

Draft Environmental Impact Statement

Steiner Studios Media Campus

Lead Agency:

Empire State Development
633 Third Avenue
New York, NY 10017

Project Sponsor:

Steiner Studios
15 Washington Avenue
Brooklyn, NY 11205

Prepared by:

AECOM USA, Inc.
125 Broad Street
New York, NY 10004

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APPENDICES

Appendix A City and State Assessment Forms

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- A.2 New York State Coastal Assessment Form
- A.3 New York City Waterfront Revitalization Program Consistency Assessment Form

Appendix B Historic and Cultural Resources Documentation

- B.1 Programmatic Agreement for the Disposal of the Naval Station, February 7, 2000
- B.2 Quitclaim Deed Between U.S. Navy and BNYDC, May 29, 2001
- B.3 Correspondence
- B.4 Alternatives Analysis

Appendix C Air Quality Documentation

- C.1 CEQR Air Quality Equivalent Truck calculation Spreadsheet
- C.2 HVAC Air Quality Screening Nomographs

1.0 EXECUTIVE SUMMARY

Introduction

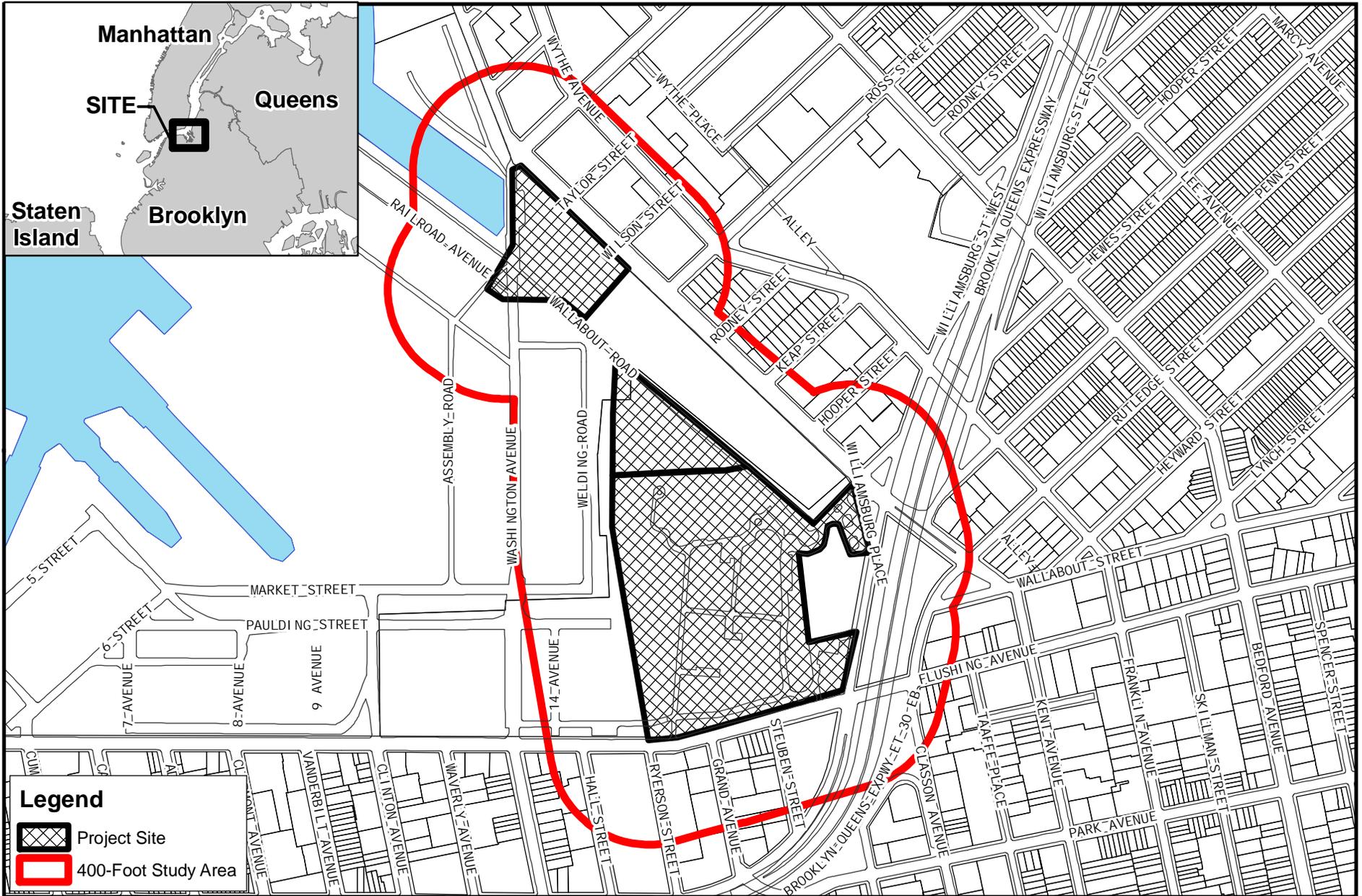
Steiner Studios (the “project sponsor”), working with the Brooklyn Navy Yard Development Corporation (BNYDC), has developed a plan for the future development of a “Media Campus” at the Brooklyn Navy Yard Naval Hospital Annex (Naval Annex), as well as future development in portions of the Navy Yard around the Naval Annex (see **Figures 1.0-1** and **1.0-2**). The project sponsor is seeking financial incentives from the New York State Urban Development Corporation d/b/a Empire State Development (ESD), which would be distributed through the Brooklyn Navy Yard Development Corporation (BNYDC), to help fund some of the key infrastructure improvements needed to implement the Media Campus development inside the Naval Annex and to implement related development that would occur in areas outside the Naval Annex.

The project site is located in the east end of the Brooklyn Navy Yard (BNY), in portions of the area generally bound by Kent Ave, Flushing Avenue, Assembly Road, Clinton Avenue and Williamsburg Street West. The site comprises portions of Block 2023, Lots 1 and 150 on the New York City Tax Map (see **Figure 1.0-3**) and is within Brooklyn Community District 2. The project site is mapped with a M3-1 zoning district.

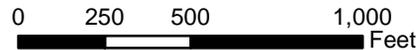
The larger portion of the approximately 25-acre project site is made up of approximately 18 acres within the Naval Annex, which formerly consisted of a naval hospital and ancillary buildings that supported the BNY, as well as residences for medical staff. The buildings on the Naval Annex site are currently unoccupied and the site contains several historic resources. Approximately seven acres of the project site are located outside the Naval Annex, which currently consist of surface areas that are used for parking and studio buildings.

The approval of the funding by ESD for the infrastructure improvements would facilitate approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex. Outside the Naval Annex, the ESD funding for infrastructure improvements would facilitate an additional approximately 70,000 square feet of new development for a new “Backlot.” In addition, the project sponsor intends to seek financial incentives from ESD in the future for the development of a 250,000-square-foot Kent Avenue Parking Structure (650 accessory parking spaces) that is envisioned for the area outside the Naval Annex, and therefore this parking structure is considered as part of the project for this environmental review.

Approval of the funding by ESD to the project sponsor (through BNYDC) requires compliance with the environmental review requirements under the State Environmental Quality Review Act (SEQRA) and its implementing regulations set forth in Title 6 of the New York Codes, Rules and Regulations (6 NYCRR) Part 617. The approval of the incentive funding by ESD also requires the adoption and affirmation by ESD of a General Project Plan (GPP). ESD has assumed the role of SEQRA lead agency for the proposed action and has determined that the project has the potential to lead to significantly adverse environmental impacts, thus requiring preparation of a Draft Environmental Impact Statement (DEIS). This document provides a detailed description of the proposed action and includes task categories for all technical areas to be analyzed in the DEIS. ESD is coordinating the environmental review among other involved and interested agencies and the general public.

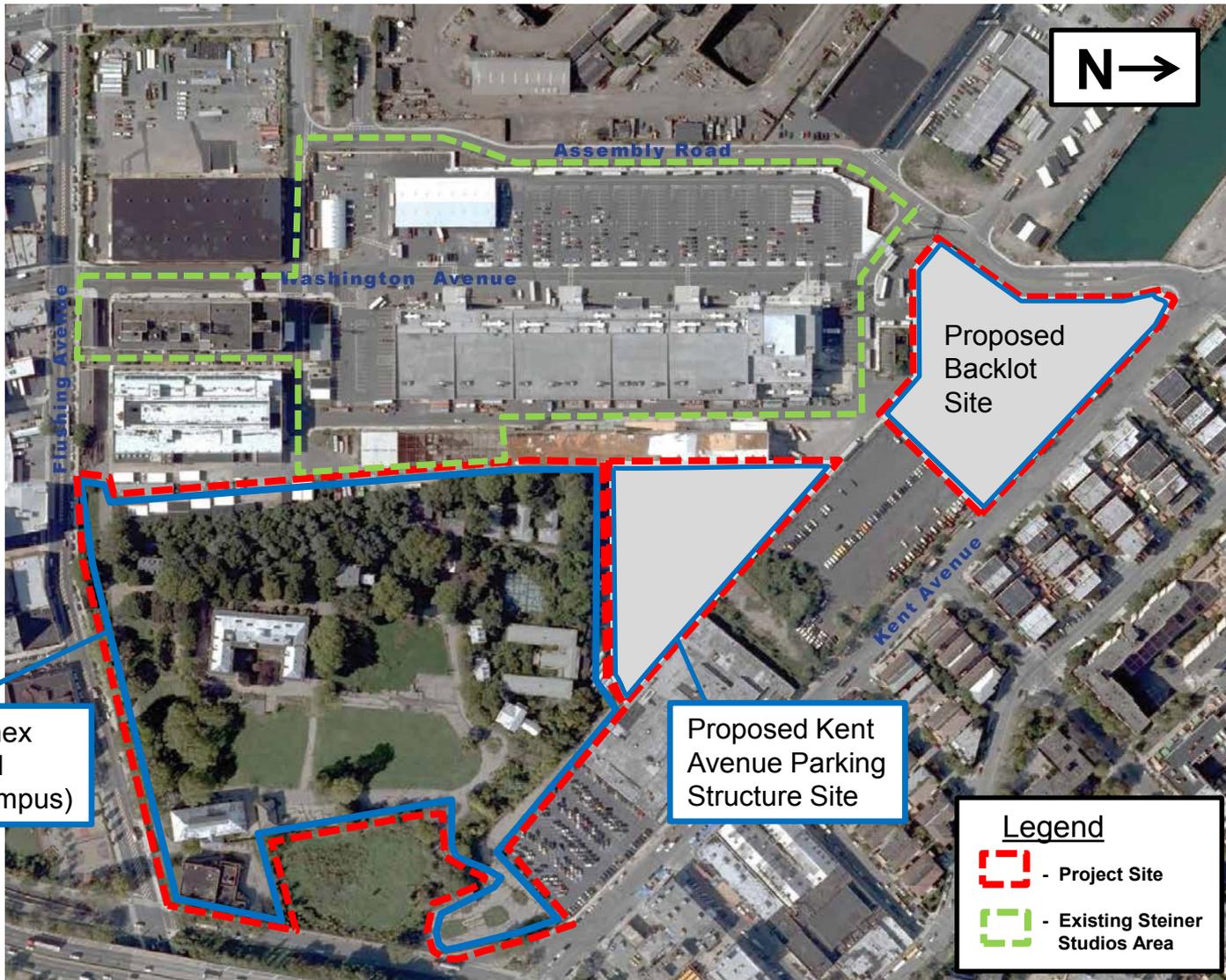


**Steiner Studios Media Campus EIS
Brooklyn Navy Yard**



Project Site Location

Figure 1.0-1



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Project Area Map

Figure 1.0-2

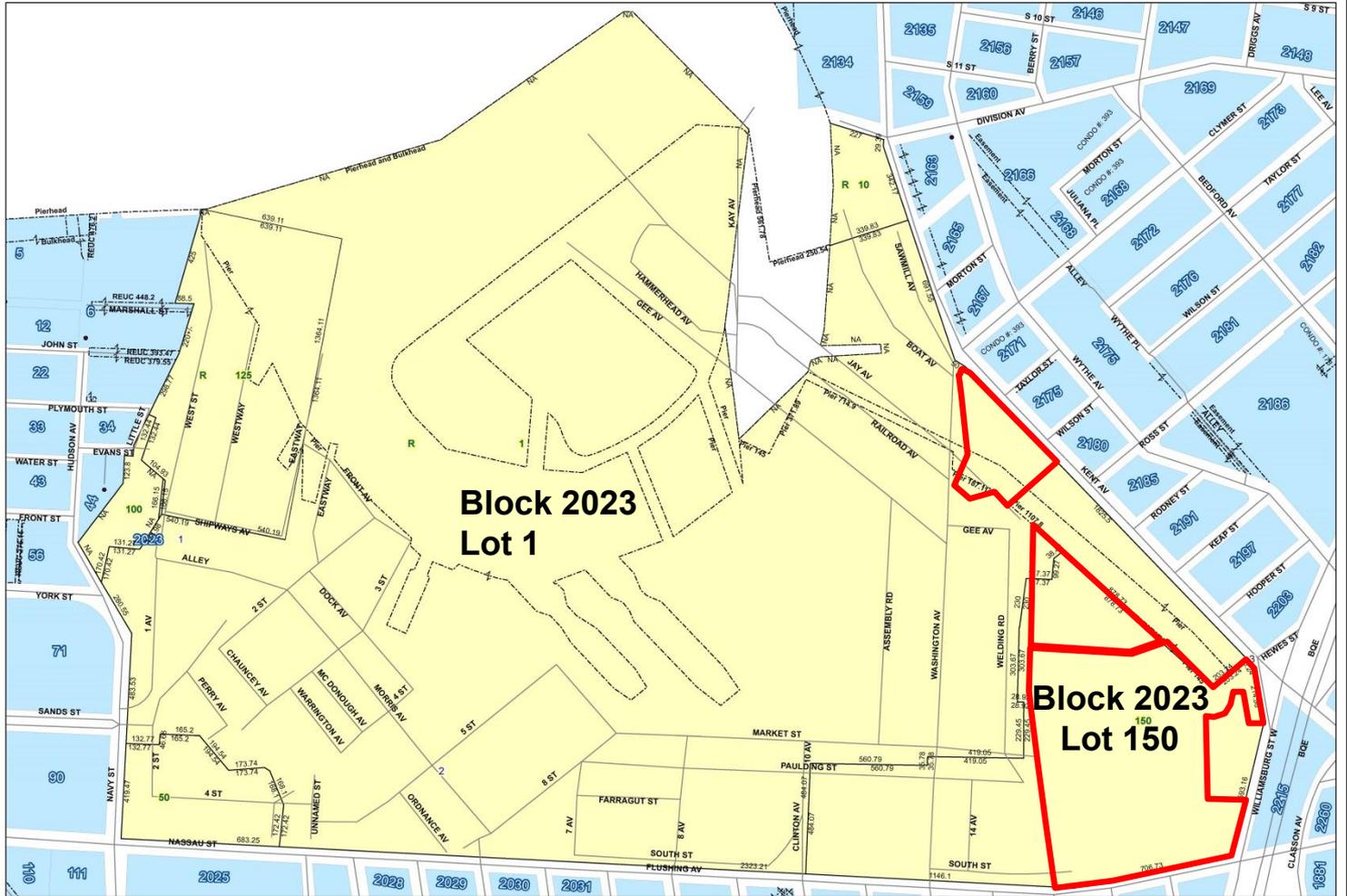


NYC Digital Tax Map

Effective Date : 10-07-2008 08:59:33
End Date : Current
Brooklyn Block:2023

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

 Project Site



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Tax Map
Figure 1.0-3

1.1 DESCRIPTION OF THE PROPOSED ACTION

Steiner Studios, working closely with BNYDC, has developed a conceptual plan for future expansion of Steiner Studios operations. Some expansion plan projects have already occurred, for example the redevelopment of Building 1 at 25 Washington Avenue. The remaining Steiner Studios expansion projects would occur over a 12-year period. The Steiner Studios expansion plan includes the creation of a state-of-the-art, full service Media Campus in the former Naval Annex that is located in the southeast corner of the BNY, as well as development in areas that surround the Naval Annex.

In order to realize the development of the Media Campus, key infrastructure improvements need to be made at the project site. Many of the buildings in the Naval Annex are in a state of disrepair and require infrastructure improvements to be re-occupied, for which ESD funding is sought. The funding provided by ESD would allow for a gas, water, sewer, electric and tele-data infrastructure loop to be constructed on the Naval Annex. In addition, other infrastructure measures that the ESD funding would support, both inside and outside the Naval Annex (as shown in **Figure 1.0-4**), include the following:

- Grand Stair Plaza – A new landscaped, monumental stair plaza to connect the Naval Annex to Steiner Studios' existing campus and the main portion of the Navy Yard, encouraging pedestrian flow, creating a gathering place for employees and visitors, and making the Naval Annex the visual focus of the east end of the Navy Yard.
- Campus Pedestrian Passage – A new landscaped pedestrian passageway between the Naval Annex and the site of the Kent Avenue Parking Structure that would better link the Naval Annex to the east side of Steiner Studios and the Kent Avenue Parking Structure.
- Kent Avenue Vehicular Entrance – A new studio entrance providing direct access to the Naval Annex and the northern end of the proposed studio lot at Kent Avenue and Wilson Street.

The approval of the funding by ESD for the infrastructure improvements would facilitate approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the boundary of the Naval Annex. Of the 350,000 square feet, approximately 105,000 square feet would be allocated to academic uses, with the remaining approximately 245,000 square feet allocated to production support. Below is a list of existing buildings on the Naval Annex that would be renovated and their proposed new uses:

- U.S. Naval Hospital, Surgeon's House, Quarters No. 4, and Bachelor Officers' Quarters – Film and television production office space (e.g., for art, location, accounting, wardrobe and set dressing departments).
- Nurses' Quarters – Post-production center (e.g., for editing, animation, visual effects and sound editing).
- Carriage Houses/Stables – Production support space (e.g., workshops for set construction, scenic artist shops and set dressing).
- Infectious Disease Quarters - Writers' cottages.
- Medical Supply Depot and Lumber Shed - Additional production office space with potential space for related academic uses, including an advanced digital media lab.

In addition to the renovation of the existing buildings, the ESD-funded infrastructure improvements would facilitate the development of several new buildings on the Naval Annex. A new underwater soundstage would be developed; the first of its kind in New York City. Three new office buildings would be developed on the Naval Annex to be used as production office space and post-production space. In addition, new buildings would be developed to support the advanced digital media lab. The Naval Annex's green space would be rehabilitated as a campus landscape. The large field at the center of the Naval Annex (behind the Naval Hospital) would serve as an outdoor gathering space for employees and visitors to the campus.

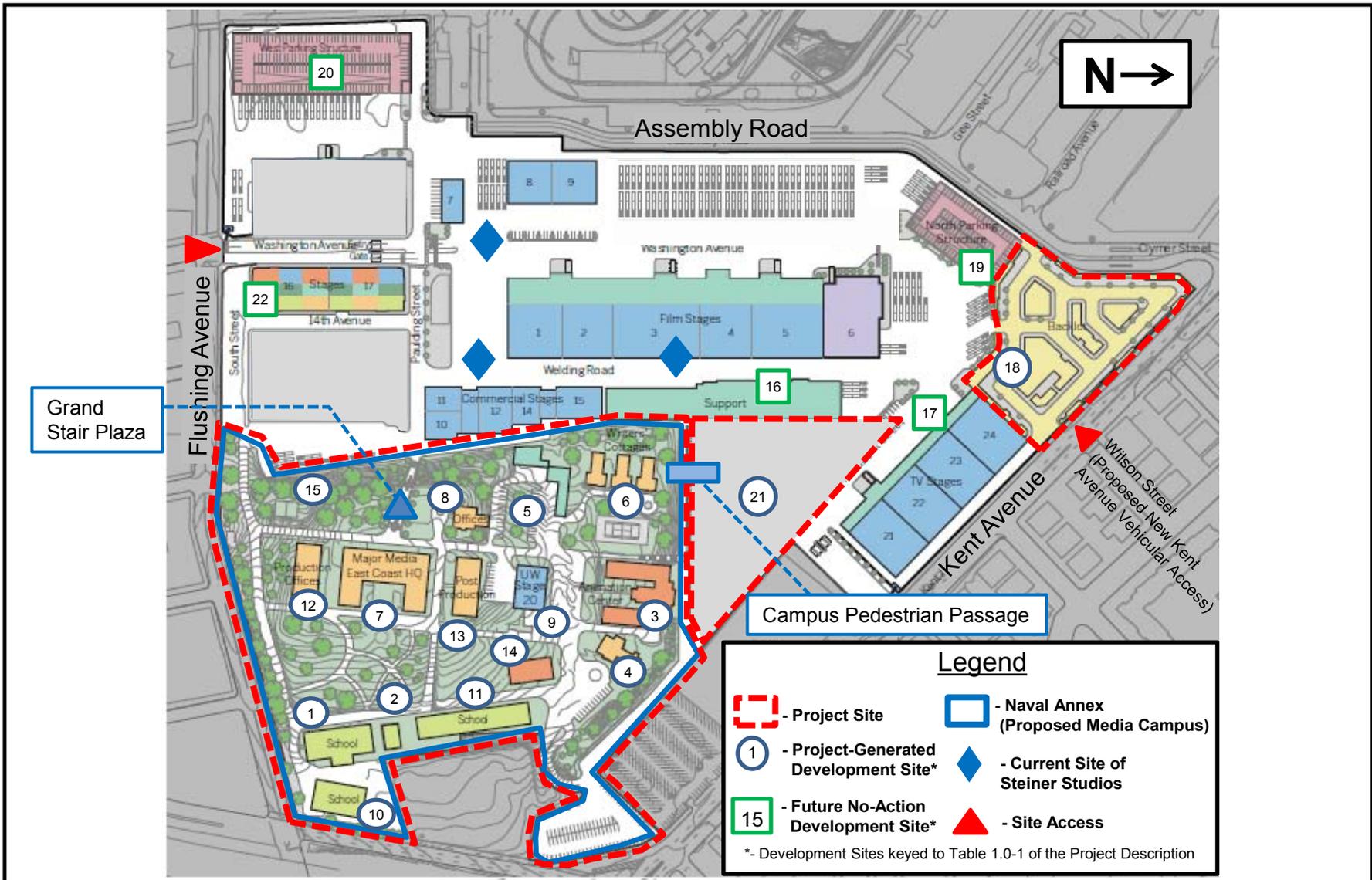
Outside the Naval Annex, the ESD funding of infrastructure improvements (in particular, the new vehicular entrance) would support the development of a “Backlot”, approximately 70,000 square feet of new development near the northern tip of the project site. The Backlot would be the first major production backlot in New York State, with building facades and streets, to substitute for outdoor shooting elsewhere in the city. In addition, Steiner Studios intends to seek financial incentives from ESD in the future for the development of a 250,000- square-foot parking structure on Kent Avenue, northwest of the Naval Annex (the Kent Avenue Parking Structure).

For the purposes of the environmental review, the “proposed action” is the funding by ESD for the infrastructure improvements at the project site. The “proposed project” is the development that would occur at the project site that would be facilitated by ESD funding. Any remaining development projected to occur in the area outside the Naval Annex, as envisioned under Steiner Studios’ expansion plans, is not dependent on the approval of funding by ESD. The development that is expected to occur outside the Naval Annex, in the future without the proposed action, would not need extensive infrastructure improvements in order to be built; Steiner Studios plans to finance and construct these projects without funding assistance from ESD or other public funding sources. A summary of development that is expected to occur independent of ESD funding (Development under Future No-Action Scenario) as well the development that ESD funding would facilitate (Development under Future With-Action Scenario), is provided in **Table 1.0-1**, which is keyed to **Figure 1.0-4**. Also shown on **Figure 1.0-4** are the current buildings occupied by Steiner Studios.

Table 1.0-1 Future Development at Steiner Studios with and without the Proposed Action

Key to Figure 2.0-4	Existing Site (Resource Designation, Name Resource also Referred to As)	Proposed Use	Development under Future No-Action Scenario (SF)	Development under Future With-Action Scenario (SF)	Development Generated by Proposed Action (SF)	Projected Employees	Projected Students
Steiner Studios - Development Inside Naval Annex (Media Campus)							
1	Medical Supply Depot (RD, Lab Building)	Production Office, Adv. Digital Media Lab, Academic Use	0	33500	33500	15	224
2	Lumber Shed (R426, Morgue Building)	Production Office, Adv. Digital Media Lab, Academic Use	0	2,100	2,100	2	14
3	Nurses' Quarters (RG, Unmarried Officer's Club)	Post-Production	0	46,633	46,633	149	0
4	Quarters No. 4 (R4, Lab Director's House)	Production Office	0	9,460	9,460	30	0
5	Carriage House/Stable/Garage (R103, R109, R103A)	Production Support	0	7,668	7,668	15	0
6	Infectious Disease Quarters (R5, R6, R7, Bungalows)	Writers' Cottages	0	6,480	6,480	0	0
7	U.S. Naval Hospital (R95)	Production Office	0	58,534	58,534	187	0
8	Surgeon's House (R1)	Production Office	0	9,800	9,800	31	0
9	Not Developed	Underwater Stage	0	20,000	20,000	50	0
10	Not Developed	Production Office, Adv. Digital Media Lab, Academic Use	0	20,000	20,000	92	132
11	Not Developed	Production Office, Adv. Digital Media Lab, Academic Use	0	50,000	50,000	92	330
12	Not Developed	Production Office	0	30,000	30,000	60	0
13	Not Developed	Production Office	0	30,000	30,000	25	0
14	Not Developed	Post-Production	0	20,000	20,000	10	0
15	Bachelor Officers' Quarters (R8, R9)	Production Office	0	5,800	5,800	5	0
Outside Naval Annex (Media Campus)							
16	B&H Building (Building 664)	Production Support/Academic Space	160,383	160,383	0	320	0
17	Parking Area	Kent Stages/Academic Space	175,000	175,000	0	970	0
18	Parking Area	Back Lot	0	70,000	70,000	300	0
19	Back Gate to Steiner Studios	North Parking Structure	88,000	88,000	0	0	0
20	Parking Area	West Parking Structure	315,000	315,000	0	0	0
21	Parking Area	Kent Ave Parking Structure	0	250,000	250,000	0	0
22	25 Washington Ave (Building 1)	Production Office/Production Support/Academic	175,623	175,623	0	190	450

Note: Site 22 – 25 Washington Avenue (Building 1) is partially occupied with 108,785 square feet production-related uses and will be occupied with 66,838 square feet of academic uses in 2015.



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Project Site Development

Figure 1.0-4

1.2 PURPOSE AND NEED

Steiner Studios opened in the BNY in 2004. Since its inception, Steiner Studios has operated a successful film and television production studio that includes soundstages, offices, and support space. In order to meet the growing space and service demands of the New York State media production community, Steiner Studios seeks to expand into the southeastern portion of BNY to allow it to grow as a media production studio in New York State.

The expansion will allow Steiner Studios to add a variety of types of studios, stages and support space that will be able to serve more forms of media in one location, offering efficiency not easily obtained in New York City, and creating synergies and business opportunities not found when an industry is scattered. The long-term goal for Steiner Studios is to be on par, in both size and utilization, with the major studio lots in Los Angeles. To achieve this, Steiner Studios requires a secure, private lot; functional buildings with easy access and ample parking; common space for social and business interaction; and sufficient critical mass for film equipment suppliers, post-production, and media-related companies. The Steiner Studios expansion would allow the company to grow, provide jobs for residents of New York City and contribute to the city's economy. In addition, the expansion would allow the potential for co-locating academic uses with new media uses, giving students exposure to an active media production environment and building local connections to the film industry, leading to continued work in the city after graduation.

As discussed previously, in order to realize some of the development of the Media Campus on the Naval Annex and in areas outside the Naval Annex, key infrastructure improvements need to be made at the project site. Many of the buildings in the Naval Annex are in a state of disrepair and require infrastructure improvements to be re-occupied. The funding provided by ESD to Steiner Studios would allow for a gas, water, sewer, electric and tele-data infrastructure loop to be constructed on the Naval Annex. In addition, other infrastructure measures that the ESD funding would support, both inside and outside the Naval Annex, include the construction of a Grand Stair Plaza, a Campus Pedestrian Passage, and a new Kent Avenue Vehicular Entrance at Kent Avenue and Wilson Street that would provide direct access to the Naval Annex and the northern end of the studio lot. Currently, the lot is primarily accessed through the BNY security gate at the intersection of Flushing and Washington Avenues and secondarily accessed through BNY Security's gate at the intersection of Kent Avenue and Clymer Street, north on Kent Avenue from where the new entrance would be located. The new entrance would allow for streamlined entry to Steiner Studios, in particular to the Media Campus and the Backlot. The project would also provide for the renovation and adaptive reuse of historic resources on the Naval Annex site. The proposed action would facilitate infrastructure improvements that would allow the historic buildings in the Naval Annex to be renovated and re-occupied with new uses.

1.3 REQUIRED APPROVAL AND REVIEW PROCEDURES

The project sponsor is seeking financial incentives from ESD, a public benefit corporation of the State of New York, for key infrastructure improvements that would enable Steiner Studios to develop a Media Campus at the Naval Annex, as well as future development in portions of the Navy Yard around the Naval Annex. The approval of the incentive funding by ESD also requires the adoption and affirmation of a General Project Plan (GPP) by ESD. Approval of the funding by ESD and a GPP requires compliance with the environmental review regulations under the State Environmental Quality Review Act (SEQRA). Because the proposed project includes nonresidential facilities which will meet or exceed 240,000 square feet in total, the proposed action is considered a Type I Action per 6 NYCRR Section 617.4 (b)(6)(v). ESD has determined that the preparation of a DEIS is warranted to review the environmental impacts of the proposed action.

The proposed Media Campus potentially would include academic uses related to film production, which are not permitted within the M3-1 zoning district in which the project site is located. To allow for such uses, the project sponsor would pursue either a zoning text amendment from the New York City Planning

Commission or a zoning override from the Office of the Mayor for Housing and Economic Development¹ at the time that specific plans have been developed.

1.4 PROBABLE IMPACTS OF THE PROPOSED PROJECT

Land Use, Zoning and Public Policy

The proposed project would provide for the rehabilitation and adaptive reuse of historic structures in the Naval Annex, as well as new uses in the area outside the Naval Annex. The new development would be compatible with and complementary to surrounding land uses and would not introduce a land use that would be considered out of character with the project site or the study area. The proposed project would not alter or change the zoning on the project site or within the study area and would comply with all applicable bulk zoning regulations. To allow for future academic uses on site the project sponsor would pursue either a zoning text amendment from the New York City Planning Commission or a zoning override from the Office of the Deputy Mayor for Economic Development at the time that specific plans have been developed. Academic uses on site would be complementary to the as-of-right uses proposed for the project site. Furthermore, the proposed project would not conflict with applicable public policies including, PlaNYC, State Coastal Program, and the city's WRP, Industrial Business Zones and SMIA. Therefore, the proposed action is not expected to result in significant adverse impacts to land use, zoning or public policy.

Socioeconomic Conditions

There are currently no residential uses on the project site and no residential development is proposed as part of the proposed project. Therefore, no impacts from direct or indirect residential displacement would be expected as a result of the proposed action. No direct business displacement would occur under the proposed project, as there are currently no businesses on the project site. Furthermore, the proposed project would not impair the ability of a specific industry to operate in the city. The proposed action would not affect business conditions in a specific industry, or involve a citywide regulatory change that would adversely affect the economic and operational conditions of any types of businesses or processes.

While the proposed project would result in an increase of commercial square feet of more than 200,000 square feet, the increase in commercial space is not expected to result in significant adverse impacts due to indirect business displacement. The proposed project would consist of production studio space for film and TV and some associated academic space, expanding upon similar uses that already exist and are planned in the study area. There would not be a significant concentration of retail space that would exceed 200,000 square feet at the project site. In addition, the project site would be within the walled confines of the BNY, an insular location, and would not introduce a commercial use that would compete with local businesses in the surrounding area. Thus, the proposed project is not expected to introduce uses to the local economy that would indirectly affect socioeconomic conditions and make it difficult for local businesses to remain in the area. Rather, local businesses, such as retail and food establishments, may benefit from the new employees and students generated by the proposed project adding to their customer base. Therefore, no significant adverse impacts to socioeconomic conditions are expected as a result of the proposed project and no further assessment is warranted.

Community Facilities and Services

The proposed project would not directly affect any of the community facilities that serve the area surrounding the project site. Further, no new residential population would be generated by the proposed action that would affect the existing service levels of existing community facilities. Therefore, there would be no significant adverse impacts to community facilities and services as a result of the proposed action

¹ Formerly known as the Office of the Deputy Mayor for Economic Development.

Open Space

The proposed action would not result in any direct effects on any open space resources, as the project would not result in a physical loss of any public open spaces either by encroaching on any open spaces or displacing any open spaces. The proposed action would not change the use of any open space so that they no longer serve the same user population, nor would the proposed action limit public access to an open space or result in increased noise, air pollutant emissions, odors, or shadows on any public open spaces that would affect their usefulness.

According to the *CEQR Technical Manual*, an open space impact would be considered significantly adverse when the decrease in open space ratio (OSR) is five percent or more in an area that is neither underserved nor well-served by open space. The proposed project would result in an OSR decrease from 0.30 acres of open space per 1,000 nonresidents to 0.27 acres of open space per 1,000 nonresidents, a decrease of approximately 11.3 percent. In the Future With-Action condition, the passive open space ratio of 0.27 would remain above the city's planning goal of 0.15 acres per 1,000 nonresidents.

The proposed project is not expected to result in any significant adverse impacts to open space resources in the study area. The OSR for the nonresidential population would not decline below the city's guideline goal of 0.15 acres in the future with the proposed project. Furthermore, workers and students at the expanded Steiner Studios campus would have access to private open space. Given the insular nature of the proposed Steiner Studios Media Campus, it is expected that much of the demand for passive open spaces would be met by the passive open space amenities that would be created as part of the project. Therefore, a detailed open space assessment is not warranted and significant adverse open space impacts are not expected for the proposed action.

Shadows

There would be new project-generated shadows on sunlight-sensitive resources, including the Wallabout Channel Barge Basin and the Navy Yard Cemetery Park, from new development on the project site. However, as discussed below, the duration and coverage of the new shadows on each resource would be limited and would not affect the vitality or usage of the sunlight-sensitive resources identified in the study area.

Wallabout Channel Barge Basin

The shadow from the proposed project would not result in a substantial reduction in sunlight on the Wallabout Channel Barge Basin. While the shadow from the proposed Backlot would reach the Wallabout Channel Barge Basin on all four analysis dates, it would be relatively limited in duration and during all representative analysis periods the shadow would be off the resource by mid-morning. The portion of the project-generated shadow that reaches the Wallabout Channel Barge Basin covers only a small portion of the water body compared to the overall size of the channel. Further, the area around the channel is not built-up, allowing most of the channel to receive a substantial amount of sunlight exposure during the course of the day. Thus, the project-generated shadow that would be cast on the Wallabout Channel Barge Basin would not have an effect on marine wildlife or any other natural resources existing in this surface water body and no significant adverse shadow impact on this sunlight-sensitive resource is expected as a result of the proposed project.

Navy Yard Cemetery Park

The shadows from the proposed project on the Naval Annex would not result in a substantial reduction in sunlight on the future Navy Yard Cemetery Park. During the analysis date with the greatest duration of project-generated shadows, December 21st, project-generated shadows would enter the open space at 8:51 a.m. and exit the open space at 2:53 p.m., for total duration of approximately six hours and two minutes. However, the maximum coverage of the shadows on the resource during this analysis date would never be greater than 35 percent of the total park area. In addition, the period of maximum exposure from project-generated shadows comes during a cold-weather month when the park is not

expected to be heavily used. Furthermore, the December analysis date falls outside the growing season and shadows occurring during this time are unlikely to affect vegetation.

During the remaining analysis dates, March 21st, May 6th and June 21st, the maximum shadow coverage would range from 25 to 40 percent of the total area of the Navy Yard Cemetery Park. However, the duration of the shadows during these analysis dates would be substantially less than the December 21st analysis date. As noted in the *CEQR Technical Manual*, the minimum requirement of sunlight during the growing season (March to October) is generally four to six hours a day. The Navy Yard Cemetery Park, during the March, May and June analysis dates, would receive at least six hours of sunlight. In addition, according to BNYDC, the Navy Yard Cemetery Park was designed to be self-sustaining with shade tolerant plantings and is not expected to be sunlight-sensitive. Furthermore, given the very low density of the Naval Annex, the area of the park site would not receive shadows from other buildings in the area. Therefore, there would be sufficient sunlight for the growing season and new shadows would not affect the overall usage and enjoyment of the park. Project-generated shadows cast on the Navy Park Cemetery Park would not lead to a significant adverse shadow impact on sunlight-sensitive resources.

Thus, significant adverse impacts from project-generated shadows would not result from the proposed action.

Historic and Cultural Resources

Archaeological Resources

The State/National Register Historic Places (S/NRHP) -eligible Naval Hospital Archaeological Site (#A04701.014975) would be directly affected by the below-ground installation of the upgrades to the utility infrastructure required as part of the Naval Hospital Building rehabilitation. The replacement/installation of utility infrastructure has the potential to affect all facades of the Naval Hospital and its wings. The proposed project could have an adverse effect on the Naval Hospital Archaeological Site because the planned ground disturbance associated with necessary utility infrastructure improvements could directly impact known and potential archaeological features that comprise the site.

In 2000, the Navy, the New York State Historic Preservation Office (SHPO), and Advisory Council on Historic Preservation (ACHP) entered into a Programmatic Agreement (PA) which set forth methods to mitigate the potential adverse effect of disposal of NAVSTA Brooklyn out of federal ownership. The PA included a *Standard Archeological Covenant* as Attachment 2, which relates directly to the Naval Hospital Archaeological Site (#A04701.014975). SHPO has advised through the consultation process that additional archaeological survey work will be required on the Naval Hospital Archaeological Site prior to the initiation of project actions. It is anticipated that a Phase II archaeological survey would be conducted in areas of proposed ground disturbance that lie within the Naval Hospital Archaeological Site, once such areas of disturbance have been specifically defined. The purpose of a Phase II survey is to provide a detailed evaluation of an identified cultural resource(s) that cannot be avoided by reasonable modification to the proposed project. Depending upon the results of the Phase II survey, Phase III data recovery excavations may also be required, where artifacts or other data are retrieved from the site. The New York City Landmarks Preservation Commission (LPC) is conducting a coordinated review with SHPO for this undertaking and concurred with SHPO's archaeological findings in its comment letter dated January 21, 2015.

Architectural Resources

The proposed action would have a significant adverse effect on the Brooklyn Navy Yard Historic District because contributing resources would be removed and altered within the Naval Annex portion of the district. In accordance with Section 14.09 of the New York State Historic Preservation Act of 1980, and the historic preservation covenant in the PA and deed, the project sponsor must consult with the SHPO to arrive at mutually agreeable and appropriate measures that the project sponsor would implement to mitigate the adverse effect. It is anticipated that the project sponsor would consult to prepare a Letter of Resolution (LOR) that would describe the actions to be undertaken prior to project implementation. LOR

signatories are expected to include the SHPO, the project sponsor, BNYDC, Empire State Development (ESD), and possibly the LPC if it is determined that LPC must be a signatory due to the proposed alterations to the LPC-designated U.S. Naval Hospital (Building R95) and the Surgeon's House (Building R1).

While the proposed project would lead to a significant adverse impact on the S/NRHP-listed Brooklyn Navy Yard Historic District due to the demolition of some contributing resources, it would allow for the rehabilitation of 15 contributing resources, including the following:

- Surgeon's House (Building R1)
- Quarters No. 4/Lab Director's House (Building R4)
- Infectious Disease Quarters/Bungalow (Building R5)
- Infectious Disease Quarters/Bungalow (Building R6)
- Infectious Disease Quarters/Bungalow (Building R7)
- Bachelor Officers' Quarters (Building R8)
- Bachelor Officers' Quarters (Building R9)
- U.S. Naval Hospital (Building R95)
- Carriage House (Building R103)
- Stable (Building R109)
- Garage (Building R103A)
- Guard House and Gate Keeper Lodge (Building R104)
- Lumber Shed/Morgue (Building R426)
- Medical Supply Depot/Lab (Building RD)
- Nurses' Quarters/Unmarried Officers' Club (Building RG)

Although the 15 contributing resources within the Naval Annex would be rehabilitated, and new construction would be designed in a context-sensitive manner in consultation with the SHPO as per the historic preservation covenant in the PA and deed, removal of five contributing resources, and opening of the contributing wall on the north and west would result in physical alteration to the Brooklyn Navy Yard Historic District. The significance of the Naval Annex within the district is tied, in part, to its variety of historic buildings in a self-contained, historic setting. The proposed changes would directly modify the integrity of the historic district, including its design, setting, feeling, and association. Therefore, implementation of the proposed action would result in a significant adverse impact on the Brooklyn Navy Yard Historic District.

The resources within the Naval Annex are subject to a standard historic preservation covenant that was incorporated into both the PA and quitclaim deed between the federal government and BNYDC/City of New York. Steiner Studios, as a lessee at BNY, is subject to the covenant, as the requirements of the covenant will be imposed on Steiner through the lease from BNYDC. It requires the grantee to covenant to the SHPO to treat resources in accordance with the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*. Specifically, the covenant indicates that "[n]o construction, alteration, rehabilitation, remodeling, demolition, disturbance of the ground surface, or other action shall be undertaken or permitted to be undertaken within "Historic Site" that would materially affect the integrity or the appearance of the attributes described above without prior approval by the SHPO and a record of such" (Department of the Navy, May 29, 2001). The 15 contributing resources listed above would therefore be rehabilitated in accordance with the Secretary of the Interior's Standards for Rehabilitation as required by the PA and quitclaim deed. However, as the proposed action would lead to a significant adverse impact on the historic district because of the removal of five contributing resources, mitigation measures, as described below under "Mitigation," would be implemented via a LOR among the project sponsor, BNYDC, and possibly LPC, in coordination with the SHPO.

Urban Design and Visual Resources

All development that would occur as a result of the proposed action would be developed "as-of-right," i.e., in conformance with the bulk regulations of the New York City Zoning Resolution, and constructed within

the existing zoning envelope. In addition, the proposed project would have a beneficial effect on existing visual resources as it would lead to key infrastructure improvements needed at the historic Naval Annex that would facilitate the redevelopment of the project site. Many of the buildings in the Naval Annex are in a state of disrepair and require extensive renovations to be re-occupied. The project would provide for the adaptive reuse of the historic resources on the Naval Annex site, allowing the historic buildings in the Naval Annex to be renovated and re-occupied with new uses. Thus, no significant adverse impacts to urban design and visual resources are expected as a result of the proposed action.

Natural Resources

The proposed project would not directly impact any regulated habitats (e.g., wetlands, open waters, etc.) and would not have any indirect effects on these habitats. Development at the project site, which would occur over the next decade or so, would only impact a portion of the natural habitat, which until the late 1990s, was regularly maintained and landscaped.

It is estimated that approximately 2,700 square feet of existing buildings at the Naval Annex would be removed and their area would be landscaped with lawns and other plantings as part of the greenspace that would form the rehabilitated campus setting at the Naval Annex, in the future with the proposed project. Approximately 1.1 acres of existing overgrown areas at the Naval Annex would be removed and replaced with new development proposed at the Naval Annex. Further, approximately 0.2 acres of existing lawns would be occupied by the footprint of future buildings. The removal of these undeveloped habitats (lawns and overgrown areas) would not result in a significant environmental impact. The fauna that are expected to utilize the project site as a long-term habitat resource are species that have adapted to an urban environment and would find other suitable habitats nearby.

No known "built resources" that are known to contain or may be used as habitat for protected species, as defined in the Federal Endangered Species Act (50 CFR 17) or the State's Environmental Conservation Law (6 NYCRR Parts 182 and 193) exist within the project site. No threatened and endangered species, or rare habitats, were observed on site during the 2014 site investigation. Furthermore, because of the long history of anthropogenic use of the site, it is likely that the native plant species present have volunteered from off-site or were planted by humans.

The project site is located within a disturbed urban setting and does not contain any natural resources of significance (e.g., wetlands, beaches, dunes, bluffs, thickets, significant grasslands, meadows, woodlands, or forests) as defined in the *CEQR Technical Manual*, nor is the site located immediately adjacent to any natural resources. The proposed project would not involve the disruption of subsurface conditions that might affect the function or value of an adjacent or nearby natural resource. Therefore, significant adverse impacts related to natural resources are not expected as a result of the proposed action, and further assessment of the impact to natural resources is not warranted.

Hazardous Materials

A Phase I Environmental Site Assessments conducted for the project site identified potential sources of contamination. Phase II site investigation activities were also conducted at the project site, including the collection of soil and groundwater samples for laboratory analysis. The Phase II site investigation confirmed evidence of petroleum contamination and other exceedances of soil and groundwater guidelines and standards.

As part of the overall development of the project site, the project sponsor is committed to the proper handling and disposal of hazardous materials on site in accordance with local, state and federal regulations and guidance. A soils management plan would be developed and implemented for the removal of any soils excavated from the project site and any dewatering required during the construction activities that require discharge to sewers would be performed in compliance with the appropriate effluent limitation through permits obtained from New York City Department of Environmental Protection, and as such sewage discharge from the site would be treated on site as required and sampled in accordance with permit requirements. The project sponsor would develop a Remedial Action Plan and Construction

Health and Safety Plan to avoid the potential of significant impacts related to Hazardous Materials. A vapor barrier or other form of vapor control would be installed below the proposed new construction at the project site and any petroleum-contaminated soil, groundwater, or underground storage tanks unexpectedly encountered during site development would be reported to the appropriate government agency. With implementation of these measures, the proposed project would not result in any significant adverse impacts related to hazardous materials that would affect public health.

Water and Sewer Infrastructure

Water Supply

The project site would generate a water supply demand of approximately 113,400 gallons per day (gpd), which represents a very small fraction of the city's water supply demand of 1.3 billion gallons per day. Therefore, since the proposed action would not result in development that consumes an exceptional amount of water, the proposed action would not result in a significant adverse impact on the city's water supply.

Wastewater Treatment

Wastewater generated from the project site would be treated by the Newtown Creek Waste Water Treatment Plant (WWTP). The capacity of the Newtown Creek WWTP would continue to have a SPDES permitted capacity of 310 million gallons per day. By the year 2027, the proposed project would generate approximately 42,000 gpd of sanitary sewage. The increase represents a very small fraction of the capacity of the Newtown Creek WWTP. Since the wastewater generated by the proposed project is well within the capacity of the treatment plant, no significant adverse impacts to the city's wastewater treatment services would occur as a result of the proposed action.

Stormwater Management

The proposed project would increase the amount of runoff above the amount that would occur in the existing condition due to the increase in impervious surfaces (roofs, pavement, roadways, etc.) within the Naval Annex, Backlot and Kent Avenue Parking Structure areas. Stormwater Best Management Practices would be incorporated into the final site plans for each of the project components to meet the requirements for on-site detention of stormwater. Thus, the proposed project would not result in significant adverse impacts from stormwater.

Solid Waste and Sanitation Services

The *CEQR Technical Manual* states that if a proposed project's generation of solid waste in the future with the proposed project would not exceed 50 tons per week, it may be assumed that there is sufficient public or private carting and transfer station capacity in the metropolitan area to absorb the increment, and further assessment is generally not required. The proposed project's incremental increase of approximately 7.2 tons per week would not lead to significant adverse impacts to municipal or commercial solid waste collection and disposal services. Therefore, the proposed project would not have a significant adverse impact on the city's solid waste and sanitation services.

Energy

It is expected that the proposed project, when operational, would consume approximately 94,395 million British Thermal Units (BTUs) per year. This would not be considered a significant demand for energy and the project site would be served by available energy suppliers. The proposed project would comply with the New York State Energy Conservation Code and would not affect the transmission or generation of energy. Therefore, the proposed project would not result in significant adverse impacts to the consumption or supply of energy.

Transportation

Traffic

The traffic generated by the proposed project would cause three of the five study area intersections to have one or more congested movements in one or more of the analyzed peak hours, as discussed below:

- **Flushing Avenue/Washington Avenue:**
 - The westbound through/right-turn lane is projected to experience a potentially significant traffic impact during the weekday AM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday AM peak hour, delays for motorists in this lane are projected to increase from 148.8 seconds per vehicle (LOS "F") under Future No-Action Conditions, to 155.8 seconds per vehicle (LOS "F") under Future With-Action Conditions.
 - The northbound approach is projected to experience potentially significant traffic impacts during the weekday AM and PM peak hours under the Future With-Action Condition, according to the stated criteria. During the weekday AM peak hour, delays for motorists on the northbound approach are projected to increase from 268.6 seconds per vehicle (LOS "F") under Future No-Action Conditions, to 436.9 seconds per vehicle (LOS "F") under Future With-Action Conditions. During the weekday PM peak hour, delays for motorists on the northbound approach are projected to increase from 215.4 seconds per vehicle (LOS "F") under Future No-Action Conditions, to 477.2 seconds per vehicle (LOS "F") under Future With-Action Conditions.
 - The southbound through/right-turn lane is projected to experience a potentially significant traffic impact during the weekday PM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday PM peak hour, delays for motorists in this lane group are projected to increase from 41.8 seconds per vehicle (LOS "D") under Future No-Action Conditions, to 49.9 seconds per vehicle (LOS "D") under Future With-Action Conditions.
- **Flushing Avenue/Williamsburg Street West:**
 - The eastbound through/right-turn lane is projected to experience a potentially significant traffic impact during the weekday PM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday PM peak hour, delays for motorists in this lane group are projected to increase from 425.5 seconds per vehicle (LOS "F") under Future No-Action Conditions, to 434.9 seconds per vehicle (LOS "F") under Future With-Action Conditions.
- **Kent Avenue/Williamsburg Street West:**
 - The westbound through/left-turn lane is projected to experience a potentially significant traffic impact during the weekday PM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday PM peak hour, delays for motorists in this lane group are projected to increase from 44.4 seconds per vehicle (LOS "D") under Future No-Action Conditions, to 49.4 seconds per vehicle (LOS "D") under Future With-Action Conditions.

As discussed in the "Mitigation" section below, several traffic network improvements are proposed as mitigation measures for the significant adverse traffic impacts projected to occur as a result of the proposed project. With these recommended improvements in place, the potential traffic impacts of the proposed project during the weekday AM and PM peak hours can be mitigated.

Parking

The project sponsor intends to seek financial incentives from ESD in the future for the development of a 250,000-square-foot Kent Avenue Parking Structure that is envisioned for the area outside the Naval Annex. This garage is planned to accommodate a total of approximately 650 accessory parking spaces. The projected parking demand for the proposed project is expected to be adequately accommodated within the proposed garage. Therefore, no significant adverse parking impacts would occur with the proposed project.

Transit

The proposed project would generate fewer than 200 new subway trips during the weekday midday peak hour, and more than 200 new subway trips during the weekday AM and PM peak hours. However, following a spatial assignment of the weekday AM and PM peak hour trips among the multiple subway stations within one mile of the Navy Yard, no one subway station is projected to experience an incremental increase of more than 200 subway trips. Furthermore, the proposed project would generate fewer than 200 new public bus trips during each of the three weekday peak hours. Therefore, the proposed project is not projected to result in any significant adverse transit impacts.

Pedestrians

The number of pedestrian trips generated by the proposed project would exceed the 200-trip preliminary screening threshold. The pedestrian assessment performed for the proposed project demonstrated that all of the pedestrian elements at the Flushing Avenue/Washington Avenue intersection are projected to operate at LOS "C" or better, with the exception of:

- 1) The north crosswalk, which is projected to operate at LOS "D" during the weekday midday peak hour. However, there is no change to the pedestrian space at this crosswalk under the With-Action Condition, relative to the No-Action Condition, and thus no significant adverse pedestrian impact.
- 2) The east-west sidewalk on the northwest corner, which is projected to operate at LOS "D" during the weekday midday peak hour, with a decrease in the projected pedestrian space under the With-Action condition that is within the allowable CEQR threshold for a significant adverse pedestrian impact.

Therefore, no significant adverse pedestrian impacts are projected to occur at this intersection during the weekday AM, midday, and PM peak hours as a result of the proposed action.

Air Quality

The proposed project would not exceed the 170-peak-hour trip-CEQR preliminary screening threshold for CO and no CO microscale impact analysis is warranted by the project. According to the PM_{2.5} hot spot screening results at each affected intersection, all intersections pass the screening based on conservative peak-hour traffic increments and no further hot spot PM_{2.5} analysis is warranted. Potential impacts from CO concentrations at the proposed parking structure were assessed at multiple receptor locations. The predicted CO levels are well below the respective 35 ppm of 1-hour average NAAQS and 9 ppm of 8-hour average NAAQS and the proposed parking structure would not result in significantly adverse air quality impacts from CO concentrations.

All renovated existing buildings and newly constructed buildings associated with the proposed project would be located a sufficient distance from each other within the project site and no stationary source project-on-project air quality impacts would occur as a result of the proposed project. Moreover, all renovated existing buildings and newly constructed buildings associated with the proposed project would be located a sufficient distance from any existing development surrounding the project site and no

stationary source air quality impacts would occur as a result of potential project-related impacts to existing development in the surrounding area.

A review of permit records provided by New York City Department of Environmental Protection (DEP) was conducted of NYCDEP-registered manufacturing facilities with known pollutants within 400 feet of the project site. The predicted concentrations using the conservative screening model at the proposed Facility are below the applicable NAAQS and/or NYSDEC AGC/SGC guideline thresholds and potential air quality impacts on the proposed project as a result of operation of existing neighborhood minor sources would not be significant, and further assessment is not warranted. Thus, the proposed project would not result in any significant adverse impact related to air quality.

Greenhouse Gas (GHG) Emissions and Climate Change

Energy expended from vehicle use associated with the proposed project would result in approximately 4,816.2 metric tons of GHG emissions on an annual basis. Stationary source operational GHG emissions are estimated to be approximately 4,414.55 metric tons on an annual basis. The proposed project is supportive of transit and non-motorized commuting options. It is expected that the new and renovated buildings would utilize energy-efficient features and be compliant with the New York City Energy Conservation Code. Furthermore, all construction work at the project site would meet the standards of the New York City Building Code and the Best Available Flood Hazard Data available from FEMA at the time of their construction. Thus, the project is consistent with the citywide GHG reduction goal and would not result in a significant climate change impact.

Noise

Based on the results of the noise monitoring program performed for the proposed project, the academic buildings clustered around the southeastern portion of the project site would require a composite Outdoor-Indoor Transmission Class (OITC) rating greater than or equal to the 31 dB(A) window wall attenuation for façades facing Flushing Avenue and Williamsburg Street West. The OITC classification is defined by ASTM International (ASTM E1332-10) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. Steiner Studios is committed to adhering to these design specifications, and the buildings that would house academic uses on the project site would provide sufficient attenuation to achieve the city's interior noise level guideline of 45 dB(A) or lower at sensitive receptors. In addition, the proposed buildings' mechanical systems (i.e., heating, ventilation, air conditioning and refrigeration systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code and Section 926 of the New York City Mechanical Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, significant adverse noise impacts are not expected to occur as a result of the proposed project.

Public Health

According to the CEQR Technical Manual, for most proposed projects a public health analysis is not necessary. Where no significant unmitigated adverse impact is found in CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise, no public health analysis is warranted. The proposed project would not result in significant adverse impacts in these technical areas; and as such would not result in significant public health impacts.

Neighborhood Character

Of the relevant technical areas specified in the *CEQR Technical Manual* that comprise of neighborhood character, the proposed project would not cause significant adverse impacts related to land use, socioeconomic conditions, historic and cultural resources, urban design and visual resources, transportation, noise, open space and shadows. The project site is separated from the surrounding community by a wall and the development proposed for the site would not affect the technical areas (except for transportation) that comprise neighborhood character. Furthermore, moderate adverse effects

that would affect such a defining feature, either singly or in combination, have also not been identified. The proposed action would not result in a significant adverse neighborhood character impact and would not result in a significant adverse impact to a defining feature of the neighborhood and no further analysis is necessary.

Construction Impacts

Construction activities, although temporary in nature, can sometimes result in significant adverse impacts and have disruptive and noticeable effects on the area that surrounds a project site. As stated in the *CEQR Technical Manual*, a project's construction activities may affect a number of technical areas analyzed for the operational period, for example air quality, noise, and traffic. The determination of significance and need for related mitigation is generally based on the duration and magnitude of the potential construction impacts.

Steiner Studios, working closely with BNYDC, has developed a conceptual plan for future expansion of the Steiner Studios operations. Construction activities generated by the proposed project would be gradual, taking place over a 12-year period. The schedule of construction at the project site would ultimately depend on market considerations and need for particular project elements. However, a conceptual reasonable worst-case construction scenario has been developed to determine if there would be a potential for significant adverse construction-related impacts. As demonstrated in detail in the Construction Chapter of the EIS, construction-related activities are not expected to have any significant adverse impacts on transportation, air quality, noise, historic resources, hazardous materials, natural resources, or other technical areas as a result of the proposed project. Therefore, no significant adverse construction impacts are expected as a result of the proposed action.

Alternatives

As part of the proposed project, 15 contributing resources to the BNY Historic District would be rehabilitated; however, five contributing resources to the BNY Historic District are proposed to be demolished. An alternative that adaptively reuses all contributing resources to the BNY Historic District was considered, but it was concluded that it is not feasible to reuse the five contributing resources that are proposed to be removed from the Naval Annex. An Alternatives Analysis was prepared for the proposed project and was reviewed by SHPO and the agency provided their concurrence that there are no prudent or feasible alternative to demolition of these few resources. Therefore, there is no feasible alternative that would allow for the adaptive reuse of all contributing resources that would preclude the need for the removal of the five identified contributing resources. The functional inefficiencies resulting from retaining these five resources, and the high costs associated with renovations, would render the project financially and programmatically infeasible and would prevent the project from moving forward.

The No-Action Alternative, analyzed throughout the EIS as the Future No-Action Condition, was assessed as an alternative to the proposed action. The No-Action Alternative consists of normal and anticipated growth patterns by the 2027 analysis year of the proposed project, along with other separately planned projects within the surrounding area, but does not include the construction of the proposed Steiner Studios Media Campus. While the No-Action Alternative analysis would reduce or eliminate significant adverse transportation and historic and cultural resource impacts generated by the proposed project, the goals and objectives of the project sponsor would not be achieved under this alternative.

Mitigation

Archaeological Resources

The proposed action could lead to an adverse effect on the State/National Registers of Historic Places (S/NRHP) eligible Naval Hospital Archaeological Site (#A04701.014975) because the planned ground disturbance associated with necessary utility infrastructure improvements could directly impact known and potential archaeological features within the site. In compliance with Section 14.09 and the archeological

covenant included in the programmatic agreement (PA), consultation with the New York State Historic Preservation Office (SHPO) is required to develop appropriate measures to mitigate the adverse effect.

The archaeological covenant includes seven stipulations, the first of which is most relevant to the status of the Naval Hospital Archaeological Site in the current study area. The first stipulation states that no disturbance of the ground surface shall be undertaken or permitted to be undertaken on-site which would affect the physical integrity of the site without the express prior written permission of the SHPO, signed by a fully authorized representative thereof. Should the SHPO require, as a condition of the granting of such permission, that the Grantee conduct archeological data recovery operations or other activities designed to mitigate the adverse effect of the proposed activity on-site, the Grantee shall at his/her/its expense conduct such activities in accordance with the Secretary of the Interior's *Standards and Guidelines for Archeological Documentation* (48 FR 447344-37).

BNYDC is engaged in consultation with SHPO concerning the Steiner Studios' expansion plans. In a letter to the BNYDC dated June 16, 2014, the SHPO has recommended that any areas of planned ground disturbance within or within 50 feet of any designated sensitive area should be subjected to archaeological examination. It is anticipated that the project sponsor would consult with SHPO to prepare a Letter of Resolution (LOR) that would detail the archaeological activities to be undertaken to mitigate the adverse effect to the Naval Hospital Archaeological Site prior to project implementation. It is anticipated that Phase II archaeological survey would be conducted in areas of proposed ground disturbance that lie within the Naval Hospital Archaeological Site. Depending upon the results of the Phase II survey, Phase III, data recovery excavations may be required to mitigate the adverse effect. The New York City Landmarks Preservation Commission (LPC) is conducting a coordinated review with SHPO for this undertaking and concurred with SHPO's archaeological findings in its comment letter dated January 21, 2015.

Historic Architectural Resources

The proposed action would have a significant adverse effect on the Brooklyn Navy Yard Historic District because contributing resources would be removed and altered within the Naval Annex portion of the district. In accordance with Section 14.09 of the New York State Historic Preservation Act of 1980, and the historic preservation covenant in the PA and deed, the project sponsor must consult with the SHPO to arrive at mutually agreeable and appropriate measures that the project sponsor would implement to mitigate the adverse effect. It is anticipated that the project sponsor would consult to prepare a LOR that would describe the actions to be undertaken prior to project implementation. LOR signatories are expected to include the SHPO, the project sponsor, BNYDC, Empire State Development (ESD), and possibly the LPC if it is determined that LPC must be a signatory due to the proposed alterations to the LPC-designated U.S. Naval Hospital (Building R95) and the Surgeon's House (Building R1). Potential LOR mitigation measures are described below.

Documentation

As indicated in the historic preservation covenant in the quitclaim deed, to mitigate adverse effect, the project sponsor shall, at a minimum, undertake recordation of the Naval Annex in accordance with federal standards (i.e., Historic American Buildings (HABS)), and any applicable state recordation standards, or other standards to which the parties may mutually agree. The scope and content of the recordation would be defined in coordination with the SHPO. HABS documentation typically includes a physical description of the overall historic district, including setting; brief physical descriptions of the interior and exterior of buildings and structures, including significant alterations; historic context illustrated by historic photographs and/or maps; and large-format, archival, black-and-white photographs of the Naval Annex. It is expected that the SHPO would also assist the project sponsor in identifying adequate repositories for copies of the documentation.

Construction Protection Plan

It is anticipated that the proposed project would result in the removal of five contributing resources and six non-contributing resources from the Naval Annex. Portions of the wall on the north and west sides of the campus would also be altered. The Flagstaff (Object 463) and the Naval Hospital Cemetery are also near potential construction areas. Because 15 contributing resources would be rehabilitated, a construction protection plan would be developed to protect them, the Flagstaff, and the cemetery during the demolition process. As indicated in the *CEQR Technical Manual*, the plan would be developed in coordination with the SHPO and professional engineers that are anticipated to work with the project sponsor. Elements of the plan for buildings may include the following:

- Existing foundation and structural condition information for the buildings to be reused.
- Protection from falling objects.
- Monitoring during construction using tell-tales, and horizontal and lateral movement scales.

Several reference documents also provide useful information on the development of construction protection plans, including “Technical Policy and Procedures Notice No. 10/88, Procedures for the Avoidance of Damage to Historic Structures Resulting from Adjacent Construction” prepared by New York City Department of Buildings (NYCDOB), and “Protecting a Historic Structure During Adjacent Construction” prepared by National Park Service. The project sponsor would also prepare a means and methods plan for how the demolition and construction would proceed on site to ensure that elements to remain (e.g., buildings, structures, trees, landscaping paths) are protected during construction.

Context-Sensitive Design

New construction would be undertaken in a context-sensitive manner. The covenant in the PA and deed require ongoing consultation with the SHPO regarding new construction, and therefore, consultation between the project sponsor, BNYDC, ESD, and the SHPO would be ongoing until the designs are complete.

With these types of mitigation strategies, adverse impacts to these resources would be substantially minimized.

Transportation

Potential significant traffic impacts are projected to occur at the following intersections and traffic movements by time period:

- **Flushing Avenue/Washington Avenue**
 - Weekday AM peak hour (westbound through/right-turn lane)
 - Weekday AM and PM peak hours (northbound approach)
 - Weekday PM peak hour (southbound through/right-turn lane)
- **Flushing Avenue/Williamsburg Street West**
 - Weekday PM peak hour (eastbound through/right-turn lane)
- **Kent Avenue/Williamsburg Street West**
 - Weekday PM peak hour (left-turn/through lane)

Based on these potential traffic impacts, the following transportation improvements are recommended:

- **Flushing Avenue/Washington Avenue:**

- Prohibit on-street parking on the east and west sides of Washington Avenue, south of Flushing Avenue, in the vicinity of the intersection.
 - Restripe the northbound approach to accommodate one exclusive left-turn lane and one shared through/right-turn lane.
 - Restripe the southbound approach (Steiner Studios access driveway) to accommodate one exclusive left-turn lane, one exclusive through lane, and one shared through/right-turn lane.
 - Reallocate one second of green time from the north-south phase to the east-west phase during the weekday AM peak hour.
- **Flushing Avenue/Williamsburg Street West:**
 - Restripe the eastbound approach to widen both vehicular travel lanes from approximately 11 feet to 11.3 feet with a corresponding reduction in the width of the center median from approximately 8.0 feet to approximately 7.4 feet (a reduction of approximately 0.6 feet).
 - **Kent Avenue/Williamsburg Street West:**
 - Reallocate one second of green time from the east-west phase to the southbound phase during the weekday PM peak hour.

These improvements are designed to accommodate the future traffic volumes projected to occur on the roadway network during critical periods of peak traffic activity under the future with the proposed project; specifically, during the peak 15-minute period of the weekday AM and PM peak hours. With these recommended improvements in place, the potential traffic impacts of the proposed action during the weekday AM and PM peak hours can be mitigated.

Unavoidable Adverse Impacts

As part of the proposed project, 15 contributing resources to the BNY Historic District would be rehabilitated; however, five contributing resources to the BNY Historic District are proposed to be demolished. An alternative that adaptively reuses all contributing resources to the BNY Historic District was considered, but it was concluded that it is not feasible to reuse the five contributing resources proposed to be removed. The functional inefficiencies resulting from retaining these five resources, and the high costs associated with their adaptive reuse, would render the project financially and programmatically infeasible and would preclude the project from moving forward.

Growth Inducing Aspects of the Proposed Action

The proposed project would occur inside the walled confines of the Brooklyn Navy Yard and would expand Steiner Studios' existing media production studios, as well as potentially expand future academic uses that would be co-located with Steiner Studios. Local businesses, such as local retail and food establishments, as well as support businesses, such as catering companies, would benefit from the activated project site adding new employees and students to their customer base. Thus, the project would be consistent and compatible with adjacent land uses within and surrounding the Brooklyn Navy Yard. While the proposed action would facilitate upgrades to the infrastructure capacity at the project site, these upgrades to infrastructure capacity are related to key infrastructure improvements needed at the project site to allow for its redevelopment and would not have a growth-inducing impact in areas outside of the study area. Many of the buildings in the Naval Annex are in a state of disrepair and require infrastructure improvements to be reoccupied.

