- Nearest Taller or Similar Height Building
- Projected Site
- Brooklyn Navy Yard

Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-5

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Navy St South Development HVAC Screening

wsp

0 100 200 Feet

N



- Assumed Stack Location
- Nearest Taller or Similar Height Building
- Projected Site
- Brooklyn Navy Yard

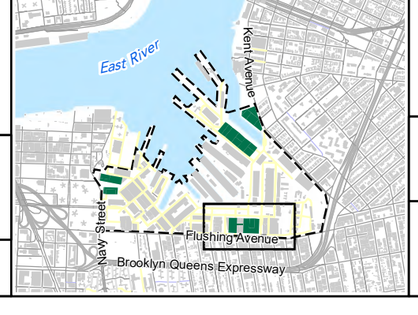
Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-6

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Flushing Ave East Development
HVAC Screening

wsp

0 100 200 Feet



- Assumed Stack Location
- Nearest Taller or Similar Height Building
- Projected Site
- Brooklyn Navy Yard

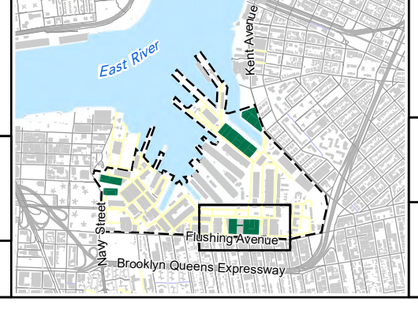
Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-7

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Flushing Ave West Development HVAC Screening

wsp

0 100 200 Feet

Table H-6: HVAC Natural Gas Screening Analysis – Projected Site 3

Projected Site 2 Building ID	Proposed Land Use	Non-Parking Building Floor Area (gsf)	Building Height (feet)	Stack Height (feet)	Nearest Building of Similar or Higher Height		Screening Threshold Distance (Feet)	Screen Results (Pass/Fail)
					Building Height (feet)	Distance (feet)		
East	Non-residential	787,383	320	323	320	153.5	150	Fail
West	Non-residential	461,737	320	323	320	153.5	140	Pass

Detailed HVAC Analysis

Based on the results of the screening analysis discussed above, a detailed air quality analysis was conducted for the Flushing Avenue East building. A dispersion modeling analysis was conducted to estimate impacts from the HVAC emissions of the Projected Site 3 Flushing Avenue East building using the latest version of AERMOD (version 19191). In accordance with CEQR guidance, the detailed HVAC analysis was performed with and without stack tip downwash. AERMODS's Plume Volume Molar Ratio Method (PVMRM) module was utilized for the one-hour NO_2 analysis. PVMRM estimates the NO-to-NO_2 conversion via ozone in order to estimate total NO_2 impacts which include both the converted NO and the emitted NO_2.

Emissions

Emissions rates were estimated based on the RWCDS building floor area, the typical building energy intensities, and emissions factors published by EPA in their *Compilation of Air Pollutant Emission Factors (AP-42).* First, the annual energy consumption was calculated by multiplying the gross building floor area by the natural gas energy intensity per square foot for non-residential buildings in the northeast according to the U.S. Energy Information Administration's 2012 Commercial Buildings Energy Consumption Survey.[4] Conservative short term natural gas consumption rates were derived from the annual rates based on assuming all annual fuel consumption occurs over 100 heating days. Next, appropriate emissions factors for each pollutant were selected from the EPA's *Compilation of Air Pollutant Emission Factors (AP-42).* **Table H-7** provides pollutant emission rates that were used in the dispersion analysis.

Table H-7: RWCDS Flushing West Natural Gas Emission Rates for HVAC Detailed Analysis

	Annual Average Emission rate (Grams/second)	Short-term Emissions (Grams/second)
NO_x- Uncontrolled Boiler	0.049830758	0.181882
$PM_{2.5}$	0.000214272	0.000782
PM_{10}	0.00025912	0.000946

Meteorological Data

All analyses were conducted using the latest five consecutive years of meteorological data (2014-2018). Surface data was obtained from La Guardia Airport National Weather Service station and upper air data was obtained from Brookhaven Station, New York. These meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the five-year period.

[4] Table C25. Natural gas consumption and conditional energy intensity by Census region, 2012 https://www.eia.gov/consumption/commercial/data/2012/c&e/pdf/c25.pdf

Stack Locations and Parameters

Dispersion modeling was conducted for three potential stack locations; northwest (NW) corner, central west and southwest (SW) corner of the Flushing Ave East building. The stack location at the central west location resulted in highest emission impacts compared to the other two locations. Consequently, the central west location was selected as the worst-case location for conservative ambient air quality impacts. At the worst-case location, the stack was assumed to be located ten feet from the edge of the building closest to the nearest taller building. The stack height was assumed to be three feet above the roof. Stack diameter, temperature and exit velocity were estimated based on values obtained from New York City Department of Environmental Protection (DEP) "CA Permit" database.

Receptor Locations

Receptors were located where people are likely to have continuous access and where the maximum total pollutant concentrations or incremental pollutant concentrations resulting from the RWCDS are likely to occur. Receptors were placed at multiple locations and elevations along the facades of Flushing Avenue West Building, from pedestrian height up to the maximum height of the building, with particular focus on receptor locations at or above the stack height of the Flushing Avenue East building. The receptor locations analyzed are illustrated in **Figure H-8.**

Results

The results of the detailed stationary source (HVAC) air quality assessment are summarized in **Table H-8**. The results show that HVAC emissions from the Flushing Avenue East building would not exceed the significant impact criteria (NAAQS and/or *de minimis* criteria, if applicable) and would, therefore, not significantly impact nearby receptors. No stack location restriction is required for the Flushing Avenue East building since the proposed building is already set back more than 150 feet from the Flushing Avenue West building (the nearest building of equal or greater height).

Table H-8: RWCDS Flushing Avenue East HVAC Detailed Analysis Results

Pollutant	Averaging Period	Units	Maximum Predicted Increment	Background Concentration	Maximum Predicted Total Concentration	*De Minimis* Criteria	NAAQS
PM_{10}	24-hour	$\mu g/m^3$	0.21	28.2	28.2	-	150
$PM_{2.5}$	Annual	$\mu g/m^3$	0.005	7.6	-	0.3	12
	24-hr	$\mu g/m^3$	0.17	17.8	-	8.6	35
NO_2	Annual	$\mu g/m^3$	1.5	26.7	28.2	-	100
	1-hr		-	104.2	136.9	-	188

The following restriction will be incorporated into the Proposed Actions as part of the lease provisions for the building to avoid the potential for significant adverse air quality impacts:

- Any new development on the Flushing Avenue East portion of Block 2023 Lot 1 must ensure that the heating system boilers only use natural gas, and that the stack(s) are located at the highest tier or at least 323 feet above grade.



Flushing Ave West Receptor
Assumed Stack Location

HVAC Detail Anlysis Buidlings

Flushing Ave East
Flushing Ave West
Projected Site
Brooklyn Navy Yard

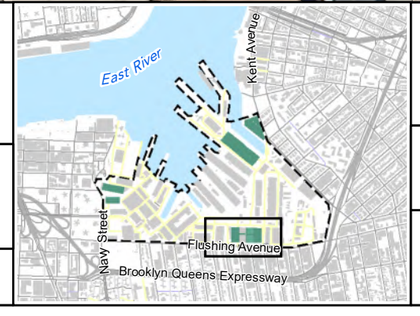
Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-8

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Flushing Ave East Development
HVAC Receptor Locations

wsp

0 100 200 Feet

N

Industrial Source Screening

Pollutants emitted from the exhaust vents of existing permitted and unpermitted industrial facilities were examined to identify potential adverse impacts on future occupants of the RWCDS buildings. All industrial air pollutant emission sources within 400 feet of the Projected Site boundaries were considered for inclusion in the air quality impact analyses.

Land use databases were used to identify buildings containing potential industrial or manufacturing sources. DEP's CATS database was used to query permit records and identify a list of industrial source permits from which to obtain full DEP file records. A request was made to DEP's Bureau of Environmental Compliance (BEC) and NYSDEC for information regarding the release of air pollutants from these potential sources within the study area. The DEP air permit data provided was compiled into a database of source locations, air emission rates, and other data pertinent to determining source impacts.

In addition to sources under DEP permit, information regarding industrial and manufacturing businesses located within BNY that may operate without a DEP permit was obtained from BNYDC.

Permitted Sources

During the DEP air permit review, permits pertaining to emergency generators, boilers, and cancelled permits were removed from further consideration. These sources do not have the potential to result in industrial process emission impacts. There is a gasoline station within 400 feet of Projected Site 3, but this facility was excluded from analysis because it does not involve industrial process emissions.

A desktop survey was conducted in May and June 2018 to review the operational status of industrial sources and identify additional industrial sources that have potential for emitting air pollutants. However, given the mixed-use nature of many buildings in the study area, it was not possible to confirm from the survey whether an industrial source at an upper floor of a building was still operating. Therefore, the analysis conservatively assumes all current and expired permitted sources are still in operation.

Industrial source permits were identified for further screening analysis. The types of industrial sources in the study area include spray booths and supplemental power generation (see **Table H-9**). The permit source locations in relation to the Projected Sites are shown in **Figures H-9** through **H-11**.

The worst-case hourly and annual pollutant emissions were calculated from the DEP permit application data in grams per second. Using these results and the distance from each industrial source to the applicable Projected Site(s), a screening analysis was performed in accordance with *CEQR Technical Manual* guidance. The predicted concentration of each pollutant at each Projected Site was compared to the short-term guideline concentrations (SGCs) and annual guideline concentrations (AGCs) recommended in NYSDEC's DAR-1 AGC/SGC tables. These guidelines present the airborne concentrations that are applied as a screening threshold to determine if the future occupants of the Projected Site buildings could be significantly impacted by nearby sources of air pollution.

Unpermitted Sources

Information regarding industrial activity without DEC or DEP permits in the BNY and located within 400 feet of the three Projected Sites was provided by BNYDC based on a field survey conducted for the Brooklyn Navy Yard Building 77 Academic Use Override EAS in March 2018. Industrial activities include

woodworking and carpentry, jewelry manufacturing/cleaning, and printing (see **Table H-9**). The approach used to analyze these unpermitted sources followed the same methodology and assumptions used for BNYDC's *Brooklyn Navy Yard Building 77 Academic Use Override EAS*[5], including the development of generic emission rates based on representative permitted sources.

Key assumptions in the industrial source analysis are as follows:

- Building 120 would be incorporated into the Projected Site 3 Flushing Avenue West building, therefore existing tenants associated with this building were excluded from further analysis;

- Building 5 is approximately 400 feet long, but only approximately one-eighth of the floor area is within 400 feet of Projected Site 3. However, information regarding the exact location of tenants within the building was not available. As such, all emission sources from businesses in Building 5 were conservatively assumed to be located in the eastern end of the building (i.e., the portion situated within 400 feet of Projected Site 3); and

- Emission quantities for industrial activity evaluated in the *Building 77 Academic Use Override EAS* were used to estimate emission quantities from uses in the Brooklyn Navy Yard without permits, or for businesses for which permit information did not include emission quantities. For industrial activity where no permit information regarding emission quantities was identified, emission quantities for similar activities reported in the *Building 77 Academic Use Override EAS* were used. The *Building 77 Academic Use Override EAS's* industrial source air quality analysis was based, in part, on EPA data for woodworking operations. According to the EPA data, the content of $PM_{2.5}$ in total mass of particulate matter based on the cumulative particle size distribution is 29.5 percent, and PM_{10} content is 52.9 percent. Therefore, a factor of 0.295 was applied to the total mass of particulate matter to estimate $PM_{2.5}$ emission rate and 0.529 factor was applied for PM_{10} particles.

In instances where stack locations were identified with DEP permit information, emissions were evaluated as dispersing from locations identified in DEP permit information. If no location information was identified, emissions were evaluated as if they were dispersing at a point closest to the Projected Site.

[5] Refer to the *Building 77 Academic Use Override EAS* for a detailed description of the methodology.

Table H-9: Industrial Sources and Emission Rates for Screening Analysis

Map ID[1]	Permit # Status Expiration Date	Block-Lot/ BNY ID	Facility Name (BNYDC ID)	Source Description	Used Hrs/Day	Used Days/ Year	Pollutant	CAS No	Hourly Emissions (gr/sec)	Annual Emissions (gr/sec)
1	PB008512 Expired 5-3-2015	2023-1 Bldg. 300	Mark Senkoff/ Steiner Studios	Spray booth	8	200	Acetone	00067-64-1	0.0566990	0.0103560
							Isopropanol	00067-63-0	0.0226796	0.0032794
							Methanol	00067-56-1	0.0037799	0.0006904
							DI-2-Ethylpthelate	00117-81-7	0.0163797	0.0029917
2	NA	Bldg. 292	Closet Maven Inc. (10673)	Wood working	8	240	$PM_{2.5}$	NY075-00-0	0.0031000	0.0007000
							PM_{10}		0.0055000	N/A
2	NA	Bldg. 292	Arplast Corp. (10574)	Printing	8	240	Particulate	NY075-00-0	0.00857	0.0003740
							Butoxyethanol, 2-	00111-76-2	0.0291	0.0069040
							Isopropyl Alcohol	00067-63-0	0.00403	0.0096080
							Ethyl Acetate	00141-78-6	0.0063	0.0014959
							Toluene	00108-88-3	0.05594	0.0127724
							Acetone	00067-64-1	0.00428	0.0010212
							Dibutyl Phthalate	00084-74-2	0.00252	0.0008918
							Butyl Acetate	00123-86-4	0.0378	0.0089752
							Ethyl Acetate	00141-78-6	0.0063	0.0014959
2	NA	Bldg. 292	Jasco Designs, Inc. (10636)	Jewelry Manufacture	8	240	Zinc Chloride	07646-85-7	0.00013	0.00003
							Lead Oxide	07439-92-1	0.00013	0.00003
3	PW003816 Current 7-14-2019	1875-14	Hall Street Storage	Auxiliary Power Generation	4	20	NO_x	NY210-00-0/ 11104-93-1	2.5199556	0.0230133
							CO	00630-08-0	0.3061746	0.0028047
							SO2	07446-09-5	0.0004662	0.0000043
							VOCs	NY-900-00-0	0.0952543	0.0008702
							PM	NY075-00-0	0.0304915	0.0002790
4	NA	Bldg. 5	Six Wood working shops[2]	Wood working Fugitive Emissions through Windows	8	240	$PM_{2.5}$	NY075-00-0	0.0186	0.1116
							PM_{10}		0.033	NA
5	NA	Bldg. 77	Armada NYC (13440)		8	240	$PM_{2.5}$	NY075-00-0	0.0031000	0.0007000
							PM_{10}		0.0055000	NA
4	NA	Bldg. 5	Ares Equities. LLC. (10568)	Printing	8	240	Particulate	NY075-00-0	0.00857	0.0003740
							Butoxyethanol, 2-	00111-76-2	0.0291	0.0069040
							Isopropyl Alcohol	00067-63-0	0.00403	0.0096080
							Ethyl Acetate	00141-78-6	0.0063	0.0014959
							Toluene	00108-88-3	0.05594	0.0127724
							Acetone	00067-64-1	0.00428	0.0010212
							Dibutyl Phthalate	00084-74-2	0.00252	0.0008918

Map ID[1]	Permit # Status Expiration Date	Block-Lot/ BNY ID	Facility Name (BNYDC ID)	Source Description	Used Hrs/Day	Used Days/ Year	Pollutant	CAS No	Hourly Emissions (gr/sec)	Annual Emissions (gr/sec)
							Butyl Acetate	00123-86-4	0.0378	0.0089752
							Ethyl Acetate	00141-78-6	0.0063	0.0014959
6	PW005117 Current 3-13-2021	Bldg. 10 (stack height 25')	Ferra Designs, Inc. (10621)	Spray Booth	4	200	Pigment	NY075-00-0	0.0015120	0.0001438
							Xylene	01330-20-7	0.1259978	0.0115066
							Ethylbenzene	00100-41-4	0.0151197	0.0013808
							Butanone	00078-93-3	0.0078119	0.0007479
							Toluene	00108-88-3	0.0018900	0.0001726
6	NA	Bldg. 10	Ferra Designs, Inc. (10621)	Wood working Metal working	6	250	$PM_{2.5}$	NY075-00-0	0.0031000	0.0007000
							PM_{10}		0.0055000	N/A
7	NA	Bldg. 12	IceStone (10629)	Cutting, Sanding of Concrete and Glass	8	240	$PM_{2.5}$	NY075-00-0	0.0031000	0.0007000
							PM_{10}		0.0055000	N/A

Notes:

[1] Refer to **Figures H-9** through H**-11.**

[2] December Box (10599); Euro Antique Restoration (10615); Nine Stories Furniture (10768); Paul Wood (10672); Schematic (10614); VOM Carpentry (10708).

Projected Site 1 Industrial Screening Results

Four industrial sources, one at Map ID 1 and three at Map ID 2 (refer to **Figure H-9**), are located approximately 400 feet and 190 feet, respectively, from the closest Projected Site 1 building.[6]

The industrial source screening results show the relevant SGC/AGC criteria would not be exceeded for any source. However, the CEQR *de minimis* threshold for $PM_{2.5}$ would be exceeded based on emissions from an unpermitted woodworking (The Closet Maven Inc.) and printing (Arplast Corp.) businesses within Building 292 (Map ID 2). Therefore, these two sources were carried forward for further detailed analysis with AERMOD.

Projected Site 2 Industrial Screening Results

A spray booth and a woodworking and metal working shop (Map ID 6 in **Figure H-10**) are located approximately 280 feet from the closest Projected Site 2 building.[7] A concrete and glass finishing shop is also located approximately 100 feet from a Projected Site 2 building (Map ID 7).

The industrial source screening results show that Projected Site 2 exceeds the cumulative industrial screening threshold for one pollutant from Map ID 7: $PM_{2.5}$. Therefore, the concrete and glass finishing shop was carried forward for further detailed analysis with AERMOD. No exceedance of the SGC/AGC was predicted for the spray booth.

Projected Site 3 Industrial Screening Results

Ten industrial sources (two with permits and eight potential unpermitted sources) are located within 400 feet of Projected Site 3. The sources evaluated include the Steiner Studios spray booth (Map ID 1 in **Figure H-11**), an auxiliary power generator used up to 80 hours per year (Map ID 3), six woodworking shops and a print shop located in Building 5 (Map ID 4), and a woodworking shop in Building 77 (Map ID 5).

The industrial source screening results show that Projected Site 3 exceeds the cumulative industrial screening thresholds for two pollutants: NO_2 and $PM_{2.5}$. NO_2 from a natural gas power generator located on Block 1875, Lot 14; $PM_{2.5}$ from Block 1875; and $PM_{2.5}$ from woodworking shops in Building 77. Therefore, these sources were carried forward for further detailed analysis with AERMOD.

Industrial Source Detailed Analysis

The AERMOD dispersion model was used for the industrial source detailed analysis, with the same set of meteorological data (2014-2018) as used for the HVAC detailed analysis. A detailed network of receptors at multiple elevations was placed along the building facades of the closest Projected Site buildings to each industrial source that failed the screening analysis.

Short-term and annual emission rates, and stack parameters were determined from the review of DEP permit information for each site.

[6] While the facility identified at Map ID 1 is located just outside the 400-foot buffer, due to the conceptual nature of the Projected Site 1 location, the facility was conservatively included in the analysis.

[7] The spray booth is a permitted source (PW005117), however this same business (Ferra Designs) also potentially operates an unpermitted woodworking and metal fabrication shop.



Industrial Source
Development Site Buidlings 400ft Buffer
Projected Site
Brooklyn Navy Yard

Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-9

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Kent Ave Development Site Industrial Sources

wsp

0 300 600 Feet

N



Industrial Source
Development Site Buidlings 400ft Buffer
Projected Site
Brooklyn Navy Yard

Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-10

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021

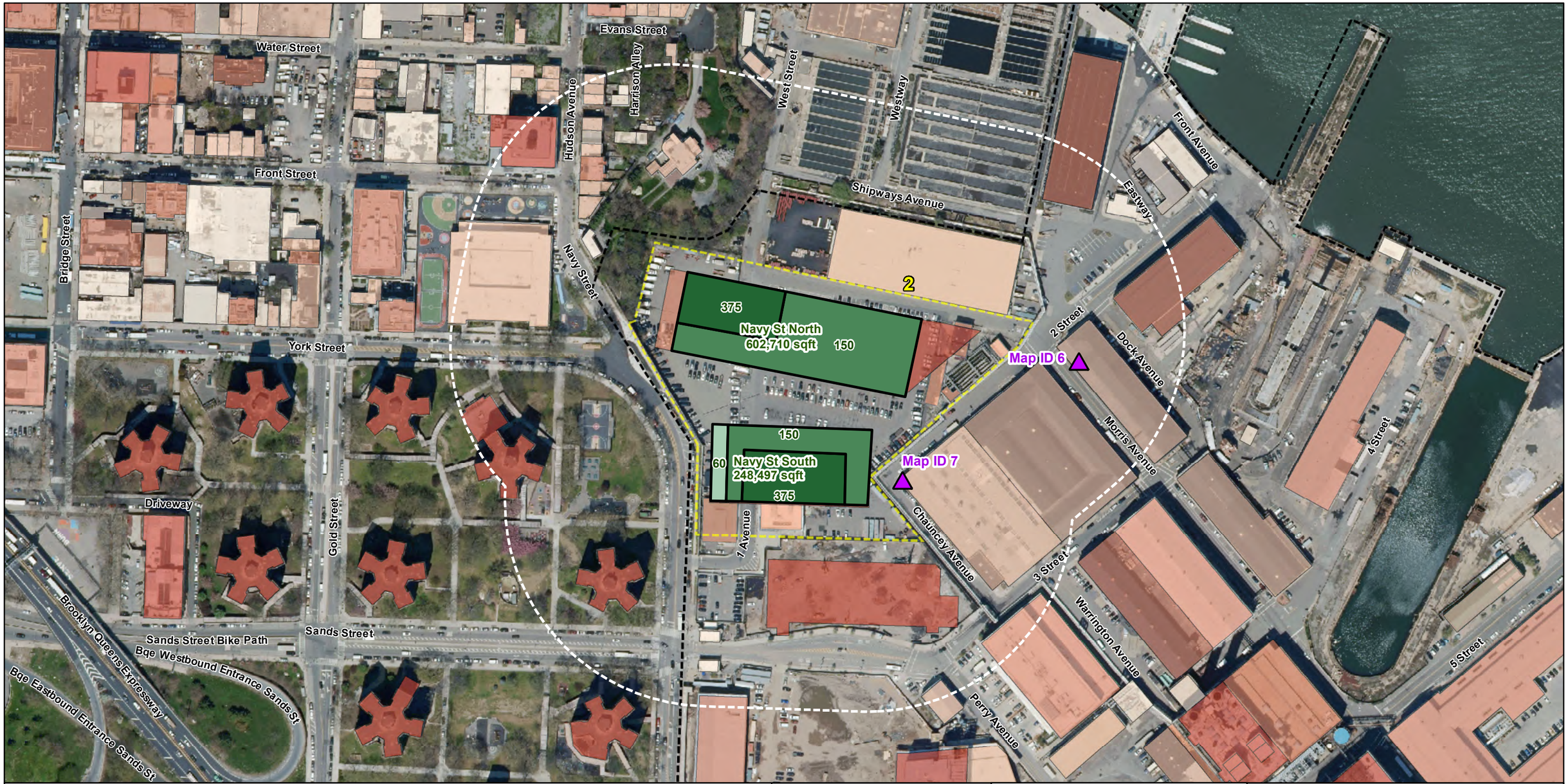


Flushing Ave Development Site Industrial Sources

wsp

0 150 300 Feet

N



- Industrial Source
- Development Site Buildings 400ft Buffer
- Projected Site
- Brooklyn Navy Yard

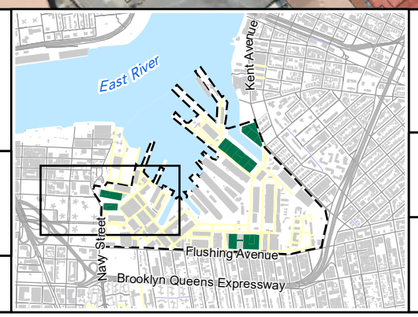
Projected Site RWCDS Building	Existing or Planned Building
34 - 50ft height	0 - 30ft height
51 - 90ft	31 - 50ft
91 - 130ft	51 - 100ft
131 - 200ft	101 - 220ft
201 - 405ft	221 - 461ft

Figure H-11

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Navy St Development Site Industrial Sources

wsp

0 200 400 Feet

N

Predicted worst-case impacts on the Projected Sites were compared with the SGCs and AGCs recommended in NYSDEC's DAR-1 AGC/SGC tables.[8]

To assess the effects of multiple sources emitting the same pollutants, cumulative source impacts were determined. Concentrations of the same pollutant from industrial sources that were within 400 feet of an individual Projected Site were combined and compared to the guideline concentrations discussed above.

Projected Site 1 Industrial Detailed Analysis

As discussed in the screening section above, one woodworking business and one printing business (both without DEP permits) require detailed analysis for cumulative $PM_{2.5}$ impacts on the Projected Site 1 buildings. Based on the methodology developed for unpermitted source analysis for the *Building 77 Academic Use Override EAS*, the woodworking and printing sources in Building 292 were modeled as an equivalent square volume source with an initial lateral dimension equal to the "equivalent square" length of side divided by 4.3. The initial vertical dimensions were estimated based on height of the opening (windows). The release heights of the volume were estimated as a height of center of volume source above the ground (see **Table H-10**). The $PM_{2.5}$ emission rates were based on summing the maximum hourly and annual emission rates for both sources (The Closet Maven Inc. and Arplast Corp.).

Table H-10: Building 292 Volume Source Modeling Parameters

Parameter	Value
Building Height H (m)	20.85
Release Height Hs (m)	10.425
Initial Horizontal Ωyo (m)	16.74
Initial Vertical Ωzo (m)	1.42
Building Dimensions (m)	113 x 46
Equivalent Square Dimensions (m)	72 x 72
Short-Term $PM_{2.5}$ Emission Rate (g/s)	0.01167
Annual $PM_{2.5}$ Emission Rate (g/s)	0.0010740

Notes:
H = Volume Source Height
Hs = Plume centerline release height (H=2Hs)
Ωyo – Initial plume dispersion in the horizontal (Ωyo = L/4.3)
Ωzo – Initial plume dispersion in the vertical (Ωzo = H/2.15)

Table H-11 summarizes the Projected Site 1 detailed analysis results, demonstrating that the CEQR *de minimis* criteria and NAAQS would not be exceeded due to existing industrial sources.

Table H-11: Projected Site 1 Industrial Source Detailed Analysis Results

Pollutant	Averaging Period	Units	Maximum Predicted Increment	Background Concentration	Maximum Predicted Total Concentration	*De Minimis* Criteria[1]	NAAQS
$PM_{2.5}$	Annual	$\mu g/m^3$	0.07	7.6	7.67	0.3	12
	24-hr	$\mu g/m^3$	3.87	17.8	21.67	7.7	35

[8] NYSDEC Division of Air Resources, August 2016.

Projected Site 2 Industrial Detailed Analysis

Table H-12 summarizes the volume source modeling parameters used for the $PM_{2.5}$ emissions from Buildings 10 and 12 (following the same procedure explained in the Projected Site 1 analysis, based on the *Building 77 Academic Use Override EAS*).

Table H-12: Buildings 10 and 12 Volume Source Modeling Parameters

Parameter	Building 10 (one woodworking/metal fabrication and a spray booth)	Building 12 (one concrete/glass cutting and sanding source)
Building Height H (m)	14.9352	12.38
Release Height Hs (m)	7.4676	6.19
Initial Horizontal Ωyo (m)	11.09	15.69
Initial Vertical Ωzo (m)	1.42	1.42
Building Dimensions (m)	91x 25	50 x 91
Equivalent Square Dimensions (m)	47.7 x 47.7	67.45 X 67.45
Short-Term $PM_{2.5}$ Emission Rate (g/s)	0.00461	0.0031000
Annual $PM_{2.5}$ Emission Rate (g/s)	0.0008438	0.0007000

Notes:
H = Volume Source Height
Hs = Plume centerline release height (H=2Hs)
Ωyo – Initial plume dispersion in the horizontal (Ωyo = L/4.3)
Ωzo – Initial plume dispersion in the vertical (Ωzo = H/2.15)

Table H-13 summarizes the Projected Site 2 detailed analysis results, demonstrating that the CEQR *de minimis* criteria and NAAQS would not be exceeded due to existing industrial sources.

Table H-13: Projected Site 2 Industrial Source Detailed Analysis Results

Pollutant	Averaging Period	Units	Maximum Predicted Increment	Background Concentration	Maximum Predicted Total Concentration	*De Minimis* Criteria[1]	NAAQS
$PM_{2.5}$	Annual	$\mu g/m^3$	0.1	7.6	7.7	0.3	12
	24-hr	$\mu g/m^3$	2.4	17.8	20.2	7.7	35

Projected Site 3 Industrial Detailed Analysis

Stack parameters and emission rates for the generator at Hall Street Storage (Map ID 3) are summarized in **Table H-14**. The short-term NO_x rate reported in the permit for this source (20 lbs/hr) based on AP-42 was extremely high and unreasonable. Therefore, manufacturer emission test data was used to determine a reasonable short-term NO_x emission rate based on actual engine performance.[9] The annual average NO_x emission rate was based on operation of the source at maximum load for 80 hours per year (as specified in the permit). The one-hour NO_2 analysis was performed using the PVRM option for NO_x to NO_2 conversion, with background ozone concentrations. The annual NO_2 analysis assumed full conversion.

[9] GENERAC. STATEMENT OF EXHAUST EMISSIONS 2016 SPARK-IGNITED, NON-SCAQMD
https://legacy.genconnect.generac.com/Media/vwDoc.axd?d=3b8a90d9-99d8-4852-9873-5db9315e41e8

Table H-14: Stack Parameters and Emission Rates for Hall Street Storage Auxiliary Generator

Parameter	Value
Number of stacks	1
Stack Height (ft)	17
Stack Diameter (ft)	1
Exit velocity (ft/sec)	72
Exit Temperature (Fahrenheit)	1300
NO_x Short-Term Emission Rate (g/s)	0.015108333
NO_x Annual Emission Rate (g/s)	0.000137976
$PM_{2.5}$ Short-Term Emission Rate (g/s)	0.0304915
$PM_{2.5}$ Annual Emission Rate (g/s)	0.0002790

Table H-15 summarizes the volume source modeling parameters used for the $PM_{2.5}$ emissions from Buildings 5 and 77 (following the same procedure explained in the Projected Site 1 analysis, based on the *Building 77 Academic Use Override EAS*).

Table H-15: Buildings 5 and 77 Volume Source Modeling Parameters

Parameter	Building 5 (six woodworking sources + one printing source)	Building 77 (one woodworking source)
Building Height H (m)	35.97	79.248
Release Height Hs (m)	17.98	39.624
Initial Horizontal Ωyo (m)	13.93	17.83
Initial Vertical Ωzo (m)	1.42	1.42
Building Dimensions (m)	119x30	105 x 56
Equivalent Square Dimensions (m)	60x60	76.68 x 76.68
Short-Term $PM_{2.5}$ Emission Rate (g/s)	0.0271700	0.0031000
Annual $PM_{2.5}$ Emission Rate (g/s)	0.0045740	0.0007000

Notes:
H = Volume Source Height
Hs = Plume centerline release height (H=2Hs)
Ωyo – Initial plume dispersion in the horizontal (Ωyo = L/4.3)
Ωzo – Initial plume dispersion in the vertical (Ωzo = H/2.15)

Table H-16 summarizes the Projected Site 3 detailed analysis results, demonstrating that the CEQR *de minimis* criteria and NAAQS would not be exceeded due to existing industrial sources.

Table H-16: Projected Site 3 Industrial Source Detailed Analysis Results

Pollutant	Averaging Period	Units	Maximum Predicted Increment	Background Concentration	Maximum Predicted Total Concentration	*De Minimis* Criteria[1]	NAAQS
$PM_{2.5}$	Annual	$\mu g/m^3$	0.07	7.6	7.67	0.3	12
	24-hr	$\mu g/m^3$	3.54	17.8	21.34	7.7	35
NO_2	Annual	$\mu g/m^3$	0.001	26.7	26.7	-	100
	1-hr		-	-	95.22	-	188

Other Large or Major Sources

The *CEQR Technical Manual* requires that all existing major or large emission sources within 1,000 feet of Projected Sites that may not be properly accounted for in the background concentrations should be identified along with their stack parameters and emissions calculations. Major sources are identified as those sources located at Title V facilities that require Prevention of Significant Deterioration permits. Large sources are identified as sources located at facilities with a State facility permit. A search for existing large and major sources of emissions was performed using registration lists maintained by NYSDEC and EPA.[10]

Table H-17 summarizes the Title V and major emission sources within 1,000 feet of the Projected Sites. Information on the location and emissions sources of these facilities is shown in **Figures H-12, H-13**, and **H-14** for Projected Sites 1, 2, and 3, respectively. For each Title V and large emission source, a detailed analysis was performed to model the emitted concentrations of particulate matter, sulfur dioxide, and nitrogen dioxide in order to identify any significant air quality impacts to the development sites.

The Con Edison Hudson Avenue generating station is within 1,000 feet of the Navy St. site. This source formerly operated under a Title V permit (2-6101-00042/00044); however, the large boilers at this source were permanently shut down.