Irreversible and Irretrievable Commitment of Resources

The project would redevelop the historic Naval Annex at the Brooklyn Navy Yard, while at the same time develop new buildings at the project site that would complement the renovated historic buildings. The

proposed project would require the irreversible and irretrievable commitment of energy, construction materials, human effort, and funding. The buildings and structures removed in the Brooklyn Navy Yard Historic District would also constitute a resource loss and potential impacts are discussed in detail in Chapter 3.6, "Historic and Cultural Resources." However, many of the historic buildings on the site would remain and be renovated, and in combination with new development proposed, the proposed action would allow for the re-use of the historic Naval Annex that has been vacant and in a state of disrepair for many years.

2.0 PROJECT DESCRIPTION

Introduction

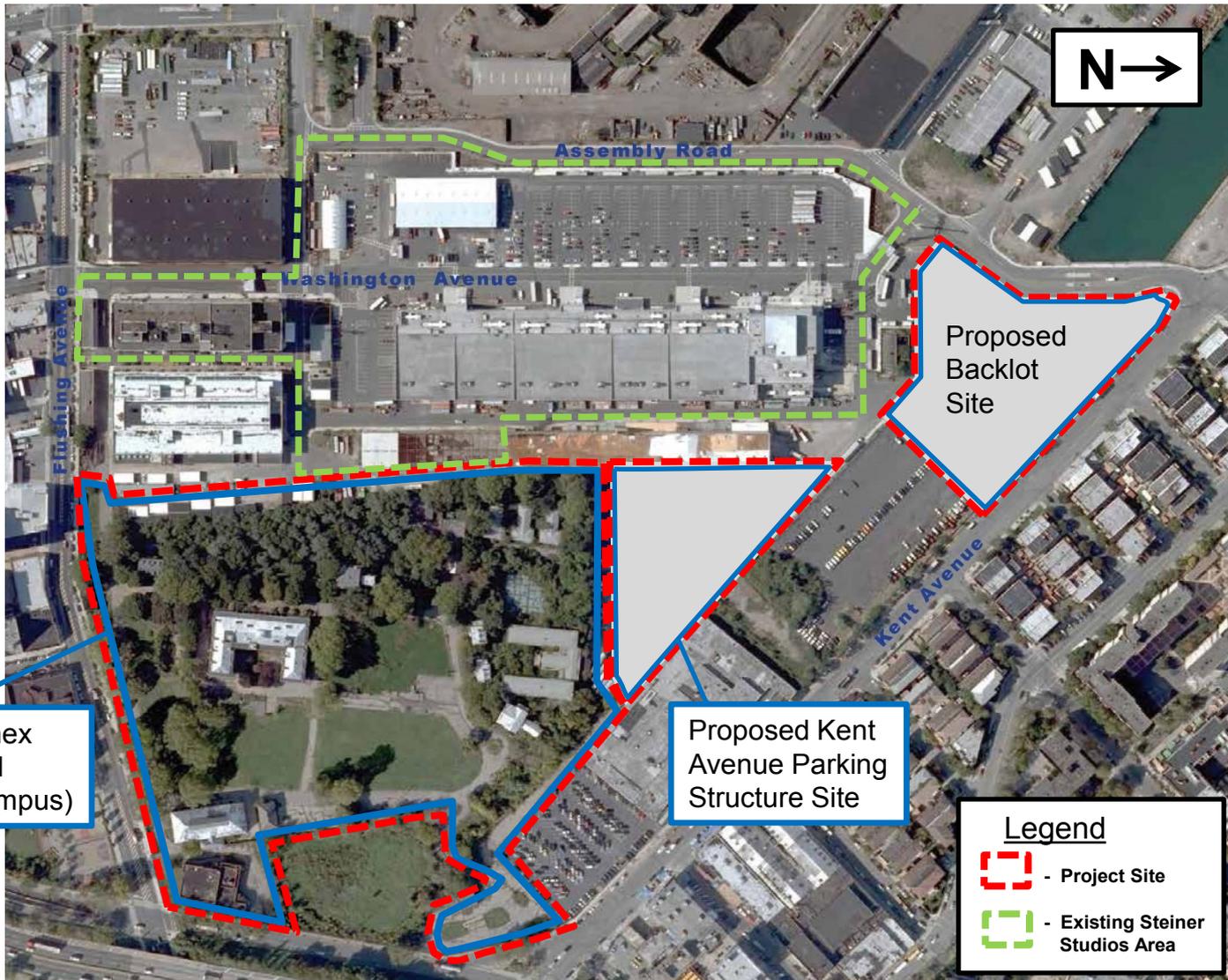
Steiner Studios (the “project sponsor”), working with the Brooklyn Navy Yard Development Corporation (BNYDC), has developed a plan for the future development of a “Media Campus” at the Brooklyn Navy Yard Naval Hospital Annex (Naval Annex), as well as future development in portions of the Navy Yard around the Naval Annex (see **Figures 2.0-1** and **2.0-2**). The project sponsor is seeking financial incentives from the New York State Urban Development Corporation d/b/a Empire State Development (ESD), which would be distributed through the Brooklyn Navy Yard Development Corporation (BNYDC), to help fund some of the key infrastructure improvements needed to implement the Media Campus development inside the Naval Annex and to implement related development that would occur in areas outside the Naval Annex.

The project site is located in the east end of the Brooklyn Navy Yard (BNY), in portions of the area generally bound by Kent Ave, Flushing Avenue, Assembly Road, Clinton Avenue and Williamsburg Street West. The site comprises portions of Block 2023, Lots 1 and 150 on the New York City Tax Map (see **Figure 2.0-3**) and is within Brooklyn Community District 2. The project site is mapped with a M3-1 zoning district.

The larger portion of the approximately 25-acre project site is made up of approximately 18 acres within the Naval Annex, which formerly consisted of a naval hospital and ancillary buildings that supported the BNY, as well as residences for medical staff. The buildings on the Naval Annex site are currently unoccupied and the site contains several historic resources. Approximately seven acres of the project site are located outside the Naval Annex, which currently consist of surface areas that are used for parking and studio buildings.

The approval of the funding by ESD for the infrastructure improvements would facilitate approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex. Outside the Naval Annex, on approximately seven acres, the ESD funding for infrastructure improvements would facilitate an additional approximately 70,000 square feet of new development for a new “Backlot.” In addition, the project sponsor intends to seek financial incentives from ESD in the future for the development of a 250,000-square-foot Kent Avenue Parking Structure (650 accessory parking spaces) that is envisioned for the area outside the Naval Annex, and therefore this parking structure is considered as part of the project for this environmental review.

Approval of the funding by ESD to the project sponsor (through BNYDC) requires compliance with the environmental review requirements under the State Environmental Quality Review Act (SEQRA) and its implementing regulations set forth in Title 6 of the New York Codes, Rules and Regulations (6 NYCRR) Part 617. The approval of the incentive funding by ESD also requires the adoption and affirmation by ESD of a General Project Plan (GPP). ESD has assumed the role of SEQRA lead agency for the proposed action and has determined that the project has the potential to lead to significantly adverse environmental impacts, thus requiring preparation of a Draft Environmental Impact Statement (DEIS). This document provides a detailed description of the proposed action and includes task categories for all technical areas to be analyzed in the DEIS. ESD is coordinating the environmental review among other involved and interested agencies and the general public.



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Project Area Map

Figure 2.0-2

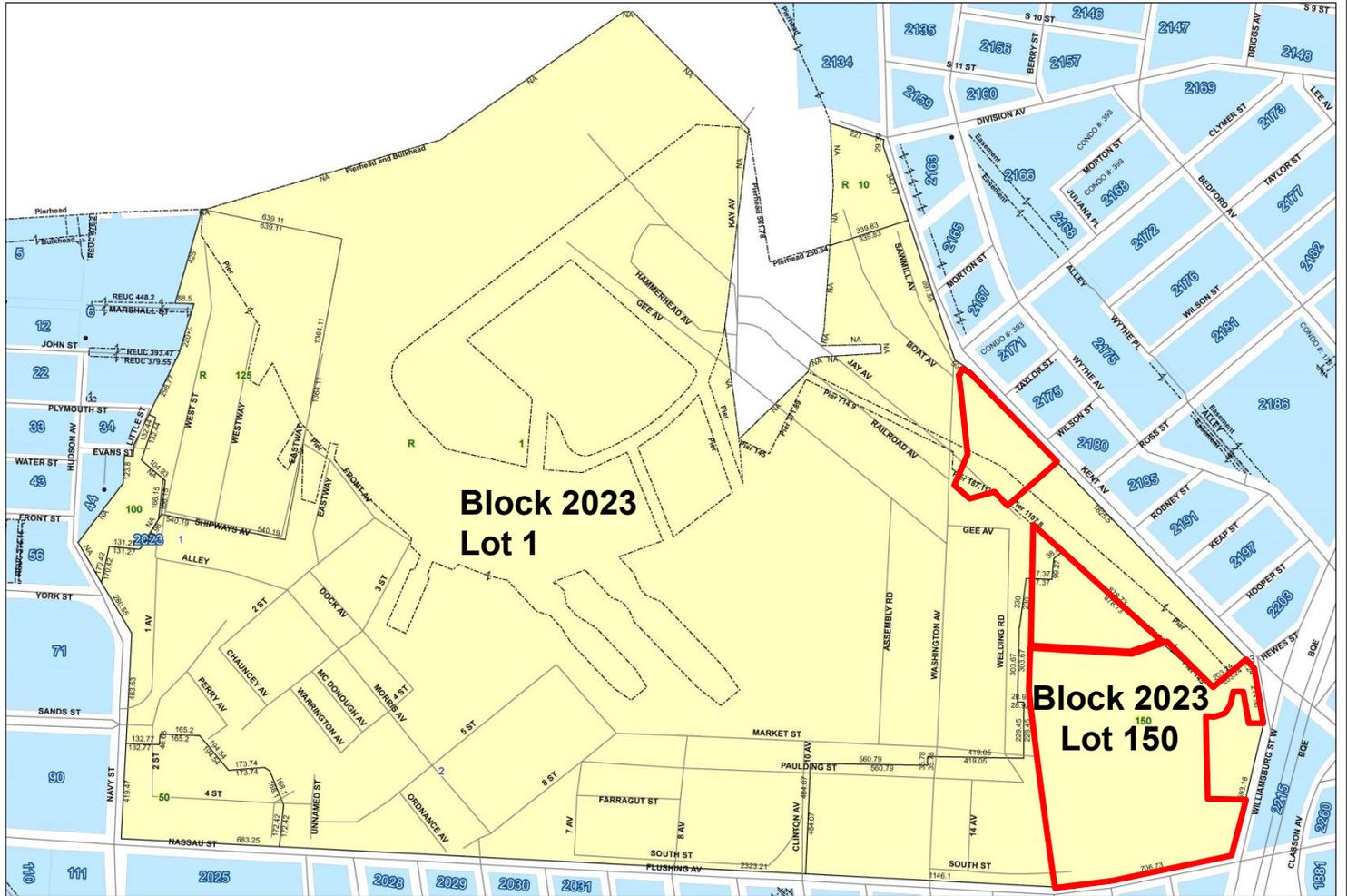


NYC Digital Tax Map

Effective Date : 10-07-2008 08:59:33
End Date : Current
Brooklyn Block:2023

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

Project Site



2.1 DESCRIPTION OF THE PROPOSED ACTION

The BNY is owned by the City of New York and managed by BNYDC, a not-for-profit corporation. BNYDC's mission is to promote local economic development and job creation, develop underutilized areas, and oversee modernization of the yard's infrastructure and assets while maintaining its historical integrity. BNY was once the site of one of the nation's most storied naval shipbuilding facilities. The Navy Yard was decommissioned in the 1960s and is now home to over 330 industrial tenants employing more than 6,400 people. Steiner Studios is a media production facility that is currently one of BNY's largest tenants. Occupying over 580,000 square feet of floor area in the Navy Yard, Steiner Studios has multiple soundstages for film and TV production, including the largest soundstage on the East Coast.

Steiner Studios, working closely with BNYDC, has developed a conceptual plan for future expansion of Steiner Studios operations. Some expansion plan projects have already occurred, for example the redevelopment of Building 1 at 25 Washington Avenue. The remaining Steiner Studios expansion projects would occur over a 12-year period. The Steiner Studios expansion plan includes the creation of a state-of-the-art, full service Media Campus in the former Naval Annex that is located in the southeast corner of the BNY, as well as development in areas that surround the Naval Annex.

In order to realize the development of the Media Campus, key infrastructure improvements need to be made at the project site. Many of the buildings in the Naval Annex are in a state of disrepair and require infrastructure improvements to be re-occupied, for which ESD funding is sought. The funding provided by ESD would allow for a gas, water, sewer, electric and tele-data infrastructure loop to be constructed on the Naval Annex. In addition, other infrastructure measures that the ESD funding would support, both inside and outside the Naval Annex (as shown in **Figure 2.0-4**), include the following:

- Grand Stair Plaza – A new landscaped, monumental stair plaza to connect the Naval Annex to Steiner Studios' existing campus and the main portion of the Navy Yard, encouraging pedestrian flow, creating a gathering place for employees and visitors, and making the Naval Annex the visual focus of the east end of the Navy Yard.
- Campus Pedestrian Passage – A new landscaped pedestrian passageway between the Naval Annex and the site of the Kent Avenue Parking Structure that would better link the Naval Annex to the east side of Steiner Studios and the Kent Avenue Parking Structure.
- Kent Avenue Vehicular Entrance – A new studio entrance providing direct access to the Naval Annex and the northern end of the proposed studio lot at Kent Avenue and Wilson Street.

The approval of the funding by ESD for the infrastructure improvements would facilitate approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the boundary of the Naval Annex. Of the 350,000 square feet, approximately 105,000 square feet would be allocated to academic uses, with the remaining approximately 245,000 square feet allocated to production support. Below is a list of existing buildings on the Naval Annex that would be renovated and their proposed new uses:

- U.S. Naval Hospital, Surgeon's House, Quarters No. 4, and Bachelor Officers' Quarters – Film and television production office space (e.g., for art, location, accounting, wardrobe and set dressing departments).
- Nurses' Quarters – Post-production center (e.g., for editing, animation, visual effects and sound editing).
- Carriage Houses/Stables – Production support space (e.g., workshops for set construction, scenic artist shops and set dressing).
- Infectious Disease Quarters - Writers' cottages.
- Medical Supply Depot and Lumber Shed - Additional production office space with potential space for related academic uses, including an advanced digital media lab.

In addition to the renovation of the existing buildings, the ESD-funded infrastructure improvements would facilitate the development of several new buildings on the Naval Annex. A new underwater soundstage would be developed; the first of its kind in New York City. Three new office buildings would be developed on the Naval Annex to be used as production office space and post-production space. In addition, new buildings would be developed to support the advanced digital media lab. The Naval Annex's green space would be rehabilitated as a campus landscape. The large field at the center of the Naval Annex (behind the Naval Hospital) would serve as an outdoor gathering space for employees and visitors to the campus.

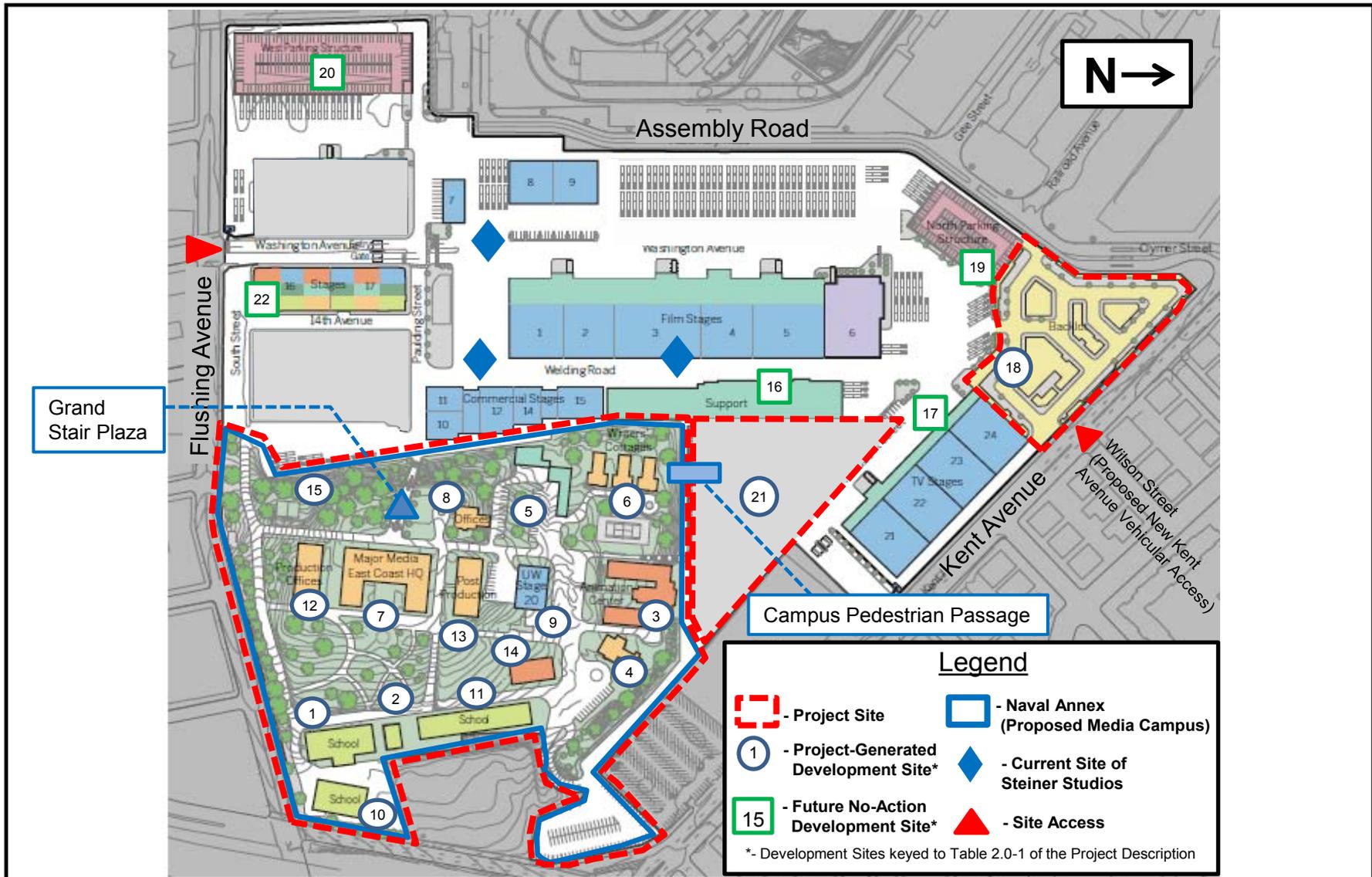
Outside the Naval Annex, the ESD funding of infrastructure improvements (in particular, the new vehicular entrance) would support the development of a “Backlot”, approximately 70,000 square feet of new development near the northern tip of the project site. The Backlot would be the first major production backlot in New York State, with building facades and streets, to substitute for outdoor shooting elsewhere in the city. In addition, Steiner Studios intends to seek financial incentives from ESD in the future for the development of a 250,000- square-foot parking structure on Kent Avenue, northwest of the Naval Annex (the Kent Avenue Parking Structure).

For the purposes of the environmental review, the “proposed action” is the funding by ESD for the infrastructure improvements at the project site. The “proposed project” is the development that would occur at the project site that would be facilitated by ESD funding. Any remaining development projected to occur in the area outside the Naval Annex, as envisioned under Steiner Studios’ expansion plans, is not dependent on the approval of funding by ESD. The development that is expected to occur outside the Naval Annex, in the future without the proposed action, would not need extensive infrastructure improvements in order to be built; Steiner Studios plans to finance and construct these projects without funding assistance from ESD or other public funding sources. These uses are described further in **Section 2.3**, below. A summary of development that is expected to occur independent of ESD funding (Development under Future No-Action Scenario) as well the development that ESD funding would facilitate (Development under Future With-Action Scenario), is provided in **Table 2.0-1**, which is keyed to **Figure 2.0-4**. Also shown on **Figure 2.0-4** are the current buildings occupied by Steiner Studios.

Table 2.0-1 Future Development at Steiner Studios with and without the Proposed Action

Key to Figure 2.0-4	Existing Site (Resource Designation, Name Resource also Referred to As)	Proposed Use	Development under Future No-Action Scenario (SF)	Development under Future With-Action Scenario (SF)	Development Generated by Proposed Action (SF)	Projected Employees	Projected Students
Steiner Studios - Development Inside Naval Annex (Media Campus)							
1	Medical Supply Depot (RD, Lab Building)	Production Office, Adv. Digital Media Lab, Academic Use	0	33500	33500	15	224
2	Lumber Shed (R426, Morgue Building)	Production Office, Adv. Digital Media Lab, Academic Use	0	2,100	2,100	2	14
3	Nurses' Quarters (RG, Unmarried Officer's Club)	Post-Production	0	46,633	46,633	149	0
4	Quarters No. 4 (R4, Lab Director's House)	Production Office	0	9,460	9,460	30	0
5	Carriage House/Stable/Garage (R103, R109, R103A)	Production Support	0	7,668	7,668	15	0
6	Infectious Disease Quarters (R5, R6, R7, Bungalows)	Writers' Cottages	0	6,480	6,480	0	0
7	U.S. Naval Hospital (R95)	Production Office	0	58,534	58,534	187	0
8	Surgeon's House (R1)	Production Office	0	9,800	9,800	31	0
9	Not Developed	Underwater Stage	0	20,000	20,000	50	0
10	Not Developed	Production Office, Adv. Digital Media Lab, Academic Use	0	20,000	20,000	92	132
11	Not Developed	Production Office, Adv. Digital Media Lab, Academic Use	0	50,000	50,000	92	330
12	Not Developed	Production Office	0	30,000	30,000	60	0
13	Not Developed	Production Office	0	30,000	30,000	25	0
14	Not Developed	Post-Production	0	20,000	20,000	10	0
15	Bachelor Officers' Quarters (R8, R9)	Production Office	0	5,800	5,800	5	0
Outside Naval Annex (Media Campus)							
16	B&H Building (Building 664)	Production Support/Academic Space	160,383	160,383	0	320	0
17	Parking Area	Kent Stages/Academic Space	175,000	175,000	0	970	0
18	Parking Area	Back Lot	0	70,000	70,000	300	0
19	Back Gate to Steiner Studios	North Parking Structure	88,000	88,000	0	0	0
20	Parking Area	West Parking Structure	315,000	315,000	0	0	0
21	Parking Area	Kent Ave Parking Structure	0	250,000	250,000	0	0
22	25 Washington Ave (Building 1)	Production Office/Production Support/Academic	175,623	175,623	0	190	450

Note: Site 22 – 25 Washington Avenue (Building 1) is partially occupied with 108,785 square feet production-related uses and will be occupied with 66,838 square feet of academic uses in 2015.



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Project Site Development

Figure 2.0-4

2.2 PURPOSE AND NEED

Steiner Studios opened in the BNY in 2004. Since its inception, Steiner Studios has operated a successful film and television production studio that includes soundstages, offices, and support space. In order to meet the growing space and service demands of the New York State media production community, Steiner Studios seeks to expand into the southeastern portion of BNY to allow it to grow as a media production studio in New York State.

The expansion will allow Steiner Studios to add a variety of types of studios, stages and support space that will be able to serve more forms of media in one location, offering efficiency not easily obtained in New York City, and creating synergies and business opportunities not found when an industry is scattered. The long-term goal for Steiner Studios is to be on par, in both size and utilization, with the major studio lots in Los Angeles. To achieve this, Steiner Studios requires a secure, private lot; functional buildings with easy access and ample parking; common space for social and business interaction; and sufficient critical mass for film equipment suppliers, post-production, and media-related companies. The Steiner Studios expansion would allow the company to grow, provide jobs for residents of New York City and contribute to the city's economy. In addition, the expansion would allow the potential for co-locating academic uses with new media uses, giving students exposure to an active media production environment and building local connections to the film industry, leading to continued work in the city after graduation.

As discussed previously, in order to realize some of the development of the Media Campus on the Naval Annex and in areas outside the Naval Annex, key infrastructure improvements need to be made at the project site. Many of the buildings in the Naval Annex are in a state of disrepair and require infrastructure improvements to be re-occupied. The funding provided by ESD to Steiner Studios would allow for a gas, water, sewer, electric and tele-data infrastructure loop to be constructed on the Naval Annex. In addition, other infrastructure measures that the ESD funding would support, both inside and outside the Naval Annex, include the construction of a Grand Stair Plaza, a Campus Pedestrian Passage, and a new Kent Avenue Vehicular Entrance at Kent Avenue and Wilson Street that would provide direct access to the Naval Annex and the northern end of the studio lot. Currently, the lot is primarily accessed through the BNY security gate at the intersection of Flushing and Washington Avenues and secondarily accessed through BNY Security's gate at the intersection of Kent Avenue and Clymer Street, north on Kent Avenue from where the new entrance would be located. The new entrance would allow for streamlined entry to Steiner Studios, in particular to the Media Campus and the Backlot. The project would also provide for the renovation and adaptive reuse of historic resources on the Naval Annex site. The proposed action would facilitate infrastructure improvements that would allow the historic buildings in the Naval Annex to be renovated and re-occupied with new uses.

2.3 REQUIRED APPROVAL AND REVIEW PROCEDURES

The project sponsor is seeking financial incentives from ESD, a public benefit corporation of the State of New York, for key infrastructure improvements that would enable Steiner Studios to develop a Media Campus at the Naval Annex, as well as future development in portions of the Navy Yard around the Naval Annex. The approval of the incentive funding by ESD also requires the adoption and affirmation of a General Project Plan (GPP) by ESD. Approval of the funding by ESD and a GPP requires compliance with the environmental review regulations under the State Environmental Quality Review Act (SEQRA). Because the proposed project includes nonresidential facilities which will meet or exceed 240,000 square feet in total, the proposed action is considered a Type I Action per 6 NYCRR Section 617.4 (b)(6)(v). ESD has determined that the preparation of a DEIS is warranted to review the environmental impacts of the proposed action.

The proposed Media Campus potentially would include academic uses related to film production, which are not permitted within the M3-1 zoning district in which the project site is located. To allow for such uses, the project sponsor would pursue either a zoning text amendment from the New York City Planning

Commission or a zoning override from the Office of the Mayor for Housing and Economic Development² at the time that specific plans have been developed. Since future city actions are anticipated to allow academic uses on the project site, a CEQR EAS Long Form has been completed to show that the analysis of the proposed action has been done pursuant to CEQR (see **Appendix A**)

2.4 ENVIRONMENTAL REVIEW PROCESS

This Draft Environmental Impact Statement (DEIS) has been prepared to assess the potential impacts of the proposed action. The DEIS was prepared in conformance with all applicable laws and regulations, including SEQRA and its implementing regulations set forth in Title 6 of the New York Codes, Rules and Regulations (6 NYCRR) Part 617. The DEIS contains:

- A description of the proposed action and its environmental setting.
- A statement of the environmental impacts of the proposed action, including its short-and long-term effects, and typical associated environmental effects.
- An identification of any adverse environmental effects that cannot be avoided if the proposed action is implemented.
- A discussion of alternatives to the proposed action.
- A discussion of any irreversible and ir retrievable commitments of resources that would be involved in the proposed action should it be implemented.
- A description of mitigation measures proposed to minimize significant adverse environmental impacts.

The environmental analyses in the DEIS assume that development facilitated by the proposed action would start in 2015 and be complete by 2027 and identify the cumulative impacts of the development on the project site in combination with other projects expected to be completed within that time period.

A draft scoping document setting forth the analyses and methodologies proposed for the EIS was issued on Friday, August 15, 2014. The public, involved and interested agencies, Brooklyn Community Board 2 and elected officials were invited to comment on the scope, either in writing or orally, at a public scoping meeting held on Tuesday, September 23, 2014, between the hours of 5:00 PM and 8:00 PM at Brooklyn Borough Hall, Community Room, 209 Joralemon Street, Brooklyn, New York. No comments were made during the public meeting. Written comments were considered and incorporated as appropriate into a final scope of work. The final scope of work was used as a framework for preparing the EIS for the proposed action. The final scoping document was issued on November 14, 2014.

2.5 ANALYSIS FRAMEWORK

Scope of Environmental Analysis

The environmental review for the proposed action applies the methodologies and follows the guidelines set forth in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, issued by the City of New York. Although the *CEQR Technical Manual*, which was designed to be used in the preparation of CEQR documents, is not expressly applicable to environmental reviews conducted by non-City agencies, it is generally considered to contain the most appropriate technical analysis methods and guidelines for environmental impact assessment for projects located in New York City. The *CEQR Technical Manual* includes, among other things, certain screening methodologies and criteria which are used in the DEIS to identify *de minimis* impacts not requiring further analysis. For each technical area of review in the DEIS that warrants a detailed assessment, the analysis includes a description of existing conditions, an assessment of conditions in the future without the proposed action, and an assessment of future conditions with the proposed project.

In order to assess the potential effects of development at the project site that would be facilitated by the proposed action (i.e., the approval of ESD funding for infrastructure improvements), a Reasonable Worst

² Formerly known as the Office of the Deputy Mayor for Economic Development.

Case Development Scenario (RWCDS) has been established for the Future No-Action and Future With-Action scenarios, as described in more detail below. The incremental difference between the No-Action and the With-Action scenarios serves as the basis for environmental impact analyses. The analysis year for the proposed project is 2027, when all development on the project site would be complete and occupied.

Existing Conditions

The analysis framework begins with an assessment of existing conditions on the project site and existing conditions found in the study areas identified for each technical area analyzed as part of the environmental review. The assessment of existing conditions does not represent the condition against which the proposed project is measured, but serves as a starting point for the projection of future conditions with and without the proposed action and the analysis of project impacts.

Future No-Action Scenario

The future without the proposed action (Future No-Action Scenario) describes a future baseline condition to which the changes that are expected to result from the proposed action are compared. For each technical analysis, proposed projects that are expected to occur in the study area surrounding the project site are included as appropriate in the analysis of the future without the proposed action. General background growth (e.g., population, traffic, etc.) is also assumed when analyzing future development in the project area in the future without the project.

For each technical area where a detailed analysis is warranted, the DEIS includes an analysis of the Future No-Action Scenario. Under the RWCDS, it is assumed that if the funding for the infrastructure improvements is not approved by ESD, the approximately 350,000 square feet of development (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) would not occur inside the Naval Annex, and that the 70,000-square-foot Backlot and 250,000-square-foot Kent Avenue Parking Structure would not be developed in the area outside the Naval Annex.

The remaining development as part of Steiner Studios expansion plans in the area outside the Naval Annex, as shown in **Table 2.0-1** and **Figure 2.0-4**, is expected to occur whether or not ESD provides funding to Steiner Studios. Thus, the remaining development that would occur outside the Naval Annex, which is not contingent on ESD funding, is included as part of the analysis baseline of the Future No-Action Scenario. The development that is expected to occur outside the Naval Annex, in the future without the proposed action, are projects that would not need extensive infrastructure improvements in order to be built because they would occur in areas currently served by up-to-date utilities; therefore, Steiner Studios would finance and construct these projects without funding assistance from ESD or other public funding sources. Below is a description of each of the projects that would occur within the Steiner Studios campus in the future without the proposed action:

- **B&H Building (Building 664)** – This 160,383-square-foot building is currently used as a warehouse for B&H Photo, an electronics retailer. When their lease expires, B&H intends to move their warehousing operations to upstate New York. Steiner Studios has entered into a term sheet with BNYDC to redevelop Building 664 as production support space. The redevelopment is expected to occur prior to the 2027 analysis year of the proposed project. The B&H building is shown as Future No-Action Development Site 16 on **Figure 2.0-4**.
- **Kent Stages** – The planned site of this 175,000-square-foot building is currently a parking lot for Steiner Studios. It is anticipated the project would involve development of production stages. The Kent Stages are expected to be developed by 2027. The Kent stages are shown as Future No-Action Development Site 17 on **Figure 2.0-4**.
- **North Parking Structure** – Near the site of the proposed Backlot, Steiner Studios is planning to build a parking structure with approximately 210 accessory parking spaces to support the Studio

Lot outside the Naval Annex. The North Parking Structure is shown as Future No-Action Development Site 19 on **Figure 2.0-4**.

- **West Parking Structure** – Located west of Building 1 at 25 Washington Avenue there is an open area currently used for parking and storage. Steiner Studios is planning to build a parking structure with up to approximately 1,000 accessory parking spaces to support the Studio Lot outside of the Naval Annex, as well as potentially other uses within the Brooklyn Navy Yard. The West Parking Structure is shown as Future No-Action Development Site 20 on **Figure 2.0-4**.
- **Academic uses at 25 Washington Avenue (Building 1)** – This project involves sublease of space in Building 1 at the Brooklyn Navy Yard to two academic tenants: the Brooklyn College Barry R. Feirstein Graduate School of Cinema (part of the CUNY system) and the Carnegie Mellon University Integrative Media Center. Building 1 is a 175,623-square-foot, 7-story World War II-era, former United States Navy building. A total of approximately 66,838 square feet of the building would be occupied by the two proposed academic institutions. The remaining 108,785 square feet of space in Building 1 would house media, film, and television production uses, including mill shops, wardrobe storage/design, and studio-related production offices. An Environmental Assessment was prepared for this project (Brooklyn Navy Yard Zoning Override for 25 Washington Avenue, December 2013) and the New York City Office of the Mayor for Housing and Economic Development³ issued a Negative Declaration on December 20, 2013. Production-related uses currently occupy the building and the two academic institutions are scheduled to occupy the building in 2015. Building 1 at 25 Washington Avenue is shown as Future No-Action Development Site 22 on **Figure 2.0-4**.

³ Formerly known as the Office of the Deputy Mayor for Economic Development.

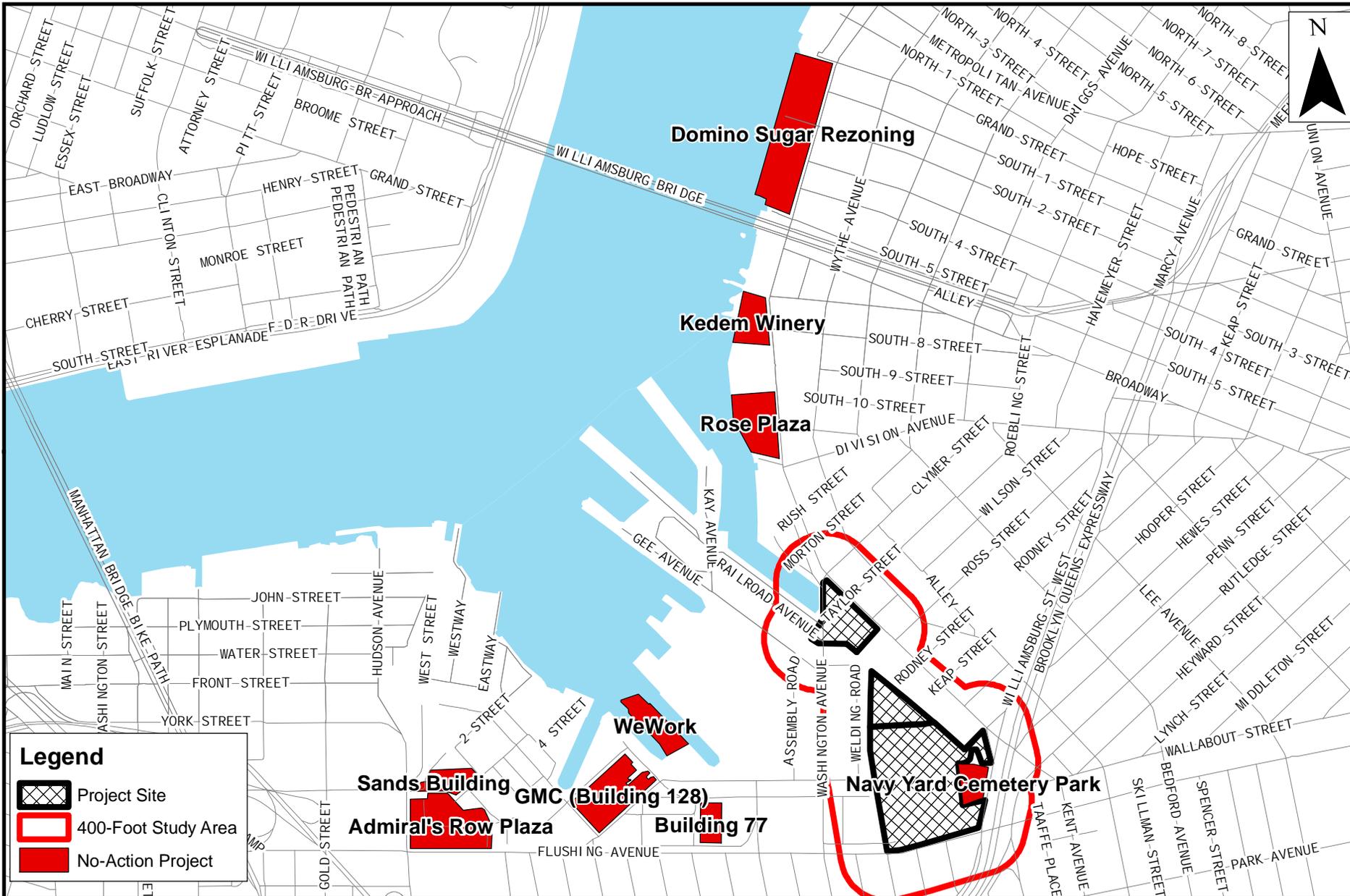
Other significant planned future development projects anticipated to occur in the surrounding area of the project site, between 2014 and 2027, were also identified. For each technical review area of the DEIS, these projects were included in the future baseline condition to the extent the project had the potential to influence Future No-Action conditions in the technical review area's defined study area. These projects are discussed below and grouped as either projects that would occur inside the BNY, but outside the current Steiner Studios campus, or projects that would occur outside the Brooklyn Navy Yard. The projects listed below are shown on **Figure 2.0-5**.

Future No-Action Project Inside the Brooklyn Navy Yard, but Outside the Current Steiner Studios Campus

- **Admiral's Row Plaza** – This development site is located at the northeast corner of the intersection of Navy Street and Nassau Street, in the southwest corner of the BNY. The site, which is located on the southwestern edge of the former BNY complex, is currently not actively used and is occupied by several vacant structures and bounded along its public street frontages by walls and fencing. The development program for the proposed project includes approximately 152,891 square feet of retail shopping center space which would include approximately 26,214 square feet of specialty retail, approximately 52,854 square feet of local neighborhood retail, and an approximately 74,161- square-foot supermarket; approximately 7,024 square feet of community facility/non-profit office space; and approximately 127,364 square feet of light industrial use. This project is expected to be complete by the end of 2016.
- **Sands Building** – The Sands Building is located east of Navy Street, and north of Sands Street within the Navy Yard. This building may be developed concurrently or after Admiral's Row. It is being offered to developers bidding on Admiral's Row as an option to develop a light industrial/office building of approximately 100,000 square feet. This project is expected to be complete by the end of 2016.
- **Building 77** – This project is allowed as-of-right and involves the renovation of a 960,000-square-foot, 18-story industrial building (Building 77) in the Navy Yard. The currently vacant space will be transformed into a light-industrial use. This project is expected to be complete by June 2016.
- **GMC (Building 128)** – This project is allowed as-of-right and involves the adaptive reuse of an existing 245,000-square-foot building that will house multi-tenant light industrial/manufacturing uses. This project is expected to be completed by July 2015.
- **WeWork (area between Dry Dock 2 and Dry Dock 3)** – This project is allowed as-of-right and involves the redevelopment of a 13-story, 450,000-square-foot building to accommodate shared office space. This project is expected to be completed in late 2016.
- **Brooklyn Greenway Initiative Naval Hospital Cemetery** – The Brooklyn Greenway Initiative, working with BNYDC, plans to create a 1.7-acre park in the former Brooklyn Naval Hospital Cemetery. The site, which is on Williamsburg Street West between Kent and Flushing Avenues, will have a walkway, landscape areas and other features.

Future No-Action Projects Outside of the Brooklyn Navy Yard

- **Domino Sugar Rezoning** – This project involves redevelopment of the former Domino Sugar site located along the Williamsburg waterfront in Brooklyn with residential, retail/commercial, community facility, and open space uses. The proposed project would include up to 2,400 residential units, up to 127,537 square feet of retail/commercial space, up to 146,451 square feet of community facility space, up to 98,738 square feet of commercial office space, and approximately four acres of public open space. It is expected that the proposed project would be completed and occupied by 2020.



**Steiner Studios Media Campus EIS
Brooklyn Navy Yard**

**Future No-Action Projects Outside
the Steiner Studios Campus**

Figure 2.0-5



- **Rose Plaza (470 Kent Ave)** – This is the site of an existing 235,772-square-foot lumber yard/cabinet manufacturer. The project involves a City Planning Commission (CPC) Special Permit renewal to accommodate up to approximately 754 residential dwelling units plus 29,000 square feet of neighborhood retail. This project is expected to be completed prior to 2027.
- **Kedem Winery (420-430 Kent Ave)** – This is the site of an existing 54,532-square-foot production studio, and involves a CPC Special Permit renewal to accommodate up to approximately 450 residential dwelling units plus 26,430 square feet of neighborhood retail. This project is expected to be completed prior to 2027.
- **Flushing Avenue Reconstruction** – As part of the Brooklyn Waterfront Greenway, the New York City Department of Transportation (NYCDOT) proposes to reconstruct Flushing Avenue to include a raised two-way bikeway and planted buffers alongside the BNY. The reconstruction would entail converting the existing westbound curbside bike lane into a two-way bikeway at sidewalk grade, separated from motor traffic by a three-foot, planted cobblestone buffer. Another planting strip would separate the bikeway from the pedestrian path. For pedestrians, adding this bikeway would narrow crossing distances about 20 percent. The estimated completion date for the Flushing Avenue Reconstruction is 2016.

Future With-Action Scenario

The identification of potential environmental impacts is based upon the comparison of the No-Action condition to the future with the proposed action (Future With-Action Scenario). In certain technical areas this comparison can be quantified and the severity of impact rated in accordance with guidelines in the *CEQR Technical Manual*. In other technical areas, the analysis is qualitative in nature. The methodology for each analysis is presented at the start of each technical analysis chapter of the EIS.

Steiner Studios, working closely with BNYDC, has developed a conceptual plan for future expansion of the Steiner Studios operations. Steiner Studios envisions the creation of a state-of-the-art, full service Media Campus in the former Naval Annex that is located in the southeast corner of the Brooklyn Navy Yard (BNY), as well as development in areas that surround the Naval Annex. The approval of the funding by ESD for infrastructure improvements would facilitate approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex. Outside the Naval Annex, the ESD funding for infrastructure improvements would facilitate an additional 70,000 square feet of new development. In addition, Steiner Studio intends to seek financial incentives from ESD in the future for the development of a 250,000-square-foot Kent Avenue Parking Structure that is envisioned as part of the area outside the Naval Annex. The development that would occur at the project site in the Future With-Action scenario, as described above, represents the RWCDs.

Although no specific plan for academic use has been developed at this time, since academic uses are anticipated in the future within the Naval Annex Media Campus, the inclusion of academic use within some of the proposed Media Campus buildings is assumed under the RWCDs in the DEIS analyses. A review of the technical areas assessed for the proposed project determined that when compared to a project site with solely media-related production uses, including academic uses would have a neutral effect on most of the technical review areas, and in some cases would represent a more conservative assessment in comparison to solely assuming media production uses, which would be the alternative if zoning permission is not obtained.

Under the RWCDs, the air quality, noise and transportation analyses represent technical areas of the environmental review where including academic uses represents a more conservative assessment. For air quality and noise, including academic uses as part of the proposed project introduces a sensitive receptor onto the project site and triggers the need for more thorough review of air quality and noise impacts. The inclusion of academic uses represents conservative assessment because, as shown in **Table 2.0-2**, academic use generates more vehicle, transit and pedestrian trips when compared to the equivalent square footage of media production uses. The one exception to this is the weekday midday

peak period for pedestrian and transit trips, where there are fewer trips generated by academic use (i.e., 553 combined transit and pedestrian trips) compared to media production uses (i.e., 611 combined transit and pedestrian trips). However, it is important to note that all transit and pedestrian trips are spatially distributed throughout the transportation network to multiple origins and destinations surrounding the project site. Therefore, the increase in pedestrian volume at any one sidewalk, crosswalk, or street corner under the solely media production use scenario is projected to be negligible during the weekday midday peak hour. Thus, the inclusion of academic uses under the RWCDs, as part of the analysis of the Future With-Action condition represents a more conservative assessment of the proposed project. It should be noted that the academic uses envisioned are undergraduate-level courses and above (i.e., postgraduate courses). The academic uses would be co-located with the media production uses on the project site, giving students exposure to an active media production environment.

Table 2.0-2 Comparison of Project-Generated Trips with or without the Inclusion of Academic Uses at the Project Site

Land Use	Vehicle Trips			Transit and Pedestrian Trips ¹		
	Weekday AM	Weekday MD	Weekday PM	Weekday AM	Weekday MD	Weekday PM
Media (TV/Film) Production Uses Only ²	141	34	120	343	611	314
Media (TV/Film) Production Uses <u>and</u> Academic Uses ³	143	51	156	545	553	731

¹ Combined Total of Subway, Bus and Walk Trips; see Chapter 3.6, "Transportation" for Trip Generation Assumptions.

² Assumes 420,000 SF of Media-Related Production Uses.

³ Assumes 315,000 SF of Media-Related Production Uses and 105,000 SF of Academic Uses.

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3.0 PROBABLE IMPACTS OF THE PROPOSED PROJECT

3.1 LAND USE, ZONING, AND PUBLIC POLICY

Introduction

A detailed assessment of land use, zoning, and public policy is appropriate if a proposed action has the potential to result in a significant change in land use or zoning, or would substantially affect regulations or public policies governing land uses. A land use analysis characterizes the uses and development trends in the study area and assesses whether a proposed project is compatible with, or may affect, land use conditions. Consistent with *CEQR Technical Manual* guidelines, an assessment of zoning is performed in conjunction with a land use analysis when the proposed action would change the zoning on the site or result in the loss of a particular use. An assessment of public policy typically accompanies the land use and zoning assessments to address the compatibility of the project with relevant public policies.

3.1.1 Existing Conditions

Land Use

The project site is located in the southeast portion of the Brooklyn Navy Yard (BNY) and is generally bound by Kent Avenue, Flushing Avenue, Assembly Road, Clinton Avenue and Williamsburg Street West. The site comprises portions of Brooklyn Block 2012, Lots 1 and 150. The study area for this assessment has been defined as being within a 400-foot radius of the project site, where the proposed project has the greatest potential to affect land use trends. The 400-foot study area is generally bounded by Rush Street to the north, Wythe Avenue to the east, Washington Avenue to the west, and the halfway point between Flushing and Park Avenues to the south (see **Figure 3.1-1**).

Background

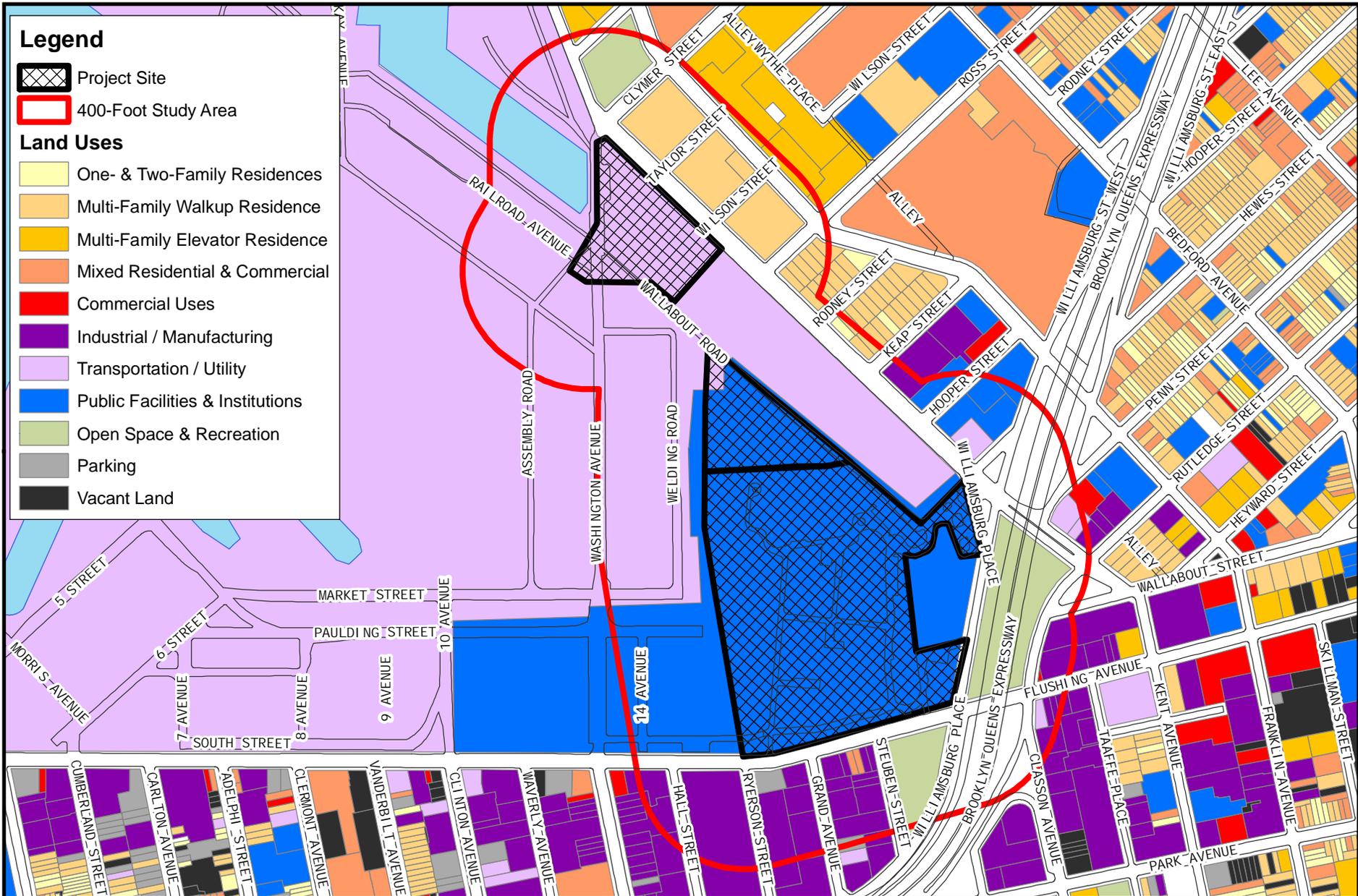
The development history of the Naval Annex is rooted in its legacy as a naval hospital adjacent to the BNY. The Naval Annex was purchased in 1824 and the hospital building was built between 1830 and 1838. The Naval Annex underwent major development during World War I and World War II, adding many medical and support structures on the site. The hospital continued in operation until 1948 when its functions were transferred to the Naval Hospital at St. Albans, in Queens, NY.

In 1966, the Navy ended ship repair operations and disposed of the main part of the BNY. That portion now functions as an industrial park operated by BNYDC. Through the 1990s, the Naval Annex functioned as the administrative headquarters of Naval Station (NAVSTA) New York, providing personnel housing and administrative support. Many of the structures in the Naval Annex were demolished, as the Navy wound down its operations and ultimately closed the facility, transferring the operations of NAVSTA Brooklyn to NAVSTA Staten Island. In more recent years, the open areas of the Naval Annex have been used as a storage area for the industrial tenants of the Navy Yard, while the buildings of the Naval Annex site are inactive and unoccupied. A more detailed discussion of the development history of the Naval Annex is provided in **Chapter 3.6**, "Historic and Cultural Resources."

Project Site

The larger portion of the project site is made up of the Naval Annex, a complex of buildings in a campus setting located at the southeastern end of the BNY. The grounds of the Naval Annex are separated from the rest of the BNY, as well as from public access, by a wall that runs the perimeter of the site, with gates located in multiple locations.

A key to the photos of the project site is shown in **Figure 3.1-2**, with photos of the project site displayed in **Figure 3.1-3**. A complete list of historic resources on the project site (see **Table 3.6-1**) and a graphic showing the location of all the historic resources (see **Figure 3.6-5**) is provided in **Chapter 3.6**, "Historic and Cultural Resources."



Legend

-  Project Site
-  400-Foot Study Area

Land Uses

-  One- & Two-Family Residences
-  Multi-Family Walkup Residence
-  Multi-Family Elevator Residence
-  Mixed Residential & Commercial
-  Commercial Uses
-  Industrial / Manufacturing
-  Transportation / Utility
-  Public Facilities & Institutions
-  Open Space & Recreation
-  Parking
-  Vacant Land

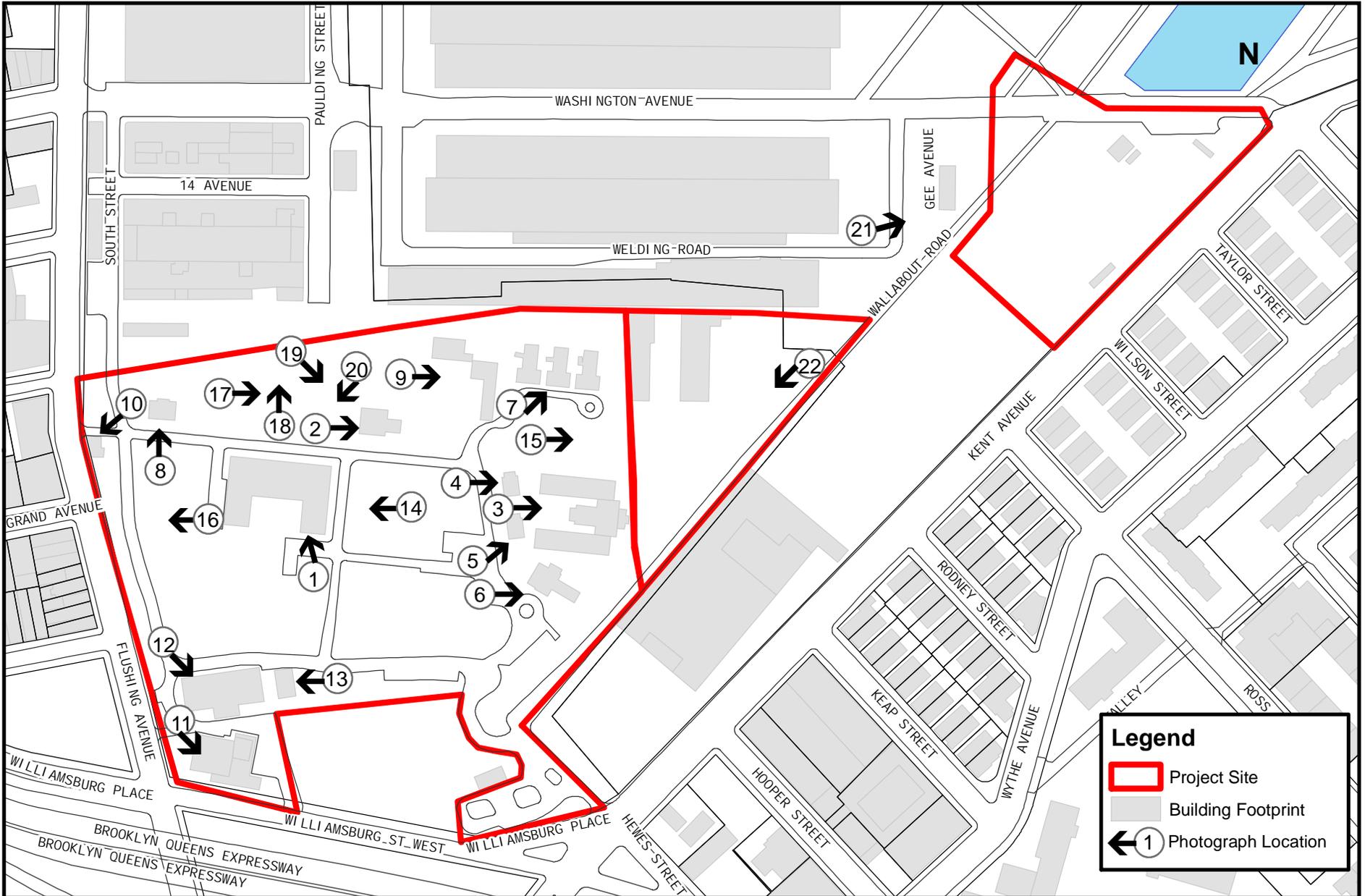


Steiner Studios Media Campus EIS
Brooklyn Navy Yard

0 250 500 1,000
 Feet



Land Use Map
 Figure 3.1-1



Legend

- Project Site
- Building Footprint
- ← 1 Photograph Location



**Steiner Studios Media Campus EIS
Brooklyn Navy Yard**



**Photo Key Map -
Photos of the Project Site**
Figure 3.1-2



Photo 1: View west of the U.S. Naval Hospital (R95) inside the Naval Annex.



Photo 2: View north of the Surgeon's House (R1) inside the Naval Annex.



Photo 3: View north of Nurses' Quarters/Unmarried Officers' Club (RG) inside the Naval Annex.



Photo 4: View north of Quarters No. 2 (R2) inside the Naval Annex.



Photo 5: View west of Quarters No. 3 (R3) inside the Naval Annex.



Photo 6: View north of Quarters No. 4 (R4) inside Naval Annex.



Photo 7: View northwest of the Infectious Disease Quarters/Bungalows (R5, R6 and R7) inside the Naval Annex.



Photo 8: View west of Bachelor Officers' Quarters (R8 and R9) inside the Naval Annex.



Photo 9: View of the Carriage House, Stable and Garage (R103, R109 and R103A) inside the Naval Annex.



Photo 10: View southeast of the Guard House and Gate Keeper Lodge (R104) inside the Naval Annex.



Photo 11: View east of the Motion Picture Exchange (311) inside the Naval Annex.



Photo 12: View northeast of the Medical Supply Depot/Lab Building (RD) inside the Naval Annex.



Photo 13: View south of the Lumber Shed/Morgue (R426) inside the Naval Annex.



Photo 14: View south of the Greenhouse remnants (R448) inside the Naval Annex.



Photo 15: View north of the Tennis Courts (R464 and R474) inside the Naval Annex.



Photo 16: View south of the Pool and Pool Bathhouse (671 and 672) inside the Naval Annex.



Photo 17: View north of the Flagstaff (R463) inside the Naval Annex.



Photo 18: View west of the Barrier Forts Monument (999) inside the Naval Annex.



Photo 19: View of the Sun Dial inside the Naval Annex.



Photo 20: View of the Bird Bath inside the Naval Annex.



Photo 21: View of the proposed Backlot site outside the Naval Annex, looking northwest towards Kent Avenue.



Photo 22: View southeast of the proposed Kent Avenue Parking Structure site outside the Naval Annex.

The focal point of the campus is the U.S. Naval Hospital (R95) that sits on an elevated site overlooking the rest of the Naval Annex. The C- shaped, Greek Revival style hospital is two-stories with a basement and faced in marble (see **Photo 1** of **Figure 3.1-3**). Aside from the hospital building, the majority of the other buildings in the Naval Annex were used as residences. The Surgeon's House (R1) sits in the western portion of the yard, near the hospital building. The Surgeon's House is a two-story and attic, French Second Empire style, brick and stone building with a mansard roof (see **Photo 2** of **Figure 3.1-3**). In the northern portion of the yard are several former naval personnel residences. The largest of these buildings is the Nurses' Quarters (RG, also referred to as the Unmarried Officers' Club), which is an E-shaped, stuccoed-brick, three-story Classical Revival style building (see **Photo 3** of **Figure 3.1-3**). In front of the Nurses' Quarters are two buildings referred to as Quarters No. 2 (R2) and Quarters No. 3 (R3), which are two-story plus basement, brick Colonial Revival style houses (see **Photos 4** and **5** of **Figure 3.1-3**). Also near the Nurses' Quarters is Quarters No. 4 (R4, also referred to as the Lab Director's House), which is a three-story Italianate style brick house (see **Photo 6** of **Figure 3.1-3**).

In the northwestern corner of the Naval Annex are the Infectious Disease Quarters (R5, R6, R7, also referred to as the Bungalows) that are three one-story Craftsman style buildings (see **Photo 7** of **Figure 3.1-3**). Sitting in the southwestern corner of the Naval Annex are the Bachelor Officers' Quarters (R8, R9). These two semi-detached houses are two-story plus basement, brick Colonial Revival style structures (see **Photo 8** of **Figure 3.1-3**).

Other non-residential buildings and structures are scattered throughout the Naval Annex. The Carriage House (R103), Stable (R109) and Garage (R103A) buildings (see **Photo 9** of **Figure 3.1-3**) are located in the northwestern portion of the yard, between the Surgeon's House and the Infectious Disease Quarters. These three buildings are connected and range from one to two stories in height. The Guardhouse and Gate Keeper Lodge (R104) is a two-story, brick L-shaped brick structure that is located near the gated entrance to Flushing Avenue (see **Photo 10** of **Figure 3.1-3**). The Motion Picture Exchange (Building 311) is located at the far eastern edge of the Naval Annex and is an irregularly shaped, two-story brick and concrete building (see **Photo 11** of **Figure 3.1-3**). In the eastern portion of the Naval Annex are the Medical Supply Depot (RD, also referred to as the Laboratory Building) a two-story and basement, rectangular brick building and the Lumber Shed (R426, also referred to as the Morgue Building) a one-story rectangular brick building (see **Photos 12** and **13** of **Figure 3.1-3**).

The Naval Annex campus creates an open setting that is characterized by ornamental trees adjacent to roadways, grass lawns and playing fields, including a football field. Remnants of a greenhouse (R448), tennis courts (R464 and R474) and a pool and an associated bathhouse (671, 672) can also be found on the campus. There is also the Memorial Area, west of the hospital, with a flagstaff (R463), a war monument (999), a sundial and a bird bath (see **Photos 14-20** of **Figure 3.1-3**).

The Naval Annex site is part of the State/National Registers of Historic Places- (S/NRHP) listed Brooklyn Navy Yard Historic District. The Naval Annex portion of the historic district contains 26 contributing (i.e., contributing to the historic significance of the district) and seven non-contributing resources in the historic district. Two resources within the Naval Annex are designated New York City Landmarks by the New York City Landmarks Preservation Commission (LPC): the Surgeon's House (R1) and the U.S. Naval Hospital (R95). A more detailed discussion of the historic and cultural resources existing on the project site is provided in **Chapter 3.6**, "Historic and Cultural Resources" and a map of the Brooklyn Navy Yard Historic District Boundary is shown in **Figure 3.6-2**.

The portions of the project site that are located outside the Naval Annex area currently consist of paved open surface areas that are used for parking and storage. The area proposed as the site of the Kent Avenue Parking structure would potentially overlap with the boundaries of the Brooklyn Navy Yard Historic District. The site of the proposed Backlot is not located within the Brooklyn Navy Yard Historic District. The area proposed for the Kent Avenue Parking Structure and the Backlot are shown in **Photos 21** and **22** of **Figure 3.1-3**.

Study Area

To the west of the project site, near Flushing Avenue, is the Foundry building (Building 2). The Foundry building is a World War II-era, former United States Navy industrial building. The brick building was originally used as a foundry and was designed with a large 50-foot high central area and two lower-height wings that flank both sides of the building. The Foundry building is currently occupied by Capsys, a manufacturer of prefabricated modular homes. West of the Foundry building is 25 Washington Avenue (Building 1), which is also a World War II-era, industrial building that stands at the entrance of the Steiner Studios media campus in the BNY. The building was recently renovated as production space for Steiner Studios, as well as some space reserved for future academic uses.

The portion of the study area north of Buildings 1 and 2 includes the current Steiner Studios campus. Steiner Studios is a walled enclave inside the BNY that includes over 500,000 square feet of space for media, film, and television production spread across over 15 acres. The campus has several buildings used for sound stages, production offices and support space. The campus also has accessory surface parking on the grounds for employee and visitor parking, as well as for trucks related to film and television production. The Steiner Studios campus is generally located within the area between Assembly Road to the west, Gee Avenue to the north, Welding Road to the east, and Market Street to the south. The current Steiner Studios campus is characterized by several large, attached buildings used for soundstages and supporting warehouse buildings. Each building contains multiple loading bays to facilitate equipment delivery and materials for production set construction.

North of Steiner Studios, the study area includes industrial buildings and open areas for storage and surface parking. The northern portion of the study area includes the Wallabout Chanel, a small channel that connects to the East River. The Clymer Gate of the BNY is located in this northern part of the study area, providing secured access to the BNY.

Along the western side of Kent Avenue, within the confines of the BNY, the study area includes an industrial building and parking lot that has a chain-link fence along its perimeter. This area is occupied by the Brink's Corporation that provides armored car and other security services. To the south on the Brink's site is the Naval Hospital Cemetery that served as the cemetery for the U.S. Naval Hospital from 1824 to 1910. The cemetery is situated just east of a brick wall that surrounds the Naval Annex and is composed of a flat, low elevation below a low, but well-defined grassy slope. The cemetery is a contributing element of the Brooklyn Navy Yard Historic District, and is the site of the Brooklyn Greenway Initiative's planned 1.7 acre park.

Jacob's Ladder Playground, an approximately one-acre open space resource with active and passive recreational facilities is located in the northeastern portion of the study area. South of the playground, along Kent Avenue, is primarily developed with multifamily residential uses. The buildings are typically three- to five-story brick row houses. Further south, along Kent Avenue, the residential uses give way to industrial uses, religious institutional buildings, and some commercial uses. This trend continues for the portion the study area located east of the Brooklyn-Queens Expressway (I-278).

Historic resources present outside the BNY include the buildings that comprise the S/NRHP-listed Wallabout Industrial Historic District. The industrial buildings of the historic district face onto Clinton Avenue, Waverly Avenue, Washington Avenue, Hall Street, Ryerson Street, Grand Avenue, Flushing Avenue, and Park Place. The buildings in the district were all built as factories, industrial warehouses or related uses, or, in one case, as tenements later converted into an industrial warehouse.

The elevated Brooklyn-Queens Expressway (I-278) swings northeast near Kent Avenue and Flushing Avenue in the southeastern portion of the study area. The expressway acts as a barrier, separating the majority of the study area located west of the expressway, from the smaller portion of the study area located east of the expressway. The Brooklyn-Queens Expressway (I-278) contributes to the traffic volumes in the area, due to the proximate vehicle access points for the highway. Two open space resources are located near the expressway. Steuben Playground is an approximately one-acre playground between Flushing Avenue, Steuben Street, and Williamsburg Place. Classon Playground and Classon Triangle are on the eastern side of the expressway and together have over three acres of space and are proximate to Kent Avenue, Classon Avenue, Wallabout Street.

A key to the photos of the study area is shown in **Figure 3.1-4**, with photos of the study area displayed in **Figure 3.1-5**.

Zoning

The *New York City Zoning Resolution* (ZR) dictates the use, density and bulk of developments within New York City. The ZR is divided into two parts: zoning text and zoning maps. The zoning text establishes the zoning districts within the city and dictates the zoning regulations governing land uses and developments. Zoning maps delineate the boundaries of the city's zoning districts.

The city has three basic zoning district classifications: residential (R), commercial (C) and manufacturing (M) districts. These three basic classifications are further divided into low-, medium- and high-density districts, as well as into standard and contextual districts. The maximum bulk permitted for new developments within any zoning district is mainly governed by the district's maximum floor area ratio (FAR)⁴ and minimum required open space.

Project Site

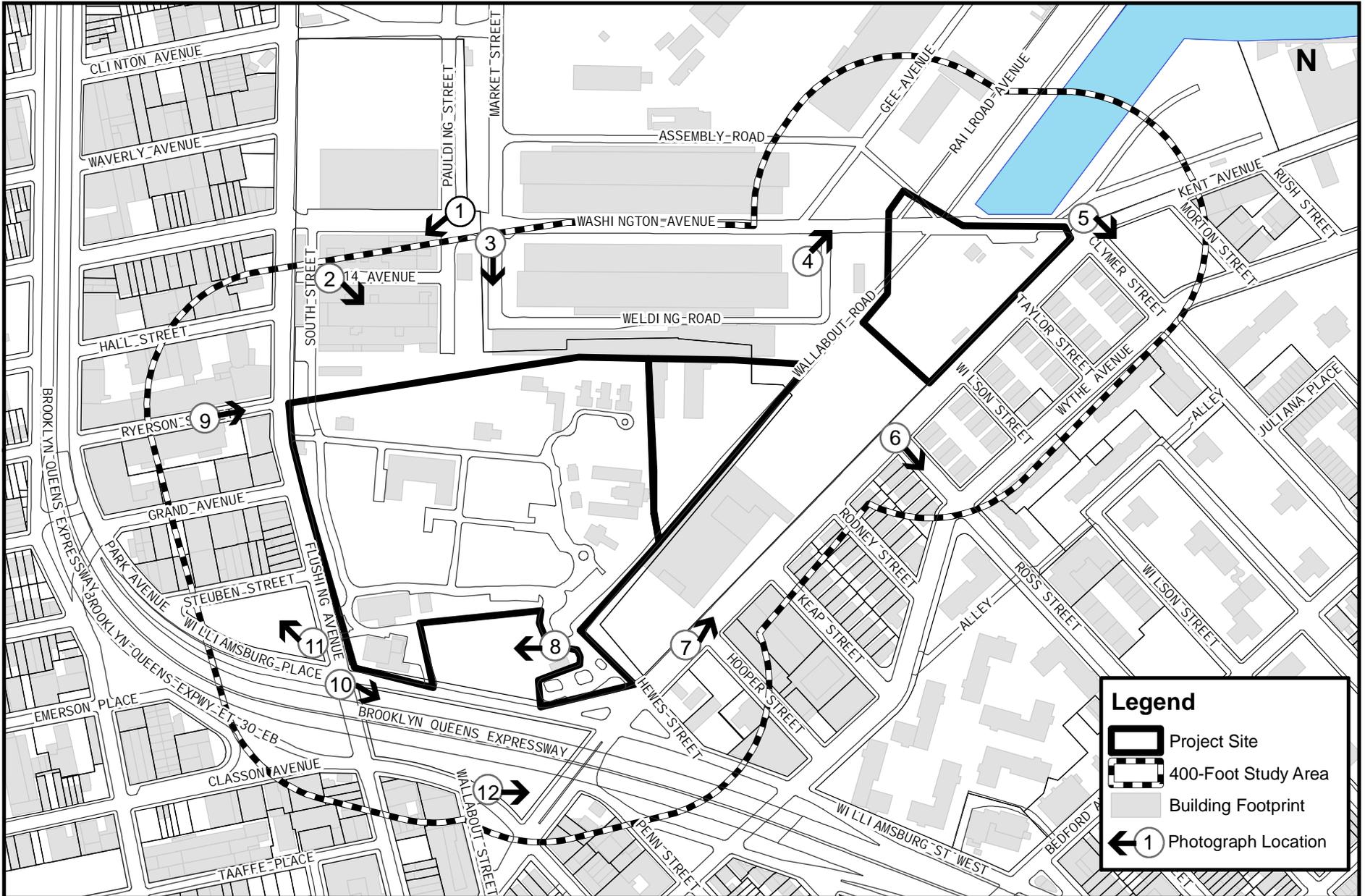
The project site and the portions of the study area that are inside the BNY are zoned M3-1. M3 zoning districts permit manufacturing, warehouse, automotive uses, and many commercial uses, including heavy industrial uses (see **Figure 3.1-6**). No new residences or community facilities are permitted in M3 districts. Development within M3-1 districts can be built to a maximum floor-area-ratio (FAR) of 2.0, with a maximum street wall height of 60 feet before mandatory setbacks. In general, developments in M3 districts have no front or side yard requirements, but are required to leave minimum 20-foot-deep rear yards or a rear yard equal to 40 feet for through-lots.

Study Area

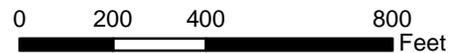
An M1-2 zoning district is mapped in the southern and eastern portions of the study area. Light manufacturing uses are permitted within M1 districts provided the uses meet the performance standards contained in the ZR, and often serve as buffers between residential and commercial districts and heavy manufacturing zones. Most commercial uses, other than large retail uses, are permitted on an as-of-right basis. Residential use is prohibited, and most community facility and big box retail uses require a special permit. M1-2 districts permit a maximum FAR of 2.0 for manufacturing and commercial development (4.8 FAR for permitted community facility uses), and a maximum permitted street wall height of 60 feet.

Portions of the study area to the east are zoned R6; a residential district widely mapped in built-up, medium-density areas in Brooklyn. The character of R6 districts can range from row house neighborhoods to large tower-in-the-park developments. The height factor regulations for R6 districts encourage small apartment buildings on small zoning lots, and tall, narrow buildings that are set back from the street on larger lots. The R6 zoning district allows a maximum FAR of 0.78 to 2.43 for residential use.

⁴ The floor area ratio, when multiplied by the area (in square feet) of a zoning lot, represents the maximum building floor area that can be developed on the lot.



**Steiner Studios Media Campus EIS
Brooklyn Navy Yard**



**Photo Key Map -
Photos of the Study Area**

Figure 3.1-4



Photo 1: View southeast from Paulding Street of 25 Washington Avenue (Building 1).



Photo 2: View northeast from South Street of the Foundry (Building 2).



Photo 3: View east from Washington Avenue of the current Steiner campus.



Photo 4: View northwest of current Steiner Studios campus and Brooklyn Navy Yard area near the Wallabout Channel.



Photo 5: View of Jacob's Ladder Playground looking northeast from Kent Avenue and Clymer Street.



Photo 6: View of the residential area adjacent to Kent Avenue, looking northeast from Kent Avenue and Ross Street.



Photo 7: View of Brink's site adjacent to the project site, looking northwest along Kent Avenue near Hooper Street.



Photo 8: View of the Naval Hospital Cemetery, looking south from inside the Naval Annex.



Photo 9: View of the Wallabout Historic District, looking north towards Flushing Avenue From Ryerson Street.



Photo 10: View of the elevated Brooklyn-Queens Expressway (I-278), looking northeast from Flushing Avenue and Williamsburg Street West.



Photo 11: View of Steuben Playground, looking southwest from Flushing Avenue and Williamsburg Place.



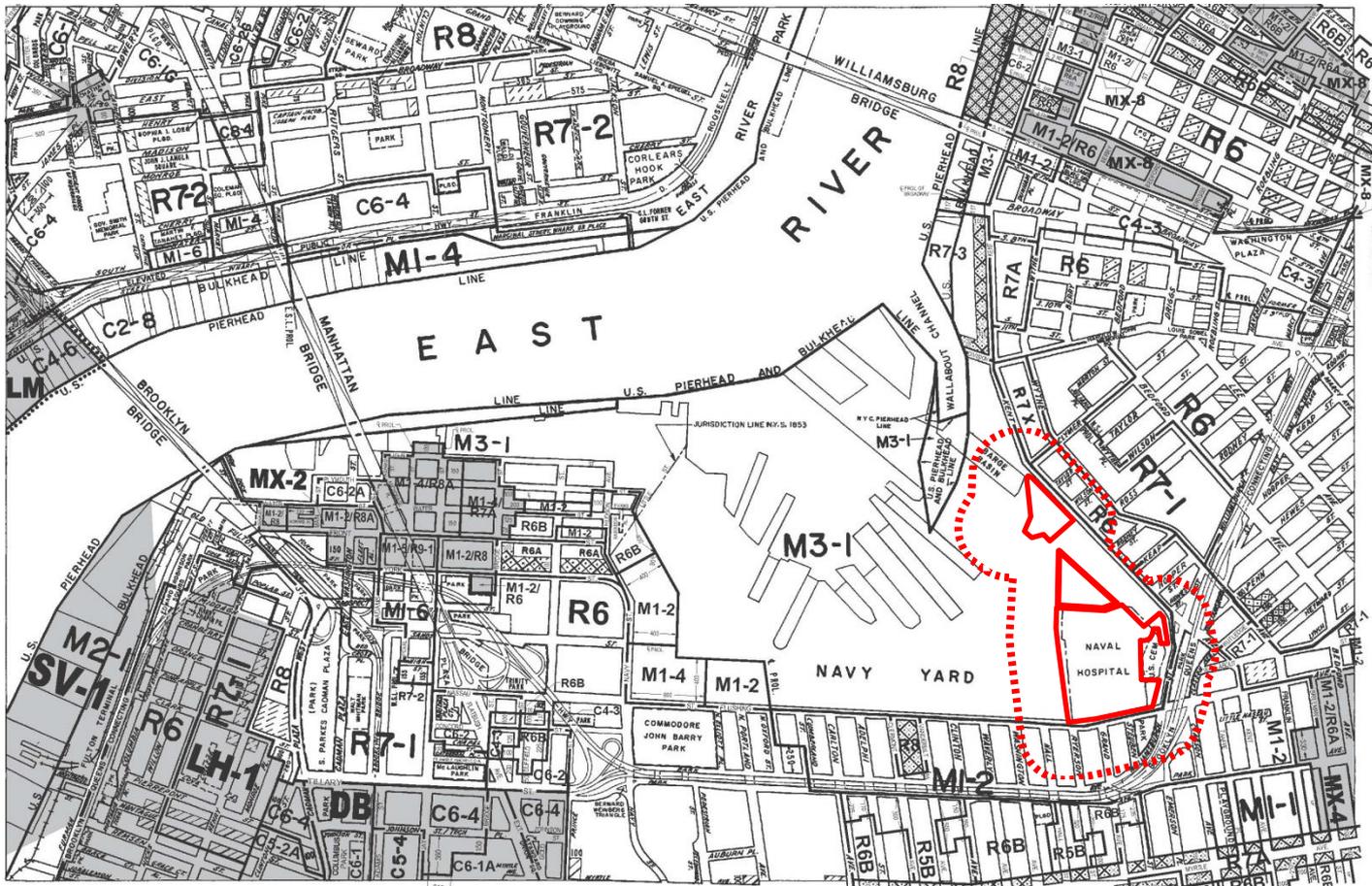
Photo 12: View of Classon Playground, located east of the Brooklyn-Queens Expressway (I-278), looking north from Classon Street.

The study area to the east and the south overlap a R7-1 zoning district. R7-1 districts are medium-density apartment districts. Two sets of bulk regulations are allowed. The standard height factor regulations in R7-1 districts encourage low apartment buildings on smaller zoning lots, and taller buildings with low lot coverage on larger lots. Buildings developed pursuant to height factor regulations are often tall buildings set back from the street and surrounded by open space and on-site parking. The residential FAR in R7-1 districts ranges from 0.87 (for a single-story building) to 3.44 at a typical height of 14 stories, and the open space ratio (OSR) ranges from 15.5 to 25.5. In addition, to the north the study area overlaps a R7X zoning district. The FAR in R7X districts is 5.0. Above a base height of 60 to 85 feet, the building must be set back a depth of 10 feet on a wide street and 15 feet on a narrow street before rising to its maximum height of 125 feet. Buildings must have interior amenities for residents pursuant to the Quality Housing Program. A summary of the zoning regulations applicable to the study area follow in **Table 3.1-1** below and a zoning map for the study area is provided in **Figure 3.1-6**.

Table 3.1-1 Summary of Zoning Regulations in the Study Area

Zoning District	Use	Floor Area Ratio (FAR)	Required Accessory Off-Street Parking Spaces
M3-1	Manufacturing, Heavy-Performance Use Groups 6-14, 16-18	2.0 FAR – Manufacturing 2.0 FAR – Commercial	Varies by Use
M1-2	Manufacturing Light-Performance Use Groups 4-14, 16 & 17	2.0 FAR – Manufacturing 2.0 FAR – Commercial 4.8 FAR – Community Facility	Varies by Use
R6	Medium-Density Residential Use Groups 1-4	0.78 to 2.43 FAR – Residential (HF) 2.2 to 3.0 FAR – Residential (QH) 4.8 FAR – Community Facility	70% of DUs (50% if lot is 10,000 SF or less; waived if 5 or fewer spaces required)
R7-1	Medium-Density Residential Use Groups 1-4	0.87 to 3.44 FAR – Residential (HF) 3.44 to 4.0 FAR – Residential (QH) 4.8 FAR – Community Facility	60% of DUs (30% if lot is 10,000 SF or less; waived if 5 or fewer spaces required)
R7X	Medium-Density Residential Use Groups 1-4	5.0 FAR – Residential 5.0 FAR – Community Facility	50% of DUs (30% if lot is 10,000 SF or less; waived if 15 or fewer spaces required)

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



ZONING MAP

THE NEW YORK CITY PLANNING COMMISSION

Major Zoning Classifications:
 The number(s) and/or letter(s) that follows on R, C or M District designation indicates use, bulk and other controls as described in the text of the Zoning Resolution.

- R – RESIDENTIAL DISTRICT
- C – COMMERCIAL DISTRICT
- M – MANUFACTURING DISTRICT
- SPECIAL PURPOSE DISTRICT**
 The letter(s) within the shaded area designates the special purpose district as described in the text of the Zoning Resolution.
- AREA(S) REZONED**

Effective Date(s) of Rezoning:
 03-20-2013 C 130052 ZMM

Special Requirements:
 For a list of lots subject to CEQR environmental requirements, see APPENDIX C.
 For a list of lots subject to "D" restrictive declarations, see APPENDIX D.
 For Inclusionary Housing designated areas on this map, see APPENDIX F.

MAP KEY

12a	12c	13a
12b	12d	13b
16a	16c	17a

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NOTE: Zoning information as shown on this map is subject to change. For the most up-to-date zoning information for this map, visit the Zoning section of the Department of City Planning website: www.nyc.gov/planning or contact the Zoning Information Desk at (212) 720-3281.

NOTE: Where no dimensions for zoning district boundaries appear on the zoning maps, such dimensions are determined in Article VII, Chapter 6 (Location of District Boundaries) of the Zoning Resolution.

600 0 600 1200 1800 FEET

Project Site **400-Foot Study Area**



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Zoning Map
Figure 3.1-6

ZONING MAP 12d

Public Policy

In addition to zoning, other public policies can affect the allowable land uses on a project site. The three public policies applicable to the proposed project are PlaNYC, the city's Waterfront Revitalization Program and the city's Industrial Business Zone policy.

PlaNYC

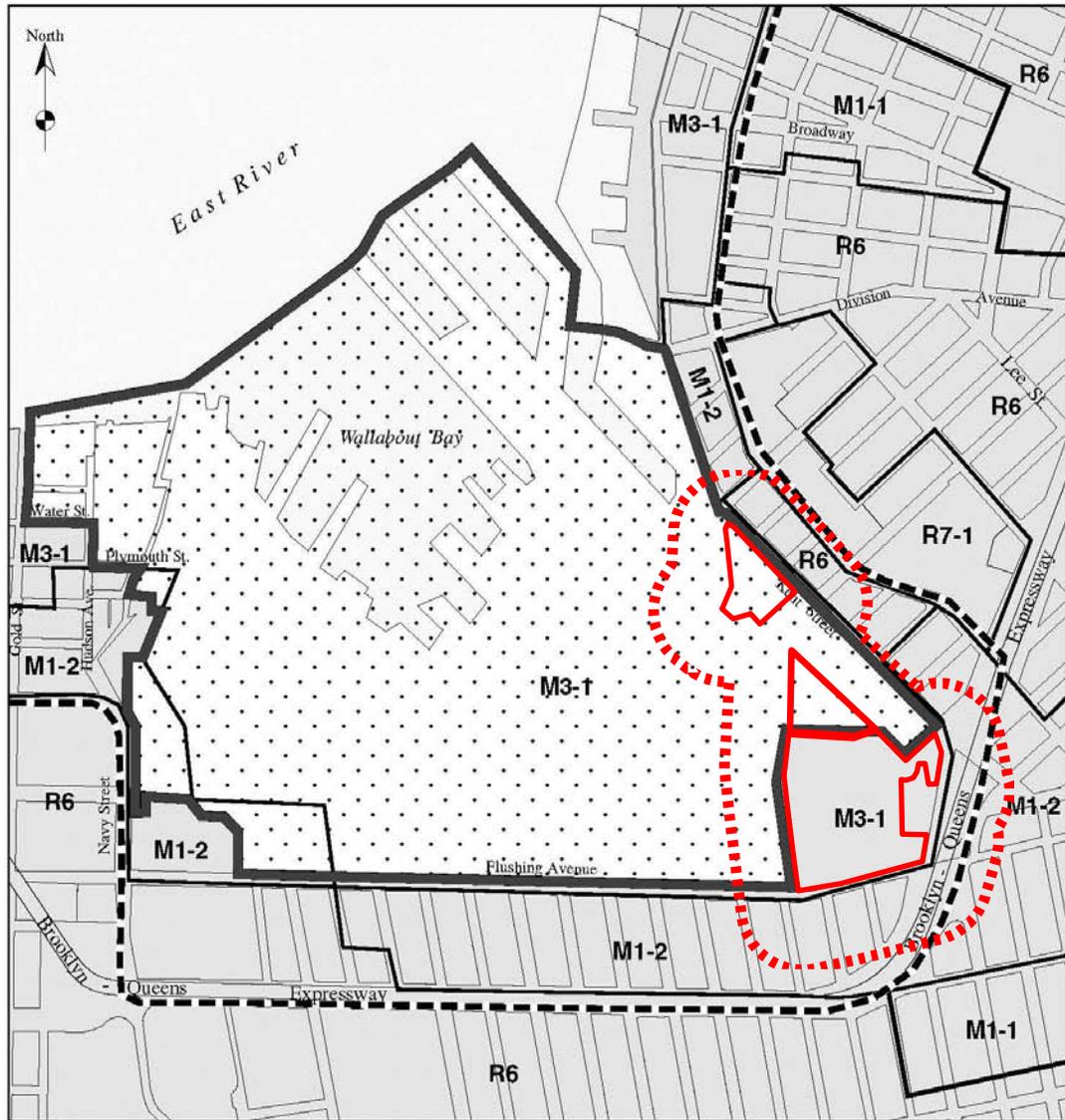
As stated in the *CEQR Technical Manual*, until sustainability goals are more clearly defined through the incorporation of initiatives into codes, regulations, and specific policies, there are few sustainability standards to apply appropriately in assessing a proposed project for the purposes of SEQRA. As these initiatives become codified, privately sponsored projects would be presumed, for purposes of SEQRA review, to comply with all codes and regulations in effect. However, to ensure that large publicly sponsored projects align with the broader sustainability priorities and goals the city has established, it is appropriate that the PlaNYC initiatives (whether or not yet embodied in generally applicable codes or regulations) be considered in an environmental assessment for large publicly sponsored projects, as these projects are often multifaceted and touch upon many of the elements addressed by PlaNYC. If a publicly-sponsored project is, itself, implementing a PlaNYC initiative, such as repairing or replacing aging infrastructure, a PlaNYC/sustainability assessment would likely be inappropriate.

Waterfront Revitalization Program (WRP)

As indicated on **Figure 3.1-7**, the project site is within New York City's Coastal Zone. The federal Coastal Zone Management Act of 1972, established to support and protect the nation's coastal areas, sets forth standard policies for the review of proposed projects along coastlines. As part of the federal Coastal Zone Management Program, New York State has adopted a state Coastal Zone Management Program, designed to achieve a balance between economic development and preservation that would promote waterfront revitalization and water-dependent uses. This program would also protect fish, wildlife, open space, scenic areas, public access to the shoreline, and farmland. The program is also designed to minimize adverse changes to ecological systems, erosion, and flood hazards. The project site is also within the Brooklyn Navy Yard Significant Maritime and Industrial Area (SMIA), as shown on **Figure 3.1-7**. SMIA's are designated areas that seek to protect and encourage concentrated working waterfront uses.

The state program contains provisions for local governments to develop their own local waterfront revitalization programs. The Waterfront Revitalization of Coastal Areas and Inland Waterways Act offers local governments the opportunity to participate in the State's Coastal Management Program (CMP) on a voluntary basis by preparing and adopting a Local Waterfront Revitalization Program (LWRP), providing more detailed implementation of the State's Coastal Management Policies through use of such existing broad powers as zoning and site plan review. When an LWRP is approved by the New York State Secretary of State, State agency actions are required to be consistent with the approved LWRP to the maximum extent practicable. Thus, proposed actions that are consistent with the LWRP are inherently compatible with the CMP. A completed New York State Coastal Assessment Form is provided in **Appendix A**.

New York City has adopted such a program (New York City Waterfront Revitalization Program, New York City Department of City Planning, revised 1999). The Local Waterfront Revitalization Program (WRP) establishes the city's Coastal Zone, and includes policies that address the waterfront's economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives.



Brooklyn Navy Yard SMIA

-  Significant Maritime and Industrial Area
-  Coastal Zone Boundary
-  Zoning District
-  Project Site
-  400-Foot Study Area



WATERFRONT REVITALIZATION PROGRAM
New York City Department of City Planning



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

**Coastal Zone
Boundary Map**
Figure 3.1-7

The WRP was adopted in 1999 under Section 197-a of the New York City Charter in coordination with local, state, and federal laws and regulations. The WRP sets forth 10 policy objectives under four categories of waterfront functions. A proposed project may be deemed consistent with the WRP when it would not substantially hinder and, where possible, would advance one or more of the 10 WRP policies dealing with: (1) residential and commercial development; (2) water-dependent and industrial uses; (3) commercial and recreational boating; (4) coastal ecological systems; (5) water quality; (6) flooding and erosion; (7) solid waste and hazardous substances; (8) public access; (9) scenic resources; and (10) historical and cultural resources. The New York City Department of City Planning (NYCDCP) is proposing a series of 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 revisions to the WRP are currently pending State and Federal approval in order to go in to effect.

Actions located within the city's Coastal Zone generally require submission of the WRP Consistency Assessment Form (CAF). This form is intended to assist an applicant in certifying that a proposed project is consistent with the WRP. The completed CAF and accompanying information is used by New York City and state agencies to review the applicant's certification of consistency. A copy of the completed CAF has been attached to this document (see **Appendix A**).

Industrial Business Zone (IBZ)

The project site is located within the BNY IBZ. Since 2006, 21 IBZs were created across the city where expanded business services are available for industrial and manufacturing businesses. This designation fosters high-performing business districts by creating competitive advantages over locating in areas outside of New York City. Businesses within the IBZs are supported by tax credits for relocation, zone-specific planning efforts, and direct business assistance from Industrial Providers of NYC Business Solutions Industrial and Transportation. In view of the purposes of IBZs, to foster industrial sector growth by creating real estate certainty, the Mayor's Office has stated that it will not support the rezoning of these areas for residential use.

The BNY IBZ encompasses the BNY, which is owned by the City of New York and managed pursuant to a master lease by the BNYDC, a not-for-profit corporation. BNYDC's mission is to promote local economic development and job creation, develop underutilized areas, and oversee modernization of the yard's infrastructure and assets while maintaining its historical integrity. 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 330 industrial tenants employing more than 6,400 people. Steiner Studios is one of the BNY's largest tenants and occupies over 500,000 square feet of floor area over 15 acres.

3.1.2 Future No-Action Condition (Future Without the Action)

Land Use

Project Site

In the future without the proposed project, the approximately 350,000 square feet of development (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) would not occur inside the Naval Annex and the buildings on the project site would remain unoccupied and likely continue to deteriorate in condition. In addition, the proposed 70,000-square-foot Backlot and 250,000-square-foot Kent Avenue Parking Structure would not be developed in the area outside the Naval Annex and these areas would continue to be open areas used for parking and storage.

Study Area

Steiner Studios, working closely with BNYDC, has developed a conceptual plan for future expansion of the Steiner Studios operations. Several proposed projects that would occur within the 400-foot study area, but outside the Naval Annex are part of Steiner Studios' planned expansion. The following five projects described previously and below, are not contingent on ESD funding in order to occur and would occur as part of Steiner

Studios' expansion in the area outside the Naval Annex in the future without the proposed action, (as discussed in **Section 2.2** "Description of the Proposed Action").

To the west of the Naval Annex is Building 1 at 25 Washington Avenue, inside the BNY. Steiner Studios recently renovated the building to accommodate TV and film production uses and, starting in 2015, the production uses would share the building with academic uses. Steiner Studios was granted a zoning override from the Office of the Deputy Mayor for Economic Development in December 2013 to allow the non-complying academic uses in the industrially zoned Building 1 at 25 Washington Avenue. Further west, along Flushing Avenue, Steiner Studios intends to build the West Parking Structure, a parking facility with approximately 1,000 accessory parking spaces. Steiner Studios also plans to build the North Parking Structure. This parking facility would be developed near the current service entrance to Steiner Studios on Assembly Road and would have approximately 210 accessory parking spaces.

Bordering the northwestern portion of the Naval Annex is the current warehouse building (Building 664) for B&H Photo, an electronics retailer. B&H Photo intends to vacate the building when its lease expires and Steiner Studios plans to sublease the building from BNYDC and convert it into a space for film and TV production. To the north of the Naval Annex, Steiner Studios plans to develop six production stages to be known as the Kent Stages. These new stages would be located along Kent Avenue, in the area between the proposed Backlot and the site currently occupied by the Brink's Corporation.

To the east of the Naval Annex within the study area, the Brooklyn Greenway Initiative, working with BNYDC, plans to create a 1.7-acre park in the former Brooklyn Naval Hospital Cemetery. The site, which is on Williamsburg Street West, between Kent and Flushing Avenues would have a walkway, landscape areas and other features.

Zoning

In the future without the proposed project, the project site would remain zoned as M3-1 and the study area would remain zoned with M1-2, R6 R7-1 and R7X zoning districts. No rezonings are currently proposed for the study area. Therefore, no changes to zoning on the project site, or elsewhere in the study area, are anticipated in the future without the proposed project.

Public Policy

No changes to public policy are anticipated in the future without the proposed project, except the aforementioned NYCDPC's proposed changes to the WRP. NYCDPC is proposing a series of 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 revisions to the WRP are currently pending State and Federal approval in order to go in to effect.

3.1.3 Future Action Condition (Future With the Action)

Land Use

As mentioned previously, Steiner Studios, working closely with BNYDC, has developed a conceptual plan for future expansion of the Steiner Studios operations. Steiner Studios envisions the creation of a state-of-the-art, full service media campus in the former Naval Annex that is located in the southeast corner of the BNY, as well as development in areas that surround the Naval Annex. There would be approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the boundary of the Naval Annex.

Some of the existing buildings and structures on the Naval Annex would be removed as part of the proposed project. Quarters No. 2 and No. 3 (R2, R3), located south of the Nurses' Quarters, would be removed from the site, as would the Movie Exchange Building (311) located in the southeast portion of the project site. In addition, other structures that would be removed include: the greenhouse (R448), tennis courts (R464 and R474) and a pool and an associated bathhouse (671, 672). A complete list of historic resources on the project site

(see **Table 3.6-1**) and a graphic showing the location of all the historic resources (see **Figure 3.6-5**) is provided in **Chapter 3.6**, “Historic and Cultural Resources.”

As discussed in **Chapter 3.6**, “Historic and Cultural Resources,” the above-mentioned resources are contributing resources to the Brooklyn Navy Yard Historic District, and their removal would constitute a significant adverse impact on the historic district; therefore, mitigation measures are identified in that chapter. The mitigation measures would be finalized through consultation with the New York State Office of Parks, Recreation and Historic Preservation, acting under Section 14.09 of the State Historic Preservation Act as the State Historic Preservation Office (SHPO) and in accordance with Section 106 of the National Historic Preservation Act pursuant to a Programmatic Agreement executed when the Navy conveyed the Naval Annex to the City.

As part of the proposed project, several of the existing historic buildings on the Naval Annex would be restored, renovated and reused as part of the proposed Media Campus. The Naval Hospital (R95), Surgeon’s House (R1), Quarters No. 4 (R4), and Bachelor Officers’ Quarters (R8, R9) would all be converted to production office space for Steiner Studios. Such uses in these buildings would include art, location, accounting, wardrobe and set dressing departments. The Nurses’ Quarters (RG) would be renovated as a post-production center, with uses such as editing, animation, visual effects and sound editing. The Carriage House, Stable and Garage (R103, R103A & R109) would be repurposed as production support space, for example workshops for set construction, scenic artist shops, and set dressing. The Infectious Disease Quarters (R5, R6, R7) would be redeveloped as cottages providing space for writers. Additional production office space with potential space for related academic uses, including an advanced digital media lab, would be provided in the converted Medical Supply Depot and Lumber Shed (RD and R426). The Guard House (R104) would also be renovated as part of the overall redevelopment of the Naval Annex and used as a security booth.

In addition to the renovation of the existing buildings, the proposed project would include the development of several new buildings on the Naval Annex. A new underwater soundstage and three new office buildings (Sites 9, 12, 13 and 14 on **Figure 2.0-4**) would be developed on the Naval Annex to be used as production office space and post-production space. In addition, two new buildings (Sites 10 and 11 on **Figure 2.0-4**) would be developed near the laboratory and morgue buildings to support the advanced digital media lab and would include space for academic uses. The Naval Annex’s green space would be rehabilitated as a campus landscape. The large field at the center of the Naval Annex (behind the Naval Hospital) would serve as an outdoor gathering space for employees and visitors to the project site.

In order to realize the development of the Media Campus, key infrastructure improvements need to be made at the project site. The proposed action (i.e., the funding provided by ESD) would allow for a gas, water, sewer, electric and tele-data infrastructure loop to be constructed on the Naval Annex. In addition, other infrastructure measures that the ESD funding would support, both inside and outside the Naval Annex (as shown in **Figure 2.0-4**), include the following:

- Grand Stair Plaza – A new landscaped, monumental stair plaza to connect the Naval Annex to Steiner Studios and the main portion of the Navy Yard, encouraging pedestrian flow, creating a gathering place for employees and visitors, and making the Naval Annex the visual focus of the east end of the Navy Yard.
- Campus Pedestrian Passage – A new landscaped pedestrian passageway between the Naval Annex and the Kent Avenue Parking Structure that would better link the Naval Annex to the east side of Steiner Studios.
- Kent Avenue Vehicular Entrance – A new studio entrance providing direct access to the Naval Annex and the northern end of the studio lot at Kent Avenue and Wilson Street.

Outside the Naval Annex, the ESD funding of infrastructure improvements would support the development of the Backlot, approximately 70,000 square feet of new development near the northern tip of the project site. The Backlot would be the first major production backlot in New York State, with building facades and streets, to substitute for outdoor shooting elsewhere in the city. In addition, Steiner Studios intends to seek financial

incentives from ESD in the future for the development of the 250,000-square-foot Kent Avenue Parking Structure in the area outside the Naval Annex.

The proposed project would alter the land use on the project site from a vacant naval hospital campus, with deteriorating structures, to Steiner Studios' Media Campus for TV and film production, including additional academic uses. However, the new development would be compatible with and complementary to surrounding land uses. Steiner Studios is currently a major tenant of the BNY and occupies space in the yard north and west of the project site. The proposed studio production use is consistent with adjacent industrial land uses found in the BNY. Further, the academic uses would only occupy a portion of the project site buildings, would complement the as-of-right uses, would be similar to uses planned and approved for the 25 Washington Avenue building within the Steiner Studios campus, and would not introduce a land use that would be considered out of character with the project site. Finally, the proposed project would provide for the rehabilitation and adaptive reuse of historic structures in the Naval Annex. Therefore, the proposed project is not expected to result in significant adverse land use impacts.

Zoning

The proposed project would not alter or change the zoning on the project site or within the study area. The project site would remain zoned as M3-1 and the study area would remain zoned with M1-2, R6 R7-1 and R7X zoning districts. The proposed project would comply with all applicable bulk zoning regulations. The proposed Media Campus potentially would include academic uses related to film production, which are not permitted uses within the M3-1 zoning district in which the project site is located. To allow for such uses, the project sponsor would pursue either a zoning text amendment from the New York City Planning Commission or a zoning override from the Office of the Deputy Mayor for Economic Development at the time that specific plans have been developed. As the academic uses would only occupy a portion of the buildings on the project site and would complement the as-of-right uses in the remaining buildings, no significant adverse zoning impacts are expected as a result of the proposed action.

Public Policy

PlaNYC 2030

The proposed project is not considered a large publically sponsored project, and thus a PlaNYC/sustainability assessment is not warranted for the project. The qualitative discussion below describes how sustainability elements, as encouraged through the goals and initiatives of PlaNYC, would be achieved by the proposed project.

The proposed project promotes the PlaNYC goal of encouraging mass transit. The project site is located in an area supported by many transit options. There are multiple MTA subway stations in the vicinity of this site, including the G, J, M, and Z subway lines. Several MTA bus lines service the neighborhood as well, including the B48, B54, B57, B62, B67, and B69 bus routes. The B57 bus line travels along Flushing Avenue. The eastbound B57 bus stop is proximate to the intersection of Flushing and Washington Avenues and the westbound B57 bus stop is one block from the project site near the intersection of Flushing and Waverly Avenues. In addition, a Citibike station is located at Washington and Park Avenues.

The proposed project promotes the PlaNYC goals of adaption of outdated buildings to new uses. The proposed project would result in the reuse and redevelopment of some of the existing inactive buildings in the Naval Annex, as well as the development of new buildings on a site that is currently unoccupied. It is expected that renovated buildings would utilize energy-efficient features. In addition, it is expected that the new and reused buildings would be compliant with the New York City Energy Conservation Code, which sets minimum standards for the design and construction of all new buildings and substantial renovation of existing buildings within New York City. Thus, the project would support many of PlaNYC's major sustainability initiatives, as well as help support the city's gradual transition to a greener city, and help contribute to meeting the goal of reducing the city's greenhouse gas emissions by 30 percent.

As a result, the proposed action would not have any significant adverse impacts on public policies applicable to the project site and the surrounding area.

Waterfront Revitalization Program (WRP)

New York City's WRP includes 10 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. A WRP Consistency Assessment Form has been completed for the proposed project. Where the proposed project has the potential to affect the objectives of the WRP program, as shown by having checked "yes" or "to be determined" in the WRP Consistency Assessment Form, additional information is provided below. The WRP Consistency Assessment Form is included in **Appendix A**. A discussion of each of the five policies where a "yes" was checked on the WRP Consistency Assessment Form follows below:

- Policy 1:** Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

The proposed project includes the development of the Steiner Studios Media Campus, which would consist of approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex. Outside the Naval Annex, the ESD funding for infrastructure improvements would facilitate an additional approximately 70,000 square feet of new development for a new "Backlot." In addition, the project sponsor intends to seek financial incentives from ESD in the future for the development of a 250,000-square-foot Kent Avenue Parking Structure that is envisioned for the area outside the Naval Annex. The proposed uses would be appropriate within the project neighborhood and would support economic development in the study area. Furthermore, the proposed project would support commercial development within the SMIA and advance the goal of maintaining a working waterfront in this area. Therefore, the proposed project would be consistent with this policy.

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

The project site is located within the BNY SMIA, as shown on **Figure 3.1-7**. SMIA's were designated to protect and encourage concentrated working waterfront uses. The proposed project would develop industrial (film production) uses within the SMIA and BNY IBZ, an area that has been specifically targeted for industrial development. The proposed project would not interfere with any existing working waterfront or industrial areas in proximity of the project site and would therefore be compatible with the surrounding working waterfront and industrial areas. As a result, the proposed project would be consistent with this policy.

- Policy 6:** Minimize loss of life, structures and natural resources caused by flooding and erosion.

While the project site is not directly on the waterfront, it is located within the 100-year (and 500-year) floodplain. The proposed project would minimize impacts on lives and structures from flooding by complying with all applicable Federal Emergency Management Agency (FEMA) requirements to minimize flood damage. The proposed project also would adhere to relevant guidance for construction and renovation of non-residential structures provided within the floodplain management regulations, such as the New York City Administrative Code (Section 10: General Limitations on Occupancy and Construction within Special Flood Hazard Areas). Therefore, the proposed project would be consistent with this policy.

- Policy 7:** Minimize environmental degradation from solid waste and hazardous substances.

As outlined in **Chapter 3.9**, “Hazardous Materials,” as part of the overall development of the project site, the project sponsor is committed to the proper handling and disposal of hazardous materials that may be present on the project site in accordance with local, state and federal regulations and guidance. A soils management plan would be developed and implemented for the removal of any soils excavated from the project site. Any dewatering required during the construction activities that require discharge to sewers would be performed in compliance with the appropriate effluent limitation through permits obtained from the New York City Department of Environmental Protection. The project sponsor would develop a remedial action plan and construction health and safety plan to avoid the potential of significant impacts related to Hazardous Materials. A vapor barrier or other form of vapor control would be installed below the proposed new construction at the project site and any petroleum-contaminated soil, groundwater, or underground storage tanks unexpectedly encountered during site development would be reported to the New York State Department of Environmental Conservation and addressed under that agency’s supervision. Therefore, the proposed project would be consistent with this policy.

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

As discussed in **Chapter 3.6**, “Historic and Cultural Resources,” the proposed project would result in the renovation and adaptive reuse of historic resources on the Naval Annex as well as new development inside and outside the Naval Annex site. The project would provide mitigation for the loss of the other historic structures currently located on the Naval Annex site. Therefore, the proposed project would be consistent with this policy.

Industrial Business Zone (IBZ)

The proposed project is compatible with the goals of the IBZ policies to support and retain businesses, and the project would not generate any residential components. The occupation of the Media Campus with media, film, and television related uses and academic uses would further the goals of the IBZ policies by supporting the expansion of successful businesses in this section of Brooklyn and more specifically, the BNY. The proposed project would revitalize the underused Naval Annex, upgrade its infrastructure and adaptively reuse historic buildings on the project site. The project furthers the goals of the BNY mission to promote local economic development and job creation, develop underutilized areas, and oversee modernization of the yard’s infrastructure and assets while maintaining its historical integrity.

Conclusion

The proposed project would provide for the rehabilitation and adaptive reuse of historic structures in the Naval Annex, as well as new uses in the area outside the Naval Annex. The new development would be compatible with and complementary to surrounding land uses and would not introduce a land use that would be considered out of character with the project site or the study area. The proposed project would not alter or change the zoning on the project site or within the study area and would comply with all applicable bulk zoning regulations. To allow for future academic uses on site the project sponsor would pursue either a zoning text amendment from the New York City Planning Commission or a zoning override from the Office of the Deputy Mayor for Economic Development at the time that specific plans have been developed. Academic uses on site would be complementary to the as-of-right uses proposed for the project site. Furthermore, the proposed project would not conflict with applicable public policies including, PlaNYC, State Coastal Program, and the city’s WRP, Industrial Business Zones and SMIA. Therefore, the proposed action is not expected to result in significant adverse impacts to land use, zoning or public policy.

3.2 SOCIOECONOMIC CONDITIONS

Introduction

The *CEQR Technical Manual* provides guidelines to evaluate whether a proposed action or actions would result in significant adverse socioeconomic impacts. The socioeconomic character of an area includes its population, housing, and economic activity. Socioeconomic changes may occur when a project directly or indirectly changes any of these elements. The analysis of socioeconomic impacts assesses whether a project would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. In some cases, these changes may be substantial but not adverse. In other cases, these changes may benefit some groups but harm others. The objective of the CEQR analysis is to disclose whether any changes created by the project would have a significant impact compared to what would happen in the future without the project.

As stated in the *CEQR Technical Manual*, the assessment of socioeconomic conditions usually separates the socioeconomic conditions of area residents from those of area businesses, although projects may affect both in similar ways. Projects may directly displace residents or businesses or may indirectly displace them by altering one or more of the underlying forces that shape socioeconomic conditions in an area. Usually, economic changes alone need not be assessed; however, in some cases their inclusion in a CEQR review may be appropriate, particularly if a major industry would be affected or if an objective of a project is to create economic change.

A socioeconomic assessment should be conducted if a project may be reasonably expected to create socioeconomic changes within the area affected by the project that would not be expected to occur without the project. The following circumstances would typically warrant a more detailed socioeconomic assessment:

- The project would result in a net increase of 200 or more new residential units.
- The project would directly displace residential population to the extent that the socioeconomic character of the neighborhood would be substantially altered. Displacement of less than 500 residents would not typically be expected to alter the socioeconomic character of a neighborhood.
- The project would directly displace more than 100 employees.
- The project would directly displace a business that is unusually important because its products or services are uniquely dependent on its location; based on its type or location, it is the subject of other regulations or publicly adopted plans aimed at its preservation; or it serves a population uniquely dependent on its services in its present location.
- The project would result in substantial new development that is markedly different from existing uses, development, and activities within the neighborhood. Such a project may lead to indirect displacement. Typically, projects that are small to moderate in size would not have significant socioeconomic effects unless they are likely to generate socioeconomic conditions that are very different from existing conditions in the area. Residential development of 200 units or less or commercial development of 200,000 square feet or less would typically not result in significant socioeconomic impacts.
- The project would add to, or create, a retail concentration that may draw a substantial amount of sales from existing businesses within the study area to the extent that certain categories of business close and vacancies in the area increase, thus resulting in a potential for disinvestment on local retail streets. Projects resulting in less than 200,000 square feet of retail on a single development site would not typically result in socioeconomic impacts. If the proposed development is located on multiple sites located across a project area, a preliminary analysis is

likely only warranted for retail developments in excess of 200,000 square feet that are considered of regional-serving (not the type of retail that primarily serves the local population).

- If the project is expected to affect conditions within a specific industry. For example, a citywide regulatory change that would adversely affect the economic and operational conditions of certain types of businesses or processes may affect socioeconomic conditions in a neighborhood in two ways: (1) if a substantial number of residents or workers depend on the goods or services provided by the affected businesses; or (2) if it would result in the loss or substantial diminishment of a particularly important product or service within the City.

3.2.1 Preliminary Assessment

The proposed project would include the development of the Media Campus, which would consist of approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex. Of the 350,000 square feet, approximately 105,000 square feet would be allocated to academic uses, with the remaining approximately 245,000 square feet allocated to production support. Outside the Naval Annex, the funding for infrastructure improvements would facilitate an additional approximately 70,000 square feet of new development for a new Backlot. In addition, the project sponsor intends to seek financial incentives for the development of a 250,000-square-foot Kent Avenue Parking Structure that is envisioned for the area outside the Naval Annex.

There are currently no residential uses on the project site and no residential development is proposed as part of the proposed project. Therefore, no impacts from direct or indirect residential displacement would be expected as a result of the proposed action. No direct business displacement would occur under the proposed project, as there are currently no businesses on the project site. Furthermore, the proposed project would not impair the ability of a specific industry to operate in the city. The proposed action would not affect business conditions in a specific industry, or involve a citywide regulatory change that would adversely affect the economic and operational conditions of any types of businesses or processes.

While the proposed project would result in an increase of commercial square feet of more than 200,000 square feet, the increase in commercial space is not expected to result in significant adverse impacts due to indirect business displacement. The proposed project would consist of production studio space for film and TV and some associated academic space, expanding upon similar uses that already exist and are planned in the study area. There would not be a significant concentration of retail space that would exceed 200,000 square feet at the project site. In addition, the project site would be within the walled confines of the BNY, an insular location, and would not introduce a commercial use that would compete with local businesses in the surrounding area. Thus, the proposed project is not expected to introduce uses to the local economy that would indirectly affect socioeconomic conditions and make it difficult for local businesses to remain in the area. Rather, local businesses, such as retail and food establishments, may benefit from the new employees and students generated by the proposed project adding to their customer base.

Therefore, no significant adverse impacts to socioeconomic conditions are expected as a result of the proposed project and no further assessment is warranted.

3.3 COMMUNITY FACILITIES AND SERVICES

Introduction

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

According to the *CEQR Technical Manual*, a community facilities analysis is typically needed if there would be potential direct or indirect effects on a facility. Detailed community facilities analyses are most commonly associated with residential projects because demand for community services generally results from the introduction of new residents to an area. Whether the project would have a potential impact is based on the likelihood that the project would create demand for services greater than the ability of existing facilities to provide those services. This can result from displacement of an existing facility, thereby increasing service demand at another facility, or by an increase in population.

3.3.1 Preliminary Assessment

Police and Fire Services

The preliminary screening threshold for a police and fire services assessment is met if the proposed action would lead to a direct effect on police and fire services, which is generally considered to be a project that affects the physical operation of, or access to and from, a police or fire facility. The proposed action would not lead to a direct effect on local police and fire services in the area. The New York City Police Department routinely reviews staffing levels at each precinct to meet operational requirements and maintain adequate coverage. The site is located in the coverage area of the 88th Police Precinct, located at 298 Classon Avenue, approximately three-quarters of a mile south of the project site. The Fire Department similarly evaluates the need for changes in personnel, equipment or locations of fire stations and makes those changes independent of particular proposed actions. The site is served by the Fire Department's Engine Company 207, located at 172 Tillary Street, approximately one mile west of the project site.

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

Health Care

According to the *CEQR Technical Manual*, a detailed assessment of service delivery is generally only conducted if a proposed project would affect the physical operations of, or access to and from, a hospital or a public health clinic, or where a proposed project would create a sizeable new neighborhood where none existed before. The proposed project would not have a direct effect on any health care facility and would not include residential development resulting in a sizeable new neighborhood that would affect health care facilities in the area. Therefore, significant adverse health care facility impacts are not expected.

Libraries

According to the *CEQR Technical Manual*, potential impacts to libraries may result from the displacement or alteration of an existing library or a large increase in residential population. The proposed project would not displace or alter any existing libraries and would not generate any new residential units. Therefore, significant adverse impacts to libraries are not expected as a result of the proposed action.

Educational Facilities

The *CEQR Technical Manual* states that the thresholds for detailed analyses for education are if a project has the potential to introduce 50 or more elementary and middle school students, or 150 or more high school students. The proposed project does not include any residential development that would potentially generate new students to the local schools in the area. Therefore, no significant adverse impacts to educational facilities are expected as a result of the proposed action.

Child Care

The *CEQR Technical Manual* suggests a detailed analysis of publicly-funded group child care centers when a proposed project would generate 20 or more children (under the age of six) in subsidized housing that are eligible for public day care. The proposed project does not include any residential development that would potentially generate new users of child care facilities in the area. Therefore, no significant adverse impacts to child care facilities are expected as a result of the proposed action.

Conclusion

The proposed project would not directly affect any of the community facilities that serve the area surrounding the project site. Further, no new residential population would be generated by the proposed action that would affect the existing service levels of existing community facilities. Therefore, there would be no significant adverse impacts to community facilities and services as a result of the proposed action.

3.4 OPEN SPACE

Introduction

Open space is defined as publicly or privately owned land that is publicly accessible and operates, functions, or is available for leisure, play, or sport, or set aside for the protection and/or enhancement of the natural environment. According to the *CEQR Technical Manual*, an analysis of open space is conducted to determine whether or not a proposed project would have a direct impact resulting from the elimination or alteration of open space and/or an indirect impact resulting from overtaxing available open space. An open space assessment may be necessary if a project potentially has a direct or indirect effect on open space.

According to the *CEQR Technical Manual*, a public open space is accessible on a constant and regular basis, including for designated daily periods. Public open spaces may be under public (government) or private ownership, and include resources such as parks managed by the city, state, or federal governments; public plazas; outdoor schoolyards that are accessible to the public outside of school hours; landscaped medians with seating; public housing grounds; and gardens and nature preserves, if publicly accessible. Private open spaces are not considered in the quantitative analysis of open space, but may be considered in the qualitative assessment. Private open spaces include private-access fee-charging spaces; recreational facilities used by community facilities, where the open space is accessible only to the institution-related population; natural areas or wetlands without public access; stoops; vacant lots; and front and rear yards.

For the majority of new projects in New York City, an open space assessment is generally conducted if the proposed project would generate more than 200 residents or 500 employees, if the site is not located within either an “underserved” or “well-served” area for open space. The project site is not located in an area of the city considered “underserved” or “well-served” by open space. Thus, the screening threshold of 200 residents and/or 500 nonresidents was used to assess the potential for a significant adverse impact as a result of the Proposed Action.

As discussed in **Chapter 2.0**, “Project Description,” no residential development is proposed as part of the project. Thus, no further assessment of potential impacts from the new residents is considered warranted. However, the proposed project is estimated to introduce approximately 1,063 employees and 700 students⁵ as a result of the development of the project site. As the proposed project would result in an increase of more than 500 nonresidents, a preliminary analysis of open space impacts as a result of the new nonresidents is warranted and is presented below.

Methodology

Open spaces may be used for “active” or “passive” uses. Active open space is used for sports, exercise, or active play, and can consist of facilities such as playgrounds with play equipment, playing fields, beach areas (swimming, running), greenways and esplanades, and multi-purpose play areas. Passive open space is used for relaxation, such as sitting or strolling, and can consist of facilities such as plazas or medians with seating, a percentage of beach areas (sunbathing), picnicking areas, greenways and esplanades (sitting, strolling), restricted-use lawns, and gardens. Often, an open space can be used for both active and passive uses. The residential population of an area uses active and passive open spaces, while the worker or nonresident population tends to place demands on passive open space.

Direct Effects

Direct effects may occur when a proposed project would encroach on, or cause a physical loss of, public open space. The proposed project would not result in a direct effect on any open space resources, since it would not result in a physical loss of any public open spaces either by encroaching on any open spaces or displacing any open spaces. The proposed action would not change the use of any open space so that

⁵ Employee and student estimates as per Steiner Studios (project sponsor), see Table 2.0-1 in Chapter 2.0.

they no longer serve the same user population, nor would the proposed action limit public access to an open space or result in increased noise, air pollutant emissions, odors, or shadows on any public open spaces that would significantly affect their usefulness. Therefore, an assessment of direct effects is not warranted.

Indirect Effects

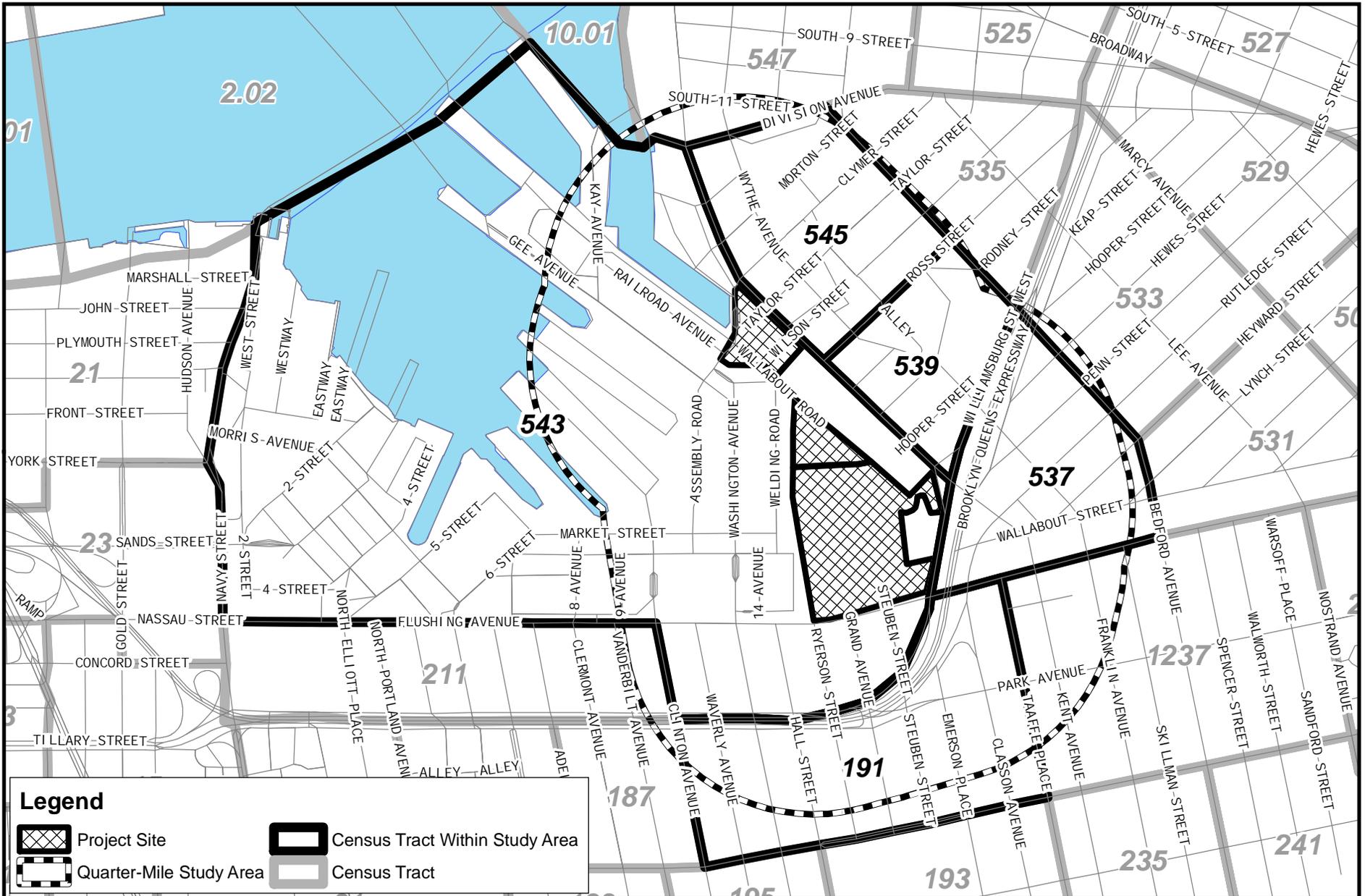
Indirect effects may occur when the population generated by the proposed project overtaxes the capacity of existing open spaces so that their service to the future population of the affected area would be substantially or noticeably diminished. If a project may add population to an area, demand for existing open space facilities would typically increase. Indirect effects may occur when the population generated by the proposed project would be sufficiently large to noticeably diminish the ability of an area's open space to serve the future population.

As stated in the *CEQR Technical Manual*, the optimal ratio for nonresidential populations is 0.15 acres of passive open space per 1,000 nonresidents. For a nonresidential open space analysis, the *CEQR Technical Manual* suggests a study area with a radius of a quarter mile, adjusted to conform to census tract boundaries. As shown in **Figure 3.4-1**, a quarter-mile radius drawn around the project site extends generally north to South 11th Street, east to Bedford Avenue, south to Myrtle Avenue, and west to Ninth Avenue and the Wallabout Bay. The open space study area includes all census tracts that have 50 percent or more of the tract area within the quarter-mile radius, which includes the following census tracts in Brooklyn: 191, 537, 539, 543 and 545.

3.4.1 Preliminary Analysis

A preliminary assessment of open space consists of calculating total population, tallying the open space acreage within the area, and comparing the open space ratios for existing, Future No-Action, and Future With-Action conditions. As shown in **Figure 3.4-2** and **Table 3.4-1** below, within the study area there would be a total of ten open spaces after the planned Naval Hospital Cemetery Park is completed.⁶ In total, with the Naval Hospital Cemetery Park, there would be approximately 12.04 total acres of open space, with approximately 4.22 acres for passive recreation and approximately 7.82 acres for active recreation.

⁶ The Brooklyn Greenway Initiative, working with BNYDC, plans to create a 1.7-acre park in the former Brooklyn Naval Hospital Cemetery. The site, which is on Williamsburg Street West between Kent and Flushing Avenues, will have a walkway, landscape areas and other features.



Legend

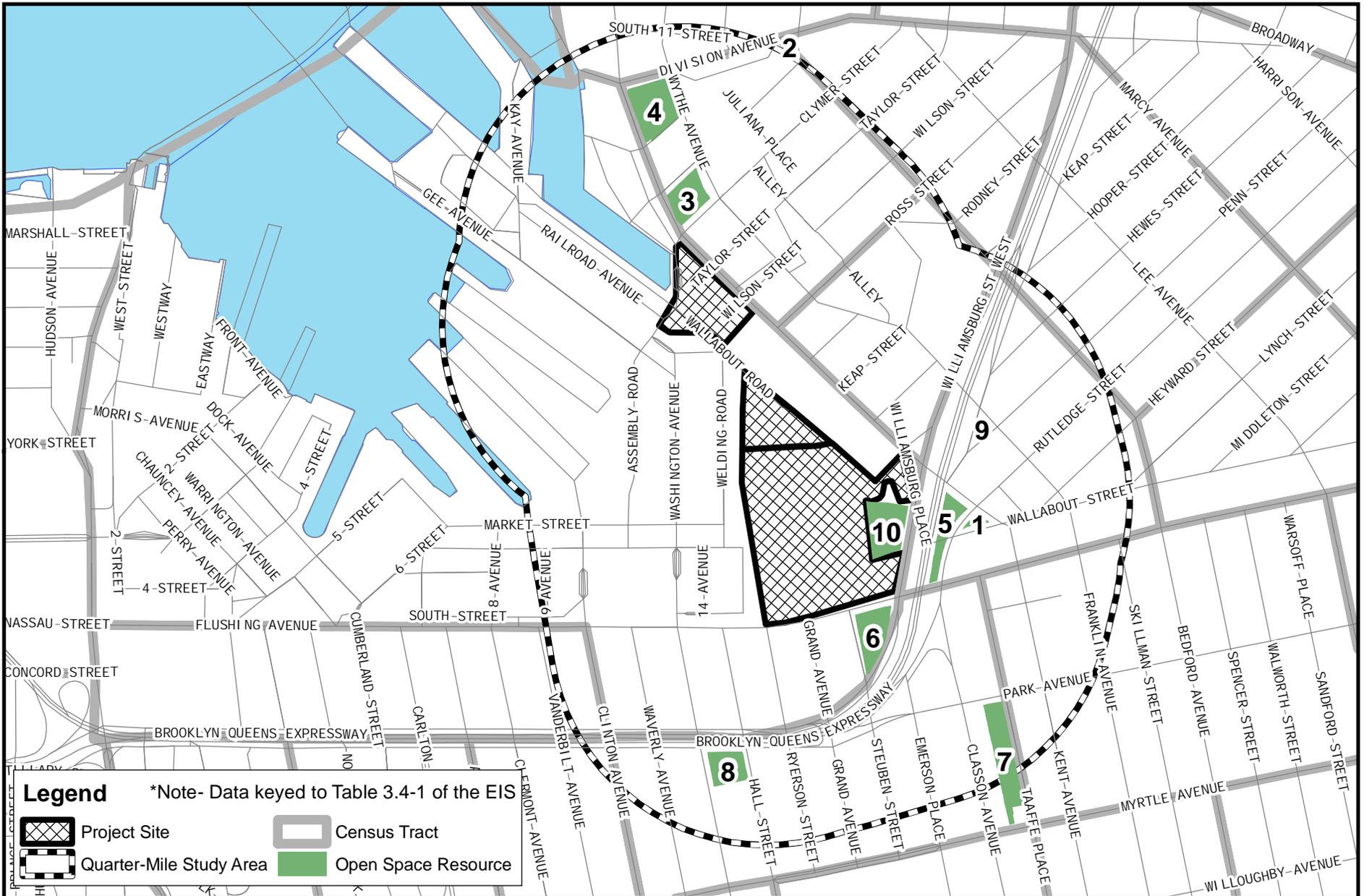
-  Project Site
-  Quarter-Mile Study Area
-  Census Tract Within Study Area
-  Census Tract



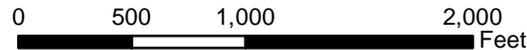
**Steiner Studios Media Campus EIS
Brooklyn Navy Yard**



**Open Space
Study Area
Figure 3.4-1**



**Steiner Studios Media Campus EIS
Brooklyn Navy Yard**



Open Space Resources

Figure 3.4-2

Table 3.4-1 Open Space Resources in the Study Area

Map Key #	Open Space Resource	Location	Size (acres)	Active (acres)	Passive (acres)
1	Classon Triangle	Kent Avenue, Classon Avenue, Wallabout Street	0.21	0.00	0.21
2	Harold W. Cohn Memorial Triangle	Bedford Avenue at Division Avenue	0.07	0.00	0.07
3	Jacob's Ladder Playground	Clymer Street to Morton Street, Between Kent Avenue and Wythe Avenue	1.08	0.54	0.54
4	Roberto Clemente Ballfield	Division Avenue between Wythe Avenue and Kent Avenue	1.93	1.25	0.68
5	Classon Playground	Lafayette Avenue and Classon Avenue	2.98	2.83	0.15
6	Steuben Playground	Flushing Avenue, Steuben Street, Williamsburg Place	1.17	0.59	0.59
7	Taaffe Playground	Taaffe Place between Park Avenue and Myrtle Avenue	1.82	1.82	0.00
8	Washington Hall Park	Park Avenue between Washington Avenue and Hall Street	0.90	0.68	0.23
9	Penn Triangle	Penn Street, Wythe Avenue, Williamsburg Street East	0.18	0.12	0.06
10	(Future) Naval Hospital Cemetery Park	Williamsburg Street West, between Kent and Flushing Avenues	1.7	0.0	1.7
TOTAL			12.04	7.82	4.22

Sources: New York City Department of City Planning; New York City Department of Parks and Recreation; BNYDC.

Under existing conditions, there are approximately 6,570 nonresidents⁷ in the open space study area. The adequacy of open space in the study area can be quantitatively assessed using a ratio of usable open space acreage to the study area population — referred to as the open space ratio (OSR). The study area currently contains nine open space resources with a total of approximately 2.52 acres of publicly-accessible passive open space. The CEQR assessment of open space resources in a study area focuses on the ratio of the passive acres of open space per 1,000 nonresidents. Thus, as shown in **Table 3.4-2**, the quarter-mile study area has an OSR of 0.38 acres per 1,000 nonresidents under existing conditions, above the City's planning goal of 0.15 acres per 1,000 nonresidents. The planned Naval Hospital Cemetery Park is not included in the calculation of the existing OSR in the study area.

Table 3.4-2 Nonresidential Population and Open Space Ratio under Existing, Future No-Action and Future With-Action Conditions

	Nonresidential Population	Open Space Acreage (passive)	Open Space Ratio (per 1,000 Nonresidents)	Percent Change
Existing Condition	6,570	2.52	0.38	NA
Future No-Action (2027)	13,864	4.22	0.30	-20.6%
Future With-Action (2027)	15,627	4.22	0.27	-11.3%

As shown in **Table 3.4-3**, an additional 7,294 nonresidents would be added to the study area in the future without the proposed project.⁸ This would increase the background nonresidential population of the study area to 13,786 under the Future No-Action condition. One known publicly accessible open space resource would be created in the study area in the future without the proposed project. The Brooklyn Greenway Initiative, working with BNYDC, plans to create a 1.7-acre park in the former Brooklyn Naval Hospital Cemetery. The site of the new park, located on Williamsburg Street West, between Kent and Flushing Avenues, will have a walkway, landscape areas and other features for passive recreation. Thus, the 2.52 acres of passive open space under the existing condition would increase to 4.22 acres of passive open space in the Future No-Action condition. In the future without the action, the OSR for the study area is projected to decrease from 0.38 acres per 1,000 nonresidents under the existing condition, to 0.30 acres per 1,000 nonresidents under the Future No-Action Condition, a 20.6 percent decrease (see **Table 3.4-2**). The OSR under the Future No-Action condition would continue to be above the city's planning goal of 0.15 acres per 1,000 nonresidents.

Table 3.4-3 Future No-Action Projects in Study Area and Estimated Nonresidential Population

Future No-Action Projects in Study Area	Nonresidential Population
B&H Building (Building 664)	320
Kent Stages	970
25 Washington Ave (Building 1)	640 (includes employees and students)
Building 77	2,500
GMC (Building 128)	300
WeWork	1,500
Admirals Row Plaza	578
Sands Building	320
Rose Plaza	87
Kedem Winery	79
Total	7,294

⁷ Source: New York City Department of City Planning derived from 2000 U.S. Census Bureau data.

⁸ Employee estimates provided by BNYDC and Steiner Studios for Future No-Action projects within BNY. The study area projects outside the BNY (Kedem Winery and Rose Plaza) are assumed to have 3 employees per 1,000 SF of new retail floor area.

Under the Future With-Action condition, there would be an additional increase of approximately 1,763 new nonresidents. These additional nonresidents would increase the study area nonresident population from 13,864 to 15,627. The OSR would decrease from 0.30 acres per 1,000 nonresidents under the Future No-Action condition to 0.27 acres per 1,000 nonresidents under the Future With-Action condition. The decrease under the Future With-Action condition represents a reduction of 11.3 percent in the OSR for the nonresidential population in the study area (see **Table 3.4-2**). However, under the Future-With Action condition the OSR in the study area would be above the city's planning goal of 0.15 acres per 1,000 nonresidents.

Workers and students at the expanded Steiner Studios campus would have access to private open space, as discussed in **Chapter 2.0**, "Project Description." As part of the proposed project, the Naval Annex's green space would be rehabilitated as a campus landscape. The approximately 2.3 acre field at the center of the Naval Annex (behind the Naval Hospital) would serve as an outdoor gathering space for employees and visitors, and a Grand Stair Plaza would provide a new landscaped, monumental stair plaza to connect the Naval Annex to Steiner Studios and create a gathering place for students, employees and visitors. Given the insular nature of the proposed Steiner Studios Media Campus, it is expected that much of the demand for passive open spaces would be met by the passive open space amenities that would be created as part of the rehabilitation of the project site. Furthermore, the amount of open space provided for the on-site nonresidential population within the campus would exceed the city's planning goal of 0.15 per 1,000 nonresidents. Therefore, a detailed open space assessment is not warranted and significant adverse open space impacts are not expected for the proposed action.

Conclusion

The proposed action would not result in any direct effects on any open space resources, as the project would not result in a physical loss of any public open spaces either by encroaching on any open spaces or displacing any open spaces. The proposed action would not change the use of any open space so that they no longer serve the same user population, nor would the proposed action limit public access to an open space or result in increased noise, air pollutant emissions, odors, or shadows on any public open spaces that would affect their usefulness.

According to the *CEQR Technical Manual*, an open space impact would be considered significantly adverse when the decrease in open space ratio is five percent or more in an area that is neither underserved nor well-served by open space. The proposed project would result in an OSR decrease from 0.30 acres of open space per 1,000 nonresidents to 0.27 acres of open space per 1,000 nonresidents, a decrease of approximately 11.3 percent. In the Future With-Action condition, the passive open space ratio of 0.27 would remain above the city's planning goal of 0.15 acres per 1,000 nonresidents.