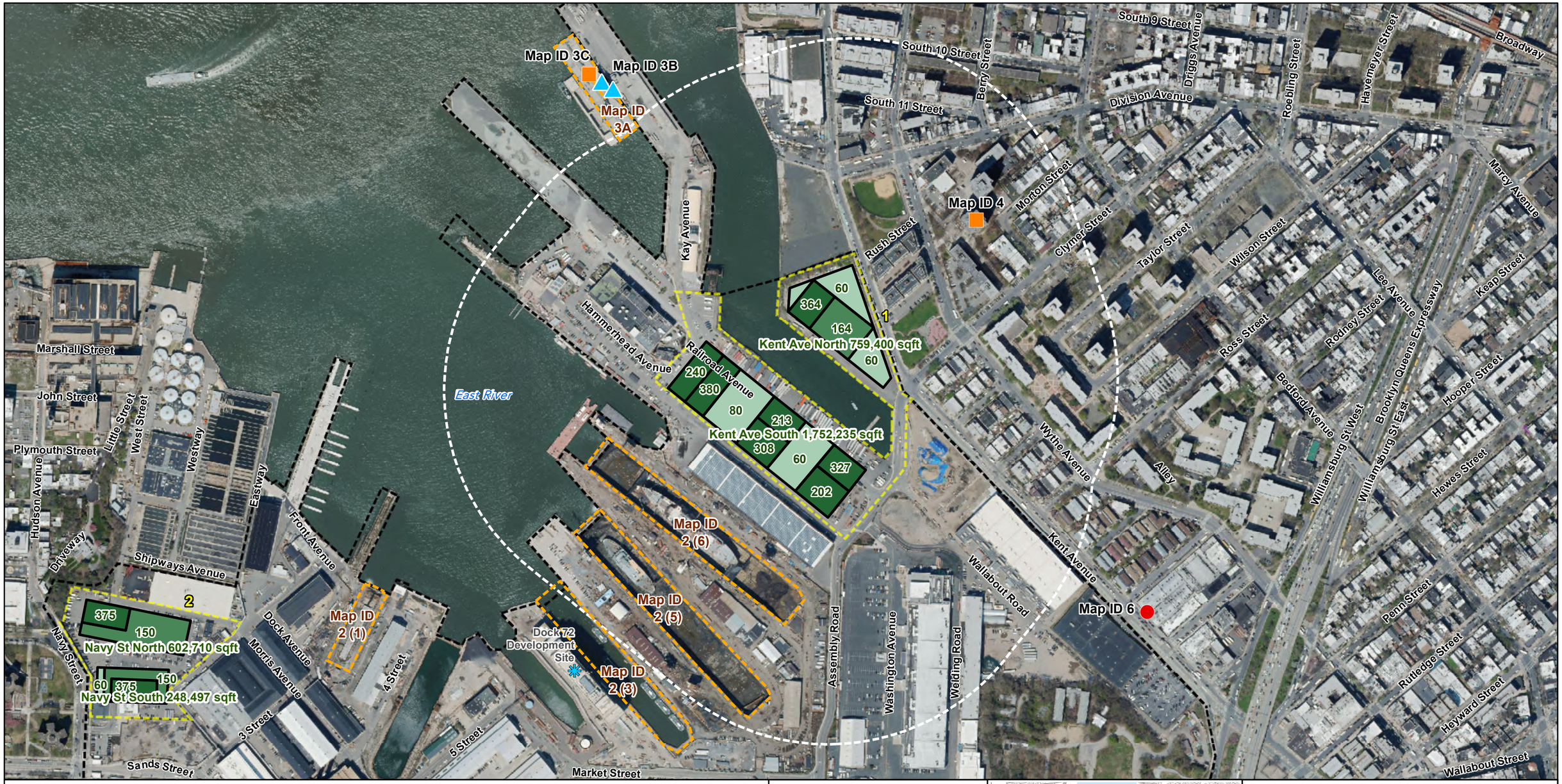
[10] NYSDEC (http://www.dec.ny.gov/index.html) and EPA (http://oaspub.epa.gov/enviro/ef_home2.air).

Table H-17: Title V and Large Emissions Sources within 1,000 feet of Projected Sites

Title V or State Facility Permit ID	Facility Address	Name (Map ID)	Block	Lot	Closest Projected Site Building (distance)	Emission Sources
2-6101-01151/00001 - portion of permit relating to cement dust	BROOKLYN NAVY YARD, PIER K|FLUSHING AVENUE & CUMBERLAND	LEHIGH PORTLAND CEMENT CO (Map ID 3A)	2023	1	Projected Site 1 - Kent Avenue North (974 feet)	The Lehigh Cement Company operates a cement plant on a barge which transfers, stores, conveys, measures and discharge cement into trucks for transporting. Particulate matter, consisting primarily of cement is the primary pollutant of concern for this part of operation of the plant.
2-6101-00458/00001	541 WYTHE AVENUE BROOKLYN, NY	541 WYTHE AVENUE BUILDING (Map ID 4)	2166	1	Projected Site 1 - Kent Avenue North (582 feet)	Apartment building operating three (3) identical Kewanee 7L291 boilers with a heat input capacity of 17.7 mmBtu/hr each, burning natural gas or #2 fuel oil.
2-6101-00369/00001	BROOKLYN NAVY YARD BLDG 595 BROOKLYN, NY 11205	G M D SHIPYARD - BROOKLYN NAVY YARD (Map ID 2)	2023	1	Dry Dock 1 to Projected Site 2 - Navy St North (508 feet) Dry Dock 3 to Projected Site 3 - Flushing Ave West (361 feet) Dry Dock 5 to Projected Site 3 - Flushing Ave West (456 feet) Dry Dock 6 to Projected Site 1 - Kent Ave South (326 feet)	The dry docks # 1, 3, 5, and 6 are used interchangeably for all ship repair activities and surface coating operations.
2-6101-00185/00008	63 FLUSHING AVE BLDG 41 UNIT # 234 BROOKLYN, NY 11205	BROOKLYN NAVY YARD COGENERATION PARTNERS LP (Map ID 1)	2023	1	Projected Site 2- Navy St South (759 feet)	This facility (Brooklyn Navy Yard Cogeneration Plant) is a 286-megawatt (MW) gas-fired power plant. The plant consists of two Siemens V84.2 gas turbines, capable of firing natural gas or fuel oil.

Lehigh Portland Cement Co (State Facility Permit)

The Lehigh Cement Company operates a cement plant on a barge moored to Pier K. The facility transfers, stores, conveys, measures, and discharges cement into trucks for transporting. Particulate matter, consisting primarily of cement, is the primary pollutant of concern for this part of operation of the plant. In addition, Lehigh Cement Company operates three Daihatsu 1,200 horsepower (HP) diesel generator engines to provide power to the floating cement barge. Each engine vents to a separate stack located on the barge. Nitrogen oxide emissions from the facility are capped at 22.5 tons per year, and a fugitive dust control plan is required by the permit.



Stack Location (Title V and State Permits)

- DEP Only
- State
- Title V
- Area Source (State Permits)

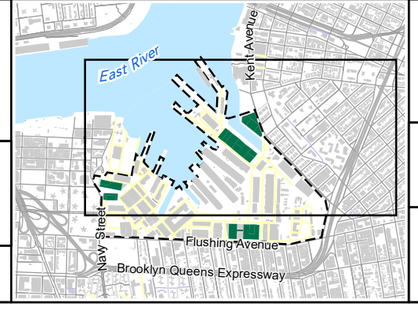
- Projected Site RWCDS Building
- Projected Site
- Kent Ave Site 1,000ft Buffer
- Other Development
- Brooklyn Navy Yard

Figure H-12

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Kent Ave Development Site
Title V and State Sources

wsp

0 400 800 Feet

N



Stack Location (Title V and State Permits)

- DEP Only
- State
- Title V
- Area Source (State Permits)

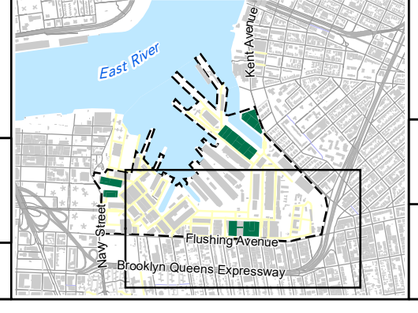
- Projected Site RWCDS Building
- Projected Site
- Flushing Ave Site 1,000 ft Buffer
- Other Development
- Brooklyn Navy Yard

Figure H-13

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Flushing Ave Development Title V and State Sources

wsp

0 300 600 Feet

N



Stack Location (Title V and State Permits)

- DEP Only
- State
- Title V
- Area Source (State Permits)

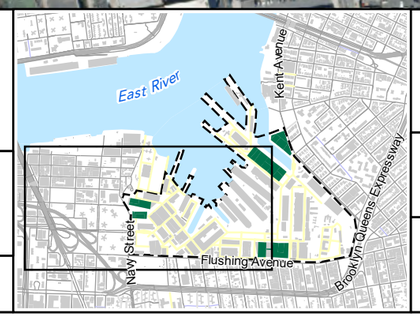
- Projected Site RWCDS Building
- Projected Site
- Navy St Site 1,000ft Buffer
- Other Development
- Brooklyn Navy Yard

Figure H-14

Sources: NYC DCP, WXY

Coordinate System:
NAD 1983 UTM Zone 18N
Datum: North American 1983

March 22, 2021



Navy St Development
Title V and State Sources

wsp

0 300 600 Feet

N

The generators were modeled as point sources. Detailed information on the generator emission rates, use, and stack parameters was not available from the permit documents. Therefore, conservative assumptions were used for stack parameters and AP 42 Section 3.4 uncontrolled emission factors were used for modeling of the generators. The short-term emissions for the generators assume 100 percent load, and the annual emissions assume 50 percent load. The dust emissions from the barge were modeled as an area source. For the cement plant emissions, hourly and annual controlled PM_{10} and total particulate matter (TPM) emissions were available from a DEP permit for the cement silos (PB013711). $PM_{2.5}$ emissions from cement plant operations were estimated to be six percent of TPM based on a literature review.[11] **Table H-18** summarizes the modeling parameters for each source.

Table H-18: Modeling Parameters for Lehigh Portland Cement Co.

Parameter	Diesel Generators	Cement Plant Barge
Number of stacks	3	N/A/ (Area source)
Stack Height (ft)	32.8 (NYSDEC permit)	
Stack Diameter (ft)	1.67 (NYSDEC permit)	
Exit velocity (ft/sec)	70 (Cummins QSK60 diesel generator spec sheet indicating 9,000 CFM to 15,000 CFM at 1/2 and full load respectively)	
Exit Temperature (Fahrenheit)	67.73 (Cummins QSK60 diesel generator spec sheet)	
NO_x Short Term (grams/second)	1.231077331	N/A
NO_X annual (grams/second)	0.615538665	N/A
$PM_{2.5}$ Short-Term (grams/second)	0.022043978	0.00340194*
$PM_{2.5}$ Annual (grams/second)	0.011021989	0.001106796*
PM_{10} Short-Term (grams/second)	0.022043978	0.021419622*

Notes:
*grams/second emission rate shown in the table was converted to grams/second/m2 for modeling of the barge as an area source.

The initial modeling of the generators at 100 percent load with the Tier 3 PVRM option resulted in very high one-hour NO_2 concentrations; therefore, additional refined modeling was undertaken using in-stack NO_2-NO_x ratios to more realistically reflect NO_2 concentrations that could be experienced at receptors. An in-stack ratio of 0.07898979 was obtained from EPA's in-stack ratio database for a similar diesel generator set at 100 percent load (the 1,500 kW Caterpillar 3606).

541 Wythe Avenue Building

This facility is an apartment building operating three identical Kewanee 7L291 boilers with a heat input capacity of 17.7 mmBtu/hr each, burning natural gas or No. 2 fuel oil. Stack parameters and emission rates were available from a DEP permit for the facility (CB048812) and are summarized in **Table H-19**.

[11] https://www.arb.ca.gov/ei/speciate/profilereference/ConcreteBatching_PM3431.pdf
PM Size and Chemical Speciation Profile for Concrete Batching—PM3431 2013

Table H-19: Modeling Parameters for 541 Wythe Avenue Boilers

Parameter	Value
Number of stacks	1
Stack Height (ft)	298
Stack Diameter (ft)	2
Exit velocity (ft/sec)	24.9
Exit Temperature (Fahrenheit)	350
NO_x Short Term (grams/second)	0.793786
NO_X annual (grams/second)	0.099287975
$PM_{2.5}$ Short-Term (grams/second)	0.0396893
$PM_{2.5}$ Annual (grams/second)	0.004966556
PM_{10} Short-Term (grams/second)	0.0396893
SO_2 Short-term (grams/second)	0.004913913

GMD Shipyard (State Facility Permit)

Dry Docks # 1, 3, 5, and 6 are used interchangeably for all ship repair activities and surface coating operations, and the facility is treated as a single emission unit. The permit allows the facility to use up to 14,109 gallons per year of surface coatings. During dry dock operation, the ships being worked on may be at or below the ground level due to the nature of dry dock operations (i.e., seawater is pumped out of the locks such that the dry working surface is below sea level). The permit caps VOC emissions for the facility at 22.88 tons per year. Emission caps for six air toxics included in the permit were used as the basis for the analysis, as summarized in **Table H-20**. The facility total emissions were divided between the four dry docks proportional to the area of each dry dock. The dry docks were modeled as area sources and the resulting concentrations compared to the relevant SGC/AGCs. No information on criteria pollutant emissions associated with the dry dock operations was available from the permits.

Table H-20: Modeling Parameters for the GMD Shipyard Drydocks

		Facility Total PTE Caps		Short-term grams/second				Annual grams/second			
Name	CAS No	lbs/hr	lbs/yr	Dry Dock 1	Dry Dock 3	Dry Dock 5	Dry Dock 6	Dry Dock 1	Dry Dock 3	Dry Dock 5	Dry Dock 6
METHYL ALCOHOL	000067-56-1	0.0001	0.9	9.97105E-07	3.08754E-06	4.20063E-06	4.31451E-06	1.02442E-06	3.17213E-06	4.31572E-06	4.43271E-06
ETHYLBENZENE	000100-41-4	NA	467.2	NA	NA	NA	NA	0.000531789	0.001646686	0.002240336	0.00230107
2-PROPANOL, 1-METHOXY	000107-98-2	0.007	59.5	6.97973E-05	0.000216128	0.000294044	0.000302015	6.77257E-05	0.000209713	0.000285317	0.000293052
2-PENTANONE, 4-METHYL	000108-10-1	0.001	0.9	9.97105E-06	3.08754E-05	4.20063E-05	4.31451E-05	1.02442E-06	3.17213E-06	4.31572E-06	4.43271E-06
2-PROPANOL, 1-METHOXY-, ACETATE	000108-65-6	0.193	1692.6	0.001924412	0.005958946	0.008107215	0.008326998	0.001926597	0.005965714	0.008116422	0.008336455
XYLENE, M, O & P MIXT.	01330-20-7	1.78	15567.1	0.017748461	0.054958158	0.074771202	0.076798224	0.017719208	0.054867576	0.074647965	0.076671645

Brooklyn Navy Yard Cogeneration Plant (Title V Permit)

The BNY Cogeneration Plant is a 286-megawatt (MW) gas-fired power plant. The plant consists of two Siemens V84.2 gas turbines, capable of firing natural gas or fuel oil. Each turbine is equipped with a Heat Recovery Steam Generator (HRSG). The Cogeneration Plant is 759 feet from the Projected Site 2 Navy Street South building; the remaining Projected Site buildings are located further from the Cogeneration Plant.

The turbine exhaust is released through two stacks, at a height of 310 feet. A worst-case analysis of combustion of distillate oil simultaneously in both turbines was performed. The emission rates used in the analysis were based on the maximum emissions allowed by the Title V permit. The stack height, stack diameter exit velocity, and exhaust temperature were obtained from the Title V permit application. The short-term emission rates are based on the upper permit limit (pounds per hour) provided in the Title V for each pollutant. Annual emissions for $PM_{2.5}$ were based on the following assumptions:

- The Title V permit allows a maximum PM_{10} emission rate of 13.5 lbs/hour per stack when firing fuel oil. This emission rate is equivalent to 1.70097 grams/second.
- Per AP-42 Table 1.3-7, $PM_{2.5}$ emissions from commercial boilers burning distillate oil (e.g. No. 2 fuel oil) are 77% of the PM_{10} emission rate.
- Applying this same $PM_{2.5}$ fraction to the maximum PM_{10} emission rate results in an annual $PM_{2.5}$ emission rate of 1.31 grams/second.

The stack parameters and emission rates used for the BNY Cogeneration Plant are shown in **Table H-21**.

Table H-21: Modeling Parameters for the Brooklyn Navy Yard Cogeneration Plant

Parameter	Value
Stack Height (ft)	310
Stack diameter (ft)	17
Exit Velocity (ft/sec)	70
Exit Temperature (F)	240
Short-term NO_x emission rate (grams/second)	7.308
Annual NO_x emission rate (grams/second)	7.125
Short-term $PM_{2.5}/PM_{10}$ emission rate (grams/second)	1.701
Annual $PM_{2.5}$ Emission rate (grams/second)	1.31
Short-term SO^2 emission rate (grams/second)	7.651

Note: Emissions are per stack
Source: *Admirals Row Plaza FEIS* (CEQR 11DME001K)

Large/Major Source Analysis Results

Table H-22 provides a summary of the large/major source results for criteria pollutants based on a cumulative analysis including all the relevant sources in a single AERMOD run for each pollutant/averaging time. The results for the pollutants/averaging times do not exceed the *de minimis* criteria or NAAQS. Therefore, no significant impacts are expected from the existing large and major emission sources within 1,000 feet of the Projected Site.

Table H-22: Large/Major Source Cumulative Analysis Results for Criteria Pollutants

Pollutant	Averaging Period	Units	Maximum Predicted Increment	Background Concentration	Maximum Predicted Total Concentration	*De Minimis* Criteria[1]	NAAQS
SO_2	1-hour	µg/m³	179.68	13.5	193.23	-	196
PM_{10}	24-hour	µg/m³	8.69	28.0	36.69	-	150
$PM_{2.5}$	Annual	µg/m³	0.20	7.6	7.80	0.3	12
	24-hr	µg/m³	5.79	17.8	23.59	7.7	35
NO_2	Annual	µg/m³	5.06	26.7	31.74	-	100
	1-hr		-	103.7	159.26	-	188

Table H-23 provides a summary of the GMD Shipyard dry docks analysis for the air toxics named in the permit. The predicted maximum concentrations are all well below the respective SGGs/AGCs; therefore, no significant adverse impacts would occur.

Table H-23: GMD Shipyard Air Toxics Analysis Results

Name	CAS No	Modeled 1-hr Concentration	SGC	Modeled Annual Concentration	AGC
METHYL ALCOHOL	000067-56-1	0.002431	33,000	0.000238	4,000
ETHYLBENZENE	000100-41-4	NA	NA	0.123678	1,000
2-PROPANOL, 1-METHOXY	000107-98-2	0.1702	36,850	0.015752	2,000
2-PENTANONE, 4-METHYL	000108-10-1	0.024314	31,000	0.000238	3,000
2-PROPANOL, 1-METHOXY-, ACETATE	000108-65-6	4.692675	55,000	0.448098	2,000
XYLENE, M, O & P MIXT.	01330-20-7	43.27964	22,000	4.121221	100

V. MOBILE SOURCE ANALYSIS

Intersections

Based on the trip generation and traffic assignment provided in **Attachment F, "Transportation**," the Proposed Actions would not exceed the *CEQR Technical Manual* screening criteria for CO or $PM_{2.5}$ analysis at any affected intersections. Therefore, detailed mobile source air quality analysis at intersections is not required and no significant adverse impacts would occur.

Brooklyn-Queens Expressway

None of the three Projected Sites is within 200 feet of Brooklyn-Queens Expressway (BQE), an atypical elevated roadway. Therefore, pursuant to *CEQR Technical Manual* guidance, a detailed mobile source analysis is not warranted to evaluate the potential impact from mobile emissions generated by vehicles on the BQE to receptors at the Projected Sites.

Parking Facilities

The Proposed Actions would result in a net reduction in the number of parking spaces in the BNY compared to the No-Action Condition. Therefore, emissions and related potential for parking facility related air quality impacts would be reduced by the Proposed Actions and a detailed parking garage analysis is not warranted.

VI. CONCLUSIONS

The analyses conclude that the Proposed Actions would not have the potential to result in any significant adverse air quality impacts on sensitive uses in the surrounding community, and the Proposed Actions (and associated RWCDS) would not be adversely affected by existing sources of air emissions in the Project Area. A summary of the general findings is presented below.

A screening analysis was conducted and demonstrated that HVAC emissions from the RWCDS buildings on Projected Sites 1 and 2, as well as the eastern building on Projected Site 3 would not have the potential to result in stationary source air quality impacts to existing or proposed buildings. A detailed HVAC analysis was conducted for the western building on Projected Site 3 because it exceeded the initial screening analysis thresholds. The detailed analysis results for the western building on Projected Site 3 showed that there would be no potential significant adverse air quality impacts from fossil fuel-fired heat and hot water systems provided that the building would use natural gas boilers. BNYDC would require the use of such natural gas boilers in any lease for the building.

An analysis of the cumulative impacts of industrial sources on the Projected Sites was performed. Maximum concentration levels at the three Projected Sites were below the air toxin guideline levels and health risk criteria established by regulatory agencies, and below National Ambient Air Quality Standards (NAAQS). Large and major emissions sources within 1,000 feet of each Projected Site were also analyzed. With the exception of the annual average particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) concentration increment, the remaining pollutant concentrations would all be below the CEQR *de minimis* criteria and NAAQS. The CEQR *de minimis* criterion for the annual $PM_{2.5}$ standard would be exceeded in a small portion of the upper levels of the Projected Site 2 Navy Street North building (at elevations above 397 feet) due to emissions from the BNY Cogeneration Plant Stacks to the southeast.

In order to prevent industrial emissions from affecting community facilities located within the same building, Rooftop units will provide outside air only, without recirculating any return air between the community facility tenant space and other tenant space. HVAC equipment serving the community facility spaces will provide 100% outside air, and will be designed so that the air from the industrial uses will not impact community facility space through the return air ducts, and will not mix with air returned from other uses in the building. The rooftop air intakes will meet all building code requirements for separation from exhaust air discharges. If Community Facility and Industrial uses are co-located within a single structure an assessment approved by DEP would be performed to demonstrate compliance with the terms of this paragraph. In addition, with the incorporation of lease provisions for the Projected Site 2 Navy Street North building that require windows above 397 feet be either inoperable or constructed such that they could be locked in a closed position to restrict operable windows/air intakes in the area of impact, no significant adverse air quality impacts related to large/major sources would occur.

With respect to mobile source impacts at intersections, the Proposed Actions would not exceed CEQR screening criteria for carbon monoxide (CO) or $PM_{2.5}$. The Proposed Actions would result in a net reduction

in the number of parking spaces in the BNY compared to the No-Action Condition but the amount of new development (other than parking facilities) would be unchanged. Therefore, emissions and related potential for parking facility related air quality impacts would be reduced by the Proposed Actions and a detailed parking garage analysis is not warranted.

ATTACHMENT I
NOISE

I. INTRODUCTION

This attachment assesses the potential for the Proposed Actions and associated reasonable worst-case development scenario (RWCDS) to result in significant adverse noise impacts. The Applicants are seeking zoning map and text amendments to establish the new Special Brooklyn Navy Yard (BNY) District to carry out the recommendations outlined in the Brooklyn Navy Yard Master Plan (*BNY 2030*). As discussed in **Attachment A, "Project Description,"** under the RWCDS With-Action Condition, three Projected Sites would be developed with a mix of industrial, commercial, and community facility uses. As the Proposed Actions would introduce new community facility uses (i.e., a noise-sensitive use) in the RWCDS With-Action Condition, an assessment of the potential for the Proposed Actions to result in significant adverse noise impacts on the community facility uses is warranted.

As discussed in **Attachment G, "Transportation,"** the Proposed Actions are expected to change traffic volumes in the general vicinity of the Project Area. As such, a mobile source noise screening analysis was conducted under *City Environmental Quality Review* (CEQR) *Technical Manual* guidance to determine whether there are any noise-sensitive locations where project-generated traffic would have the potential to result in significant adverse noise impacts. Additionally, as the RWCDS would introduce new community facility uses (a noise-sensitive use) on the Projected Sites, an analysis was conducted in order to determine the level of building attenuation required to ensure that future interior noise levels would satisfy applicable noise criteria.

II. NOISE FUNDAMENTALS

Quantitative information on the effects of airborne noise on people is well documented. If sufficiently loud, noise may adversely affect people in several ways. For example, noise may interfere with human activities such as sleep, speech communication, and tasks requiring concentration or coordination. It may also cause annoyance, hearing damage, and other physiological problems. Although it is possible to study these effects on people on an average or statistical basis, it must be remembered that all the stated effects of noise on people vary greatly with the individual. Several noise scales and rating methods are used to quantify the effects of noise on people. These scales and methods consider factors such as loudness, duration, time of occurrence, and changes in noise level with time.

"A"-Weighted Sound Levels (dBA)

Noise is typically measured in units called decibels (dB), which are ten times the logarithm of the ratio of the sound pressure squared to a standard reference pressure squared. Because loudness is important in the assessment of the effects of noise on people, the dependence of loudness on frequency must be taken into account in the noise scale used in environmental assessments. Frequency is the rate at which sound pressures fluctuate in a cycle over a given quantity of time and is measured in Hertz (Hz), where one Hz

equals one cycle per second. Frequency defines sound in terms of pitch components. In the measurement system, one of the simplified scales that accounts for the dependence of perceived loudness on frequency is the use of a weighting network (known as A-weighting) that simulates the response of the human ear. For most noise assessments, the A-weighted sound pressure level in units of dBA is used due to its widespread recognition and its close correlation to perception. In this analysis, all measured noise levels are reported in dBA or A-weighted decibels. Common noise levels in dBA are shown in **Table I-1.**

Table I-1: Common Noise Levels

Sound Source	(dBA)
Air Raid Siren at 50 feet	120
Maximum Levels at Rock Concerts (Rear Seats)	110
On Platform by Passing Subway Train	100
On Sidewalk by Passing Heavy Truck or Bus	90
On Sidewalk by Typical Highway	80
On Sidewalk by Passing Automobiles with Mufflers	70
Typical Urban Area	60-70
Typical Suburban Area	50-60
Quiet Suburban Area at Night	40-50
Typical Rural Area at Night	30-40
Soft Whisper at 5 meters	30
Isolated Broadcast Studio	20
Audiometric (Hearing Testing) Booth	10
Threshold of Hearing	0

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

Community Response to Changes in Noise Levels

Table I-2 shows the average ability of an individual to perceive changes in noise. Generally, changes in noise levels less than three dBA are barely perceptible to most listeners. However, as illustrated in **Table I-2**, five dBA changes are readily noticeable. Ten dBA changes are normally perceived as doublings (or halvings) of noise levels. These guidelines permit direct estimations of an individual's probable perception of changes in noise levels.

Table I-2: Average Ability to Perceive Changes in Noise Levels

Change (dBA)	Human Perception of Sound
2-3	Barely perceptible
5	Readily noticeable
10	A doubling or halving of the loudness of sound
20	A dramatic change
40	Difference between a faintly audible sound and a very loud sound

Source: Bolt Beranek and Neuman, Inc., *Fundamentals and Abatement of Highway Traffic Noise* (Report No. PB-222-703). Prepared for the Federal Highway Administration (FHA), June 1973.

Noise Descriptors Used in Impact Assessment

Because the sound pressure level unit (dBA) describes a noise level at just one moment and very few noises are constant, other ways of describing noise over extended periods of time have been developed. One way of describing fluctuating sound is to describe the fluctuating noise heard over a specific time period as if it

had been a steady, unchanging sound. For this condition, a descriptor called the "equivalent sound level" (L_{eq}) can be computed. L_{eq} is the constant sound level that, in a given situation and time period (e.g., one hour [denoted by $L_{eq(1)}$] or 24 hours [denoted as $L_{eq(24)}$]), conveys the same sound energy as the actual time-varying sound. Statistical sound level descriptors such as L_1, L_{10}, L_{50}, L_{90}, and L_x are sometimes used to indicate noise levels that are exceeded one, ten, fifty, ninety, and x percent of the time, respectively. Discrete event peak levels are given as L_1 levels. L_{eq} is used in the prediction of future noise levels by adding the contributions from new sources of noise (i.e., increases in traffic volumes) to the existing levels and in relating annoyance to increases in noise levels.

The 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 ten 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}. The relationship between L_{eq} and exceedance levels has been used in this analysis to characterize the noise sources and to determine the nature and extent of their impact at all receptor locations.

For the purposes of this analysis, the maximum one-hour equivalent sound level ($L_{eq(1)}$) has been selected as the noise descriptor to be used in the noise impact evaluation. $L_{eq(1)}$ is the noise descriptor used in the *CEQR Technical Manual* for noise impact evaluation and is used to provide an indication of highest expected sound levels; $L_{10(1)}$ is the noise descriptor used in the *CEQR Technical Manual* for building attenuation. Hourly statistical noise levels (particularly L_{10} and L_{eq} levels) were used to characterize the relevant noise sources and their relative importance at each receptor location.

The Day-Night sound level (L_{dn}) describes a receptor's cumulative noise exposure from all events over 24 hours. It may be thought of as a noise level totaled after increasing all nighttime L_{eq} noise levels between 10 PM and 7 AM by ten dBA to reflect the greater intrusiveness of noise experienced during these hours. Pursuant to Federal Transit Authority (FTA) noise impact analysis methodology, the L_{dn} is adopted to assess noise generated by trains.[1] However, because the L_{dn} descriptor tends to average out high hourly values over 24 hours, the *CEQR Technical Manual* recommends that the L_{eq} descriptor be used for purposes of impact analysis.

Applicable Noise Codes and Impact Criteria

New York City Noise Code

The New York City Noise Control Code, as amended in December 2005, contains prohibitions regarding unreasonable noise and specific noise standards, including plainly audible criteria for specific noise sources. In addition, the amended code specifies that no sound source operating in connection with any commercial or business enterprise may exceed the decibel levels in the designated octave bands at specified receiving properties.

[1] "Transit Noise and Vibration Impact Assessment", 2006, FTA, Office of Planning and Environment.

CEQR Technical Manual Noise Standards

The New York City Department of Environmental Protection (DEP) has set external noise exposure standards. These standards are shown in **Table I-3**.

Table I-3: Noise Exposure Guidelines for Use in City Environmental Impact Review

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

Source: DEP (adopted policy 1983).

Notes:

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

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

[2] Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and old-age homes.

[3] One may use the Federal Aviation Administration- (FAA-) approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved Integrated Noise Model (INM) Computer Model using flight data supplied by the Port Authority of New York and New Jersey.

[4] External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the 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).

Noise Exposure is classified into four categories: acceptable, marginally acceptable, marginally unacceptable, and clearly unacceptable. The standards shown are based on maintaining an interior noise level for the worst-case hour L_{10} of less than or equal to 45 dBA. Attenuation requirements are shown in **Table I-4**.

Table I-4: Required Attenuation Values to Achieve Acceptable Interior Noise Levels

	Marginally Unacceptable				Clearly Unacceptable
Noise level with Proposed Action	$70<L_{10}\leq73$	$73<L_{10}\leq76$	$76<L_{10}\leq78$	$78<L_{10}\leq80$	$80<L_{10}$
Attenuation[A]	(I) 28 dBA	(II) 31 dBA	(III) 33 dBA	(IV) 35 dBA	$36 + (L_{10} - 80)$[B] dBA

Sources: DEP; *CEQR Technical Manual*

Notes:

[A] The above composite window-wall attenuation values are for residential dwellings and community facility uses. Commercial office spaces and meeting rooms would be five 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 one dBA increments for L_{10} values greater than 80 dBA.

Impact Criteria

In addition, the *CEQR Technical Manual* uses the following criteria to determine whether a proposed residential and/or community facility development would be subject to a significant adverse noise impact:

- If the No-Action levels are less than 60 dBA $L_{eq(1)}$ and the analysis period is not a nighttime period, the threshold for a significant impact would be an increase of at least five dBA $L_{eq(1)}$ (for the 5 dBA threshold to be valid, the resultant With-Action condition noise level would have to be equal to or less than 65 dBA);

- If the No-Action noise level is equal to or greater than 62 dBA $L_{eq(1)}$ or if the analysis period is a nighttime period (defined under CEQR standards as being between 10 PM and 7 AM), the incremental significant impact threshold would be three dBA $L_{eq(1)}$;

- If the No-Action noise level is 61 dBA $L_{eq(1)}$, the maximum incremental increase would be four dBA, since an increase higher than this would result in a noise level higher than the 65 dBA $L_{eq(1)}$ threshold.

III. NOISE PREDICTION METHODOLOGY

Future noise levels resulting from traffic were calculated with a proportional modeling technique used as a screening tool to estimate changes in noise levels. The proportional modeling technique is an analysis methodology recommended for analysis purposes in the *CEQR Technical Manual*.

Proportional Modeling

Proportional modeling was used to determine No-Action and With-Action noise levels along the three Projected Sites' street frontages, as discussed in more detail below. Proportional modeling is one of the techniques recommended in the *CEQR Technical Manual* for mobile source analysis.

Using this technique, the prediction of future noise levels (where traffic is the dominant noise source) is based on a calculation using measured existing noise levels and predicted changes in traffic volumes to determine No-Action and With-Action noise levels. Vehicular traffic volumes (counted during the noise recording), are converted into passenger car equivalent (PCE) values, for which one medium-duty truck

(defined as vehicles with two axles and six tires having a gross weight between 9,900 and 26,400 pounds[2]) is assumed to generate the noise equivalent of 13 cars, one heavy-duty truck (defined as vehicles with three or more axles having a gross weight of more than 26,400 pounds) is assumed to generate the noise equivalent of 47 cars, and one bus (vehicles having two or three axles designed to carry more than nine passengers) is assumed to generate the noise equivalent of 18 cars. Future noise levels are calculated using the following equation:

FNA NL =10 log (NA PCE/E PCE) + E NL

where:

FNA NL = Future No-Action Noise Level
NA PCE = No-Action PCEs
E PCE = Existing PCEs
E NL = Existing Noise Level

Sound levels are measured in decibels and, therefore, increase logarithmically with sound source strength. In this case, the sound source is traffic volumes measured in PCEs. For example, assume that traffic is the dominant noise source at a particular location. If the existing traffic volume on a street is 100 PCEs and if the future traffic volumes were increased by 50 PCEs to a total of 150 PCEs, the noise level would increase by 1.8 dBA. Similarly, if the future traffic were increased by 100 PCEs, or doubled to a total of 200 PCEs, the noise level would increase by 3.0 dBA.

To calculate the future 2030 No-Action noise levels, an annual background growth rate of 0.50 percent for years one through five, and 0.25 percent for year six and beyond was applied to the PCE noise values based on counted vehicles.[3] In addition, as it anticipated that a combined approximately 4.6 million square feet (sf) of new industrial and commercial development would occur on three sites within the Yard (Projected Site 1, No-Action Site 2, and No-Action Site 3) in the 2030 No-Action Condition, a trip generation was prepared. The No-Action trip generation was based on the anticipated industrial floor area (3,728,962 sf), commercial office space (731,127 sf), and commercial retail space (151,874 sf) generated by the 2030 No-Action developments identified in **Attachment C, "Land Use, Zoning, & Public Policy."**

In order to obtain the necessary With-Action PCE values to calculate the With-Action noise levels, the incremental trip generations for each Projected Site provided in **Appendix 3** and summarized in **Table I-5**, were converted into PCE values and added to the calculated No-Action PCE values. As presented in **Table I-5**, the total incremental vehicles generated per hour at Projected Site 1 were estimated at 64 for the weekday AM peak period, -30 for the weekday midday peak period, and 66 for the weekday PM peak period; at Projected Site 2, 18 for the weekday AM peak period, 29 for the weekday midday peak period, and 81 for the weekday PM peak period; and at Projected Site 3, 78 for the weekday AM peak period, -69 for the weekday midday peak period, and -43 for the weekday PM peak period.

[2] The State of New York (DOT and DMV) defines school buses as having a gross vehicle weighting rate (GVWR) of between 10,000 and 36,000 pounds, depending on the class of bus (e.g., "A," "B," "C," or "D"). The most common bus types utilized throughout City are Types B and C, which typically have two axles and six tires, therefore school buses included in the proportional modeling were classified "medium trucks" for the mobile source noise analysis.

[3] The background growth rate is based on information provided in Table 16-4 of the *2020 CEQR Technical Manual*.