The proposed project is not expected to result in any significant adverse impacts to open space resources in the study area. The OSR for the nonresidential population would not decline below the city's guideline goal of 0.15 acres in the future with the proposed project. Furthermore, workers and students at the expanded Steiner Studios campus would have access to private open space. Given the insular nature of the proposed Steiner Studios Media Campus, it is expected that much of the demand for passive open spaces would be met by the passive open space amenities that would be created as part of the project. Therefore, a detailed open space assessment is not warranted and significant adverse open space impacts are not expected for the proposed action.

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3.5 SHADOWS

Introduction

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

Structures within urban environments cast shadows on their surroundings throughout the daylight hours. As the city develops and redevelops, the extent and duration of the shadows cast are altered. Sunlight can entice outdoor activities, support vegetation, and enhance architectural features, such as stained glass windows and carved detail on historic structures. Conversely, shadows can affect the growth cycle and sustainability of natural features and the architectural significance of built features.

Shadows also vary according to time of day and season. Shadows cast during the morning and evening, when the sun is low in the sky, are longer, while midday shadows are shorter in length. Shadows in winter, when the sun arcs low across the southern sky, are also longer throughout the day than at corresponding times in spring and fall seasons. In summer, the high arc of the sun casts shorter shadows than at any other time of year.

Methodology

The purpose of a shadow analysis is to assess whether new structures may cast shadows on sunlight-sensitive resources and to assess the significance of their impact. The *CEQR Technical Manual* states that a shadow assessment considers projects that result in new shadows long enough to reach a sunlight-sensitive resource. Therefore, a shadow assessment is required only if the project would either result in: (a) new structures (or additions to existing structures, including the addition of rooftop mechanical equipment) of 50 feet or more in height; or, (b) be located adjacent to, or across the street from, a sunlight-sensitive resource. However, a project located adjacent to or across the street from a sunlight-sensitive open space resource (which is not a designated New York City Landmark or listed on the State/National Registers of Historic Places, or eligible for these programs) may not warrant a detailed shadow assessment if the project's height increase is 10 feet or less.

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

3.5.1 Preliminary Shadow Screening Assessment

The shadow assessment begins with a preliminary screening to ascertain whether a project's shadow may reach any sunlight-sensitive resources at any time of the year. If the screening assessment does not eliminate this possibility, a detailed shadow analysis is generally required in order to determine the extent and duration of the incremental shadow resulting from the project. If warranted, the detailed shadow analysis provides the necessary information for the assessment of shadow impacts. Shadow impact assessments describe the effect of shadows on the sunlight-sensitive resources and their degree of significance.

Tier 1 Screening Assessment

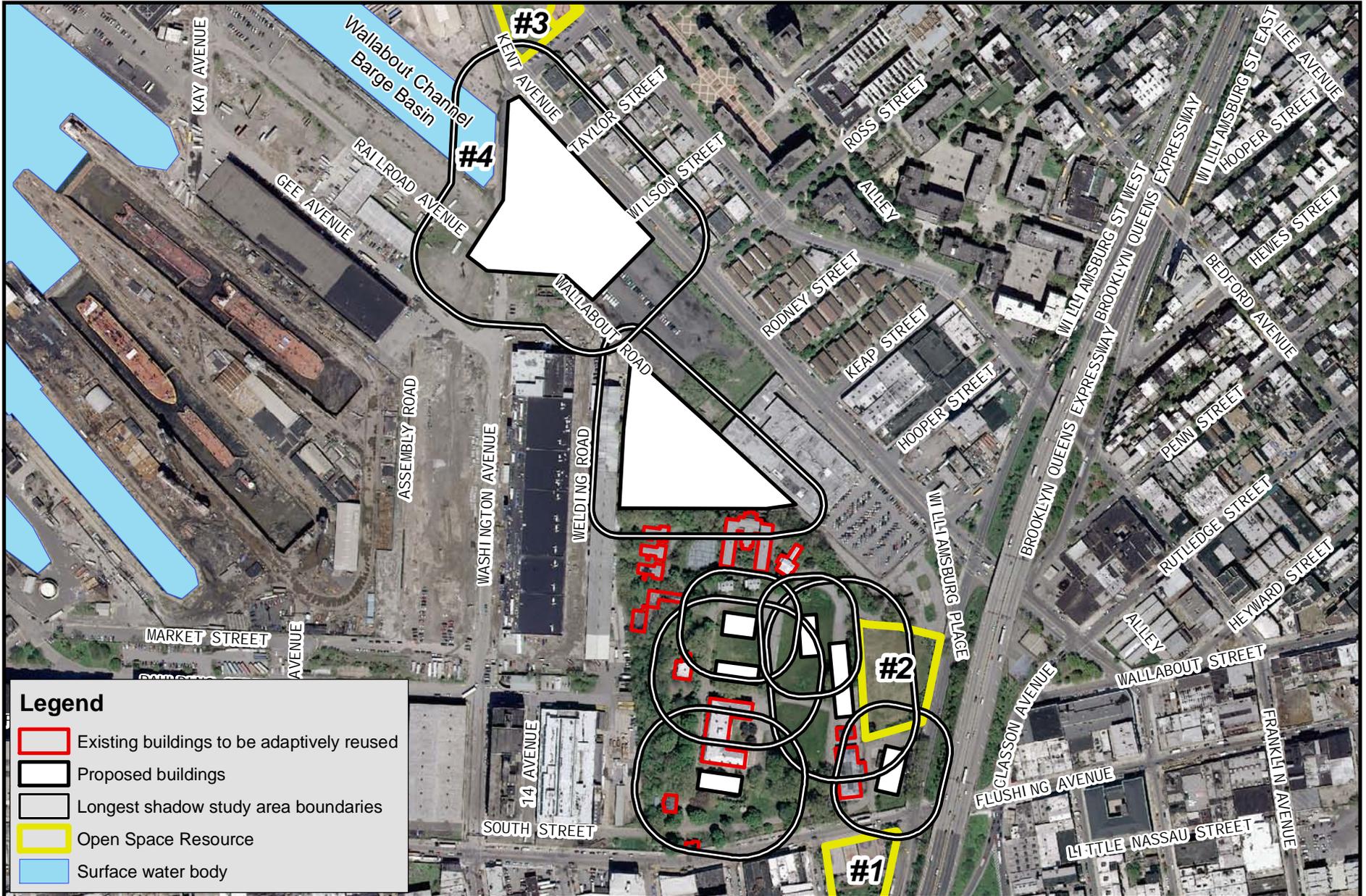
The first step in the shadow screening assessment is a Tier 1 screening. A base map is developed that illustrates the proposed site location in relationship to the sunlight-sensitive resources. The base map includes the location of the proposed project, the street layout, and the locations of the sunlight-sensitive resources. After the base map is developed, the longest shadow study area is determined. The study area for the longest shadow encompasses the site of the proposed project(s) and a perimeter around the site's boundary with a radius equal to the longest shadow that could be cast by the proposed structure, which occurs on December 21st, the winter solstice. To find the longest shadow length, the maximum height of the new development resulting from the proposed project is multiplied by the factor of 4.3, which represents a longest shadow that would occur on December 21st.

As discussed in **Chapter 2.0**, "Project Description," new development on the project site would consist of six new buildings developed on the Naval Annex, the Backlot, and the Kent Avenue Parking Structure. A shadow radius of 4.3 times the anticipated maximum heights of the project-generated development on the project site was prepared, based on the building heights contemplated by Steiner Studios conceptual master plan for expansion. Steiner Studios anticipates that the maximum height of the Backlot would be 38 feet. The heights of the remaining proposed development sites were estimated based on the proposed square footage of the sites (see **Table 2.0-1**) and taking into account that new development would not be higher than the approximately 50-foot height of the existing Naval Hospital, as the hospital building would be the focal point of the Steiner Studios campus at the Naval Annex. The new project-generated development sites with shadow radii that did not intersect with an open space resource, surface water body or sunlight-sensitive architectural resource were determined not to have a potential for impact and were eliminated from further analysis. Additionally, the existing buildings on the Naval Annex proposed to be renovated were eliminated from further analysis, as these buildings would not increase in height.

As shown in **Figure 3.5-1**, the results of the Tier 1 screening assessment show that three open space resources and one surface water body are located within a potential maximum shadow radius of project-generated new development, and warrant further study under the Tier 2 screening level. Resources listed below are keyed to **Figure 3.5-1** for reference. None of the historic structures within the Naval Annex have architectural features considered to be sunlight-sensitive, and therefore no cultural or historic resources have the potential to be affected by project-generated shadows.

Public Open Spaces

- Steuben Playground – This 1.17-acre active and passive open space resource is located south of Flushing Avenue, between Steuben Place and Williamsburg Place. Steuben Playground is shown as resource "1" on **Figure 3.5-1**.
- Navy Yard Cemetery Park – This approximately 1.7-acre passive open space, which is planned for construction prior to the proposed project build year of 2027, would be located west of Williamsburg Street West, between Kent and Flushing Avenues. Navy Yard Cemetery Park is shown as resource "2" on **Figure 3.5-1**.

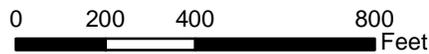


Legend

- Existing buildings to be adaptively reused
- Proposed buildings
- Longest shadow study area boundaries
- Open Space Resource
- Surface water body



**Steiner Studios Media Campus EIS
Brooklyn Navy Yard**



Tier 1 Screening Assessment

Figure 3.5-1

*-Note: Sunlight-sensitive resources keyed to Section 3.5-1 of the EIS.

- Jacob's Ladder Playground – This 1.08-acre open space is located between Clymer Street, Morton Street, Kent Avenue and Wythe Avenue. Jacob's Ladder Playground is shown as resource "3" on **Figure 3.5-1**.

Surface Water Body

- Wallabout Channel Barge Basin – Wallabout Bay is a small body of water in Upper New York Bay, which abuts the project site. The Wallabout Channel Barge Basin is a channel located behind the pierhead and bulkhead lines that terminates near the site of the proposed Backlot. Wallabout Channel Barge Basin is shown as resource "4" on **Figure 3.5-1**.

Tier 2 Screening Assessment

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

As shown in **Figure 3.5-2**, the Tier 2 screening assessment showed that, of the three open space resources and one surface water body described above, Steuben Playground is located within the triangular area that cannot be shaded by any of the potential shadows from project-generated development on the project site. Therefore, no further analysis is required for Steuben Playground.

The Tier 2 screening assessment shows that for the Navy Yard Cemetery Park, Jacob's Ladder Playground and the Wallabout Channel Barge Basin, further assessment is warranted. A Tier 3 screening assessment was performed for these three sunlight-sensitive resources that have the potential to receive shadows cast from the new buildings developed on the project site.

Tier 3 Screening Assessment

Based on the results of the Tier 2 screening assessment, a Tier 3 screening assessment should be performed if any portion of a sunlight-sensitive resource is within the area that could be shaded by the proposed project. Because the sun rises in the east and travels across the southern part of the sky to set in the west, a project's earliest shadows would be cast almost directly westward. Throughout the day, shadows shift clockwise (moving northwest, then north, then northeast) until sunset, when they would fall east. Therefore, a project's earliest shadow on a sunlight-sensitive resource would occur in a similar pattern, depending on the location of the resource in relation to the project site.

The *CEQR Technical Manual* states that for the New York City area, the months of interest for an open space resource encompass the growing season (March through October) and one month between November and February (usually December) representing a cold-weather month. Assessments of the incremental shadows cast during four representative dates were made in accordance with the *CEQR Technical Manual* to encompass a cold-weather month and months during the growing season. The four representative dates of the Tier 3 screening assessment are:

- December 21st
- March 21st
- May 6th
- June 21st



Legend

- Existing buildings to be adaptively reused
- Proposed buildings
- Remaining longest shadow study area boundary
- Open space resource
- Surface water body



**Steiner Studios Media Campus EIS
Brooklyn Navy Yard**

0 200 400 800 Feet



Tier 2 Screening Assessment

Figure 3.5-2

*-Note: Sunlight-sensitive resources keyed to Section 3.5-1 of the EIS.

As shown in **Figure 3.5-3** through **Figure 3.5-6**, the Tier 3 screening assessment showed that project-generated shadows do not have the potential to reach Jacob's Ladder Playground during the relevant analysis time periods and no further shadow assessment is required for this resource. However, the Tier 3 screening assessment showed that project-generated shadows have the potential to reach the Navy Yard Cemetery Park and the Wallabout Channel Barge Basin on all four representative analysis days, and a detailed shadow analysis is warranted for December 21st, March 21st, May 6th, and June 21st. Based on the Tier 3 screening, detailed shadow studies were performed for these two resources for the four representative analysis dates.

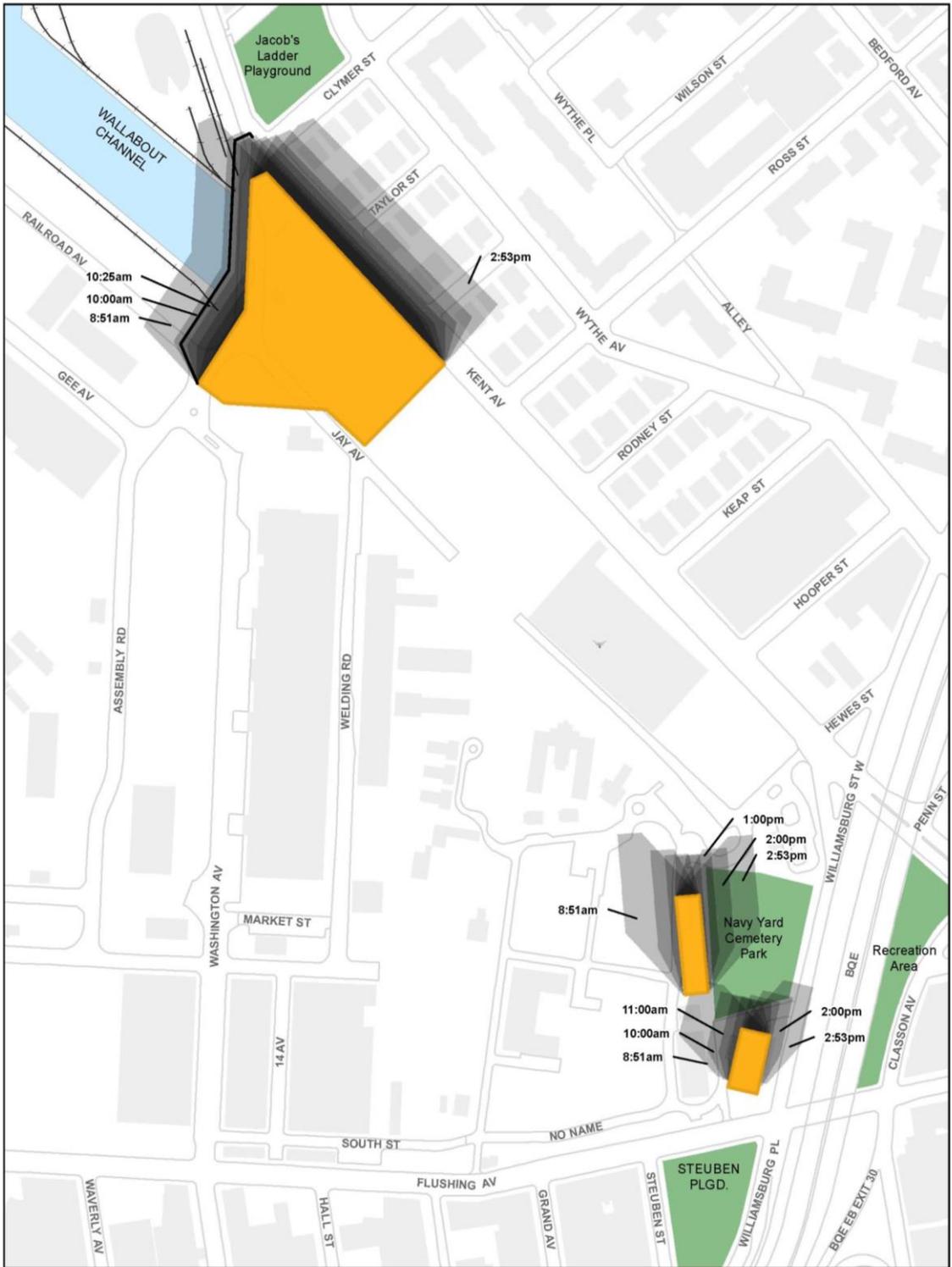
3.5.2 Detailed Shadow Analysis

The *CEQR Technical Manual* states that a detailed shadow analysis is warranted when the screening analyses does not rule out the possibility that project-generated shadows would reach any sunlight-sensitive resources during the relevant analysis time periods. The purpose of the detailed analysis is to determine the extent and duration of new incremental shadows that fall on a sunlight-sensitive resource as a result of the proposed project. As previously discussed, the two resources that warrant a detailed shadows assessment based on the tier screening assessment are the Wallabout Channel and the Navy Yard Cemetery Park. The results of the detailed shadow analyses on the identified resources of concern are summarized in **Table 3.5-1** and each resource is discussed below.

Table 3.5-1 Detailed Shadow Analysis Summary

Analysis Date	December 21	March 21	May 6	June 21
Analysis Period	8:51 am – 2:53 pm	7:36 am – 4:29 pm	6:27 am – 5:18 pm	5:57 am – 6:01 pm
Wallabout Channel Barge Basin				
Shadows Enter/Exit Time	8:51 am – 10:25 am	7:36 am - 9:25 am	6:27 am - 8:30 am	5:57 am - 8:25 am
Shadow Duration	1 h 34 min	1 h 49 min	2 h 3 min	2 h 28 min
Navy Yard Cemetery Park				
Shadows Enter/Exit Time	8:51 am – 2:53 pm	1:55 pm - 4:29 pm	2:10 pm - 5:18 pm	2:35 pm - 6:01 pm
Shadow Duration	6 h 2 min	2 h 34 min	3 h 8 min	3 h 26 min

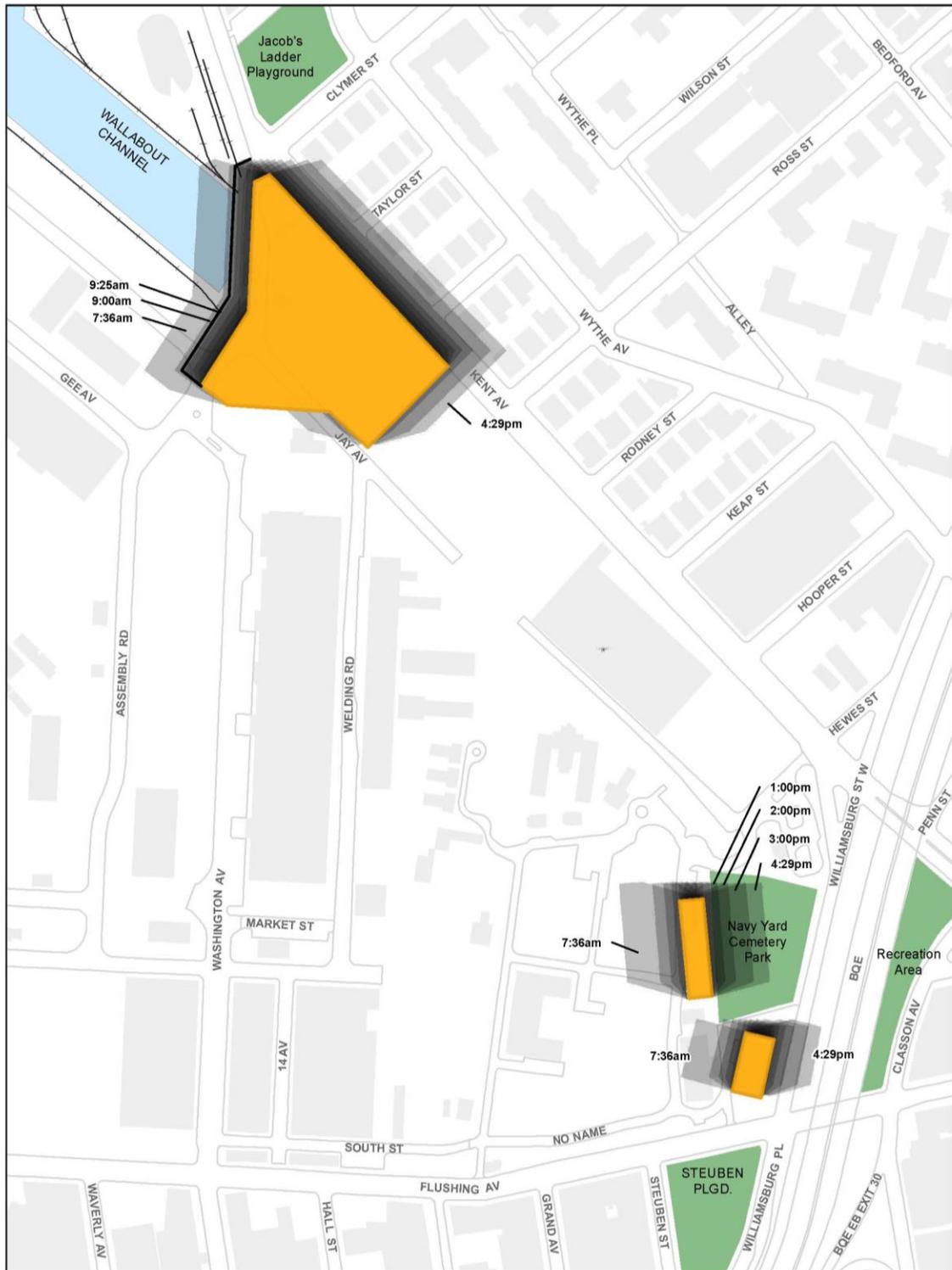
Note: Daylight Saving Time not used/applied (per CEQR)



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Tier 3 Screening
Assessment - December 21

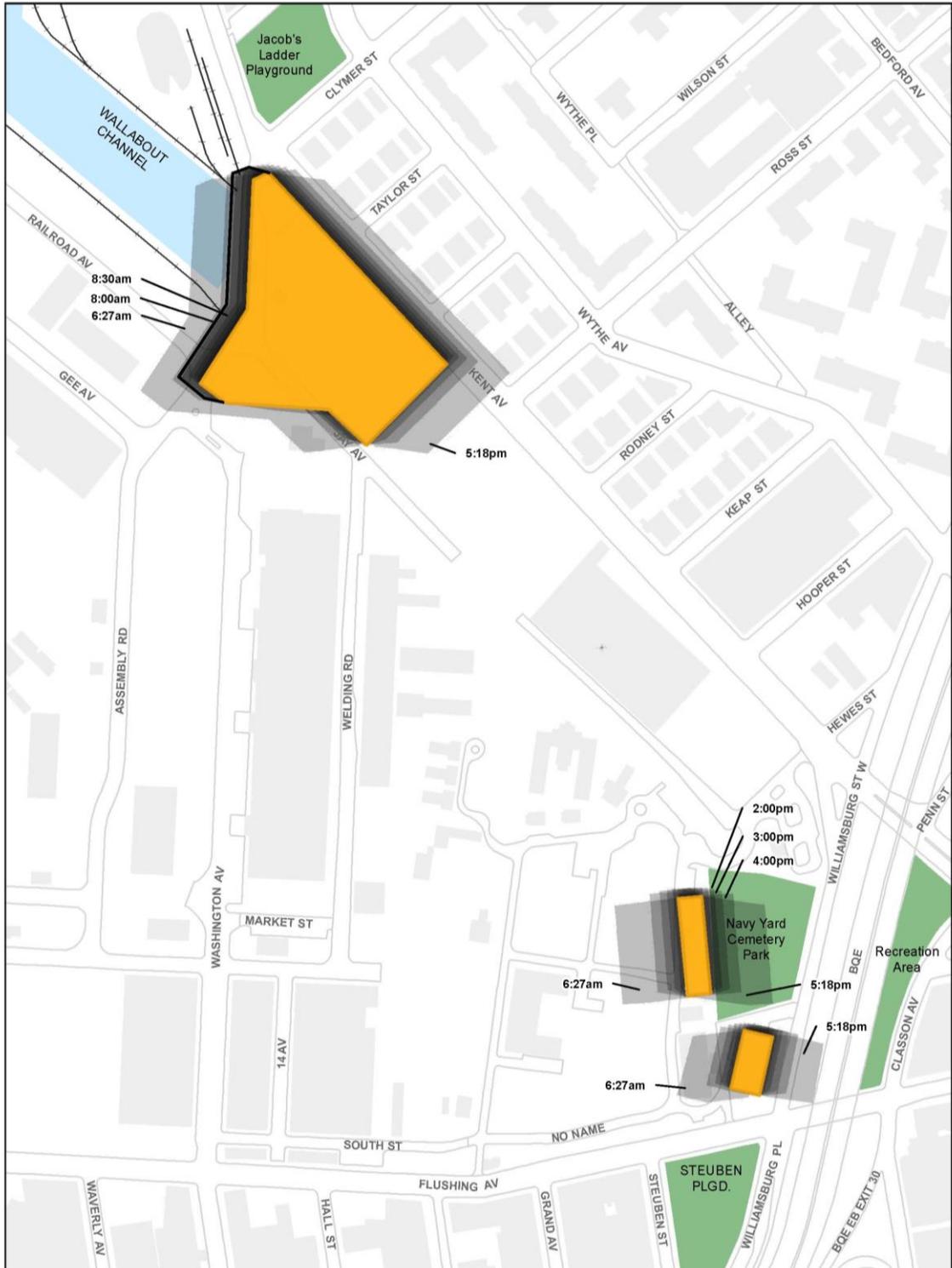
Figure 3.5-3



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Tier 3 Screening
Assessment – March 21

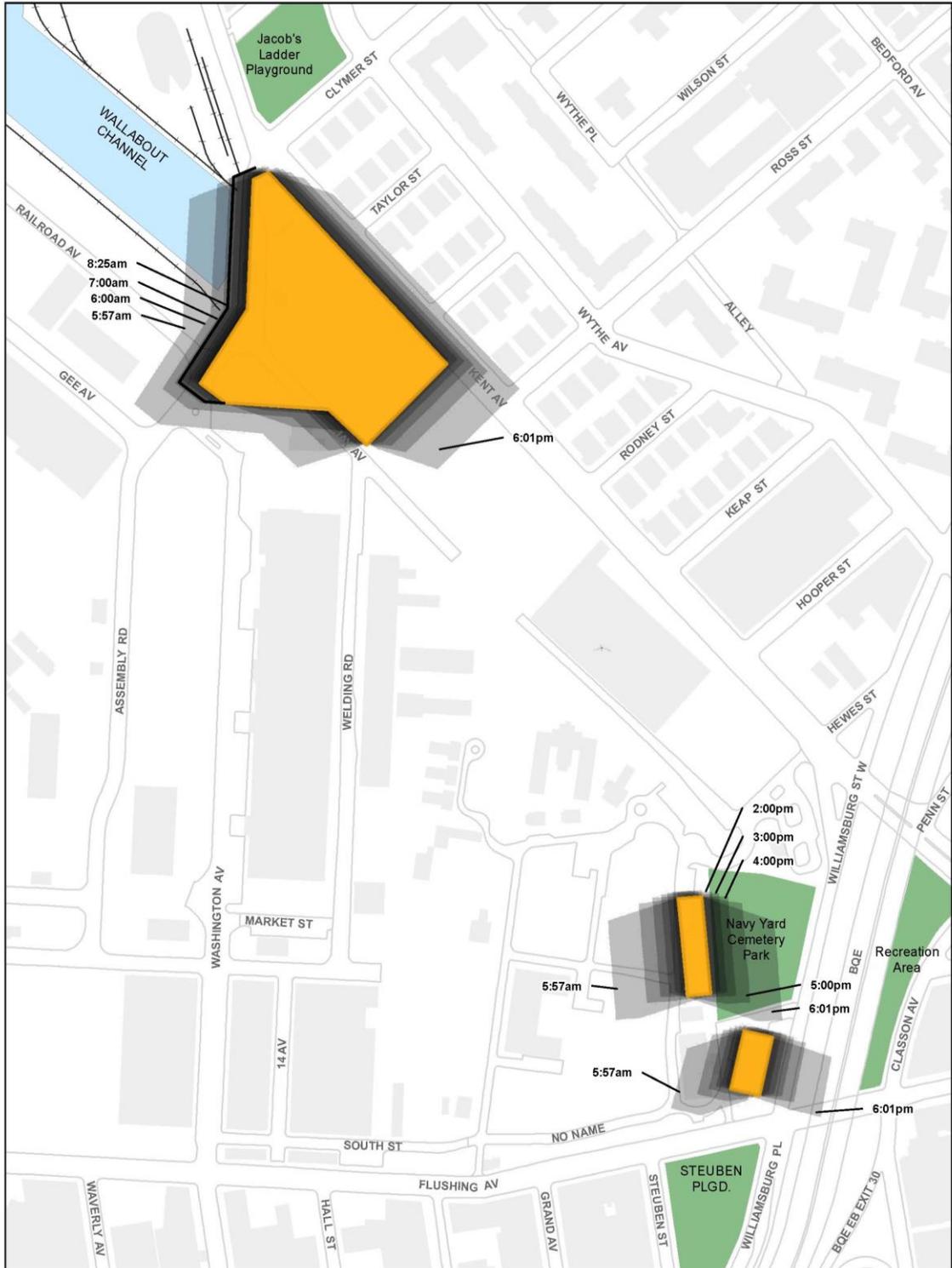
Figure 3.5-4



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Tier 3 Screening Assessment – May 6

Figure 3.5-5



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Tier 3 Screening
Assessment – June 21

Figure 3.5-6

Wallabout Channel Barge Basin

The Wallabout Barge Basin terminates in the Navy Yard across Washington Avenue from the site of the proposed Backlot structure. As discussed in more detail below, a small portion of the end of the channel would receive project-generated shadows in the morning. However, these shadows are minimal compared to the overall size of the channel and during all analysis periods would recede off the channel in the morning. The entering and exiting shadows for the Wallabout Channel are shown on the Tier 3 screening assessment figures (see **Figure 3.5-3** through **Figure 3.5-6**). The following is an assessment of project-generated shadows on Wallabout Channel for each of the representative analysis dates:

- On December 21st, the project-generated shadow from the proposed Backlot would enter the Wallabout Channel Barge Basin with the beginning of the analysis period (8:51 a.m.) and exit the resource at 10:25 a.m., for a total duration of approximately one hour and 34 minutes. The shadow cast on the Wallabout Channel at the beginning of the analysis period represents the maximum extent of the project-generated shadow on the resource. After this point, the shadow would recede off the Wallabout Channel and ultimately exit the resource at 10:25 a.m., as shown in **Figure 3.5-3**.
- On March 21st, the project-generated shadow from the proposed Backlot would enter the Wallabout Channel Barge Basin with the beginning of the analysis period (7:36 a.m.) and exit the resource at 9:25 a.m., for a total duration of approximately one hour and 49 minutes. The shadow cast on the Wallabout Channel at the beginning of the analysis period represents the maximum extent of the project-generated shadow on the resource. After this point, the shadow would recede off the Wallabout Channel and ultimately exit the resource at 9:25 a.m., as shown in **Figure 3.5-4**.
- On May 6th, the project-generated shadow from the proposed Backlot would enter the Wallabout Channel Barge Basin with the beginning of the analysis period (6:27 a.m.) and exit the resource at 8:30 a.m., for a total duration of approximately two hours and three minutes. The shadow cast on the Wallabout Channel at the beginning of the analysis period represents the maximum extent of the project-generated shadow on the resource. After this point, the shadow would recede off the Wallabout Channel and ultimately exit the resource at 8:30 a.m., as shown in **Figure 3.5-5**.
- On June 21st, the project-generated shadow from the proposed Backlot would enter the Wallabout Channel Barge Basin with the beginning of the analysis period (5:57 a.m.) and exit the resource at 8:25 a.m., for a total duration of approximately two hours and 28 minutes. The shadow cast on the Wallabout Channel at the beginning of the analysis period represents the maximum extent of the project-generated shadow on the resource. After this point, the shadow would recede off the Wallabout Channel and ultimately exit the resource at 8:25 a.m., as shown in **Figure 3.5-6**.

Navy Yard Cemetery Park

As discussed in **Chapter 3.4**, "Open Space," the Brooklyn Greenway Initiative plans to create a 1.7-acre park in the former Brooklyn Naval Hospital Cemetery, adjacent to the project site. The site of the new park, located on Williamsburg Street West, between Kent and Flushing Avenues, will have a walkway, landscaped areas and other features for passive recreation. Project-Generated Development Sites 10 and 11 (as discussed in **Chapter 2.0** and shown on **Figure 2.0-4**) are located west and south of the proposed Navy Yard Cemetery Park. The new park would receive project-generated shadows from both of these proposed buildings and an assessment of the shadows for each representative date follows below:

- On December 21st, the shadow from Project-Generated Development Site 10 would enter the resource at the beginning of the analysis period (8:51 a.m.), while the shadow from Project-Generated Development Site 11 would enter the resource at 1:00 p.m. The total shadow duration

on the resource would be six hours and two minutes. The maximum period of shadow coverage would occur at end of the analysis period (2:53 p.m.), when the shadows from both development sites would cover approximately 35 percent of the resource, as shown in **Figure 3.5-7** through **Figure 3.5-9**.

- On March 21st, the shadow from Project-Generated Development Site 10 would enter the resource at 1:55 p.m. Project-Generated Development Site 11 would not cast a shadow on the resource during the March 21st analysis date. The total shadow duration on the resource would be two hours and 34 minutes. The maximum period of shadow coverage would occur at the end of the analysis period (4:29 p.m.), when the shadow from Project-Generated Development Site 10 would cover approximately 25 percent of the resource, as shown in **Figure 3.5-10** and **Figure 3.5-11**.
- On May 6th, the shadow from Project-Generated Development Site 10 would enter the resource at 2:10 p.m. Project-Generated Development Site 11 would not cast a shadow on the resource during the May 6th analysis date. The total shadow duration on the resource would be three hours and eight minutes. The maximum period of shadow coverage would occur at end of the analysis period (5:18 p.m.), when the shadow from Project-Generated Development Site 10 would cover approximately 25 percent of the resource, as shown in **Figure 3.5-12** and **Figure 3.5-13**.
- On June 21st, the shadow from Project-Generated Development Site 10 would enter the resource at 2:35 p.m. Project-Generated Development Site 11 would not cast a shadow on the resource during the June 21st analysis date. The total shadow duration on the resource would be three hours and 26 minutes. The maximum period of shadow coverage would occur at end of the analysis period (6:01 p.m.), when the shadow from Project-Generated Development Site 10 would cover approximately 40 percent of the resource, as shown in **Figure 3.5-14** and **Figure 3.5-15**.

Determination of Shadow Impact Significance.

The *CEQR Technical Manual* states that the determination of significance of shadow on a sunlight-sensitive resource is based on: (1) the information resulting from the detailed shadow analysis describing the extent and duration of incremental shadows; and (2) an analysis of the resource's sensitivity to reduced sunlight. The goal of the assessment is to determine whether the effects of incremental shadows on a sunlight-sensitive resource are significant under SEQRA. A shadow impact occurs when the incremental shadow from a proposed project falls on a sunlight-sensitive resource or feature and reduces its direct sunlight exposure. Determining whether this impact is significant or not depends on the extent and duration of the incremental shadow and the specific context in which the impact occurs.

For open space and natural resources, the uses and features of a resource are indicators of its sensitivity to shadows. Shadows occurring during the cold-weather months generally do not affect the growing season of outdoor vegetation; however, their effects on other uses and activities should be assessed. This sensitivity is assessed for warm-weather-dependent features (such as wading pools and sand boxes) or vegetation that could be affected by a loss of sunlight during the growing season, and for features (such as benches) that could be affected by a loss of winter sunlight. Vegetation requiring direct sunlight includes the tree canopy, flowering plants and plots in community gardens. Generally, four to six hours a day of sunlight, particularly in the growing season, is often a minimum requirement. Where the incremental shadows from the project fall on sunlight-sensitive features or uses, the analysis assesses the loss of sunlight relative to sunlight that would be available without the project.



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Detailed Shadow Analysis
Navy Yard Cemetery Park
December 21 – 8:51 AM

Figure 3.5-7



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Detailed Shadow Analysis
Navy Yard Cemetery Park
December 21 – 1:00 PM

Figure 3.5-8



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Detailed Shadow Analysis
Navy Yard Cemetery Park
December 21 – 2:53 PM

Figure 3.5-9



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Detailed Shadow Analysis
Navy Yard Cemetery Park
March 21 – 1:55 PM

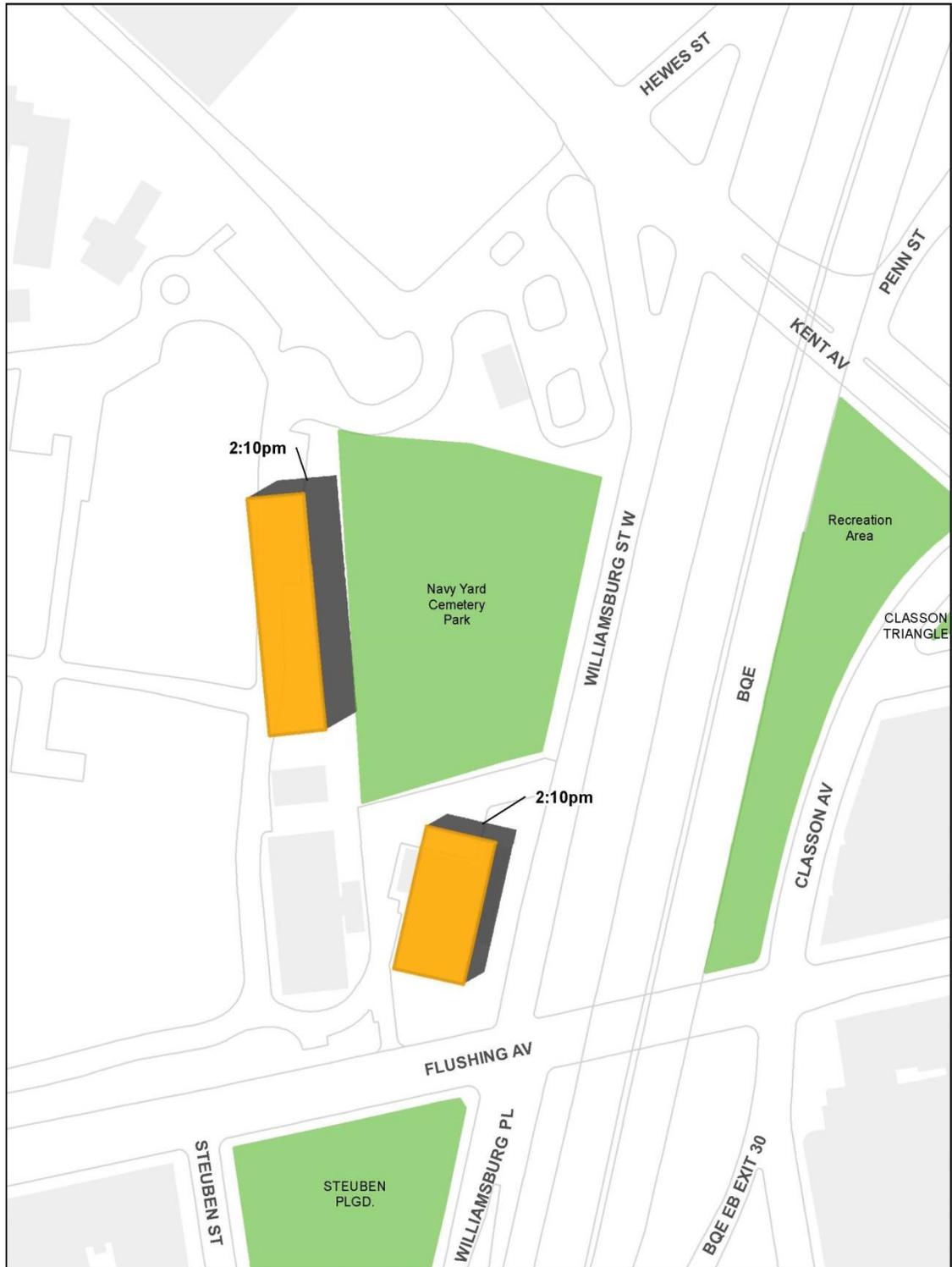
Figure 3.5-10



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Detailed Shadow Analysis
Navy Yard Cemetery Park
March 21 – 4:29 PM

Figure 3.5-11



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Detailed Shadow Analysis
Navy Yard Cemetery Park
May 6 – 2:10 PM

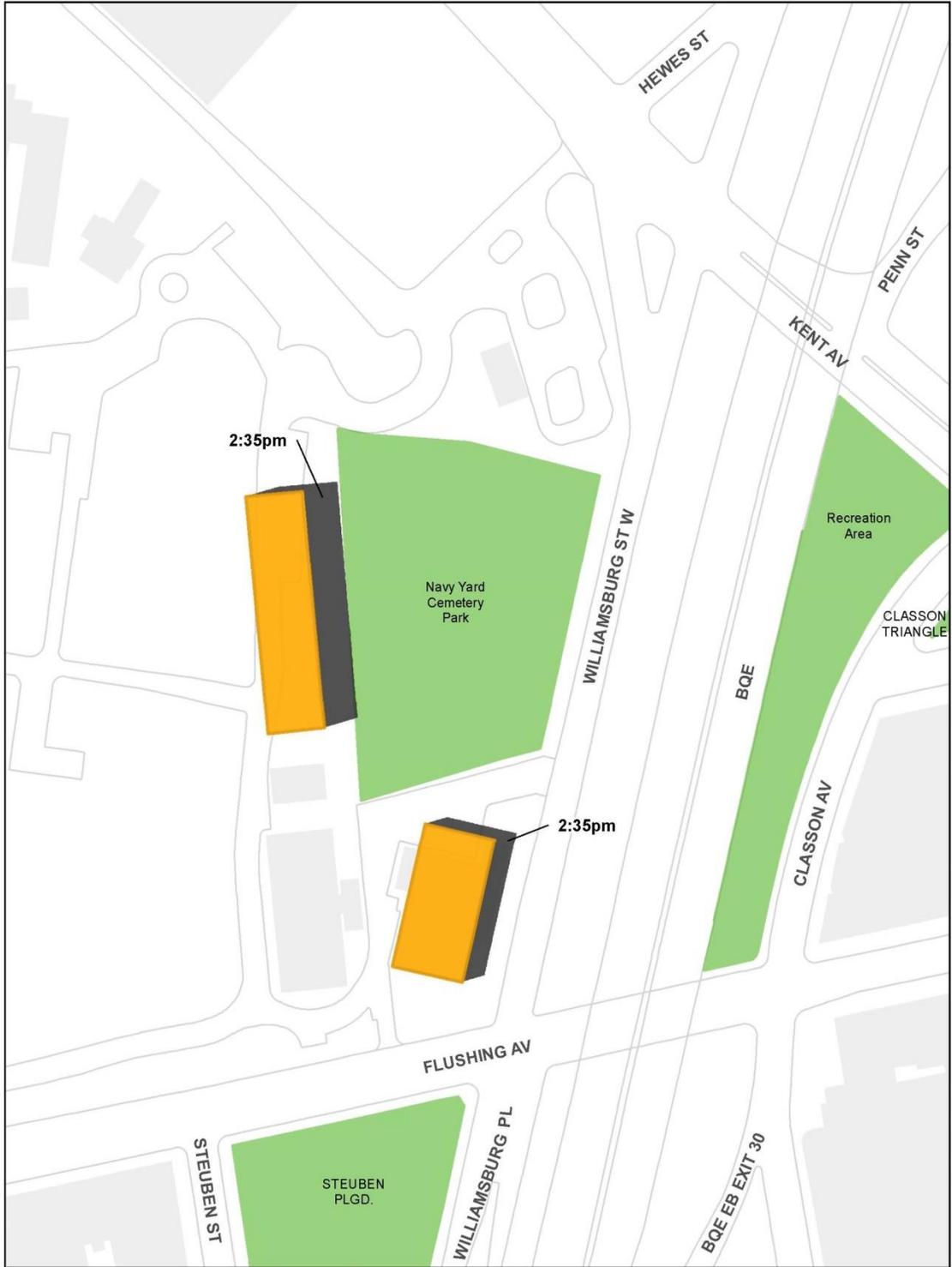
Figure 3.5-12



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Detailed Shadow Analysis
Navy Yard Cemetery Park
May 6 – 5:18 PM

Figure 3.5-13



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Detailed Shadow Analysis
Navy Yard Cemetery Park
June 21 – 2:35 PM

Figure 3.5-14



Steiner Studios Media Campus EIS
Brooklyn Navy Yard

Detailed Shadow Analysis
Navy Yard Cemetery Park
June 21 – 6:01 PM

Figure 3.5-15

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

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

Open Space Utilization – A substantial reduction in the usability of open space as a result of increased shadow.

For Any Sunlight-Sensitive Feature of a Resource – Complete elimination of all direct sunlight on the sunlight-sensitive feature of the resource, when the complete elimination results in substantial effects on the survival, enjoyment, or, in the case of open space or natural resources, the use of the resource.

Wallabout Channel Barge Basin

The shadow from the proposed project would not result in a substantial reduction in sunlight on the Wallabout Channel Barge Basin. While the shadow from the proposed Backlot would reach the Wallabout Channel Barge Basin on all four analysis dates, it would be relatively limited in duration and during all representative analysis periods, the shadow would be off the resource by mid-morning (as noted in **Table 3.5-1**). The portion of the project-generated shadow that reaches the Wallabout Channel Barge Basin covers only a small portion of the water body compared to the overall size of the channel. Further, the area around the channel is not built-up, allowing most of the channel to receive a substantial amount of sunlight exposure during the course of the day. Thus, the project-generated shadow that would be cast on the Wallabout Channel Barge Basin would not have an effect on marine wildlife or any other natural resources existing in this surface water body and no significant adverse shadow impact on this sunlight-sensitive resource is expected as a result of the proposed project.

Navy Yard Cemetery Park

The shadows from Project-Generated Development Sites 10 and 11 on the Naval Annex would not result in a substantial reduction in sunlight on the future Navy Yard Cemetery Park. During the analysis date with the greatest duration of project-generated shadows, December 21st, project-generated shadows would enter the open space at 8:51 a.m. and exit the open space at 2:53 p.m., for total duration of approximately six hours and two minutes. However, the maximum coverage of the shadows on the resource during this analysis date would never be greater than 35 percent of the total park area. In addition, the period of maximum exposure from project-generated shadows comes during a cold-weather month when the park is not expected to be heavily used. Furthermore, the December analysis date falls outside the growing season and shadows occurring during this time are unlikely to affect vegetation.

During the remaining analysis dates, March 21st, May 6th and June 21st, the maximum shadow coverage would range from 25 to 40 percent of the total area of the Navy Yard Cemetery Park. However, the duration of the shadows during these analysis dates would be substantially less than the December 21st analysis date. As noted in the *CEQR Technical Manual*, the minimum requirement of sunlight during the growing season (March to October) is generally four to six hours a day. As shown in **Table 3.5-1**, the entirety of the Navy Yard Cemetery Park, during the March, May and June analysis dates, would receive at least six hours of sunlight. In addition, according to BNYDC, the Navy Yard Cemetery Park was designed to be self-sustaining with shade tolerant plantings and is not expected to be sunlight-sensitive. Furthermore, given the very low density of the Naval Annex, the area of the park site would not receive shadows from other buildings in the area. Therefore, there would be sufficient sunlight for the growing season and new shadows would not affect the overall usage and enjoyment of the park. Project-

generated shadows cast on the Navy Park Cemetery Park would not lead to a significant adverse shadow impact on sunlight-sensitive resources.

Conclusion

While there would be new project-generated shadows on sunlight-sensitive resources from new development on the project site, the duration and coverage of the new shadows would be limited and would not affect the vitality or usage of the sunlight-sensitive resources identified in the study area. Thus, significant adverse impacts from shadows would not result from the proposed action.

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3.6 HISTORIC AND CULTURAL RESOURCES

INTRODUCTION

This chapter considers the potential for the proposed Media Campus at the Naval Annex to affect historic and cultural resources. Historic and cultural resources include both archaeological and historic architectural resources, and are defined by Section 14.09 of the New York State Historic Preservation Act of 1980 (Section 14.09), and the *CEQR Technical Manual* as districts, buildings, structures, sites, and objects of historical, aesthetic, cultural, and archaeological importance. This includes resources listed in the State/National Registers of Historic Places (S/NRHP), resources determined eligible for listing in the S/NRHP by the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) (also known as New York State Historic Preservation Office (SHPO)), landmarks designated or under consideration for designation by the New York City Landmarks Preservation Commission (LPC), National Historic Landmarks (NHL), and previously unidentified resources that meet the S/NRHP and/or LPC eligibility requirements.

The proposed project involves a discretionary action by the State of New York, and thus is subject to review under Section 14.09 of the New York State Historic Preservation Act of 1980. Section 14.09 and the *CEQR Technical Manual* recommends that a historic and cultural resources impacts assessment be conducted for undertakings that would result in ground disturbance, new construction, physical alterations to existing structures, and/or change in scale, visual prominence or visual context of buildings, structures, or landscape features, among others. The historic and cultural resources analysis has been prepared in accordance with the State Environmental Quality Review Act (SEQRA) and under Section 14.09. This technical analysis follows the guidance of the 2014 *CEQR Technical Manual*.

Study Area

Archaeological Resources Study Area

As per CEQR guidelines, for archaeological resources, the study area is the area which would be directly impacted by the proposed project. Generally, areas of planned ground disturbance that could directly impact known and potential archaeological resources are the areas of concern. As discussed in **Chapter 2.0**, "Project Description," the Steiner Studios Media Campus study area is composed of the following three components:

- Brooklyn Navy Yard Naval Hospital Annex (Naval Annex).
- Proposed Kent Avenue Parking Structure located within the triangular area of the BNY, north of the Naval Annex, formerly known as the Northern Triangle.
- Proposed 70,000-square-foot Backlot area on the west side of Kent Avenue, in the Brooklyn Navy Yard, outside the Naval Annex.

These areas of development have been evaluated for archaeological sensitivity. In compliance with Section 14.09, an archaeological site file search was conducted to gather information on previously identified sites on file at SHPO. The search area for archaeological resources was a one-quarter mile radius around the study area (see **Figure 3.6-1**).

Architectural Resources Study Area

The study area for historic architectural resources is defined as the area in which resources may be affected by the project, and includes both direct impacts, such as physical alteration to all or part of a resource, and indirect impacts, such as visual intrusions, or changes in the resource's setting that may impact its historic significance. The *CEQR Technical Manual* guidelines indicate that the standard study area for most projects is defined by a 400-foot radius from the border of the project site. Impacts of the proposed development of the project site are not anticipated to extend beyond the standard 400-foot radius. Therefore, the historic architectural resources study area is defined as the project site plus an approximate 400-foot radius around the project site (see **Figure 3.6-2**).

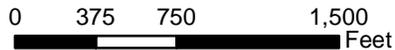


Legend

- Project Site
- Quarter-Mile Study Area



Steiner Studios Media Campus EIS
Brooklyn Navy Yard



Quarter-Mile Study Area

Figure 3.6-1

3.6.1 Existing Conditions

Prehistoric and Historic Context

Prehistoric Period

Approximately 12,500 to 10,000 years before present (BP); Paleoindians first arrived in the northeast following the retreat of the Wisconsin glacier. Archaeologists have determined that rising sea levels caused evidence of Paleoindian occupations to be lost in coastal regions. Although no Paleoindian sites have been identified on Long Island or in Brooklyn, a Paleoindian component was located on the Port Mobil Site in Staten Island, NY. Vegetation during this early period consisted of a spruce boreal forest followed by a mixed coniferous/deciduous zone of primarily pine, spruce, and birch (U.S. Navy, 1994).

The gradual development of adaptive strategies oriented to mixed coniferous/deciduous forests and, eventually, the increased importance of coastal resources provides the basis for the Archaic Period (ca. 10,000-3,000 BP). This period is marked by the gradual development of a more complex, localized land use strategy focusing on a wider resource base than that of the preceding period. The earliest evidence of Native American utilization of coastal resources (shell fishing) has also been documented from this period. Identified Archaic sites are significantly more numerous than Paleoindian sites although none have been documented within the project site (U.S. Navy, 1999).

The Woodland Period (ca. 3,000-450 BP) demonstrates a continuation of the shift from generalized hunting and gathering to the more specialized exploitation of wild resources, including marine shellfish and annual fish runs. The emergence of the salt marsh allowed for the increasingly intensive exploitation of the coast, such as in the vicinity of the current study area during this time period. Sites grew in size, with semi-sedentary fortified villages being established at the end of the period. A village site occupied by the Mareykawicks Native American tribe, was noted to have been situated approximately one-and-a-half-miles southwest of the study area (Bolton 1934; Solecki 1977; Greenhouse Consultants, Inc., 1990).

One archaeological site dating to the Woodland Period was identified in the vicinity of the current study area by non-professional archaeologists during the mid-19th to early-20th century (Furman 1865; Solecki 1977; Greenhouse Consultants, Inc., 1990). This site, located to the west of the western periphery of the BNY, yielded diagnostic artifacts such as clay pipes, pottery, and projectile points. No Woodland Period sites have been identified within the study area itself (U.S. Navy, 1999).

Historic Period, 1600s – 1800

During the 1620s, the land that eventually comprised the Brooklyn Navy Yard was privately owned by the Rapelyes, a Dutch Huguenot family who originally purchased the 335-acre (135.6-hectare) tract of high ground, meadow, and swamp from the Native Americans. The parcel was bounded by two hills situated around Wallabout Bay. Throughout the 17th and 18th centuries, the Rapelyes and their descendants (Schenck, Bergen, Bogart, Vanderbeck, Remsen, Johnson, Jackson, et. al.) lived along Wallabout Bay and prospered by selling their agricultural products to neighboring communities. Notable settlements on the site included Rem Remsen's mill, dam, and toll bridge, established during the early 1700s, on 70 acres along the western strand of Wallabout Bay. Other features included the farmstead of Martin Schenk, Jr., a direct descendent of the Rapelyes. The farmstead contained a house, barn, outbuildings, and farmland. The house on the Schenk farmstead would later become part of the United States (U.S.) Naval Hospital campus (U.S. Navy, 1994).

After four generations, the Rapelye land was divided into small parcels and sold to, or inherited by, numerous heirs. In 1781, the Jackson brothers purchased property surrounding the west hill of the Remsen mill property, and constructed a shipyard. These holdings would later become a portion of the BNY.

Brooklyn Navy Yard, 1800-1990

In 1801, the U.S. Navy purchased John Jackson's 41.93-acre parcel, including the shipyard site and part of the west hill, for establishment of the Brooklyn Navy Yard. At the time of its construction, the Navy Yard was one of six commissioned by the Navy. In its initial years, the yard functioned primarily as a depot for supplies, but during the early-19th century, it served as the Navy's primary shipbuilding and repair facility.

Shipbuilding activity increased with the War of 1812 when the yard fitted out more than 100 naval vessels. During the mid-19th century, the growth of shipping and port activities in New York City further enhanced the Navy Yard's development. Numerous ships were built and repaired in the shipyard, and spurred the construction of the granite Dry Dock No. 1 in 1841-1851. The dock, located outside the U.S. Naval Hospital campus (currently referred to as the Naval Annex) and west of the project site, has been designated a New York City Landmark (U.S. Navy, 1994).

During the Civil War, the BNY was the Union's most important shipyard, employing 6,000 workers at the close of the war. It built vessels, converted private ships to military use, and repaired more ships than any other yard in the nation. In the decade following the Civil War, new ship construction slowed considerably, and arms and munitions storage became part of the yard's mission. However, by the 1880s, shipbuilding re-emerged as a primary activity at the Navy Yard, and new dry docks were constructed to accommodate these needs (U.S. Navy, 1994).

The boundaries of the BNY changed in 1890 with the sale of lands on the east side of the yard to the City of Brooklyn. The lands were bounded by Flushing Avenue on the south, Washington Street on the west, the U.S. Naval Hospital perimeter wall on the east, and Wallabout Place on the north and northeast. On this property the city created Wallabout Market, the city's only public wholesale market. It was housed in blocks of two-story, Dutch-style buildings with elaborate stepped and ornamented gables that lined the west and south sides of the open "Farmer's Square." An additional group of six buildings were sited on Flushing Avenue and smaller streets (i.e., from west to east, West Street, Market Street, and East Avenue running north into Farmer's Square). These street names continue to be used today at the BNY. The market separated the BNY from the U.S. Naval Hospital campus, which is described below.

During the Spanish-American War (1898), the BNY became the Navy's principal supply center. With changes in technology and scale of ship design in the early-20th century, newer, larger facilities were needed. During the early 1900s, shipways were rebuilt and new dry docks were constructed. In addition, a perimeter wall of concrete caissons, sunk by the pneumatic method, was built around the complex (U.S. Navy, 1994).

In the early-20th century, the BNY emerged as one of the leading yards in large vessel construction. As World War I escalated, the Navy Yard's employment tripled, going from its civilian peak of 6,000 to more than 18,000 civilians by war's end. More than 60 ships, mostly fishing boats and yachts, were outfitted to hunt U-boats, and captured German ships were reequipped for Navy use. During this period buildings within the yard were remodeled to accommodate new uses; other improvements included the construction of streets, tracks, and sewers; power plant upgrades; and waterfront enhancements (U.S. Navy, 1994). After World War I, ship repairs became the main mission of the Brooklyn Navy Yard, and employment dropped.

During World War II, expansion of the BNY was the most comprehensive and complex construction program of all Navy Yards in the nation, as a result of a 1940 Congressional directive calling for expansion of buildings and structures within the yard, and development of its east end. Some of the new construction also occurred near Wallabout Market. The market area was improved through dredging and removal of all market buildings except the stable and storage building (Building 305, ca. 1896). Other storage and maintenance buildings were also erected north and south of Building 305, the area currently proposed for location of the Kent Avenue Parking Structure. However, in recent times, these buildings have been removed.

New construction also occurred during World War II in the east end of the yard, west of the Naval Annex (U.S. Navy, 1994). This included the Materials Testing Lab (Building 1; present-day 25 Washington Avenue) and the Foundry (Building 2), among many others which are no longer extant. Similarly, two 1940s-era subassembly shops (Buildings 294 and 296) north of Buildings 1 and 2 were destroyed by fire in the 1990s (Higgins Quasebarth & Partners, February 2014). Subsequently in 2004, Steiner Studios erected a sound stage in the former location of Building 294 (Higgins Quasebarth & Partners, April 2012).

Industrial expansion also occurred within the Naval Annex itself. During this period, the Motion Picture Exchange (Building 311) was erected in the southeastern portion of the annex.

The Navy Yard's workforce and production scale were reduced at the close of World War II, but expanded again during the Cold War and Korean conflicts of the 1950s. Carriers for jet operations and antisubmarine warfare were remodeled, and several large carriers were built. In 1966, the Brooklyn Navy Yard became one of 90 military bases and installations to be closed as an economic measure by then-Secretary of Defense Robert S. McNamara. Ownership of the former yard, excluding the Naval Annex and small industrial portions to the north and west, was transferred to the City of New York. Upon transfer, it was converted into an industrial park managed by BNYDC.

The remaining Navy-owned portion of the yard, including the Naval Annex, became the administrative headquarters of Naval Station (NAVSTA) New York. NAVSTA New York was comprised of three sites in Brooklyn (NAVSTA Brooklyn, Dayton Manor, and Floyd Bennett Field), one site on Staten Island (NAVSTA New York, Staten Island), and one site on Long Island (Mitchel Field/Mitchel Manor). From the late 1960s to the 1990s, NAVSTA Brooklyn continued to serve administrative, security, and limited operational functions (U.S. Navy, 1990). In the 1990s, NAVSTA Brooklyn was closed in accordance with the federal Base Realignment and Closure Commission (BRAC). In 2001, NAVSTA Brooklyn transferred out of federal ownership to the City of New York, and is currently managed and operated by BNYDC. (Department of the Navy, May 29, 2001).

U.S. Naval Hospital Campus, 1811-1990

The U.S. Naval Hospital campus is situated within the Naval Annex. In 1811, the Commandant of the BNY requested aid from Congress to construct a Naval Hospital on the location of the Schenk farm, east of the Navy Yard on Wallabout Bay. By May 1824, roughly 25 acres, including buildings, were purchased by the Navy. Historic documents suggest that structures on the former Schenk property may have been used as an interim hospital facility while construction of the new Naval Hospital was underway; another temporary-hospital candidate, Remsen's mill (by then a decrepit building on the west side of the Brooklyn Navy Yard), had been deemed unfit for patients (U.S. Navy, 1994, 1997a). In 1838, construction of the U.S. Naval Hospital (Building R95) was completed (U.S. Navy, 1994).

During the Civil War, the naval laboratory at the hospital prepared most of the medicines used by the Union Navy. It is estimated that, at the time, the Naval Hospital accommodated about 25 percent of the total Civil War patient load of all naval hospitals.

In the 1840s, the former Schenk dwelling (Building R4) was altered to become the Doctor's House. This included shifting its orientation from east-west to north-south, at which time Italianate details were added to the house (U.S. Navy, 1997a). Other buildings altered during this era included the hospital, when a wood addition was erected to connect the north and south wings of the building. This section was removed after 1867. In 1850, the Gate and Guard House (Building R104) was erected within the hospital campus property. In addition, it is likely that portions of the brick-and-stone perimeter wall that surrounds the north and west sides of the hospital campus were built at this time. In 1864, the Surgeon's House (Building R1) was erected at the site (U.S. Navy, 1994).

In 1891, a 17-acre tract, including two acres in the hospital campus, was sold to the City of Brooklyn and developed as the Wallabout Market previously described. By the mid-1890s, 17 buildings were located on the hospital campus. According to an 1895 map, multiple buildings that no longer exist were located east and south of the hospital. For example, a court building was located east of the hospital within the

hospital's U-shaped courtyard. A kitchen building, laundry, and boiler house were appended to the court building by an east/west corridor. Two north/south spurs extended south from the east/west corridor to connect to a coal shed south of the boiler house and a ward building south of the hospital. The freestanding naval laboratory was located north of the boiler house and east of the hospital (U.S. Navy, 1997a). None of the buildings south and east of the hospital survive today.

The following 19th-century buildings remain intact within the hospital campus:

- U.S. Naval Hospital (Building R95)
- Surgeon's House (Building R1)
- Doctor's House (former Schenck House) (Building R4)
- Gate and Guard House (Building R104)
- Smallpox Hospital and Stable (Building R103)
- Stable for Surgeon's House (Building R109)

In 1905 new Officers' Quarters (Buildings R2 and R3) were erected, west of Building R4, within the hospital campus property. A new mortuary was built in 1909 (Building R426), and a new laboratory (Building RD) was designated as the Medical Supply Depot in 1910. The earlier laboratory was converted to a 60-bed ward and incorporated into the Naval Hospital via a covered walkway. Projects from this period also included grading northwest of the hospital, installation of sidewalks around Buildings R1 and R2, and street improvements around the new laboratory (Building RD). Building R4, the former Schenck house, was enlarged in 1909 (U.S. Navy, 1994).

During World War I, an emergency hospital expansion resulted in the construction of multi-winged brick wards, collectively identified as Building C, on the lawn immediately north of the hospital. In addition, the South Annex ward was constructed south of the hospital in the current location of the Pool (Structure 671) (1978) (U.S. Navy, 1997a). In 1919, the Nurses' Quarters (Building RG) was completed near the northern border of the hospital campus.

In 1926, Bachelor Officers' Quarters (Buildings R8 and R9) were erected southwest of the hospital. During this same period, the Memorial Area was established northwest of the hospital on land that had been disturbed by cutting and filling in 1842 (U.S. Navy, 1997a). By 1936, the majority of land within the hospital campus had been developed. As a result, very little open space existed within the campus, and what remained was confined to the Memorial Area northwest of the hospital and the lawn south of non-extant Building F.

During World War II, hospital operations had outgrown their restricted site, and a new Naval Hospital was erected in St. Albans, Queens. In 1948, the U.S. Naval Hospital was decommissioned, but the hospital campus remained utilized and unaltered for several decades as part of NAVSTA Brooklyn. During this period, the buildings and land were used for administrative, recreational, security, limited operational, and housing purposes.

In 1978, a pool and bath house were erected south of the hospital in the former location of a building. Between 1979 and 1981, multiple buildings on the hospital campus were demolished, including the original laboratory, power plant, and other buildings (U.S. Navy, 1994; Stokes, February 20, 1992). Demolition of these structures resulted in the current hospital campus configuration.

After NAVSTA Brooklyn was closed in the 1990s, the SHPO determined that the U.S. Naval Hospital campus qualified as an S/NRHP eligible historic district in 1992. This determination was made in accordance with Section 106 of the National Historic Preservation Act (NHPA) (U.S. Navy, 1994). In 1994, select buildings at NAVSTA Brooklyn outside the hospital campus were also identified as S/NRHP-eligible as part of Section 106 compliance activities (i.e., contributing Building 1 [present-day 25 Washington Avenue] and Building 2), and the SHPO concurred (U.S. Navy, 2000)

In 2000, the Navy and SHPO entered into a Programmatic Agreement (PA) which set forth methods to mitigate the adverse effect of disposal of NAVSTA Brooklyn out of federal ownership. The PA included a

standard historic preservation covenant as Attachment 4 for the SHPO to guide proper treatment of the S/NRHP-eligible resources in accordance with the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*. The PA is included in **Appendix B**. In 2001, the conveying language in the quitclaim deed between the federal government and BNYDC/City of New York incorporated the historic preservation covenant from the PA as Item VI under Notices, Covenants, Conditions, Reservations, and Restrictions (Department of the Navy, May 29, 2001). The deed is included in **Appendix B**.

Naval Hospital Cemetery, 1824-Present

The Naval Hospital Cemetery, located within the grounds of the U.S. Naval Hospital campus at the Naval Annex, served as the hospital's official burial ground from 1824-1910. The land upon which the cemetery was established was purchased from the Schenck family in 1824 as part of the original hospital land acquisition. Records from the Navy's Bureau of Medicine & Surgery (BUMED) indicate that bodies may have been interred at the cemetery as early as 1812, prior to the official establishment of the cemetery (U.S. Navy, 1997a).

In 1842, the burial ground was expanded by filling the marshy land along its eastern edge using materials removed from land west of the hospital (U.S. Navy, 1997a). By 1899, the northwestern portion of the cemetery was expanded to accommodate an additional 100 graves. During the early-20th century, the U.S. Surgeon General denounced the cemetery's condition as deplorable and, in 1910, the cemetery was closed to new interments (U.S. Navy, 1994).

In 1926, the Navy removed 907 burials from the cemetery and reinterred them at Cypress Hills National Cemetery in Brooklyn, and considered the cemetery defunct. However, documentary research indicates that approximately 517 interments are not documented as having been removed (U.S. Navy, 1997a, 1998).

As the Navy believed that the cemetery was gone, between the 1930s and 1940s a recreational field was constructed in the northern portion of the cemetery. After 1944, the Navy added infrastructure to the field and constructed a tennis court in the southern section, which was later removed. Significant grading also occurred at the cemetery site. By 1964, the northern portion of this field was converted into a paved parking lot and, during the 1970s, the Navy added baseball and football fields to the southern portion (U.S. Navy, 1994).