Table I-5: Incremental Vehicle Trip Generations for Projected Sites 1, 2, and 3

Peak Period	Projected Site 1 (Kent Avenue Site)			Projected Site 2 (Navy Street Site)			Projected Site 3 (Flushing Avenue Site)		
	In	Out	Total	In	Out	Total	In	Out	Total
AM	68	-4	64	24	-6	18	89	-11	78
MD	-8	-22	-30	26	3	29	-30	-39	-69
PM	11	55	66	35	46	81	-17	-26	-43

For the purposes of trip assignment, it was conservatively assumed that the project-generated trips from each Projected Site be analyzed along the thoroughfares fronting each site. As such, it is conservatively assumed that project-generated trips from Projected Site 1 would be analyzed along Kent Avenue, Assembly Road, Gee Avenue, and Kay Avenue; project-generated trips from Projected Site 2 would be analyzed along Navy Street, Morris Avenue, 2nd Street, and Chauncey Avenue; and project-generated trips from Projected Site 3 would be analyzed along Flushing Avenue, Paulding Street, 9th Avenue, and Washington Avenue. Additionally, as the thoroughfares surrounding Projected Sites 1 and 3 are anticipated to experience net reductions in vehicle trips during the weekday midday period (refer to Table I-5), for conservative analysis purposes the noise analysis at these locations will assume a With-Action increment of 0 vehicles for the weekday midday and PM peak periods.

IV. EXISTING CONDITIONS

The Project Area encompasses the majority of Brooklyn Block 2023, Lots 1 and 150. As presented in **Attachment A, "Project Description,"** three With-Action Projected Sites were identified for the 2030 analysis year. As shown in **Figure I-1**, Projected Site 1 is located along the eastern border of the project area and has frontages on Kent, Gee, and Kay avenues and Assembly Road; Assembly Road and Gee and Kay avenues are internal Yard roadways that are not part of the City's mapped street system and not accessible to the public. Projected Site 2 is located along the western border of the project area and has frontages on Navy and 2nd streets and Morris and Chauncey avenues; 2nd Street, Morris Avenue, and Chauncey Avenue are internal Yard roadways that are not part of the City's mapped street system and not accessible to the public. Lastly, Projected Site 3 is located along the southern border of the project area and has frontages on Flushing, 9th, and 14th avenues, and Paulding Street; Paulding Street and 9th and 14th avenues are internal Yard roadways that are not part of the City's mapped street system and not accessible to the public.

Selection of Noise Receptor Locations

As noise generated by vehicles is the primary contributor to existing noise levels in the surrounding area, noise monitoring was conducted along the Projected Sites' street frontages, including Kent Avenue, Navy Street, and Flushing Avenue. Noise monitoring was also conducted along non-public roads located within the Yard, including Assembly Road, Gee Avenue, Morris Avenue, and Paulding Street (refer to **Figure I-1**), to account for noise levels generated by both vehicle and nearby industrial sources.

Noise Monitoring

Noise monitoring was carried out on Wednesday, May 23rd and May 30th, 2018. On May 23rd, the weather was partly cloudy with a high temperature of 80° F with winds speeds between three and six miles per hour. On May 30th, the weather was partly cloudy with a high temperature of 77° F with winds speeds

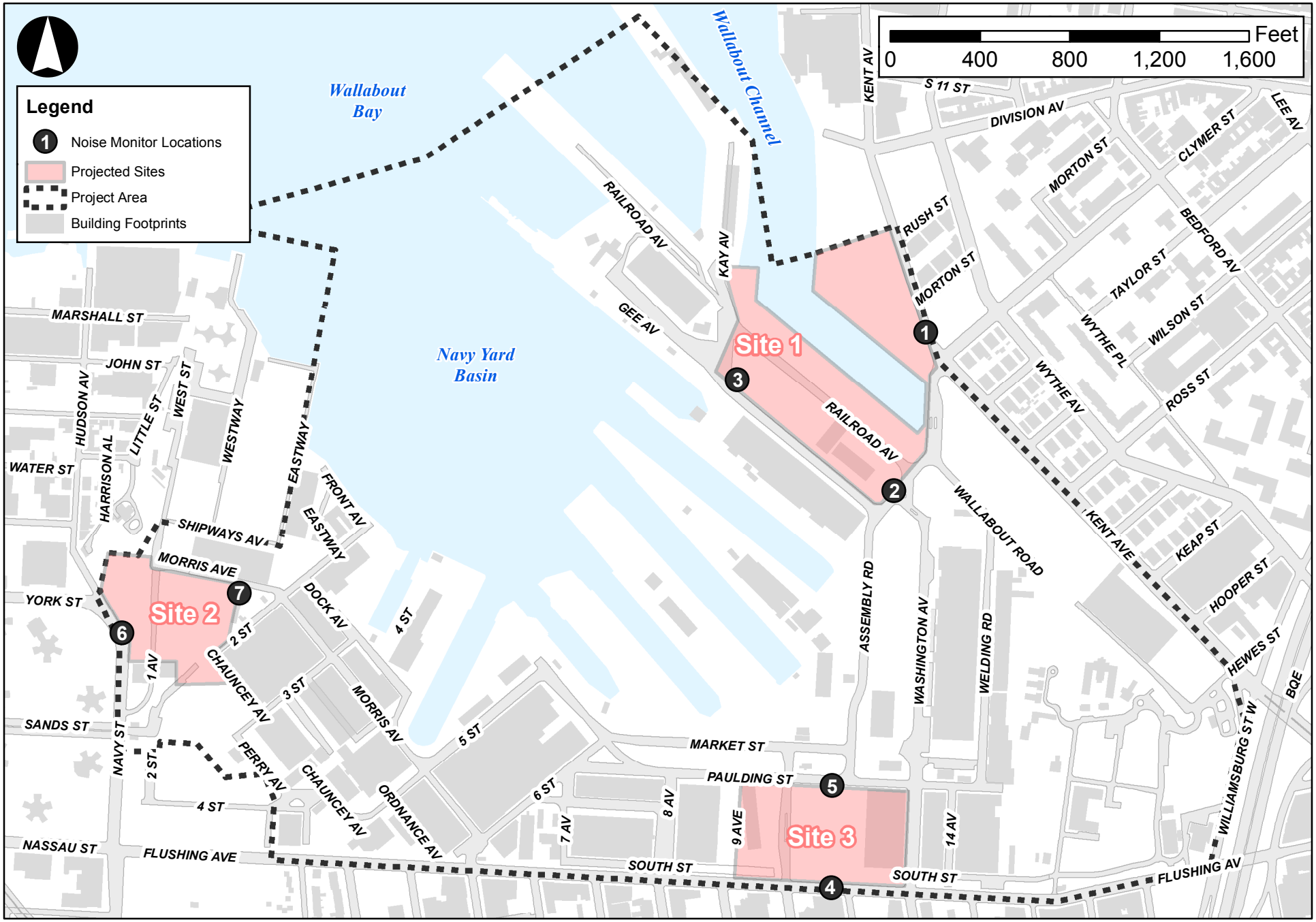


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Figure I-1
Noise Monitor Locations

between three and five miles per hour. Twenty-minute spot measurements of existing noise levels were performed at the receptor locations for each of the three noise analysis periods – weekday AM peak hour (8 AM to 9 AM), weekday midday peak hour (12 PM to 1 PM), and weekday PM peak hour (5 PM to 6 PM) – to establish existing noise levels. For the purpose of this analysis, during the noise recordings, vehicles were counted and classified as described above in Section IV, "Noise Prediction Methodology".

Equipment Used During Noise Monitoring

The instrumentation used for the measurements was a Brüel & Kjær Type 4189 ½-inch microphone connected to a Brüel & Kjær Model 2250 Type 1 (as defined by ANSI) sound level meter. This assembly was mounted at a height of five feet above the ground surface on a tripod and at least six feet away from any sound-reflecting surfaces to avoid major interference with source sound level that was being measured. The meter was calibrated before and after readings with a Brüel & Kjær Type 4231 sound-level calibrator using the appropriate adaptor. The data were digitally recorded by the sound level meter and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq}, L_1, L_{10}, L_{50}, and L_{90}. A windscreen was used during all sound measurements except for calibration. Only traffic-related noise was measured; noise from other sources (e.g., emergency sirens, aircraft flyovers, etc.) was excluded from the measured noise levels. Weather conditions were noted to ensure a true reading as follows: wind speed under 12 mph; relative humidity under 90 percent; and temperature above 14°F and below 122°F (pursuant to ANSI Standard S1.13-2005).

Existing Noise Levels at Noise Monitoring Locations

Noise monitoring results for the receptor location are shown below in **Table I-6**. As indicated in the table, existing L_{eq} noise levels at the receptor locations range from 60.37 dBA to 71.43 dBA in the weekday peak hours, with the highest monitored L_{eq} and L_{10} noise levels during the AM weekday peak hour at receptor location 4 (71.43 dBA and 74.56 dBA, respectively). The existing L_{10} noise levels at receptor locations 1, 3, 5, 6, and 7 would be classified as "Marginally Acceptable" under the CEQR Noise Exposure categories. The highest L_{10} value measured at receptor locations 2 and 4 would be above 70 dBA, placing these locations in the "Marginally Unacceptable (I)" and "Marginally Unacceptable (II)" categories, respectively.

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

As outlined in **Attachment A, "Project Description,"** in the 2030 No-Action Condition, development within the Yard would continue to occur on an as-of-right basis in keeping with BNYDC's mission to create and preserve quality jobs, anchor New York City's modern industrial sector and its businesses, and connect the local community with resources and economic opportunity at the Yard. To meet this goal, it is anticipated that a combined approximately 4.6 million square feet (sf) of new industrial and commercial development would occur on three sites (Projected Site 1, No-Action Site 2, and No-Action Site 3) in the 2030 No-Action Condition. The development of these sites would include 3,728,962 sf of industrial floor area and 883,000 sf of commercial floor area (including 731,127 sf of office space and 151,874 sf of retail space).

Table I-6: Existing Noise Levels at Monitoring Location (in dBA)

Receptor	Time	L_{eq}	L_{max}	L_{min}	L_1	L_{10}[1]	L_{50}	L_{90}	CEQR Noise Exposure Category
1	AM	63.78	79.46	55.10	73.48	66.68	60.63	57.52	Marginally Acceptable
	MD	64.80	85.81	50.97	75.16	**67.38**	58.56	54.26	
	PM	65.88	90.72	52.65	73.43	67.35	60.65	55.44	
2	AM	68.95	87.46	54.32	80.95	**71.64**	63.35	57.97	Marginally Unacceptable (I)
	MD	68.25	92.72	56.50	78.97	69.87	62.99	59.17	
	PM	60.37	77.93	48.47	71.75	63.54	54.58	50.56	
3	AM	63.64	83.22	53.40	76.59	**65.18**	57.41	55.41	Marginally Acceptable
	MD	64.12	82.44	52.03	77.83	64.78	56.43	54.11	
	PM	60.51	84.09	53.06	70.65	62.26	56.63	54.85	
4	AM	71.43	92.83	55.75	81.65	**74.56**	66.81	61.65	Marginally Unacceptable (II)
	MD	70.94	90.41	54.79	83.41	71.89	64.67	58.85	
	PM	67.56	84.15	52.89	75.96	70.75	65.08	58.77	
5	AM	66.01	89.63	53.31	78.47	66.83	59.23	56.14	Marginally Acceptable
	MD	64.48	81.91	52.21	76.81	**66.84**	57.60	54.42	
	PM	62.21	83.83	49.99	74.92	62.87	56.20	52.62	
6	AM	63.97	80.84	54.03	73.37	67.42	60.26	56.56	Marginally Acceptable
	MD	63.90	85.15	54.51	73.83	66.85	59.63	56.55	
	PM	64.43	77.49	53.64	72.36	**67.92**	61.90	57.12	
7	AM	64.61	89.87	58.51	71.20	65.13	62.05	59.98	Marginally Acceptable
	MD	64.49	80.22	62.35	68.16	64.85	64.10	63.48	
	PM	66.03	90.62	58.17	71.83	**66.55**	63.68	60.01	

Notes:
Field measurements were performed by Philip Habib & Associates (PHA) on Wednesday, May 23rd and May 30th, 2018
[1] Highest L_{10} value indicated in **bold**.

Future No-Action noise levels at each of the receptor locations were calculated using the noise prediction methodology described above in Section IV, "Noise Prediction Methodology." **Table I-7** compares the future No-Action and existing noise levels at the seven receptors. As indicated in **Table I-7**, increases in L_{eq} noise levels would range from 0.6 dBA to 7.5 dBA for all analysis periods in the 2030 No-Action condition. Some of these increases would be readily noticeable. The highest projected No-Action L_{10} noise level at a receptor location would be 75.2 dB at receptor location 4, placing it within the "Marginally Unacceptable (II)" CEQR Noise Exposure category. As shown in **Table I-7**, in the future No-Action Condition, receptor locations 1, 3, and 7 would now fall in the "Marginally Unacceptable (I)" CEQR Noise Exposure category, and receptor location 2 would now fall in the "Marginally Unacceptable (II)" CEQR Noise Exposure category. Receptor locations 5 and 6 would remain in the "Marginally Acceptable" CEQR Noise Exposure category and receptor location 4 would remain in the "Marginally Unacceptable (II)" CEQR Noise Exposure category, as under existing conditions.

Table I-7: Future No-Action Condition Noise Levels at Receptor Location (in dBA)

Receptor	Time	Existing L_{eq}	No-Action L_{eq}	Change in L_{eq} from Existing Conditions[1]	No-Action L_{10}[2]	CEQR Noise Exposure Category
1	AM	63.8	68.4	4.6	71.3	Marginally Unacceptable (I)
	MD	64.8	69.7	4.9	**72.3**	
	PM	65.9	69.5	3.6	71.0	
2	AM	69.0	72.3	3.3	**74.9**	Marginally Unacceptable (II)
	MD	68.3	71.6	3.4	73.2	
	PM	60.4	63.3	2.9	66.5	
3	AM	63.6	71.2	7.5	**72.7**	Marginally Unacceptable (I)
	MD	64.1	71.3	7.1	71.9	
	PM	60.5	67.8	7.3	69.6	
4	AM	71.4	72.0	0.6	**75.2**	Marginally Unacceptable (II)
	MD	70.9	71.7	0.8	72.6	
	PM	67.6	68.2	0.7	71.4	
5	AM	66.0	67.8	1.8	**68.6**	Marginally Acceptable
	MD	64.5	66.1	1.6	68.5	
	PM	62.2	63.9	1.7	64.6	
6	AM	64.0	65.7	1.8	69.2	Marginally Acceptable
	MD	63.9	65.8	1.9	68.7	
	PM	64.4	66.0	1.6	**69.5**	
7	AM	64.6	69.5	4.9	70.0	Marginally Unacceptable (I)
	MD	64.5	69.6	5.1	69.9	
	PM	66.0	70.3	4.3	**70.9**	

Notes:
[1] No-Action L_{eq} – Existing L_{eq}
[2] Highest L_{10} value indicated in **bold**.

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

In the With-Action Condition, new development would not occur beyond a density that is not already permitted as-of-right within the Yard. Rather, the Proposed Actions would acknowledge the unique character of the Yard and tailor the applicable zoning regulations to address certain site conditions in light of the goals for Yard, such as actual parking needs, the introduction of publicly accessible space near the Yard's perimeter, and the addition of complementary community facility and commercial uses in keeping with a modern industrial park. As such, a combined total of 4,611,962 gsf of non-parking floor area would be developed on the three projected development sites (Projected Site 1, Projected Site 2, and Projected Site 3) within the BNY in the future with the Proposed Actions. As a result of the Proposed Actions, a somewhat different mixture of uses would be developed in the Project Area than under No-Action Conditions and fewer parking space would be provided. With-Action Condition noise levels at the receptors were calculated using the noise prediction methodology described in **Section III**: "Noise Prediction Methodology," above. **Table I-8** shows projected With-Action Condition noise levels.

As shown in **Table I-8**, in the future with the Proposed Actions, the maximum projected L_{10} noise level at the receptor locations would be 75.5 dBA (receptor location 4). As shown in **Table I-8**, in the future With-Action Condition, receptor locations 5 and 6 would remain in the "Marginally Acceptable" CEQR Noise Exposure category, receptor locations 1, 3, and 7 would remain in the "Marginally Unacceptable (I)" CEQR

Noise Exposure category, and receptor locations 2 and 4 would remain in the "Marginally Unacceptable (II)" CEQR Noise Exposure category, as under No-Action conditions.

Table I-8: Future With-Action Condition (RWCDS) Noise Levels at Receptor Location (in dBA)

Receptor	Time	No-Action L_{eq}	With-Action L_{eq}	Change in L_{eq} from No-Action Conditions[1]	With-Action L_{10}[2]	CEQR Noise Exposure Category
1	AM	68.4	67.8	-0.56	70.7	Marginally Unacceptable (I)
	MD	69.7	69.1	-0.63	**71.7**	
	PM	69.5	69.0	-0.54	70.4	
2	AM	72.3	71.8	-0.44	**74.5**	Marginally Unacceptable (II)
	MD	71.6	71.1	-0.49	72.7	
	PM	63.3	62.8	-0.45	66.0	
3	AM	71.2	70.4	-0.73	**72.0**	Marginally Unacceptable (I)
	MD	71.3	70.5	-0.77	71.1	
	PM	67.8	67.0	-0.82	68.8	
4	AM	72.0	72.4	0.36	**75.5**	Marginally Unacceptable (II)
	MD	71.7	72.2	0.50	73.1	
	PM	68.2	68.7	0.47	71.9	
5	AM	67.8	68.9	1.10	**69.7**	Marginally Acceptable
	MD	66.1	67.2	1.06	69.5	
	PM	63.9	65.1	1.19	65.7	
6	AM	65.7	65.8	0.04	69.2	Marginally Acceptable
	MD	65.8	66.0	0.06	68.8	
	PM	66.0	66.3	0.28	**69.8**	
7	AM	69.5	69.6	0.08	70.1	Marginally Unacceptable (I)
	MD	69.6	70.0	0.13	70.1	
	PM	70.3	71.0	0.61	**71.5**	

Notes:
[1] With-Action L_{eq} – No-Action L_{eq}
[2] Highest L_{10} value indicated in **bold**.

Comparing future With-Action and No-Action Conditions, changes in noise levels at the receptor locations would range from a reduction of up to 0.82 dBA to an increase of up to 1.19 dBA. Changes of this magnitude would not be perceptible to the public and would fall below the applicable *CEQR Technical Manual* significant adverse impact threshold.

VII. BUILDING ATTENUATION REQUIREMENTS

As shown earlier in **Table I-4**, the *CEQR Technical Manual* has set noise attenuation requirements for buildings based on exterior L_{10} noise levels. Recommended noise attenuation values for buildings are designed to maintain a maximum interior noise level of 45 dBA or lower for residential and community facility uses and 50 dBA or lower for commercial office uses and are determined based on exterior L_{10} noise levels. It is generally assumed that without specific information on a building's window and wall construction, the outdoor-to-indoor noise reduction of the building is 25 dBA. Therefore, exterior ambient sound levels exceeding 70 dBA at community facility receptors (which would equate to an interior noise level of 45 dBA) or 75 dBA at commercial office uses (which would equate to an interior noise level of 50 dBA) are considered to be "Marginally Unacceptable" (refer to **Table I-4**), and the need to provide sufficient window/wall noise attenuation must be considered.

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. Typically, a building façade is composed of the wall, windows, and any vents or louvers for heating, ventilation, and air conditioning (HVAC) systems in various ratios of area. As construction on the Projected Sites would most likely be of masonry construction, which typically provides a high level of sound attenuation, the attenuation requirements for CEQR purposes apply primarily to the windows, but may also represent a composite window/wall attenuation value. Window/wall attenuation can be described in terms of sound transmission class (STC), transmission loss (TL), and outdoor-indoor transmission class (OITC). Although these terms are sometimes used interchangeably, they are unique from each other. Transmission loss refers to how many decibels of sound a façade (wall) or façade accessory (window or door) can stop at a given frequency. The TL for a given construction material varies with the individual frequencies of the noise.

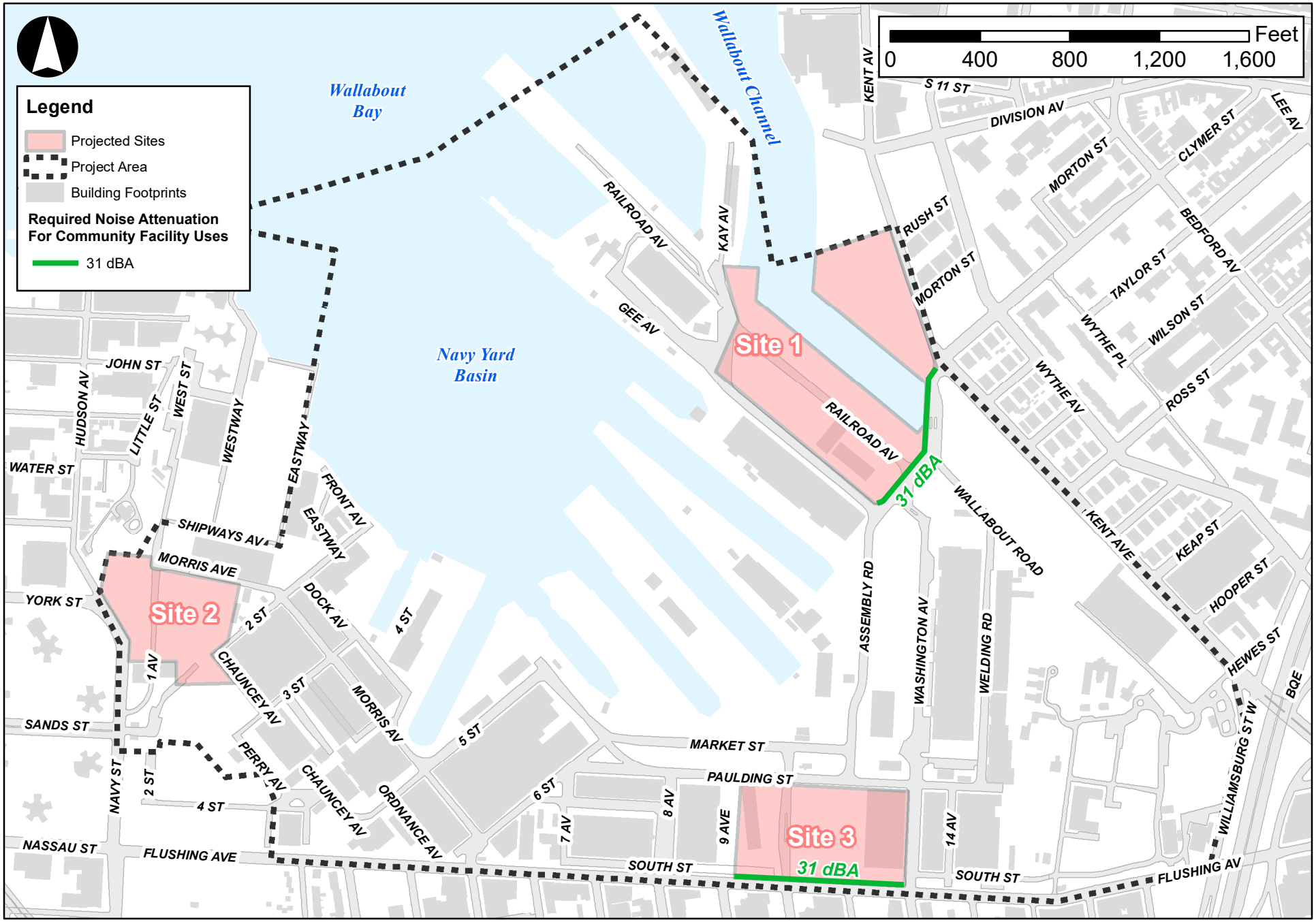
To simplify the noise attenuation properties of a wall, the STC rating was developed. It is a single number that describes the sound isolation performance of a given material for the range of test frequencies between 125 and 4,000 Hz. These frequencies sufficiently cover the range of human speech. Higher STC values reflect greater efficiencies to block airborne sound. The U.S. Department of Housing and Urban Development (HUD) uses the STC when identifying the required sound attenuation for a façade.

The OITC is similar to the STC, except that it is weighted more towards the lower frequencies associated with aircraft, rail, and truck traffic. The OITC classification is defined by the American Society of Testing and Materials (ASTM E1332-90 [Reapproved 2003]) 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. DEP uses the OITC when identifying the required sound attenuation for a façade.

Based on predicted future With-Action exterior noise levels and *CEQR Technical Manual* criteria, maximum With-Action L_{10} noise levels at the receptor locations 1, 2, 3, 4, and 7 would be greater than 70 dBA and would fall in either the "Marginally Unacceptable (I)" (receptor locations 1, 3, and 7) or "Marginally Unacceptable (II)" (receptor locations 2 and 4) CEQR Noise Exposure categories, and would require special noise attenuation measures in order to achieve the required interior noise levels.

Specifically, as maximum With-Action L_{10} noise levels at receptor locations 1, 3, and 7 would be 71.7 dBA, 72.0 dBA, and 71.5 dBA, respectively, a minimum 28 dBA of composite window/wall attenuation for community facility uses on any southwestern façade (facing Gee Avenue), northwestern façade (facing Kay Avenue), and eastern façade (facing Kent Avenue) at Projected Site 1, as well as on any northern façade (facing Morris Avenue) and eastern façade (facing 2nd Street and/or Chauncey Avenue) at Projected Site 2, would be required in order to achieve the required community facility interior noise level of 45 dBA or lower (refer to **Figure I-2**). Future commercial uses on the affected frontages of Projected Sites 1 and 2 would not require any additional building attenuation beyond standard construction in order to maintain an interior noise level of 50 dBA or lower for commercial office uses.

The maximum With-Action L_{10} noise levels at receptor locations 2 and 4 would be 74.5 dBA and 75.5 dBA, respectively. Therefore, a minimum 31 dBA of composite window/wall attenuation on any southeastern façade (facing Assembly Road) at Projected Site 1, or any southern façade (facing Flushing Avenue) at Projected Site 3 will be necessary to achieve the required community facility interior noise level of 45 dBA or lower (refer to **Figure I-2).** As discussed above**,** future commercial office uses on the affected frontage of Projected Sites 1 and 3 would be subject to an attenuation rating of five dBA less than the community facility requirement. As standard construction generally provides approximately 25 dBA of noise



FOR ILLUSTRATIVE PURPOSES

Special Brooklyn Navy Yard District

Figure I-2
Building Attenuation Requirements For Community Facility Uses

attenuation, and standard double-glazed and/or laminated windows in conjunction with an alternate means of ventilation would provide up to 28 dBA of noise attenuation, no additional building attenuation for commercial uses at the affected frontages would be required in order to maintain an interior noise level of 50 dBA or lower.

Proposed Attenuation Measures

The composite window/wall noise attenuation described above for community facility uses would be incorporated into the Proposed Actions and incorporated into the Master Lease for the BNY. The Master Lease would require 31 dBA window/wall attenuation for all new community facility uses in the BNY District to maintain an interior noise level of 45 dB(A) or less, with windows closed, and shall provide an alternate means of ventilation. As standard construction generally provides approximately 25 dBA of noise attenuation, and standard double-glazed and/or laminated windows in conjunction with an alternate means of ventilation would provide up to 28 dBA of noise attenuation, no additional building attenuation for commercial uses at the Projected Sites would be required beyond standard construction in order to maintain an interior noise level of 50 dBA or lower for commercial uses. As such, no significant adverse noise impacts related to building attenuation would occur as a result of the Proposed Actions.

VIII. OTHER NOISE CONCERNS

Mechanical Equipment

The Projected Sites' mechanical systems (i.e., heating, ventilation, and air conditioning systems) will be designed to meet all applicable noise regulations and requirements and would be designed to produce noise levels that would not result in any significant increase in ambient noise levels. In addition, the building mechanical systems would be designed with enclosures where necessary to meet all applicable noise regulations (i.e., Subchapter 5 §24-227 of the New York City Noise Control Code and the New York City DOB Building Code) and to avoid producing levels that would result in any significant increase in ambient noise levels.

Industrial Source Noise

As outlined in the *CEQR Technical Manual*, if an action would introduce a new receptor in an area with high ambient noise levels resulting from stationary sources, such as unenclosed manufacturing activities or other loud noises, further analysis may be warranted. As new receptors (i.e. Projected Sites 1, 2, and 3) would be located in areas adjacent to existing or proposed industrial districts, an initial industrial source noise impact screening analysis was conducted.

Sections 42-20 and 42-21 of the New York City Zoning Resolution establish performance standards required for all industrial sources in M1, M2, and M3 zoning districts. The performance standards use maximum instantaneous octave band sound pressure levels (SPLs) as its noise descriptor, and in all manufacturing districts, the SPLs resulting from activity—whether open or enclosed—shall not exceed the maximum permitted decibel levels for the designated octave band at any point on or beyond the lot line. Projected Sites 1, 2, and 3 would introduce new community facility uses in areas adjacent to existing or proposed industrial noise sources. The Brooklyn Navy Yard Cogeneration (BNYC) facility, a 286-megawatt gas-fired

power plant whose steam pipes are located along Projected Site 2's Chauncey Avenue and 2nd Street frontages, is the largest of the industrial noise sources in the area. However, the daytime existing L_{10} noise levels in the vicinity of the BNYC facility are generally low (below 70 dBA[4]). Additionally, the Special BNY District would not permit sleeping accommodations for community facility uses that could be affected by evening/overnight noise, so it is unlikely that the BNYC facility and/or other nearby industrial noise sources would have any significant adverse impacts during the evening/overnight time period (4:00 PM to 7:00 AM). Therefore, noise from nearby existing industrial sources would not result in a significant adverse impact on new sensitive receptors introduced in the future with the Proposed Actions, and no further analysis is warranted.

In order to address any noise from tenants within the Projected Sites, the Applicants intend to follow all SCA guidelines (including STC ratings for doors, windows, and partitions) to mitigate noise transmission that could impact any proposed sensitive spaces. The Applicants will review all proposed tenant alterations in multi-tenant buildings to identify any significant noise-producing equipment and require that isolators or similar devices be required when mounting equipment to the building structure. The Applicants will also treat any ductwork on community facility floors with acoustic insulation of baffles to reduce sound transmissions through the ducts from other floors. Any doors that enter shafts, such as stairwells, are required by NYC Building Code to be fire-rated doors with automatic closers. These doors are required to be kept closed at all times, and will ensure that any noise transmission between floors is minimized. With the above measures, noise transmission from industrial uses with the Projected Sites through inter-floor ductwork would be minimized, and interior noise levels at proposed sensitive spaces within the Projected Sites would be expected to meet CEQR requirements.

Aircraft Noise

An initial aircraft noise impact screening analysis would be warranted if the new receptor would be located within one mile of an existing flight path, or cause aircraft to fly through existing or new flight paths over or within one mile of a receptor. Since the Project Area is not within one mile of an existing flight path, no initial aircraft noise impact screening analysis is warranted.

Train Noise

According to the *CEQR Technical Manual*, if a project would be within 1,500 feet of existing rail activity and have a direct line of sight to that activity, a more detailed analysis would be appropriate. No rail activity operates within 1,500 feet of the Yard. Therefore, a detailed train noise analysis related to rail operations is not warranted.

IX. CONCLUSIONS

Noise from the increased traffic volumes generated by the Proposed Actions would not cause significant adverse noise impacts as the relative increases in noise levels would fall below the applicable 2020 *CEQR Technical Manual* significant adverse impact threshold (3.0 dBA).

[4] Based on noise levels at receptor location 7; refer to **Tables I-6** through **I-8** for existing, No-Action, and With-Action noise levels at receptor location 7.

To ensure acceptable interior noise levels for the Projected Sites, noise attenuation specifications would be incorporated into the Proposed Actions and incorporated into the Master Lease for the BNY. The Master Lease would ensure an acceptable interior noise environment, requiring that future community facility uses in the Project Area must provide a closed-window condition with a minimum OITC rating of 31 dBA window/wall attenuation. As standard construction generally provides approximately 25 dBA of noise attenuation, and standard double-glazed and/or laminated windows in conjunction with an alternate means of ventilation would provide up to 28 dBA of noise attenuation, no additional building attenuation for commercial office uses at the Projected Sites would be required beyond standard construction in order to maintain an interior noise level of 50 dBA or lower for commercial office uses.

In order to address any noise from tenants within the Projected Sites, the Applicants intend to follow all SCA guidelines (including STC ratings for doors, windows, and partitions) to mitigate noise transmission that would impact any proposed sensitive spaces. The Applicants will review all proposed tenant alterations in multi-tenant buildings to identify any significant noise-producing equipment and require that isolators or similar devices be required when mounting equipment to the building structure. The Applicants will also treat any ductwork on community facility floors with acoustic insulation of baffles to reduce sound transmissions through the ducts from other floors. Any doors that enter shafts, such as stairwells, are required by NYC Building Code to be fire-rated doors with automatic closers. These doors are required to be kept closed at all times, and will ensure that any noise transmission between floors is minimized. With the above measures, noise transmission from industrial uses with the Projected Sites through inter-floor ductwork would be minimized, and interior noise levels at proposed sensitive spaces within the Projected Sites would be expected to meet CEQR requirements.

Therefore, the Proposed Actions would not result in any significant adverse noise impacts related to building attenuation requirements.

ATTACHMENT J
CONSTRUCTION

I. INTRODUCTION

This attachment assesses the potential impacts of the construction of buildings expected to result as a consequence of the Proposed Action. Construction impacts, although temporary, can include noticeable and disruptive effects from an action that is associated with construction or could induce construction. As stated in the 2020 *City Environmental Quality Review* (CEQR*) Technical Manual*, determination of the significance of construction impacts and need for mitigation is generally based on the duration and magnitude of the impacts. Construction impacts are usually important when construction activities could affect traffic conditions, hazardous materials, archaeological resources, the integrity of historic resources, community noise patterns, or air quality conditions. According to the *CEQR Technical Manual*, construction duration is often broken down into short-term (less than two years) and long-term (two or more years). Where the duration of construction is expected to be short-term, any impacts resulting from short-term construction generally do not require detailed assessment.

As detailed in **Attachment A, "Project Description,"** the Applicants are seeking zoning map and text amendments (collectively, the "Proposed Actions") to facilitate certain recommendations of the Brooklyn Navy Yard Master Plan. The Project Area encompasses the majority of Brooklyn Block 2023, Lots 1 and 150[1] and is generally bounded by Kent Avenue to the east, Flushing Avenue to the south, and Navy Street to the west. The Proposed Actions include:

- (1) A zoning text amendment to create the Special Brooklyn Navy Yard District (the "Special District") with special use, bulk, parking and loading, and publicly accessible space regulations; and
- (2) A zoning map amendment to map the Special District over the Project Area and change an R6B, M1-2, and portions of an M3-1 district within the Project Area to an M2-1 district.

The Proposed Actions would introduce tailored zoning regulations to facilitate and refine the further development of a modern manufacturing campus at the Brooklyn Navy Yard (the "Yard" or "BNY") by the approximately 4.6 million square feet (sf) of zoning floor area projected to occur at the Yard over the next 10 years by rationalizing parking and loading controls, allowing the introduction of compatible community facility and commercial uses to complement the core industrial use of the BNY, establishing public access area requirements in connection with development in certain areas at the perimeter of the Yard, and modifying height and setback regulations in defined areas of the Yard, modify waterfront regulations, and other bulk controls in manners compatible with modern industrial development and the surrounding context.