In conjunction with the transfer of the U.S. Naval Hospital property out of federal ownership in the 1990s, the remains of an unknown soldier was discovered during an archaeological investigation conducted in 1997 in compliance with Section 106 of NHPA. As a result, the cemetery was determined to contribute to the S/NRHP-eligible Naval Hospital Historic District by the SHPO. In 2000, the Navy and SHPO entered into a PA which set forth methods to mitigate the adverse effect of disposal of NAVSTA Brooklyn out of federal hands. The PA included a covenant for the SHPO to guide proper treatment of the cemetery. The PA is included in **Appendix B**. In 2001, the conveying language in the quitclaim deed between the federal government and BNYDC/City of New York incorporated the cemetery covenant from the PA as Item VII under Notices, Covenants, Conditions, Reservations, and Restrictions and Exhibit C (Department of the Navy, May 29, 2001). The deed is included in **Appendix B**.

Archaeological Resources

Archaeological Site File Search

The archaeological search radius for the archaeological site file search at SHPO was one-quarter-mile surrounding the project site. No previously identified prehistoric archaeological sites were identified within or immediately adjacent to the project site.

Two known historic archaeological sites are located within the Naval Annex. Copies of the NYS Historical Archaeological Site Inventory Forms were obtained for the Naval Hospital Archaeological Site (#A04701-

014975) and the Naval Hospital Cemetery Site (#A04701-014899). According to current project plans, only the Naval Hospital site is located within the current study area.

Prior Surveys

Numerous cultural resources evaluations and archaeological surveys have been conducted for portions of the Brooklyn Navy Yard, and are listed below. Most of the archaeology-focused surveys were concerned with the Naval Annex, specifically the Naval Hospital Building and Naval Hospital Cemetery.

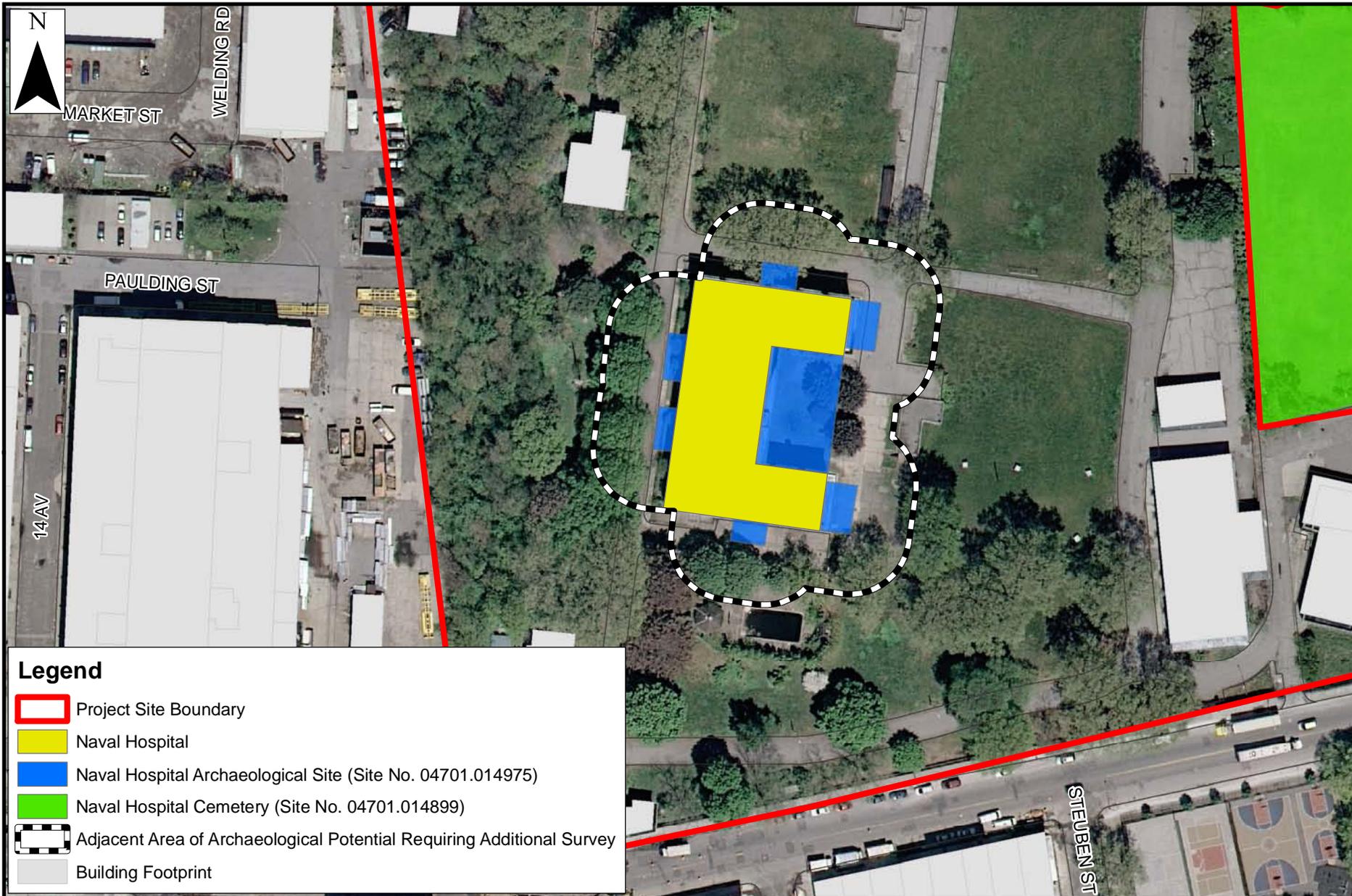
- U.S. Navy. 2000. *Final Environmental Impact Statement, Disposal and Reuse Naval Station Brooklyn, NY*. Prepared for the Northern Division. Prepared by TAMS Consultants, Inc.
- U.S. Navy. 1999. *Determination of National Register Eligibility of Naval Hospital Archaeological Features, Naval Station Brooklyn, NY*. Prepared for the Northern Division. Prepared by TAMS Consultants, Inc. and Joan H. Geismar, Ph.D.
- U.S. Navy. 1999. *State of the Research, Naval Hospital Cemetery, NAVSTA Brooklyn, Historical Documentation*. Prepared for the Northern Division. Prepared by TAMS Consultants, Inc.
- U.S. Navy. 1997a. *Archaeological Evaluation (Stage 1A Documentary Study), Former Naval Station (NAVSTA) New York, Navy Yard Annex Site, Brooklyn, New York*. Prepared for the Northern Division. Prepared by Joan H. Geismar, Ph.D, under contract to TAMS Consultants, Inc.
- U.S. Navy. 1997b. *Ground-Penetrating Radar Evaluation, Navy-Retained Section (Former) Brooklyn Navy Yard, Brooklyn, New York*. Prepared for the Northern Division. Prepared by TAMS Consultants, Inc. and Joan H. Geismar, Ph.D.
- U.S. Navy. 1994. *Cultural Resources Survey for Base Closure and Realignment Redevelopment and Reuse of Excess Property at Naval Station New York*. Prepared for the Northern Division. Prepared by Baystate Environmental Consultants, Inc.
- U.S. Navy. 1990. *Environmental Assessment for Base Closure and Realignment of Naval Station New York at Brooklyn*. Prepared for the Northern Division. Prepared by Ecology and Environment.
- Church, David and Edward Rutsch. 1982. *Stage I Cultural Resources Survey for the Proposed Resource Recovery Facility Site, Brooklyn Navy Yard, New York City*. Prepared for Camp, Dresser & McKee. Prepared by Historic Conservation & Interpretation, Inc.

Archaeological Resources Within Study Area

Naval Annex

The culmination of the archaeological work already completed for the Naval Annex, as listed above, has resulted in the identification of the S/NRHP-eligible Naval Hospital Archaeological Site (SHPO Site #A04701-014975), and Naval Hospital Cemetery (SHPO Site # A04701-014899) (see **Figure 3.6-3**).

The Naval Hospital Cemetery is not within the project site; however, it is a contributing element of the S/NRHP-listed Brooklyn Navy Yard Historic District. It is important to note that the northern boundary of the cemetery site was registered as a NYS Historic Archaeological Site in 1998 and subsequently evaluated for S/NRHP eligibility in 1999 and may overlap with the project site; however, no in-ground development is proposed for this area of the project site.



Legend

- Project Site Boundary
- Naval Hospital
- Naval Hospital Archaeological Site (Site No. 04701.014975)
- Naval Hospital Cemetery (Site No. 04701.014899)
- Adjacent Area of Archaeological Potential Requiring Additional Survey
- Building Footprint



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**Naval Hospital Archaeological Site
(Site No. 04701.014975)**

Figure 3.6-3

S/NRHP-eligible Naval Hospital Archaeological Site: NYS Site Number A0471-014975

Subsurface testing in the courtyard of the Naval Hospital Building (R95) in 1998 identified four historic features that meet NPS guidelines for the definition of integrity and therefore, are eligible for inclusion in the NRHP. These features include a pair of large cisterns, a cesspool, and a brick drain.

Additional features (four foundation walls associated with the 1895 Court Building) were also encountered. These features were determined to be non-contributing archaeological features since they have limited research value and are not unique examples of late-19th century construction practices.

The results of the 1998 subsurface testing and the extensive cartographic analysis strongly suggest that hospital-related features similar to the cisterns, cesspool and drain discussed above may exist in untested portions of the hospital courtyard and in specific unexcavated areas immediately to the south, west, north, and east of the hospital building and its wings.

The unexcavated areas adjacent to the hospital building and its wings could contain hospital-related features that appear on the 1833 hospital architectural plan and the 1895 plan showing proposed changes to the Naval Hospital. These potential features include four additional cisterns (two along the west side of the hospital, one south of the south wing, and one north of the north wing), and two additional cesspools located east of the two hospital wings. The cisterns may have been constructed when the hospital was built, but the cesspools located to the east of the two wings are contemporaneous with, or postdate, the 1840 construction of these hospital additions (U.S. Navy, 1999).

As mentioned above, in 2000, the Navy, SHPO, and Advisory Council on Historic Preservation (ACHP) entered into a Programmatic Agreement (PA) which set forth methods to mitigate the adverse effect of disposal of NAVSTA Brooklyn out of federal ownership. The PA included a *Standard Archeological Covenant* as Attachment 2, which relates directly to the Naval Hospital Archaeological Site; the PA also included the *Naval Hospital Cemetery Covenant* as Attachment 3 (**Appendix B**).

The archaeological covenant includes seven stipulations, the first of which is most relevant to the status of the Naval Hospital Archaeological Site in the current study area. The first stipulation states that no disturbance of the ground surface shall be undertaken or permitted to be undertaken on [site] which would affect the physical integrity of [site] without the express prior written permission of the SHPO, signed by a fully authorized representative thereof. BNYDC is engaged in consultation with SHPO concerning the Steiner Studios expansion plans.

Proposed Kent Avenue Parking Structure

There are no previously identified archaeological resources or areas of archaeological potential located in the Northern Triangle portion of the BNY, which encompasses the site of the proposed Kent Avenue Parking Structure.

The Northern Triangle was assessed for archaeological sensitivity in 2006 in conjunction with the proposed demolition of Building 305. In a letter to SHPO dated December 20, 2006 (see **Appendix B**), Earth Tech's (predecessor firm to AECOM) senior archaeologist requested concurrence from the SHPO that the Northern Triangle had been extensively studied through prior surveys and was not archaeologically sensitive due to the extent of prior subsurface disturbance that had occurred across the parcel.

The SHPO Archeology Unit concurred with the finding in a letter dated February 13, 2007, noting that there are "no further archeological concerns in the Northern Triangle" (Cumming, 2007; see **Appendix B**).

Proposed Backlot

There are no previously identified archaeological resources located in the proposed Backlot area, west of Kent Avenue. No areas of archaeological sensitivity were identified during previous cultural resources evaluations or archaeological surveys (Church, David and Edward Rutsch. 1982, U.S. Navy 1990, and U.S. Navy 1994).

Consultation between BNYDC and SHPO is ongoing. The SHPO noted in a June 16, 2014, review response letter that no testing is recommended for the construction of a perimeter wall for the proposed Backlot, as available evidence indicates that this area has been highly disturbed (Perazio, 2014; see **Appendix B**).

Historic Architectural Resources Within Study Area

S/NRHP-Listed Resources

Two S/NRHP-listed resources were identified by the SHPO within the project site and surrounding 400-foot study area radius. These include the Brooklyn Navy Yard Historic District located within both the project site and a portion of the 400-foot study area, and the Wallabout Industrial Historic District located within a portion of the 400-foot study area. Both historic districts are briefly described below.

Brooklyn Navy Yard Historic District

Physical Description

The Brooklyn Navy Yard Historic District is located on the western tip of the coast of Long Island at a bend in the East River between the Williamsburg and Manhattan Bridges in Kings County. It was listed in the S/NRHP on May 22, 2014, and is situated on the north side of Flushing Avenue, a major east-west thoroughfare in Brooklyn, which serves as a border for the historic district. As described in **Section 3.6.1**, the district includes the U.S. Naval Hospital campus which was determined to be an S/NRHP-eligible historic district by the SHPO when NAVSTA Brooklyn was transferred out of federal hands in the 1990s. The S/NRHP-listed historic district is featured in **Figure 3.6-2** and **Figure 3.6-4**.

The historic district embraces 140 years of naval history, and includes resources representing six significant periods in the Brooklyn Navy Yard's history, which correspond with important periods in the history of the U.S. Navy itself. As it exists today, the historic district most clearly illustrates its 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.



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Detail of U.S. Naval Hospital Campus
(Naval Annex) Within Brooklyn Navy
Yard Historic District

Figure 3.6-4

Buildings in the 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 earliest buildings in the district were constructed in the first decade of the 19th century and the newest buildings were built as recently as 2013. A 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 have been sufficiently major to obscure the building's historic character. In terms of circulation, remnants of an 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. The areas generally include 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 (Higgins & Quasebarth & Partners, February, 2014).

Statement of Significance

The Brooklyn Navy Yard Historic District is significant in the area of military history as a collection of 19th- and 20th-century industrial, residential, and institutional resources associated with the establishment and development of one of the nation's oldest naval installations.

Established in 1801, the New York Naval Shipyard evolved through a variety of land transactions, during which the Navy both purchased and sold land, reclaimed land, created and filled channels, built and rebuilt dry docks and piers, and constructed newer and more efficient buildings, gradually and successively changing the configuration of an 18th-century harbor and marshland to meet the technical needs of shipbuilders whose product changed dramatically over the period of significance. As it exists today, the shipyard contains significant features, including elements of its plan, shipyard features and buildings that represent all of its significant eras of naval use. However, as a whole, its plan, buildings, and shipbuilding facilities most clearly represent its final and most important stage of development during World War II, when the Navy Yard was the world's largest shipyard and the Navy's largest industrial site, employing over 75,000 workers.

The yard is also significant as a collection of military architecture and engineering structures that exhibit the changes in architectural styles, forms, and technology on American naval yards during the 19th and 20th centuries. It is notable both for its individually significant buildings and structures, and as a major assemblage of industrial buildings. Nearly all of the structures were designed and constructed by the Bureau of Yards and Docks in association with many civilian employees, engineering firms, and contractors. Particularly notable individual buildings and structures include U.S. Naval Hospital, (Building R95, 1830-38), a Greek Revival style building faced in Tuckahoe marble and designed by architect Martin E. Thompson, and Surgeon's House (Building R1, 1863), a French Second Empire house located on the hospital campus at the Naval Annex. Twentieth-century warehouse and fabrication buildings exemplify characteristics of the period including steel-frame and reinforced-concrete construction. A representative example of this type includes the Materials Testing Laboratory (1941-1942) (Building 1; present-day 25 Washington Avenue), a Modern style brick and steel structure constructed during World War II, and located within the 400-foot study area immediately southwest of the Naval Annex.

The BNY's physical fabric reflects various construction campaigns and expansions, primarily undertaken prior to and during America's wars—similar to several of the older navy yards in the country—and is a character-defining feature of the resource type. The alternating periods of growth and contraction are framed by some of the most hallowed events and important discoveries in America's history. This national

influence peaked during World War II, when the BNY grew to become the largest industrial complex in the Navy, as well as in New York and the site of the most comprehensive, complex expansion program of all the navy yards during the conflict. Many of the Yard's extant historic buildings date to this period. Of the original federal shipyards, the Brooklyn Navy Yard is particularly notable for its relative physical integrity. Although some demolition did occur post-decommissioning, most of the important historical structures have avoided demolition due to a lack of will and funds in the late-20th century.

The period of significance begins in 1805-1806, with the construction of a residence for the yard's first commandant (Quarters A). Although the yard was decommissioned by the government in 1966, the period of significance ends in 1945, a date that represents the Navy Yard at its final and most important stage of development (Higgins Quasebarth & Partners, February, 2014).

National Register Boundary

The boundary of the historic district encompasses 236 acres, and includes the largest intact area that was associated with the shipyard during the period of significance, from 1805-1806 to 1945. The district generally encompasses all the area associated with the yard since its establishment, with the exception of areas in the northwest corner and along its eastern edge that have lost integrity.

The historic district is generally bounded by Wallabout Bay and the East River to the north, and by Flushing Avenue, the yard's consistent boundary over time, on the south. On the west, the boundary generally follows the border of the Navy Yard 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 in 1987.

In the southeast corner, the boundary includes the U.S. Naval Hospital campus within the Naval Annex, a part of the BNY since 1824. The rest of the eastern boundary is irregular, and was drawn to exclude an area that was historically part of the BNY but has suffered a near complete loss of integrity. A large part of this excluded area was the location of two massive subassembly shops—Buildings 294 and 296—which were demolished in the 1990s after a fire. Another area along Kent Avenue, which was densely developed during World War II, is also now largely vacant, and has been excluded (Higgins & Quasebarth & Partners, February, 2014).

Brooklyn Navy Yard Historic District Within Project Site and 400-Foot Study Area

Of the three functional areas that comprise the Brooklyn Navy Yard Historic District (Residential; Shipyard; and U.S. Naval Hospital campus), only a portion of the historic district coincides with the project site and surrounding 400-foot study area. Specifically, the U.S. Naval Hospital campus is located within the Naval Annex. In general, the resources within the hospital campus have not been occupied for approximately two decades years, and are in poor condition. A small segment of the eastern portion of the Shipyard area is also situated within the western portion of the 400-foot study area.

Table 3.6-1 provides a summary of the contributing and non-contributing resources in the Brooklyn Navy Yard Historic District that are within the project site and 400-foot study area. These include 26 contributing resources and seven non-contributing resources within the hospital campus/Naval Annex, and two contributing resources and one non-contributing resource within the Shipyard area. **Figure 3.6-5** features a detailed view of the Naval Annex, and **Figure 3.6-4** features the overall historic district.

Table 3.6-1 Brooklyn Navy Yard Historic District Contributing and Non-Contributing Resources within Project Site and 400-Foot Study Area

Resource Number/ Designation	Resource Name	Year Constructed	Historic District Classification	Location
U.S. Naval Hospital Area Within Historic District				
R1	Surgeon's House	1863	Contributing	Naval Annex
R2	Quarters No. 2	1905	Contributing	Naval Annex
R3	Quarters No. 3	1905	Contributing	Naval Annex
R4	Quarters No. 4; also referred to as Lab Director's House	1864; 1900; 1917; 1947	Contributing	Naval Annex
R5	Infectious Disease Quarters; also referred to as Bungalow	1915	Contributing	Naval Annex
R6	Infectious Disease Quarters; also referred to as Bungalow	1915	Contributing	Naval Annex
R7	Infectious Disease Quarters; also referred to as Bungalow	1915	Contributing	Naval Annex
R8	Bachelor Officers' Quarters	1926	Contributing	Naval Annex
R9	Bachelor Officers' Quarters	1926	Contributing	Naval Annex
R95	U.S. Naval Hospital	1830-1838	Contributing	Naval Annex
R103	Carriage House	ca. 1900	Contributing	Naval Annex
R109	Stable	ca. 1872	Contributing	Naval Annex
R103A	Garage	ca. 1947	Contributing	Naval Annex
R104	Guard House and Gate Keeper Lodge	1850	Contributing	Naval Annex
311	Motion Picture Exchange	1942	Contributing	Naval Annex
R426	Lumber Shed; also referred to as Morgue	1909	Contributing	Naval Annex
R448	Greenhouse remnants	ca. 1928	Contributing	Naval Annex
R463	Flagstaff	ca. 1921	Contributing	Naval Annex
R464 and R474	Tennis Courts	ca. 1920	Contributing	Naval Annex
671	Pool	1978	Non-contributing	Naval Annex
672	Pool Bathhouse	1978	Non-contributing	Naval Annex
999	Barrier Forts Monument	1858; relocated to hospital campus in 1979	Contributing	Naval Annex
RD	Medical Supply Depot; also referred to as Lab Building	1910	Contributing	Naval Annex

Table 3.6-1 Brooklyn Navy Yard Historic District Contributing and Non-Contributing Resources within Project Site and 400-Foot Study Area (cont'd)

Resource Number/ Designation	Resource Name	Year Constructed	Historic District Classification	Location
U.S. Naval Hospital Area Within Historic District (cont'd)				
RG	Nurses' Quarters; also referred to as Unmarried Officers' Club	1919; addition ca. 1980	Contributing	Naval Annex
No number	Naval Hospital Cemetery	1831-1910	Contributing	Naval Annex
No number	Sun Dial	ca. 1945	Contributing	Naval Annex
No number	Bird Bath	ca. 1945	Contributing	Naval Annex
X31	Pool Shed	1978	Non-contributing	Naval Annex
X32	Steam Reducing Station	ca. 1980	Non-contributing	Naval Annex
X33	Gazebo	ca. 1980	Non-contributing	Naval Annex
X34	Chicken Coop	No date	Non-contributing	Naval Annex
No number	Brick Wall West, North, and East side of Hospital Grounds	ca. 1850	Contributing	Naval Annex
No number	Stone Wall and Gates, Flushing Avenue	ca. 1850	Contributing	Naval Annex
No number	Chain-Link Gate and Fence, Williamsburg Street and Williamsburg Place	No date	Non-contributing	Naval Annex
Shipyard Area Within Historic District				
1 (Present-Day 25 Washington Avenue)	Materials Testing Lab	1941-1942	Contributing	400-Foot Study Area
2	Foundry	1941	Contributing	400-Foot Study Area
293	Paint Fabrication Facility	1970	Non-contributing	400-Foot Study Area



Source: Higgins Quasebarth & Partners, April 2012.



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Brooklyn Navy Yard

Brooklyn Navy Yard Historic District

Figure 3.6-5

Wallabout Industrial Historic District

The Wallabout Industrial Historic District overlaps with a portion of the 400-foot study area, and comprises 40 contributing buildings situated on portions of five blocks located in the Wallabout neighborhood of north-central Brooklyn. It was listed in the S/NRHP in 2012. The historic district is featured in **Figure 3.6-2**.

The industrial buildings of the historic district face onto Clinton Avenue, Waverly Avenue, Washington Avenue, Hall Street, Ryerson Street, Grand Avenue, Flushing Avenue, and Park Place. The buildings in the district were all built as factories, industrial warehouses or related uses, or, in one case, as tenements later converted into an industrial warehouse. These buildings illustrate the history of late 19th- and early 20th-century American industrial architecture, moving from buildings of mill construction to buildings of reinforced concrete. Many of the buildings retain their industrial use; others are residences or are used for storage or institutional use. As is typical of industrial buildings, many of the structures within the district have undergone changes in the course of the past century or more. Despite obvious neglect of some properties and the loss of many windows and storefronts, the industrial buildings of this historic district retain their integrity to a high degree, and the streets still retain the ambience of a bustling industrial past.

The period of significance for the Wallabout Historic District begins in ca. 1890 when the earliest industrial building was erected in the district. It extends through 1942 when construction of new industrial buildings in the district ceased.

The Wallabout Industrial Historic District in Brooklyn, Kings County, New York, with its streets lined predominately with late-19th and early- to mid-20th-century industrial buildings, is locally significant for its importance as a manifestation of the broad patterns of history as represented by industrialization, and as a district with the distinctive characteristics of type and period. The district represents an important cluster of late-19th- and early- to mid-20th-century industrial buildings and a few related industrial buildings that reflect the paramount importance of industry in Brooklyn as both the independent city, and, after 1898, as the New York City 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 loadbearing walls and a significant cluster of reinforced-concrete factories.

The general development of Wallabout as an important industrial area and the construction of specific buildings within the historic district reflect several important forces that resulted in the creation of an area with a notable physical character. These forces include the growth of Brooklyn as a major industrial center; the development of the BNY, adjoining the district to the north; the opening of the Wallabout Market, Brooklyn's major produce market, in 1896, also immediately north of the district; and the expansion of infrastructure near the area, including ferry slips, elevated rail lines, and bridges.

The Wallabout Industrial Historic District is bounded to the west by an irregular line running along the east side of Clinton Avenue, and the western lot lines of buildings on the west side of Waverly Avenue; on the east by west side of Grand Avenue; on the south by an irregular line running along the north side of Park Avenue, and along the southern lot line of buildings on Washington Avenue and Hall Street; and on the north by an irregular line running along the south side of Flushing Avenue, and along the northern lot lines of buildings on Clinton Avenue, Waverly Avenue, Washington Avenue, Hall Street, Ryerson Street, and Grand Avenue. The boundary includes all of the late-19th and 20th-century buildings that represent the industrial development of this section of Brooklyn. In addition, the S/NRHP-listed Rockwood Chocolate Factory Historic District located between Flushing, Park, Washington and Waverly Avenues outside the 400-foot study area, is situated within the Wallabout Industrial Historic District, and contributes to its industrial significance (Dolkart, January 1, 2012).

New York City Landmarks

Two resources situated at the U.S. Naval Hospital campus within the Naval Annex portion of the project site are designated New York City Landmarks by LPC. They include the Surgeon's House (Building R1)

and the U.S. Naval Hospital (Building R95). Both are also contributing resources to the Brooklyn Navy Yard Historic District.

A capsule description of each resource, based on its LPC designation report, is provided below. The resources are depicted in **Figure 3.6-2**.

Surgeon's House (Building R1)

The Surgeon's House (Building R1) is located along Flushing Avenue, opposite Ryerson Street. The mansarded Second Empire-style house was built for the chief surgeon of the U.S. Naval Hospital in 1863 during the Civil War, a period when the Navy Yard experienced extensive growth. It was designed by True W. Collins and Charles Hastings. In 1976, it was designated a New York City Landmark, and is also a contributing resource to the S/NRHP-listed Brooklyn Navy Yard Historic District (Postal, 2009).

U.S. Naval Hospital (Building R95)

The U.S. Naval Hospital (Building R95) is located on Hospital Road. Constructed in 1830-1838, with wings in 1840 and ca. 1862, it was designed by Martin E. Thompson, one of the most prominent architects of the pre-Civil War period. The Greek Revival-style building is built of Westchester Marble, and is distinguished by eight square stone piers along its main façade. In 1965, it was designated a New York City Landmark, and is also a contributing resource to the S/NRHP-listed Brooklyn Navy Yard Historic District (Postal, 2009).

Assessment Methodology

According to the *CEQR Technical Manual*, significant adverse effects to historic and cultural resources could potentially result if a proposed action affects those characteristics that make a resource eligible for LPC designation or S/NRHP listing. This section assesses the potential for the proposed project to result in significant adverse effects on identified historic and cultural resources. **Table 3.6-2** provides information about possible direct and indirect impacts to historic and cultural resources according to guidance in the *CEQR Technical Manual*.

The effects of the project action on historic and cultural resources were assessed in accordance with **Table 3.6-2** to determine (a) whether there would be a physical change to any designated resource or its setting, and (b) if so, is the change likely to diminish the qualities of the resource that make it important (including non-physical changes such as context or visual prominence).

Table 3.6.2 - Possible Impacts to Historic and Cultural Resources

<ul style="list-style-type: none"> Construction resulting in ground disturbance, including construction of temporary roads and access facilities, grading, and landscaping.
<ul style="list-style-type: none"> Below-ground construction, such as excavation or installation of utilities.
<ul style="list-style-type: none"> Physical destruction, demolition, damage, alteration or neglect of all or part of an historic property.
<ul style="list-style-type: none"> Changes to the architectural resource that cause it to become a different visual entity, such as a new location, design, materials, or architectural features.
<ul style="list-style-type: none"> 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.
<ul style="list-style-type: none"> Introduction of incompatible visual, audible, or atmospheric elements to a resource's setting.
<ul style="list-style-type: none"> Replication of aspects of the resource so as to create a false historical appearance.
<ul style="list-style-type: none"> Elimination or screening of publicly accessible views of the resource.
<ul style="list-style-type: none"> Construction-related impacts such as falling objects, vibration, dewatering, flooding, subsidence, or collapse.
<ul style="list-style-type: none"> Introduction of significant new shadows, or significant lengthening of the duration of existing shadows, over an historic landscape or an historic structure to the extent that the architectural details that distinguish that resource as significant are obscured.

Source: Mayor's Office of Environmental Coordination (MOEC). Chapter 9 – Historic and Cultural Resources in *CEQR Technical Manual*. March 2014.

3.6.2 Future No-Action Condition (Future Without the Action)

Archaeological Resources

Under the Future No-Action Condition, no subsurface ground disturbance would occur within the project site. Consequently, there would be no effect on known or potential archaeological resources associated with the Naval Hospital Archaeological Site within the Naval Annex.

The Brooklyn Greenway Initiative, working with the BNYDC, plans to create a 1.7-acre park within the boundaries of the S/NRHP-listed Naval Hospital Cemetery Site (#A04701.014899). Located on Williamsburg Street West, between Kent and Flushing Avenues, the proposed park will have a walkway, landscaped areas, and other features. The establishment of a park within the Naval Hospital Cemetery Site could have an adverse effect on the resource. The cemetery site is subject to the Naval Hospital Cemetery Covenant that was incorporated into the PA as Attachment 3. Stipulation 1 of the Covenant states that "No disturbance of the ground surface shall be undertaken or permitted to be undertaken on the Naval Hospital Cemetery, Brooklyn."

Historic Architectural Resources

Brooklyn Navy Yard Historic District

Under the Future No-Action Condition, contributing and non-contributing resources within the U.S. Naval Hospital campus (Naval Annex) of the Brooklyn Navy Yard Historic District would not be rehabilitated. Therefore, it is expected that the condition of most of the buildings, structures, and objects that form part of the district would continue to decline, primarily as a result of exposure to the elements. Although the resources within the hospital campus would not be removed, ongoing deterioration would diminish aspects that contribute to their historic significance, such as the strong variety of 19th and 20th-century architectural styles in a self-contained campus with a cohesive layout. Along with the Shipyard and Residential areas, the hospital campus is one of the three key areas that define the Brooklyn Navy Yard Historic District. Therefore, its worsening condition may result in an adverse effect on the historic district because the hospital campus would be neglected.

Although the hospital campus would not be rehabilitated under the Future No-Action Condition, development would occur within the Brooklyn Navy Yard Historic District. Specifically, the 315,000 square-foot West Parking Structure (Future No-Action Development Site 20 on **Figure 2.0-4**) would be erected within the Shipyard area of the district, west of non-contributing Navy Yard Building 4, and just outside and west of the 400-foot study area. The structure would be erected on a parking lot, and no contributing buildings would be removed to accommodate construction. It is anticipated that the parking structure would be designed in a context-sensitive manner to the industrial buildings within the Shipyard area of the district, and therefore, have no adverse effect on the historic district.

In addition, Navy Yard Building 1 at 25 Washington Avenue (Future No-Action Development Site 22 on **Figure 2.0-4**) would become occupied with Production Office/Production Support/Academic uses within the 400-foot study area in the Shipyard area of the district, west of the hospital campus. As indicated in **Section 3.6.1**, the building is subject to a standard historic preservation covenant that was incorporated into both the PA and quitclaim deed between the federal government and BNYDC/City of New York. The covenant requires the grantee to covenant to the SHPO to treat resources in accordance with the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*. The building has already been rehabilitated in accordance with the "Secretary of the Interior's Standards for Rehabilitation," qualified for federal historic preservation tax credits, and future work would likely continue to comply with such standards. Occupancy of the building would have no adverse effect on the historic district. For the proposed project, the grantee is BNYDC and the requirements will be incorporated into the lease for the project site between BNYDC and Steiner Studios.

Development would also occur outside the Brooklyn Navy Yard Historic District, west of the hospital campus, and within the 400-foot study area. Specifically, the modern 160,383-square-foot B&H Building (Building 664; Future No-Action Development Site 16 on **Figure 2.0-4**) would be adapted for reuse for lighting department and set construction shops on the first floor, with production, offices and storage on upper floors. It is anticipated that windows would also be added to the building for the offices. In addition, the proposed 175,000-square-foot Kent Stages (Future No-Action Development Site 17 on **Figure 2.0-4**) would be erected in a parking area on the south side of Kent Avenue. Furthermore, the proposed 88,000-square-foot North Parking Structure (Future No-Action Development Site 19 on **Figure 2.0-4**) would be erected on a parking lot that currently functions as the back gate to Steiner Studios, east of the non-contributing Building 293 within the 400-foot study area in the Shipyard area of the district. Because these projects would be developed in a context-sensitive manner and are located outside the Brooklyn Navy Yard Historic District in an area characterized by large modern buildings and parking lots, they would have no effect on the historic district.

Wallabout Industrial Historic District

Under the Future No-Action Condition, two projects would occur in the Brooklyn Navy Yard Historic District on the north side of Flushing Avenue, within view of the Wallabout Industrial Historic District to the north. These include the West Parking Structure (Future No-Action Development Site 20 on **Figure 2.0-4**)

and occupancy of 25 Washington Avenue (Building 1) to accommodate Production Office/Production Support/Academic uses (Future No-Action Development Site 22 on **Figure 2.0-4**).

The significance of the industrial historic district is linked to its cohesive collection of late 19th- and early 20th-century American industrial architecture, moving from buildings of mill construction to buildings of reinforced concrete. Proposed construction of the West Parking Structure and occupancy of 25 Washington Avenue are consistent with the setting of the industrial historic district which is primarily characterized by large industrial buildings. Therefore, it is not anticipated that these projects would impact the integrity of location, design, setting, materials, feeling, workmanship or association of the Wallabout Industrial Historic District. The district would remain intact on the south side of Flushing Avenue. Therefore, the Future No-Action Condition would have no effect on the Wallabout Industrial Historic District.

Other Future No-Action projects (Future No-Action Development Sites 16, 17, and 19 on **Figure 2.0-4**) would not occur within view of the Wallabout Industrial Historic District because the district would be screened by intervening Steiner Studio buildings. Therefore, these projects would have no impact upon the district.

3.6.3 Future Action Condition (Future With the Action)

Archaeological Resources

The proposed project involves a discretionary action by the State of New York, and thus is subject to review under Section 14.09 of the New York State Historic Preservation Act of 1980. Under the Act, it is the responsibility of state agencies to avoid or mitigate adverse impacts to properties listed or determined eligible for listing on the State and National Registers of Historic Places. Every agency with regulatory authority over the project is required to fully explore all feasible and prudent alternatives and give due consideration to feasible and prudent plans which avoid or mitigate adverse impacts to such property.

In the Future Action Condition, the Naval Hospital Building would be rehabilitated as part of the Media Campus (Project-Generated Development Sites 1-15 on **Figure 2.0-4**) located within the Naval Annex, the proposed Kent Avenue Parking Structure (Project-Generated Development Site 21 on **Figure 2.0-4**) would be constructed within the Northern Triangle, and the Proposed Backlot (Project-Generated Development Site 18 on **Figure 2.0-4**) would be constructed at the northern boundary of the BNY, west of Kent Avenue.

As noted in **Section 3.6.2**, there are no previously identified or potential archaeological resources in the Northern Triangle or in the proposed Backlot location. There would be no effect on archaeological resources for these areas. There are previously identified and potential archaeological resources in the Naval Annex that would be directly affected by the rehabilitation of the Naval Hospital building.

The S/NRHP-eligible Naval Hospital Archaeological Site (#A04701.014975) would be directly affected by the below-ground installation of the upgrades to the utility infrastructure required as part of the Naval Hospital Building rehabilitation. The replacement/installation of utility infrastructure has the potential to affect all facades of the Naval Hospital and its wings. The proposed project could have an adverse effect on the Naval Hospital Archaeological Site because the planned ground disturbance associated with necessary utility infrastructure improvements could directly impact known and potential archaeological features that comprise the site.

As mentioned above, in 2000, the Navy, SHPO, and Advisory Council on Historic Preservation (ACHP) entered into a Programmatic Agreement (PA) which set forth methods to mitigate the potential adverse effect of disposal of NAVSTA Brooklyn out of federal ownership. The PA included a *Standard Archeological Covenant* as Attachment 2, which relates directly to the Naval Hospital Archaeological Site (#A04701.014975). (**Appendix B**).

The following is taken from the Programmatic Agreement, Attachment 2 Standard Archaeological Covenant:

"In consideration of the conveyance of real property that includes the Naval Hospital Archaeological Site (State Site # A04701.014975) located in New York City, State of New York, which is more fully described as: part of former Naval Station Brooklyn, NY, the Grantee hereby covenants on behalf of himself/herself/itself/its heirs, successors and assigns at all times to the New York State Historic Preservation Officer (SHPO) to maintain and preserve the Naval Hospital Archaeological Site as follows:

1. No disturbance of the ground surface shall be undertaken or permitted to be undertaken on the Naval Hospital Archaeological Site which would affect the physical integrity of the Naval Hospital Archaeological Site without the express prior written permission of the SHPO, signed by a fully authorized representative thereof. Should the SHPO require, as a condition of the granting of such permission, that the Grantee conduct archeological data recovery operations or other activities designed to mitigate the adverse effect of the proposed activity on the Naval Hospital Archaeological Site, the Grantee shall at his/her/its own expense conduct such activities in accordance with the Secretary of the Interior's *Standards and Guidelines for Archeological Documentation* (48 FR 447344-37)."

SHPO has advised through the consultation process that additional archaeological survey work will be required on the Naval Hospital Archaeological Site prior to the initiation of project actions. It is anticipated that a Phase II archaeological survey would be conducted in areas of proposed ground disturbance that lie within the Naval Hospital Archaeological Site, once such areas of disturbance have been specifically defined. The purpose of a Phase II survey is to provide a detailed evaluation of an identified cultural resource(s) that cannot be avoided by reasonable modification to the proposed project. Depending upon the results of the Phase II survey, Phase III data recovery excavations may also be required, where artifacts or other data are retrieved from the site. The LPC is conducting a coordinated review with SHPO for this undertaking and concurred with SHPO's archaeological findings in its comment letter dated January 21, 2015 (**Appendix B**).

Historic Architectural Resources

Brooklyn Navy Yard Historic District

In the Future With-Action Condition, the U.S. Naval Hospital campus in the Brooklyn Navy Yard Historic District (Naval Annex) would be redeveloped as part of the proposed Media Campus. The proposed Backlot and proposed Kent Avenue Parking Structure would also be constructed within the 400-foot study area, but outside the district, (See **Figure 2.0-4**).

The proposed Backlot would be located north of the Naval Annex, and north and east of the Shipyard area of the district. The Naval Annex would be screened from the proposed Backlot by retaining walls and vegetation. Similarly, modern development within the Steiner Studios campus would screen the Shipyard area of the district from the proposed lot. The proposed lot would be comprised of fabrications of typical New York streets, brownstone neighborhoods, and office buildings, and would fit into the existing context of the surrounding Williamsburg neighborhood, which is currently characterized by a mix of low-rise and high-rise residences, and commercial and industrial development. The proposed Backlot would not impact the historic location, design, setting, materials, workmanship, feeling, and association of the Brooklyn Navy Yard Historic District, and therefore, have no effect on the historic district. However, it is anticipated that the proposed Media Campus and Kent Avenue Parking Structure would affect the Naval Annex within the Brooklyn Navy Yard Historic District. The impacts analysis is provided below.

Redevelopment of the Naval Annex to accommodate the proposed Media Campus would include the following:

- Rehabilitation of select contributing resources.

- Retention of select contributing resources.
- New construction.
- Removal of select contributing and non-contributing resources.

Table 3.6-3 summarizes the status of 26 contributing and seven non-contributing resources within the Naval Annex under the proposed Media Campus plan. The table is keyed to **Figure 2.0-4**, which shows the project-generated development sites.

As indicated in **Section 3.6.1**, the resources within the Naval Annex are subject to a standard historic preservation covenant that was incorporated into both the PA and quitclaim deed between the federal government and BNYDC/City of New York. Steiner Studios, as a lessee at BNY, is subject to the covenant, as the requirements of the covenant will be imposed on Steiner through the lease from BNYDC. It requires the grantee to covenant to the SHPO to treat resources in accordance with the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings*. Specifically, the covenant indicates that "[n]o construction, alteration, rehabilitation, remodeling, demolition, disturbance of the ground surface, or other action shall be undertaken or permitted to be undertaken within "Historic Site" that would materially affect the integrity or the appearance of the attributes described above without prior approval by the SHPO and a record of such" (Department of the Navy, May 29, 2001). The 15 contributing resources listed in **Table 3.6-3** would therefore be rehabilitated in accordance with to the Secretary of the Interior's Standards for Rehabilitation as required by the PA and quitclaim deed.

In addition, the proposed project involves a discretionary action by the State of New York, and thus is subject to review under Section 14.09 of the New York State Historic Preservation Act of 1980. Under the Act, it is the responsibility of state agencies to avoid or mitigate adverse impacts to properties listed or determined eligible for listing on the State and National Registers of Historic Places. Every agency with regulatory authority over the project is required to fully explore all feasible and prudent alternatives and give due consideration to feasible and prudent plans which avoid or mitigate adverse impacts to such property.

Table 3.6-3 Brooklyn Navy Yard Historic District Status of Contributing and Non-Contributing Resources Within Naval Annex Under Proposed Media Campus Plan

Resource Number	Resource Name	Year Built	Historic District Classification	Future Action Condition	Project Generated Development Site (Keyed to Figure 2.0-4)
Proposed for Rehabilitation					
R1	Surgeon's House	1863	Contributing	To be rehabilitated into Production Office, Advanced Digital Media Lab, Academic Use	8
R4	Quarters No. 4; also referred to as Lab Director's House	1864; 1900; 1917; 1947	Contributing	To be rehabilitated into Production Office	4
R5	Infectious Disease Quarters; also referred to as Bungalow	1915	Contributing	To be rehabilitated into Writer's Cottage	6
R6	Infectious Disease Quarters; also referred to as Bungalow	1915	Contributing	To be rehabilitated into Writer's Cottage	6
R7	Infectious Disease Quarters; also referred to as Bungalow	1915	Contributing	To be rehabilitated into Writer's Cottage	6
R8	Bachelor Officers' Quarters	1926	Contributing	To be rehabilitated into Production Office	15
R9	Bachelor Officers' Quarters	1926	Contributing	To be rehabilitated into Production Office	15
R95	U.S. Naval Hospital	1830-1838	Contributing	To be rehabilitated into Production Office	7
R103	Carriage House	ca. 1900	Contributing	To be rehabilitated into Production Support	5
R109	Stable	ca. 1872	Contributing	To be rehabilitated into Production Support	5
R103A	Garage	ca. 1947	Contributing	To be rehabilitated into Production Support	5
R104	Guard House and Gate Keeper Lodge	1850	Contributing	To be rehabilitated	N/A

Table 3.6-3 Brooklyn Navy Yard Historic District Status of Contributing and Non-Contributing Resources Within Naval Annex Under Proposed Media Campus Plan (cont'd)

Resource Number	Resource Name	Year Built	Historic District Classification	Future Action Condition	Project Generated Development Site (Keyed to Figure 2.0-4)
R426	Lumber Shed; also referred to as Morgue	1909	Contributing	To be rehabilitated into Production Office, Advanced Digital Media Lab, Academic Use	2
RD	Medical Supply Depot; also referred to as Lab Building	1910	Contributing	To be rehabilitated into Production Office, Advanced Digital Media Lab, Academic Use	1
RG	Nurses' Quarters; also referred to as Unmarried Officers' Club	1919; addition ca. 1980	Contributing	To be rehabilitated into Post-Production	3
Resources To Be Retained					
R463	Flagstaff	ca. 1921	Contributing	To be retained	South of 8
No number	Naval Hospital Cemetery	1831-1910	Contributing	To be retained	(N/A)
999	Barrier Forts Monument	1858; relocated to hospital campus in 1979	Contributing	To be retained	Near Grand Staircase area
No number	Sun Dial	ca. 1945	Contributing	To be retained	Near Grand Staircase area
No number	Bird Bath	ca. 1945	Contributing	To be retained	Near Grand Staircase area
No number	Structure - Stone Wall and Gates, Flushing Avenue	ca. 1850	Contributing	To be retained	N/A
No number	Structure - Chain-Link Gate and Fence, Williamsburg Street and Williamsburg Place	No date	Non-contributing	To be retained	N/A
Proposed for Removal					
R2	Quarters No. 2	1905	Contributing	To be removed	North of 9
R3	Quarters No. 3	1905	Contributing	To be removed	North of 9

Table 3.6-3 Brooklyn Navy Yard Historic District Status of Contributing and Non-Contributing Resources Within Naval Annex Under Proposed Media Campus Plan (cont'd)

Resource Number	Resource Name	Year Built	Historic District Classification	Future Action Condition	Project Generated Development Site (Keyed to Figure 2.0-4)
311	Motion Picture Exchange	1942	Contributing	To be removed and replaced with Production Office, Advanced Digital Media Lab, Academic Use	10
R448	Greenhouse remnants	ca. 1928	Contributing	To be removed	North of 8
R464 and R474	Tennis Courts	ca. 1920	Contributing	To be removed	East of 6 and west of Campus Pedestrian Passage
671	Pool	1978	Non-contributing	To be removed and replaced with Production Office	12
672	Pool Bathouse	1978	Non-contributing	To be removed and replaced with Production Office	12
X31	Pool Shed	1978	Non-contributing	To be removed	12
X32	Steam Reducing Station	ca. 1980	Non-contributing	To be removed	East of 7
X33	Gazebo	ca. 1980	Non-contributing	To be removed	East of 7
X34	Chicken Coop	No date	Non-contributing	To be removed	N/A
No number	Structure – Brick Wall West, North, and East side of Hospital Grounds	ca. 1850	Contributing	To be shored up and altered	Grand Stair Plaza; Campus Pedestrian Passage; and Kent Avenue Vehicular Access

As noted previously, the Surgeon's House (Building R1) and U.S. Naval Hospital (Building R95) are LPC-designated Landmarks. The rehabilitation of these buildings will require permits from the LPC Preservation department, and will be undertaken in consultation with SHPO and in accordance with the Secretary of the Interior's Standards for Rehabilitation. Regarding the treatment of other architectural resources, LPC in its comment letter dated January 21, 2015, stated that it defers to the SHPO (**Appendix B**).

In addition to proposed rehabilitation of 15 contributing resources, new construction would also occur within the Naval Annex. As indicated in **Table 3.6-3** and **Figure 2.0-4**, six buildings would be erected to accommodate one underwater stage (Project-Generated Development Site 9 on **Figure 2.0-4**); one post-production office (Project-Generated Development Site 14 on **Figure 2.0-4**); four production offices (Project-Generated Development Sites 12, 13 and 15 on **Figure 2.0-4**); and two production offices/advanced digital media labs/academic uses (Project-Generated Development Sites 10 and 11 **Figure 2.0-4**.) Although it is anticipated that new construction would be undertaken in a context sensitive manner, five contributing and six non-contributing resources would be removed from the Naval Annex as indicated in **Table 3.6-3**. In addition, the contributing brick wall on the west, north, and east sides of the campus would be shored up. A portion of the wall along the west would be opened to accommodate the proposed Grand Stair Plaza and Campus Pedestrian Passage. Similarly, a portion of the wall along the north would be opened to accommodate the proposed Campus Pedestrian Passage from the proposed Kent Avenue Parking Structure (Project-Generated Development Site 21 on **Figure 2.0-4**).

Although the 15 contributing resources within the Naval Annex would be rehabilitated, and new construction would be designed in a context-sensitive manner in consultation with the SHPO as per the historic preservation covenant in the PA and deed, removal of five contributing resources, and opening of the contributing wall on the north and west would result in physical alteration to the Brooklyn Navy Yard Historic District. The significance of the Naval Annex within the district is tied, in part, to its variety of historic buildings in a self-contained, historic setting. The proposed changes would directly modify the integrity of the historic district, including its design, setting, feeling, and association. Therefore, implementation of the proposed action would result in a significant adverse impact on the Brooklyn Navy Yard Historic District. An Alternatives Analysis was prepared for the proposed project and is provided in **Appendix B**. The Alternative Analysis was reviewed by SHPO and the agency provided their concurrence that there are no prudent or feasible alternative to demolition of these few resources.

Wallabout Industrial Historic District

The Wallabout Industrial Historic District is located on the south side of Flushing Avenue, south of the Brooklyn Navy Yard Historic District. The significance of the industrial historic district is linked to its cohesive collection of late 19th- and early 20th-century American industrial architecture, moving from buildings of mill construction to buildings of reinforced concrete.

The Naval Annex, site of the proposed Media Campus (Project-Generated Development Sites 1-15 on **Figure 2.0-4**) is screened from the industrial historic district by a stone wall and dense vegetation on the north side of Flushing Avenue. The stone wall would be retained, therefore, the Naval Annex would remain screened from the industrial historic district, and maintain its identity as a campus with low-scale buildings, set back from the street. The industrial historic district is also far-removed from the proposed Backlot (Project-Generated Development Site 18 on **Figure 2.0-4**) and proposed Kent Avenue Parking Structure (Project-Generated Development Site 21 on **Figure 2.0-4**).

It is not anticipated that the proposed Media Campus, Backlot, or Kent Avenue Parking Structure would impact the integrity of location, design, setting, materials, feeling, workmanship or association of the Wallabout Industrial Historic District. The district would remain intact on the south side of Flushing Avenue. Therefore, the proposed project would have no effect on the Wallabout Industrial Historic District.

Mitigation

Archaeological Resources

The proposed project could have an adverse effect on the S/NRHP-eligible Naval Hospital Archaeological Site (#A04701.014975) because the planned ground disturbance associated with necessary utility infrastructure improvements could directly impact known and potential archaeological features that comprise the site. In compliance with Section 14.09 and the archeological covenant included in the PA, consultation with the SHPO is in process to develop appropriate measures to mitigate the adverse effect.

The archaeological covenant includes seven stipulations, the first of which is most relevant to the status of the Naval Hospital Archaeological Site in the current study area. The first stipulation states that no disturbance of the ground surface shall be undertaken or permitted to be undertaken, which would affect the physical integrity of [the site] without the express prior written permission of the SHPO, signed by a fully authorized representative thereof. Should the SHPO require, as a condition of the granting of such permission, that the Grantee conduct archeological data recovery operations or other activities designed to mitigate the adverse effect of the proposed activity on the [site], the Grantee shall at his/her/its expense conduct such activities in accordance with the Secretary of the Interior's *Standards and Guidelines for Archeological Documentation* (48 FR 447344-37). The PA and the Archeological Covenant are found in **Appendix B**.

ESD, BNYDC and Steiner Studios are engaged in consultation with SHPO concerning the Steiner Studios expansion plans. In a letter to the BNYDC dated June 16, 2014 (see **Appendix B**), the SHPO has recommended that any areas of planned ground disturbance within or within 50 feet of any designated sensitive area should be subjected to archaeological examination. **Figure 3.6-6** depicts the Naval Hospital Archaeological Site (which includes areas of known and potential archaeological resources) that was taken from the SHPO site form with the addition of a fifty foot zone of sensitivity extending from these resources as per SHPO recommendations.

It is anticipated that the project sponsor would consult with SHPO to prepare a Letter of Resolution (LOR) that would detail the archaeological activities to be undertaken to mitigate the adverse effect to the Naval Hospital Archaeological Site prior to project implementation. It is anticipated that Phase II archaeological survey would be conducted in areas of proposed ground disturbance that lie within the Naval Hospital Archaeological Site. Depending upon the results of the Phase II survey, Phase III data recovery excavations may be required to mitigate the adverse effect. The LPC is conducting a coordinated review with SHPO for this undertaking and concurred with SHPO's archaeological findings in its comment letter dated January 21, 2015 (**Appendix B**).

Historic Architectural Resources

The proposed project would have a significant adverse impact on the Brooklyn Navy Yard Historic District because contributing resources would be removed and altered within the Naval Annex portion of the district. In accordance with Section 14.09 of the New York State Historic Preservation Act of 1980, and the historic preservation covenant in the PA and deed, the project sponsor will consult with the SHPO to arrive at mutually agreeable and appropriate measures that the project sponsor would implement to mitigate the adverse effect. It is anticipated that the project sponsor would consult to prepare a LOR that would describe the actions to be undertaken prior to project implementation. LOR signatories are expected to include the SHPO, the project sponsor, BNYDC, ESD, and possibly LPC if it is determined that LPC must be a signatory due to the proposed alterations to LPC-designated U.S. Naval Hospital (Building R95) and the Surgeon's House (Building R1). Potential mitigation measures which would be incorporated in the LOR are described below.

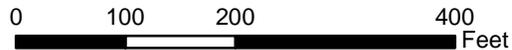


Legend

- Project Site Boundary
- Building Footprint
- Naval Hospital Archaeological Site (Site No. 04701.014975)
- Naval Hospital Cemetery (Site No. 04701.014899)



**Steiner Studios Media Campus EIS
Brooklyn Navy Yard**



**Previously Identified Archaeological
Sites Within Study Area**

Figure 3.6-6

Documentation

As indicated in the historic preservation covenant in the quitclaim deed, to mitigate adverse effect, the project sponsor shall, at a minimum, undertake recordation of the Naval Annex in accordance with federal standards (i.e., Historic American Buildings (HABS)), and any applicable state recordation standards, or other standards to which the parties may mutually agree. The scope and content of the recordation would be defined in coordination with the SHPO. HABS documentation typically includes a physical description of the overall historic district, including setting; brief physical descriptions of the interior and exterior of buildings and structures, including significant alterations; historic context illustrated by historic photographs and/or maps; and large-format, archival, black-and-white photographs of the Naval Annex. It is expected that the SHPO would also assist the project sponsor in identifying adequate repositories for copies of the documentation.

Construction Protection Plan

The proposed project anticipates removal of five contributing resources and six non-contributing resources from the Naval Annex. Portions of the wall on the north and west sides of the campus would also be altered. Because 15 contributing resources would be rehabilitated, a construction protection plan would be developed to protect them, the Flagstaff, and the cemetery during the demolition process. Following the guidelines of the *CEQR Technical Manual*, the plan would be developed in coordination with the SHPO and professional engineers that are anticipated to work with the project sponsor. Elements of the plan for preserving the historic integrity of the resources may include the following:

- Existing foundation and structural condition information for the buildings to be reused.
- Protection from falling objects.
- Monitoring during construction using tell-tales, and horizontal and lateral movement scales.

Several reference documents also provide useful information on the development of construction protection plans, including “Technical Policy and Procedures Notice No. 10/88, Procedures for the Avoidance of Damage to Historic Structures Resulting from Adjacent Construction” prepared by New York City Department of Buildings (NYCDOB), and “Protecting a Historic Structure During Adjacent Construction” prepared by NPS. The project sponsor would also prepare a means and methods plan for how the demolition and construction would proceed on site to ensure that elements to remain (e.g., buildings, structures, trees, landscaping paths) are protected during construction.

Context-Sensitive Design

New construction would be undertaken in a context-sensitive manner. The covenant in the PA and deed require ongoing consultation with the SHPO regarding new construction, and therefore, consultation among the project sponsor, BNYDC, ESD, and the SHPO would be ongoing until the designs are complete.

Conclusion

In conclusion, it is anticipated that the Future No-Action Condition would have a negative effect on the S/NRHP-listed Brooklyn Navy Yard Historic District because the resources within the Naval Annex would continue to be exposed to the elements which may ultimately result in their further deterioration. Deterioration of the resources may have the potential to diminish the qualities of the district which contribute to its significance, such as the strong variety of 19th and 20th-century architectural styles in a self-contained campus with a cohesive layout.

In contrast, while the proposed action would lead to a significant adverse impact on the S/NRHP-listed Brooklyn Navy Yard Historic District due to the demolition of some contributing resources, it would allow for the rehabilitation of 15 contributing resources, including the following:

- Surgeon’s House (Building R1)

- Quarters No. 4/Lab Director's House (Building R4)
- Infectious Disease Quarters/Bungalow (Building R5)
- Infectious Disease Quarters/Bungalow (Building R6)
- Infectious Disease Quarters/Bungalow (Building R7)
- Bachelor Officers' Quarters (Building R8)
- Bachelor Officers' Quarters (Building R9)
- U.S. Naval Hospital (Building R95)
- Carriage House (Building R103)
- Stable (Building R109)
- Garage (Building R103A)
- Guard House and Gate Keeper Lodge (Building R104)
- Lumber Shed/Morgue (Building R426)
- Medical Supply Depot/Lab (Building RD)
- Nurses' Quarters/Unmarried Officers' Club (Building RG)

However, as the proposed action would lead to a significant adverse impact on the historic district because of the removal of five contributing resources, mitigation measures, as described above and in **Chapter 3.21**, "Mitigation," would be implemented via a LOR among the project sponsor, BNYDC, and possibly LPC, in coordination with the SHPO.

The proposed project could have an adverse effect on the S/NRHP-eligible Naval Hospital Archaeological Site (#A04701.014975) because the planned ground disturbance associated with necessary utility infrastructure improvements and new construction could directly impact known and potential archaeological features that comprise the site. It is anticipated that the project sponsor would consult with SHPO to prepare a LOR that would detail the archaeological activities to be undertaken to mitigate the adverse effect to the Naval Hospital Archaeological Site prior to project implementation

References

Bolton, Reginald Pelham. 1934. *Indian Life of Long Ago in the City of New York*. Museum of the American Indian, Heye Foundation. New York.

Church, David and Edward Rutsch. 1982. *Stage I Cultural Resources Survey for the Proposed Resource Recovery Facility Site, Brooklyn Navy Yard, New York City*. Prepared for Camp, Dresser & McKee. Prepared by Historic Conservation & Interpretation, Inc.

Cumming, Beth. 2007. Letter to Richard H. Drucker of BNYDC confirming that the SHPO had no further archaeological concerns in the Northern Triangle. February 13, 2007.

Department of the Navy, May 29, 2001. Quitclaim Deed between U.S. Navy and Brooklyn Navy Yard Development Corporation. Borough of Brooklyn, Block 2023, Lot 150. New York City Department of Finance, Office of the City Register No. 2003081300801001001EF1FB.

Dolkart, Andrew January 1, 2012. *National Register Nomination Form*: "Wallabout Industrial Historic District, Brooklyn, New York."

Furman, Gabriel. 1865. *Notes, Geographical and Historical, Relating to the Town of Brooklyn, on Long Island*. E.B. Spooner & Son. Reprinted for the Faust Club.

Greenhouse Consultants, Inc. 1990. *Phase IA Historical and Archaeological Sensitivity Evaluation of the Block 169, Lot 36, Borough of Brooklyn, New York, New York*. CEQR #89-297K. Prepared for NYC Department of General Services by William I. Roberts, IV and Linda Stone.

Higgins Quasebarth & Partners, April 2012. *Draft National Register Nomination, New York Navy Yard, Brooklyn, New York*.

Higgins Quasebarth & Partners, February 2014. *Draft National Register Nomination Form, New York Navy Yard, Brooklyn, New York.*

Mayor's Office of Environmental Coordination. March 2014. *CEQR Technical Manual.*

National Park Service. March 2014. "Historic Preservation Certification Application Instructions." Form 10-168 Instructions.

Park, Sharon C., AIA, 1993. *Preservation Brief 31: "Mothballing Historic Buildings."* Washington, DC: National Park Service. Available online at <http://www.nps.gov/tps/how-to-preserve/briefs/31-mothballing.htm>

Perazio, Philip. 2014. Letter to Shani Leibowitz of BNYDC concerning additional archaeological work to be conducted in the Naval Annex relating to the Steiner Studios Master Plan implementation. June 16, 2014.

Postal, Matthew A., Editor. 2009. *Guide to New York City Landmarks, Fourth Edition.* New York, New York: John Wiley & Sons, Inc.

Solecki, Ralph. 1977. *Contract 1A Red Hook Water Pollution Control Project, Brooklyn, New York. Stage I Archaeological Survey: Fulton Street (Cadman Plaza West) Furman Street to East of Front Street, Atlantic Avenue, Furman Street and Joralemon Street West of Columbia Street, Main and Plymouth Street, Howard to Pearl Street.* Report prepared for Mason & Hanger-Silas Mason Co., Inc. with the Department of Water Resources, City of New York.

Stehling, Nancy. 2006. Letter to Beth Cumming at SHPO seeking concurrence that the Northern Triangle does not possess archaeological sensitivity and does not warrant a Phase I archaeological survey. December 20, 2006.

U.S. Navy. 1990. *Environmental Assessment for Base Closure and Realignment of Naval Station New York at Brooklyn.* Prepared for the Northern Division. Prepared by Ecology and Environment.

U.S. Navy, 1994. *Cultural Resources Survey for Base Closure and Realignment, Redevelopment and Reuse of Excess Property at Naval Station New York, Brooklyn, New York.* Prepared by Baystate Environmental Consultants, Inc. for Northern Division, Naval Facilities Engineering Command, Lester, Pennsylvania.

U.S. Navy. 1997a. *Archaeological Evaluation (Stage 1A Documentary Study), Former Naval Station (NAVSTA) New York, Navy Yard Annex Site, Brooklyn, New York.* Prepared for the Northern Division. Prepared by Joan H. Geismar, Ph.D, under contract to TAMS Consultants, Inc.

U.S. Navy. 1997b. *Ground-Penetrating Radar Evaluation, Navy-Retained Section (Former) Brooklyn Navy Yard, Brooklyn, New York.* Prepared for the Northern Division. Prepared by TAMS Consultants, Inc. and Joan H. Geismar, Ph.D.

U.S. Navy. 1999. *Determination of National Register Eligibility of Naval Hospital Archaeological Features, Naval Station Brooklyn, NY.* Prepared for the Northern Division. Prepared by TAMS Consultants, Inc. and Joan H. Geismar, Ph.D.

U.S. Navy. 1999. *State of the Research, Naval Hospital Cemetery, NAVSTA Brooklyn, Historical Documentation.* Prepared for the Northern Division. Prepared by TAMS Consultants, Inc.

U.S. Navy, 2000. *Final Environmental Impact Statement, Disposal and Reuse of Naval Station Brooklyn, Brooklyn, New York.* Prepared by TAMS Consultants, Inc. for Northern Division, Naval Facilities Engineering Command, Lester, Pennsylvania.

3.7 URBAN DESIGN AND VISUAL RESOURCES

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

All development that would occur as a result of the proposed action would be developed "as-of-right," i.e., in conformance with the bulk regulations of the New York City Zoning Resolution, and constructed within the existing zoning envelope. In addition, the proposed project would have a beneficial effect on existing visual resources as it would lead to key infrastructure improvements needed at the historic Naval Annex that would facilitate the redevelopment of the project site. Many of the buildings in the Naval Annex are in a state of disrepair and require extensive renovations to be re-occupied. The project would provide for the adaptive reuse of the historic resources on the Naval Annex site, allowing the historic buildings in the Naval Annex to be renovated and re-occupied with new uses. Thus, no significant adverse impacts to urban design and visual resources are expected as a result of the proposed action.

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3.8 NATURAL RESOURCES

Introduction

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 disturbance of that resource caused by the project. An assessment of natural resources is not necessary if:

- The project site and the immediate adjacent area are substantially devoid of natural resources;
- The project site contains no “built resource” that is known to contain or may be used as a habitat by a protected species;
- The project site contains no subsurface conditions where the disruption project might affect the function or value of an adjacent or nearby natural resource; and/ or if
- The disturbance of a natural resource has been deemed insignificant by a government agency with jurisdiction over that resource and conditions have not changed significantly since an applicable permit was issued.

The Naval Annex project site is a disturbed urban setting located in an industrially developed portion of Brooklyn. While the Brooklyn Navy Yard was decommissioned in the 1960s, the Naval Annex portion of the Navy Yard was retained by the Navy and functioned as the administrative headquarters of Naval Station Brooklyn until the 1990s. In more recent years, the Naval Annex has been used as a storage/laydown area for the industrial tenants of the Navy Yard, including the Capsys modular construction company. The EIS for the disposal of the Naval Station Brooklyn that was completed in 2000 characterizes the Naval Annex as “...an urban environment” and notes that “much of the site has been filled and paved for industrial uses. As a result of this intensive level of development, there is insufficient natural habitat to support most wildlife species. Open space remaining at NAVSTA Brooklyn is characterized by ornamental trees adjacent to roadways, maintained grass lawns, and ball fields.” The EIS from 2000 also states “There are no records indicating the presence of any federal- or state-listed endangered or threatened species at the NAVSTA Brooklyn site.” In order to assess the continued validity of the 2000 EIS conclusions an ecological investigation within the Naval Annex was performed and results are summarized in this chapter.

3.8.1 Ecological Investigation at Naval Annex

As part of the former Naval Hospital Annex (Naval Annex) complex, the project site was subject to a high amount of anthropogenic activity (e.g., maintaining lawns, presence of naval personnel, etc.) until the 1990s. Limited ecological resources were present on the Naval Annex due to ongoing landscaping and other anthropogenic activities when the site was an active military installation (Navy, 2000). Since the closure of the Naval Annex, anthropogenic activity at the project site has reduced substantially and parts of the Naval Annex have become overgrown. In order to account for the potential introduction or natural creation of ecological resources (e.g., wetlands, endangered species, etc.) an ecological investigation was performed in October 2014. The investigation consisted of the review of available regulatory agency data and an ecological site investigation (ESI) to characterize vegetation and habitats within the project site. The investigation focused on the Naval Annex, as the other portions of the project site (i.e., the Backlot and the area of the Kent Avenue parking Structure) are completely developed with no ecological resources.