According to the *CEQR Technical Manual*, construction duration is often broken down into short-term (less than two years) and long-term (two or more years). Where the duration of construction is expected

[1] As detailed further in **Attachment A, "Project Description,"** the Project Area encompasses the entirety of Tax Lots 1 and 150 on Brooklyn Block 2023 except for a small portion of Lot 1 located in the water and a smaller, irregular-shaped portion of Lot 1 located in the southwest corner of the Project Area.

to be short-term, any impacts resulting from construction generally do not require detailed assessment. Multi-sited projects with overall construction periods lasting longer than two years and that are near sensitive receptors should undergo a preliminary impact assessment.

II. CONSTRUCTION REGULATIONS & GENERAL PRACTICES

Construction Oversight

Governmental oversight of construction in New York City is extensive and involves a number of City, State, and Federal agencies, each with specific areas of responsibility, as follows:

- DOB has primary oversight of construction and oversees compliance with the New York City Building Code to ensure that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both workers and the general public during construction. Areas of oversight include installation and operation of equipment such as cranes and lifts, sidewalk sheds, safety netting, and scaffolding.
- The New York City Department of Environmental Protection (DEP) enforces the New York City Noise Code, reviews and approves any needed Remedial Action Plans (RAPs) and associated Construction Health and Safety Plans (CHASPs), as well as the removal of fuel tanks and abatement of hazardous materials. DEP also regulates water disposal into the sewer system and review and approves any rerouting of wastewater flow.
- The New York City Fire Department (FDNY) has primary oversight of compliance with the New York City Fire Code and the installation of tanks containing flammable materials.
- The New York City Department of Transportation Office of Construction Mitigation and Coordination (DOT OCMC) reviews and approves any traffic lane and sidewalk closures.
- New York City Transit (NYCT) is responsible for bus stop relocations and subsurface construction within 200 feet of a subway, if needed.
- The New York City Landmarks Preservation Commission (LPC) approves studies and testing to prevent the loss of archaeological resources and to prevent damage to architectural resources.
- The New York State Department of Environmental Conservation (NYSDEC) regulates disposal of hazardous materials and construction, operation, and removal of bulk petroleum and chemical storage tanks. NYSDEC also regulates discharge of water into rivers and streams.
- The New York State Department of Labor (NYSDOL) licenses asbestos workers.
- The New York State Department of Transportation (NYSDOT) reviews and approves any traffic lane closures on its roadways, should any be necessary.
- The U.S. Environmental Protection Agency (EPA) has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons, however, much of its responsibility is delegated to the state level.
- The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.

Construction Hours

New York City regulates the hours of construction work through the New York City Noise Control Code, as amended in December 2005 and effective July 1, 2007. Construction is limited to weekdays between the hours of 7:00 AM and 6:00 PM, and noise limits are set for certain specific pieces of construction equipment. The City may permit work outside of these hours to accommodate: (1) emergency conditions; (2) public safety; (3) construction projects by or on behalf of City agencies; (4) construction activities with minimal noise impacts; and (5) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. The DOB issues these work permits, and in some instances, approval of a noise mitigation plan from the DEP under the City's Noise Code is also required.

In New York City, construction work typically occurs on weekdays and begins at 7:00 AM, with most workers arriving between 6:00 AM and 7:00 AM. Work typically ends at 4:00 PM, with some exceptions when certain critical tasks (e.g., finishing a concrete pour for a floor deck, completing the drilling of piles, or completing the bolting of a steel frame erected that day) require that the workday be extended beyond normal work hours. Any extended workdays generally last until approximately 5:30 PM or 6:00 PM and do not include all construction workers onsite, but only those involved in the specific task requiring additional work time. For work outside of normal construction hours, work permits are obtained from DOB prior to such work commencing. The numbers of workers and pieces of equipment in operation for work outside normal hours is generally limited to those needed to complete the particular authorized task. Overall, the level of activity for any work outside of normal construction hours is less than a normal workday.

Construction Practices

Access, Deliveries, and Staging Areas

Access to construction sites is controlled. Work areas are fenced off, and limited access points for workers and construction-related trucks are provided. Typically, worker vehicles are not allowed into the construction area, and workers or trucks without a need to be on the site are not allowed entry. After work hours, the gates are closed and locked. Security guards may patrol the construction site after work hours and over weekends to prevent unauthorized access.

Material deliveries to the site are controlled and scheduled. To aid in adhering to the delivery schedules, as is normal for building construction in New York City, flaggers are employed at each of the construction site's access points. Flaggers are typically supplied by either the subcontractor on-site at the time or by the construction manager. The flaggers control trucks entering and exiting the project site so that they would not interfere with one another. In addition, they provide an additional traffic aid as trucks enter and exit the on-street traffic streams.

Lane and Walkway Closures

Temporary curb-lane and sidewalk closures are typical for construction projects in New York City. To manage such closures, a Maintenance and Protection of Traffic (MPT) plan is developed consistent with DOT requirements. DOT OCMC reviews and approves MPT plans, and the implementation of the closures

is also coordinated with DOT OCMC. In general, construction managers for major projects on adjacent sites also coordinate their activities to avoid delays and inefficiencies.

Public Safety

A variety of measures are employed to ensure public safety during construction at sites within New York City. Examples include the use of sidewalk bridges to provide overhead protection for pedestrians passing by the construction site and the employment of flaggers to control trucks entering and exiting the construction site, to provide guidance to pedestrians, and/or to alert or slow down the traffic. Other safety measures include following DOB requirements during the installation and operation of tower cranes to ensure safe operation of the equipment and the installation of safety nettings on the sides of the project as the superstructure advances upward to prevent debris from falling to the ground.

Rodent Control

Construction projects in New York City typically include provisions for a rodent (i.e., mouse and rat) control program with provisions for this formalized in construction contracts for the development. Rodent control programs are typically carried out throughout construction, beginning with surveying and baiting appropriate areas prior to construction and providing for proper site sanitation and maintenance during construction. Signage would be posted, and coordination would be conducted with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides would be permitted, and the contractor would be required to implement the rodent control program in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

III. PRELIMINARY ASSESSMENT

In accordance with the *CEQR Technical Manual*, this preliminary assessment evaluated the effects associated with the Proposed Actions' construction-related activities including transportation (traffic, transit, pedestrians, and parking), air quality, noise, land use and neighborhood character, socioeconomic conditions, community facilities, open space, historic and cultural resources, natural resources, and hazardous materials.

As described in **Attachment A, "Project Description,"** the Proposed Actions would facilitate development at three developments sites: the Kent Street Site ("Projected Site 1"), the Navy Street Site ("Projected Site 2"), and the Flushing Avenue Site ("Projected Site 3"). However, for Projected Sites 2 and 3, it is assumed that under the No-Action Condition, development would occur on other sites within Brooklyn Navy Yard: the Navy Street Alternate Sites ("No-Action Site 2") and the Flushing Avenue Alternate Sites ("No-Action Site 3") (refer to **Figure A-6** in **Attachment A**). The amount of new construction under the Proposed Actions would be similar to the No-Action Condition since both the Proposed Actions and the No-Action Condition would be expected to result in approximately 4.6 million sf of development. However, as compared to the No-Action Condition, the Proposed Actions would facilitate the incremental development of approximately 750,000 gsf of community facility floor area and net reductions of 672,191 gsf of industrial floor area and 77,809 gsf of commercial floor area.

The overall construction duration at each development site would be similar between the No-Action and With-Action Conditions. Construction on Projected Site 1 is anticipated to be approximately 36 months

under both the No-Action and With-Action Conditions. No-Action construction on No-Action Site 2 is anticipated to be approximately 30 months while With-Action construction on Project Site 2 is anticipated to be approximately 27 months. Lastly, No-Action construction on No-Action Site 3 is anticipated to be approximately 32 months while With-Action construction on Project Site 3 is anticipated to be approximately 30 months.

Transportation

Construction activities associated with the Proposed Actions would generate construction worker and truck traffic similar to the No-Action Condition, as both scenarios would result in the development of approximately 4.6 million sf in the Project Area. There would not be any incremental construction-related vehicles trips in the future with the Proposed Actions as compared to the future without the Proposed Actions.

Like other construction projects in New York City, most of the construction activity in the Project Area under both scenarios would take place during the typical construction hours of 7:00 AM to 3:30 PM. While construction truck trips would be made throughout the day (with trips distributed evenly throughout the day), construction workers typically commute during the hours before and after the work shift.

During both No-Action and With-Action Conditions, there would be a need for short-term curb lane and/or sidewalk narrowing or closures associated with construction activities in the BNY. However, all of these activities are expected to occur immediately adjacent to the identified development sites within the Yard, and would not result in narrowing or closures of public sidewalks along Kent Avenue, Flushing Avenue, Navy Street, or any other streets outside of the Yard. Curb lane and/or sidewalk narrowing or closures within the Yard could include the unloading of construction materials from trucks and the loading of trucks with construction debris for limited durations. Pedestrians would either walk on the opposite side of the street or in a sectioned-off portion of the street. All requirements for ADA compliant pedestrian routes, including any detours, would be met and coordinated with DOT. Detailed MPT plans would be submitted for approval to NYCDOT's Office of Construction Mitigation and Coordination (DOT-OCMC) prior to construction. Appropriate protective measures for ensuring pedestrian safety surrounding each of the development sites would be implemented under these plans. Curb lane and/or sidewalk closures would not affect access points to public transportation including ferry, shuttle, subway, or bus stops.

Truck movements would be distributed throughout the day and would generally occur between the hours of 6:00 AM and 3:00 PM, depending on the stage of construction. Flaggers would be present during construction to manage the access and movements of trucks. Little if any rerouting of traffic in the Yard is anticipated; no rerouting of traffic outside of the BNY would be required in either the No-Action or With-Action Condition in order to accommodate construction-related truck movements. Additionally, moving lanes of traffic on streets adjacent to the development sites within the Yard are expected to be available at all times along the affected streets except on limited days if cranes will be erecting planks; no changes to streets outside of the Yard are expected as a result of the anticipated construction in either scenario.

Based on the similar construction program between the No-Action and With-Action Conditions and assessment provided above, the Proposed Actions would not result in any significant adverse construction transportation impacts, and no further analysis is warranted.

Air Quality

Construction under the Proposed Actions would require use of both non-road construction equipment and on-road vehicles, which results in emissions that have the potential to affect air quality. Non-road construction equipment includes equipment operating on-site, such as excavators, loaders, and cranes. On-road vehicles include construction delivery trucks, dump trucks, concrete trucks, and construction worker vehicles arriving at and departing from the Project Area, as well as operating on-site. In addition, emissions from dust-generating construction activities (i.e., truck loading and unloading operations) also have the potential to affect air quality. The *CEQR Technical Manual* lists several factors for consideration in determining whether a quantified on-site and/or off-site construction impact assessment for air quality is appropriate. These factors include the use of emission control measures, the duration and intensity of construction activities, the location of nearby sensitive receptors, and project-generated, construction-related vehicle trips. This guidance was followed to assess the potential for construction air quality impacts from the Proposed Actions.

Emission Control Measures

Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. These include dust suppression measures and idling restrictions:

- *Clean Fuel*. Ultra-low-sulfur diesel[2] (ULSD) fuel will be used exclusively for all diesel engines throughout the Project Area.
- *Dust Control.* To minimize dust emissions from construction activities, a dust control plan, including a robust watering program, would be required as part of contract specifications. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the Project Area; and water sprays would be used for all demolition, excavation, and transfer of soils to ensure that materials would be dampened as necessary to avoid the suspension of dust into the air. All measures required by the portion of the *DEP Construction Dust Rules* regulating construction-related dust emissions would be implemented.
- *Idling Restriction.* In accordance with Title 24, Chapter 1, Subchapter 7, Section 24-163 of the *NYC Administrative Code,* the local law restricting unnecessary idling on roadways, truck idle time will be restricted to 3 minutes except for vehicles that are using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or are otherwise required for the proper operation of the engine.
- *Diesel Equipment Reduction*. Electrically powered equipment would be utilized over diesel-powered and gasoline-powered versions of that equipment to the extent practicable.

In addition, the following measures would be implemented to further reduce air pollutant emissions during construction:

[2] The U.S. Environmental Protection Agency (EPA) required a major reduction in the sulfur content of diesel fuel intended for use in locomotive, marine, and non-road engines and equipment, including construction equipment. As of 2015, the diesel fuel produced by all large refiners, small refiners, and importers must be ULSD fuel. Sulfur levels in non-road diesel fuel are limited to a maximum of 15 parts per million (ppm).

- *Best Available Tailpipe Reduction Technologies.* Non-road diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract with the proposed development), including but not limited to concrete mixing and pumping trucks would utilize the best available technology (BAT) for reducing diesel particulate emissions to extent practicable. Diesel particulate filters have been identified as being the tailpipe technology currently proven to have the highest reduction capability.
- *Utilization of Newer Equipment.* EPA's Tier 1 through 4 standards[3] for non-road engines regulate the emission of criteria pollutants from new engines, including particulate matter (PM), carbon monoxide (CO), nitrogen oxide (NO_x), and hydrocarbons (HC). To the extent practicable, all diesel-powered non-road construction equipment with a power rating of 50 hp or greater used in construction under the Proposed Actions would meet at least the Tier 3 emissions standard to the extent practicable.

Overall, the emissions control measures identified above are expected to significantly reduce air pollutant emissions during construction under the Proposed Actions.

Potential Air Quality Effects during Construction

Although the overall construction duration on each of the development sites are anticipated to be approximately 27 to 36 months, the most intense construction activities in terms of air pollutant emissions (demolition, excavation, and infrastructure improvement activities, when the largest number of large non-road diesel engines such as excavators and loaders would be employed) are anticipated to occur over a period of approximately 9 months on each development site under the Proposed Actions, as compared to the longer periods of approximately 9 to 11 months on each development site under the No-Action Condition. In addition, construction sources would move around each development site over the construction period such that the air pollutant concentration increments due to construction would not persist in any single location. The other stages of construction, including building construction, interior construction, and site finishes, would result in substantially lower air emissions, since they would require fewer pieces of heavy-duty diesel equipment and generally would not involve soil disturbance activities that generate dust emissions. Although there are sensitive receptor locations (i.e., residences) outside the Yard near the Kent Avenue Site and Navy Street Site and at the proposed buildings at Projected Sites 1 and 3 that could be completed and occupied during subsequent construction at these sites, the construction activities on each of the development sites are temporary. Furthermore, to the extent practicable, best efforts would be made to stage construction activities within the BNY complex.

As described above in "Transportation," the construction worker commuting trips and truck deliveries would generally concentrate in the early morning and mid-afternoon periods on weekdays and outside of the commuting peak hours, and there would not be any incremental construction-related vehicles trips between the No-Action and With-Action Conditions. Therefore, further mobile source analysis is not required. The approach and procedures for constructing the proposed buildings would be typical of the methods utilized in other building construction projects throughout New York City and, therefore, would not be considered out of the ordinary in terms of intensity. As discussed above under "Emissions Control

[3] The first federal regulations for new non-road diesel engines were adopted in 1994, and signed by EPA into regulation in a 1998 Final Rulemaking. The 1998 regulation introduces Tier 1 emissions standards for all equipment 50 hp and greater and phases in the increasingly stringent Tier 2 and Tier 3 standards for equipment manufactured in 2000 through 2008. In 2004, the EPA introduced Tier 4 emissions standards with a phased-in period of 2008 to 2015. The Tier 1 through 4 standards regulate the EPA criteria pollutants, including PM, HC, NOx and CO. Prior to 1998, emissions from non-road diesel engines were unregulated. These engines are typically referred to as Tier 0.

Measures," measures would be taken to reduce pollutant emissions during construction. For example, a watering program would be implemented to minimize dust emissions from construction activities and all measures required by the portion of DEP's *Construction Dust Rules* regulating construction-related dust emissions would be followed. In addition, to further minimize air pollutant emissions during construction, emissions reduction measures including the use of BAT and the use of newer and cleaner equipment would be implemented during construction.

Based on the analyses provided, similar construction program between the Proposed Actions and the No-Action Condition, and the implementation of the emissions reduction program described above, construction under the Proposed Actions would not result in any significant adverse construction air quality impacts, and no further analysis is required.

Noise

Potential impacts on community noise levels during construction could result from the operation of construction equipment and from construction and delivery vehicles traveling to and from the development sites. Noise levels at a given location are dependent on the type and quantity of construction equipment being operated, the acoustical utilization factor of the equipment (i.e., the percentage of time the equipment is operating), the distance from the construction site, and any shielding effects (e.g., from structures such as walls or barriers). The location of the construction activities relative to noise-sensitive receptor locations and the amount and type of construction equipment and activities would vary widely over the course of the construction period.

Noise Control Measures

Construction noise is regulated by the requirements of the New York City Noise Control Code (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) and DEP's Notice of Adoption of Rules for Citywide Construction Noise Mitigation (also known as Chapter 28). These requirements mandate that specific construction equipment and motor vehicles meet specified noise emission standards; that construction activities be limited to weekdays between the hours of 7:00 AM and 6:00 PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. For weekend and after hour work, permits would be required, as specified in the New York City Noise Control Code. As required under the New York City Noise Control Code, a site-specific noise mitigation plan for construction under the Proposed Actions would be developed and implemented that may include source and path controls. This noise control plan is expected to include such measures as avoiding unnecessary evening construction and truck idling. A copy of the noise mitigation plan would also be kept at the construction site for compliance review by DEP and DOB.

Noise control measures would typically include a variety of source and path controls. In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with the New York City Noise Code:

- Equipment that meets the sound level standards specified in Subchapter 5 of the New York City Noise Control Code would be used from the start of construction.
- As early in the construction period as logistics would allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as pumps, compressors, and hoists (i.e., early electrification) to the extent feasible and practicable.

- Where feasible and practical, construction sites would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than 3 minutes at the construction site based upon New York City Local Law.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented to the extent feasible and practical:

- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations.
- Noise barriers would be utilized to provide shielding (i.e., the construction sites would have an 8-foot site perimeter barrier).

Potential Noise Effects during Construction

Although the overall construction duration on each of the development sites are anticipated to be approximately 27 to 36 months, the most noise-intensive construction activities (demolition, excavation, and infrastructure improvement activities) are anticipated to occur over a period of approximately 9 months on each development site under the Proposed Actions, as compared to the longer periods of approximately 9 to 11 months on each development site under the No-Action Condition. Although there are noise-sensitive receptor locations (i.e., residences) outside Yard near the Kent Avenue Site and Navy Street Site and that the development site locations for Projected Sites 2 and 3 are slightly closer to the BNY boundaries under the Proposed Actions as compared to the No-Action Condition, the difference in distance between any receptor and the nearest construction work area would not be reduced by half as would be necessary to result in an exceedance of the *CEQR Technical Manual* construction noise screening threshold of 3 dBA. In addition, to the extent practicable, best efforts would be made to stage construction activities within the BNY, and perimeter fencing would be erected to shield noise emitted from construction activities.

At Projected Sites 1 and 3, buildings including community facility uses could potentially be completed and occupied during subsequent construction at these sites and would consequentially have the potential to experience construction noise. Community facility uses are considered noise-sensitive receptors according to *CEQR Technical Manual* guidance; however, the expected uses at Sites 1 and 3 would likely not be as sensitive to noise as many common community facility uses such as elementary schools. Any school developed on these sites would be a high school or higher education facility with a focus on hands-on activities associated with the types of sectors/industries that exist elsewhere within the Navy Yard. So, while the potential community facility uses have been treated as noise receptors, they likely would not be any more noise sensitive than the other light industrial and commercial uses developed elsewhere on Sites 1 and 3. Notwithstanding the reduced noise-sensitivity, as described in Attachment I, "Noise," these uses would be required to provide between 28 and 31 dBA window/wall attenuation along with alternate means of ventilation. With this level of window/wall attenuation, interior noise levels at the buildings could exceed the level considered acceptable for a community facility use according to *CEQR Technical Manual* noise exposure guidelines if the buildings are completed and occupied during subsequent construction immediately adjacent. However, such exceedances, if they were to occur, would be limited in duration and of reduced magnitude as a result of the attenuation provided. Moreover, should construction occur proximate to a completed and occupied community facility use on Sites 1 or 3, the Applicants would control

the construction activities as well as such community facility space developed with the BNY and would have a vested interest in avoiding construction-related noise impacts at the community facility space. As such, it may be possible during construction to adjust the schedule of noise-intensive construction activities or alter construction means and methods to minimize disrupting critical activities in any occupied community facility space. Consequently, the potential for construction noise at completed and occupied noise-sensitive spaces at Projected Sites 1 and 3, should they be completed and occupied during subsequent construction, would not rise to the level of a significant adverse impact.

As described above in "Transportation," the construction worker commuting trips and truck deliveries would generally concentrate in the early morning and mid-afternoon periods on weekdays and outside of the commuting peak hours, and there would not be any incremental construction-related vehicle trips between the Proposed Actions and the No-Action Condition. Therefore, further mobile source analysis is not required. The approach and procedures for constructing the proposed buildings would be typical of the methods utilized in other building construction projects throughout New York City and, therefore, would not be considered out of the ordinary in terms of intensity. Therefore, noise levels expected to result from the construction facilitated by the Proposed Actions would be comparable to those from any typical construction site in New York City involving construction of a new building. Noise levels would be minimized by adherence to the New York City Noise Control Code and implementation of a noise mitigation plan as discussed above. Overall, noise associated with construction under the Proposed Actions would be similar to those under the No-Action Condition and would be controlled, temporary, and would not have the potential to result in a significant adverse noise impact.

Vibration

Construction activities have the potential to result in vibration levels that may in turn result in structural or architectural damage, and/or annoyance or interference with vibration-sensitive activities. In general, vibratory levels at a receiver are a function of the source strength (which in turn is dependent upon the construction equipment and methods utilized), distance between the equipment and the receiver, characteristics of the transmitting medium, and receiver building construction. Construction equipment operation causes ground vibrations, which spread through the ground and decrease in strength with distance. Vehicular traffic, even in locations close to major roadways, typically does not result in perceptible vibration levels unless there are discontinuities in the roadway surface. With the exception of the case of fragile and possibly historically significant structures or buildings, generally construction activities do not reach the levels that can cause architectural or structural damage, but can rise to levels that may be perceptible and annoying in buildings or structures (i.e., elevated subway structures) close to a construction site. Localized increases in vibration associated with construction facilitated by the Proposed Actions would be temporary. In addition, as discussed below in "Historic & Cultural Resources," construction under the Proposed Actions could result in adverse physical impacts on contributing buildings in the State/National Register of Historic Places (S/NR)-listed Brooklyn Navy Yard Historic District, which is located within 90 feet of all identified development sites, if a Construction Protection Plan (CPP) is not implemented. Therefore, to avoid potential inadvertent construction-period damage from ground-borne vibrations, falling debris, collapse, dewatering, subsidence, or construction equipment on that adjacent architectural resource, the Applicants would develop and implement a CPP in consultation with the New York City Landmarks Preservation Commission (LPC) and/or the New York State Historic Preservation Office (SHPO). For these reasons, the Proposed Actions would not result in any potential significant adverse vibration impacts during construction.

Other Technical Areas

Land Use & Neighborhood Character

According to the *CEQR Technical Manual*, a construction impact analysis for land use and neighborhood character is typically needed if construction would require continuous use of property for an extended duration, thereby having the potential to affect the nature of the land use and character of the neighborhood. A land use and neighborhood character assessment for construction impacts examines construction activities that would occur on the site (or portions of the site) and their duration. The analysis determines whether the type and duration of the activities would affect neighborhood land use patterns or neighborhood character. For example, a single property might be used for staging for several years, resulting in a "land use" that would be industrial in nature. Depending upon the nature of existing land uses in the surrounding area, the use of a single piece of property for an extended duration and its compatibility with neighboring properties may be assessed to determine whether it would have a significant adverse impact on the surrounding area.

Construction activities associated with the Proposed Actions would affect land uses in the Project Area temporarily, but would not alter surrounding land uses. As is typical with construction projects, during periods of peak construction activity there would be some disruption to the nearby area. There would be construction trucks and construction workers coming to the Yard. There would also be noise, sometimes intrusive, from demolition, excavation, and foundation activities, as well as trucks and other vehicles backing up, loading, and unloading. These disruptions would be temporary in nature and would have limited effects on land uses within the study area, particularly as most construction activities would take place within the BNY. In addition, throughout the construction period, measures would be implemented to control noise and dust on the development sites, including the erection of construction fencing and barriers. The fencing and barriers would reduce potentially undesirable views of the construction site and buffer noise emitted from construction activities. Since none of these impacts would be continuous or ultimately permanent, they would not create significant adverse impacts on land use patterns or neighborhood character in the area. Therefore, it is expected that such impacts would be temporary and would not impact neighborhood character. Therefore, no significant construction impacts to land use and neighborhood character are expected as a result of the Proposed Actions.

Socioeconomic Conditions

According to the *CEQR Technical Manual*, construction impacts to socioeconomic conditions are possible if a project would entail construction of a long duration that could affect access to and thereby viability of a number of businesses and if the failure of those businesses has the potential to affect neighborhood character. Construction activities associated with the Proposed Actions would not result in any significant adverse impacts to socioeconomic conditions. As noted above, most construction activities and staging would take place within the BNY. Construction of the With-Action buildings in the Yard would be of limited duration, and would be shorter than under No-Action Conditions. In some instances, construction would temporarily affect pedestrian and vehicular access on street frontages immediately adjacent to the development sites within the BNY; however, any lane and/or sidewalk closures are expected to be of very limited duration, lasting only a few months and are not expected to occur in front of entrances to any existing retail businesses. In addition, construction activities are not expected to expand beyond the boundaries of the BNY and would not obstruct major thoroughfares used by customers or businesses. Businesses would not be significantly affected by any temporary reductions in the amount of pedestrian

foot traffic or vehicular delays that could occur as a result of project-related construction activities. As such, no significant construction impacts to socioeconomic conditions are expected as a result of the Proposed Actions, and further assessment is not warranted.

Community Facilities

According to *CEQR Technical Manual* guidance, construction impacts to community facilities are possible if a community facility would be directly affected by construction (e.g., if construction would disrupt services provided at a facility or close a facility temporarily, etc.). No community facilities would be directly affected by construction under either the No-Action or With-Action Conditions in the Project Area. The construction sites would be surrounded by construction fencing and barriers that would limit the effects of construction on nearby facilities. Construction workers would not place any burden on public schools and would have minimal, if any, demands on libraries, day care facilities, and health care. Construction of the proposed buildings would not block or restrict access to any facilities in the area, and are not expected to materially affect emergency response times. NYPD and FDNY emergency services and response times would not be materially affected as a result of the geographic distribution of the police and fire facilities and their respective coverage areas. Therefore, no significant construction impacts to community facilities are expected a result of the Proposed Actions and further assessment is not warranted.

Open Space

According to *CEQR Technical Manual* guidance, construction impacts to open space are possible if open space resources are taken out of service for a period of time during the construction process. No publicly accessible open space resources would be disrupted during the proposed construction work, nor would access to any publicly accessible open space be impeded during construction. Furthermore, construction activities would be required to comply with the New York City Noise Code, which regulates construction noise to reduce the effects on noise sensitive receptors including public open space. As such, no construction impacts related to open space are expected as a result of the Proposed Actions, and further assessment is not warranted.

Historic & Cultural Resources

According to *CEQR Technical Manual* guidance, construction impacts may occur on historic and cultural resources if in-ground disturbances or vibrations associated with project construction could undermine the foundation or structural integrity of nearby resources. As detailed above, the identified development sites are all within 90 feet of the S/NR-listed Brooklyn Navy Yard Historic District. Therefore, the Applicants will prepare a CPP to avoid any inadvertent construction-related impacts to historic buildings in the vicinity of the development sites during demolition and construction activities associated with the Proposed Actions, including ground-borne vibration, falling debris, and accidental damage from heavy machinery. The CPP would meet the requirements specified in DOB's Technical Policy and Procedure notice (TPPN) #10/88[4] concerning procedures for avoidance of damage to historic structures resulting from adjacent construction. With the development and implementation of a CPP in consultation with LPC and/or SHPO,

[4] 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 S/NR or NYCLs resulting from adjacent construction, defined as construction within a lateral distance of 90 feet from the historic resource.

the Proposed Actions would have no significant adverse construction-related impacts on historic resources.

Hazardous Materials

According to *CEQR Technical Manual* guidance, a construction assessment is not needed for hazardous materials unless the construction activities would disturb a site or be located adjacent to a site containing hazardous materials. As discussed in **Attachment B, "Supplemental Screening,"** in the future with the Proposed Actions, all of the identified development sites will be located within areas subject to executed NYSDEC Site Management Plans (SMPs) and Environmental Easements, and therefore, would be required to investigate and remediate any potential contamination present on the site. As such, no significant adverse hazardous materials impacts would occur during construction of the Proposed Actions.

APPENDIX 1
ZONING TEXT

PROPOSED SPECIAL BROOKLYN NAVY YARD DISTRICT TEXT AMENDMENT

Matter underlined is new, to be added;
Matter in ~~strikeout~~ is to be deleted;
Matter with # # is defined in Section 12-10;
* * * indicates where unchanged text appears in the Zoning Resolution

* * *

ARTICLE I
GENERAL PROVISIONS

Chapter 1
Title, Establishment of Controls and Interpretation of Regulations

* * *

11-12
Establishment of Districts

* * *

11-122
Districts established

In order to carry out the purposes and provisions of this Resolution, the following districts are hereby established:

* * *

Special Purpose Districts

* * *

Establishment of the Special Bay Street Corridor District

In order to carry out the special purposes of this Resolution as set forth in Article XIII, Chapter 5, the #Special Bay Street Corridor District# is hereby established.

Establishment of the Special Brooklyn Navy Yard District

In order to carry out the special purposes of this Resolution as set forth in Article XIV, Chapter 4, the #Special Brooklyn Navy Yard District# is hereby established.

Establishment of the Special City Island District

In order to carry out the special purposes of this Resolution as set forth in Article XI, Chapter 2, the #Special City Island District# is hereby established.

* * *

Chapter 2
Construction of Language and Definitions

* * *

12-10
Definitions

* * *

Special Bay Street Corridor District (6/26/19)

The "Special Bay Street Corridor District" is a Special Purpose District designated by the letters "BSC" in which special regulations set forth in Article XIII, Chapter 5, apply.

Special Brooklyn Navy Yard District ([date of adoption])

The "Special Brooklyn Navy Yard District" is a Special Purpose District designated by the letters "BNY" in which special regulations set forth in Article XIV, Chapter 4, apply.

Special City Island District (2/2/11)

The "Special City Island District" is a Special Purpose District designated by the letters "CD" in which special regulations set forth in Article XI, Chapter 2, apply.

* * *

Chapter 4
Sidewalk Café Regulations

* * *

14-44
Special Zoning Districts Where Certain Sidewalk Cafes Are Permitted

#Enclosed# or #unenclosed sidewalk cafes# shall be permitted, as indicated, in the following special zoning districts, where allowed by the underlying zoning. #Small sidewalk cafes#, however, may be located on #streets# or portions of #streets# within special zoning districts pursuant to the provisions of Section 14-43 (Locations Where Only Small Sidewalk Cafes Are Permitted).

* * *

Brooklyn	#Enclosed Sidewalk Café#	#Unenclosed Sidewalk Café#
* * *	* * *	* * *
#Bay Ridge District#	Yes	Yes
#Brooklyn Navy Yard District#	Yes	Yes
#Coney Island District#	Yes	No
* * *	* * *	* * *

ARTICLE VI
SPECIAL REGULATIONS APPLICABLE TO CERTAIN AREAS

Chapter 2
Special Regulations Applying in the Waterfront Area

* * *

62-13
Applicability of District Regulations

* * *

The provisions of this Chapter shall not apply to the following Special Purpose Districts unless expressly stated otherwise in the special district provisions:

#Special Battery Park City District#

#Special Brooklyn Navy Yard District#

#Special Governors Island District#

* * *

ARTICLE XIV
SPECIAL PURPOSE DISTRICTS

* * *

Chapter 4
Special Brooklyn Navy Yard District (BNY)

144-00
GENERAL PURPOSES

The "Special Brooklyn Navy Yard District" established in this Resolution is designed to promote and protect public health, safety and general welfare. These goals include, among others, the following specific purposes:

(a) to encourage investment in the Brooklyn Navy Yard and facilitate the expansion of the Brooklyn Navy Yard as a modern manufacturing complex;

(b) to promote job growth;

(c) to allow for a mix of office, community facility, retail, and other commercial uses to complement the industrial and manufacturing facilities at the Brooklyn Navy Yard;

(d) to use traffic management planning to meet loading and parking needs including through alternate means of travel

(e) to better integrate the Brooklyn Navy Yard with the urban fabric of surrounding residential and mixed-use communities and to introduce publicly accessible open space areas within the perimeter of the Yard; and

(f) to promote the most desirable use of land in accordance with a well-considered plan and thus conserve the value of land and buildings, and thereby protect the City's tax revenues.

144-01
Definitions

Definitions specifically applicable to this Chapter are set forth in this Section and may modify definitions set forth in Section 12-10 (DEFINITIONS). Where a term in italics is defined in both Section 12-10 and in this Chapter, the definitions in this Chapter shall govern. The terms #pier#, #platform#, and #floating structure# shall have the meaning set forth in Section 62-11 (Definitions).

Barge Basin

#Barge Basin# shall mean that inlet from the East River identified on Map 2 in the Appendix to this Chapter as the Barge Basin.

Shoreline

The definition of #shoreline# set forth in Section 12-10 is modified to mean the line identified as the Brooklyn Navy Yard Shoreline in that certain survey dated [date of survey] on file in the Office of the Department of City Planning.

144-02
General Provisions

The provisions of this Chapter shall apply within the #Special Brooklyn Navy Yard District#. The regulations of all other Chapters of this Resolution are applicable, except as superseded, supplemented, or modified by the provisions of this Chapter or where excluded from application by the terms of such other Chapter. In the event of a conflict between the provisions of this Chapter and other regulations of this Resolution, the provisions of this Chapter shall control. However, in #flood zones#, in the event of a conflict between the provisions of this Chapter and the provisions of Article VI, Chapter 4 (Special Regulations Applying in Flood Zones), the provisions of Article VI, Chapter 4 shall control.

144-03
District Plan and Maps

The regulations of this Chapter are designed to implement the #Special Brooklyn Navy Yard District# Plan. The district plan includes the following maps in the Appendix to this Chapter:

Map 1	Special Brooklyn Navy Yard District and Subdistricts
Map 2	Barge Basin Subareas and Public Access Areas
Map 3	Navy Street Central Subarea
Map 4	Flushing Avenue Subareas and View Corridors

The maps are hereby incorporated and made part of this Resolution for the purpose of specifying locations where the special regulations and requirements set forth in the text of this Chapter apply.

144-04
Subdistricts and Subareas

In order to carry out the purposes and provisions of this Chapter, four subdistricts are established within the #Special Brooklyn Navy Yard District# comprised of three perimeter subdistricts and one core subdistrict for the remainder of the Yard. In addition, one subarea is established in the Navy Street Subdistrict, two subareas are established within the Flushing Subdistrict and two subareas are established within the Barge Basin Subdistrict.

Perimeter Subdistricts

Navy Street Subdistrict
Navy Street Central Subarea

Flushing Subdistrict

Flushing West Subarea

Flushing East Subarea

Barge Basin Subdistrict

Barge Basin East Subarea

Barge Basin West Subarea

Core Subdistrict

The boundaries of the Subdistricts are shown in Map 1 and the boundaries of the Subareas are shown on Maps 2 through 4 in the Appendix to this Chapter.

144-05
Applicability of Special Regulations Applying in the Waterfront Area

The provisions of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area) shall not apply in the #Special Brooklyn Navy Yard District# except as expressly provided in this Chapter.

144-06
Single Zoning Lot

For all purposes of this Chapter, the #Special Brooklyn Navy Yard District# shall be deemed to be a single #zoning lot# except where expressly provided otherwise in this Chapter. #Floor area# attributable to the #zoning lot# may be located anywhere on the #zoning lot# without regard to Subdistrict boundary lines, and all #floor area# located within a Subdistrict shall be subject to the #use# and #bulk# requirements of such Subdistrict.

144-10
SPECIAL USE REGULATIONS

The provisions of Article IV, Chapter 2 (Use Regulations) are modified within the #Special Brooklyn Navy Yard District# by the provisions of Section 144-11 (Additional Uses Permitted in M2-1 zones) through Section 144-13 (Additional Uses in M3-1 Districts).

144-11
Additional Uses Permitted in All Districts

The following modifications to the underlying district regulations shall be applicable throughout the #Special Brooklyn Navy Yard District#:

(a) Alcoholic beverages and breweries

The manufacture of alcoholic beverages and breweries, as specified in Section 42-15 (Use Group 18), shall be permitted, subject to the applicable performance standards, except that the provisions of Section 42-27 (Performance Standards Regulating Fire and Explosive Hazards) shall not apply.

(b) Water-dependent #uses#

The provisions of Section 62-21 (Classification of Uses in the Waterfront Area), Section 62-22 (Commercial Docking Facilities), Section 62-24 (Uses on Piers and Platforms), and Section 62-25 (Uses on Floating Structures) shall apply, provided that all #uses# existing on #piers# and #platforms# as of [date of adoption] shall be deemed conforming #uses#.

(c) #Physical culture or health establishments#

#Physical culture or health establishments# shall be permitted as-of-right and. For the purposes of applying the underlying regulations, such #use# shall be considered a Use Group 9A #use#, and shall be within parking requirement category (PRC) B.

144-12
Additional Uses Permitted in M2-1 Districts

The provisions of Section 42-10 (USES PERMITTED AS-OF-RIGHT) shall be modified to permit the following uses in M2-1 Districts, subject to the requirements of Section 144-212 (Floor area limitations on additional uses):

(a) all Use Group 3A #uses#, as set forth in Section 22-13, not otherwise permitted by the underlying regulations other than #uses# containing sleeping accommodations; and

(b) Use Groups 6C, 9A, 10A and 12B, as set forth in Sections 32-15, 32-18, 32-19 and 32-21, respectively, all #uses# not otherwise permitted by the underlying regulations.

144-13
Additional Uses in M3-1 Districts

Within M3-1 Districts, the City Planning Commission may allow, by authorization, #schools#, colleges or universities, as listed in Use Group 3A, provided that the Commission finds that:

(a) such #school#, college or university has an academic program compatible with a tenant or industrial operation in the #Brooklyn Navy Yard Special District#; and

(b) the location of the #school#, college or university will not interfere with any industrial #use# or alter the essential industrial character of the #Special Brooklyn Navy Yard District#.

The Commission may impose appropriate conditions and safeguards to minimize adverse impacts effects on the character of the surrounding area.

144-20
SPECIAL BULK REGULATIONS

144-21
Floor Area Regulations

The #floor area# regulations of the underlying controls shall apply as modified by Sections 144-211 (Floor area ratio) through 144-213 (Floor area limitations on additional uses).

144-211
Floor area ratio
The maximum #floor area ratio# for all #uses# within the #Special Brooklyn Navy Yard Special District# shall be 2.0.

144-212
Floor area ratio calculations

Section 62-31 (Bulk Computations on Waterfront Zoning Lots) shall apply in the #Special Brooklyn Navy Yard District#.

144-213
Floor area limitations on additional uses

The additional #uses# allowed pursuant to Section 144-11 (Additional Uses Allowed in M2 Districts) shall be limited to 300,000 square feet of #floor area# within each Subdistrict where such additional #uses# are allowed, and the total #floor area# allocated to such additional #commercial uses# shall not exceed 100,000 square feet in each Subdistrict where the additional #uses# are allowed.

144-22
Yard Regulations

Section 43-20 (YARD REGULATIONS) and Section 43-31 (Other Special Provisions for Rear Yards) shall not apply in the #Special Brooklyn Navy Yard District#. In lieu thereof, no #yards# shall be required.

144-23
Height and Setback Regulations

The height and setback regulations set forth in Section 43-40 (HEIGHT AND SETBACK REGULATIONS) shall apply, except as modified by the regulations of this Section, inclusive.

144-231
Flushing East Subarea

(a) Wide street designation

For purposes of applying the height and setback controls, Flushing Avenue shall be deemed a #wide street#.

(b) Street wall location

The #street wall# of any #development# or horizontal #enlargement# within the Flushing East Subarea shall be located at least 50 feet from the Flushing Avenue #street line#. The area between such #development# or horizontal #enlargement# and the adjoining #street# shall be improved as publicly accessible space in accordance with Section 144-30 (SPECIAL PUBLIC ACCESS AREA REGULATIONS).

(c) View corridors

View corridors with a minimum width of 50 feet shall be provided:

(1) within the Vanderbilt Avenue view corridor; and

(2) within one of the Clinton Avenue or Waverly Avenue view corridors.

The locations of such required view corridors are designated on Map 4 in the Appendix to this Chapter.

No #development# or horizontal #enlargement# may be located in the required view corridors, provided that gates and fencing, entry signage, sentry booths, and other entry and security measures may be located within such areas. Any gates or fencing shall be designed to allow for views into the #Special Brooklyn Navy Yard District#.

144-232
Barge Basin Subdistrict

In the Barge Basin Subdistrict, the underlying height and setback regulations shall not apply. In lieu thereof, all #buildings or other structures# shall comply with the provisions of this Section.

(a) Sidewalk widening and Barge Basin setback

(1) A sidewalk with a minimum width of 15 feet inclusive of any sidewalk located within the adjoining #street# shall be located along the Barge Basin Subdistrict. Any open area within the Barge Basin Subdistrict required to meet such minimum width shall be improved as a sidewalk to Department of Transportation standards, shall be at the same level as the adjoining public sidewalk, and shall be accessible to the public at all times. Any required

sidewalk widening line shall be deemed the #street line# for purposes of this Section 144-232.

(2) No portion of any #development# or #enlargement# other than a #cellar# level located completely below grade shall be located within forty feet of the eastern boundary of the #Barge Basin# in the Barge Basin East Subarea or within fifty feet of the western boundary of the #Barge Basin# in the Barge Basin West Subarea. The area between the #Barge Basin# and any #building# within the Barge Basin Subdistrict shall be improved as publicly accessible space in accordance with Section 144-30 (SPECIAL PUBLIC ACCESS AREA REGULATIONS).

(b) Base height

The maximum base height of any #building# prior to the setbacks required by paragraph (e) of this Section shall be 85 feet or six stories, whichever is less.

(c) Building wall continuity

(1) Any wall of any #building# #developed# or horizontally #enlarged# and facing the #Barge Basin# shall be located within eight feet of the setback distance required under paragraph (a)(ii) of this Section for a minimum of 70 percent of the length of the #building# frontage to a minimum height of 30 feet or two #stories# whichever is lower.

(2) The #street wall# of any #building# #developed# or horizontally #enlarged# in the Barge Basin East Subarea shall be located within eight feet of the #street line# for a minimum of 70 percent of the length of the #building# frontage to a minimum height of 30 feet or two #stories# whichever is lower

For purposes of this paragraph #buildings# that abut one another shall be considered a single #building#.

(d) Building articulation

For walls of any #building# #developed# or horizontally #enlarged# and facing the #Barge Basin# having a length of more than 200 feet and subject to the building wall continuity requirement of paragraph (c), a minimum of 20 percent and maximum of 50 percent of the surface area of the #building# wall up to the height of the ceiling of the second #story# or 30 feet, whichever is lower, shall either recess or project from the plane of the #building# wall by a minimum of three feet. Such recesses and projections shall be treated as permitted obstructions.

(e) Required setback

Any portion of a #building# that exceeds the maximum base height set forth in paragraph (b) shall set back at least 15 feet from any #street line,# at least 70 feet from the eastern boundary of the #Barge Basin# in the Barge Basin East Subarea, and at least 80 feet from the western boundary of the #Barge Basin# in the Barge Basin West Subarea. In addition, in any location where a #building# or portion of a #building# is set back at least 60 feet from the boundary of the #Barge Basin# for a length of at least 50 feet, such portion may rise without setback subject to the requirements of paragraphs (f) and (g), provided that the length of any such #building wall# shall be limited to 100 feet.

(f) Sky Exposure Planes

(i) Kent Avenue. Any portion of a #development# or horizontal #enlargement# facing Kent Avenue and located above the maximum base height set forth in paragraph (b) shall fit within a #sky exposure plane# of 5.6:1 commencing at the #street line# at such maximum base height.

(ii) Barge Basin. Any portion of a #building# facing the Barge Basin and located above the maximum base height set forth in paragraph (b) shall fit within a #sky exposure plane# of 5.6:1.

(iii) Southern Boundary. Any portion of a #building# facing the southern boundary of the Barge Basin Subdistrict shall fit within a #sky exposure plane# of 5.6:1 commencing at the southern boundary of the Subdistrict at a height of 85 feet above #base plane#.

For purposes of this paragraph, the setback lines set forth in paragraph (a)(ii) of Section 144-232 (Barge Basin Subdistrict) and the southern boundary of the Barge Basin Subdistrict shall be deemed #street lines#.

(g) Towers

#Buildings# may encroach on the #sky exposure planes# set forth in paragraph (f) and such portion of a #building# shall be deemed a tower, provided that (i) the #lot coverage# of such portion of the #building# shall not exceed, in the aggregate with any other #buildings# in the Subarea, 40 percent of the #lot area# of the relevant Subarea, and (ii) the width of the wall closest to Barge Basin of any tower portion shall not exceed 200 feet. For purposes of this paragraph, the Barge Basin East Subarea and the Barge Basin West Subarea shall each be considered a #zoning lot#.

(h) Permitted Obstructions

The provisions of Section 43-42 (Permitted Obstructions), as modified by paragraph (d) of this Section shall apply in the Barge Basin Subdistrict.

144-24
Shoreline Setback

Except as provided in Section 144-241 (Certification for resiliency measures) no #building# shall be located closer to the #shoreline# than 30 feet within the #Special Brooklyn Navy Yard District# other than (i) #buildings# used for #water dependent uses#, and (ii) #buildings# containing not more than 5,000 square feet of #floor area#.

The #shoreline# setback requirement set forth in Section 144-24 (Shoreline Setback) shall be eliminated or reduced in distance if the Chair of the City Planning Commission certifies to the Commissioner of the Department of Buildings or the Commissioner of the Department of Small Business Services, as applicable, that either:

(a) a #building# proposed to be located within such 30 foot setback area incorporates flood protection measures for the immediate area of the #building# that protect the #building# to a level that is fifty-eight inches above the mean high water line existing on [date of adoption]; or

(b) A district-wide resiliency plan for the #Special Brooklyn Navy Yard# has been adopted and the measures to be incorporated in connection with the #development# or already in place are in furtherance of the district-wide plan.

Measures shall be deemed protective if they alone or together with other measures in place at the time of construction protect the #building# from flooding to the elevation set forth in paragraph (a) of this Section or if they would support protection of the entire #Special Brooklyn Navy Yard District# to such elevation without further improvement of the portion of area directly seaward of the proposed #building#.

The Chairperson shall certify the application within 45 days of receipt of a complete application. Failure to certify within the 45-day period will release the Department of Buildings or the Department of Small Business Services from any obligation to withhold the excavation or building permit and authorize such agency to determine compliance with the provisions of this Section.

144-25
Modification of Bulk Regulations

Within the #Special Brooklyn Navy Yard District# the City Planning Commission may, by special permit, allow a modification of the #bulk# regulations of this Chapter and the underlying #bulk# regulations, except #floor area# regulations, provided the Commission finds that:

(a) such modifications further the needs and objectives of the #Special Brooklyn Navy Yard District#;

(b) such distribution of #bulk# will result in better site planning and will thus benefit both the residents, occupants or users of the #Special Brooklyn Navy Yard District# and the surrounding neighborhood;

(c) such distribution of #bulk# will permit adequate access of light and air to surrounding public access areas, #streets# and properties; and

(d) such distribution of #bulk# will not unduly increase the #bulk# of #buildings# in the #Special Brooklyn Navy Yard District# to the detriment of the occupants or users of #buildings# in the #Special Brooklyn Navy Yard District# or on nearby #blocks#.

The Commission may impose appropriate conditions and safeguards to assure that such modifications will not adversely affect the surrounding area.

144-30
SPECIAL PUBLIC ACCESS AREA REGULATIONS

Public access areas shall be provided in connection with #developments# located within the Subareas identified in this Section, inclusive, as applicable. For purposes of determining the amount of public access area required in the Navy Street Central Subarea, the Barge Basin East Subarea, and the Barge Basin West Subarea, each such Subarea shall be deemed a single #zoning lot#.

144-31
Required Public Access Areas

(a) Navy Street Central Subarea

Except as set forth in paragraph (g), public access area in an amount equal to not less than 15 percent of the #lot area# of the Navy Street Central Subarea shall be provided within the Navy Street Central Subarea in connection with any #development# or #enlargement#. The required public access area shall have a minimum dimension in all directions of 50 feet for at least eighty percent of the public access area and shall have no dimension of less than 30 feet for the remainder of the required public access area.

If the Navy Street Central Subarea is #developed# with more than one #building# or horizontally #enlarged# in phases, the public access area may be constructed in phases provided that each phase includes an amount of public access area proportionate to the amount of #lot area# being #developed# with #buildings# or horizontally #enlarged# in each phase by certification of the Chairperson of City Planning, as set forth in paragraph (e) of this Section.

(b) Flushing East Subarea

Except as set forth in paragraph (g), public access area with a minimum depth of 50 feet from the #street line# extending along the entire length of the #street wall line# of a #building# shall be provided within the Flushing East Subarea in connection with any #development# or #enlargement# and shall extend to any visual corridor required under

paragraph (c) of Section 144-231 (Flushing East Subarea) adjacent to the site of the #development# or #enlargement# .

(c) Barge Basin East Subarea

Except as set forth in Paragraph (g), public access area in an amount of at least 30 percent of the #lot area# of Barge Basin East Subarea shall be provided within the Barge Basin East Subarea in connection with any #development# or #enlargement#.

The Barge Basin East Subarea public access area shall consist of:

(i) a pedestrian esplanade with a seaward edge contiguous with the eastern edge of the #Barge Basin# and a minimum width, measured from such edge, of 40 feet;

(ii) a pedestrian connection with a minimum width of 30 feet located along the shared boundary between the Barge Basin East Subarea and the contiguous property to the northeast connecting the Kent Avenue and eastern portion of the pedestrian esplanade required by clause (i);

(iii) a pedestrian connection with a minimum width of 60 feet located within 150 feet of the southern boundary of the Barge Basin East Subarea connecting Kent Avenue and the pedestrian esplanade required by clause (i); and

(iv) such supplemental publicly accessible space contiguous to one or more of the elements set forth above as may be required to achieve the required percentage of publicly accessible area.

If the Barge Basin East Subarea is #developed# with more than one #building# or horizontally #enlarged# in phases, the required public access area may be constructed in phases provided that each phase includes an amount of public access area proportionate to the amount of #lot area# being #developed# with #buildings# or horizontally #enlarged# in each phase, as set forth in paragraph (e) of this Section.

(d) Barge Basin West Subarea

Except as set forth in paragraph (g), public access area in an amount of at least 20 percent of the #lot area# of Barge Basin West Subarea shall be provided within such parcel in connection with any #development# or #enlargement#.

The Barge Basin West Subarea public access area shall consist of:

(i) a pedestrian esplanade with a seaward edge contiguous with the western edge of the #Barge Basin# and a minimum width measured from such edge of 50 feet;

(ii) an esplanade entry area at the southern end of the Barge Basin West Subarea having a minimum width of 60 feet and a minimum length of 30 feet measured parallel to western edge of the #Barge Basin#; and

(iii) such supplemental publicly accessible open space contiguous to one or more of the elements set forth above as may be required to achieve the percentage of publicly accessible area required by this paragraph.

If the Barge Basin West Subarea is #developed# with more than one #building# or horizontally #enlarged# in phases, the required public access area may be constructed in phases provided that each phase includes an amount of public access area proportionate to the amount of #lot area# being #developed# with #buildings# or horizontally #enlarged# in each phase, as set forth in paragraph (f) of this Section.

(e) Public Access Area Phasing in the Navy Street Central Subarea and in the Barge Basin East Subarea

Except in the Barge Basin West Subarea, where public access areas required under this Section may be phased, any such phased portion shall meet the following criteria:

i. The amount of public access area being provided in any phase shall be in proportion to the total public access requirement based on the area of the Subarea being #developed# or horizontally #enlarged# as compared to the #lot area# of the Subarea. Any public access area provided in an earlier phase in excess of the amount required for such phase may be applied to a later phase;
ii. The public access area being proposed in any phase shall not prevent the total amount of public access area required for a Subarea from being achieved;
iii. Any phased portion of the required public access area shall comply with the minimum widths and other dimensions required for the public access areas;
iv. Any phased portion of the required public access area shall connect directly to one or more of (i) a #street#, and (ii) an improved public access area; and
v. Planting shall be included within the phase.

(f) Public Access Area Phasing in the Barge Basin West Subarea

Where public access in the Barge Basin West Subarea is phased, any such phased portion shall meet the following criteria:

i. The public access area to be provided in the phase shall include the portion of the required public access area located between the #development# or horizontal #enlargement# and the Barge Basin;
ii. If the #development# or #enlargement# included in a phase is located within 100 feet the southern boundary of the Subarea, the public access area shall also include the required public access area between the southern boundary and the #development# or horizontal #enlargement#;
iii. The public access area being proposed in any phase shall not prevent the total amount of public access area required for a Subarea from being achieved;
iv. Any phased portion of the required public access area shall comply with the minimum widths and other dimensions required for the public access areas;
v. Any phased portion of the required public access area shall connect directly to one or more of (i) a #street#, (ii) a private street if the required public access area is required for the first phase of #development# or #enlargement#, and (iii) an improved public access area; and
vi. Planted areas shall be included within the phase.

(g) Exceptions to Public Access Area Requirements for Minor Developments

The public access area required under paragraphs (a) through (d) shall not apply to any #development# or #enlargement# adding #floor area# of an amount less than or equal to five percent of the #lot area# of the Subdistrict in which the Subarea is located, provided that the #use# that occupies such #floor area# is #accessory# to a Use Group 11, 16, 17, or 18 #use# or #uses# existing within the #Special Brooklyn Navy Yard District at the time of such #development# or #enlargement#. Any #development# or #enlargement# allowed pursuant to this paragraph (g) must be located at least fifty feet away from the #street line# in the Navy Street Central Subarea and the Flushing East Subarea, and may not be located in the areas where public access areas are required within the Barge Basin Subdistrict.

144-32
Design Requirements

The required public access areas in each Subarea shall comply with the following provisions:

(a) The required public access area shall be open to the sky, provided that #building# awnings, entrance canopies, solar shading devices, and similar structures attached to an adjoining #building# and extending over the public access area shall be permitted;

(b) The required public access area shall include planted areas;

(c) Except as set forth below in this Section, at least one linear foot of seating shall be provided for each 200 square feet of required public access areas;

(d) Public access area signage complying with the requirements of Section 37-751 (Public space signage systems) shall be located at all entry points to the public access areas.

The requirements of paragraphs (b) and (c) shall not apply to the public access areas required under paragraph (c)(ii) of Section 144-31 (Required Public Access Areas). Additional amenities including pathways, seating steps, entrances to adjoining #buildings#, artwork, maritime or industrial elements, tables, seating above the required minimum, lighting fixtures, litter receptacles, kiosks, children play areas, railings, drinking fountains, water features, planting and trees may be included in the public access areas and shall be permitted obstructions.

144-33
Additional Barge Basin Design Requirements

In addition to the requirements set forth in Section 144-32 (Design Requirements), required public access areas in the Barge Basin Subdistrict shall comply with the following provisions:

(a) The pedestrian esplanade around the #Barge Basin# and the pedestrian connections from Kent Avenue to the eastern pedestrian esplanade shall include a primary circulation path along the length of such elements with a minimum clear width of 10 feet.

(b) At least three different types of seating shall be provided, which may include moveable seating, fixed individual seats, fixed benches with and without backs, and design-feature seating such as seat walls, planter ledges, or seating steps.

144-34
Hours of Operation

All public access areas shall be open to the public from 6:00 a.m. to 10:00 p.m. from April 15th to October 31st and from 7:00 a.m. to 8:00 p.m. from November 1st to April 14th, except when required to be closed for repairs.

144-35
Maintenance

The owner of each applicable portion of a Subarea, or a ground tenant if the applicable portion is subject to a ground lease, shall be responsible for the maintenance and operation of the required public access area. Maintenance shall include, but not be limited to, necessary repairs, litter control and the care and replacement of vegetation. The owner or ground tenant of a public access area may temporarily close the smallest portion reasonably necessary for the shortest period of time reasonably necessary to make repairs or to mitigate hazardous or emergency conditions, or in connection with construction on adjacent areas.

144-36
Chairperson Certification of Waterfront Compliance and Phasing

No excavation or building permit shall be issued for any #development# or #enlargement# requiring the provision of public access area in the Navy Street Central Subarea, the Barge Basin East Subarea, or the Barge Basin West Subarea until the Chairperson of the City Planning Commission certifies to the Department of Buildings or Department of Small Business Services, as applicable, that a complete application has been submitted showing compliance with the provisions of Section 144-31 (Required Public Access Areas), 144-32 (Design Requirements), and for the Barge Basin East Subarea and the Barge Basin West Subarea Section 144-33 (Additional Barge Basin Design Requirements), including the requirements of Section 144-31(e) or 144-31(f) for any phased public access area.

Within 45 days of submission of such complete application, the Chairperson shall either certify that the proposed public access area complies with the requirements of this Section or disapprove such complete application in writing, citing the nature of any failure to comply. Failure to certify or disapprove such complete application within the 45-day period will release the Department of Buildings or the Department of Small Business Services from any obligation to withhold the excavation or building permit and authorize such agency to determine compliance with the provisions of this Section.

144-37
Timing of Public Access Areas

No temporary certificate of occupancy allowing for the actual occupancy by tenants or users of more than 10 percent of the #manufacturing floor area# in a #development# or horizontal #enlargement# resulting in a public access area requirement under Section 144-31 (Required Public Access Areas) shall be issued by the Department of Buildings or the Department of Small Business Services, as applicable, without the substantial completion of the public access area required for such #development# or horizontal #enlargement#, and no final certificate of occupancy allowing for the actual occupancy of any such #development# or horizontal #enlargement# shall be issued prior to the final completion of the required public access area.

144-40
MANDATORY DISTRICT PLAN ELEMENTS

The provisions of Section 144-40 (MANDATORY DISTRICT PLAN ELEMENTS) shall apply to new #developments# and horizontal #enlargements# within the #Navy Street Central Subarea, the Flushing East Subarea, and the Barge Basin East Subarea and the Barge Basin West Subarea subject to the requirements of Section 144-30 (SPECIAL PUBLIC ACCESS AREA REGULATIONS).

144-41
Ground Floor Streetscape Provisions

The provisions of this Section shall apply to #developments# and horizontal #enlargements# within the Special District Subareas subject to a public access area requirement under Section 144-30 (SPECIAL ACCESS AREA REGULATIONS), and shall apply to (a) #ground floor level street walls# more than 50 feet in length, (b) to #ground floor level# walls facing a public access area provided pursuant to Section 144-30 (SPECIAL PUBLIC ACCESS AREA REGULATIONS) more than 50 feet in length, and (c) #ground floor level# walls within 50 feet of the frontages set forth in clauses (a) and (b). For purposes of the Section, #ground floor level# shall have the meaning set forth in Section 37-311 (Definitions).

#Ground floor level walls# meeting the requirements of clauses (a) and (b) shall be deemed “primary street frontages” and #ground floor level walls# meeting the requirements of (c) shall be deemed “secondary street frontages”.

(a) Along #primary street frontages#

Along #primary street frontages#, at least 50 percent of the width of the #ground floor level# shall be occupied by #floor area#, that extends to a minimum depth of thirty feet, provided that the depth may be reduced to not less than fifteen feet in areas where there are no walls parallel to the building frontage or #street wall# within such lesser depth.

The portion of the #ground floor level street wall# allocated to such minimum #floor area# requirement shall be glazed in accordance with the following requirements:

(i) 50 percent of the surface area of such #street wall# and ground floor level walls, measured between a height of two feet above the level of the adjoining sidewalk or publicly accessible open area and a height of 12 feet above the average level of the sidewalk or public access area immediately adjacent to the #building# façade where the #use# adjacent to the #building# wall is a #community facility use# or a #commercial use# other than a #commercial use# listed in use Groups 11 or 16; and

(ii) 25 percent of the surface area of such #street wall# and ground floor level walls, measured between a height of two feet above the level of the adjoining sidewalk or publicly accessible open area and a height of 12 feet above the average level of the sidewalk or public access area immediately adjacent to the #building# façade where the #use# adjacent to the #building# wall is a #manufacturing use# or a #commercial use# listed in use Groups 11 or 16.

(c) Blank wall provisions along #primary# and #secondary street frontages#

Along both #primary# and #secondary street frontages#, any #street wall# width of 50 feet or more with no transparent elements on the #ground floor level# shall provide visual mitigation elements in accordance with the provisions for Type 1 blank walls set forth in Section 37-361 (Blank wall thresholds).

144-50
SPECIAL PARKING AND LOADING REGULATIONS

The requirements of Article IV, Chapter 4 (Accessory Off-Street Parking and Loading Regulations) shall not apply in the #Special Brooklyn Navy Yard District# except as specifically set for the in this Section. In lieu thereof, the provisions of this Section shall apply.

144-51
Permitted Accessory Parking

#Accessory# parking shall be permitted in the #Special Brooklyn Navy Yard District# without limitation subject to Section 144-54 (Curb Cuts).

144-52
Required Accessory Off-Street Parking

The requirements of Section 44-21 (General Provisions) shall apply within in the #Special Brooklyn Navy Yard District#, provided that in the event that a Transportation Management Plan has been prepared in accordance with Section 144-56 (Transportation Management Planning), Section 44-21 (General Provisions) shall not be applicable and no parking shall be required.

144-53
Loading Berths

Loading berths are not required but are permitted within the #Special Brooklyn Navy Yard District# subject to Section 144-54 (Curb Cuts), and any loading berths provided shall be deemed required loading berths for purposes of determining the amount of #floor area# in any #building#.

144-54
Curb Cuts

Access to any #accessory# off-street loading berth and parking areas for a #development# within the Navy Street Central Subarea, the Flushing East Subarea, and the Barge Basin East Subarea shall be limited to one curb cut from the adjoining #street#.

Additional curb cuts may be added in the Barge Basin East Subarea upon certification by the Chairperson of the City Planning Commission to the Commissioner of Buildings or the Department of Small Business Services, as applicable, that an additional curb cut has been approved by the Commissioner of the Department of Transportation.

The Chairperson shall issue the certification within 45 days of receipt of a communication from the Department of Transportation approving an additional curb cut. Failure to certify within the 45-day period will release the Department of Buildings or the Department of Small Business Services from any obligation to withhold the excavation or building permit and authorize such agency to determine compliance with the provisions of this Section.

144-55
Bicycle Parking

The requirements of Section 44-60 (BICYCLE PARKING) shall apply in the #Special Brooklyn Navy Yard District#, provided that up to half of the required spaces may be provided as unenclosed bicycle parking spaces, and may be located anywhere on the #zoning lot#.

144-56
Transportation Management Planning

In lieu of the requirements of Section 44-21 (General Provisions), a Transportation Management Plan may be prepared for the #Special Brooklyn Navy Yard District# that documents: (i) existing parking within the Special District; (ii) parking and bicycle parking utilization rates; (iii) transportation mode choice; (iv) plans, if any, for additional parking within the Special District; (v) public transportation options in and around the Special District; (vi) indoor and outdoor bicycle parking facilities, including any covered outdoor bicycle spaces, and (vii) measures being employed and planned to incentivize alternate means of transportation. Any Transportation Management Plan shall be filed with the Department of City Planning and made available to the public via a website. The Transportation Management Plan shall be updated not less than every three (3) years with surveys or other data collection undertaken not less than annually to document changes in parking facilities and utilization; the average number of employees and visitors arriving at the #Special Brooklyn Navy Yard District# and their modes of arrival; bike parking availability and utilization of both open and enclosed facilities; transit options, and new technologies and strategies for managing the number of private vehicles accessing the #Special Brooklyn Navy Yard District#. Such updates shall be submitted to the Department of City Planning, and made available to the public via a website and the submission to the Department of City Planning shall be accompanied by an affidavit from the owner or ground tenant stating that the Transportation Management Plan remains in effect, or if it is no longer in effect the date that the Transportation Management Plan terminated.

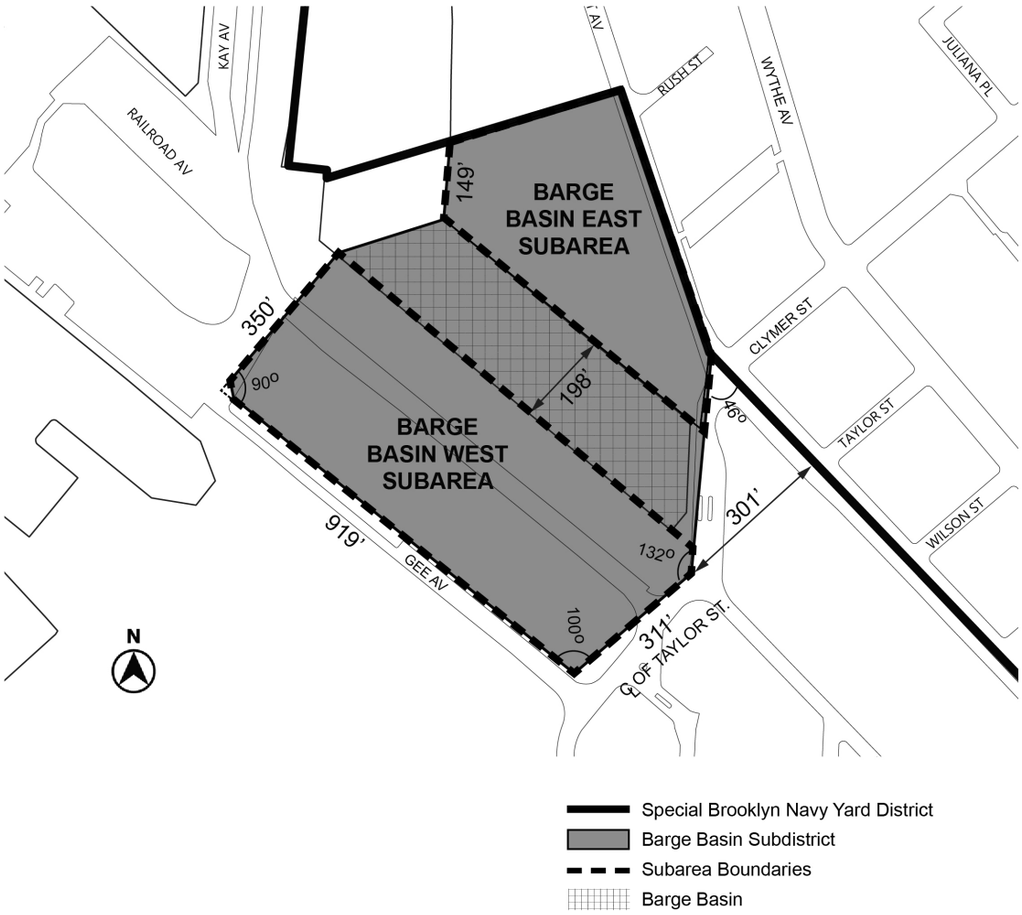
Any #development# or #enlargement# occurring after the date a Transportation Management Plan has terminated will be subject to the requirements of Section 44-21 (General Provisions).

APPENDIX A
Special Brooklyn Navy Yard District Plan

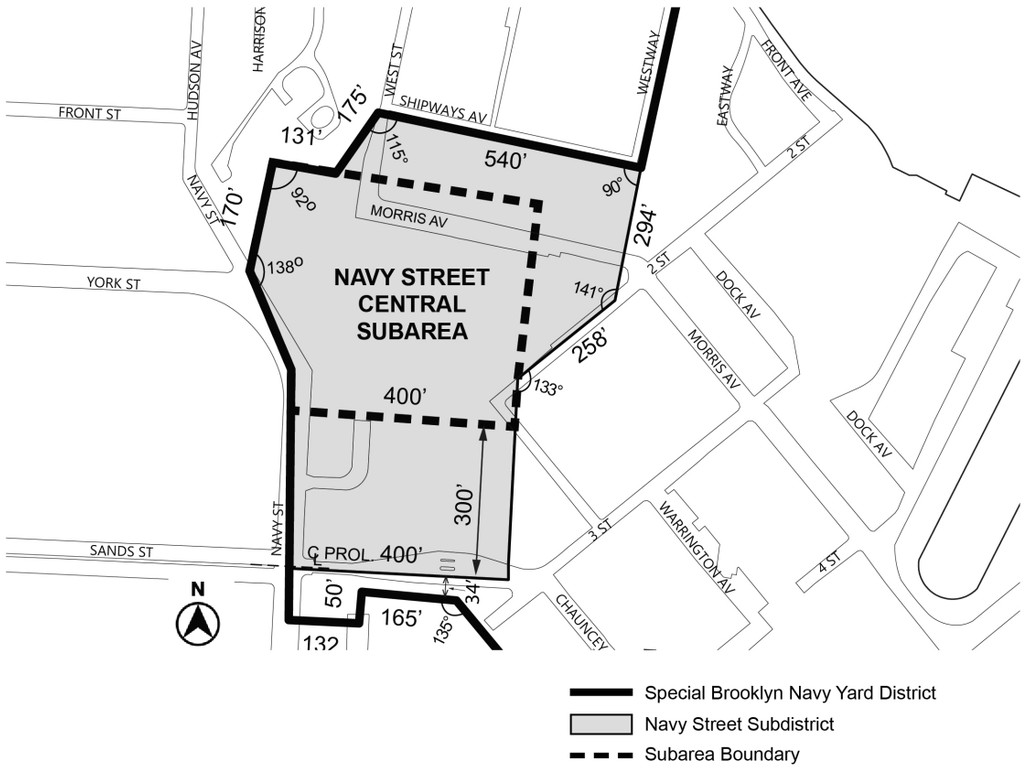
Map 1 - Special Brooklyn Navy Yard District and Subdistricts



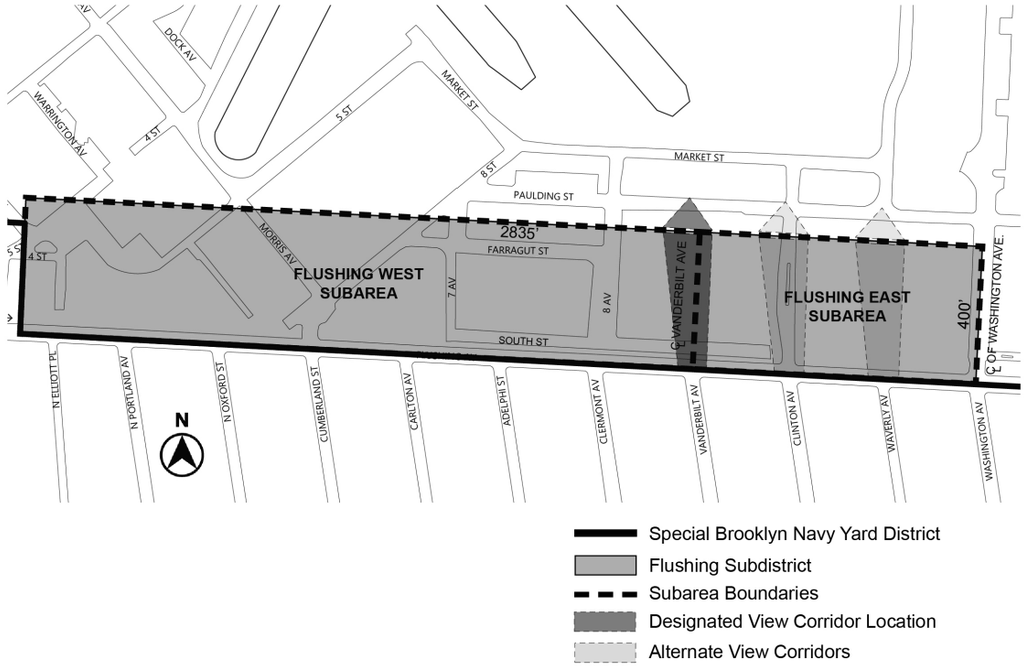
Map 2 - Barge Basin Subareas and Public Access Areas



Map 3 - Navy Street Central Subarea



Map 4 - Flushing Avenue Subareas and View Corridors



APPENDIX 2

WATERFRONT REVITALIZATION PROGRAM (WRP)
CONSISTENCY ASSESSMENT FORM (CAF)

FOR INTERNAL USE ONLY	WRP No. _____
Date Received: _____	DOS No. _____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's Coastal Zone, must be reviewed and assessed for their consistency with the *New York City Waterfront Revitalization Program (WRP)* which has been approved as part of the State's Coastal Management Program.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, the New York City Department of City Planning, or other city or state agencies in their review of the applicant's certification of consistency.