Terrestrial Resources

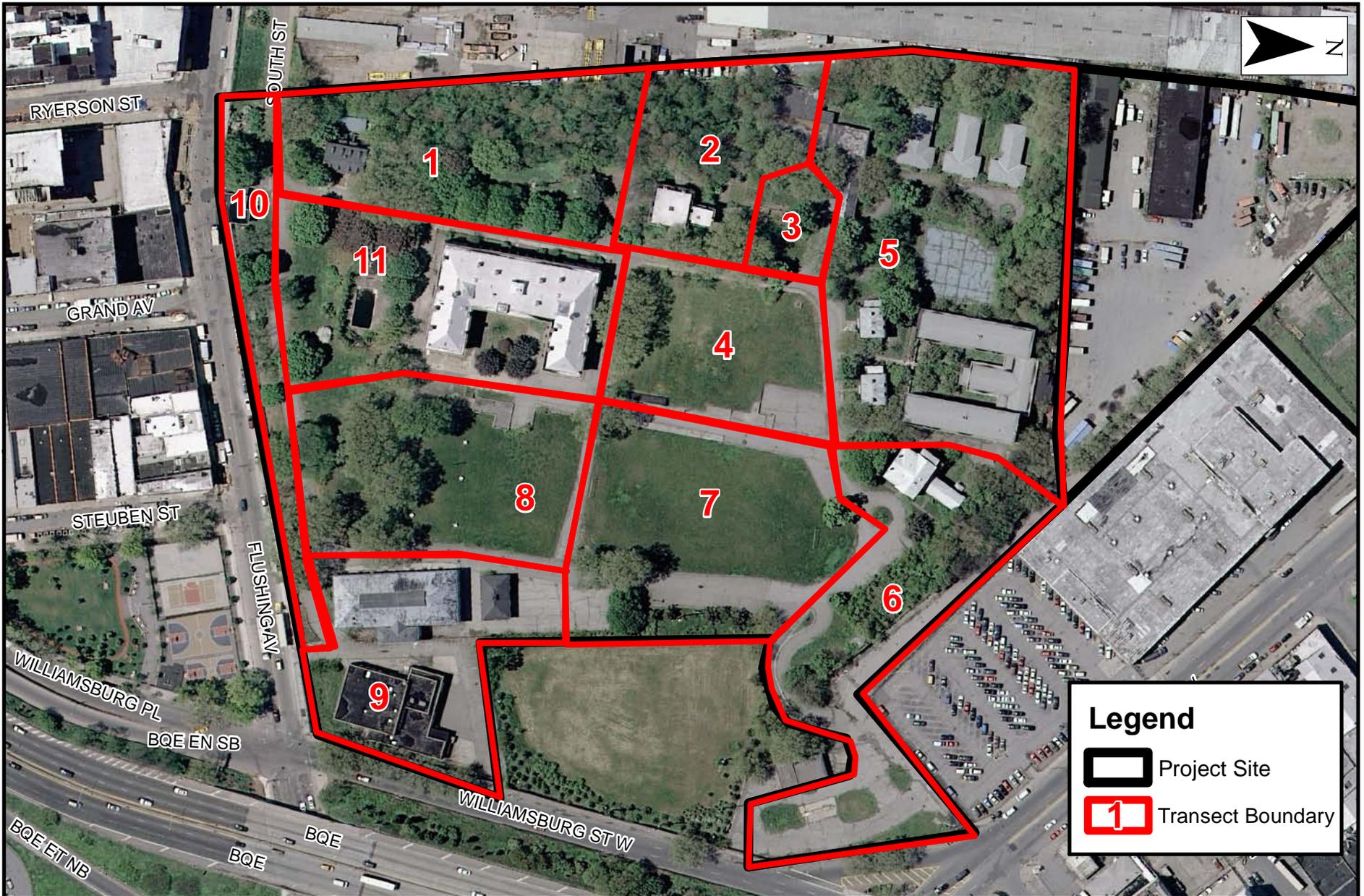
Flora and Habitats

AECOM scientists performed an ESI on October 26, 2014. The ESI field team consisted of two ecologists: an International Study of Arboriculture (ISA) Certified Arborist and a Certified Professional Wetland Scientist. During the ESI, the field team walked a series of transects (see **Figure 3.8-1**)

Table 3.8-1 - Observed Species on Project Site (October 2014)

Scientific Name	Common Name	Native/ Introduced*
Trees		
<i>Abies sp.</i>	Fir	na
<i>Acer platanoides</i>	Norway Maple	I
<i>Acer rubrum</i>	Red Maple	N
<i>Acer saccharinum</i>	Silver Maple	N
<i>Ailanthus altissima</i>	Tree-of-Heaven	I
<i>Carya sp.</i>	Hickory	na
<i>Catalpa speciosa</i>	Northern Catalpa	I
<i>Cladrastis kentukea</i>	Yellowwood	I
<i>Cornus florida</i>	Dogwood	N
<i>Malus sp.</i>	Crabapple	na
<i>Fagus sylvatica</i>	European Beech	I
<i>Fraxinus sp.</i>	Ash	na
<i>Gleditsia triacanthos</i>	Honey Locust	I
<i>Juniperus virginiana</i>	Red Cedar	N
<i>Koelreuteria paniculata</i>	Golden rain-tree	I
<i>Liquidambar styraciflua</i>	Sweetgum	N
<i>Morus alba</i>	White Mulberry	I
<i>Paulownia tomentosa</i>	Princess Tree	I
<i>Pinus sp.</i>	Pine spp.	na
<i>Platanus x hybrid</i>	London Plane	I
<i>Populus alba</i>	White Poplar	I
<i>Prunus serotina</i>	Cherry sp.	N
<i>Quercus palustris</i>	Pin Oak	N
<i>Quercus rubra</i>	Red Oak	N
<i>Robinia pseudoacacia</i>	Black Locust	I
<i>Tilia americana</i>	American Linden	N
<i>Ulmus americana</i>	American Elm	N
Shrubs		
<i>Elaeagnus sp.</i>	Olive	I
<i>Ligustrum sp.</i>	Privet	I
<i>Philadelphus coronarius</i>	Mock-Orange	I
<i>Populus alba</i>	White Poplar	I
<i>Rhodotypos scandens</i>	Jetbead	I
<i>Rosa multiflora</i>	Multiflora Rose	I
<i>Taxus cuspidata</i>	Japanese Yew	I
<i>Tilia americana</i>	Basswood	N
Vines		
<i>Campsis radicans</i>	Trumpet Vine; Trumpet Creeper	N
<i>Celastrus orbiculatus</i>	Oriental Bittersweet	I
<i>Clematis terniflora</i>	Sweet Autumn Clematis	I
<i>Hedera helix</i>	English Ivy	I
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	N
<i>Toxicodendron radicans</i>	Poison Ivy	N
<i>Vitis riparia</i>	Frost Grape; Riverbank Grape	N

Scientific Name	Common Name	Native/ Introduced*
Forbs		
<i>Ageratina altissima</i>	White Snakeroot	N
<i>Alliaria petiolata</i>	Garlic Mustard	I
<i>Artemisia vulgaris</i>	Common Mugwort	I
<i>Asclepias syriaca</i>	Common Milkweed	N
<i>Dactylis glomerata</i>	Orchard Grass	I
<i>Daucus carota</i>	Queen Anne's-Lace	I
<i>Duchesnea indica</i>	Indian Strawberry	I
<i>Elymus canadensis</i>	Canada Wild Rye	N
<i>Epipactis helleborine</i>	Bastard Hellebore	I
<i>Hieracium sabaudum</i>	Hawkweed; Savoy Hawkweed	I
<i>Juncus tenuis</i>	Path Rush	N
<i>Oclemena acuminata</i>	Wood Aster; Whorled Aster	N
<i>Oenothera biennis</i>	Evening-Primrose	N
<i>Onoclea sensibilis</i>	Sensitive Fern	N
<i>Phytolacca americana</i>	Pokeweed	N
<i>Plantago lanceolata</i>	English Plantain	I
<i>Poaceae</i> sp. 1	Unidentified Grass	na
<i>Poaceae</i> sp. 2	Unidentified Grass	na
<i>Polygonum caespitosum</i>	Cespitose Knotweed	I
<i>Setaria faberi</i>	Nodding Foxtail	I
<i>Setaria pumila</i>	Yellow Foxtail	I
<i>Solidago canadensis</i>	Canada Goldenrod	N
<i>Symphotrichum cordifolium</i>	Blue wood Aster; Heart-leaved Aster	N
<i>Symphotrichum dumosum</i>	Bushy Aster	N
<i>Taraxacum officinale</i>	Common Dandelion	I
<i>Trifolium pratense</i>	Red Clover	I
<i>Viola</i> sp.	Violet	N
Notes: * I = introduced, N = native, na = not applicable		



Steiner Studios Media Campus EIS
Brooklyn Navy Yard



Natural Resource Study Area

Figure 3.8-1

throughout the project site and characterized all visible on-site habitats. While traversing the site, scientists identified all observed vegetation to the lowest practicable taxa.

AECOM scientists identified 71 plant species growing within the project site. A complete inventory of vascular plant species identified on the site is provided in **Table 3.8-1**. Over half of the species present, 35, are non-native (i.e., have been introduced and/or ornamental cultivated taxa). The remaining 34 plants species are either native to North America or were not identifiable at the time of survey. Many of the species are common to the New York City urban environment.

The Naval Annex has characteristics of having been a previously landscaped area that has received minimal maintenance since the closure of the Naval Annex in the 1990s. The northern and eastern portions of the site can be characterized as being more overgrown than the southern and central portions (See **Figure 3.8-1**). A description of these areas as follows:

- The eastern and northern areas of the Naval Annex have a largely continuous tree canopy comprising several large trees that were planted several decades ago, and numerous smaller trees that are likely volunteer trees (established without anthropogenic aid). These smaller trees are primarily invasive species, mainly largely black locust, black cherry, and white mulberry. The woody shrub and vine understory layers of this wooded area are dominated by multiflora rose, privet, golden rain-tree, river grape and English ivy. English ivy is the dominant groundcover throughout most of the northern and eastern portions, with patches of dominant common mugwort, and frequent occurrence of white snakeroot, violet species, and heart-leaved aster.
- Areas in the center and south of the Naval Annex are more evidently maintained, with mown grass between the trees. Unmown grass and shrub areas in the center-north area of the Naval Annex have several large trees, and multiple younger multi-stemmed mulberry trees. Several maintained buildings in the center of the area have maintained landscape trees, while neglected buildings on the outskirts of the area have become overgrown with invasive princess trees. Much of the groundcover is dominated by grasses that are unidentifiable; however, nodding foxtail, yellow foxtail, and orchard grass were recognized. Growing among the grasses are common milkweed, common mugwort, bushy aster, and cespitose knotweed, and Virginia creeper.

No federal or state listed endangered or threatened plant species or rare habitats were observed during the 2014 ESI.

Fauna

A natural resources survey was performed in July 2010 as part of the 2010 Admirals Row Plaza EIS (Mayor's Office, 2010) that characterized the habitats of the Admirals Row project site area located at the western end of the BNY. Similar to the Naval Annex, the Admirals Row site is an area of the BNY that has been unused for many years and as a result has become overgrown. As noted in the Admirals Row EIS, observed faunal usage of the Admiral Row site was limited to the following:

- Avifauna (birds) - During the 2010 site visit, several avian species common to an urban/suburban environment were observed: blue jay (*Cyanocitta cristata*), European starling, American goldfinch (*Spinus tristis*), American robin (*Turdus migratorius*), downy woodpeckers (*Picoides pubescens*), northern flickers (*Colaptes auratus*), and a species of flycatcher (*Empidonax* sp.). Also, observed were a northern parula (*Parula americana*) and blackpoll warbler (*Dendroica striata*). The last two species were likely migrants that were observed during a migration period. Parula nest in forested wetlands, and black poll warblers nest in northern boreal forests – neither habitats exist within and/or adjacent to the Admirals Row project site.
- Mammals – Only those species common to an urban environment would occur on site. During the 2010 survey, only a grey squirrel (*Sciurus carolinensis*) was observed.

- Reptiles And Amphibians – No amphibians or reptiles were observed during the 2010 site visit. Although not observed, the common gartersnake (*Thamnophis sirtalis*) is found in both suburban and urban environments and may use the project site.
- Invertebrates - During the 2010 site visit, few species of invertebrates were observed. These included small eastern milkweed bug (*Lygaeus kalmia*) along with dragonfly and mosquito species.

A few avian species common to an urban environment (e.g., pigeons, robins, etc.) were observed on the project site during the 2014 ESI. Due to the disturbed nature of the site and limited habitat resources, only species adapted to an urban environment would utilize the site as nesting habitat. Migrating birds could use the trees on site as a resource for foraging and resting; however, the project site provides relatively limited resources. Large parks nearby, including Fort Greene Park and Prospect Park, provide similar resources to migrating birds.

The habitat quality of the project site is also diminished by an existing feral cat population. During the ESI, an unusually large number of feral cats were observed on site. The cats, possibly descendants of the cats introduced by naval personnel to control rat populations, are now fed by volunteers (FRC, 2014). A substantial artificially maintained cat population would have an adverse impact on the habitat quality, due to predation on small mammals, songbirds, and other small fauna.

Water Resources

Surface Waters and Groundwater

No surface water resources are located on and/or adjacent to the project site. The nearest surface water is the East River, which is located approximately 1,500 feet to the northwest from the undeveloped portions of the project site. Urban development (i.e., the grounds of the BNY) separates the entire project site from the East River. No ephemeral streams or evidence of substantial groundwater discharge (e.g., seeps, etc.) or recharge were observed on the project site.

Wetlands and Vernal pools.

Review of the United States Fish and Wildlife Wetland Mapper indicates the only wetlands mapped within 0.5 miles of the site are estuarine subtidal wetlands associated with the East River (USFWS, 2014). The New York State Department of Environmental Conservation's (NYSDEC's) Environmental Resource Mapper was also reviewed, and identified no state-mapped freshwater wetlands occurring on and/or adjacent to the site. The East River near the project area is classified as a tidal wetland by the state. Tidal wetlands typically have a regulated adjacent area of 150 feet in width; however, due to site elevation and the constructed shoreline separating the project site from the wetland area, regulated adjacent area likely extends no further than the existing bulkheads north of Clymer Street. The undeveloped portions of the project site are over 1,000 feet from the East River. During the site investigation, no evidence of wetlands or vernal pool habitat was observed on site.

Threatened and Endangered Species

Both the USFWS and NYSDEC Natural Heritage Program (NHP) on-line data bases were reviewed for potential species and habitats that occurred within and/or adjacent to the study area.

Federal

A search of the USFWS's Environmental Conservation Online System for federally listed species in Kings County was conducted on November 18, 2014 (USFWS, 2014a). Three listed species were identified:

- Hawksbill sea turtle (*Eretmochelys imbricata*)
- Leatherback sea turtle (*Dermochelys coriacea*)
- Green sea turtle (*Chelonia myda*)

Habitats for sea turtles do not occur on and/or adjacent to the project site.

In addition to the three listed species, two other proposed species were listed:

- Red knot (*Calidris canutus rufa*) - Proposed Threatened; and
- Northern Long-Eared Bat (*Myotis septentrionalis*) - Proposed Endangered.

Neither of these species are anticipated to occur on site as their preferred habitat is not present. The red knot breeds in drier tundra areas and outside of breeding season, it is found primarily in intertidal, marine habitats, especially near coastal inlets, estuaries, and bays (Cornell, 2014). These habitats do not occur within 0.5 miles of the project site.

The range of the northern long-eared bat includes much of the eastern and north central United States, and all Canadian provinces from the Atlantic Ocean west to the southern Yukon Territory and eastern British Columbia (USFWS, 2014b). The northern long-eared bat typically hibernates between mid-fall and mid-spring. Suitable winter habitat (hibernacula) for the species includes underground caves and cave-like structures (e.g. abandoned or active mines, railroad tunnels) (USFWS, 2014c).

During summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities, or in crevices of both live and dead trees. It has also been found, rarely, roosting in structures like barns and sheds (USFWS, 2014b). This species is typically associated with mature interior forest (Carroll et al. 2002, as cited in NYNHP, 2014) and tend to avoid woodlands with significant edge habitat (Yates and Muzika, 2006, as cited in NYNHP, 2014).

It is highly unlikely the northern long-eared bat would occur within and/or adjacent to the project area. No known hibernacula of the northern long-eared bat occur within close proximity to the project site. Suitable summer roosting habitat does not occur within or adjacent to the project area, and there have been no known recent records of the species within New York City.

New York State

A formal request regarding information on the presence of threatened and endangered species and/or rare habitats within a one mile radius of the Brooklyn Navy Yard was submitted to the New York Natural Heritage Program (NYNHP). As per a December 24, 2014 letter received from the NYNHP, the letter stated that "We have no records of rare or state-listed animals or plants, or significant natural communities, at your site or in its immediate vicinity". This response is similar to past correspondence provided by the NYNHP for inquiries related to projects occurring at the Brooklyn Navy Yard.

In order to ascertain any further information on threatened and endangered species, the NYSDEC online Environmental Resource Mapper was investigated. Review of the NYSDEC Environmental Resource Mapper indicated that no rare habitats or threatened and endangered species are known to occur within and/or immediately adjacent to the project site. During the ESI, no federal or state-listed species were observed in the Naval Annex.

Conclusion

The proposed project would not directly impact any regulated habitats (e.g., wetlands, open waters, etc.) and would not have any indirect effects on these habitats. Development at the project site, which would occur over the next decade or so, would only impact a portion of the natural habitat (see **Chapter 2.0**, "Project Description"), which until the late 1990s, was regularly maintained and landscaped.

As discussed in Section 2.5, "Analysis Framework," Steiner Studios, working closely with BNYDC, has developed a conceptual plan for future expansion of the Steiner Studios operations. Steiner Studios envisions the creation of a state-of-the-art, full service Media Campus in the former Naval Annex that is located in the southeast corner of the Brooklyn Navy Yard (BNY), as well as development in areas that surround the Naval Annex. The approval of the funding by ESD for infrastructure improvements would facilitate approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex. The development proposed at the Naval Annex contributes to the total developed area that would occur at the project site, as studied under the reasonable worst case development scenario (RWCDs). A detailed discussion of the RWCDs is provided in **Section 2.5**.

Under the RWCDs, it is estimated that approximately 2,700 square feet of existing buildings at the Naval Annex would be removed and their area would be landscaped with lawns and other plantings as part of the greenspace that would form the rehabilitated campus setting at the Naval Annex, in the future with the proposed project. Approximately 1.1 acres of existing overgrown areas at the Naval Annex would be removed and replaced with new development proposed as part of the RWCDs for the Naval Annex. Further, approximately 0.2 acres of existing lawns would be occupied by the footprint of future buildings. The removal of these undeveloped habitats (lawns and overgrown areas) would not result in a significant environmental impact. The fauna that are expected to utilize the project site as a long-term habitat resource are species that have adapted to an urban environment and would find other suitable habitats nearby.

No known "built resources" that are known to contain or may be used as habitat for protected species, as defined in the Federal Endangered Species Act (50 CFR 17) or the State's Environmental Conservation Law (6 NYCRR Parts 182 and 193) exist within the project site. As identified previously, no threatened and endangered species, or rare habitats, were observed on site during the 2014 ESI. Furthermore, because of the long history of anthropogenic use of the site, it is likely that the native plant species present have volunteered from off-site or were planted by humans.

During the ESI, several large shade trees were observed throughout the project site. Based on the data obtained during the ESI, the large shade trees were comprised of 44 trees on site greater than 25 inches diameter at breast height (dbh). Under the RWCDs, it is anticipated that approximately 12 of these 44 trees would be removed. The project sponsor intends to incorporate existing large trees into future landscape designs, to the extent practicable, in order to maintain greenspace and the campus setting of the Naval Annex. Thus, protective measures would be utilized to preserve trees during construction. Protective measures would include a vehicle exclusion zone underneath the drip line, tree boxes, elevation pruning, and other activities.

The project site is located within a disturbed urban setting and does not contain any natural resources of significance (e.g., wetlands, beaches, dunes, bluffs, thickets, significant grasslands, meadows, woodlands, or forests) as defined in the *CEQR Technical Manual*, nor is the site located immediately adjacent to any natural resources. The conclusion of the 2000 EIS that there is insufficient natural habitat to support most wildlife species still holds. The proposed project would not involve the disruption of subsurface conditions that might affect the function or value of an adjacent or nearby natural resource. Therefore, significant adverse impacts related to natural resources are not expected as a result of the proposed action, and further assessment of the impact to natural resources is not warranted.

References

Carroll, S. K., T. C. Carter and G. A. Feldhamer. 2002. Placement of nets for bats: effects on perceived fauna. *Southeastern Naturalist* 1:193-198.

Cornell, 2014. Website accessed in November 2014 to determine habitat requirements of the red knot. Retrieved from: <http://www.allaboutbirds.org/guide/red_knot/lifehistory>

Department of the Navy (Navy). 2000. *Final Environmental Impact Statement Disposal and Reuse of Naval Station Brooklyn*, Brooklyn, NY.

FRC, 2014. Website accessed in November 2014 to ascertain information regarding the feral cat population at the former Brooklyn Navy Yard. Retrieved from:
<<http://frenchhatchingcat.com/2014/10/17/brave-black-cats-brooklyn-navy-yard/>>

New York City Office of the Deputy Mayor for Economic Development. 2010. *Admirals Row Plaza Final Environmental Impact Statement*, Brooklyn, NY.

New York State Department of Environmental Conservation (NYSDEC), 2014. Website accessed in November 2014 to ascertain information regarding threatened and endangered species on or near the project site. Retrieved from: <<http://www.dec.ny.gov/imsmaps/ERM/viewer.htm>>

United States Fish and Wildlife Service (USFWS), 2014. Website accessed in November 2014 to ascertain information regarding mapped wetlands on or near the project site. Retrieved from:
<<http://www.fws.gov/wetlands/data/mapper.HTML>>

United States Fish and Wildlife Service (USFWS), 2014a. Website accessed in November 2014 to ascertain information regarding threatened and endangered species in Kings County. Retrieved from: <http://ecos.fws.gov/tess_public/countySearch!speciesByCountyReport.action?fips=36047>

United States Fish and Wildlife Service (USFWS), 2014b. United States Fish and Wildlife Service. Website accessed to obtain information on the Long-eared bat. Retrieved from:
<http://www.fws.gov/midwest/endangered/mammals/nlba/nlbaFactSheet.html> as accessed October 3, 2014.

United States Fish and Wildlife Service (USFWS), 2014c. Long-Eared Bat Interim Conference And Planning Guidance. USFWS Regions 2, 3, 4, 5, & 6. January 6, 2014.

Yates, M. and R. Muzika. 2006. Effect of forest structure and fragmentation on site occupancy of bat species in Missouri Ozark forests. *Journal of Wildlife Management* 70:1238-1248.

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3.9 HAZARDOUS MATERIALS

A hazardous material is any substance that poses a threat to human health or the environment. Substances that may be of concern include, but are not limited to, heavy metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), methane, polychlorinated biphenyls (PCBs), pesticides, dioxins, hazardous wastes, radiation sources, etc. For hazardous materials, the goal under SEQRA is to determine whether the proposed project would increase the exposure of people or the environment to hazardous materials, and, if so, whether this increased exposure would result in potential significant public health or environmental impacts. If significant adverse impacts are identified, SEQRA requires that the impacts be disclosed and mitigated or avoided to the greatest extent practicable.

To identify any potential environmental concerns resulting from past or current on and off-site operations, the following reports were reviewed: May 2011 *Phase I Environmental Site Assessment* and July 2011 *Phase II Site Assessment*, prepared by AKRF Engineering, P.C. (AKRF), as well as July 2002 *Phase I Environmental Site Assessment* and May 2002 *Phase II Investigation Report*, prepared by Environmental Resources Management (ERM). The Phase I and Phase II site assessments prepared by AKRF focused on the Naval Annex portion of the project site. The Phase I and Phase II site assessments prepared by ERM covered the entire BNY, including the area of the project site where the Backlot and the Kent Avenue Parking Structure would be located.

3.9.1 Summary of Phase I Environmental Site Assessments Findings

The Phase I ESA prepared by AKRF reviewed a variety of information sources, including recent and historical Sanborn fire insurance maps, environmental regulatory agency databases identifying state and federally listed sites, and previous studies of the Naval Annex. The Phase I ESA identified the following:

- The majority of the project site was used as a Naval Hospital from approximately the 1830s to 1948. In the late 19th and early 20th centuries, the southeastern corner was occupied by manufacturing, including leather manufacturers and dyers, a compound color factory, and a circular structure labeled as a former gas generator. A number of buildings were added to the hospital campus and/or demolished in the 20th century. The existing structures were built between the 1830s and the 1960s. Hospital-related uses included residences, two hospitals, laboratories and morgues. Following the closure of the hospital, portions of the site were used as offices and a canine training center. Buildings 103 and 103A (Carriage Houses) were historically used as garages and auto maintenance shops. The basement of Building 311 (Motion Picture Exchange) in the southeastern corner historically contained maintenance shops and photo darkrooms. The development of the BNY in the 19th century included extensive filling of tidal flats and marshes, so fill materials of unknown origin are likely present beneath the Naval Annex. Elevated concentrations of metals and and/or semi volatile organic compounds (SVOCs) were identified in soil beneath on-site Buildings R103 (Carriage Houses) and R109 (Stable) during Naval Station closure activities, and soil was excavated from beneath a sump pit in R103 (Carriage House) and an adjacent dry well. A 55-gallon drum containing petroleum waste and contaminated soil beneath the drum were removed from Building R109 (Stable). At unspecified portions of the Naval Annex, the closure activities included the capping of fill materials located less than one foot below grade with six to 10 inches of "clean fill" seeded with grass to reduce the potential for exposure.
- Building R475 in the northeastern corner of the Naval Annex was historically a filling station/auto body shop. All historical on-site underground storage tanks (USTs) were closed and removed or closed in place in the 1990s according to previous reports. A petroleum spill (Spill #9505775) was reported to the New York State Department of Environmental Conservation (NYSDEC) in 1995 due to the discovery of contaminated soil during tank removal at the filling station. Although previous reports indicated that contaminated soil was removed during the closure activities, the spill listing remains open. Regulatory databases identified two NYC Fire Department petroleum storage records potentially pertaining to the Naval Annex and a NYSDEC registration for the Naval Annex listing 12 closed and removed USTs, five USTs closed in place, and one closed and

removed aboveground storage tank (AST). Two Navy Yard hazardous waste generator listings potentially including the Naval Annex were also identified in regulatory databases. No waste is currently generated on-site, but hazardous lead and polychlorinated biphenyl (PCB) wastes were reportedly removed during the Naval Annex's closure.

- Previous studies indicated that the Naval Annex contained three electrical substations with PCB containing transformers. By 1997, all PCB-containing transformers were removed or filled with non-PCB-containing transformer oil. PCB-contaminated soil was identified in the vicinity of the two off-site buildings and removed, although residual contamination was noted to remain beneath Building 7 (Infectious Disease Quarters). Monitoring wells installed in the vicinity of Building 7 identified no PCB contamination in groundwater.
- The surrounding area was historically mixed-use. The remainder of the Brooklyn Navy Yard, including factories, a foundry, a laboratory, boat repair and a filling station, was located north and west of the project site. The surrounding area to the south and east included: numerous manufacturing uses including printing, hat making, leather factories, a chemical works, foundries and chrome steel manufacturing; auto repair, filling stations and facilities with buried gasoline tanks; and (in the early 20th century) manufactured gas holders two blocks to the northeast and two blocks to the southeast. A canal located north of the site in 1887 was filled in by 1979. Regulatory records identified off-site spills, hazardous waste generators and petroleum storage facilities with the potential to affect the site.
- The Naval Annex was formerly listed as a State Inactive Hazardous Waste Disposal Site. Remedial activities pertaining to USTs, subsurface contamination, lead-based paint, PCBs and asbestos containing materials (ACM) were undertaken in the 1990s as part of Naval Annex closure. Based on the completion of these investigation and remedial activities, the Naval Annex was delisted from the Inactive Hazardous Waste Disposal database in 1997.
- Some inaccessible structures at the Naval Annex may contain petroleum storage tanks or PCB-containing electrical equipment.
- Previous studies indicated that abatement of friable, accessible and damaged (FAD) asbestos containing materials (ACM) in the buildings was conducted in the 1990s. However, ACM likely remains on the Property. Suspect ACM observed during the reconnaissance included 12"x12" vinyl floor tiles and associated mastic, suspended ceiling tiles of various sizes, and plaster and sheetrock walls and ceilings. Damaged suspect ACM were noted in several buildings and signs indicating an asbestos hazard were posted on Buildings RD and RG and the bunker east of Building R95.
- Previous studies indicated that abatement of peeling, accessible or damaged lead-based paint was conducted in the former residential buildings in the 1990s. However, lead-based paint likely remains on the Property. Painted surfaces were observed to be generally in poor condition during the reconnaissance.

In addition, the Phase I prepared for the BNY by ERM concluded that historic activities conducted at the BNY have resulted in contamination of soil and groundwater. These impacts resulted from historic fill or from known release sites, including USTs, transformers and drum storage areas.

3.9.2 Summary of Phase II Environmental Site Investigation Findings

AKRF conducted a subsurface investigation (Phase II) at the Naval Annex to determine whether on- or off-site activities have adversely affected the site. The investigation included the advancement of 20 borings with the collection of 40 soil samples and seven groundwater samples for laboratory analysis. The groundwater samples were collected from temporary wells installed in the borings. Fill material (generally sand with gravel, silt, clay, concrete, asphalt, brick, ash, coal, slag and/or lumber fragments) was encountered in most borings to depths ranging from five to 35 feet below grade. Sand with silt, gravel

and/or clay, which may be fill or native soil, underlay the fill. Groundwater was encountered at approximately 10 to 40 feet below grade, with the greatest depth in the southwestern portion of the site.

Soil sample analytical results were compared to New York State Department of Environmental Conservation (NYSDEC) Part 375 Unrestricted Use Soil Cleanup Objectives and Part 375 Soil Cleanup Objectives for Restricted Residential Use. Groundwater sample analytical results were compared to the NYSDEC Class GA Ambient Water Quality Standards, which are intended for current or potential potable water supplies, even though groundwater in Brooklyn is not a potable source.

The Phase II noted that there was evidence of petroleum contamination near the edge of the former gas station (Building R475) and other exceedances of soil and groundwater guidelines and standards. However, the results were consistent with soil and groundwater testing of sites with urban fill material. The proposed project would include subsurface infrastructure upgrades and other soil disturbance for new construction, as well as the rehabilitation of certain existing buildings. Based on the findings of the Phase II investigation the following recommendations were made for pre-development and development activities occurring at the Naval Annex:

- Since petroleum-related contamination was encountered near the former gas station (Building R475) and other areas of elevated VOCs or other soil contamination may be present elsewhere (documented or undocumented underground storage tanks may also be present), it is recommended that to minimize the potential for impacts to the community and construction workers, future construction work involving subsurface disturbance should be performed under a Remedial Action Plan (RAP)/environmental construction health and safety plan (CHASP), which would be based on the results of the Phase II investigation. The RAP should address: soil stockpiling, disposal and transportation; dust control; and contingency measures should petroleum tanks or unexpected contamination be encountered. The CHASP should include measures for worker and community protection, including dust control, personal protective equipment, air monitoring, and emergency response procedures.
- A vapor barrier or other form of vapor control should be installed below any proposed new construction to reduce the potential for vapor intrusion from VOCs in the soil or groundwater.
- Since soil encountered during the Phase II site investigation included urban fill materials containing elevated concentrations of semi-volatile organic compounds and metals, soil excavated as part of site development activities should be managed in accordance with applicable regulations. Soil intended for off-site disposal should be tested in accordance with the requirements of the intended receiving facility. Transportation of material leaving the site for off-site disposal should be in accordance with federal, state and local regulatory requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc.
- If petroleum-contaminated soil or groundwater or other evidence of a release or spill is encountered, it should be reported to NYSDEC and contamination should be delineated and remediated in accordance with applicable regulations. Any underground storage tanks unexpectedly encountered during site development should be registered with NYSDEC and/or the NYC Fire Department, if required, and closed and removed along with any contaminated soil in accordance with applicable regulations.
- If dewatering is necessary for the proposed project, it should be conducted in accordance with a New York City Department of Environmental Protection (NYCDEP) sewer discharge permit and/or NYSDEC SPDES requirements, if applicable. It should be noted that lead and zinc concentrations in several groundwater samples and the tetrachloroethene concentration in some samples exceeded NYCDEP limitations for effluent to sanitary or combined sewers. Additional groundwater testing, and possibly pre-treatment (dependent upon the testing results), may be necessary to comply with NYCDEP requirements.

The Phase II performed by ERM had similar results as the Phase II prepared by AKRF. Most soil samples contained detected levels of SVOCs and metals in excess of NYSDEC standards in the total soil analyses. The ERM Phase II recognized that SVOCs and metals in site soils is typical of industrial environs within the New York City area and were expected considering the historic filling, construction and use of the site. Moreover, the toxicity characteristic leaching procedure (TCLP) leachate analytical results indicated that the metals are relatively insoluble and do not exceed hazardous waste regulatory levels. However, the Phase II noted that these compounds should be taken into consideration when preparing Health and Safety Plans for all future intrusive activities (e.g., construction, demolition, etc.).

As part of the overall development of the project site, i.e., the Naval Annex, the Backlot and the Kent Avenue Parking Structure, Steiner Studios is committed to the proper handling and disposal of hazardous materials on site in accordance with local, state and federal regulations and guidance, and in accordance with the recommendations from the Phase II investigations. Prior to any renovation or demolition activities an ACM survey of the areas to be disturbed would be conducted and any ACM encountered removed and disposed of in accordance with local, state and federal requirements. Any activities with the potential to disturb lead-based paint would be performed in accordance with applicable requirements (including federal Occupational Safety and Health Administration regulation 29 CFR 1926.62 - Lead Exposure in Construction). Disposal of PCB materials would be performed in accordance with applicable federal, state and local requirements.

A soils management plan would be developed and implemented for the removal of any soils excavated from the project site and any dewatering required during the construction activities that require discharge to sewers would be performed in compliance with the appropriate effluent limitation through permits obtained from NYCDEP, and as such sewage discharge from the site would be treated on site as required and sampled in accordance with permit requirements. The project sponsor would develop a RAP and CHASP to avoid the potential for significant impacts related to Hazardous Materials. The RAP should address: soil stockpiling, disposal and transportation; dust control; and contingency measures should petroleum tanks or unexpected contamination be encountered. The CHASP should include measures for worker and community protection, including dust control (e.g., dust covers for trucks, watering of demolition and excavation areas, roadways and trucks) personal protective equipment, air monitoring, and emergency response procedures. A vapor barrier or other form of vapor control would be installed below the proposed new construction at the project site (and existing buildings retrofitted with vapor barriers) and any petroleum-contaminated soil, groundwater, or underground storage tanks unexpectedly encountered during site development would be reported to the appropriate government agency. With the inclusion of the above measures, the proposed action would not result in significant adverse hazardous materials impacts.

3.10 WATER AND SEWER INFRASTRUCTURE

Introduction

This chapter provides an evaluation of the potential effect of the proposed action on the city's water supply, wastewater treatment, and stormwater management infrastructure. Based on the methodology set forth in the *CEQR Technical Manual*, the proposed action would not result in significant adverse impacts to these infrastructure systems.

According to the guidelines of the *CEQR Technical Manual*, a preliminary analysis of wastewater and stormwater conveyance and treatment is warranted if a project: (i) is located in a combined sewer area and would have an incremental increase above the No-Action condition of 400 residential units or 150,000 square feet of commercial, public facility and institution and/or community facility space in Brooklyn; (ii) is located in a separately sewered area and would exceed certain incremental development thresholds; (iii) is located in an area that is partially sewered or currently unsewered; (iv) involves development on a site five acres or larger where the amount of impervious surface would increase; (v) would involve development on a site one acre or larger where the amount of impervious surface would increase and other criteria are met; or (vi) would involve construction of a new stormwater outfall that requires federal and/or state permits. Since the proposed project involves the development on a site of five acres or larger where the amount of impervious surface would increase, an analysis of wastewater and stormwater conveyance and treatment has been prepared and follows below.

3.10.1 Existing Conditions

Water Supply

New York City's water supply system is composed of three watersheds—Croton, Delaware, and Catskill—and extends as far north as the Catskill Mountains. From these watersheds, water is carried to the city via a conveyance system made up of reservoirs, aqueducts, and tunnels. Within the city, a network of underground water pipes distributes water to customers. On average, the New York City water system delivers approximately 1.1 billion gallons per day (bgd) to the five boroughs and Westchester County.

The Croton system supplies an average of 22 million gallons per day (mgd), primarily to users in the lower-elevation portions of Manhattan and the Bronx. The Delaware and Catskill systems supply all five boroughs and delivers approximately 98 percent of the City's drinking water. The Delaware and Catskill water systems collect water from watershed areas in the Catskill Mountains and deliver it to the Kensico Reservoir in Westchester County. From the Kensico Reservoir, water is sent to the Hillview Reservoir in Yonkers, which balances the daily fluctuations in water demand and pressure to the system. From there, water is delivered to the City through three tunnels, Tunnel Nos. 1, 2, and 3. Tunnel No. 1 carries water through the Bronx and Manhattan to Brooklyn; Tunnel No. 2 travels through the Bronx, Queens, Brooklyn, and then through the Richmond Tunnel to Staten Island; and Tunnel No. 3 goes through the Bronx and Manhattan, terminating in Queens. City Tunnel No. 2 serves the northern portion of Brooklyn where the project site is located.

Once water arrives in the city, the three aqueducts distribute water into a network of water mains. Water mains up to 96 inches in diameter feed smaller mains that deliver water to a final destination. Nearly all of the water in New York City reaches its destination by gravity alone, although some areas, generally located at the outer limits of the system where pressure is low, require water to be pumped to its final destination. Pressure regulators throughout the city monitor and control the water pressure.

Water lines enter the project site at the intersection of Ryerson Street and Flushing Avenue via a 10-inch line. There are 20-inch water mains surrounding the project site along Flushing and Kent Avenues and

Williamsburg Street West.⁹ The project site is mostly vacant, with some areas used for parking or storage and generates a minimal demand for water under existing conditions. Thus, the total demand for water under existing conditions is estimated to be zero.

Wastewater Treatment

According to the *CEQR Technical Manual*, wastewater is considered to include sanitary sewage, wastewater generated by industries, and stormwater. Water used for air conditioning generates a negligible amount of wastewater, as it is recirculated or evaporates in the cooling and heating process.

The majority of New York City's wastewater treatment system is comprised of the sewer network beneath the streets and the 14 waste water treatment plants (WWTP) located throughout the city. The majority of the New York City sewers are combined sewers that receive sanitary wastewater and stormwater runoff. Wastewater generated in a "drainage basin," the area served by a WWTP, is conveyed through a network of combined sewers to the WWTP. In recent years, NYCDEP has initiated a plan by which the existing combined sewers are being replaced with separate storm drainage sewer and sanitary sewer systems. In locations where no existing sewers are located, such as low lying areas in the outer boroughs, separate sanitary and storm drainage systems are now being constructed to replace existing private sanitary systems such as septic systems.

During dry weather, a WWTP primarily treats sanitary sewage. The average daily flow during dry weather is known as the average "dry-weather flow." WWTPs have treatment capacities set at twice their dry-weather design flow for a limited amount of time. However, because the majority of New York City sewers are combined sewers, the sewers also receive stormwater and rainwater runoff from impermeable surfaces that generally contain pollutants such as oil and floatable debris. During wet weather, stormwater enters the combined sewer system along with sanitary sewage, and are both treated at a WWTP. During wet weather, rainfall runoff can reach 10 to 50 times the dry weather flow, sometimes well above the WWTP design capacity. To avoid flooding the WWTPs, built-in regulators act as relief valves to direct the excess water to an outfall. During storm events, sanitary sewage entering or already in the combined sewer system, stormwater, and debris can be discharged (or overflowed) untreated into the nearest body of water. This untreated overflow is known as "combined sewer overflow" (CSO). To reduce the release of CSO into local waters, NYCDEP has a program of replacing combined sewers with individual sanitary and storm drainage systems, as infrastructure improvements are made. Although storm drainage will still be discharged into local waters during severe rainfall events, the separated sanitary sewers will not be impacted by increased storm flows and will flow directly into the WWTPs in a separate closed system.

The project site is in an area served by the Newtown Creek WWTP. At the Newtown Creek WWTP, wastewater is fully treated by physical and biological processes before it is discharged into the East River. The quality of the treated wastewater (effluent) is regulated by a New York State Pollution Discharge Elimination System (SPDES) permit issued by the New York State Department of Environmental Conservation (DEC). A maximum daily capacity for each treatment facility in the city is set to ensure that the quality of effluent is acceptable to discharge into surrounding water bodies, and the maximum capacity for the Newtown Creek WWTP is 310 mgd.

If any sanitary sewage were generated at the project site, it would be discharged into the combined sewer lines of the New York City sewer system, maintained and operated by NYCDEP. There is a 138-inch sewer line along Flushing Avenue and Williamsburg Street West, which is connected at the intersection of Hewes Street and Kent Avenue to a 198-inch sewer line along Kent Avenue. Sanitary sewage is directed from the site via 12- and 24-inch sanitary piping to the 138-inch combined sewer lines. The 12-inch pipe

⁹ Department of the Navy. 2000 *Final Environmental Impact Statement Disposal and Reuse of Naval Station Brooklyn, Brooklyn, New York*. June 2000.

connects from the site to the 138-inch sewer line along Williamsburg Street West, while the 24-inch pipe connects from the site to the 138-inch sewer line between Ryerson Street and Grand Avenue.¹⁰

Stormwater Management

Stormwater runoff from the project site is collected in catch basins and storm drains are located throughout the site. The catch basins and storm drains convey the stormwater from the project site to the combined sewer lines of the New York City sewer system. The sewage is conveyed to the Newtown Creek WWTP.

The vacant and undeveloped portion of the project site is approximately 50 percent (542,702 square feet) covered in permeable grass/softscape. The existing structures in the project site account for approximately nine percent (97,695 square feet) of the surface area at the project site. Additionally, paved areas and sidewalks account for approximately 41 percent (453,219 square feet) of the total area at the project site. **Table 3.10-1** presents a breakdown of surface area and runoff coefficient calculations for the project site. The total stormwater flows generated within the project site under existing conditions, during different storm events, are presented in millions of gallons (MG) in **Table 3.10-2**. The project site is mostly vacant, thus, the total demand for water under existing conditions is estimated to be zero.

Table 3.10-1 Existing Conditions - Surface Calculations

Existing Conditions					
Weighted Runoff Coefficient (C)					
Surface Type	Roof	Pavement & Walks	Other	Grass & Soft Scape	Total
Area %	9%	41%	0%	50%	100%
Surface Area (SF)	97,695	453,219	0	542,703	1,093,617
Runoff Coefficient	1.00	0.85	0.85	0.20	0.54

Note: Runoff coefficients for each surface type are as per NYCDEP. (Chapter 13 of *CEQR Technical Manual*)

Table 3.10-2 Existing Conditions - Stormwater and Sanitary Generation from Project Area During Different Storm Events

Rainfall, (In)	Duration, (Hr)	Total Area (Acre)	Weighted Runoff Coefficient (C)	Stormwater Runoff (MG)	Daily Sanitary Sewage Generation (MGD)	Sanitary to Sewer (MG)
0.0	3.8	25.1	0.54	0.00	0.00	0.00
0.4	3.8	25.1	0.54	0.15	0.00	0.00
1.2	11.3	25.1	0.54	0.44	0.00	0.00
2.5	19.5	25.1	0.54	0.92	0.00	0.00

¹⁰ Ibid.

3.10.2 Future No-Action Conditions

Water Supply

Under the Future No-Action condition, the project site is expected to remain largely in its existing condition by the analysis year of the proposed project. Therefore, total water consumption on the project site under the Future No-Action condition is estimated to be zero, similar to the total water consumption estimated under existing conditions.

Wastewater Treatment

As the project site would remain largely vacant under the Future No-Action Condition, there would be minimal increase in sanitary wastewater generation from the project site to the Newton Creek WWTP by the 2027 analysis year of the proposed project.

Stormwater Management

As the project site would remain largely unchanged under the Future No-Action condition, total stormwater flows generated at the project site are expected to be similar to the stormwater flows generated under existing conditions.

3.10.3 Future With-Action Conditions

The proposed project under review includes approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex, a gas, water, sewer, electric and teledata infrastructure loop, as well as the construction of a Grand Stair Plaza, a Campus Pedestrian Passage. The condition of existing utility connections would be tested and utility improvements would be made at the site, including assessing the existing conditions of piping and connections and the replacement and upgrade the existing infrastructure. Outside the Naval Annex, the proposed project includes an additional approximately 70,000 square feet of new development for a new Backlot, a new Kent Avenue Vehicular Entrance at Kent Avenue and Wilson Street and the 250,000-square-foot Kent Avenue Parking Structure.

Water Supply

The focus of the water supply assessment is on the potential water demand generated by the 350,000 square feet of floor area on the Naval annex and the 70,000-square-foot Backlot that would be created as part of the proposed project. The proposed Kent Avenue Parking Structure is expected to have a negligible demand for water in the future with the proposed action. As shown in **Table 3.10-3**, the proposed development by the year 2027 would generate a water supply demand of approximately 113,400 gallons per day (gpd), which represents less than 0.1 percent of the City's water supply demand. The incremental demand with the proposed action would, therefore, not adversely impact the City's water supply.

Table 3.10-3 Future With-Action Conditions - Water Consumption and Wastewater Generation

Land Use	Rate ¹	Water Consumption and Wastewater Generated		
		Area (SF)	Water/Wastewater Generation (GPD)	Air Conditioning (GPD)
Production Studio ²	Domestic: 0.10 gpd/sf Air Conditioning: 0.17 gpd/sf	420,000	42,000	71,400
Total Water Consumption		113,400		
Total Wastewater Generation		42,000		

Notes:

1. Water and Wastewater generation rates for Production Studio assumed to be similar to Office/Commercial rate, from *Silvercup West FEIS*, NYCDCP, June 2006.
2. The Production Studio use includes space for academic uses.

Wastewater Treatment

In the Future No-Action condition, wastewater generated from the study area would be treated by the Newtown Creek WWTP, which would continue to have a SPDES permitted capacity of 310 mgd. As shown in **Table 3.10-3**, the proposed project would generate approximately 42,000 gpd of sanitary sewage. This increase represents a small fraction of the capacity of the Newtown Creek WWTP. Since the wastewater generated by the proposed project is well within the capacity of the WWTP, no significant adverse impacts to the city's wastewater treatment services would occur as a result of the project.

Stormwater Management

In the future with the proposed action, the approximately 1,093,617-square-foot project site would have an increase in the total square feet of impervious surface area. Consequently, the stormwater runoff in the Future With-Action condition would be greater than under existing conditions. **Table 3.10-4** below contains a breakdown of surface area and runoff coefficient calculations for the 2027 analysis year. **Table 3.10-5** contains a review of stormwater and sanitary generation from the project site during different storm events. A comparison of stormwater runoff and sanitary wastewater flows in the Future With-Action Conditions to those under existing conditions is provided in **Table 3.10-6**.

Table 3.10-4 Future With-Action Conditions (2027) – Surface Calculations

Future With the Proposed Action Weighted Runoff Coefficient (C)					
Surface Type	Roof	Pavement & Walks	Other	Grass & Soft Scape	Total
Area %	12%	42%	0%	46%	100%
Surface Area (SF)	126,495	458,219	0	508,903	1,093,617
Runoff Coefficient	1.00	0.85	0.85	0.20	0.56

Note: Runoff coefficients for each surface type are as per NYCDEP (*Chapter 13 of CEQR Technical Manual*)

Table 3.10-5 Future With-Action Condition - Stormwater and Sanitary Generation from Project Site During Different Storm Events

Rainfall, (In)	Duration, (Hr)	Total Area (Acre)	Weighted Runoff Coefficient (C)	Stormwater Runoff (MG)	Daily Sanitary Sewage Generation (MGD)	Sanitary to Sewer (MG)
0.0	3.8	25.1	0.56	0.00	0.04	0.007
0.4	3.8	25.1	0.56	0.15	0.04	0.007
1.2	11.3	25.1	0.56	0.46	0.04	0.020
2.5	19.5	25.1	0.56	0.96	0.04	0.034

Table 3.10-6 Stormwater and Sanitary Volumes from Project Area during Different Storm Events – Comparison of Existing Conditions to Future With-Action Conditions

		Area =1,093,617 SF (25.1 Acres)				Area =1,093,617 SF (25.1 Acres)			
		Existing Conditions				Future With-Action			
Rainfall Volume (In)	Rainfall Duration (Hr)	Runoff Volume Direct Drainage (MG)	Runoff Volume To CSS (MG)	Sanitary Volume To CSS (MG)	Total Volume To CSS (MG)	Runoff Volume Direct Drainage (MG)	Runoff Volume To CSS (MG)	Sanitary Volume To CSS (MG)	Total Volume To CSS (MG)
0.00	3.80	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
0.40	3.80	0.00	0.15	0.00	0.15	0.00	0.15	0.01	0.16
1.20	11.30	0.00	0.44	0.00	0.44	0.00	0.46	0.02	0.48
2.50	19.50	0.00	0.92	0.00	0.92	0.00	0.96	0.03	1.00

Note: Based on *Intensity/duration/Frequency Rainfall Analysis, New York City and the Catskill Mountain Water Supply Reservoirs*, Vieux & Associates, Inc., April 4, 2006. The 24-hour rainfall volume is based on average rainfall intensity over 24 hours (inch/per) times 24 hrs. (Duration information provided by T. Newman & P. Jadhav, HydroQual).

On-Site Stormwater Management Requirements

New York City has regulations and practice requirements in place to control the flow of stormwater. Self-certification of sewer connection applications is not permitted by the New York City Department of Buildings or NYCDEP in connection with any proposed development or enlargement of buildings for which sewer connection approval is required. Prior to filing a House or Site Connection application, applicants may be required to submit a site-specific hydraulic analysis and a stormwater and water conservation best management practices concept plan to NYCDEP for its review and approval, to establish the adequacy of existing sanitary and storm sewers to serve the proposed development or enlargement.

Enhanced stormwater management throughout the city to improve water quality in adjacent waterways is consistent with recent policies including the *NYC Green Infrastructure Plan* and *PlaNYC 2030 and Sustainable Stormwater Management Plan*. The *NYC Green Infrastructure Plan*, released in September 2010, includes a goal of capturing the first inch of rainfall on 10 percent of the impervious areas in combined sewer watersheds through detention or infiltration techniques over 20 years. Generally, *PlaNYC* calls for water quality improvements through stormwater source controls to expand recreation opportunities adjacent to and in the city's waterways. The *Sustainable Stormwater Management Plan*, which describes a framework for meeting this water quality goal, identified new development and redevelopment as a cost-effective and feasible means of implementing greater source controls. In addition, NYCDEP has released *Guidelines for the Design and Construction of Stormwater Management Systems*, which is utilized for new and redevelopment projects in Combined Sewer Outfall (CSO) watersheds. In all watersheds, new and redevelopment projects must meet the requirements in New York State Department of Environmental Conservation's (NYSDEC) *Management Design Manual* (August, 2010).

The NYSDEC stormwater guidelines would be used to properly select and design stormwater management Best Management Practices (BMPs) to control water quantity and quality, as well as promote groundwater recharge/infiltration. BMPs can include blue and green roofs, subsurface detention, porous pavement, enhanced tree pits, rain gardens or infiltration swales and rain barrels. Each area developed on the project site would be required to design and select one or more BMP measures to meet NYSDEC stormwater management requirements, as applicable. The project designs for the project site would be required to follow a five-step planning process, in accordance with the NYSDEC stormwater manual. Required percent reductions of stormwater runoff and water quality improvements are based on existing conditions. The five steps include:

1. Site planning to preserve natural features and reduce impervious cover;
2. Calculation of the water quality volume for the site;
3. Incorporation of green infrastructure techniques and standard Stormwater Management Plans (SMPs) with Runoff Reduction Volume (RRv) capacity;
4. Use of standard SMPs, where applicable, to treat the portion of water quality volume not addressed by green infrastructure techniques and standard SMPs with RRv capacity; and
5. Design of volume and peak rate control practices where required.

Specific design criteria for completing the stormwater analysis and design are detailed in NYCDEP's *Guidelines for the Design and Construction of Stormwater Management Systems* and the NYSDEC's *New York State Stormwater Management Design Manual*. BMPs would be integrated into the proposed development expected to occur in the project site which would help to achieve the required stormwater release rate. The exact BMPs that would be incorporated would be determined during final design and permitting, subject to site constraints, zoning requirements, soil conditions, and other factors. Stormwater BMPs potentially suitable for the proposed project include green roofs and blue roofs, which would retain or detain and release with slowed discharge rates stormwater to control peak runoff rates to achieve an overall release rate of 0.25 cubic feet per second (cfs) or 10 percent of the allowable flow rate (whichever is greater). Tree plantings to capture stormwater as well as porous pavement for walkways, courtyards or other paved surfaces could also be utilized within the uses developed in these zoning lots.

Conclusion

Water Supply

In the future with the proposed action, the project site would generate a water supply demand of approximately 113,400 gallons per day (gpd), which represents a very small fraction of the city's water supply demand of 1.3 billion gallons per day. Therefore, since the proposed action would not result in development that consumes an exceptional amount of water, the proposed action would not result in a significant adverse impact on the city's water supply.

Wastewater Treatment

In the future with the proposed action, wastewater generated from the project site would be treated by the Newtown Creek WWTP. The capacity of the Newtown Creek WWTP would continue to have a SPDES permitted capacity of 310 mgd. By the year 2027, the proposed project would generate approximately 42,000 gpd of sanitary sewage. The increase represents a very small fraction of the capacity of the Newtown Creek WWTP. Since the wastewater generated by the proposed project is well within the capacity of the treatment plant, no significant adverse impacts to the city's wastewater treatment services would occur as a result of the proposed action by the 2027 analysis year.

Stormwater Management

The proposed project would increase the amount of runoff above the amount that would occur in the existing condition due to the increase in impervious surfaces (roofs, pavement, roadways, etc.) within the Naval Annex, Backlot and Kent Avenue Parking Structure areas. Stormwater BMPs would be incorporated into the final site plans for each of the project components to meet the requirements for on-site detention of stormwater. Thus, the proposed project would not result in significant adverse impacts from stormwater.

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3.11 SOLID WASTE AND SANITATION SERVICES

Introduction

According to the *CEQR Technical Manual*, a solid waste assessment determines whether a project has the potential to cause a substantial increase in solid waste production that may overburden available waste management capacity, or otherwise be inconsistent with the City's Solid Waste Management Plan (SWMP), or with state policy related to the city's integrated solid waste management system. Most projects would not have the potential to generate sufficient waste to overburden the available waste management capacity and would not warrant a detailed solid waste analysis. However, it is recommended by the *CEQR Technical Manual* that the estimated demand for solid waste and services that could be generated by a proposed project be disclosed, if applicable.

3.11.1 Existing Conditions

Current Sanitation Services in New York City

In New York City, the Department of Sanitation ("DSNY") is the agency responsible for the collection and disposal of refuse and recyclable materials generated by residences, some non-profit institutions, tax-exempt properties, and city agencies. DSNY also collects waste from street litter baskets, and handles street-sweeping operations and lot cleaning activities. Private carting firms handle solid waste generated from other uses, including commercial retail, office, and industrial operations.

As required by New York State law, the city has a comprehensive SWMP for the management of solid waste generated within its borders. The current SWMP was adopted in 2006. It addresses recycling, residential refuse, and commercial waste, providing a framework for waste collection and disposal through 2025. The SWMP provides a long-term export plan for residential refuse via four new Marine Transfer Stations using the city's waterways and certain existing rail-based private transfer stations for the containerization of municipal solid waste (MSW) and the transport of the containerized MSW by rail or barge to remote disposal facilities. In addition, the SWMP includes contracting for capacity for residential MSW at a regional waste-to-energy plant in Newark, delivered directly in DSNY trucks. Pending completion of long-term contracts and construction of the Marine Transfer Facilities, the SWMP provides for short-term contracts with waste transfer facilities in the city and region, based on competitive bids. New York City's Recycling Law, Local Law 19 of 1989, requires that DSNY and private carters collect designated recyclable materials and deliver them to material recovery facilities.

Most of the city's municipal solid waste is collected and delivered to transfer stations and then transported out of New York City. Private carters also consolidate solid waste from commercial and industrial operations and haul it to waste transfer facilities for transport to disposal facilities. It is estimated that DSNY collects approximately 10,500 tons of MSW per day (tpd), and 1,760 tpd of designated recyclables. It is also estimated that the commercial solid waste stream is approximately 10,000 tpd (MSW and recyclables), plus approximately 28,000 tpd of mixed construction and demolition debris, and clean fill such as dirt, rock and masonry waste. Thus, in total the solid waste generated in the city averages approximately 50,000 tpd.¹¹

As discussed in **Chapter 3.1**, "Land Use, Zoning and Public Policy," the site of the proposed Kent Avenue Parking Structure, Backlot, and Naval Annex, are presently vacant or used for parking or storage and generate minimal, if any, solid waste under existing conditions. Thus, total solid waste generation at the project site under existing conditions is estimated to be zero.

¹¹ DSNY Solid Waste Management Plan, September 2006.

3.11.2 Future No-Action Conditions

Under the Future No-Action Condition, if the proposed action is not approved, the site of the proposed Kent Avenue Parking Structure, Backlot, and the Naval Annex, are expected to remain similar to existing conditions. No other projected development is planned to occur on these sites by the 2027 analysis year of the proposed project. Therefore, total solid waste generation on the project site under Future No-Action conditions is expected to remain at zero.

3.11.3 Future With-Action Conditions

The proposed action would result in changes to the land uses on the project site, which as noted above is currently vacant and unused. The proposed action would facilitate the development of the Media Campus, which would consist of approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex. Of the 350,000 square feet, approximately 105,000 square feet would be allocated to academic uses, with the remaining approximately 245,000 square feet allocated to production support. Outside the Naval Annex, the funding for infrastructure improvements would facilitate an additional approximately 70,000 square feet of new development for a new Backlot. In addition, the project sponsor intends to seek financial incentives for the development of a 250,000-square-foot Kent Avenue Parking Structure that is envisioned for the area outside the Naval Annex.

Table 3.11-1 shows the solid waste expected to be generated by the project site in the Future No-Action Scenario and the Future With-Action Scenario, as well as the net incremental change in solid waste generation associated with the Future With-Action Scenario. As shown in **Table 3.11-1**, the proposed development would create an incremental solid waste generation of approximately 14,519 pounds (7.2 tons) of solid waste per week. The proposed Kent Avenue Parking Structure would be used for accessory parking and is expected to generate a negligible amount of waste and is not included in this assessment.

Table 3.11-1 Estimated Weekly Solid Waste Generated by Proposed Project

Use	Future No-Action		Future With-Action			Increment
	Square Feet	Solid Waste Generated (pounds per week)	Square Feet (SF)	Generation Rate Factor	Solid Waste Generated (pounds per week)	Solid Waste Generated (pounds per week)
Production Studio ^{1,2}	0	0	315,000 SF	13 lbs. per employee	13,819	13,819
Academic ³	0	0	105,000 SF	1 lb. per pupil	700	700
TOTAL	0	0	420,000 SF		14,519	14,519

Notes: ¹ The estimated number of production studio employees (1,063), as provided by the project sponsor.

² Production studio area includes the Naval Annex and Backlot areas.

³ The estimated number of students (700), as provided by the project sponsor.

⁴ Solid waste generation rates as per Table 14-1 of the *CEQR Technical Manual*, Production studio assumed to be similar to office commercial rate, as per *Silvercup West FEIS*, NYCDCP, June 2006.

The *CEQR Technical Manual* states that if a proposed project's generation of solid waste in the future with the proposed project would not exceed 50 tons per week, it may be assumed that there is sufficient public or private carting and transfer station capacity in the metropolitan area to absorb the increment, and further assessment is generally not required. The incremental increase of approximately 7.2 tons per week would not lead to significant adverse impacts to municipal or commercial solid waste collection and disposal services. Therefore, the proposed project would not have a significant adverse impact on the city's solid waste and sanitation services.

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3.12 ENERGY

According to the *CEQR Technical Manual*, all new structures requiring heating and cooling are subject to the New York City Energy Conservation Code. Therefore, the need for a detailed assessment of energy impacts is limited to projects that may significantly affect the transmission or generation of energy. Since the proposed project would not significantly affect the transmission or generation of energy, this chapter of the EIS presents an estimate of the proposed project's energy consumption.

Table 3.12-1 Estimated Operational Energy Demand (million BTU per year)

Use	Area (SF) ¹	BTU/SF ²	Total
Production Studio ³	315,000	0.216	68,040
Academic	105,000	0.251	26,355
Total			94,395

Notes:

1 - Area is approximate.

2 - BTUs expressed in millions per square foot

3 - The CEQR energy rate for commercial sources is assumed to be comparable to Production Studio use, as per *Silvercup West FEIS*, NYCDOP, June 2006.

Source: *CEQR Technical Manual* - Table 15-1

It is expected that the proposed project, when operational, would consume approximately 94,395 million British Thermal Units (BTUs) per year (see **Table 13-1**). This would not be considered a significant demand for energy and the project site would be served by available energy suppliers. The proposed project would comply with the New York State Energy Conservation Code and would not affect the transmission or generation of energy. Therefore, the proposed project would not result in significant adverse impacts to the consumption or supply of energy.

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3.13 TRANSPORTATION

According to the *CEQR Technical Manual*, interrelationships between the key technical areas of the transportation system – traffic, transit, pedestrians, and parking – should be taken into account in any assessment, and the individual technical areas should be separately assessed to determine whether a project has the potential to adversely and significantly affect a specific area of the transportation system. The *CEQR Technical Manual* states that if an analysis is warranted, a preliminary trip generation assessment should be prepared to determine whether a quantified analysis of any technical areas of the transportation system is necessary. Except in unusual circumstances, a further quantified analysis would typically not be needed for a technical area if the proposed development would result in fewer than the following increments:

- 50 peak hour vehicle trips;
- 200 peak hour subway/rail or bus transit riders; or
- 200 peak hour pedestrian trips.

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

3.13.1 Traffic

This section examines potential future traffic conditions associated with the proposed project. In most areas of the city, including the area of Brooklyn where Steiner Studios is located, if a proposed project is projected to result in 50 or more peak hour vehicular trip ends, there is the potential for traffic impacts and a detailed traffic assessment is recommended by CEQR. As discussed in detail later in this chapter, the proposed project is projected to generate approximately 143 vehicle trips during the AM peak hour and approximately 155 vehicle trips during the PM peak hour on a typical weekday. Because these numbers of vehicle trips exceed the 50 vehicle-trips/peak hour threshold for a detailed analysis in the *CEQR Technical Manual*, a detailed traffic analysis is provided for both time periods. Although the project is also projected to generate approximately a total of 51 vehicle trips during the weekday midday peak hour, a spatial distribution of these vehicle trips to the two vehicular access points (i.e., Flushing Avenue/Washington Avenue and Kent Avenue/Wilson Street) results in fewer than 50 vehicle-trips per intersection. Therefore, no midday peak hour traffic analysis is required. During the weekend, the studio has limited operations; thus, traffic generated would be substantially less than during the peak weekday AM and PM periods.

The traffic study area was selected to include the key intersections most likely to experience increases of more than 50 project-generated vehicle trips traveling to and from the Steiner Studios campus. As shown in **Figure 3.13-1**, the study area extends along Kent Avenue and includes the signalized intersection at Wilson Street (i.e., a proposed site access point), as well as the signalized intersection at Williamsburg Street West and the unsignalized intersection at Penn Street-Williamsburg Street East (i.e., the entrance ramp to Interstate 278, the Brooklyn-Queens Expressway or “BQE”). It also includes the signalized intersections of Flushing Avenue/Washington Street (i.e., an existing access point for Steiner Studios) and Flushing Avenue/Williamsburg Street West. Beyond these intersections, project-generated traffic volumes would be more dispersed, such that less than 50 additional vehicle trips per hour are projected to be generated by the proposed project at any one intersection. Therefore, the potential effect on traffic operations would be less significant.

The following section describes year 2014 existing traffic conditions in the study area. Year 2027 future conditions without the proposed project (i.e., “Future No-Action” Condition) are described next. The change in vehicular traffic resulting from the proposed project is then estimated and added to the Future No-Action Condition traffic volumes to develop the forecast year 2027 Future with the Proposed Action (i.e., “Future With-Action” Condition) traffic volumes.

Existing Conditions

Street Network

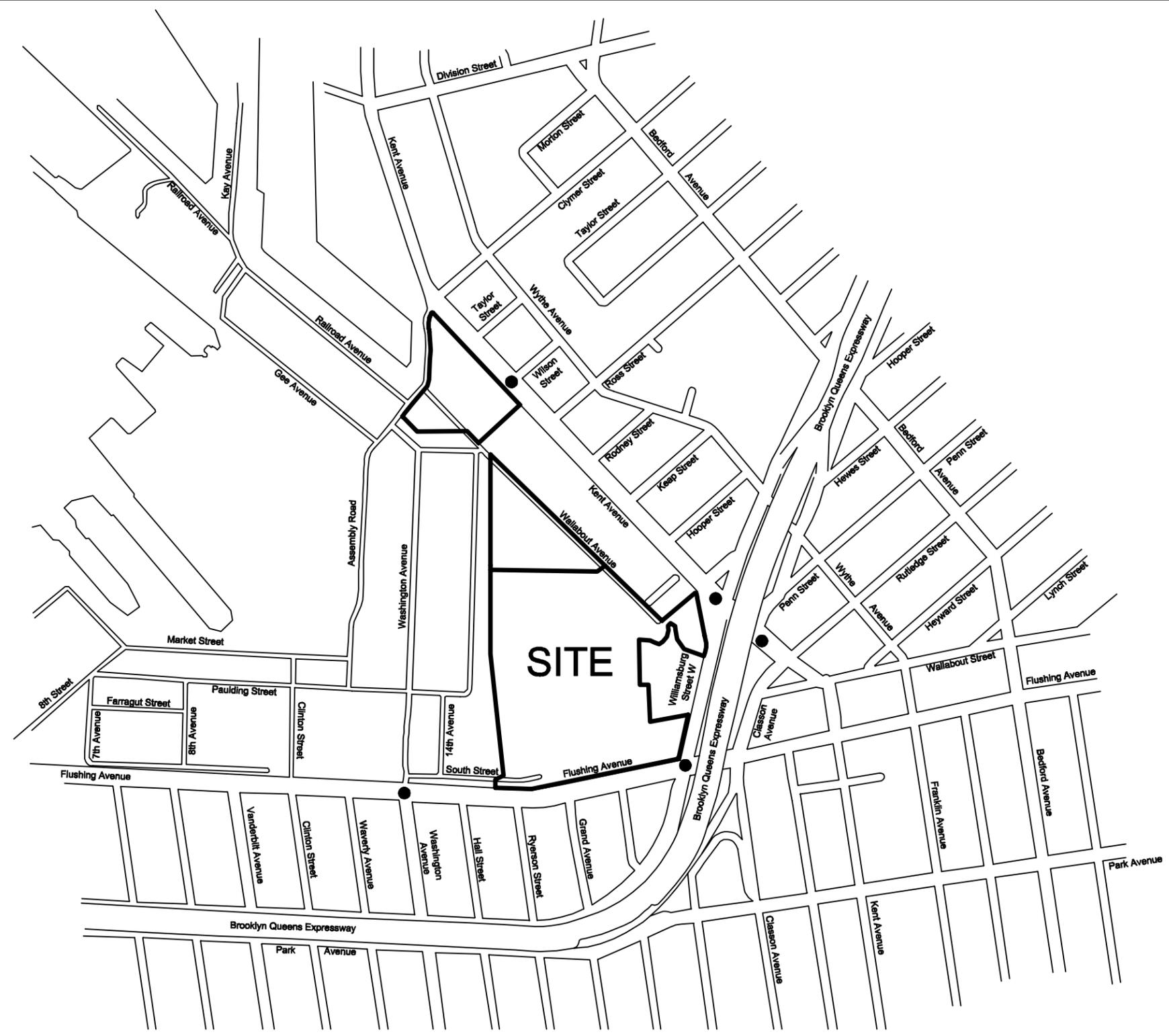
The physical and operational characteristics of the major streets comprising the roadway network within the study area are described as follows:

- *Flushing Avenue* – Within the study area, Flushing Avenue is a two-way (east-west) roadway classified as a Minor Arterial. It extends between Navy Street to the west (at the southwest corner of the Brooklyn Navy Yard) and Grand Avenue, near the Mt. Olivet Cemetery in Queens, to the east. West of Navy Street, Flushing Avenue continues two blocks as Nassau Street and terminates at the Manhattan Bridge. In the study area, Flushing Avenue ranges from approximately 45 to 50 feet wide, with one travel lane in each direction. Curbside parking is allowed on the south side of the roadway and striped bicycle lanes are provided in both directions. East of Washington Avenue, on the north side of Flushing Avenue, two 4-foot directional bike lanes are provided with a raised concrete barrier separating the lanes from vehicular traffic.
- *Kent Avenue* – Within the study area, Kent Avenue is a two-way (northwest-southeast) roadway classified as a Minor Arterial. Kent Avenue extends between DeKalb Avenue to the south and North 14th Street to the north, where it continues north as Franklin Street. In the study area, Kent Avenue is approximately 57 feet wide, with one travel lane in each direction and a raised concrete median divider. Curbside parking is allowed on both sides of the median in the northwest-bound direction. In the southeast-bound direction, two directional, striped bike lanes are provided along the curbside.
- *Williamsburg Street West* – Within the study area, Williamsburg Street West is a one-way (southbound) local roadway located west of, and parallel to, Interstate 278 (i.e., the Brooklyn-Queens Expressway or “BQE”). Williamsburg Street West functions as a local service road to the BQE. To the north, Williamsburg Street West extends to Division Avenue, where it continues north as Marcy Avenue. To the south, it extends to Grand Avenue, where it continues west as Park Avenue. In the study area, Williamsburg Street West ranges from approximately 29 to 34 feet wide, and has two travel lanes. Between Kent Avenue and Flushing Avenue, two 4-foot directional bike lanes are provided along the west side of the roadway with a raised concrete barrier separating the lanes from vehicular traffic. Curbside parking is allowed on the west side of the roadway, north of Kent Avenue and south of Flushing Avenue.
- *Wilson Street* – Within the study area, Wilson Street is a one-way (southwest-bound) local roadway. Wilson Street extends between Division Avenue to the northeast and Kent Avenue to the southwest, but is discontinuous for one block between Bedford Avenue and Wythe Avenue. On the block between Wythe Avenue and Kent Avenue, Wilson Street is approximately 37 feet wide, with one southwest-bound travel lane and curbside parking allowed on both sides of the roadway.

Study Area Intersections

The study area, shown in **Figure 3.13-1**, was defined to include five study intersections in the proximity of the proposed project that have the potential to experience increases of more than 50 vehicles per hour as a result of the proposed project. These five study intersections are as follows:

- Flushing Avenue/Washington Avenue (signalized)
- Flushing Avenue/Williamsburg Street West (signalized)
- Kent Avenue/Williamsburg Street West (signalized)
- Kent Avenue/Wilson Street (signalized)
- Kent Avenue/Penn Street/Williamsburg Street East (unsignalized)



● -Study Intersection



Steiner Studios Media Campus EIS
Brooklyn, New York

Site Vicinity Map

Figure 3.13-1

A comprehensive data collection effort was undertaken at these five intersections to obtain the necessary data required for the traffic operations analysis.

Traffic Data Collection

Data were collected in the field at all five study intersections in June 2014. The traffic data collection effort included Automatic Traffic Recorder (ATR) counts, manual turning movement and vehicle classification counts, conflicting pedestrian crossing counts, and a comprehensive inventory of roadway geometrics and physical operating characteristics at each study intersection.

Intersection Inventory

The physical and operational characteristics of each study intersection were inventoried in the field. This inventory specifically included:

- Street directions;
- Number and configuration of lanes;
- Crosswalk locations and crosswalk widths;
- Curbside parking regulations;
- Turning restrictions and prohibitions;
- Type of intersection traffic control;
- Signal timing and phasing sequences as observed in the field; and
- Bus stop locations.

Official signal timings were obtained from the New York City Department of Transportation (NYCDOT) for each of the signalized study area intersections.

ATR Counts

For a period of seven days, beginning Wednesday, June 11, 2014, ATR counts were conducted continuously at 15-minute intervals along:

- Flushing Avenue, between the intersections with Washington Avenue and Hall Street.
- Kent Avenue, between the intersections with Wilson Street and Ross Street.

Manual Turning Movement and Vehicle-Classification Counts

Manual turning movement and four-way vehicle classification counts were collected at each of the study intersections. These counts were performed at 15-minute intervals during the weekday AM (6:00 a.m. to 9:00 a.m.) and PM (4:00 to 7:00 p.m.) peak periods. During the counts, vehicles were classified as autos, trucks, buses, and bicycles. Based on the summary of the turning movement counts, the weekday AM and PM peak hours for the traffic analysis were determined to be the following:

- Weekday AM Peak Hour: 8:00 to 9:00 a.m.
- Weekday PM Peak Hour: 4:45 to 5:45 p.m.

Figures 3.13-2 and 3.13-3 show the turning-movement volumes at each of the study intersections during the weekday AM and PM peak hours, respectively, under year 2014 existing conditions.

Capacity Analysis

The capacity analyses for the study-area intersections are based on the methodologies described in the *2000 Highway Capacity Manual (HCM)* and were conducted using *Highway Capacity Software (HCS+) Release 5.4*. The official signal phasing sequences and timing plans obtained from NYCDOT were used in the analysis of all signalized intersections.

For signalized intersections, the *HCM* methodology calculates a volume-to-capacity (v/c) ratio for each approach or lane group. The v/c ratio represents the ratio of traffic volumes on the approach to the approach's vehicle-carrying capacity. At v/c ratios between 0.95 and 1.00, traffic volumes approach capacity and delays to motorists could become substantial. Volume-to-capacity ratios exceeding 1.00 indicate saturated conditions, typically characterized by long delays and building queues.

The *HCM* methodology also expresses the quality of flow for an approach or lane group in terms of level-of-service (LOS), a measure based on the average control delay that motorists experience when traveling through the intersection. Control delay includes delays associated with acceleration, deceleration, and queue move-up time, in addition to stopped delay at the intersection. For signalized intersections, LOS ranges on a letter-grade scale from "A" (average control delays of 10 seconds or less per vehicle) to "F" (average control delays exceeding 80 seconds per vehicle).

For unsignalized intersections, the *HCM* methodology assumes that major-street through and right-turning traffic is unaffected by turning movements from the minor street. Left-turns from the major street are assumed to be affected by the opposing (oncoming) major-street traffic flow. Minor street traffic movements are affected by all of the conflicting higher-priority movements described above.

As with signalized intersections, the *HCM* methodology for unsignalized intersections expresses the quality of flow in terms of both v/c ratio and a letter-grade LOS, with LOS based on the average control delay experienced by motorists making left-turns from the major street or turns from the minor-street approach. However, the relationships between delay and LOS for unsignalized intersections are different from those for signalized intersections, primarily because motorists expect different levels of performance from these two types of intersections. For unsignalized intersections, LOS ranges from "A" (average control delays of 10 seconds or less per vehicle) to "F" (average control delays exceeding 50 seconds per vehicle).

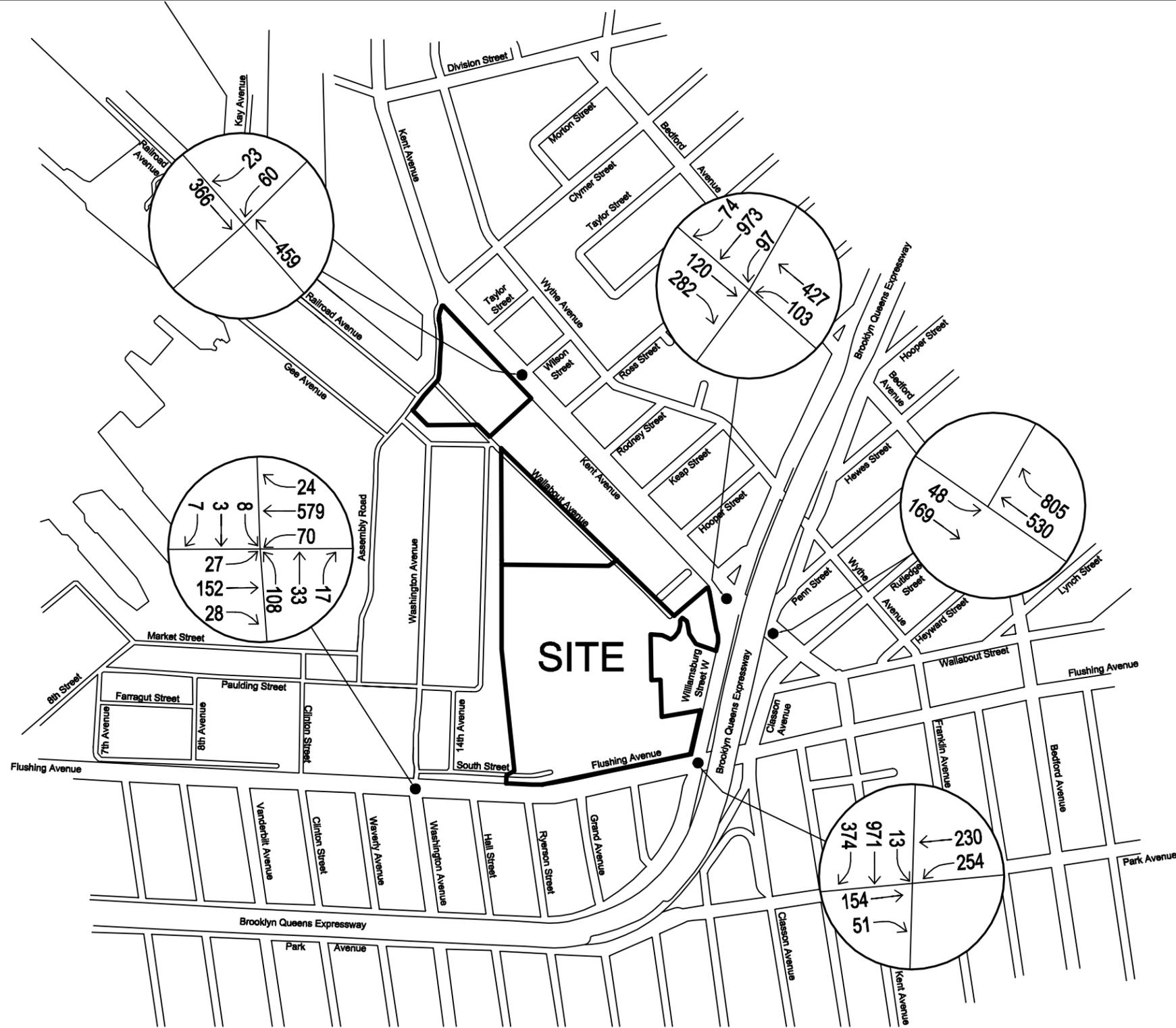
Table 3.13-1 shows the relationships between average control delay and LOS for signalized and unsignalized intersections using the *HCM* methodologies. Levels-of-service "A", "B" and "C" generally represent extremely favorable to fair levels of traffic flow. At LOS "D", delays increase and the influence of congestion becomes noticeable. LOS "E" is considered to be the limit of acceptable delay for most motorists. LOS "F" is considered to be unacceptable to most motorists, with traffic flow at, or exceeding, the capacity of the roadway.

Table 3.13-1 Level-of-Service Criteria

Level-of-Service	Average Control Delay (seconds per vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Source: 2000 Highway Capacity Manual.

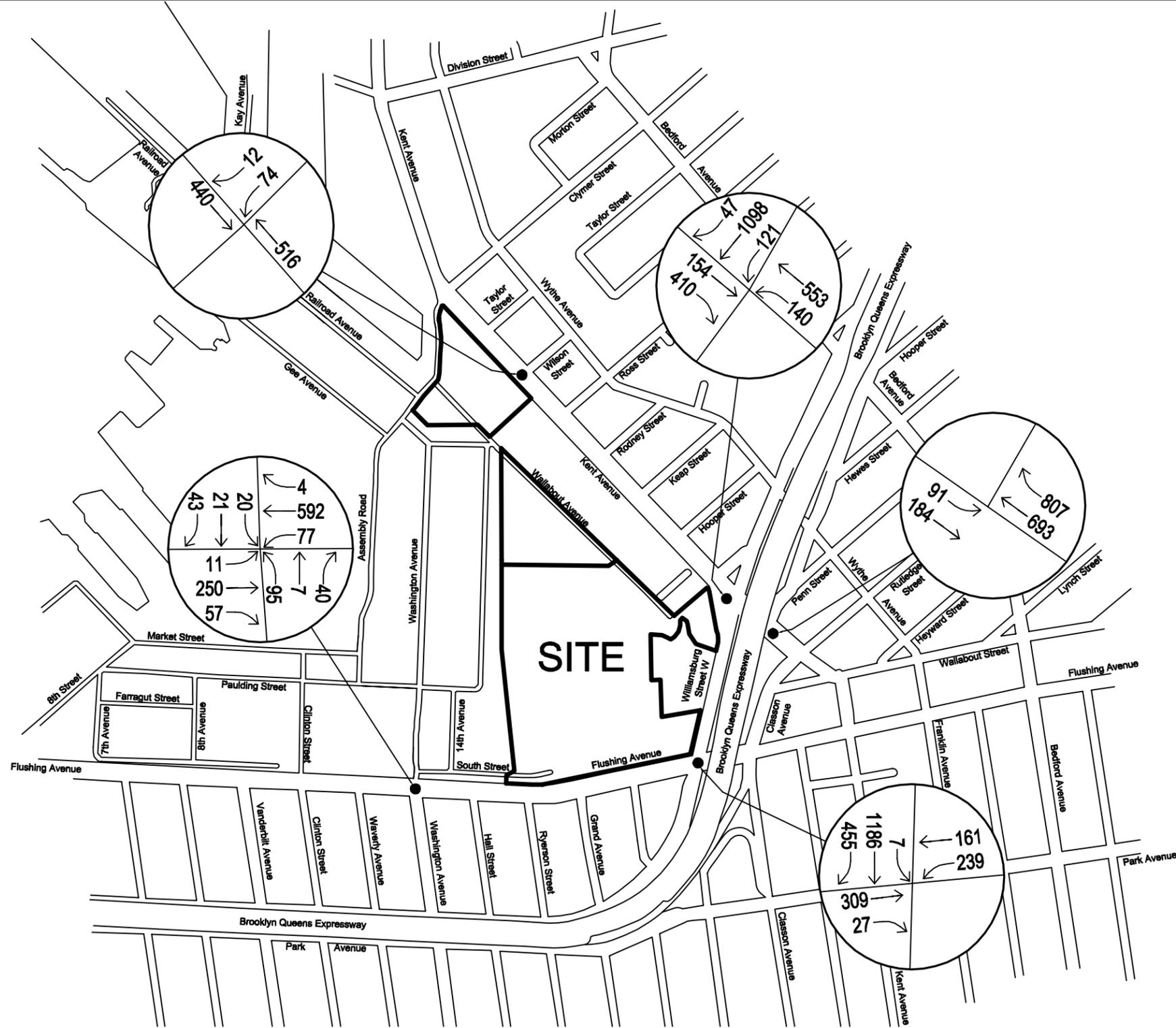
Using the existing turning movement volumes shown in **Figures 3.13-2** and **3.13-3**, traffic operations analyses were conducted for each of the study intersections for the weekday AM and PM peak hours. **Table 3.13-2** shows the results of these analyses, including volume-to-capacity ratios, average control delays, corresponding levels-of-service, and 85th percentile queue lengths. The 85th percentile queue represents the distance from the intersection that vehicle queues would not exceed for 85 percent of the time during the peak 15-minute period of the peak hour. In other words, this queue would be exceeded only approximately 15 percent of the time during the peak 15 minutes of the peak hour.



Steiner Studios Media Campus EIS
Brooklyn, New York

Year 2014 Existing Turning Movement Volumes
Weekday AM Peak Hour (8:00-9:00 AM)

Figure 3.13-2



Steiner Studios Media Campus EIS
Brooklyn, New York

Year 2014 Existing Turning Movement Volumes
Weekday PM Peak Hour (4:45-5:45 PM)

Figure 3.13-3

Table 3.13-2 Year 2014 Levels-of-Service, Existing Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00-9:00 AM)				Weekday PM Peak Hour (4:45-5:45 PM)			
			v/c	Average Control Delay	LOS	85th % Queue	v/c	Average Control Delay	LOS	85th % Queue
			SIGNALIZED INTERSECTIONS							
Flushing Avenue / Washington Avenue	EB	LTR	0.30	7.7	A	5.9	0.37	8.3	A	8.4
	WB	LTR	0.72	15.0	B	26.5	0.73	15.4	B	26.8
	NB	LTR	0.81	69.8	E	11.7	0.83	75.4	E	10.1
	SB	L	0.04	37.4	D	0.5	0.10	38.5	D	1.2
		TR	0.04	37.4	D	0.6	0.22	39.9	D	3.8
Overall			0.74	22.5	C	-	0.75	22.5	C	-
Flushing Avenue / Williamsburg Street West	EB	TR	0.77	54.7	D	13.9	1.04	141.4	F	32.2
	WB	L	0.80	52.7	D	13.0	0.78	60.3	E	11.3
		T	0.39	22.9	C	10.3	0.29	24.3	C	7.4
	SB	LTR	1.05	63.3	E	53.4	1.05	58.4	E	61.1
	Overall			0.96	55.9	E	-	0.99	68.5	E
Kent Avenue / Williamsburg Street West	EB	T	0.12	22.2	C	2.7	0.12	22.2	C	3.3
		R	0.43	13.5	B	-	0.55	14.7	B	-
	WB	LT	0.57	29.8	C	12.8	0.76	35.4	D	20.6
		LT	0.79	28.5	C	29.3	0.81	29.1	C	32.6
	SB	R	0.17	12.8	B	-	0.15	15.7	C	-
Overall			*	25.9	C	-	*	27.8	C	-
Kent Avenue / Wilson Street	EB	T	0.53	12.4	B	10.9	0.48	11.3	B	11.2
	WB	T	0.60	14.0	B	13.1	0.70	16.6	B	17.9
	SB	LR	0.28	27.4	C	3.6	0.26	27.1	C	3.3
	Overall			0.50	14.7	B	-	0.56	15.3	B
UNSIGNALIZED INTERSECTION										
Kent Avenue / Penn Street-Williamsburg Street East	EB	L	0.23	23.9	C	-	0.35	21.9	C	-

Notes:

v/c = volume-to-capacity ratio; LOS = Level-of-Service

NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound

L = Left-Turn; T = Through; R = Right-Turn;

LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn

Average Control Delay shown in units of seconds/vehicle

85th-Percentile Queue shown in units of vehicles.

* = overall v/c ratio not calculated for this intersection.

As shown in **Table 3.13-2**, all approaches at each of the study intersections currently operate at LOS “D” or better during the weekday AM and PM peak hours, with the exception of the following:

- **Flushing Avenue/Washington Avenue** – During the weekday AM and PM peak hours, the northbound approach currently operates with delays corresponding to LOS “E”. The intersection as a whole currently operates at LOS “C” overall during the weekday AM and PM peak hours.
- **Flushing Avenue/Williamsburg Street West** – The eastbound approach currently operates over capacity with delays corresponding to LOS “F” during the weekday PM peak hour. During the weekday PM peak hour, the westbound left-turn movement operates with delays corresponding to LOS “E.” The southbound approach currently operates over capacity and at LOS “E” during both the weekday AM and PM peak hours. The intersection as a whole currently operates at LOS “E” overall during the weekday AM and PM peak hours.

Future Without the Proposed Action (Future No-Action) Traffic Conditions

The Future No-Action Conditions traffic analysis identifies how the study area’s transportation system is projected to operate in the future *without* the proposed project. As such, the Future No-Action Conditions traffic analysis includes anticipated future increases in background traffic volumes, but does not include traffic generated by the proposed project. The proposed project is anticipated to be in place by 2027. Therefore, the horizon year for all future conditions traffic analyses is 2027.

Planned Development

As part of this analysis, staff at the New York City Department of City Planning (NYCDCP) was contacted in order to identify any significant planned future developments or transportation improvement projects anticipated to occur within the study area between 2014 and 2027. Based on conversations with NYCDCP staff, the following planned future developments were identified. These include a combination of projects: 1) outside the Brooklyn Navy Yard, 2) inside the Navy Yard, but outside the Steiner Studios campus, and 3) inside the Steiner Studios campus, not dependent on the proposed action (as discussed in **Chapter 2.0**, “Project Description.”)

Outside the Brooklyn Navy Yard

- **Domino Sugar Rezoning** – This project involves redevelopment of the former Domino Sugar site located along the Williamsburg waterfront in Brooklyn with residential, retail/commercial, community facility, and open space uses. The proposed project would include up to 2,400 residential units, up to 127,537 gross square feet (gsf) of retail/commercial space, up to 146,451 gsf of community facility space, up to 98,738 gsf of commercial office space, and approximately four acres of public open space. In addition, the proposed project would provide up to 1,694 below-grade accessory parking spaces. It is expected that the proposed project would be completed and occupied by 2020. Traffic volume forecasts for this project were obtained from the May 2010 FEIS prepared for the project.
- **Rose Plaza (470 Kent Ave)** – This is the site of an existing 235,772-square-foot lumber yard/cabinet manufacturer. The project involves a City Planning Commission (CPC) Special Permit renewal to accommodate up to approximately 754 residential dwelling units plus 29,000 square feet of neighborhood retail. Traffic volume forecasts for this project were estimated by AECOM using *CEQR* trip rates and other transportation planning factors approved by NYCDOT staff. Estimated traffic volumes associated with the existing lumber yard/cabinet manufacturer uses currently on-site, which are accounted for in the traffic count data and existing conditions analysis, have been subtracted from the increment added into the No-Action Condition for this project.
- **Kedem Winery (420-430 Kent Ave)** – This is the site of an existing 54,532-square-foot production studio, and involves a CPC Special Permit renewal to accommodate up to

approximately 450 residential dwelling units plus 26,430 square feet of neighborhood retail. Traffic volume forecasts for this project were estimated by AECOM using *CEQR* trip rates and other transportation planning factors approved by NYCDOT staff. Estimated traffic volumes associated with the existing production studio space, which are accounted for in the traffic count data and existing conditions analysis, have been subtracted from the increment added into the No-Action Condition for this project.

Inside the Brooklyn Navy Yard, but Outside the Steiner Studios Campus

- **Admiral's Row Plaza at Brooklyn Navy Yard** – This development site is located at the northeast corner of the intersection of Navy Street and Nassau Street, in the southwest corner of the Brooklyn Navy Yard. The site is currently not actively used and is occupied by several vacant structures and bounded along its public street frontages by walls and fencing. The development program for the proposed project includes approximately 152,891 square feet of retail shopping center space which would include approximately 26,214 square feet of specialty retail, approximately 52,854 square feet of local neighborhood retail, and an approximately 74,161 square feet supermarket; approximately 7,024 square feet of community facility/non-profit office space; and approximately 127,364 square feet of light industrial use. Traffic volume forecasts for this project were obtained from the October 2011 FEIS prepared for the project.
- **Sands Building** – The Sands Building is located east of Navy Street, and north of Sands Street within the Navy Yard. This building may be developed concurrently or after Admiral's Row. It is being offered to developers bidding on Admiral's Row as an option to develop a light industrial/office building of approximately 100,000 square feet (i.e., 70,000 square feet of office and 30,000 square feet of light industrial space). This project is expected to be complete by the end of 2016. Traffic volume forecasts for this project were estimated by AECOM using *CEQR* trip rates and other transportation planning factors approved by NYCDOT staff.
- **Building 77** – This project is allowed as-of-right and involves the renovation of a 960,000-square-foot, 18-story industrial building (Building 77) in the Navy Yard that is currently vacant. This project is expected to be complete by June 2016. Traffic volume forecasts for this project were estimated by AECOM using *CEQR* trip rates and other transportation planning factors approved by NYCDOT staff.
- **GMC (Building 128)** – This project is allowed as-of-right and involves the adaptive reuse of a 245,000-square-foot, multitenant light industrial/manufacturing building. This project is expected to be completed by July 2015. Traffic volume forecasts for this project were estimated by AECOM using *CEQR* trip rates and other transportation planning factors approved by NYCDOT staff.
- **WeWork (area between Dry Dock 2 and Dry Dock 3)** – This project is allowed as-of-right and involves the redevelopment of a 13-story, 450,000 sf building to accommodate shared office space. This project is expected to be completed in late 2016. Traffic volume forecasts for this project were estimated by AECOM using *CEQR* trip rates and other transportation planning factors approved by NYCDOT staff.
- **Brooklyn Greenway Initiative Naval Hospital Cemetery** – The Brooklyn Greenway Initiative, working with BNYDC, plans to create a 1.7-acre park in the former Brooklyn Naval Hospital Cemetery. The site, which is on Williamsburg Street West between Kent and Flushing Avenues, will have a walkway, landscape areas and other features. This project is expected to be completed in late 2016. Traffic volume forecasts for this project were estimated by AECOM using *CEQR* trip rates and other transportation planning factors approved by NYCDOT staff.

Inside the Steiner Studios Campus¹²

- **B&H Building (Building 664)** – This 160,383-square-foot building is currently used as a warehouse for B&H Photo, an electronics retailer. The project is allowed as-of-right and would involve redevelopment of Building 664 to include 160,383 square feet of production support for Steiner Studios. The redevelopment is expected to occur prior to the 2027 analysis year of the proposed project. Traffic volume forecasts for this project were estimated by AECOM using *CEQR* trip rates, other transportation planning factors approved by NYCDOT staff. Estimated traffic volumes associated with the existing warehouse space, which are accounted for in the traffic count data and existing conditions analysis, have been subtracted from the increment added into the No-Action Condition for this project.
- **Kent Stages** – This 175,000-square-foot lot is currently a parking lot for Steiner Studios. The project is allowed as-of-right and would involve development of 175,000 square feet of stages for Steiner Studios. The Kent Stages are expected to be developed by 2027. Traffic volume forecasts for this project were estimated by AECOM using *CEQR* trip rates and other transportation planning factors approved by NYCDOT staff.
- **Academic uses at 25 Washington Avenue (Building 1)** – This project involves sublease of space in Building 1 at the Brooklyn Navy Yard to two academic tenants: the Brooklyn College Barry R. Feirstein Graduate School of Cinema (part of the CUNY system) and the Carnegie Mellon University Integrative Media Center. Building 1 is a 7-story World War II-era former United States Navy building that is bounded by Washington Avenue to the west, Paulding Street to the north, 14th Avenue to the east, and South Street to the south. A total of approximately 66,838 square feet of the building would be occupied by the two proposed academic institutions. The remaining 108,785 square feet of space in Building 1 would house media, film, and television production uses, including mill shops, wardrobe storage/design, and studio-related production offices. Traffic volume forecasts for this project were obtained from the December 2013 EAS and supplemental environmental studies prepared by AECOM. It should be noted that when the traffic data collection effort was underway in June 2014, the media uses (i.e., 108,785 zsf) were already occupying Building 1. Therefore, only the 66,838 square feet of Building 1 dedicated to the two proposed academic institutions was included in the future traffic volume forecasts.

Planned Transportation System Improvements

Reconstruction of Flushing Avenue – As part of the second phase of the Brooklyn Waterfront Greenway Development Plan, a new widened sidewalk with a bicycle lane/pedestrian walkway/amenity strip is planned for the north side of Flushing Avenue between Navy Street and Williamsburg Street West to create an attractive and safer pedestrian and bicycle-friendly corridor. This reconstruction will also involve roadway geometric changes at two of the study intersections – Flushing Avenue/Washington Avenue and Flushing Avenue/Williamsburg Street West. At the former intersection, separate exclusive left-turn lanes will be provided on the eastbound and westbound approaches on Flushing Avenue. At the latter intersection, on-street parking will be prohibited along the south side of Flushing Avenue, west of Williamsburg Street West, to accommodate a second eastbound travel lane. It is expected that the first stage of the project will be completed in 2016, with all improvements in place by 2027. The planned street geometry changes were incorporated into the year 2027 No-Action and With-Action conditions traffic (and pedestrian) analyses based on information contained in the NYC Department of Design and Construction (NYCDDC) Traffic Study Report.

¹² In the Future No-Action Scenario, Steiner Studios intends to build the West Parking Structure, a parking facility with approximately 1,000 accessory parking spaces. Steiner Studios also plans to build the North Parking Structure, with approximately 210 accessory parking spaces. These two parking structures would provide accessory parking to the Steiner Studios campus and would not generate additional vehicle trips. Parking in these garages for the general public will not be allowed.

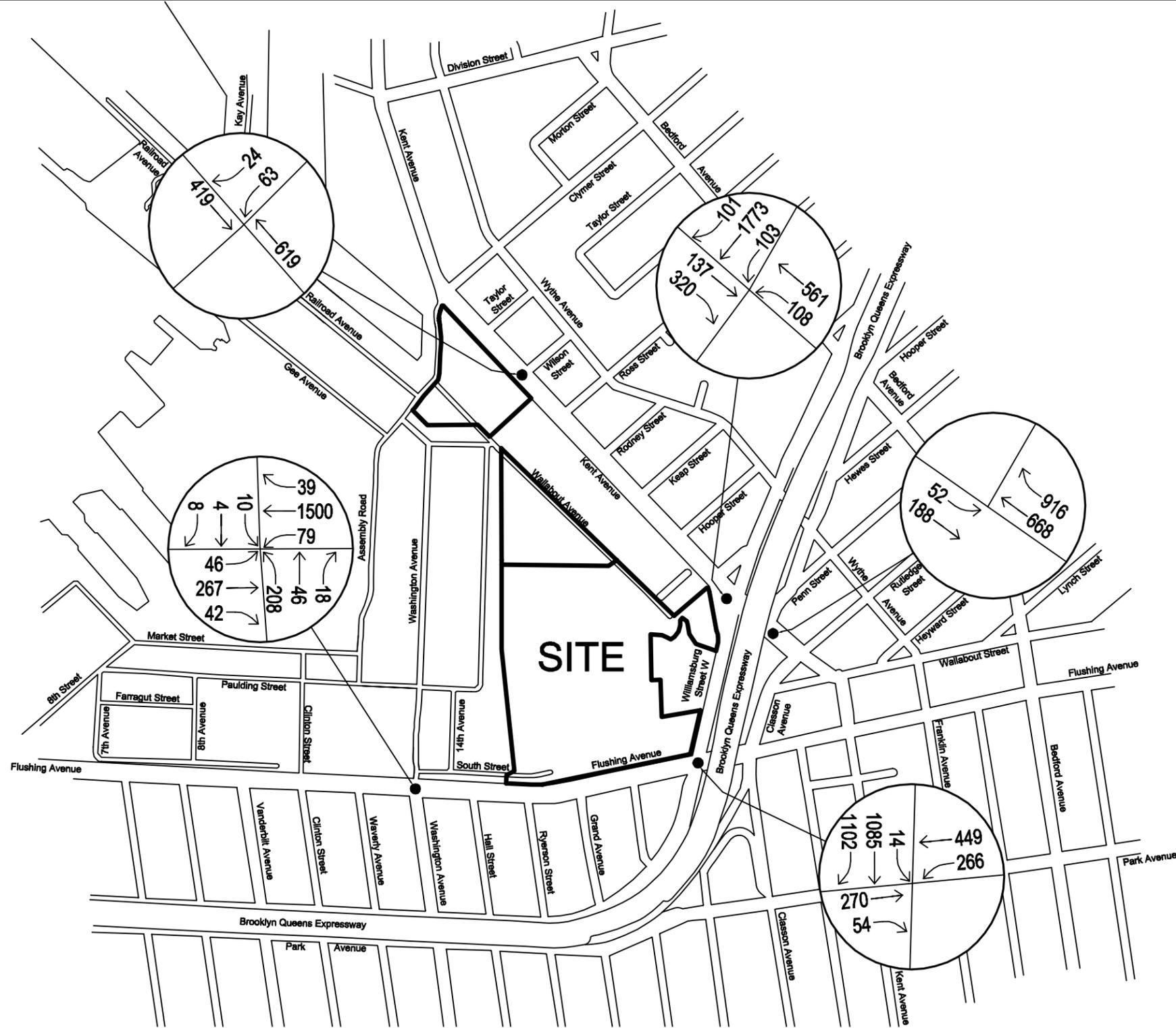
Future Without the Proposed Action Traffic Volumes and Levels-of-Service

During the 2014 to 2027 period, it is expected that vehicular travel demands in the study area will increase over time. In order to forecast future traffic demands without the proposed project, the applicable growth rates in the March 2014 *CEQR Technical Manual* for Brooklyn were compounded over 13 years resulting in 4.59 percent total growth. This growth rate was applied to the existing traffic volumes. In addition, the weekend AM and PM peak hour incremental traffic volumes for the other background development projects described above were added to these adjusted traffic volumes to arrive at the projected Future No-Action traffic volumes. The resulting year 2027 Future No-Action traffic volumes are shown in **Figures 3.13-4** and **3.13-5** for the weekday AM and PM peak hours, respectively.

Capacity Analysis

Using Future No-Action traffic volumes shown in **Figures 3.13-4** and **3.13-5**, intersection capacity analyses were conducted using the *HCM* methodologies. As shown in **Table 3.13-3**, all approaches at each of the study intersections are projected to operate at LOS "D" or better during the weekday AM and PM peak hours, with the exception of the following:

- **Flushing Avenue/Washington Avenue** – During the weekday AM peak hour, the eastbound left-turn lane is projected to operate near capacity with delays corresponding to LOS "F" and the westbound through/right-turn lane is projected to operate over capacity with delays corresponding to LOS "F". During the weekday PM peak hour, the westbound left-turn lane and the eastbound through/right-turn lane are both projected to operate over capacity with delays corresponding to LOS "F." During the weekday AM and PM peak hours, the northbound approach is projected to operate over capacity with delays corresponding to LOS "F". The intersection as a whole is projected to operate near capacity at LOS "F" overall during the weekday AM and PM peak hours.
- **Flushing Avenue/Williamsburg Street West** – The eastbound approach is projected to operate at capacity with delays corresponding to LOS "F" during the weekday PM peak hour. The westbound left-turn movement is projected to operate over capacity with delays corresponding to LOS "E" during the weekday PM peak hour. The southbound approach is projected to operate over capacity and at LOS "F" during both the weekday AM and PM peak hours. The intersection as a whole is projected to operate at LOS "F" overall during the weekday AM and PM peak hours.
- **Kent Avenue/Williamsburg Street West** – Eastbound right-turn movements are projected to operate near capacity with delays corresponding to LOS "F" during the weekday AM peak hour. Southbound through and left-turn movements are projected to operate over capacity with delays corresponding to LOS "F" during the weekday AM peak hour. These southbound movements are also projected to operate near capacity during the weekday PM peak hour. The intersection as a whole is projected to operate at LOS "F" overall during the weekday AM peak hour and LOS "D" overall during the weekday PM peak hour.
- **Kent Avenue/Penn Street-Williamsburg Street East** – Eastbound left-turns at this unsignalized intersection are projected to experience delays corresponding to LOS "E" and LOS "F" during the weekday AM and PM peak hours, respectively.



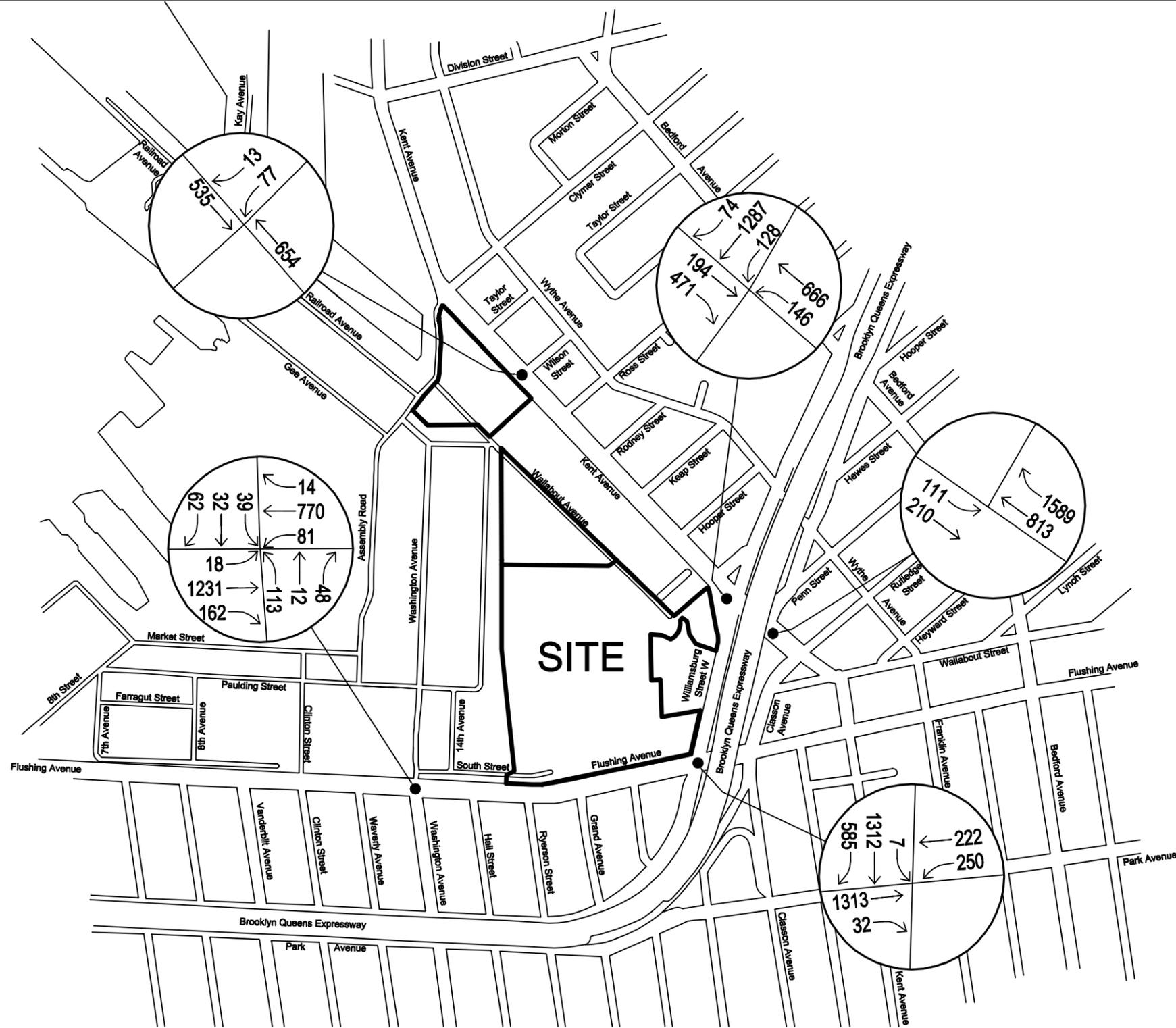
Note: All traffic volumes rounded to the nearest one (1) vehicle.



Steiner Studios Media Campus EIS
Brooklyn, New York

Year 2027 No-Action Turning Movement Volumes
Weekday AM Peak Hour (8:00-9:00 AM)

Figure 3.13-4



Note: All traffic volumes rounded to the nearest one (1) vehicle.



Steiner Studios Media Campus EIS
Brooklyn, New York

Year 2027 No-Action Turning Movement Volumes
Weekday PM Peak Hour (4:45-5:45 PM)

Figure 3.13-5

Table 3.13-3 – Year 2027 Levels-of-Service, Future No-Action Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00-9:00 AM)				Weekday PM Peak Hour (4:45-5:45 PM)			
			v/c	Average Control Delay	LOS	85th % Queue	v/c	Average Control Delay	LOS	85th % Queue
			SIGNALIZED INTERSECTIONS							
Flushing Avenue / Washington Avenue	EB	L	0.95	118.7	F	4.2	0.09	6.4	A	0.5
		TR	0.36	8.2	A	9.0	1.43	216.9	F	161.0
	WB	L	0.18	6.9	A	2.2	1.68	387.1	F	12.9
		TR	1.28	148.8	F	157.0	0.64	12.2	B	26.7
	NB	LTR	1.44	268.6	F	36.1	1.29	215.4	F	19.5
	SB	L	0.05	37.5	D	0.6	0.26	42.4	D	2.4
		TR	0.05	37.5	D	0.7	0.32	41.8	D	5.6
Overall			1.32	136.6	F	-	1.65	149.6	F	-
Flushing Avenue / Williamsburg Street West	EB	TR	0.50	37.3	D	9.8	1.80	425.5	F	105.0
	WB	L	0.80	50.5	D	13.6	0.84	68.8	E	12.5
		T	0.76	34.1	C	26.2	0.40	26.2	C	10.6
	SB	LTR	1.81	396.8	F	158.0	1.22	128.2	F	86.9
	Overall			1.35	270.4	F	-	1.31	230.0	F
Kent Avenue / Williamsburg Street West	EB	T	0.13	22.4	C	3.0	0.15	22.6	C	4.2
		R	0.97	74.3	F	-	0.75	23.9	C	-
	WB	LT	0.71	33.7	C	17.6	0.89	44.4	D	28.1
		LT	1.37	198.7	F	108.0	0.94	39.4	D	46.0
	SB	R	0.27	15.8	C	-	0.28	20.3	C	-
		Overall		*	136.6	F	-	*	36.7	D
Kent Avenue / Wilson Street	EB	T	0.60	14.0	B	13.4	0.59	13.1	B	14.9
	WB	T	0.81	22.1	C	23.2	0.89	27.8	C	30.7
	SB	LR	0.30	27.6	C	3.7	0.28	27.3	C	3.5
	Overall			0.65	19.4	B	-	0.70	21.9	C
UNSIGNALIZED INTERSECTION										
Kent Avenue / Penn Street-Williamsburg Street East	EB	L	0.34	34.7	D	-	1.10	175.6	F	-

Notes:

v/c = volume-to-capacity ratio; LOS = Level-of-Service

NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound

L = Left-Turn; T = Through; R = Right-Turn;

LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn

Average Control Delay shown in units of seconds/vehicle

85th-Percentile Queue shown in units of vehicles.

* = overall v/c ratio not calculated for this intersection.

Future With the Proposed Action (Future With-Action) Traffic Conditions

The Future With-Action Condition traffic analysis identifies how the study area's transportation system will operate in the 2027 horizon year with the addition of vehicular traffic generated by the proposed project. In this analysis, the projected weekday AM and PM peak hour vehicle trips associated with the proposed project were added to the respective Future No-Action traffic volumes to arrive at projected Future With-Action traffic volumes. Intersection LOS analyses were then repeated for both analysis peak hours based on the projected Future With-Action traffic volumes, in order to evaluate the performance of the transportation system with the inclusion of vehicular traffic associated with the proposed project. The results of the Future No-Action and Future With-Action Conditions analyses were then compared to identify any potential significant traffic impacts associated with the proposed project.

Proposed Development Plan

The proposed project consists of approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex. Outside the Naval Annex, there would be an additional approximately 70,000 square feet of new development for a new Backlot. In addition, the project sponsor intends to develop a 250,000-square-foot, 650-space Kent Avenue Parking Structure (accessory parking) that is envisioned for the area outside the Naval Annex, and therefore this parking structure is considered as part of the project for this environmental review.

The approximately 420,000 square feet of floor area under the proposed project is expected to be a combination of media (TV/film) production space (approximately 315,000 square-feet) and related academic space (approximately 105,000 square-feet).

Vehicular and pedestrian access points for the Media Campus would be provided via the existing driveway at the Flushing Avenue/Washington Avenue intersection (to the south) and the proposed driveway to be located on the south side of Kent Avenue, opposite the intersection with Wilson Street (to the north). The development activities are expected to be complete by 2027.

Trip Generation

In order to determine the number of trips generated by the proposed project, trip generation estimates were prepared for each of the land uses proposed as part of the development, namely media (TV/film) production and academic (university level) uses. Under the proposed project, there would be approximately 105,000 square feet of academic uses, with the balance of the remaining floor space (i.e., approximately 315,000 square feet) dedicated to uses related to media (TV and film) production. The trip generation estimates were prepared based on standard transportation planning assumptions provided in the March 2014 *CEQR Technical Manual*, as well as those provided by New York City Department of Transportation (NYCDOT) staff as part of the *Environmental Assessment for the Brooklyn Navy Yard Zoning Override for 25 Washington Avenue* in late 2013. The *Environmental Assessment for the Brooklyn Navy Yard Zoning Override for 25 Washington Avenue* (CEQR No. 14DME007K) was reviewed and approved by NYCDOT. The resulting trip generation estimates were then reviewed and approved by NYCDOT staff. **Tables 3.13-4** and **3.13-5** show the estimated person trips and vehicle trips, respectively, for the proposed project, as well as the associated transportation planning assumptions.

Table 3.13-4 – Steiner Studios: Project-Generated Person Trip Generation Estimate

Land Use	Size (sq. ft.)	Weekday Daily Person-Trip Rate	Temporal Distribution (%)			Linked-Trip %	Estimated Person-Trips		
			Weekday AM	Weekday MD	Weekday PM		Weekday AM	Weekday MD	Weekday PM
Media (Film/TV) Production	315,000	10 trips per 1,000 sq. ft.	12.0%	15.0%	11.0%	15.0%	321	402	295
Academic Use	105,000	26.6 per 1,000 sq. ft.	16.0%	8.0%	26.0%	15.0%	380	190	617
TOTAL = 420,000			TOTAL PERSON-TRIPS =				701	592	912

Note, The trip generation assumptions are based on the Brooklyn Navy Yard Zoning Override for Academic Uses in 25 Washington Avenue EAS, December 2013, which used the following sources:

Media (Film/TV) Production trip rate and temporal distribution based on "Television Studio" from *CEQR Technical Manual* (Table 16-2).

Academic Use trip rate from *CEQR Technical Manual* (Table 16-2).

Academic Use temporal distribution for AM and PM from *CEQR Technical Manual* (Table 16-2). Academic Use temporal distribution for midday from The New School University Center Project.

15 percent linked-trip credit applied to both land uses to account for trip-chaining between Academic Uses and Media Production uses.

Table 3.13-5 – Steiner Studios: Project-Generated Vehicle Trip Generation Estimate

Land Use	Size (sq. ft.)	Estimated Mode Split (AM, PM)						Estimated Mode Split (MD)						Estimated Vehicle-Trips								
														Weekday AM			Weekday MD			Weekday PM		
		Auto	Taxi	Sub-way	Bus	Walk	Total	Auto	Taxi	Sub-way	Bus	Walk	Total	Total	In	Out	Total	In	Out	Total	In	Out
Media (Film/TV) Production	315,000	31.0%	1.0%	44.0%	14.0%	10.0%	100.0%	2.0%	1.0%	7.0%	7.0%	83.0%	100.0%	82	72	10	12	6	6	75	9	66
Academic Use	105,000	12.0%	2.0%	63.0%	9.0%	14.0%	100.0%	12.0%	2.0%	63.0%	9.0%	14.0%	100.0%	48	45	3	24	11	13	78	33	45
Truck trips		100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	13	7	7	15	7	7	3	1	1
TOTAL =	420,000													143	124	19	51	24	27	156	43	112

Note, The trip generation assumptions are based on the Brooklyn Navy Yard Zoning Override for Academic Uses in 25 Washington Avenue EAS, December 2013, which used the following sources:

Media (Film/TV) Production modal split based on modal split for Light Industrial land use in 850 Third Avenue EAS.

Media (Film/TV) Production vehicle occupancy rates based on Light Industrial land use in 850 Third Avenue EAS: Auto = 1.30 / Taxi = 1.30.

Media (Film/TV) Production directional splits (In%/Out%) based on Light Industrial land use in 850 Third Avenue EAS: AM (88/12), MD (50/50), PM (12/88).

Academic Use modal split based on The New School University Center Project.

Academic Use vehicle occupancy rates based on The New School University Center Project: Auto = 1.2 / Taxi = 1.50.

Academic Use directional splits (In%/Out%) based on The New School University Center Project: AM (94/6), MD (45/55), PM (42/58).

Truck trips assumed as per Office trip rate in *CEQR Technical Manual* (Table 16-2).

Trip Distribution and Assignment

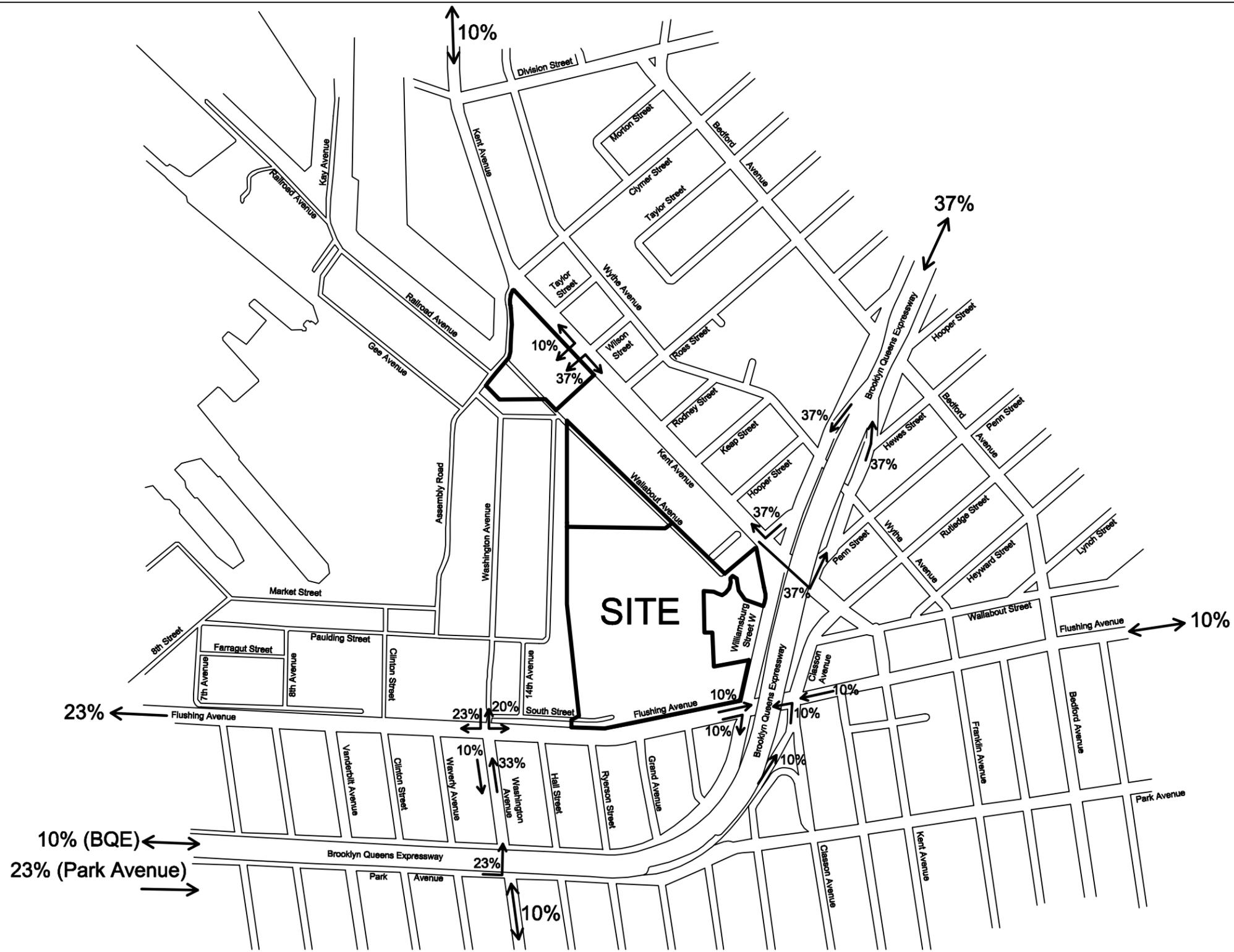
Figure 3.13-6 shows the estimated vehicle trip distribution for the proposed project during weekday peak hours. This trip distribution was developed based on reverse journey-to-work census data for Census Tract 543, which comprises the BNY in its entirety. Based on the estimated trip generation, and the estimated trip distribution pattern shown in **Figure 3.13-6**, traffic assignments were prepared for the weekday AM and PM peak hours. During the weekday midday peak hour, the project would generate 51 vehicle trips. However, following a spatial assignment of these 51 trips to the two intersections providing access to and from the site, the project would result in less than the *CEQR* screening threshold of 50 trips per intersection. During the weekend, the studio has limited operations; thus, traffic generated would be substantially less than during the peak weekday AM and PM periods. Therefore, a detailed traffic assessment is warranted for only the weekday AM and PM peak hours.

Figures 3.13-7 and **3.13-8** show the resulting assignments of the incremental project-generated turning movement volumes during the weekday AM and PM peak hours, respectively, at the study intersections. **Figures 3.13-9** and **3.13-10** show the resulting total traffic volumes under the year 2027 Future With-Action Condition for both analysis peak hours, which are the sum of the project-generated traffic volumes and the traffic volumes under the Future With-Action Conditions.

Capacity Analysis

Using the Future With-Action traffic volumes shown in **Figures 3.13-9** and **3.13-10**, intersection capacity analyses were conducted using the *HCM* methodologies. As shown in **Table 3.13-6**, all approaches at each of the study intersections are projected to operate at LOS "D" or better during the weekday AM and PM peak hours, with the exception of the following:

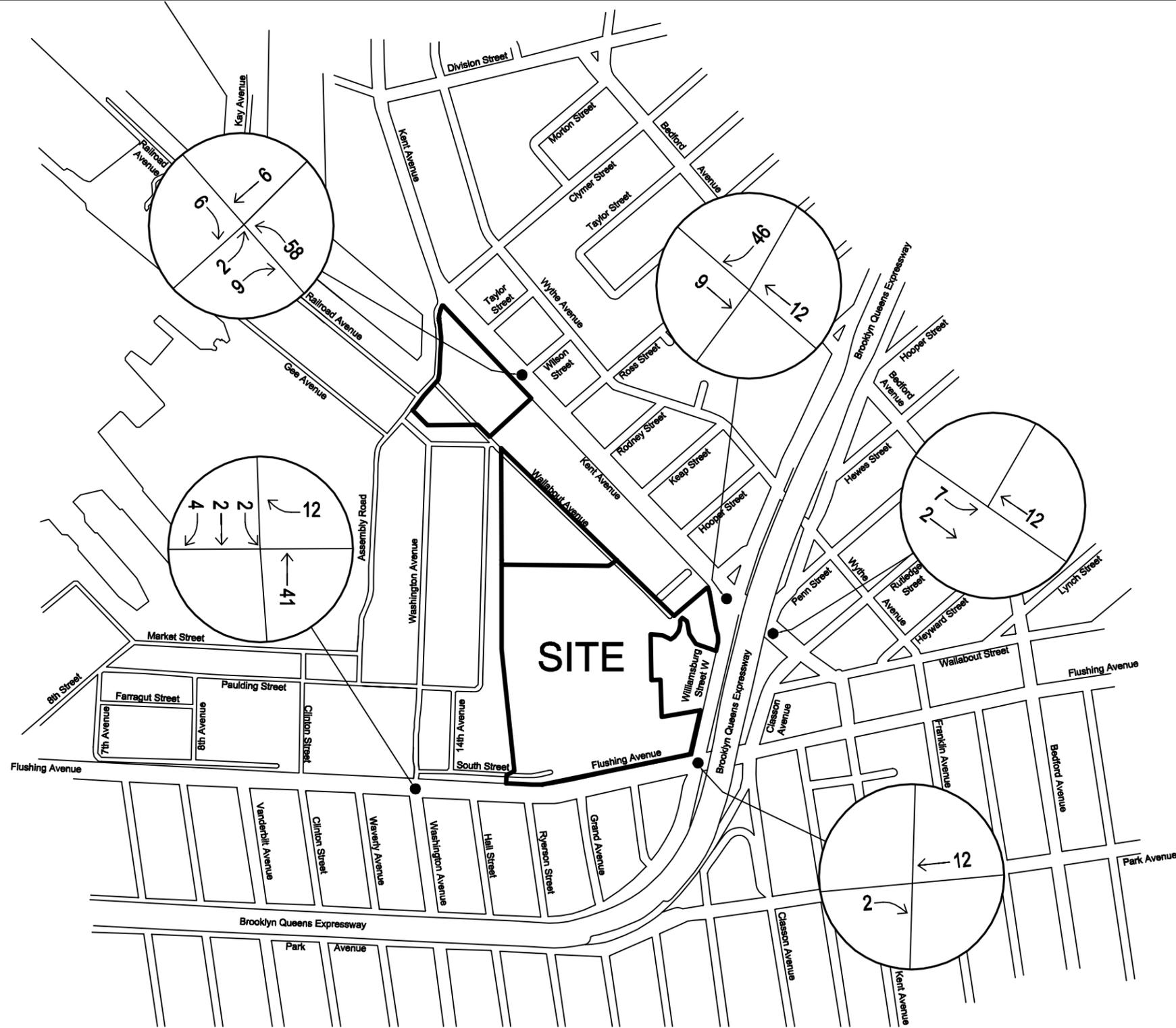
- **Flushing Avenue/Washington Avenue** – During the weekday AM peak hour, the eastbound left-turn lane is projected to continue to operate near capacity with delays corresponding to LOS "F" and the westbound through/right-turn lane is projected to continue to operate over capacity with delays corresponding to LOS "F". During the weekday PM peak hour, the westbound left-turn lane and the eastbound through/right-turn lane are both projected to continue to operate over capacity with delays corresponding to LOS "F." During the weekday AM and PM peak hours, the northbound approach is projected to continue to operate over capacity with delays corresponding to LOS "F". The intersection as a whole is projected to continue to operate near capacity at LOS "F" overall during the weekday AM and PM peak hours.
 - **Flushing Avenue/Williamsburg Street West** – The eastbound approach is projected to continue to operate at capacity with delays corresponding to LOS "F" during the weekday PM peak hour. The westbound left-turn movement is projected to continue to operate over capacity with delays corresponding to LOS "E" during the weekday PM peak hour. The southbound approach is projected to continue to operate over capacity and at LOS "F" during both the weekday AM and PM peak hours. The intersection as a whole is projected to continue to operate at LOS "F" overall during the weekday AM and PM peak hours.
 - **Kent Avenue/Williamsburg Street West** – Eastbound right-turn movements are projected to continue to operate near capacity with delays corresponding to LOS "F" during the weekday AM peak hour. Southbound through and left-turn movements are projected to continue to operate over capacity with delays corresponding to LOS "F" during the weekday AM peak hour. These southbound movements, as well as movements from the westbound approach, are projected to operate near capacity during the weekday PM peak hour. The intersection as a whole is projected to continue to operate at LOS "F" overall during the weekday AM peak hour and LOS "D" overall during the weekday PM peak hour.
- Kent Avenue/Penn Street-Williamsburg Street East** – Eastbound left-turns at this unsignalized intersection are projected to continue to experience delays corresponding to LOS "E" and LOS "F" during the weekday AM and PM peak hours, respectively.



Steiner Studios Media Campus EIS
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Estimated Vehicle Trip Distribution Pattern

Figure 3.13-6



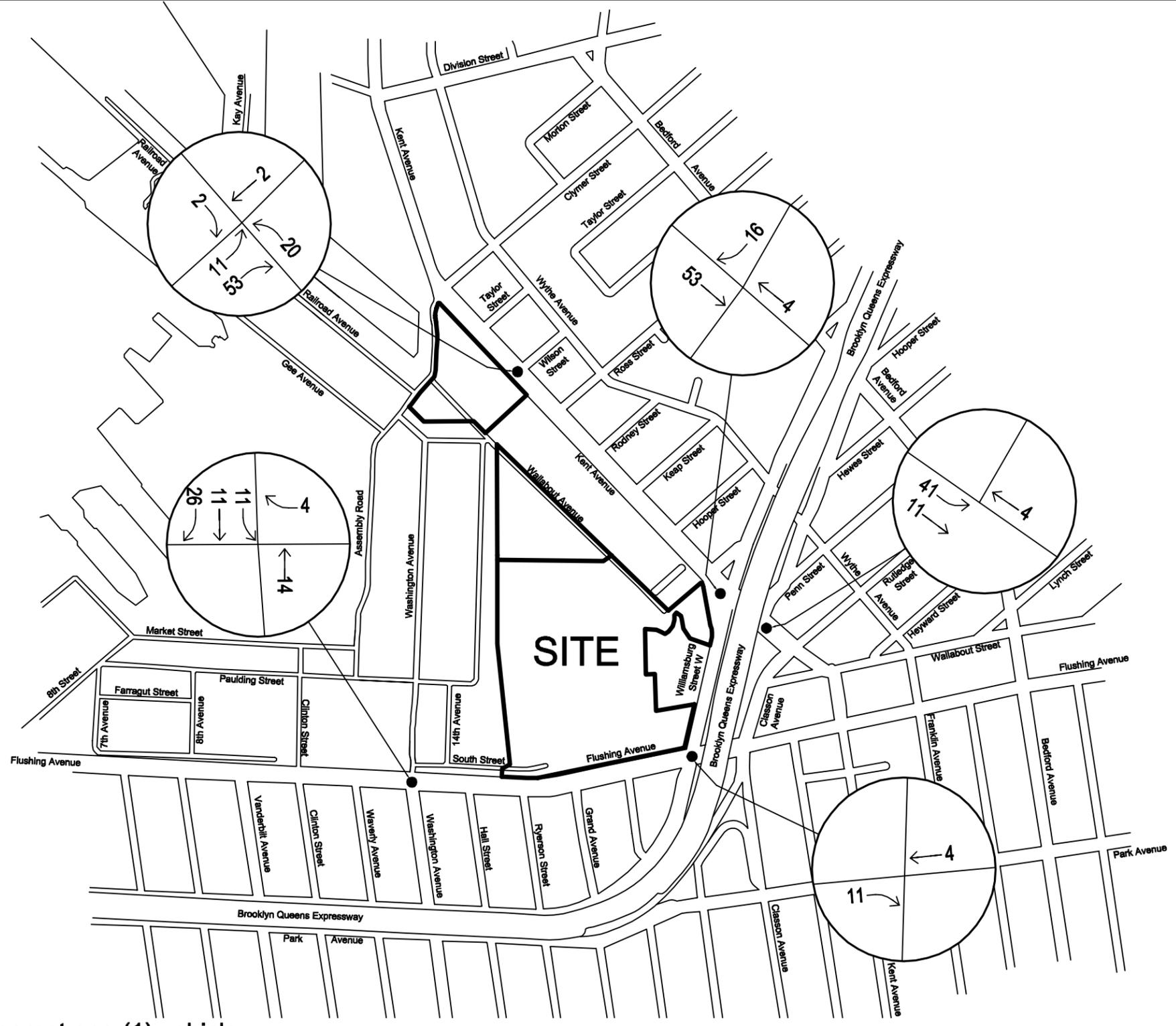
Note: All traffic volumes rounded to the nearest one (1) vehicle.



Steiner Studios Media Campus EIS
Brooklyn, New York

Project Generated Traffic Volumes
Weekday AM Peak Hour (8:00-9:00 AM)

Figure 3.13-7



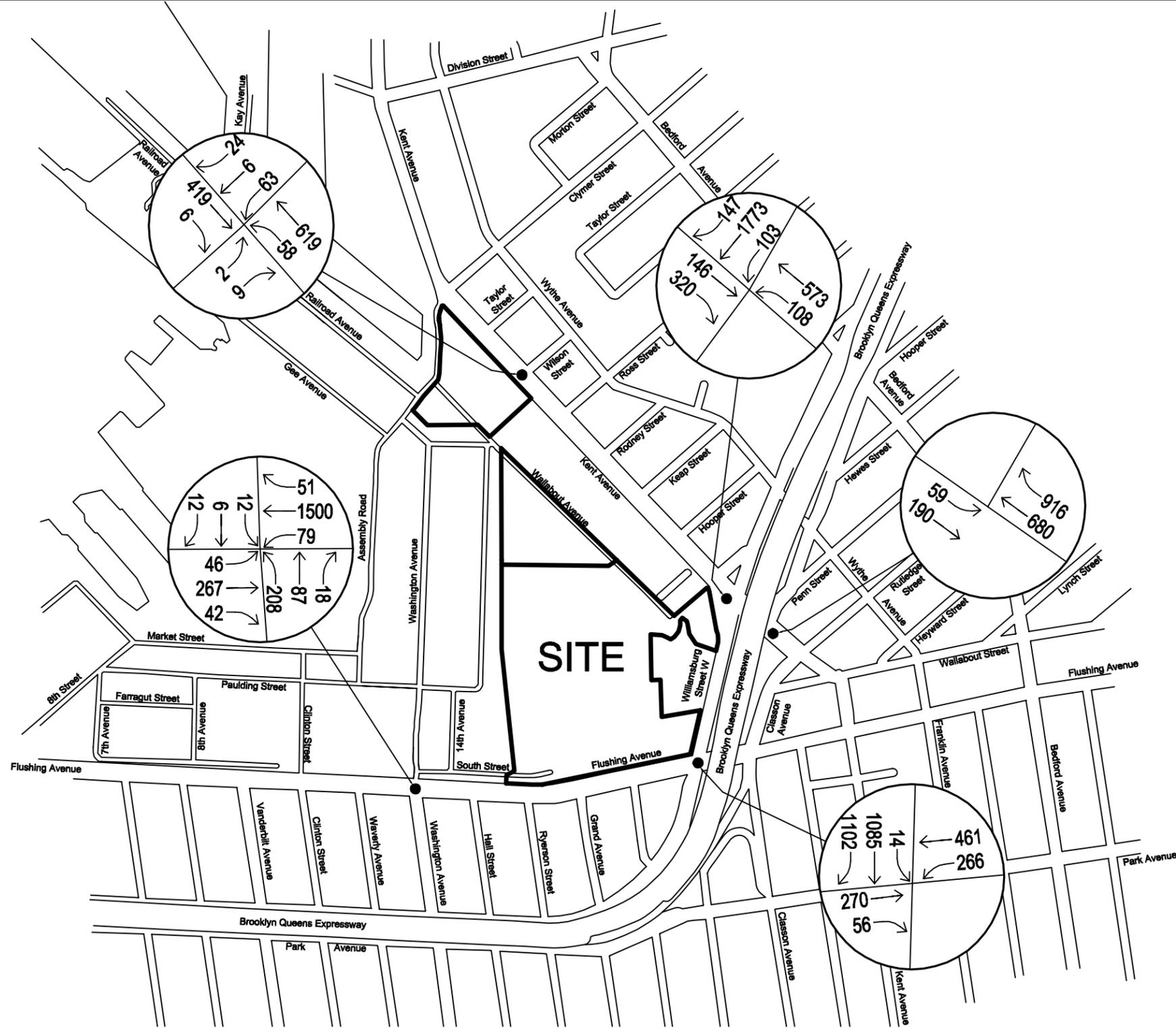
Note: All traffic volumes rounded to the nearest one (1) vehicle.