A. APPLICANT INFORMATION

Name of Applicant: Building 77 QALICB, Inc.

Name of Applicant Representative: Shani Leibowitz, Brooklyn Navy Yard Development Corporation (BNYDC)

Address: Building 77, 141 Flushing Avenue, Suit 801, Brooklyn, NY 11205

Telephone: 718-796-2517 Email: SLeibowitz@bnydc.org

Project site owner (if different than above): Brooklyn Navy Yard Development Corporation

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The Applicant s seeking zoning map and text amendments (collectively, the "Proposed Actions") to facilitate certain recommendations of the Brooklyn Navy Yard Master Plan. The Project Area encompasses the majority of Brooklyn Block 2023, Lots 1 and 150 and is generally bounded by Kent Avenue to the east, Flushing Avenue to the south, and Navy Street to the west. The Proposed Actions include: (1) A zoning text amendment to create the Special Brooklyn Navy Yard District (the "Special District") with special use, bulk, parking and loading, and publicly accessible space regulations; and (2) A zoning map amendment to map the Special District over the Project Area and change an R6B, M1-2, and portions of an M3-1 district within the Project Area to an M2-1 district.

The Proposed Actions would introduce tailored zoning regulations to facilitate and refine the further development of a modern manufacturing campus at the Brooklyn Navy Yard (the "Yard" or "BNY") by the approximately 4.6 million square feet (sf) of zoning floor area projected to occur at the Yard over the next 10 to 15 years by rationalizing parking and loading controls, allowing the introduction of compatible community facility and commercial uses to complement the core industrial use of the Yard, establish public access areas, and modify height, setback, and other bulk controls in manners compatible with modern industrial development and the surrounding context. The analysis year for the Proposed Actions is 2030.

Refer to Attachment A, "Project Description," for more details.

2. Purpose of activity

The proposed Special BNY District is in furtherance of BNY 2030 and would acknowledge the Yard's unique character, tailoring the applicable zoning regulations to address certain site conditions. The Proposed Actions would allow the BNYDC to carry out the vision of BNY 2030, which include becoming a leader in vertical manufacturing development, enhancing industrial operations while integrating the Yard into the fabric of the surrounding communities, and enhancing the Yard's dynamic campus through innovative urban design. The proposed modifications to underlying use regulations would allow for limited community facility uses to be permitted as-of-right within the Yard, which would be in keeping with the the BNYDC's goal of ensuring that the local community benefits from the Yard's economic development initiatives and successes. New community facility uses, such as museums and academic institutions would open up and further integrate the Yard to the surrounding area and provide for unique and valuable learning opportunities. Underlying accessory parking regulations are outdated and inappropriate for the increasingly transit-accessible Yard and the increased transit- and non-auto travel patterns of existing and future Yard employees. In addition, providing the excessive amount of parking and loading pursuant to existing zoning would require a significant amount of land and building area, further reducing the BNYDC's flexibility to utilize the Yard to drive further job creation. Additionally, the Proposed Actions would provide publicly-accessible open space along the frontages of new developments in the Project Area's perimeter, including multiple open spaces, a public walkway, and upland connections.

Refer to Attachment A, "Project Description," for further discussion.

C. PROJECT LOCATION

Borough: Brooklyn Tax Block/Lot(s): Block 2023, Lots 1 & 150

Street Address: N/A

Name of water body (if located on the waterfront): East River

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

- ☐ City Map Amendment
- ☑ Zoning Map Amendment
- ☑ Zoning Text Amendment
- ☐ Site Selection – Public Facility
- ☐ Housing Plan & Project
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____
- ☐ Zoning Certification
- ☐ Zoning Authorizations
- ☐ Acquisition – Real Property
- ☐ Disposition – Real Property
- ☐ Other, explain: _____
- ☐ Concession
- ☐ UDAAP
- ☐ Revocable Consent
- ☐ Franchise

Board of Standards and Appeals ☐ Yes ☑ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit
  (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

- ☐ Legislation
- ☐ Rulemaking
- ☐ Construction of Public Facilities
- ☐ 384 (b) (4) Approval
- ☐ Other, explain: _____
- ☐ Funding for Construction, specify: _____
- ☐ Policy or Plan, specify: _____
- ☐ Funding of Program, specify: _____
- ☐ Permits, specify: _____

State Actions/Approvals/Funding

- ☐ State permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Federal Actions/Approvals/Funding

- ☐ Federal permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Is this being reviewed in conjunction with a Joint Application for Permits? ☐ Yes ☑ No

E. LOCATION QUESTIONS

1. Does the project require a waterfront site? ☑ Yes ☐ No
2. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters? ☑ Yes ☐ No
3. Is the project located on publicly owned land or receiving public assistance? ☑ Yes ☐ No
4. Is the project located within a FEMA 1% annual chance floodplain? *(6.2)* ☑ Yes ☐ No
5. Is the project located within a FEMA 0.2% annual chance floodplain? *(6.2)* ☑ Yes ☐ No
6. Is the project located adjacent to or within a special area designation? *See Maps – Part III of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).* ☑ Yes ☐ No

   ☑ Significant Maritime and Industrial Area (SMIA) (*2.1*)

   ☐ Special Natural Waterfront Area (SNWA) (*4.1*)

   ☑ Priority Martine Activity Zone (PMAZ) (*3.5*)

   ☐ Recognized Ecological Complex (REC) (*4.4*)

   ☐ West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) (*2.2, 4.2*)

F. WRP POLICY ASSESSMENT

Review the project or action for consistency with the WRP policies. For each policy, check Promote, Hinder *or* Not Applicable (N/A). *For more information about consistency review process and determination, see* ***Part I*** *of the NYC Waterfront Revitalization Program. When assessing each policy, review the full policy language, including all sub-policies, contained within* ***Part II*** *of the WRP. The relevance of each applicable policy may vary depending upon the project type and where it is located (i.e. if it is located within one of the special area designations).*

For those policies checked Promote *or* Hinder, *provide a written statement on a separate page that assesses the effects of the proposed activity on the relevant policies or standards. If the project or action promotes a policy, explain how the action would be consistent with the goals of the policy. If it hinders a policy, consideration should be given toward any practical means of altering or modifying the project to eliminate the hindrance. Policies that would be advanced by the project should be balanced against those that would be hindered by the project. If reasonable modifications to eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial, and if so, those adverse effects should be mitigated to the extent practicable.*

		Promote	Hinder	N/A
1	**Support and facilitate commercial and residential redevelopment in areas well-suited to such development.**	☐	☐	☑
1.1	Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.	☐	☐	☑
1.2	Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.	☐	☐	☑
1.3	Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.	☐	☐	☑
1.4	In areas adjacent to SMIAs, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.	☐	☐	☑
1.5	Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.	☐	☐	☑

		Promote	Hinder	N/A
2	**Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.**	☑	☐	☐
2.1	Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	☑	☐	☐
2.2	Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
2.3	Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.	☐	☐	☑
2.4	Provide infrastructure improvements necessary to support working waterfront uses.	☐	☐	☑
2.5	Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.	☑	☐	☐
3	**Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.**	☑	☐	☐
3.1.	Support and encourage in-water recreational activities in suitable locations.	☐	☐	☑
3.2	Support and encourage recreational, educational and commercial boating in New York City's maritime centers.	☐	☐	☑
3.3	Minimize conflicts between recreational boating and commercial ship operations.	☐	☐	☑
3.4	Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	☐	☐	☑
3.5	In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.	☑	☐	☐
4	**Protect and restore the quality and function of ecological systems within the New York City coastal area.**	☐	☐	☑
4.1	Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.	☐	☐	☑
4.2	Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.	☐	☐	☑
4.3	Protect designated Significant Coastal Fish and Wildlife Habitats.	☐	☐	☑
4.4	Identify, remediate and restore ecological functions within Recognized Ecological Complexes.	☐	☐	☑
4.5	Protect and restore tidal and freshwater wetlands.	☐	☐	☑
4.6	In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.	☐	☐	☑
4.7	Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	☐	☐	☑
4.8	Maintain and protect living aquatic resources.	☐	☐	☑

		Promote	Hinder	N/A
5	**Protect and improve water quality in the New York City coastal area.**	☐	☐	☑
5.1	Manage direct or indirect discharges to waterbodies.	☐	☐	☑
5.2	Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	☐	☐	☑
5.3	Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	☐	☐	☑
5.4	Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.	☐	☐	☑
5.5	Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.	☐	☐	☑
6	**Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.**	☑	☐	☐
6.1	Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.	☑	☐	☐
6.2	Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in *New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms*) into the planning and design of projects in the city's Coastal Zone.	☑	☐	☐
6.3	Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	☐	☐	☑
6.4	Protect and preserve non-renewable sources of sand for beach nourishment.	☐	☐	☑
7	**Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.**	☐	☐	☑
7.1	Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.	☐	☐	☑
7.2	Prevent and remediate discharge of petroleum products.	☐	☐	☑
7.3	Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	☐	☐	☑
8	**Provide public access to, from, and along New York City's coastal waters.**	☑	☐	☐
8.1	Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.	☑	☐	☐
8.2	Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	☑	☐	☐
8.3	Provide visual access to the waterfront where physically practical.	☑	☐	☐
8.4	Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	☑	☐	☐

		Promote	Hinder	N/A
8.5	Preserve the public interest in and use of lands and waters held in public trust by the State and City.	☐	☐	☑
8.6	Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.	☑	☐	☐
9	**Protect scenic resources that contribute to the visual quality of the New York City coastal area.**	☑	☐	☐
9.1	Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	☑	☐	☐
9.2	Protect and enhance scenic values associated with natural resources.	☐	☐	☑
10	**Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.**	☑	☐	☐
10.1	Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.	☑	☐	☐
10.2	Protect and preserve archaeological resources and artifacts.	☐	☐	☑

G. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: Shani Leibowitz, Brooklyn Navy Yard Development Corporation (BNYDC)

Address: Building 77, 141 Flushing Avenue, Suite 801, Brooklyn, NY 11205

Telephone: 718-796-2517 Email: SLeibowitz@brooklynnavyyard.org

Applicant/Agent's Signature: Shani Leibowitz

Date: 6/4/2021

Submission Requirements

For all actions requiring City Planning Commission approval, materials should be submitted to the Department of City Planning.

For local actions not requiring City Planning Commission review, the applicant or agent shall submit materials to the Lead Agency responsible for environmental review. A copy should also be sent to the Department of City Planning.

For State actions or funding, the Lead Agency responsible for environmental review should transmit its WRP consistency assessment to the Department of City Planning.

For Federal direct actions, funding, or permits applications, including Joint Applicants for Permits, the applicant or agent shall also submit a copy of this completed form along with his/her application to the NYS Department of State Office of Planning and Development and other relevant state and federal agencies. A copy of the application should be provided to the NYC Department of City Planning.

The Department of City Planning is also available for consultation and advisement regarding WRP consistency procedural matters.

New York City Department of City Planning
Waterfront and Open Space Division
120 Broadway, 31st Floor
New York, New York 10271
212-720-3525
wrp@planning.nyc.gov
www.nyc.gov/wrp

New York State Department of State
Office of Planning and Development
Suite 1010
One Commerce Place, 99 Washington Avenue
Albany, New York 12231-0001
(518) 474-6000
www.dos.ny.gov/opd/programs/consistency

Applicant Checklist

- ☐ Copy of original signed NYC Consistency Assessment Form
- ☐ Attachment with consistency assessment statements for all relevant policies
- ☐ For Joint Applications for Permits, one (1) copy of the complete application package
- ☐ Environmental Review documents
- ☐ Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.

APPENDIX 3

TRANSPORTATION PLANNING FACTORS (TPF) /
TRAVEL DEMAND FORECAST (TDF) MEMORANDUM

Philip Habib & Associates

Engineers and Planners • 102 Madison Avenue • New York, NY 10016 • 212 929 5656 • 212 929 5605 (fax)

Special Brooklyn Navy Yard District EAS

Transportation Planning Factors (TPF) / Travel Demand Forecast (TDF)

TECHNICAL MEMORANDUM

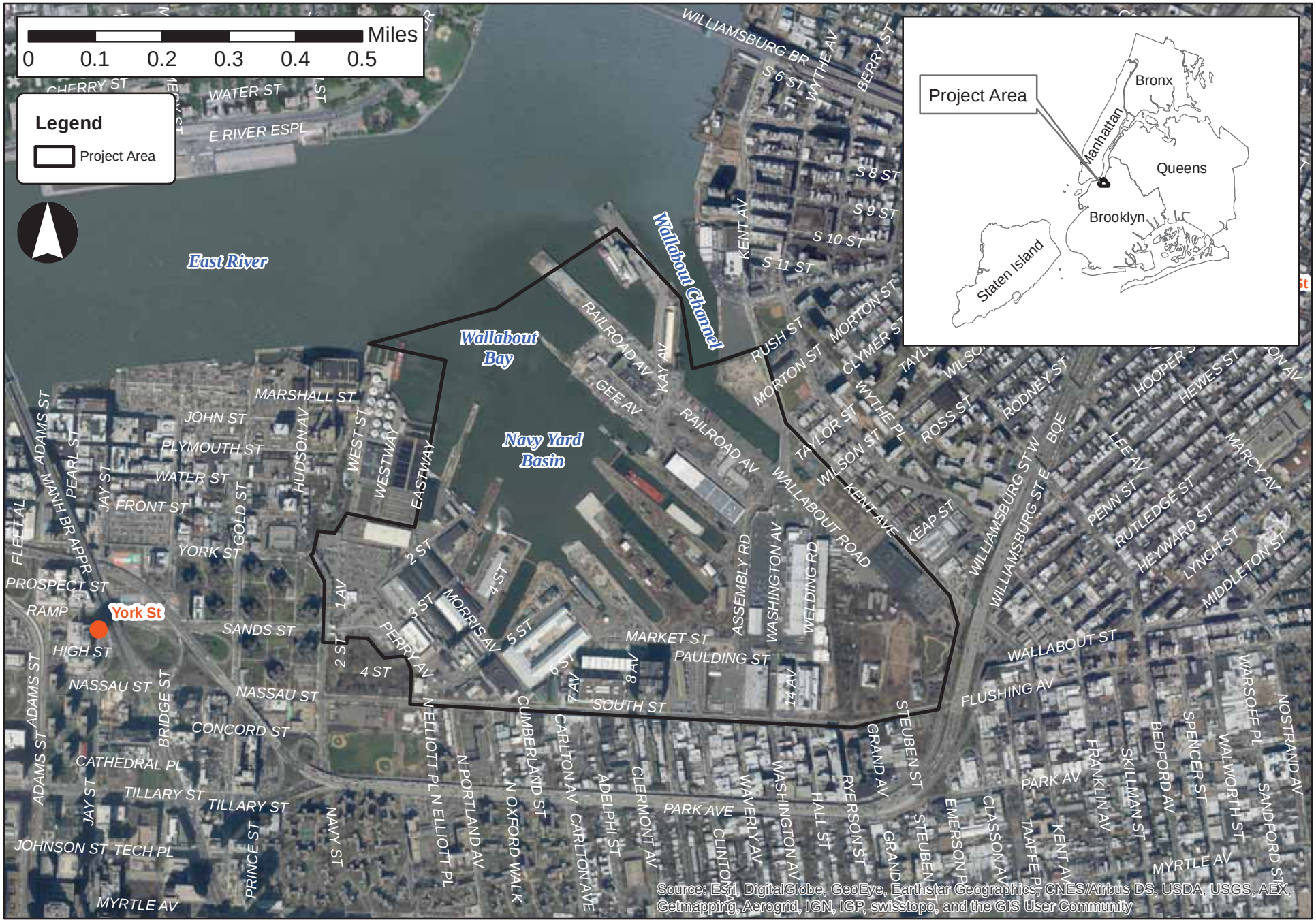
INTRODUCTION

Building 77 QALICB, Inc. (the "Applicant") is seeking zoning map and text amendments (collectively, the "Proposed Actions") to facilitate implementation of the recommendations of the Brooklyn Navy Yard Master Plan (*BNY 2030*). The Project Area encompasses Brooklyn Block 2023, Lots 1 and 50, and is generally bounded by Kent Avenue to the east, Flushing Avenue to the south, and Navy Street to the west (refer to **Figure 1**). The proposed zoning text amendments, discussed in detail in the EAS, would create a new Special Brooklyn Navy Yard (BNY) District with use, bulk, parking/loading, and open space regulations tailored to facilitate the development of a modern industrial campus. In addition to mapping the proposed Special BNY District, the Proposed Actions would rezone an approximately 36,500-square foot (sf) portion of the Yard that is currently zoned R6B to M1-2 zoning to make the zoning consistent with the goals of the Brooklyn Navy Yard Development Corporation (BNYDC). The proposed change would affect approximately 0.3 percent of the Project Area.

Three sites within the Yard that could facilitate the BNYDC's target expansion plan of increasing Yard employment to 30,000 by 2030 are being analyzed for reasonable worst-case development scenario (RWCDS) purposes: the Kent Avenue site ("Projected Site 1"), the Navy Street site ("Projected Site 2"), and the Flushing Avenue site ("Projected Site 3") (refer to **Figure 2**). Under both 2030 No-Action and With-Action conditions, it is assumed that the three sites would be developed; however, under With-Action conditions, the sites would include a greater variety of land uses, fewer parking spaces and loading docks, larger signage along the public frontages, rooftop signage, and unenclosed rooftop uses. This memorandum summarizes the transportation planning factors to be used for the analyses of traffic, transit, pedestrian, and parking conditions for the Proposed Actions.

REASONABLE WORST CASE DEVELOPMENT SCENARIO (RWCDS)

In order to assess the potential effects of the Proposed Actions, a RWCDS for both the future without the Proposed Actions (the "No-Action Condition") and the future with the Proposed Actions (the "With-Action Condition") is analyzed for an analysis year of 2030. In the No-Action Condition, the requested zoning map and text amendments would not be approved, and development within the Yard would continue to occur on an as-of-right basis. It is anticipated that a combined approximately 4.6 million sf of new industrial and commercial development would occur on Projected Sites 1, 2, and 3 in the No-Action Condition. As presented in **Table 1**, in the No-Action Condition it is expected that development on the three sites would comprise a total of 3,728,962 sf of industrial floor area and 883,000 sf of commercial floor area (including 731,127 sf of



Special Brooklyn Navy Yard District TPF Memo

Figure 1
Project Location



Source: WXY

Figure 2

BNY 2030 Master Plan Identified Near-Term Sites

office space and 151,874 sf of retail). No community facility uses would be built in the No-Action condition. Under the No-Action condition, 6,672 parking spaces would be provided.

Under the With-Action Condition, the Proposed Actions would be approved. As the Proposed Actions would not result in new development density beyond that which is permitted as-of-right, no changes to the sites' building massings would occur, and a combined approximately 4.6 million sf of non-parking floor area would be developed on the three sites. As presented below in **Table 1**, the Proposed Actions would facilitate the incremental development of 750,000 sf of community facility floor area and a net reduction of 672,191 sf of industrial floor area and 77,809 sf of commercial floor area, as compared to the No-Action Condition. For analysis purposes, the With-Action Condition community facility uses are assumed to include predominantly academic uses (650,000 gsf) on all three sites, as well as a museum (100,000 gsf) on Projected Site 2. Under the RWCDS, it is assumed that a larger proportion of the commercial uses would comprise non-office uses in the With-Action condition. As a result, the Proposed Actions would result in a net increase of 40,000 sf of health-club floor area and 50,000 sf of destination retail uses, as well as a net reduction of 91,874 sf of local retail uses and 75,937 sf of office uses. Additionally, the Special Permit text would eliminate parking requirements if a traffic demand management plan (the "TDM Plan") documenting modes of travel to the Yard, identifying and evaluating strategies to reduce reliance on automobiles, and encouraging the use of sustainable, alternative methods of transportation is maintained. Therefore, in accordance with the TDM plan, parking will be provided to meet the anticipated demand at each site. As the incremental development of certain uses resulting from the Proposed Actions would exceed the minimum development densities in Table 16-1 of the *City Environmental Quality Review* (CEQR) *Technical Manual*, a preliminary travel demand forecast was prepared.

TRANSPORTATION PLANNING FACTORS

In order to conduct a Level 1 Trip Generation Screening Assessment for the Proposed Actions in 2030, a travel demand forecast was prepared for the overall RWCDS projected development within the Yard. The forecast was prepared for a typical peak hour during the weekday AM, midday, school midday, and PM and Saturday midday periods. The transportation planning factors shown below in **Table 2** were developed based on standard criteria as per the 2020 *CEQR Technical Manual*; data provided by the New York City Department of Transportation (NYCDOT); data collected within the Yard; and factors developed for recent environmental reviews. These factors include trip generation rates, temporal and directional distributions, mode choice factors, and vehicle occupancies for the With-Action increment of approximately -672,191 gsf industrial, - 75,937 sf office, -91,874 sf local retail, +50,000 sf destination retail, +40,000 sf health club, +650,000 sf of academic uses, and a +100,000 sf museum. The approximately 650,000 sf of academic uses was assumed to include 400,000 sf of university uses (consisting of approximately 266,667 sf of space dedicated to undergraduate students and approximately 133,333 sf of space dedicated to graduate students) at Projected Sites 1 and 2 and an approximately 250,000-sf high school at Projected Site 3. In addition, it should be noted that the NYC Ferry Astoria Route stops near the center of the Project Area and provides access to Lower Manhattan, Western Queens, Roosevelt Island, and the Upper East Side (refer to **Figure 3**). As such, the transit mode shares were adjusted for the museum, academic and destination retail uses to include a two percent ferry share based on PHA surveys of over 1,000 DUMBO office employees in 2012.

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

Site	Use	No-Action Condition New Development (gsf)	With-Action Condition New Development (gsf)	Incremental New Development (gsf)
Projected Site 1 (Kent Avenue)	Industrial	2,036,635	1,825,011	-211,624
	Commercial	475,000	436,624	-38,376
	Office	*416,083*	*386,624*	*-29,459*
	Local Retail	*58,918*	*25,000*	*-33,918*
	Destination Retail	*0*	*25,000*	*+25,000*
	Health Club	*0*	*0*	*0*
	Community Facility	0	250,000	+250,000
	Academic	*0*	*250,000*	*+250,000*
	Museum	*0*	*0*	*0*
	Total	**2,511,635**	**2,511,635**	**0**
No-Action Site 2 (Navy Street Alternate) + Projected Site 2 (Navy Street)	Industrial	671,207	458,590	-212,617
	Commercial	180,000	142,617	-37,383
	Office	*121,744*	*92,616*	*-29,128*
	Local Retail	*58,256*	*25,000*	*-33,256*
	Destination Retail	*0*	*25,000*	*+25,000*
	Health Club	*0*	*0*	*0*
	Community Facility	0	250,000	+250,000
	Academic	*0*	*150,000*	*+150,000*
	Museum	*0*	*100,000*	*+100,000*
	Total	**851,207**	**851,207**	**0**
No-Action Site 3 (Flushing Avenue Alternate) + Projected Site 3 (Flushing Avenue)	Industrial	1,021,120	773,170	-247,950
	Commercial	228,000	225,950	-2,050
	Office	*193,300*	*175,950*	*-17,350*
	Local Retail	*34,700*	*10,000*	*-20,600*
	Destination Retail	*0*	*0*	*0*
	Health Club	*0*	*40,000*	*+40,000*
	Community Facility	0	250,000	+250,000
	Academic	*0*	*250,000*	*+250,000*
	Museum	*0*	*0*	*0*
	Total	**1,249,120**	**1,249,120**	**0**
Total Non-Parking gsf	**Industrial**	**3,728,962**	**3,056,771**	**-672,191**
	Commercial	**883,000**	**805,191**	**-77,809**
	Office	***731,127***	***655,190***	***-75,937***
	Local Retail	***151,874***	***60,000***	***-91,874***
	Destination Retail	***0***	***50,000***	***+50,000***
	Health Club	***0***	***40,000***	***+40,000***
	Community Facility	**0**	**750,000**	**+750,000**
	Academic	***0***	***650,000***	***+650,000***
	Museum	***0***	***100,000***	***+100,000***
	Total	**4,611,962**	**4,611,962**	**0**

Local Retail

The trip generation rates and temporal distributions for local retail uses were based on data from the *CEQR Technical Manual* and the 2016 *East New York Rezoning Proposal FEIS*. The modal splits were based on data

Table 2
Transportation Planning Factors

Land Use:	Local Retail	Office	Museum	High School		University	University	University	Health Club/Gym	Industrial Park	Destination Retail
				Students	Staff	Undergraduates	Graduates/Professiona	Faculty/Staff			
Size/Units:	-91,874 gsf	-75,937 gsf	100,000 gsf	250,000 gsf	250,000 gsf	266,667 gsf	133,333 gsf	400,000 gsf	40,000 gsf	-672,191 gsf	50,000 gsf
				1,188 students	198 staff					-1,120 employees	
Trip Generation:	(1)	(1)	(1)	(1)	(1)	(6)	(6)	(6)	(1)	(8)	(1)
Weekday	205	18.0	27.0	2.0	2.0	12.9	9.2	5.7	44.7	4.82	78.2
Saturday	240	3.9	20.6			7.16	4.42	1.63	26.1	4.82	92.5
	per 1,000 sf	per 1,000 sf	per 1,000 sf	per student	per staff	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf	per employee	per 1,000 sf
Temporal Distribution:	(1, 18)	(15, 18)	(1, 19)	(1,21)	(1,21)	(6, 20)	(6, 20)	(6, 20)	(1, 18)	(9)	(1, 3)
AM	3.0%	12.0%	1.0%	49.5%	40.0%	16.4%	7.5%	17.6%	4.0%	8.5%	3.0%
MD	19.0%	11.0%	16.0%	0.0%	0.0%	8.0%	5.7%	1.4%	9.0%	5.9%	9.0%
School MD	10.5%	14.3%	8.2%	39.5%	25.0%	8.0%	5.7%	1.4%	8.1%	6.7%	9.8%
PM	10.0%	11.0%	13.0%	10.0%	15.0%	7.1%	12.2%	20.7%	5.0%	8.5%	9.0%
Sat MD	10.0%	13.0%	17.0%	0.0%	0.0%	13.2%	10.7%	8.4%	9.0%	6.7%	11.0%
	(15,16)	(10, 12)	(16,22)	(5,16)	(11)	(14,16)	(14,16)	(10,11)	(7,16)	(12)	(16,17)
Modal Splits:	All Periods	AM/PM/SAT	MD	AM/MD/PM	SAT	All Periods	All Periods	AM/PM/SAT	MD	All Periods	All Periods	AM/MD/PM	SAT
Auto	11.0%	15.1%	2.0%	19.5%	19.5%	15.0%	28.7%	12.0%	12.0%	28.7%	2.0%	5.0%	32.7%	36.0%	40%
Taxi/Drop-Off	0.0%	2.3%	1.0%	10.0%	10.0%	0.0%	0.7%	2.0%	2.0%	0.7%	1.0%	1.0%	3.6%	1.0%	1%
Subway	2.00%	37.2%	7.0%	31.0%	31.0%	38.0%	46.3%	61.00%	61.00%	46.3%	7.0%	3.00%	43.6%	11.00%	8%
Bus	3.00%	11.6%	7.0%	7.0%	7.0%	20.0%	7.7%	9.0%	9.0%	7.7%	7.0%	6.0%	5.5%	27.0%	22%
Ferry	0.0%	1.2%	0.0%	2.0%	2.0%	2.0%	0.6%	2.0%	2.0%	0.6%	0.0%	0.0%	3.6%	2.0%	2.0%
Walk/Other	84.0%	32.6%	83.0%	30.5%	30.5%	25.0%	16.0%	14.0%	14.0%	16.0%	83.0%	85.0%	11.0%	23.0%	27%
	100.0%	100.0%	100%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100%	100.0%	100.0%	100.0%	100.0%
	(2)	(15)	(4)	(5)	(5)	(6)	(6)	(6)	(7)	(2)	(17)
In/Out Splits:	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out	In Out
AM	50% 50.0%	89.0% 11.0%	50% 50%	100% 0.0%	100% 0.0%	99% 1.0%	99% 1.0%	100% 0.0%	61% 39.0%	94% 6.0%	61% 39%
MD	47% 53.0%	48.0% 52.0%	63% 37%	50% 50.0%	50% 50.0%	49% 51.0%	82% 18.0%	70% 30.0%	55% 45.0%	39% 61.0%	55% 45%
School MD	47% 53.0%	48.0% 52.0%	63% 37%	0% 100.0%	0% 100.0%	49% 51.0%	82% 18.0%	70% 30.0%	55% 45.0%	39% 61.0%	55% 45%
PM	44% 56.0%	17.0% 83.0%	52% 48%	0% 100.0%	0% 100.0%	13% 87.0%	60% 40.0%	2% 98.0%	29% 71.0%	5% 95.0%	47% 53%
Sat MD	55% 45.0%	50.0% 50.0%	63% 37%			85% 15.0%	86% 14.0%	78% 22.0%	49% 51.0%	60% 40.0%	52% 48%
	(7)	(12)	(22)	(5)	(11,12)	(6)	(6)	(11,12)	(7)	(12)	(17)
Vehicle Occupancy:	Weekday Saturday			Weekday	Weekday						Weekday Saturday
Auto	2.00 2.00	1.33	2.67	1.75	1.10	1.11	1.11	1.10	1.65	1.25	2.00 2.70
Taxi	2.00 2.00	1.20	2.08	1.75	1.20	1.16	1.16	1.20	1.40	1.33	2.00 2.80
Truck Trip Generation:	(1)	(1)	(4)	(5)		(6)			(7)	(1)	(1)
	0.35	0.32	0.05	0.03		0.06			0.29	0.35	0.35
	0.04	0.01	0.01			0.003			0.29	0.04	0.04
	per 1,000 sf	per 1,000 sf	per 1,000 sf	per student		per 1,000 sf			per 1,000 sf	per 1,000 sf	per 1,000 sf
	(1)	(1)	(4)	(5)		(6)			(7)	(1)	(1)
AM	8.0%	10.0%	9.6%	9.6%		9.7%			9.6%	10.0%	8.0%
MD	11.0%	11.0%	11.0%	11.0%		9.1%			11.0%	11.0%	11.0%
PM	2.0%	2.0%	1.0%	1.0%		5.1%			1.0%	2.0%	2.0%
Sat MD	11.0%	11.0%	0.0%			9.1%			0.0%	11.0%	11.0%
	In Out	In Out	In Out	In Out		In Out			In Out	In Out	In Out
All Periods	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%		50.0% 50.0%			50.0% 50.0%	50.0% 50.0%	50.0% 50.0%

Table 2 (continued)
Transportation Planning Factors

Notes :

(1) *2020 City Environmental Quality Review (CEQR) Technical Manual.*
(2) *25 Kent Avenue EAS,* 2016.
(3) School midday temporal distribution based on parking patterns from the *Admirals Row Plaza FEIS, 2011.*
(4) *West Harlem Rezoning FEIS, 2012.*
(5) *Brooklyn Navy Yard Building 77 Academic Use Override EAS, 2018.*
(6) *NYU Core FEIS, 2012.*
(7) *East New York Rezoning Proposal FEIS, 2016.*
(8) Based on data for Land Use 130 (Industrial Park) from *ITE Trip Generation Manual, 10th Edition.*
(9) Based on temporal data provided by the Brooklyn Navy Yard Development Corporation, 2015.
(10) *Brooklyn Navy Yard Building 72 Zoning Override EAS, 2015*
(11) Based on AASHTO CTPP Reverse journey-to-work 5-Year (2012-2016) data for Brooklyn census tracts 15, 21, 23, 29.01, 185.01, 187, 191, 211, 537, 539, 543, 545, and 547.
(12) BNY Employee Surveys, 2019.
(13) 5% absentee rate applied to High School students
(14) *Steiner Studios Medua Campus FEIS, 2015*
(15) Based on data provided by NYCDOT
(16) Adjusted transit share to reflect area transportation characteristics. Ferry modal split based on PHA DUMBO employeee surveys, 2012.
(17) *Admirals Row Plaza FEIS, 2011.*
(18) School midday temporal distribution based on parking patterns from the *East New York Rezoning Proposal FEIS, 2016* .
(19) School midday temporal distribution based on parking patterns from the *Proposed No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FGEIS, 2004* .
(20) School midday temporal distribution assumed to be the same as the midday temporal distribution, based on parking patterns from the *NYU Core FEIS, 2012* .
(21) Adjusted based on afterschool programming information provided by BNYDC.
(22) *Pier 57 Redevelopment FEIS, 2013.*

Trasnportation Strategic Plan - Implemented Components



Source: BNYDC

provided by NYCDOT. The directional in/out splits and vehicle occupancy rates were based on data from the 2016 *25 Kent Avenue EAS* and the 2016 *East New York Rezoning Proposal FEIS*. Truck trip generation rates and temporal distributions were based on data from the *CEQR Technical Manual*. To reflect the mixed-use nature of the Proposed Development, it was assumed for the purposes of the travel demand forecast that 25 percent of all local retail trips would be linked to other proposed uses on the site.

Office

The trip generation rates and temporal distributions for office uses were based on data from the *CEQR Technical Manual*, data provided by NYCDOT, and the 2016 *East New York Rezoning Proposal FEIS*. The modal splits and vehicle occupancies were based on PHA office employee surveys conducted at the Yard in October and November 2019 and data from the 2015 *Brooklyn Navy Yard Building 72 Zoning Override EAS*. The directional in/out splits were based on data provided by NYCDOT. Truck trip generation rates and temporal distributions were based on data from the *CEQR Technical Manual*.

Museum

The trip generation rates and temporal distributions for the museum uses were based on data from the *CEQR Technical Manual* and the 2004 *Proposed No. 7 Subway Extension – Hudson Yards Rezoning and Development Program FGEIS*. The modal splits, directional in/out splits, vehicle occupancy rates and truck trip generation rates and temporal distributions were based on data from the 2013 *Pier 57 Redevelopment FEIS*. As noted above, the modal splits were adjusted to include a ferry share based on PHA surveys of over 1,000 DUMBO office employees in 2012.

High School

As shown in **Table 2**, the trip generation rates and temporal distributions for the high school uses were based on data from the *CEQR Technical Manual*. The temporal distributions were adjusted to reflect that approximately 20% of students and 30% of staff would utilize afterschool programs. The student modal splits, directional in/out splits and vehicle occupancy rates were based on data from the 2018 *Brooklyn Navy Yard Building 77 Academic Use Override EAS*. The staff modal splits and vehicle occupancy rates were based on AASHTO CTPP Reverse Journey to Work data for Brooklyn Census Tracts 15, 21, 23, 29.01, 185.01, 187, 191, 211, 537, 539, 543, 545, and 547. The truck trip generation rates and temporal distributions were also based on data from the 2018 *Brooklyn Navy Yard Building 77 Academic Use Override EAS*.

University

<u>Undergraduate and Graduate Students</u>

Travel demand for the RWCDS university use was forecasted separately for undergraduate and graduate students. The trip generation rates and temporal distributions for the undergraduate and graduate university uses were based on data from the 2012 *NYU Core FEIS*. The university student modal splits were based on data from the 2015 *Steiner Studios Media Campus FEIS*, which is located within the BNY, and were adjusted to include a ferry share based on PHA surveys of over 1,000 DUMBO office employees in 2012. The directional in/out splits, vehicle occupancy rates and truck trip generation rates were also based on data from the 2012 *NYU Core FEIS*.

Faculty/Staff

Similar to the university students, the university faculty/staff trip generation rates, temporal distributions, and directional in/out splits were based on data from the 2012 *NYU Core FEIS*. The staff modal splits were also based on AASHTO CTPP Reverse Journey to Work data for Brooklyn Census Tracts 15, 21, 23, 29.01, 185.01, 187, 191, 211, 537, 539, 543, 545, and 547, similar to high school staff.

Health Club/Gym

The trip generation rates and temporal distributions for the health club/gym uses were based on data from the *CEQR Technical Manual* and the 2016 *East New York Rezoning Proposal FEIS*. The health club/gym modal splits, directional in/out splits, vehicle occupancy rates and truck trip generation rates and temporal distributions were based on data from the 2016 *East New York Rezoning Proposal FEIS*. To reflect the mixed-use nature of the Proposed Development, it was assumed for the purposes of the travel demand forecast that 25 percent of all health club/gym trips would be linked to other proposed uses on the site.

Industrial Park

The trip generation rates for the industrial park uses were based on data from the *ITE Trip Generation Manual, 9th Edition* for Land Use 130 (Industrial Park). The temporal distributions were based on daily temporal distributions of employees and visitors entering and exiting the Navy Yard, provided by the BNYDC in April 2015.[1] The modal splits and vehicle occupancies were based on PHA industrial employee surveys conducted at the Yard in October and November 2019. The directional in/out splits and truck trip generation rates and temporal distributions were based on data from the 2016 *25 Kent Avenue EAS* and the *CEQR Technical Manual*.

Destination Retail

The trip generation rates and temporal distributions for destination retail uses were based on data from the *CEQR Technical Manual* and 2011 *Admirals Row Plaza FEIS*. The modal splits, directional in/out splits and vehicle occupancy rates were based on data from the 2011 *Admirals Row Plaza FEIS*, adjusted to include a ferry share based on PHA surveys of over 1,000 DUMBO office employees in 2012. Truck trip generation rates and temporal distributions were based on data from the *CEQR Technical Manual*.

TRIP GENERATION

According to the 2020 *CEQR Technical Manual* guidelines, a two-tier screening process is used to determine whether quantified analyses of any technical areas of the transportation system are necessary. A Level 1 screening is typically necessary if a proposed project has the potential to exceed either 50 vehicle trips, 200 transit trips, or 200 pedestrian trips during any given peak hour. If these thresholds are exceeded, a Level 2 screening assessment is required in order to ensure that there are not 50 vehicle trips, 50 bus trips, 200 subway/rail trips, or 200 pedestrian trips assigned to an individual transportation element (intersections, bus routes, subway stations, etc.) during any analysis peak hour. Based on the planning factors shown in **Table 2**,

[1] The April 2015 temporal distributions were subsequently verified based on recent Spring 2018 data provided by the BNYDC.

Table 3
Travel Demand Forecast

		Increment																							
Land Use:		**Local Retail**		**Office**			**Museum**		**High School**			**University**		**University**		**University**		**Health Club/Gym**		**Industrial Park**		**Destination Retail**		**Total**	
									Students		Staff	Undergraduates		Graduates/Professionals		Faculty/Staff									
Size/Units:		-91,874 gsf		-75,937 gsf			100,000 gsf		1,188		198	266,667 gsf		133,333 gsf		400,000 gsf		40,000 gsf		-672,191 gsf		50,000 gsf			
																				-1,120 employees					
Peak Hour Trips:				Employees		Visitors			Students		Staff														
	AM	-408		-166		0	28		1,176		160	566		94		404		54		-462		120		**1,566**	
	MD	-2,566		-154		0	432		0		0	278		72		32		122		-322		352		**-1,754**	
	School MD	-1,420		-198		0	222		940		100	278		72		32		110		-364		384		**156**	
	PM	-1,352		-154		0	352		238		60	246		152		474		68		-462		352		**-26**	
	Sat MD	-1,584		-42		0	352		0		0	254		64		58		72		-364		432		**-758**	
Person Trips:																									
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
AM	**Auto**	-22	-22	-23	-3	0	0	3	3	176	0	46	0	67	0	11	0	116	0	2	1	-142	-9	26	16	**260**	**-14**
	Taxi	0	0	-3	0	0	0	1	1	0	0	1	0	11	0	2	0	3	0	0	0	-16	0	0	0	**-1**	**1**
	Subway	-5	-5	-55	-8	0	0	5	5	447	0	74	0	342	3	57	0	187	0	1	1	-190	-12	8	6	**871**	**-10**
	Bus	-5	-5	-18	-2	0	0	1	1	235	0	12	0	52	0	8	0	31	0	2	1	-25	-1	21	12	**314**	**6**
	Ferry	0	0	-2	0	0	0	0	0	24	0	1	0	11	0	2	0	3	0	0	0	-16	0	2	0	**25**	**0**
	Walk/Other	-172	-172	-47	-5	0	0	4	4	294	0	26	0	80	0	14	0	64	0	28	18	-48	-3	18	11	**261**	**-147**
	Total	-204	-204	-148	-18	0	0	14	14	1,176	0	160	0	563	3	94	0	404	0	33	21	-437	-25	75	45	**1,730**	**-164**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
MD	**Auto**	-132	-150	-2	-2	0	0	53	31	0	0	0	0	16	17	7	2	0	0	3	3	-41	-64	70	58	**-26**	**-105**
	Taxi	0	0	0	0	0	0	27	16	0	0	0	0	3	3	1	0	0	0	1	1	-4	-7	2	2	**30**	**15**
	Subway	-24	-27	-5	-5	0	0	84	50	0	0	0	0	83	86	36	8	2	0	2	2	-55	-86	21	18	**144**	**46**
	Bus	-36	-41	-5	-5	0	0	19	11	0	0	0	0	13	13	5	1	2	0	4	3	-7	-10	51	42	**46**	**14**
	Ferry	0	0	0	0	0	0	5	3	0	0	0	0	3	3	1	0	0	0	0	0	-4	-7	4	4	**9**	**3**
	Walk/Other	-1,014	-1,142	-62	-68	0	0	84	49	0	0	0	0	19	19	9	2	20	8	56	47	-13	-24	44	36	**-857**	**-1,073**
	Total	-1206	-1360	-74	-80	0	0	272	160	0	0	0	0	137	141	59	13	24	8	66	56	-124	-198	192	160	**-654**	**-1,100**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
School MD	**Auto**	-73	-82	-15	-16	0	0	27	16	0	141	0	29	16	17	7	2	6	3	3	2	-47	-73	76	62	**0**	**101**
	Taxi	0	0	-3	-3	0	0	14	8	0	0	0	1	3	3	1	0	0	0	1	0	-6	-9	2	2	**12**	**2**
	Subway	-13	-16	-35	-37	0	0	43	25	0	357	0	45	83	86	37	8	10	5	2	1	-60	-94	24	20	**91**	**400**
	Bus	-21	-23	-11	-13	0	0	10	6	0	188	0	8	13	13	5	1	2	1	4	3	-7	-12	56	46	**51**	**218**
	Ferry	0	0	0	0	0	0	3	2	0	19	0	1	3	3	1	0	0	0	0	0	-6	-9	4	4	**5**	**20**
	Walk/Other	-560	-632	-31	-34	0	0	43	25	0	235	0	16	19	19	8	2	3	2	52	42	-16	-25	48	40	**-434**	**-310**
	Total	-667	-753	-95	-103	0	0	140	82	0	940	0	100	137	141	59	13	21	11	62	48	-142	-222	210	174	**-275**	**431**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
PM	**Auto**	-65	-84	-4	-20	0	0	36	33	0	36	0	17	3	26	11	8	3	133	1	2	-7	-144	60	68	**38**	**75**
	Taxi	0	0	0	-3	0	0	18	17	0	0	0	0	0	5	2	1	0	3	0	0	0	-16	2	2	**22**	**9**
	Subway	-13	-16	-10	-47	0	0	57	52	0	89	0	28	19	131	55	37	5	215	1	1	-11	-192	18	20	**121**	**318**
	Bus	-18	-23	-3	-15	0	0	13	12	0	48	0	5	3	19	8	5	0	35	1	3	0	-25	44	50	**48**	**114**
	Ferry	0	0	0	-2	0	0	4	3	0	5	0	0	0	5	2	1	0	3	0	0	0	-16	4	4	**10**	**3**
	Walk/Other	-499	-634	-8	-42	0	0	55	52	0	60	0	10	5	30	14	8	2	75	17	42	-3	-48	38	42	**-379**	**-405**
	Total	-595	-757	-25	-129	0	0	183	169	0	238	0	60	30	216	92	60	10	464	20	48	-21	-441	166	186	**-140**	**114**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
Sat MD	**Auto**	-96	-78	-3	-3	0	0	43	25	0	0	0	0	26	5	6	1	13	3	2	2	-71	-48	90	82	**10**	**-11**
	Taxi	0	0	0	0	0	0	22	13	0	0	0	0	5	0	1	0	0	0	0	0	-8	-6	2	2	**22**	**9**
	Subway	-18	-14	-8	-8	0	0	69	40	0	0	0	0	132	23	34	5	22	6	1	1	-94	-62	18	16	**156**	**7**
	Bus	-26	-21	-3	-3	0	0	16	9	0	0	0	0	19	3	5	1	3	1	2	2	-12	-9	50	46	**54**	**29**
	Ferry	0	0	0	0	0	0	4	3	0	0	0	0	5	0	1	0	0	0	0	0	-8	-6	4	4	**6**	**1**
	Walk/Other	-732	-599	-7	-7	0	0	68	40	0	0	0	0	31	5	9	1	8	2	31	31	-24	-16	61	57	**-555**	**-486**
	Total	-872	-712	-21	-21	0	0	222	130	0	0	0	0	218	36	56	8	46	12	36	36	-217	-147	225	207	**-307**	**-451**

Table 3 (continued)

Travel Demand Forecast

		Local Retail		Office				Museum		High School				University		University		University		Health Club/Gym		Industrial Park		Destination Retail		Total	
Vehicle Trips :				Employees		Visitors																					
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
AM	**Auto (Total)**	-12	-12	-18	-3	0	0	1	1	101	0	42	0	61	0	10	0	105	0	1	1	-114	-6	14	8	**191**	**-11**
	Taxi	0	0	-3	0	0	0	0	0	0	0	1	0	9	0	2	0	3	0	0	0	-13	0	0	0	**-1**	**0**
	Taxi Balanced	0	0	-3	-3	0	0	0	0	0	0	1	1	9	9	2	2	3	3	0	0	-13	-13	0	0	**-1**	**-1**
	Truck	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	-12	-12	0	0	**-9**	**-9**
	Total	-12	-12	-21	-6	0	0	1	1	103	2	43	1	70	9	12	2	108	3	2	2	-139	-31	14	8	**181**	**-21**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
MD	**Auto (Total)**	-67	-76	-2	-2	0	0	20	12	0	0	0	0	14	15	7	2	0	0	2	2	-32	-51	36	30	**-22**	**-68**
	Taxi	0	0	0	0	0	0	13	8	0	0	0	0	3	3	1	0	0	0	1	1	-4	-6	2	2	**16**	**8**
	Taxi Balanced	0	0	0	0	0	0	21	21	0	0	0	0	6	6	1	1	0	0	2	2	-10	-10	4	4	**24**	**24**
	Truck	-2	-2	-2	-2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	-13	-13	0	0	**-14**	**-14**
	Total	-69	-78	-4	-4	0	0	41	33	2	2	0	0	20	21	8	3	0	0	5	5	-55	-74	40	34	**-12**	**-58**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
School MD	**Auto (Total)**	-37	-42	-12	-13	0	0	10	6	0	81	0	26	14	15	7	2	6	3	2	1	-38	-58	38	32	**-10**	**53**
	Taxi	0	0	-3	-3	0	0	7	4	0	0	0	1	3	3	1	0	0	0	1	0	-6	-6	2	2	**5**	**1**
	Taxi Balanced	0	0	-6	-6	0	0	11	11	0	0	1	1	6	6	1	1	0	0	1	1	-12	-12	4	4	**6**	**6**
	Truck	-2	-2	-2	-2	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	-13	-13	0	0	**-14**	**-14**
	Total	-39	-44	-20	-21	0	0	21	17	2	83	1	27	20	21	8	3	6	3	4	3	-63	-83	42	36	**-18**	**45**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
PM	**Auto (Total)**	-34	-42	-4	-15	0	0	13	12	0	21	0	15	3	23	10	8	3	120	1	1	-6	-115	30	34	**16**	**62**
	Taxi	0	0	0	-3	0	0	9	8	0	0	0	0	0	5	2	1	0	3	0	0	0	-13	2	2	**13**	**3**
	Taxi Balanced	0	0	-3	-3	0	0	17	17	0	0	0	0	5	5	3	3	3	3	0	0	-13	-13	4	4	**16**	**16**
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-3	-3	0	0	**-3**	**-3**
	Total	-34	-42	-7	-18	0	0	30	29	0	21	0	15	8	28	13	11	6	123	1	1	-22	-131	34	38	**29**	**75**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	**In**	**Out**
Sat MD	**Auto (Total)**	-49	-39	-3	-3	0	0	16	9	0	0	0	0	23	5	6	1	12	3	1	1	-57	-38	34	30	**-17**	**-31**
	Taxi	0	0	0	0	0	0	11	6	0	0	0	0	5	0	1	0	0	0	0	0	-6	-6	0	0	**11**	**0**
	Taxi Balanced	0	0	0	0	0	0	17	17	0	0	0	0	5	5	1	1	0	0	0	0	-12	-12	0	0	**11**	**11**
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	-1	0	0	**-1**	**-1**
	Total	-49	-39	-3	-3	0	0	33	26	0	0	0	0	28	10	7	2	12	3	1	1	-70	-51	34	30	**-7**	**-21**

Note: 25% linked-trip credit applied to local retail and health club uses.

a travel demand forecast (Level 1 screening) was prepared for the overall RWCDS, and is shown in **Table 3**. A summary of the travel demand forecasts is shown below in **Table 4**.

Table 4
Travel Demand Summary

Peak Hour	Vehicle Trips			Person Trips																	
				Subway Trips[1]			Subway Shuttle Users			Bus Trips			Ferry Trips			Walk/Other Trips			Total Pedestrian Trips[2]		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Weekday AM	181	-21	160	871	-10	861	653	-8	645	314	6	320	25	0	25	261	-147	114	1,446	-151	1,295
Weekday MD	-12	-58	-70	144	46	190	108	35	143	46	14	60	9	3	12	-857	-1,073	-1,930	-667	-1,013	-1,680
Weekday School MD	-18	45	27	91	400	491	68	300	368	51	218	269	5	20	25	-434	-310	-744	-292	308	16
Weekday PM	29	75	104	121	318	439	91	239	330	48	114	162	10	3	13	-379	-405	-784	-210	27	-183
Saturday MD	-7	-21	-28	156	7	163	117	5	122	54	29	83	6	1	7	-555	-486	-1,041	-345	-450	-795

Notes:

1. Includes BNYDC shuttle service users.
2. Does not include ferry users utilizing the in-Yard ferry stop.
3. Vehicle trips do not include shuttle bus trips.

Traffic and Parking

As shown in **Figure 4**, there are four vehicular entrances to the Yard: (1) along the western frontage at Navy Street and Sands Street; (2) along the southern frontage at Cumberland Street and Flushing Avenue; (3) along the southern frontage at Waverly Avenue and Flushing Avenue; and (4) along the eastern frontage at Kent Avenue and Clymer Street. The origins and destinations for the vehicle trip assignments were based on the Projected Site locations, area arterials, and origin zip code data for existing Yard employees.

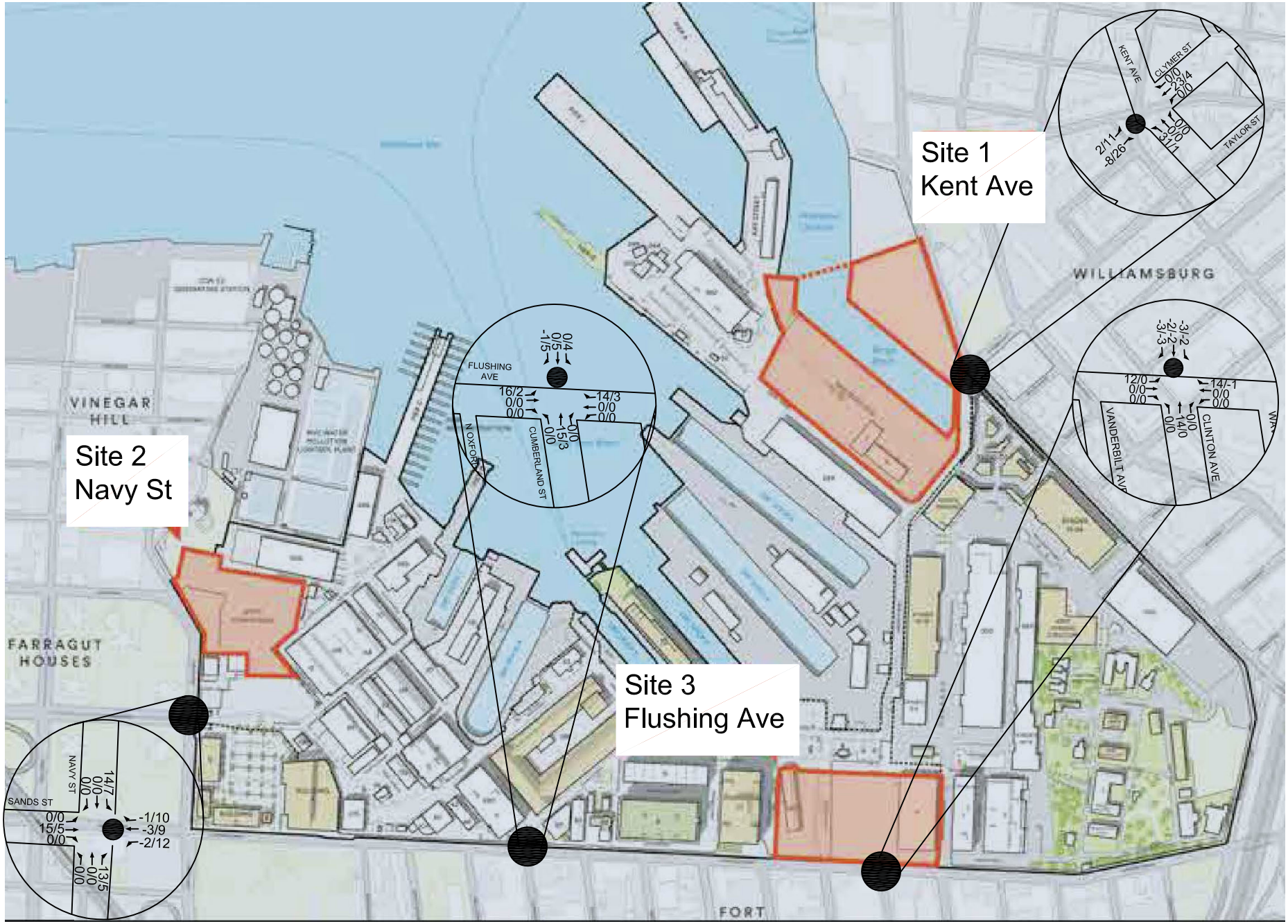
Traffic

Based on the factors outlined above, the RWCDS would generate approximately 160, -70, 27, 104, and -28 incremental vehicle trips (in and out combined) during the weekday AM, midday, school midday, and PM and Saturday midday peak periods, respectively (refer to **Table 4**). As the *CEQR Technical Manual* Level 1 screening threshold of 50 vehicle trips per peak hour is exceeded during the weekday AM and PM peak hours, a Level 2 screening assessment is required to determine if the development would result in an incremental increase of 50 or more vehicle trips at any given intersection.

The subsequent Level 2 vehicle trip assignments for the overall Yard are shown in **Figure 4** for the weekday AM and PM peak periods. As shown in **Figure 4**, as the vehicle trips would be distributed amongst the four vehicular entrances, no intersection is expected to experience an increase of 50 or more vehicles during any of the peak hours. Therefore, no significant adverse impacts are expected, and a detailed traffic analysis is not warranted.

Parking

As per the *CEQR Technical Manual*, a detailed parking assessment is not needed if the threshold for traffic analysis is not exceeded. Weekday hourly parking accumulations are provided below in **Tables 5a, 5b and 5c** for Projected Development Sites 1, 2, and 3, respectively. As shown in **Table 5a**, the parking demand at



LEGEND: ● - BNY Vehicular Entrance xx/xx/xx - AM/School MD/PM Traffic Volumes

Special Brooklyn Navy Yard District

Figure 4

Incremental Traffic Volumes

Table 5a
Projected Development Site 1 (Kent Avenue) - With-Action Weekday Parking Accumulation

	Industrial 3,042 Employees			Office 386,624 sf			Local Retail 25,000 sf			Academic - University 250,000 sf			Academic - University Staff 250,000 sf			Destination Retail 25,000 sf			Total		
	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation
			91			0			0			0			0			0			91
12-1 AM	13	14	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	14	90
1-2	6	13	83	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	13	83
2-3	9	13	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	13	79
3-4	12	7	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	7	84
4-5	36	13	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	13	107
5-6	129	26	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	129	26	210
6-7	194	49	355	8	0	8	0	0	0	0	0	0	4	0	4	1	0	1	207	49	368
7-8	207	46	516	22	1	29	2	1	1	4	0	4	15	0	19	2	1	2	252	49	571
8-9	307	19	804	84	11	102	3	3	1	44	0	48	65	0	84	7	4	5	510	37	1,044
9-10	165	73	896	37	9	130	7	5	3	14	3	59	21	4	101	11	2	14	255	96	1,203
10-11	114	78	932	13	8	135	7	3	7	12	5	66	6	6	101	13	7	20	165	107	1,261
11-12	100	85	947	6	16	125	7	6	8	13	8	71	5	15	91	15	11	24	146	141	1,266
12-1 PM	88	138	897	5	6	124	19	22	5	13	11	73	0	0	91	18	15	27	143	192	1,217
1-2	117	105	909	6	7	123	15	8	12	8	16	65	3	3	91	15	14	28	164	153	1,228
2-3	100	157	852	54	59	118	11	12	11	13	11	67	4	2	93	19	16	31	201	257	1,172
3-4	90	189	753	13	38	93	5	8	8	5	18	54	6	13	86	14	16	29	133	282	1,023
4-5	85	208	630	10	32	71	6	8	6	5	32	27	5	12	79	14	16	27	125	308	840
5-6	16	310	336	15	72	14	10	12	4	8	19	16	2	75	6	15	17	25	66	505	401
6-7	48	146	238	5	16	3	6	6	4	8	12	12	3	8	1	14	14	25	84	202	283
7-8	39	78	199	4	5	2	4	6	2	4	12	4	2	2	1	10	12	23	63	115	231
8-9	20	44	175	2	4	0	3	4	1	4	8	0	1	2	0	6	14	15	36	76	191
9-10	19	46	148	0	0	0	1	2	0	4	0	4	0	0	0	3	14	4	27	62	156
10-11	2	24	126	0	0	0	0	0	0	0	4	0	0	0	0	1	4	1	3	32	127
11-12	1	36	91	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	37	91
Total	1,917	1,917		284	284		106	106		159	159		142	142		178	178		2,786	2,786	

Note: Overnignt parking use existing 2019 ratio 0.03 cars/employees to assuming in the future condition.

Table 5b
Projected Development Site 2 (Navy Street) - With-Action Weekday Parking Accumulation

	Industrial 764 Employees			Office 92,616 sf			Local Retail 25,000 sf			Academic - University Student 150,000 sf			Academic - University Staff 150,000 sf			Museum 100,000 sf			Destination Retail 25,000 sf			Total		
	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation
			23			0			0			0			0			0			0			23
12-1 AM	3	4	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	22
1-2	2	3	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	21
2-3	2	3	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	20
3-4	3	2	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	21
4-5	9	3	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	3	27
5-6	32	7	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	7	52
6-7	49	12	89	2	0	2	0	0	0	0	0	0	2	0	2	0	0	0	1	0	1	54	12	94
7-8	52	12	129	8	0	10	2	1	1	2	0	2	9	0	11	0	0	0	2	1	2	75	14	155
8-9	78	5	202	20	3	27	3	3	1	27	0	29	39	0	50	1	1	0	7	4	5	175	16	314
9-10	42	19	225	11	2	36	7	5	3	8	0	37	13	3	60	0	0	0	11	2	14	92	31	375
10-11	28	20	233	3	2	37	7	3	7	9	3	43	6	2	64	5	0	5	13	7	20	71	37	409
11-12	25	21	237	1	4	34	7	6	8	7	5	45	3	8	59	8	2	11	15	11	24	66	57	418
12-1 PM	22	34	225	2	2	34	19	21	6	8	6	47	0	1	58	20	12	19	18	15	27	89	91	416
1-2	29	26	228	1	2	33	15	8	13	5	10	42	2	2	58	9	9	19	15	14	28	76	71	421
2-3	26	39	215	13	14	32	11	12	12	8	6	44	2	0	60	10	6	23	19	16	31	89	93	417
3-4	22	48	189	3	9	26	5	8	9	3	11	36	4	11	53	8	10	21	14	16	29	59	113	363
4-5	21	53	157	2	8	20	6	8	7	3	19	20	3	9	47	8	10	19	14	16	27	57	123	297
5-6	4	78	83	4	17	7	9	12	4	5	12	13	1	45	3	13	12	20	15	17	25	51	193	155
6-7	13	38	58	1	4	4	6	6	4	5	10	8	2	4	1	10	12	18	14	14	25	51	88	118
7-8	9	20	47	1	4	1	4	6	2	2	7	3	1	1	1	5	12	11	10	12	23	32	62	88
8-9	6	11	42	0	1	0	3	4	1	2	5	0	0	1	0	1	12	0	6	14	15	18	48	58
9-10	5	12	35	0	0	0	1	2	0	2	0	2	0	0	0	0	0	0	3	14	4	11	28	41
10-11	1	5	31	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	4	1	2	11	32
11-12	0	8	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	9	23
	483	483		72	72		105	105		96	96		87	87		98	98		178	178		1,119	1,119	

Note: Overnignt parking use existing 2019 ratio 0.03 cars/employees to assuming in the future condition.

Table 5c
Projected Development Site 3 (Flushing Ave) - With-Action Weekday Parking Accumulation

	Industrial 1,289 Employees			Office 175,950 sf			Local Retail 10,000 sf			Health Club 40,000 sf			Academic - High School Staff 198 staff			Total		
	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation
			39			0			0			0			0			39
12-1 AM	5	6	38	0	0	0	0	0	0	0	0	0	0	0	0	5	6	38
1-2	3	5	36	0	0	0	0	0	0	0	0	0	0	0	0	3	5	36
2-3	4	5	35	0	0	0	0	0	0	0	0	0	0	0	0	4	5	35
3-4	5	3	37	0	0	0	0	0	0	0	0	0	0	0	0	5	3	37
4-5	15	5	47	0	0	0	0	0	0	0	0	0	0	0	0	15	5	47
5-6	55	11	91	0	0	0	0	0	0	0	0	0	0	0	0	55	11	91
6-7	83	21	153	3	0	3	0	0	0	0	0	0	0	0	0	86	21	156
7-8	88	19	222	15	0	18	1	0	1	2	1	1	5	0	5	111	20	247
8-9	130	8	344	38	5	51	2	2	1	1	1	1	43	0	48	214	16	445
9-10	70	31	383	20	4	67	3	2	2	2	3	0	4	0	52	99	40	504
10-11	48	33	398	6	3	70	3	1	4	2	2	0	0	0	52	59	39	524
11-12	42	36	404	3	7	66	3	2	5	2	2	0	0	0	52	50	47	527
12-1 PM	38	58	384	2	3	65	8	9	4	2	2	0	0	0	52	50	72	505
1-2	49	44	389	3	3	65	6	3	7	3	2	1	0	0	52	61	52	514
2-3	42	66	365	25	27	63	4	5	6	2	1	2	0	26	26	73	125	462
3-4	38	81	322	6	21	48	2	3	5	2	3	1	0	0	26	48	108	402
4-5	36	89	269	5	16	37	2	3	4	2	3	0	0	5	21	45	116	331
5-6	7	132	144	7	33	11	4	5	3	1	1	0	0	16	5	19	187	163
6-7	20	64	100	2	7	6	3	3	3	2	2	0	0	5	0	27	81	109
7-8	16	33	83	2	7	1	2	3	2	1	1	0	0	0	0	21	44	86
8-9	9	19	73	1	2	0	1	2	1	1	1	0	0	0	0	12	24	74
9-10	7	20	60	0	0	0	0	1	0	0	0	0	0	0	0	7	21	60
10-11	1	9	52	0	0	0	0	0	0	0	0	0	0	0	0	1	9	52
11-12	1	14	39	0	0	0	0	0	0	0	0	0	0	0	0	1	14	39
	812	812		138	138		44	44		25	25		52	52		1,071	1,071	

Note: Overnignt parking use existing 2019 ratio 0.03 cars/employees to assuming in the future condition.

Projected Development Site 1 would peak with approximately 1,266 spaces in the 11:00 AM – 12:00 PM period. In addition, the parking demand at Projected Development Site 2 would peak with approximately 421 spaces in the 1:00 PM – 2:00 PM period, and the parking demand at Projected Development Site 3 would peak with approximately 527 spaces in the 11:00 AM – 12:00 PM period (refer to **Tables 5b and 5c**).

As previously noted, the Special Permit text would eliminate parking requirements if a traffic demand management plan (the "TDM Plan") documenting modes of travel to the Yard, identifying and evaluating strategies to reduce reliance on automobiles, and encouraging the use of sustainable, alternative methods of transportation is maintained. The TDM Plan would establish a program of alternative transportation measures and would include ongoing survey and reporting criteria to assess the effectiveness of the plan. The TDM Plan is expected to evolve over time to respond to changes in travel patterns and to incorporate additional modes of transportation and technologies, with the goal of making additional parking at the Yard unnecessary. Surveys on travel modes, parking utilization, parking counts, and bicycle counts at the Yard would be conducted no less than every three years and made public. In accordance with the TDM plan, parking will be provided to meet the anticipated demand at each site.

In addition, it should be noted that there are currently approximately 2,017 parking spaces within the BNY available to employees and visitors. These 2,017 parking spaces would remain within the BNY under both No-Action and With-Action conditions. Based on data provided by BNYDC in early 2020 (pre-pandemic), up to approximately 1,600 parking spaces were used daily, for a parking utilization rate of approximately 80%.

Therefore, as the Special District TDM Plan will require that parking is provided to meet the anticipated demand at each site, and the existing parking at the BNY has a daily utilization rate of approximately 80%, no significant adverse impacts are expected, and a detailed parking analysis is not warranted.

Transit

Subway

According to the general thresholds used by the Metropolitan Transportation Authority (MTA) as specified in the 2020 *CEQR Technical Manual*, detailed transit analyses are not required if the proposed development is projected to result in fewer than 200 peak-hour subway/rail or bus transit riders. Transit analyses typically examine conditions during the weekday AM and PM commuter peak periods, as it is during these times that overall transit demand (and the potential for significant adverse impacts) is generally greatest.

As shown in **Figure 5**, there are a total of five subway stations located in proximity to the Yard. The York Street (F) and High Street (A,C) subway stations are located approximately 0.4-miles and 0.6-miles west of the Yard, respectively, the Atlantic Avenue-Barclays Center (2,3,4,5,B,D,N,R,Q,W, and Long Island Railroad (LIRR)) and the Clinton-Washington Avenues (G) subway station are located approximately 1.1-miles and 0.7-miles south of the Yard, respectively, and the Marcy Avenue (J,M,Z) subway station located approximately 0.7-miles east of the Yard. As shown in **Figure 3**, the BNYDC provides a free shuttle service for Yard employees on two separate routes. The DUMBO route connects the Yard to both the York Street (F) and High Street (A/C) stations and operated at seven-minute headway in peak hours and 15-minute headway off-peak in the first quarter of 2020, and the Atlantic Terminal route, which connects the Yard to the Atlantic Avenue-Barclays Center (2/3/4/5/B/D/N/Q/R and LIRR) and Clinton-Washington (G) stations and operated at 10-minute headway in peak hours and 15-minute headway off-peak during the same period. Frequency of service along both routes is expected to increase in the coming years. Based on employee surveys conducted at the Yard in October and November 2019, approximately 75 percent of employees who travel to the Yard

by subway utilize the shuttle service. Although shuttle frequency will increase along both routes by 2030, which is expected to result in an increase in the shuttle utilization along each route, it was conservatively assumed that 75 percent of future employees who travel to the Yard by subway in 2030 would also choose to utilize the shuttle service (refer to **Table 4**). As shown in **Table 4**, the Proposed Actions would generate an incremental increase of 645, 143, 368, 330, and 122 shuttle trips during the weekday AM, midday, school midday, PM and Saturday midday peak hours, respectively.

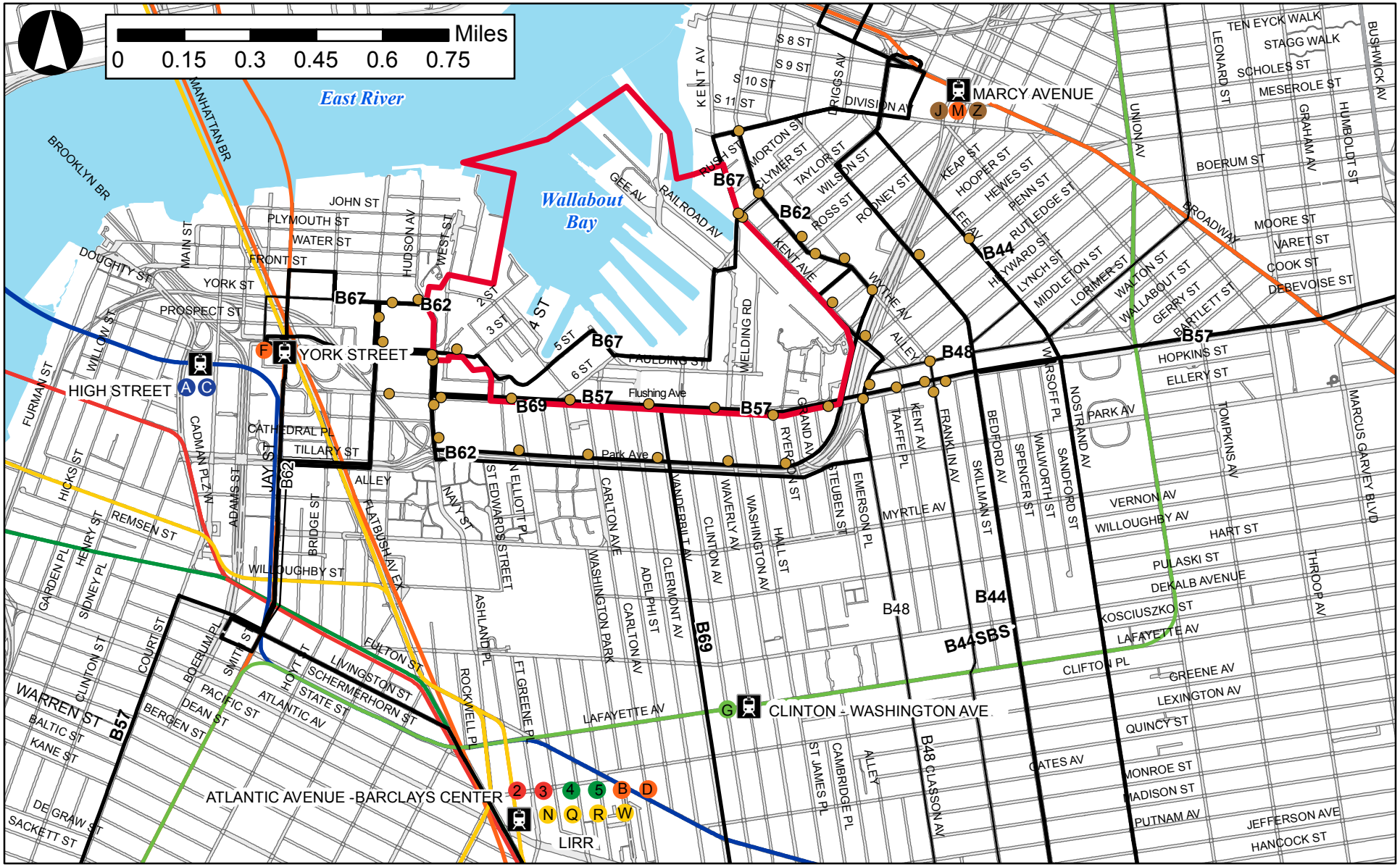
Consistent with the TDM plan, the BNY is committed to increasing frequency and capacity along both existing shuttle routes to meet ridership demands. Per the TDM plan, shuttle ridership and capacity will be monitored continuously and changes will be made to the system as needed. The existing shuttle system is not fully utilized, and over the next 10 years (prior to the 2030 build year) the BNY will gradually increase capacity along each route as ridership demand materializes, including increasing frequency by adding additional buses to one or more routes. The BNY will increase shuttle capacity prior to the 2030 build year, consistent with the methodology outlined in the TDM plan and the long-term BNY plan to have the shuttle system operate with a 5-minute headway on each route. As such, incremental shuttle bus trips are expected to be negligible (potentially up to a maximum of 1-2 shuttle bus trips per hour, as needed).

Additionally, as shown in **Figure 5**, the Yard is also served by several New York City Transit (NYCT) bus routes including the B44, B44 SBS, B48, B57, B62, B67, and B69. The B44 and B44 SBS routes operate to the east of the Yard and provide service between Sheepshead Bay and Williamsburg Bridge Plaza. The B48 bus route operates to the south of the Yard and provides local service between Greenpoint and Prospect-Lefferts Gardens, and the B57 bus route operates to the south and west of the Yard and provides local service between Maspeth, Queens and Red Hook, Brooklyn. The B62 operates to the east and west of the Yard and provides local service between Queens Plaza, Queens and Downtown Brooklyn, and the B67 and B69 provide local service between Kensington and Downtown Brooklyn. The B67 operates through the Yard, and contains in-Yard stops for Yard employees, and the B69 operates to the south and west of the Yard.

As shown in **Table 4**, the RWCDS would generate approximately 861 and 439 incremental subway person trips (in and out combined) during the weekday AM and PM peak periods, respectively. The RWCDS would also generate approximately 320 and 162 incremental bus person trips (in and out combined) during the weekday AM and PM peak hours, respectively. As the *CEQR Technical Manual* Level 1 subway thresholds would be exceeded during the weekday AM and PM peak hours, a Level 2 screening assessment is required to determine if the RWCDS would result in an incremental increase of 200 or more new peak-hour subway trips at any given station or on a given line. Additionally, as the *CEQR Technical Manual* Level 1 bus thresholds would be exceeded during the weekday AM and PM peak hours, a Level 2 screening assessment is required to determine if the RWCDS would result in an incremental increase of 50 peak-hour bus trips on a single route in the peak direction.

As shown below in **Table 6**, the York Street station, where the highest number of peak-hour trips are expected to occur, is expected to experience approximately 300 incremental trips in the AM peak hour. As the incremental demand would exceed the 200-trip *CEQR Technical Manual* threshold at the York Street station during the weekday AM peak hour, this station will be analyzed during the weekday AM peak hour in the EAS. The analysis will account for the key circulation elements (e.g., stairs and fare arrays) expected to be used by concentrations of new RWCDS demand. No other station exceeded the 200-trip *CEQR Technical Manual* threshold.

Based on origin zip code data for Yard employees that travel to/from the York Street Subway station, approximately 65 percent of subway trips at the York Street Station would be in the southbound direction



Legend

Project Area · Bus Stops · Bus Routes · Subway Stops · N Q R W · 2 3 · 4 5 · A C · B D F

and approximately 35 percent of trips would be in the northbound direction. Therefore, during the AM peak hour, there would be approximately 195 southbound and 105 northbound trips on the F subway line at the York Street Station during the weekday AM peak hour. During the AM peak hour, the northbound (Manhattan-bound) direction is the peak direction on the F subway line. Therefore, it is anticipated that the RWCDS would not generate 200 or more incremental subway trips on the F line in the peak direction during the AM peak hour. As such, the RWCDS is not expected to result in significant adverse impacts to subway line haul conditions and further analysis would not be warranted.

Table 6
Net Incremental Peak Hour Subway Trips by Station

Subway Station/Line Summary	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Peak Hour Incremental Subway Trips	871	-10	861	121	318	439
York Street (F)	305	-5	300	42	111	153
High Street (A,C)	200	-3	197	28	73	101
Atlantic Terminal (2,3)	43	0	43	6	16	22
Atlantic Terminal (4,5)	43	0	43	6	16	22
Atlantic Terminal (B,D)	43	0	43	6	16	22
Atlantic Terminal (N,Q,R)	70	-1	69	10	26	36
Clinton-Washington Avenues (G)	106	-1	105	15	39	54
Marcy Avenue (J,M,Z)	61	0	61	8	21	29
Total	871	-10	861	121	318	439

Bus

In addition, the estimated net incremental bus trips generated by the RWCDS during the weekday AM and PM peak hours are shown in **Table 7**. As previously mentioned, transit analyses examine conditions during the weekday AM and PM commuter peak periods, as it is during these times that overall transit demand (and the potential for significant adverse impacts) is generally greatest. **Table 7** shows the estimated net incremental bus trips generated by the Proposed Actions during the weekday AM and PM peak hours on each of the six bus routes that operate in close proximity to the Yard (B44, B48, B57, B62, B67, and B69). Bus trips were assigned based on proximity to each Projected Site, and current ridership patterns. As shown in **Table 7**, the B44 bus route is expected to experience 50 or more new bus trips during both the weekday AM and PM peak hours.

Table 7
Net Incremental Peak Hour Bus Trips by Route

Bus Line	AM			PM		
	In	Out	Total	In	Out	Total
Peak Hour Incremental Bus Trips	314	6	320	48	114	162
B44	170	3	**173**	26	62	**88**
B48	19	0	**19**	3	6	**9**
B57	38	2	**40**	6	14	**20**
B62	38	1	**39**	5	14	**19**
B67	25	0	**25**	4	9	**13**
B69	24	0	**24**	4	9	**13**
Total	314	6	320	48	114	162

Subsequently, the incremental ridership on the B44 was assigned by direction during the weekday AM and PM peak hours, in order to determine if either route will experience an incremental increase of 50 or more new bus trips in a single direction. The directional distributions, which were assigned based on current ridership patterns, are shown below in **Table 8**. As shown below in **Table 8**, the B44 bus route is expected to experience an incremental increase of greater than 50 bus trips in each direction during the weekday AM and PM peak hours, and will therefore be analyzed in the EAS.

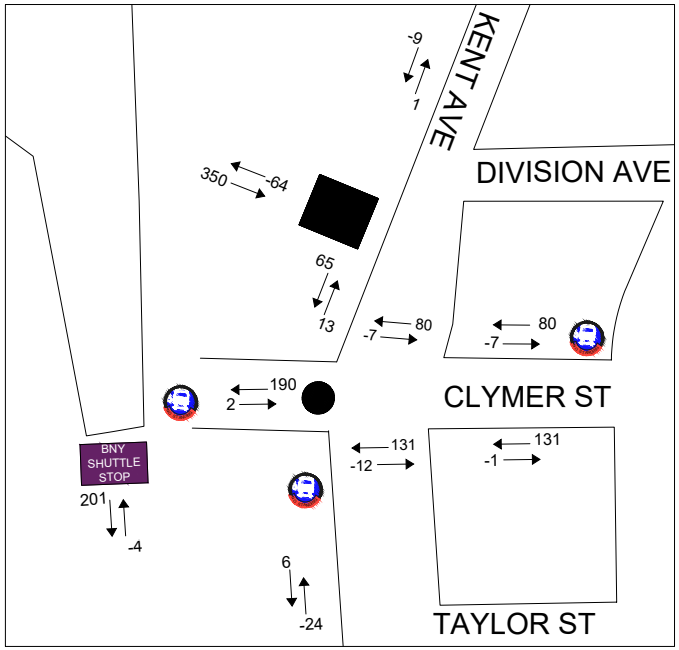
Table 8
Net Incremental Peak Hour Bus Trips by Direction

Bus Route	Direction	AM	PM
B44	Northbound	95	49
	Southbound	78	39
	Total	173	88

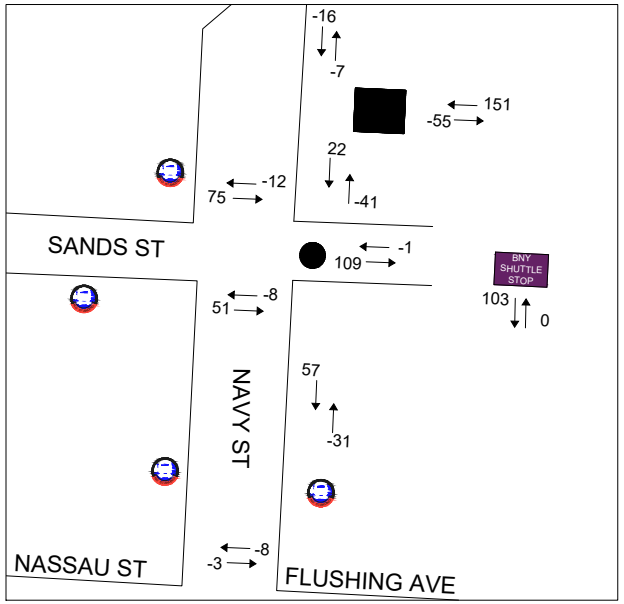
Pedestrians

According to the *CEQR Technical Manual*, detailed pedestrian analyses are not required if the proposed development is projected to result in fewer than 200 peak-hour pedestrian trips. The RWCDS would generate approximately 114, -1,930, -744, -784, and -1,041 incremental walk-only trips (in and out combined) during the weekday AM, midday, school midday, and PM and Saturday midday peak periods, respectively (refer to **Table 4**). As previously mentioned, subway trips and bus trips also include walk portions of the trip. Therefore, the RWCDS would generate a total of 1,295, -1,680, 16, -183 and -795 incremental pedestrian trips in the weekday AM, midday, school midday, and PM and Saturday midday peak periods, respectively (refer to **Table 4**). These pedestrian trips also include trips to/from BNY shuttle stops. As the total pedestrian trips exceed the *CEQR Technical Manual* threshold during the weekday AM peak hour, a more detailed analysis is warranted. The subsequent Level 2 pedestrian assignment for the weekday AM is shown below in **Figure 6**.

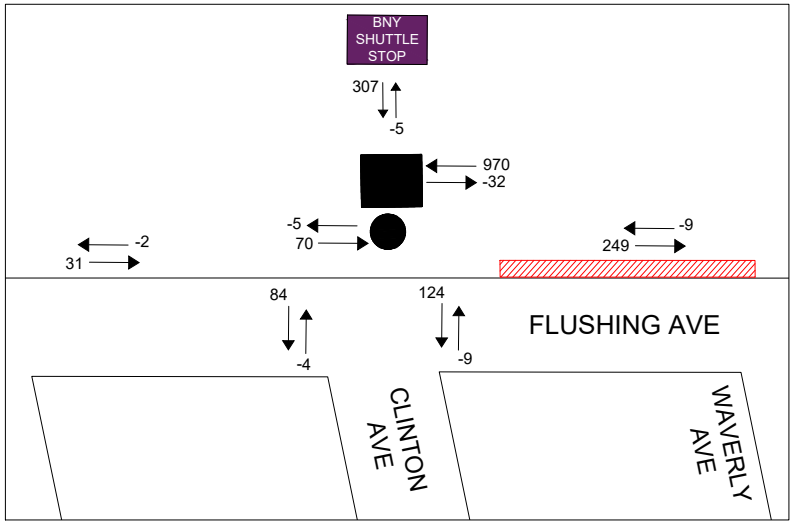
Figure 6 shows the assignment of project-generated pedestrian trips (walk-only, subway, and bus trips) to pedestrian elements (sidewalks, corner areas, and crosswalks) in the vicinity of each Projected Site, during the weekday AM peak hour. The origins and destinations for pedestrian trip assignments were based on Projected Site locations, the most direct paths between Yard and local transit routes, and employee and



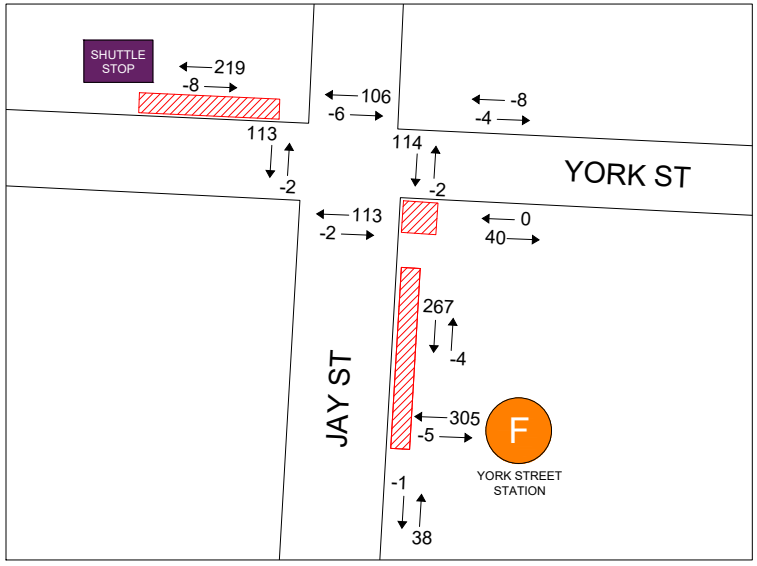
Site 1 - Kent Avenue Site



Site 2 - Navy Street Site



Site 3 - Flushing Avenue Site



York Street Station

LEGEND: ● - BNY Pedestrian Entrance ■ - Projected Development Site xx - AM Pedestrian Volumes ▨ - Analysis Location

Special Brooklyn Navy Yard District

Figure 6

Incremental Pedestrian Volumes

population density in proximity to the Yard. As shown in **Figure 6,** there are pedestrian entrances located both within the Yard for each Projected Site, as well as publically accessible entrances located along the adjacent frontages. The publically accessible entrances are located along Kent Avenue, Navy Street, and Flushing Avenue for Projected Sites 1, 2, and 3, respectively. In addition, there is a pedestrian entrance, with security checkpoint, located at the intersection of Flushing Avenue and Cumberland Street.

A total of four pedestrian elements, as shown in **Figure 6B** and listed below, would exceed the 200-trip *CEQR Technical Manual* threshold and have been selected for analysis during the weekday AM peak hour. The four analysis locations include three sidewalks and one corner.

Sidewalks:

1. North Sidewalk on York Street between Jay Street and Pearl Street
2. East Sidewalk on Jay Street between York Street and Prospect Street
3. North Sidewalk on Flushing Avenue between Clinton Avenue and Waverly Avenue

Corners:

1. York Street and Jay Street – Southeast corner

CONCLUSIONS

A transportation forecast and assignments were prepared for the RWCDS associated with the Proposed Actions. As shown in **Table 4**, the Level 1 *CEQR Technical Manual* threshold of 50 peak-hour incremental vehicle trips was exceeded during the weekday AM and PM peak hours. Therefore, a Level 2 traffic screening analysis was performed. As shown in **Figure 4**, no intersection is expected to experience an incremental increase of 50 or more vehicles during any of the analyzed peak hour periods. Therefore, no significant adverse impacts are expected, and a detailed traffic analysis is not warranted. As per the *CEQR Technical Manual*, a detailed parking assessment is not needed if the threshold for traffic analysis is not exceeded. In addition, per the Special District text and in accordance with the TDM plan, parking will be provided to meet the anticipated demand at each site.

In terms of transit (subway and bus), the Level 1 *CEQR Technical Manual* threshold of 200 peak-hour incremental subway person trips was exceeded during the weekday AM and PM peak hours. Based on the Level 2 subway screening assessment shown in **Table 6**, the incremental demand at the York Street subway station would exceed the 200-trip *CEQR Technical Manual* threshold during the weekday AM peak hour. Therefore, a detailed station analysis of station elements is required for the York Street (F) subway station during the weekday AM peak hour and will be provided in the EAS. However, as the F subway line (at the York Street subway station) would not experience 200 or more new peak-hour subway person trips in the peak direction during the weekday AM peak hour, further analysis of subway line haul conditions is not warranted. Additionally, the Level 1 *CEQR Technical Manual* threshold of 200 peak-hour bus trips was exceeded. Based on the Level 2 bus screening assessment shown in **Table 7**, the B44 bus route is expected exceed the *CEQR Technical Manual* threshold of 50 or more new bus trips in a single direction, during both the weekday AM and PM peak hours. Therefore, a detailed analysis of the B44 bus route in each direction, during the weekday AM and PM peak hours, is required and will be provided in the EAS.

As shown in **Table 4**, the Level 1 *CEQR Technical Manual* threshold of 200 peak-hour incremental pedestrian trips (including walk-only trips, subway trips, and bus trips) was exceeded during the weekday AM peak hour.

Therefore, a Level 2 pedestrian screening analysis was performed. As shown in **Figure 6**, a total of four pedestrian elements are expected to experience an incremental increase of 200 or more peak-hour pedestrian trips during the weekday AM peak hour. Therefore, a detailed pedestrian analysis is warranted and will be provided in the EAS.

APPENDIX 4

HISTORIC RESOURCES: EXISTING BUILDINGS

Kent Avenue Project Site
With Action and No Action





Map Key:

Address:
Building 7
63 Flushing Avenue
Brooklyn, NY 11205

National Register Status:
Not within district boundaries

Demolition Status:
To be demolished



Map Key:

Address:
Building 8
63 Flushing Avenue
Brooklyn, NY 11205

National Register Status:
Not within district boundaries

Demolition Status:
To be demolished

Navy Street Projected Site 2
With Action





Map Key:

Address:
Brooklyn Tow Pound Facility
26 Navy Street
Brooklyn, NY 11201

National Register Status:
Non-Contributing

Demolition Status:
To be demolished



Map Key:

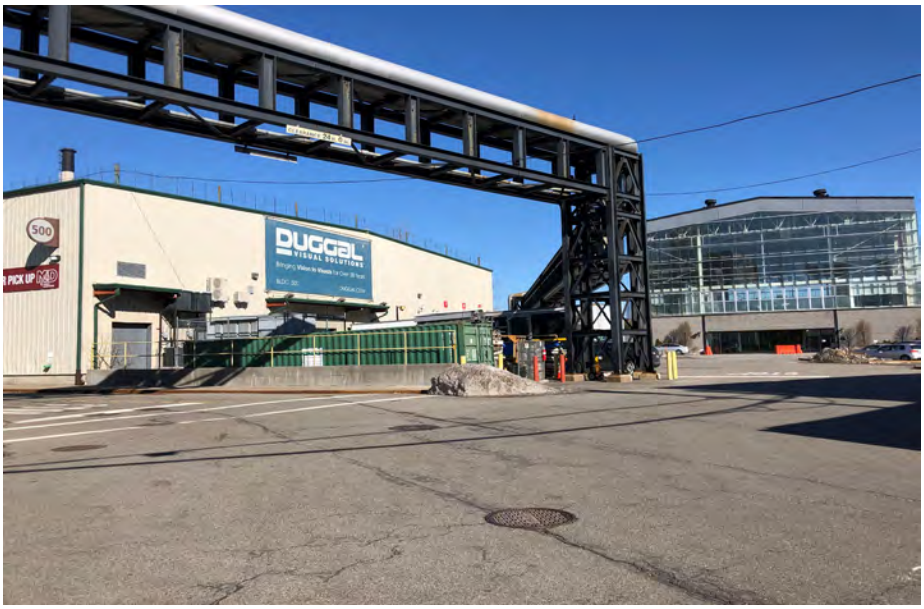
Address:
DCAS Administrative Building
Brooklyn, NY 11205

National Register Status:
Non-Contributing

Demolition Status:
To be demolished

Navy Street Projected Site 2
No Action





Map Key:

Address:
Building 500
63 Flushing Avenue
Brooklyn, NY 11205

National Register Status:
Non-Contributing

Demolition Status:
Potential to be demolished



Map Key:

Address:
Building 314
63 Flushing Avenue
Brooklyn, NY 11205

National Register Status:
Contributing

Demolition Status:
Potential to be demolished

Navy Street Alternative Site 2
No Action



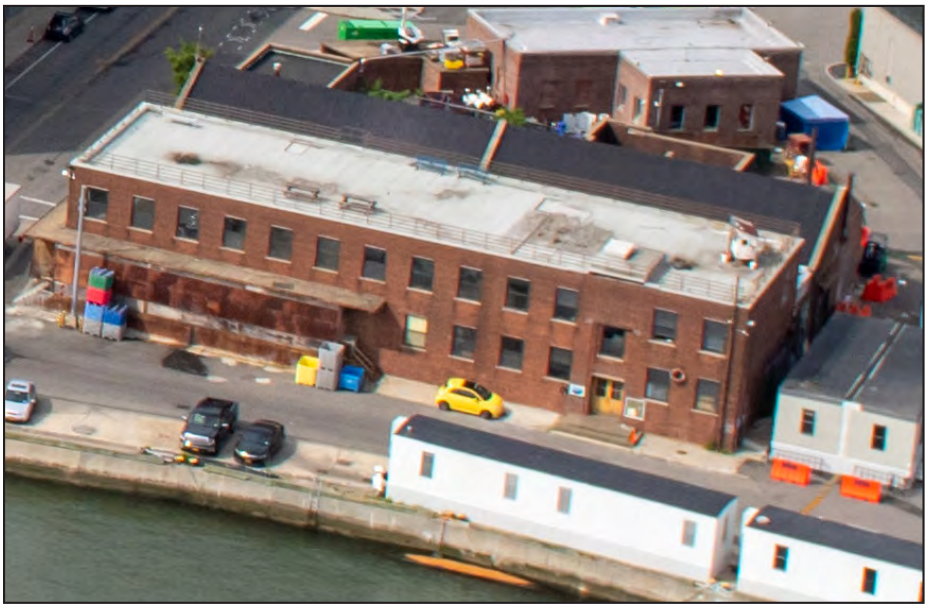


Map Key:

Address:
Building 234
63 Flushing Avenue
Brooklyn, NY 11205

National Register Status:
Contributing

Demolition Status:
Potential to be demolished



Map Key:

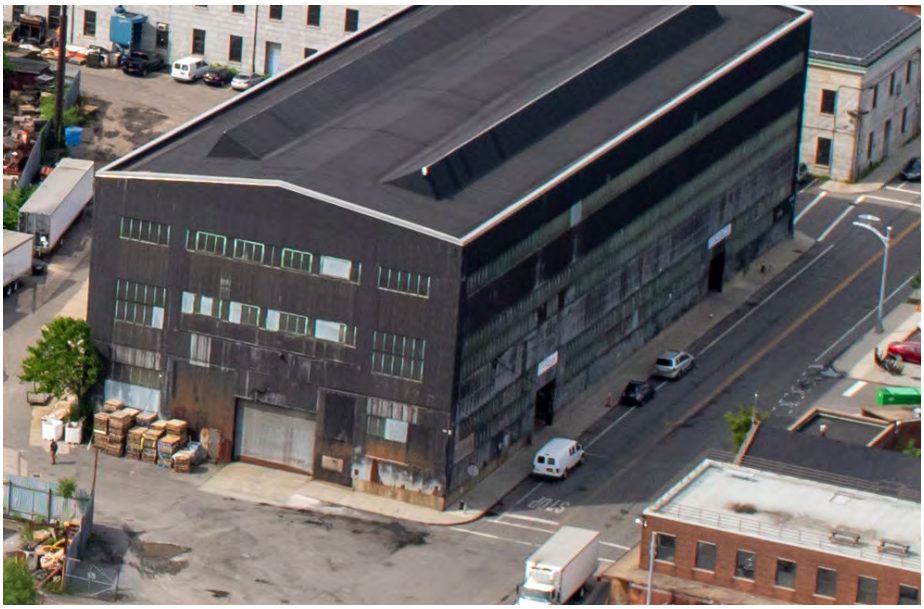
Address:
Building 313
63 Flushing Avenue
Brooklyn, NY 11205

National Register Status:
Contributing

Demolition Status:
Potential to be demolished

Navy Street Alternative Site 2
No Action





Map Key:

●

Address:
Building 269
63 Flushing Avenue
Brooklyn, NY 11205

National Register Status:
Contributing

Demolition Status:
Potential to be demolished

Flushing Avenue Projected Site 3 With Action





Map Key:

Address:
Building 120
63 Flushing Avenue
Brooklyn, NY 11205

National Register Status:
Contributing

Demolition Status:
Not intended for demolition



Map Key:

Address:
DOJ Warehouse and Distribution Center
Brooklyn, NY 11205

National Register Status:
Non-Contributing

Demolition Status:
To be demolished

Flushing Avenue Projected Site 3
No Action





Map Key:

Address:
Building 120
63 Flushing Avenue
Brooklyn, NY 11205

National Register Status:
Contributing

Demolition Status:
To be demolished



Map Key:

Address:
Building 293
63 Flushing Avenue
Brooklyn, NY 11205

National Register Status:
Non-Contributing

Demolition Status:
To be demolished

APPENDIX 5
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: DEPUTY MAYOR FINANCE/ECO DEV / 19DME011K
Project: BROOKLYN NAVY YARD SPECIAL DISTRICT
Date Received: 5/14/2021

Comments: The LPC is in receipt of the Draft Historic and Cultural EAS chapter dated May 14, 2021. There are no additional concerns.

Gina Santucci 5/24/2021

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 35553_FSO_ALS_05202021.docx

APPENDIX 6
COMMITMENT LETTER

BUILDING 77 QALICB, INC.
Building 77
141 Flushing Avenue, Suite 801
Brooklyn, NY 11205

June 6, 2021

Hilary Semel, Assistant to the Mayor
NYC Office of the Deputy Mayor for Housing and Economic Development
100 Gold Street, 2nd Floor
New York, New York 10038

Brooklyn Navy Yard Zoning Map and Text Amendments
CEQR #19DME011K

Dear Ms. Semel:

Building 77 QALICB, Inc. ("BNY"), together with the New York City Department of Small Business Services as co-applicant, are proposing the following actions (the "Proposed Actions") with respect to Brooklyn Block 2023, Lots 1 and 150 within the Brooklyn Navy Yard located in Community District 2 in Brooklyn:

- A zoning text amendment to create the Special Brooklyn Navy Yard District (the "Special District") with special use, bulk, parking and loading, and publicly accessible space regulations; and

- A zoning map amendment to: (i) map the Special District over the entirety of Tax Lots 1 and 150 other than a small portion of Lot 1 located in the water and a smaller irregularly-shaped portion of Lot 1 located in the southwest corner of the Project Area (the "Project Area"); and (ii) change an R6B district, M1-2 districts and portions of an M3-1 district within the Project Area to an M2-1 district.

The Proposed Actions would introduce tailored zoning regulations to facilitate and refine the further development of a modern manufacturing campus at the Brooklyn Navy Yard (the "Yard" or "Navy Yard") to facilitate and improve on the approximately 4.6 million square feet of zoning floor area projected to expected to occur at the Navy Yard over the next approximately10 years with or without the Proposed Actions. In particular, the proposed regulations would: rationalize parking and loading controls; allow for the introduction of compatible community facility and commercial uses to complement the core industrial use of the Yard; establish public access area requirements in connection with development in certain areas at the perimeter of the Yard; and modify height and setback regulations in defined areas of the Yard and other bulk controls in manners compatible with modern industrial development and the surrounding context.

In connection with the Proposed Actions, BNY commits to the following:

BUILDING 77 QALICB, INC.
Building 77
141 Flushing Avenue, Suite 801
Brooklyn, NY 11205

1. The Proposed Actions would allow for schools to be introduced within the Yard. In order to ensure that any school use allowed under the Zoning Actions is located in the Yard with safety and traffic congestion in mind, BNY hereby commits to the following measures prior to filing plans at the Department of Buildings (DOB) for any school use:

    - Once a school site has been selected, BNY will conduct a Transportation safety study to resolve any potential vehicular and pedestrian safety concerns as result of the proposed school. BNY should prepare and submit a scope of work for DOT's review and approval, prior to conducting any data collection and analysis together with a site plan. The Transportation safety study will follow CEQR TM guidelines to perform Level 1 and Level 2 screening assessments to verify the locations to be included in the analyses.

    - The study will identify appropriate and meaningful safety recommendations which may include measures involving capital funding (i.e. installing new signals, concrete curb extensions, pedestrian ramps, etc.) at the following locations listed in DOT May 10th's comment memo where warranted by the location of the proposed school and the findings of the Study:

        - Navy Street and York Street
        - Navy Street and Sands Street
        - Navy Street and Flushing Avenue
        - Flushing Avenue and Williamsburg Street South
        - Kent Avenue and Hewes Street and Williamsburg Street West
        - Kent Avenue and Clymer Street
        - Kent Avenue and Division Avenue; and
        - Flushing Avenue, from Navy Street to Williamsburg Street West.

      The locations may change once the specific school location is selected. DOT may require improvements to be built by BNY at that time (including but not limited to curb extensions, etc.) to address the findings of the Transportation safety study. BNY will be responsible for all costs associated with the Transportation safety study, as well as the design and construction of any measures recommended by the study and improvements recommended by DOT once the specific school site is known. The Transportation safety study should ensure all sidewalks adjacent to school property provide a minimal clear path of at least 10' of unobstructed pedestrian access following DOT's guidelines.

BUILDING 77 QALICB, INC.
Building 77
141 Flushing Avenue, Suite 801
Brooklyn, NY 11205

2. Curb Cuts. Prior to filing building plans with DOB, BNY will address DOT May 10th's comments regarding the safety and operation of any proposed curb cuts/driveways. In addition, if any new curb cuts are proposed beyond those shown on EAS, BNY will share it with DOT and address any operational and safety concerns prior to filing the plans with DOB. BNY will ensure the site design options that minimize the number of access driveways along Flushing Ave and Kent Ave will be explored and will perform the Level of Service analysis, submit detailed drawings including Auto Turn analysis and signal warrant studies using NYCDOT's warrant booklet for DOT review and approval

3. Construction Measures. Prior to the issuance by DOB of a building permit for construction of any development within the Perimeter Subareas that is both (i) within the line of site of an existing school operating at the Yard and (ii) where construction activities are expected to exceed two years, BNY shall prepare and submit to DEP additional environmental review consistent with accepted CEQR methodologies and standards approved by DEP to evaluate potential noise conditions at the school and based on the results of such studies prepare a construction protection plan subject to approval by DEP proposing construction protection measures designed to minimize construction noise within the school's classrooms to the maximum extent feasible. The level of detail contained in such studies and plan shall be based on the distance between the school and the construction activities, the scale of the anticipated construction, and the anticipated duration of constructions activities, and shall be acceptable to DEP.

4. Air Quality.

   a. In order to prevent industrial emissions from affecting community facilities located within the same building, Rooftop units will provide outside air only, without recirculating any return air between the community facility tenant space and other tenant space. HVAC equipment serving the community facility spaces will provide 100% outside air, and will be designed so that the air from the industrial uses will not impact community facility space through the return air ducts, and will not mix with air returned from other uses in the building. The rooftop air intakes will meet all building code requirements for separation from exhaust air discharges. If Community Facility and Industrial uses are co-located within a single structure an assessment approved by DEP would be performed to demonstrate compliance with the terms of this paragraph.

BUILDING 77 QALICB, INC.
Building 77
141 Flushing Avenue, Suite 801
Brooklyn, NY 11205

b. For the Projected Site 2 Navy Street North building windows located above 397 feet shall be either inoperable or constructed such that they could be locked in a closed position to restrict operable windows/air intakes in the area of impact.

With these measures, any potential adverse environmental impact from the Proposed Actions will be avoided.

Thank you for your attention.

Sincerely,

Paul Kelly (Jun 7, 2021 09:53 EDT)

Paul Kelly
Secretary