Steiner Studios Media Campus EIS
Brooklyn, New York

Project Generated Traffic Volumes
Weekday PM Peak Hour (4:45-5:45 PM)

Figure 3.13-8



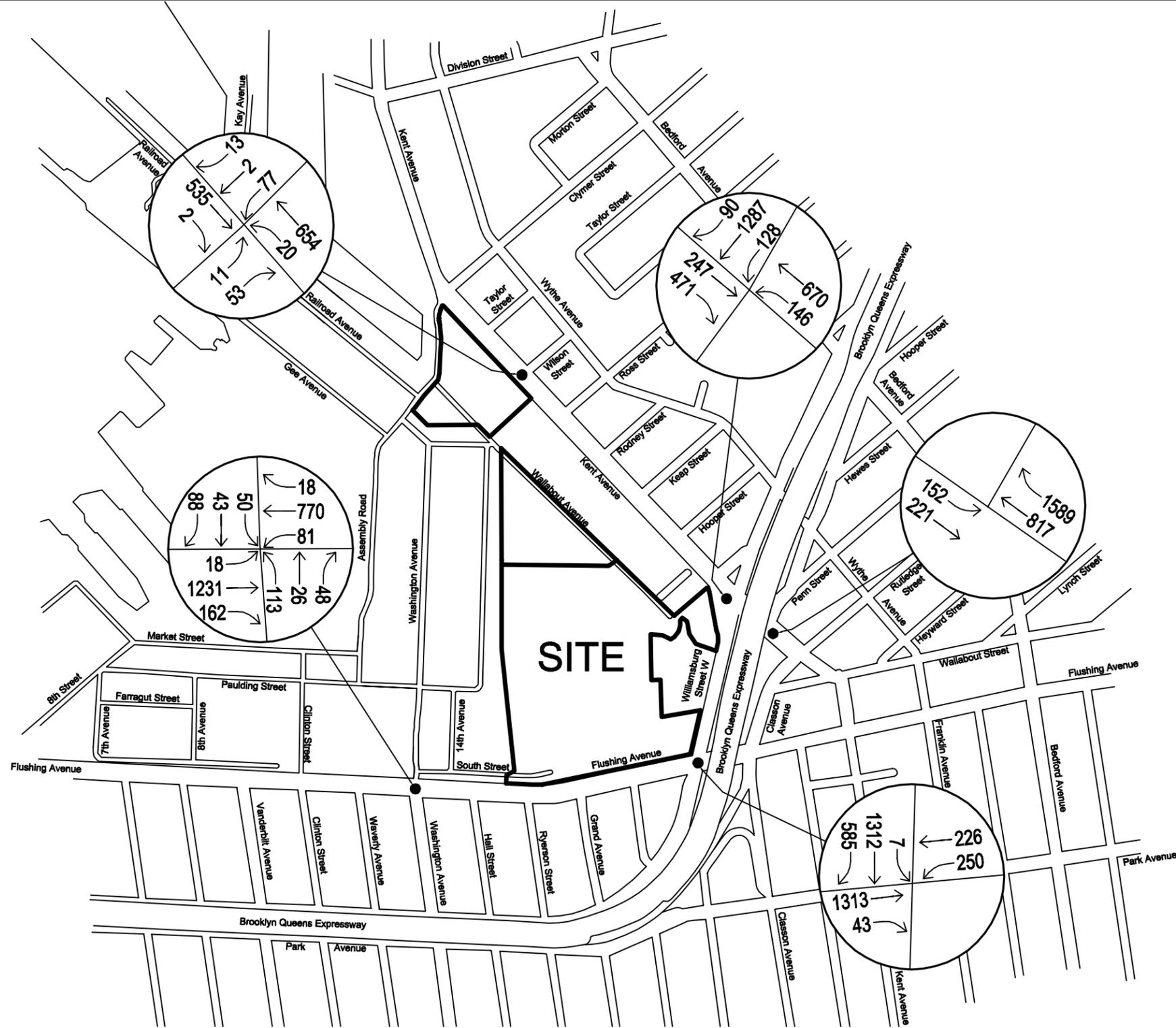
Note: All traffic volumes rounded to the nearest one (1) vehicle.



Steiner Studios Media Campus EIS
Brooklyn, New York

Year 2027 With-Action Turning Movement Volumes
Weekday AM Peak Hour (8:00-9:00 AM)

Figure 3.13-9



Note: All traffic volumes rounded to the nearest one (1) vehicle.



Steiner Studios Media Campus EIS
Brooklyn, New York

Year 2027 With-Action Turning Movement Volumes
Weekday PM Peak Hour (4:45-5:45 PM)

Figure 3.13-10

Table 3.13-6 – Year 2027 Levels-of-Service, Future With-Action Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00-9:00 AM)				Weekday PM Peak Hour (4:45-5:45 PM)			
			v/c	Average Control Delay	LOS	85th % Queue	v/c	Average Control Delay	LOS	85th % Queue
			SIGNALIZED INTERSECTIONS							
Flushing Avenue / Washington Avenue	EB	L	0.95	118.7	F	4.2	0.09	6.4	A	0.8
		TR	0.36	8.2	A	9.0	1.43	216.9	F	161.0
	WB	L	0.18	6.9	A	2.2	1.68	387.1	F	12.9
		TR	1.29	155.8	F	160.0	0.65	12.3	B	27.0
	NB	LTR	1.83	436.9	F	50.6	1.89	477.2	F	27.4
	SB	L	0.06	37.8	D	0.7	0.35	45.3	D	3.2
		TR	0.08	38.1	D	1.1	0.57	49.9	D	8.4
Overall			1.42	167.4	F	-	1.79	167.2	F	-
Flushing Avenue / Williamsburg Street West	EB	TR	0.50	37.4	D	9.8	1.82	434.9	F	106.0
	WB	L	0.80	50.7	D	13.6	0.84	68.8	E	12.5
		T	0.78	35.2	D	27.5	0.41	26.4	C	10.8
	SB	LTR	1.81	396.8	F	158.0	1.22	128.2	F	86.9
	Overall			1.35	269.4	F	-	1.32	234.1	F
Kent Avenue / Williamsburg Street West	EB	T	0.14	22.5	C	3.2	0.19	23.0	C	5.4
		R	0.97	74.3	F	-	0.75	23.9	C	-
	WB	LT	0.72	34.4	C	18.2	0.93	49.4	D	29.8
	SB	LT	1.37	198.7	F	108.0	0.94	39.4	D	46.0
		R	0.40	18.2	C	-	0.35	21.9	C	-
Overall			*	134.4	F	-	*	37.7	D	-
Kent Avenue / Wilson Street	EB	TR	0.61	14.2	B	13.7	0.59	13.2	B	15.0
	WB	LT	0.95	39.2	D	34.1	0.93	33.6	C	34.7
	NB	LR	0.03	23.9	C	0.4	0.21	26.2	C	2.4
	SB	LTR	0.35	29.0	C	4.1	0.35	29.4	C	3.7
	Overall			0.77	28.8	C	-	0.75	25.3	C
UNSIGNALIZED INTERSECTION										
Kent Avenue / Penn Street-Williamsburg Street East	EB	L	0.40	38.7	E	-	1.51	330.3	F	-

Notes:

v/c = volume-to-capacity ratio; LOS = Level-of-Service

NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound

L = Left-Turn; T = Through; R = Right-Turn;

LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn

Average Control Delay shown in units of seconds/vehicle

85th-Percentile Queue shown in units of vehicles.

* = overall v/c ratio not calculated for this intersection.

Traffic Impacts

Traffic Impact Criteria

According to the thresholds established in the March 2014 *CEQR Technical Manual*, the following situations represent significant traffic impacts for signalized intersections:

- 1) If a lane group under the With-Action Condition is within LOS "A", "B" or "C" or marginally acceptable LOS "D" (average control delay less than or equal to 45.0 seconds/vehicle) the impact is not considered significant. However, if a lane group under the No-Action Condition is within LOS "A," "B" or "C," then a deterioration under the With-Action Condition to worse than mid-LOS "D" (delay greater than 45.0 seconds/vehicle) should be considered a significant impact.
- 2) For a lane group with LOS "D" under the No-Action Condition, an increase in projected average control delay of 5.0 or more seconds should be considered significant if the With-Action delay exceeds mid-LOS "D" (delay greater than 45.0 seconds/vehicle).
- 3) For a lane group with LOS "E" under the No-Action Condition, an increase in projected delay of 4.0 or more seconds should be considered significant.
- 4) For a lane group with LOS "F" under the No-Action Condition, an increase in projected delay of 3.0 or more seconds should be considered significant.

For unsignalized intersections, the criteria above also apply. However, for the minor street at an unsignalized intersection to trigger significant impacts, 90 PCEs (passenger car equivalents) must be identified in the future With-Action Conditions in any peak hour.

The criteria described above ensure that the LOS for individual turning movements at each intersection does not degrade significantly under the future with the proposed project. In contrast, movements that are projected to operate relatively well under the future without the proposed project can accommodate additional volumes and marginally increased delays under the future with the proposed project without experiencing a significant adverse impact, provided the additional volume does not significantly degrade intersection operations.

Potential Traffic Impacts

Table 3.13-7 compares the Future No-Action Condition LOS and delays (from **Table 3.13-3**) with the Future With-Action Condition LOS and delays (from **Table 3.13-6**), and identifies where and when the proposed project will generate significant traffic impacts, based on the *CEQR* criteria described above. **Table 3.13-7** also shows the incremental change in vehicle delay associated with the proposed project. As shown in **Table 3.13-7**, the following movements would experience significant traffic impacts:

- **Flushing Avenue/Washington Avenue:**
 - The westbound through/right-turn lane is projected to experience a potentially significant traffic impact during the weekday AM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday AM peak hour, delays for motorists in this lane are projected to increase from 148.8 seconds per vehicle (LOS "F") under Future No-Action Conditions, to 155.8 seconds per vehicle (LOS "F") under Future With-Action Conditions.
 - The northbound approach is projected to experience potentially significant traffic impacts during the weekday AM and PM peak hours under the Future With-Action Condition, according to the stated criteria. During the weekday AM peak hour, delays for motorists on the northbound approach are projected to increase from 268.6 seconds per vehicle (LOS "F") under Future No-Action Conditions, to 436.9 seconds per vehicle (LOS "F") under Future

With-Action Conditions. During the weekday PM peak hour, delays for motorists on the northbound approach are projected to increase from 215.4 seconds per vehicle (LOS “F”) under Future No-Action Conditions, to 477.2 seconds per vehicle (LOS “F”) under Future With-Action Conditions.

- The southbound through/right-turn lane is projected to experience a potentially significant traffic impact during the weekday PM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday PM peak hour, delays for motorists in this lane group are projected to increase from 41.8 seconds per vehicle (LOS “D”) under Future No-Action Conditions, to 49.9 seconds per vehicle (LOS “D”) under Future With-Action Conditions.

Table 3.13-7 – Year 2027 Levels-of-Service, Comparison of Future No-Action vs. Future With-Action Conditions, without Mitigation

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)										Weekday PM Peak Hour (4:45 to 5:45 PM)													
			2027 No-Action					2027 With-Action					Change in Delay	Impact?	2027 No-Action					2027 With-Action					Change in Delay	Impact?
			v/c	Average Control Delay	LOS	85th % Queue		v/c	Average Control Delay	LOS	85th % Queue				v/c	Average Control Delay	LOS	85th % Queue		v/c	Average Control Delay	LOS	85th % Queue			
SIGNALIZED INTERSECTIONS																										
Flushing Avenue / Washington Avenue	EB	L	0.95	118.7	F	4.2	0.95	118.7	F	4.2	0.0		0.09	6.4	A	0.5	0.09	6.4	A	0.8	0.0					
		TR	0.36	8.2	A	9.0	0.36	8.2	A	9.0	0.0		1.43	216.9	F	161.0	1.43	216.9	F	161.0	0.0					
	WB	L	0.18	6.9	A	2.2	0.18	6.9	A	2.2	0.0		1.68	387.1	F	12.9	1.68	387.1	F	12.9	0.0					
		TR	1.28	148.8	F	157.0	1.29	155.8	F	160.0	7.0	yes	0.64	12.2	B	26.7	0.65	12.3	B	27.0	0.1					
	SB	LTR	1.44	268.6	F	36.1	1.83	436.9	F	50.6	168.3	yes	1.29	215.4	F	19.5	1.89	477.2	F	27.4	261.8	yes				
		TR	0.05	37.5	D	0.6	0.06	37.8	D	0.7	0.3		0.26	42.4	D	2.4	0.35	45.3	D	3.2	2.9					
		TR	0.05	37.5	D	0.7	0.08	38.1	D	1.1	0.6		0.32	41.8	D	5.6	0.57	49.9	D	8.4	8.1	yes				
	Overall		1.32	136.6	F	-	1.42	167.4	F	-	-	1.65	149.6	F	-	1.79	167.2	F	-	17.6	-					
Flushing Avenue / Williamsburg Street West	EB	TR	0.50	37.3	D	9.8	0.50	37.4	D	9.8	0.1		1.80	425.5	F	105.0	1.82	434.9	F	106.0	9.4	yes				
		L	0.80	50.5	D	13.6	0.80	50.7	D	13.6	0.2		0.84	68.8	E	12.5	0.84	68.8	E	12.5	0.0					
	WB	T	0.76	34.1	C	26.2	0.78	35.2	D	27.5	1.1		0.40	26.2	C	10.6	0.41	26.4	C	10.8	0.2					
		LTR	1.81	396.8	F	158.0	1.81	396.8	F	158.0	0.0		1.22	128.2	F	86.9	1.22	128.2	F	86.9	0.0					
		Overall		1.35	270.4	F	-	1.35	269.4	F	-	-	1.31	230.0	F	-	1.32	234.1	F	-	4.1	-				
Kent Avenue / Williamsburg Street West	EB	T	0.13	22.4	C	3.0	0.14	22.5	C	3.2	0.1		0.15	22.6	C	4.2	0.19	23.0	C	5.4	0.4					
		R	0.97	74.3	F	-	0.97	74.3	F	-	0.0		0.75	23.9	C	-	0.75	23.9	C	-	0.0					
	WB	LT	0.71	33.7	C	17.6	0.72	34.4	C	18.2	0.7		0.89	44.4	D	28.1	0.93	49.4	D	29.8	5.0	yes				
		LT	1.37	198.7	F	108.0	1.37	198.7	F	108.0	0.0		0.94	39.4	D	46.0	0.94	39.4	D	46.0	0.0					
		R	0.27	15.8	C	-	0.40	18.2	C	-	2.4		0.28	20.3	C	-	0.35	21.9	C	-	1.6					
	Overall		*	136.6	F	-	*	134.4	F	-	-	*	36.7	D	-	*	37.7	D	-	1.0	-					
Kent Avenue / Wilson Street	EB	T	0.60	14.0	B	13.4	-	-	B	-	-		0.59	13.1	B	14.9	-	-	B	-	-					
		TR	-	-	-	-	0.61	14.2	B	13.7	-		-	-	-	-	0.59	13.2	B	15.0	-					
	WB	T	0.81	22.1	C	23.2	-	-	-	-	-		0.89	27.8	C	30.7	-	-	-	-	-					
		LT	-	-	-	-	0.95	39.2	D	34.1	-		-	-	-	-	0.93	33.6	C	34.7	-					
	SB	LR	-	-	-	-	0.03	23.9	C	0.4	-		-	-	-	-	0.21	26.2	C	2.4	-					
		LTR	0.30	27.6	C	3.7	-	-	-	-	-		0.28	27.3	C	3.5	-	-	-	-	-					
	LTR	-	-	-	-	0.35	29.0	C	4.1	-		-	-	-	-	0.35	29.4	C	3.7	-						
	Overall		0.65	19.4	B	-	0.77	28.8	C	-	-	0.70	21.9	C	-	0.75	25.3	C	-	-	-					
UNSIGNALIZED INTERSECTION																										
Kent Avenue / Penn Street- Williamsburg Street East	EB	L	0.34	34.7	D	-	0.40	38.7	E	-	4.0		1.10	175.6	F	-	1.51	330.3	F	-	154.7					

Notes:
v/c = volume-to-capacity ratio, LOS = Level-of-Service
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound
L = Left-Turn; T = Through; R = Right-Turn
LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn
Average Control Delay shown in units of seconds/vehicle
85th-Percentile Queue shown in units of vehicles
* = overall v/c ratio not calculated for this intersection.

● **Flushing Avenue/Williamsburg Street West:**

- The eastbound through/right-turn lane is projected to experience a potentially significant traffic impact during the weekday PM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday PM peak hour, delays for motorists in this lane group are projected to increase from 425.5 seconds per vehicle (LOS “F”) under Future No-Action Conditions, to 434.9 seconds per vehicle (LOS “F”) under Future With-Action Conditions.

● **Kent Avenue/Williamsburg Street West:**

- The westbound through/left-turn lane is projected to experience a potentially significant traffic impact during the weekday PM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday PM peak hour, delays for motorists in this lane group are projected to increase from 44.4 seconds per vehicle (LOS “D”) under Future No-

Action Conditions, to 49.4 seconds per vehicle (LOS "D") under Future With-Action Conditions.

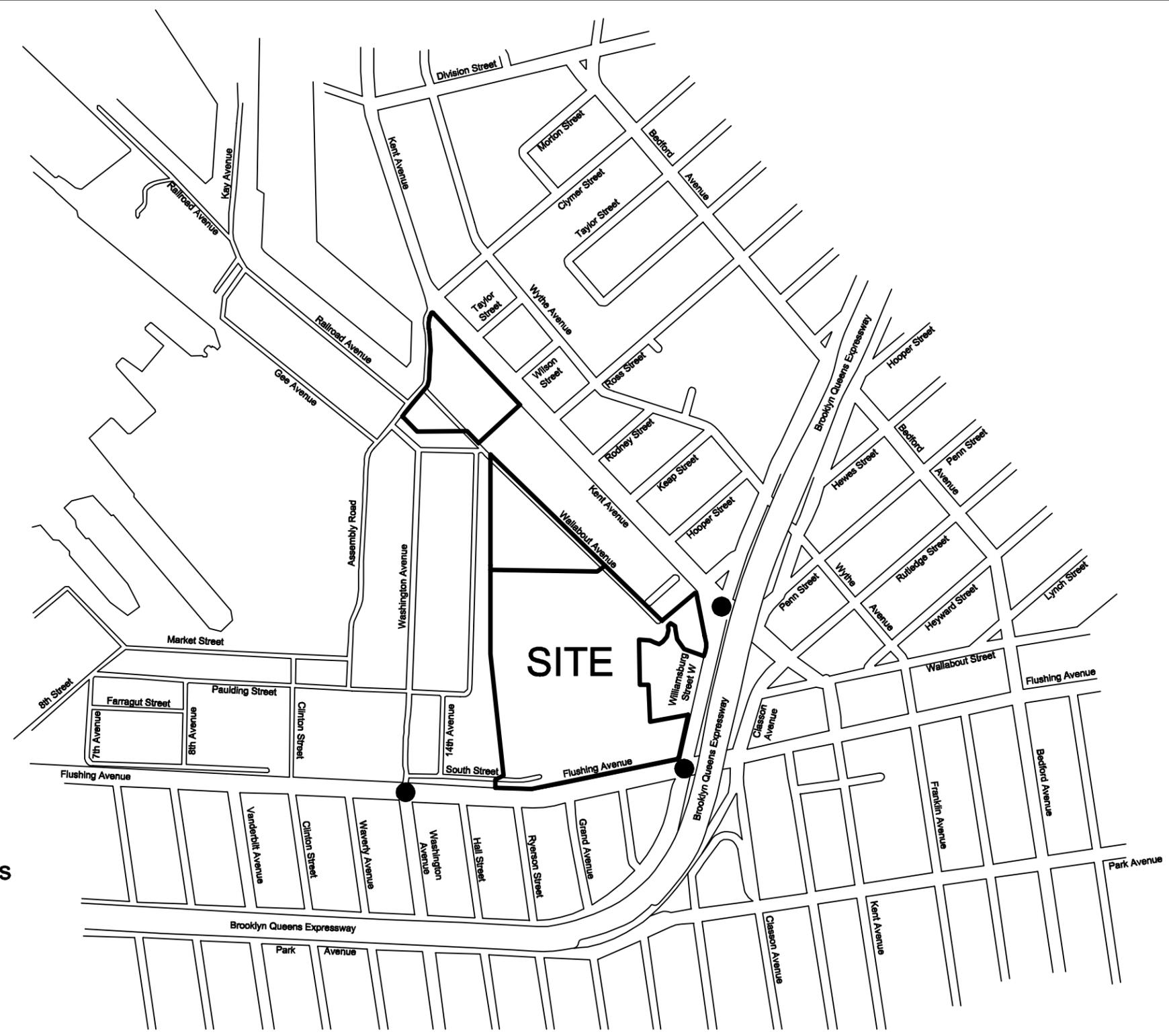
It should be noted that no significant traffic impacts are projected to occur at the unsignalized intersection of Kent Avenue/Penn Street-Williamsburg Street East during either analysis peak hour, because the incremental volume of traffic generated as a result of the proposed project is expected to be less than 90 PCEs.

Traffic Mitigation

This section describes the transportation system improvements that are recommended at the study intersections to mitigate potential traffic impacts associated with the proposed project. Based on the potential traffic impacts identified in **Table 3.13-7**, the following improvements are recommended to mitigate these impacts:

- **Flushing Avenue/Washington Avenue:**
 - Prohibit on-street parking on the east and west sides of Washington Avenue, south of Flushing Avenue, in the vicinity of the intersection.
 - Restripe the northbound approach to accommodate one exclusive left-turn lane and one shared through/right-turn lane.
 - Restripe the southbound approach (Steiner Studios access driveway) to accommodate one exclusive left-turn lane, one exclusive through lane, and one shared through/right-turn lane.
 - Reallocate one second of green time from the north-south phase to the east-west phase during the weekday AM peak hour.
- **Flushing Avenue/Williamsburg Street West:**
 - Restripe the eastbound approach to widen both vehicular travel lanes from approximately 11 feet to 11.3 feet with a corresponding reduction in the width of the center median from approximately 8.0 feet to approximately 7.4 feet (a reduction of approximately 0.6 feet).
- **Kent Avenue/Williamsburg Street West:**
 - Reallocate one second of green time from the east-west phase to the southbound phase during the weekday PM peak hour.

The locations of these improvements are shown in **Figure 3.13-11**. These improvements are designed to accommodate the future traffic volumes projected to occur on the roadway network during critical periods of peak traffic activity under the future with the proposed project; specifically, during the peak 15-minute period of the weekday AM and PM peak hours. As shown in **Table 3.13-8**, with these recommended improvements in place, the potential traffic impacts of the proposed action during the weekday AM and PM peak hours can be mitigated. Vehicular delays are not projected to increase to the level of significant adverse traffic impact with these mitigation measures in place.



● - Location of Mitigation Measures



Steiner Studios Media Campus EIS
Brooklyn, New York

Location of Traffic Mitigation Measures

Figure 3.13-11

Table 3.13-8 – Year 2027 Levels-of-Service, Comparison of Future No-Action vs. Future With-Action Conditions, with Mitigation

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)										Weekday PM Peak Hour (4:45 to 5:45 PM)										
			2027 No-Action				2027 Mitigated-Action				Change in Delay	Impact?	2027 No-Action				2027 Mitigated-Action				Change in Delay	Impact?	
			v/c	Average Control Delay	LOS	85th % Queue	v/c	Average Control Delay	LOS	85th % Queue			v/c	Average Control Delay	LOS	85th % Queue	v/c	Average Control Delay	LOS	85th % Queue			
SIGNALIZED INTERSECTIONS																							
Flushing Avenue / Washington Avenue	EB	L	0.95	118.7	F	4.2	0.95	118.2	F	4.2	-0.5		0.09	6.4	A	0.5	0.09	6.4	A	0.8	0.0		
		TR	0.36	8.2	A	9.0	0.36	7.8	A	8.7	-0.4		1.43	216.9	F	161.0	1.42	212.2	F	159.0	-4.7		
	WB	L	0.18	6.9	A	2.2	0.17	6.4	A	2.1	-0.5		1.68	387.1	F	12.9	1.68	387.1	F	12.9	0.0		
		TR	1.28	148.8	F	157.0	1.28	148.6	F	158.0	-0.2		0.64	12.2	B	26.7	0.65	12.3	B	27.0	0.1		
	NB	LTR	1.44	268.6	F	36.1	-	-	-	-	-		1.29	215.4	F	19.5	-	-	-	-	-	-	
		TR	-	-	-	-	1.37	243.1	F	26.5	-25.5		-	-	-	-	0.79	75.1	E	7.9	-140.3		
	SB	L	-	-	-	-	0.42	45.4	D	6.5	-223.2		-	-	-	-	0.38	44.6	D	3.9	-170.8		
		TR	0.05	37.5	D	0.6	0.09	39.5	D	0.7	2.0		0.26	42.4	D	2.4	0.39	47.0	D	3.2	4.6		
	Overall			1.32	136.6	F	-	1.30	125.4	F	-	-11.2		1.65	149.6	F	-	1.53	134.2	F	-	-15.4	
	Flushing Avenue / Williamsburg Street West	EB	TR	0.50	37.3	D	9.8	0.49	37.3	D	9.8	0.0		1.80	425.5	F	105.0	1.80	426.1	F	106.0	0.6	
L			0.80	50.5	D	13.6	0.80	50.7	D	13.6	0.2		0.84	68.8	E	12.5	0.84	68.8	E	12.5	0.0		
WB		T	0.76	34.1	C	26.2	0.80	35.2	D	27.5	1.1		0.40	26.2	C	10.6	0.41	26.4	C	10.8	0.2		
		LTR	1.81	396.8	F	158.0	1.81	396.8	F	158.0	0.0		1.22	128.2	F	86.9	1.22	128.2	F	86.9	0.0		
Overall			1.35	270.4	F	-	1.35	269.4	F	-	-1.0		1.31	230.0	F	-	1.31	230.7	F	-	0.7		
Kent Avenue / Williamsburg Street West	EB	T	0.13	22.4	C	3.0	0.14	22.5	C	3.2	0.1		0.15	22.6	C	4.2	0.18	22.4	C	5.3	-0.2		
		R	0.97	74.3	F	-	0.97	74.3	F	-	0.0		0.75	23.9	C	-	0.75	23.9	C	-	0.0		
	WB	LT	0.71	33.7	C	17.6	0.72	34.4	C	18.2	0.7		0.89	44.4	D	28.1	0.91	46.0	D	28.9	1.6		
		LT	1.37	198.7	F	108.0	1.37	198.7	F	108.0	0.0		0.94	39.4	D	46.0	0.95	42.4	D	47.4	3.0		
	SB	R	0.27	15.8	C	-	0.40	18.2	C	-	2.4		0.28	20.3	C	-	0.35	21.9	C	-	1.6		
		LTR	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		
Overall			*	136.6	F	-	*	134.4	F	-	-2.2		*	36.7	D	-	*	37.7	D	-	1.0		
Kent Avenue / Wilson Street	EB	T	0.60	14.0	B	13.4	-	-	-	-	-		0.59	13.1	B	14.9	-	-	-	-	-		
		TR	-	-	-	-	0.61	14.2	B	13.7	0.3		-	-	-	-	0.59	13.2	B	15.0	0.1		
	WB	T	0.81	22.1	C	23.2	-	-	-	-	-		0.89	27.8	C	30.7	-	-	-	-	-		
		LT	-	-	-	-	0.95	39.2	D	34.1	10.9		-	-	-	-	0.93	33.6	C	34.7	4.0		
	NB	LR	-	-	-	-	0.03	23.9	C	0.4	-		-	-	-	-	0.21	26.2	C	2.4	-		
		LR	0.30	27.6	C	3.7	-	-	-	-	-		0.28	27.3	C	3.5	-	-	-	-	-		
	SB	LTR	-	-	-	-	0.35	29.0	C	4.1	0.4		-	-	-	-	0.35	29.4	C	3.7	0.2		
		LTR	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-		
Overall			0.65	19.4	B	-	0.77	28.8	C	-	9.4		0.70	21.9	C	-	0.75	25.3	C	-	3.4		
UNSIGNALIZED INTERSECTION																							
Kent Avenue / Penn Street-Williamsburg Street East	EB	L	0.34	34.7	D	-	0.40	38.7	E	-	4.0		1.10	175.6	F	-	1.51	330.3	F	-	154.7		

Notes:
v/c = volume-to-capacity ratio; LOS = Level-of-Service
NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound
L = Left-Turn; T = Through; R = Right-Turn;
LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn
Average Control Delay shown in units of seconds/vehicle
85th-Percentile Queue shown in units of vehicles.
* = overall v/c ratio not calculated for this intersection.

3.13.2 Transit

The area surrounding the project site and the BNY is served by public transit. Several New York City Transit (NYCT) bus lines are routed near the project site. This includes the B44, B48, B54, B57, B62, B67, and B69 bus routes, all of which are routed through, adjacent to, or a short walking distance from the Navy Yard.

The Navy Yard also operates free subway shuttle bus services for employees during the weekday AM and PM peak periods. This shuttle provides service to and from the following subway stations located within one mile west/southwest of the Navy Yard:

- Jay Street-MetroTech (“A,” “C,” “F” and “R” lines)
- Court Street-Borough Hall (“R,” 2, 3, 4 and 5 lines)
- York Street (“F” line)

In addition, the Flushing Avenue station (“G” line) and the Marcy Avenue station (“J,” “M” and “Z” lines) are located to the east and northeast, respectively, of the Navy Yard, within one mile from the proposed site. No shuttle bus service is provided to these two stations.

The preliminary screening threshold provided in the March 2014 *CEQR Technical Manual*—where potential impacts may occur and further assessments may be warranted—is 200 transit trips for either subway or public bus riders in a given peak hour. Any number of transit trips below this screening threshold would generally not warrant a detailed transit analysis.

Table 3.13-9 summarizes the resulting numbers of new transit trips (both subway and public bus) expected to be generated by the project during the weekday AM and PM peak hours with the proposed project. As shown in **Table 3.13-9**, the proposed project would generate fewer than 200 new public bus trips during each of the three weekday peak hours. Therefore, the proposed development is not projected to result in any significant adverse bus impacts and no detailed assessment of the potential for bus-related impacts as a result of the proposed project is warranted.

Table 3.13-9 Steiner Studios: Project-Generated Transit Trip Generation Estimate

Land Use	Weekday AM						Weekday Midday						Weekday PM					
	Subway			Bus			Subway			Bus			Subway			Bus		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out
Media (Film/TV) Production	141	124	17	45	40	5	28	14	14	28	14	14	130	16	114	41	5	36
Academic Use	239	225	14	34	32	2	120	54	66	17	8	9	389	163	226	56	23	32
TOTAL =	381	349	31	79	72	7	148	68	80	45	22	23	518	179	340	97	28	69

As **Table 3.13-9** shows, the proposed project would generate fewer than 200 new subway trips during the weekday midday peak hour, and more than 200 new subway trips during the weekday AM and PM peak hours. However, following a spatial assignment of the weekday AM and PM peak hour trips among the multiple subway stations within one mile of the Navy Yard, no one subway station is projected to experience an incremental increase of more than 200 subway trips. Therefore, the proposed development is not projected to result in any significant adverse subway impacts and no detailed assessment of the potential for subway-related impacts as a result of the proposed project is warranted.

3.13.3 Pedestrians

The *CEQR Technical Manual* indicates that a detailed pedestrian analysis be performed for projects that are likely to generate 200 or more incremental pedestrian trips during any peak hour on any one pedestrian element (i.e., a crosswalk, street corner, or sidewalk). As shown in **Table 3.13-10**, the

proposed project is projected to generate more than 200 combined new pedestrian trips (i.e., the combined total of subway, bus, and walk trips) during the weekday AM, midday, and PM peak hours.

Table 3.13-10 Steiner Studios: Project-Generated Pedestrian Trip Generation Estimate

Land Use	Weekday AM									Weekday Midday									Weekday PM								
	Subway			Bus			Walk			Subway			Bus			Walk			Subway			Bus			Walk		
	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out			
Media (Film/TV) Production	141	124	17	45	40	5	32	28	4	28	14	14	28	14	14	333	167	167	130	16	114	41	5	36	29	4	26
Academic Use	239	225	14	34	32	2	53	50	3	120	54	66	17	8	9	27	12	15	389	163	226	56	23	32	86	36	50
TOTAL =	381	349	31	79	72	7	85	78	7	148	68	80	45	22	23	360	179	181	518	179	340	97	28	69	116	40	76
	Total AM Ped Trips = 545									Total Midday Ped Trips = 553									Total PM Ped Trips = 731								

Existing Pedestrian Conditions

Study Intersection

Based on a spatial assignment of the pedestrian trips shown in **Table 3.13-10** to City streets, it was projected that one or more pedestrian elements at the signalized Flushing Avenue/Washington Avenue intersection (i.e., the main entrance to the Steiner Studios campus) have the potential to experience increases of more than 200 new combined pedestrian trips during the weekday AM and PM peak hours. Therefore, further quantitative analyses of pedestrian operations on crosswalks, street corners, and sidewalks at this intersection were conducted for the weekday AM, midday, PM peak hours under existing conditions, Future No-Action Conditions, and Future With-Action Conditions. The assignment indicated that incremental pedestrian volumes generated on other pedestrian elements in the vicinity of the proposed site during each of the three weekday peak hours are likely to be dispersed to levels below the 200-trip threshold for detailed pedestrian study.

Data Collection

Field counts of pedestrian volumes at all crosswalks, corners, and sidewalks at the Flushing Avenue/Washington Avenue intersection were conducted over three days during the weekday AM (6:00 to 9:00 AM), midday (11:30 AM to 1:30 PM), and PM (4:00 to 7:00 PM) peak periods. The data collection effort included counts of the numbers of pedestrians using crosswalks, corners, and sidewalks, as well as counts of the volumes of vehicles making conflicting turning movements through the crosswalks. In addition, the physical characteristics of all pedestrian elements were inventoried in the field. This inventory specifically included:

- Crosswalk locations, widths, and lengths;
- Sidewalk locations and widths;
- Curb return radii; and
- Locations and dimensions of street accessories along the sidewalks and on corners (which constitute obstacles to the unimpeded flow of pedestrians).

The NYCDOT's official traffic signal timings were obtained and used in all pedestrian analyses. Based on the observed pedestrian volumes, crosswalk, corner, and sidewalk level-of-service (LOS) analyses were conducted at the signalized Flushing Avenue/Washington Avenue intersection during the weekday AM, midday, and PM peak hours.

Analysis Methodology

The analysis of pedestrian flow involves quantifying the comfort level for pedestrians walking along the sidewalks, waiting to cross the street at intersection corners, and crossing intersection crosswalks. The LOS is calculated using the physical and operational parameters at the intersection including the pedestrian flow rate, the effective length and width (i.e., area) of the crosswalk, the area of the street corner, conflicting traffic volumes that turn through the crosswalk, and the signal timing at the intersection.

Crosswalk, street corner, and sidewalk operations were analyzed using the methodologies described in the March 2014 *CEQR Technical Manual* and were conducted using NYCDOT's most recent pedestrian analysis Excel spreadsheet (obtained in May 2014 from NYCDOT Traffic Planning staff).

The crosswalk and street corner LOS methodologies are based on pedestrian density, as expressed in units of "square feet of space per pedestrian" (square feet/ped), during the peak 15-minute period of the peak hour. The LOS ranges for crosswalks and street corners are as shown below in **Table 3.13-11**.

Table 3.13-11: LOS Criteria for Crosswalks and Street Corners

LOS	Square Feet of Space per Pedestrian (feet ² /ped)
A	> 60
B	> 40 to 60
C	> 24 to 40
D	> 15 to 24
E	> 8 to 15
F	≤ 8

Source: Adapted from March 2014 *CEQR Technical Manual*, Table 16-10, page 16-48.

The LOS methodology for sidewalks is also based on pedestrian density, as expressed in units of "square feet of space per pedestrian" (feet²/ped), during the peak 15-minute period of the peak hour. The LOS ranges for sidewalks under platoon flow conditions are as shown below in **Table 3.13-12**.

Table 3.13-12: LOS Criteria for Sidewalks under Platoon Flow Conditions

LOS	Square Feet of Space per Pedestrian (feet ² /ped)
A	> 530
B	> 90 to 530
C	> 40 to 90
D	> 23 to 40
E	> 11 to 23
F	≤ 11

Source: Adapted from March 2014 *CEQR Technical Manual*, Table 16-9, page 16-47.

The pedestrian walking speed is not noted on NYCDOT's official traffic signal timing sheet for the Flushing Avenue/Washington Avenue intersection. In addition, none of the crosswalks at this intersection are school crosswalks, which would suggest that a slower walking speed, reflecting a high proportion of children, would be appropriate. Therefore, the standard pedestrian walking speed of 3.5 feet/second was applied.

Existing Levels-of-Service

The pedestrian LOS analyses for existing conditions are based on peak 15-minute pedestrian flows observed during the weekday AM, midday, and PM peak hours. **Tables 3.13-13, 3.13-14 and 3.13-15** summarize the results of the existing conditions pedestrian LOS analyses for crosswalks, street corners, and sidewalks, respectively. As shown in **Tables 3.13-13 through 3.13-15**, all crosswalks, street corners, and sidewalks currently operate at LOS "B" or better during the weekday AM, midday, and PM peak hours.

Table 3.13-13: Year 2014 Existing Conditions Pedestrian Crosswalk Analyses

Intersection	Peak Hour	Crosswalk	Crosswalk Length (Feet - approx.)	Crosswalk Width (Feet - approx.)	Pedestrian Operations	
					feet ² /ped	LOS
Flushing Avenue/ Washington Avenue	Weekday AM	North	43.9	9.8	1,094.1	A
		East	50.5	11.0	329.4	A
		South	41.1	11.2	896.8	A
		West	50.5	13.5	566.0	A
	Weekday Midday	North	43.9	9.8	844.9	A
		East	50.5	11.0	197.8	A
		South	41.1	11.2	517.8	A
		West	50.5	13.5	477.8	A
	Weekday PM	North	43.9	9.8	1,003.0	A
		East	50.5	11.0	336.2	A
		South	41.1	11.2	763.9	A
		West	50.5	13.5	584.1	A

Table 3.13-14: Year 2014 Existing Conditions Pedestrian Corner Analyses

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet ² /ped	LOS
Flushing Avenue/ Washington Avenue	Weekday AM	Northwest	745.2	A
		Northeast	888.0	A
		Southwest	296.7	A
		Southeast	934.3	A
	Weekday Midday	Northwest	550.9	A
		Northeast	585.3	A
		Southwest	203.4	A
		Southeast	586.6	A
	Weekday PM	Northwest	683.9	A
		Northeast	877.9	A
		Southwest	296.4	A
		Southeast	754.4	A

Table 3.13-15: Year 2014 Existing Conditions Pedestrian Platoon Sidewalk Analyses

Intersection	Peak Hour	Corner	Sidewalk	Pedestrian Operations	
				feet ² /ped	LOS
Flushing Avenue/ Washington Avenue	Weekday AM	NE	N-S	3,503.8	A
			E-W	1,193.3	A
		SE	N-S	493.8	B
			E-W	926.2	A
		SW	N-S	1,358.5	A
			E-W	687.7	A
	NW	N-S	12,768.0	A	
		E-W	1,157.9	A	
	Weekday Midday	NE	N-S	1,575.0	A
			E-W	2,753.1	A
		SE	N-S	294.5	B
			E-W	691.8	A
		SW	N-S	1,059.1	A
			E-W	502.3	B
	NW	N-S	6,277.6	A	
		E-W	1,207.0	A	
	Weekday PM	NE	N-S	3,075.8	A
			E-W	971.5	A
		SE	N-S	405.7	B
			E-W	478.6	B
		SW	N-S	1,417.2	A
			E-W	822.3	A
	NW	N-S	14,364.0	A	
		E-W	985.9	A	

Future No-Action Pedestrian Conditions

Pedestrian activity in the study area was projected for the Future No-Action Condition and the Future With-Action Condition. The projected future pedestrian growth is a combination of background growth in pedestrian activity that is expected throughout the study area (i.e., 4.59 percent growth between 2014 and 2027 for “Other Brooklyn,” as per the March 2014 *CEQR Technical Manual*), and pedestrian volumes generated through the study intersections by other specific planned development projects expected to be in place by the 2027 build year.

As noted previously in the Traffic section, the following planned future developments were identified based on discussions with NYCDP staff. These include a combination of projects: 1) outside the Brooklyn Navy Yard, 2) inside the Navy Yard, but outside the Steiner Studios campus, and 3) inside the Steiner Studios campus, not dependent on the proposed action (as discussed in **Chapter 2.0**, “Project Description.” More details concerning each of these projects can be found in the Traffic section.

Outside the Brooklyn Navy Yard

- Domino Sugar Rezoning
- Rose Plaza (470 Kent Ave)
- Kedem Winery (420-430 Kent Ave)

Inside the Brooklyn Navy Yard, but Outside the Steiner Studios Campus

- Admiral’s Row Plaza at Brooklyn Navy Yard
- Sands Building
- Building 77
- GMC (Building 128)
- WeWork (area between Dry Dock 2 and Dry Dock 3)
- Brooklyn Greenway Initiative Naval Hospital

Inside the Steiner Studios Campus, but not dependent on the proposed action

- B&H Building (Building 664)
- Kent Stages
- North Parking Structure
- West Parking Structure
- Academic use at 25 Washington Avenue (Building 1)

In addition, the planned future geometry of the Flushing Avenue/Washington Avenue intersection resulting from the planned reconstruction of Flushing Avenue was incorporated into all future year 2027 No-Action and With-Action condition pedestrian analyses.

To arrive at the total Future No-Action Condition pedestrian volumes, the existing baseline pedestrian volumes were increased by 4.59 percent through the 2027 analysis year, and pedestrian trip assignments generated by the development projects listed above were added to these adjusted baseline volumes. It should be noted that not all of these projects are sufficiently close enough to the study intersection of Flushing Avenue/Washington Avenue to generate a significant number of pedestrian trips through this intersection.

Future No-Action Levels-of-Service (LOS)

The crosswalk, street corner, and sidewalk LOS analyses at the study intersection of Flushing Avenue/Washington Avenue were then repeated using the projected Future No-Action Condition pedestrian volumes. **Tables 3.13-16, 3.13-17 and 3.13-18** summarize the results of the Future No-Action Conditions pedestrian LOS analyses for crosswalks, street corners, and sidewalks, respectively. As shown in **Tables 3.13-16 through 3.13-18**, all crosswalks, street corners and sidewalks are projected to continue to operate at LOS “C” or better during the weekday AM and PM peak hours, with the exception of the north crosswalk at the Flushing Avenue/Washington Avenue intersection and the east-west

sidewalk at the northwest corner, which are projected to operate at LOS “D” during the weekday midday peak hour under No-Action conditions.

Table 3.13-16: Year 2027 Future No-Action Conditions Pedestrian Crosswalk Analyses

Intersection	Peak Hour	Crosswalk	Crosswalk Length (Feet - approx.)	Crosswalk Width (Feet - approx.)	Pedestrian Operations	
					feet ² /ped	LOS
Flushing Avenue/ Washington Avenue	Weekday AM	North	43.9	9.8	141.8	A
		East	50.5	11.0	78.5	A
		South	41.1	11.2	386.0	A
		West	50.5	13.5	431.8	A
	Weekday Midday	North	43.9	9.8	22.9	D
		East	50.5	11.0	76.4	A
		South	41.1	11.2	354.7	A
		West	50.5	13.5	400.6	A
	Weekday PM	North	43.9	9.8	143.9	A
		East	50.5	11.0	56.9	B
		South	41.1	11.2	249.6	A
		West	50.5	13.5	358.6	A

Table 3.13-17: Year 2027 Future No-Action Conditions Pedestrian Corner Analyses

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet ² /ped	LOS
Flushing Avenue/ Washington Avenue	Weekday AM	Northwest	153.9	A
		Northeast	130.7	A
		Southwest	182.0	A
		Southeast	366.4	A
	Weekday Midday	Northwest	31.1	C
		Northeast	40.2	B
		Southwest	163.0	A
		Southeast	330.0	A
	Weekday PM	Northwest	148.0	A
		Northeast	120.8	A
		Southwest	139.7	A
		Southeast	267.8	A

Table 3.13-18: Year 2027 Future No-Action Conditions Pedestrian Platoon Sidewalk Analyses

Intersection	Peak Hour	Corner	Sidewalk	Pedestrian Operations	
				feet ² /ped	LOS
Flushing Avenue/ Washington Avenue	Weekday AM	NE	N-S	439.3	B
			E-W	214.1	B
		SE	N-S	292.2	B
			E-W	894.3	A
		SW	N-S	1,279.5	A
			E-W	400.8	B
	NW	N-S	12,768.0	A	
		E-W	135.8	B	
	Weekday Midday	NE	N-S	417.0	B
			E-W	48.5	C
		SE	N-S	178.9	B
			E-W	664.5	A
		SW	N-S	980.6	A
			E-W	403.4	B
	NW	N-S	5,539.1	A	
		E-W	38.7	D	
	Weekday PM	NE	N-S	323.3	B
			E-W	146.1	B
		SE	N-S	254.4	B
			E-W	454.9	B
		SW	N-S	1199.1	A
			E-W	387.1	B
	NW	N-S	14,364.0	A	
		E-W	138.6	B	

Future With-Action Pedestrian Conditions

To determine the levels-of-service with the proposed project, the crosswalk, street corner, and sidewalk LOS analyses at all study intersections were repeated to include the projected numbers of the new pedestrians generated by the proposed project, shown previously in **Table 3.13-10**.

As shown in **Table 3.13-10**, the proposed project is projected to generate approximately¹³:

- 545 new pedestrian trips (approximately 381 subway trips, 79 bus trips, and 85 walk trips) during the weekday AM peak hour;
- 553 new pedestrian trips (approximately 148 subway trips, 45 bus trips, and 360 walk trips) during the weekday midday peak hour; and
- 731 new pedestrian trips (approximately 518 subway trips, 97 bus trips, and 116 walk trips) during the weekday PM peak hour.

¹³ All trip values rounded to the nearest one (1) trip.

The following assumptions were made for the trip distribution patterns for pedestrians traveling to and from the proposed site:

- *Subway trips* – To ensure a conservative analysis of pedestrian operations at the study intersections, it was assumed that *all* subway riders would walk to and from the various subway stations, even though it is likely that a significant number of subway riders would choose to utilize the Navy Yard’s free shuttle bus service to access the subway stations located to the west and southwest of the Navy Yard (i.e., the Jay Street-MetroTech, Court Street-Borough Hall, and York Street stations), rather than walk. The assignment of the pedestrian trips to the various subway stations was assumed to be as follows:
 - 30 percent to/from the Court Street-Borough Hall station (R, 2, 3, 4 and 5 lines) via the existing Flushing Avenue/Washington Avenue entrance
 - 20 percent to/from the Jay Street-MetroTech station (A, C, F and R lines) via the existing Flushing Avenue/Washington Avenue entrance
 - 20 percent to/from the York Street (F line) via the existing Flushing Avenue/Washington Avenue entrance
 - 20 percent to/from the Marcy Avenue station (J, M and Z lines) via the proposed Kent Avenue/Wilson Street entrance
 - 10 percent to/from the Flushing Avenue station (G line) via the proposed Kent Avenue/Wilson Street entrance
- *Bus trips* – The Navy Yard is served by the B44, B48, B54, B57, B62, B67, and B69 bus routes, all of which are routed through, adjacent to, or a short walking distance from the Navy Yard. Bus trips were assigned to each route based on the relative capacity (i.e., frequency of bus trips on each route × bus capacity) available along each route during weekday AM and PM peak hours, as follows:
 - 39 percent to/from the B44
 - 10 percent to/from the B48
 - 16 percent to/from the B54
 - 8 percent to/from the B57
 - 14 percent to/from the B62
 - 7 percent to/from the B67
 - 6 percent to/from the B69
- *Walk trips* – Walk trips were assumed to be distributed approximately equally in the all directions from the proposed site:
 - 25 percent to/from the north, via the proposed Kent Avenue/Wilson Street entrance
 - 25 percent to/from the south, via the existing Flushing Avenue/Washington Avenue entrance
 - 25 percent to/from the east, via both entrances
 - 25 percent to/from the west, via both entrances

Based on the trip generation estimates shown in **Table 3.13-10** and the trip distribution estimates, by mode, identified above, pedestrians were assigned through the Flushing Avenue/Washington Avenue study intersection for the weekday AM, midday, and PM peak hours. The projected new pedestrian volumes associated with the proposed project were then added to the Future No-Action Condition pedestrian volumes to arrive at the total projected Future With-Action Condition pedestrian volumes. It should be noted that these pedestrian volumes represent a combination of the highest background pedestrian volumes occurring during the peak hour of the peak period, combined with the highest pedestrian volumes generated by the proposed project during the peak hour of the peak period. Therefore, the pedestrian volumes used in the LOS analysis represent a reasonable worst-case scenario for Future With-Action pedestrian conditions.

Future With-Action Levels-of-Service

The crosswalk, street corner, and sidewalk LOS analyses at the study intersections were then repeated using the projected Future With-Action Condition pedestrian volumes, and the results are shown in **Tables 3.13-19** through **3.13-21**. As noted in the Traffic Mitigation section, traffic signal timings at the intersection of Flushing Avenue/Washington Avenue are recommended to mitigate projected traffic impacts during the weekday AM and PM peak hours. These traffic signal timing modifications were also incorporated into the With-Action pedestrian analyses and are reflected in the tables below. As shown in these tables, all crosswalks, street corners and sidewalks at the Flushing Avenue/Washington Avenue intersection are projected to continue to operate at LOS "C" or better during the weekday AM and PM peak hours, with the exception of the north crosswalk, which is projected to continue to operate at LOS "D" during the weekday midday peak hour (with no change to the pedestrian space relative to the No-Action condition) and the east-west sidewalk on the northwest corner, which is projected to operate at LOS "D" during the weekday midday peak hour.

Table 3.13-19: Year 2027 Future With-Action Conditions Pedestrian Crosswalk Analyses

Intersection	Peak Hour	Crosswalk	Crosswalk Length (Feet - approx.)	Crosswalk Width (Feet - approx.)	Pedestrian Operations	
					feet ² /ped	LOS
Flushing Avenue/ Washington Avenue	Weekday AM	North	43.9	9.8	139.5	A
		East	50.5	11.0	67.7	A
		South	41.1	11.2	386.0	A
		West	50.5	13.5	125.7	A
	Weekday Midday	North	43.9	9.8	22.9	D
		East	50.5	11.0	60.4	A
		South	41.1	11.2	354.7	A
		West	50.5	13.5	129.5	A
	Weekday PM	North	43.9	9.8	143.1	A
		East	50.5	11.0	50.1	B
		South	41.1	11.2	249.6	A
		West	50.5	13.5	57.2	B

Table 3.13-20: Year 2027 Future With-Action Conditions Pedestrian Corner Analyses

Intersection	Peak Hour	Corner	Pedestrian Operations	
			feet ² /ped	LOS
Flushing Avenue/ Washington Avenue	Weekday AM	Northwest	83.4	A
		Northeast	87.9	A
		Southwest	126.9	A
		Southeast	339.5	A
	Weekday Midday	Northwest	26.4	C
		Northeast	33.9	C
		Southwest	109.1	A
		Southeast	286.7	A
	Weekday PM	Northwest	55.6	B
		Northeast	91.0	A
		Southwest	82.1	A
		Southeast	255.3	A

Table 3.13-21: Year 2027 Future With-Action Conditions Pedestrian Platoon Sidewalk Analyses

Intersection	Peak Hour	Corner	Sidewalk	Pedestrian Operations	
				feet ² /ped	LOS
Flushing Avenue/ Washington Avenue	Weekday AM	NE	N-S	325.8	B
			E-W	157.3	B
		SE	N-S	238.6	B
			E-W	894.3	A
		SW	N-S	840.0	A
			E-W	339.1	B
	NW	N-S	291.0	B	
		E-W	82.8	C	
	Weekday Midday	NE	N-S	305.1	B
			E-W	44.7	C
		SE	N-S	138.9	B
			E-W	664.5	A
		SW	N-S	612.2	A
			E-W	331.2	B
	NW	N-S	424.1	B	
		E-W	35.3	D	
	Weekday PM	NE	N-S	243.9	B
			E-W	100.7	B
		SE	N-S	219.0	B
			E-W	454.9	B
		SW	N-S	603.4	A
			E-W	297.4	B
	NW	N-S	237.6	B	
		E-W	79.0	C	

Assessment of Projected Pedestrian Impacts

The assessment of projected pedestrian impacts is based in part on whether the pedestrian element being analyzed is part of a Central Business District (CBD) and, for sidewalks, whether the pedestrian flow is platooned or not. This area of Brooklyn is not considered a CBD location and can be characterized as operating under platoon flow conditions, due to the presence of transit services in the area.

For crosswalks and street corners in non-CBD locations: According to the guidelines established in the *CEQR Technical Manual*, average pedestrian space under the Future With-Action Condition deteriorating to LOS “C” or better should generally not be considered a significant impact. If the pedestrian space under the Future With-Action Condition deteriorates to LOS “D” or worse (i.e., less than 24.0 square feet/ped), then the determination of whether the impact is considered significant is based on a sliding scale that varies with the Future No-Action pedestrian space.

For sidewalks with platoon flow in non-CBD locations: According to the guidelines established in the *CEQR Technical Manual*, average pedestrian space under the Future With-Action Condition deteriorating to LOS “C” or better should generally not be considered a significant impact. If the pedestrian space

under the Future With-Action Condition deteriorates to LOS “D” or worse (i.e., less than 40.0 square feet/ped), then the determination of whether the impact is considered significant is based on a sliding scale that varies with the Future No-Action pedestrian space.

As shown in **Tables 3.13-19** through **3.13-21**, under the proposed future Future With-Action Condition, all of the pedestrian elements at the Flushing Avenue/Washington Avenue intersection are projected to operate at LOS “C” or better with the exception of:

- 3) The north crosswalk, which is projected to operate at LOS “D” during the weekday midday peak hour. However, there is no change to the pedestrian space at this crosswalk under the With-Action Condition, relative to the No-Action Condition, and thus no significant adverse pedestrian impact.
- 4) The east-west sidewalk on the northwest corner, which is projected to operate at LOS “D” during the weekday midday peak hour, with a decrease in the projected pedestrian space from 38.7 square feet/ped in the No-Action condition to 35.3 square feet/ped under the With-Action condition, which is within the allowable *CEQR* threshold of 3.8 for a significant adverse pedestrian impact.

Therefore, no significant adverse pedestrian impacts are projected to occur during the weekday AM, midday, and PM peak hours as a result of the proposed action, according to the March 2014 *CEQR Technical Manual* criteria.

3.13.4 Parking

The project sponsor intends to seek financial incentives from ESD in the future for the development of a 250,000-square-foot Kent Avenue Parking Structure that is envisioned for the area outside the Naval Annex. This garage is planned to accommodate a total of approximately 650 accessory parking spaces. Based on parking generation rates presented in the standard reference manual *Parking Generation, 4th Edition* published by the Institute of Transportation Engineers, parking demand from the proposed project on a typical weekday is projected to peak at approximately 220 vehicles. Therefore, the projected parking demand is expected to be adequately accommodated within the proposed garage. In summary, parking demand generated by the proposed project is not expected to overflow into the surrounding neighborhood and no significant parking impacts are projected.

3.13.5 Transportation Safety

Each of the five study intersections were screened to determine if they qualify as a “high crash” location. The March 2014 *CEQR Technical Manual* defines a “high crash location” as those locations with 48 or more total reportable and non-reportable crashes—or five or more pedestrian/bicyclist injury crashes—in any 12-month period of the most recent three-year period for which data is available. Crash data compiled by the NYCDOT for the most recent available three-year period (i.e., 2010 to 2012) was reviewed to identify the crash history at each of the study intersections. The data is summarized in **Tables 3.13-22** and **3.13-23**. **Table 3.13-22** summarizes the total crashes at each of the study intersections, as well as the number of pedestrian, bicycle, and fatal crashes.

Table 3.13-22: Summary of NYCDOT Crash Data from 2010 through 2012

Intersection	Total Crashes	Pedestrian Crashes	Bicyclist Crashes	Fatal Crashes
Flushing Avenue / Washington Avenue	12	1	6	0
Flushing Avenue / Williamsburg Street West	37	0	11	0
Kent Avenue / Williamsburg Street West	22	0	0	0
Kent Avenue / Wilson Street	5	0	0	0
Kent Avenue / Williamsburg Street East / Penn Street	0	0	0	0
Total	76	1	17	0

Source: New York City Department of Transportation (2010-2012).

Table 3.13-23: Summary of NYCDOT Pedestrian/Bicyclist Crash Data (2010 through 2012)

Intersection	Total Pedestrian/Bicyclist Crashes	2010 Pedestrian/Bicyclist Crashes	2011 Pedestrian/Bicyclist Crashes	2012 Pedestrian/Bicyclist Crashes
Flushing Avenue / Washington Avenue	7	3	2	2
Flushing Avenue / Williamsburg Street West	11	2	7	2
Kent Avenue / Williamsburg Street West	0	0	0	0
Kent Avenue / Wilson Street	0	0	0	0
Kent Avenue / Williamsburg Street East / Penn Street	0	0	0	0
Total	18	5	9	4

Source: New York City Department of Transportation (2010-2012).

As shown in **Table 3.13-22**, the NYCDOT data indicates that the numbers of crashes between 2010 and 2012 (inclusive) at each intersection are below the 48-crash *CEQR* threshold for a “high-crash location.” Of the 76 total crashes at these five intersections, one was a pedestrian crash and seventeen were bicycle crashes. There were no fatal crashes at any of the five study intersections. **Table 3.13-23** summarizes, by year, the pedestrian/bicycle crashes at each of the study intersections from 2010 through 2012.

As shown in **Table 3.13-23**, at the intersection of Flushing Avenue/Williamsburg Street West there were a total of 11 bicycle crashes from 2010 to 2012. Out of these 11 crashes, seven occurred in one year (i.e., 2011) making Flushing Avenue/Williamsburg Street West a high-crash location according to *CEQR Technical Manual* criteria. Out of the 11 bicycle crashes, five occurred during night time. Weather conditions were clear for 10 of the 11 crashes, while one crash occurred during rainy conditions. Two of the bicycle crashes occurred with wet roadway surface conditions and the remaining nine occurred when the roadway was dry. Out of the 11 bicycle crashes, five crashes occurred with the bicyclist crossing with the signal, two crossing against the signal, and four as the bicyclist traveled along with traffic. The extent of injuries for all 11 crashes was classified as follows: three incapacitating injuries, three non-incapacitating injuries, four possible injuries, and one unknown. All other intersections had less than five pedestrian/bicycle crashes in any one year. Based on these findings, only the Flushing Avenue/Williamsburg Street West intersection qualifies as a “high-crash location” as defined in the *CEQR Technical Manual*.

Driveways and intersections along the north side of Flushing Avenue and on the south side of Kent Avenue—such as the “high crash location” at Flushing Avenue/Williamsburg Street West intersection, existing entrance to Steiner Studios opposite the Flushing Avenue/Washington Avenue intersection, and the proposed entrance opposite Kent Avenue/Wilson Street intersection—present potential conflict points between bicyclists traveling along these roadways and motor vehicle traffic entering and exiting the driveways/intersections. In order to provide for the safe and efficient flow of motor vehicle and bicycle traffic at such locations, the following design treatments are recommended for consideration by NYCDOT (these design treatments may also be considered for inclusion in the design of the planned Flushing Avenue reconstruction project). These treatments are applied in a similar design context along the West Side Highway in Manhattan, as indicated in the photos below.

- Provide bicycle signals at driveways and intersections crossing the bikeway (see example in **Photo 3.13-1**).
- Provide bicycle stop-bars and advance lane markings on the bikeway approaching driveways and intersections that cross the bikeway (see example in **Photo 3.13-2**).
- Provide advance signing for motor vehicle traffic, bicycle traffic, and pedestrians (see examples in **Photos 3.13-3** through **3.13-5**).

Photo 3.13-1 Example design treatment showing bicycle signal, at West 30th Street intersection along West Side Highway in Manhattan



Photo 3.13-2 Example design treatment of bikeway crossing, at Houston Street intersection along West Side Highway in Manhattan, showing bike stop-bar and advance lane markings.



Photo 3.13-3 Example signing for bicyclists at intersection along West Side Highway



Photo 3.13-4 Example signing for motor vehicle traffic (“Turning Vehicles Yield to Pedestrians and Bicyclists”) at West Houston Street along West Side Highway in Manhattan



Photo 3.13-5 Example signing for bikeway and walkway along West Side Highway in Manhattan



3.14 AIR QUALITY

When assessing the potential for significant air quality impacts, the *CEQR Technical Manual* seeks to determine a proposed action's effect on ambient air quality or the quality of the surrounding air. Ambient air can be affected by motor vehicles, referred to as "mobile sources," or by fixed facilities, referred to as "stationary sources." This can occur during operation and/or construction of a proposed project. The *CEQR Technical Manual* generally recommends an assessment of the potential impact of mobile sources on air quality when an action increases traffic or causes a redistribution of traffic flows, creates any other mobile sources of pollutants (such as diesel train usage), or adds new uses near mobile sources (e.g., roadways, parking lots, garages). The *CEQR Technical Manual* generally recommends assessments when new stationary sources of pollutants are created, when a new use might be affected by existing stationary sources, or when stationary sources are added near existing sources and the combined dispersion of emissions would impact surrounding areas.

3.14.1 Air Quality Standards and Guidelines

The applicable air quality standards and guidelines considered in the impact analysis for the proposed action are described below.

National and State Ambient Air Quality Standards

The U.S. Environmental Protection Agency (EPA), under the requirements of the Clean Air Act, has established National Ambient Air Quality Standards (NAAQS) for seven contaminants, referred to as criteria pollutants (40 CFR 50). These are carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter less than 10 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM_{2.5}), lead (Pb), and sulfur dioxide (SO₂). New York State has adopted the NAAQS as the state ambient air quality standards.

New York State Department of Environmental Conservation Guideline Concentrations

In addition to the criteria pollutants, there are certain non-criteria pollutants, such as volatile organic compounds (VOCs)-related air toxics, which are also considered to be of concern. The New York State Department of Environmental Conservation (NYSDEC) has published both Annual and Short-term Guideline Concentrations (AGCs and SGCs) to regulate non-criteria pollutants.

3.14.2 Mobile Sources

According to the *CEQR Technical Manual*, projects have the potential to result in significant adverse mobile source air quality impacts when they may increase or cause a redistribution of traffic, create any other mobile sources of pollutants (such as diesel trains, helicopters etc.), or add new uses near mobile sources (roadways, garages, parking lots, etc.). Automobiles and vehicular traffic in general are typically considered mobile sources of air pollutants. Changes in local traffic volumes, traffic patterns, or the types of vehicles moving through a given area could result in significant adverse air quality impacts from increased levels of CO and PM, which are the primary pollutants of concern for most microscale mobile source analyses.

A screening analysis was conducted at each intersection that was analyzed for transportation impacts, as these intersections are anticipated to experience the largest increases in vehicular traffic as the result of the proposed project. As summarized in **Table 3.14-1** the proposed project would not exceed the 170-peak-hour trip-CEQR preliminary screening threshold for CO at any intersection and no CO microscale impact analysis is required.

The study area for mobile sources is directly related to the project's traffic study area. The study area usually includes those intersections where traffic congestion is expected, since this is where air quality impacts are likely to occur. PM_{2.5} hot spot screening was also performed at each intersection based on peak hour traffic increments in each of the applicable vehicle classifications assuming conservatively that all trucks would be heavy duty diesel vehicles (HDDVs). The analysis further assumed conservatively that peak

hour trips would remain the same over a 24-hour daily period. These class-specific increments were then used as inputs into the CEQR screening worksheet to determine incremental truck equivalency and compared to the screening threshold. Since each analyzed intersection consists of arterial roadways, a 23-equivalent truck screening threshold was used to determine whether further screening or microscale analysis was required. According to the peak hour screening results at each affected intersection, as shown in **Table 3.14-1**, all intersections pass the screening based on conservative peak hour traffic increments. Therefore, PM_{2.5} mobile source impacts would not be significant and no further hot spot PM_{2.5} analysis is warranted.

Table 3.14-1 Peak Hour Traffic Screening at Signalized Intersections

Intersection	Time	No Action Approach Volume	With Action Approach Volume	Total Net Volume Increase/Truck Increase	Pass/Fail CO Microscale Screening	Maximum Incremental HDDV Equivalent Trips	Pass/Fail PM _{2.5} Microscale Screening
Flushing and Washington Ave	AM Peak	1,631	1,692	61/6	pass	8	Pass
	PM Peak	1,853	1,919	66/6	pass	9	Pass
Flushing Ave/Williamsburg St W	AM Peak	2,652	2,666	14/2	pass	3	Pass
	PM Peak	3,052	3,067	15/1	pass	2	Pass
Kent Ave/Williamsburg St W	AM Peak	2,673	2,740	67/10	pass	13	Pass
	PM Peak	2,901	2,974	73/6	pass	9	Pass
Kent Ave/Wilson St	AM Peak	1,120	1,201	81/20	pass	23 ¹	Pass
	PM Peak	1,266	1,354	88/11	pass	14	Pass

¹ - This intersection passes using the Air Quality Equivalent Truck Calculation Spreadsheet provided in the CEQR Technical Manual (March, 2014). The spreadsheet is provided in **Appendix C**.

3.14.3 Parking Facilities

As discussed in **Chapter 2.0**, "Project Description," the project sponsor intends to seek ESD funding for the 250,000-square-foot, 650-space Kent Avenue Parking Structure (accessory parking) that is envisioned for the area outside the Naval Annex, and therefore this parking structure is considered as part of the project for this environmental review. Emissions from vehicles using the parking lot could potentially affect ambient levels of pollutants at receptors adjacent to the project site. An analysis was performed using *CEQR Technical Manual* guidance to calculate pollutant levels. Since the parking lot would be used by automobiles, the primary pollutant of concern is CO.

Potential impacts from the proposed parking structure on CO concentrations were assessed at multiple receptor locations. The CO concentrations were determined for the weekday PM peak period when overall lot usage would be the greatest, considering the hours when the greatest number of vehicles would exit the facility. Conservatively, it was assumed that during such peak times the parking structure would be near its capacity of 650 vehicles. Emissions from vehicles entering, parking, and exiting the parking lots were estimated using the EPA MOVES mobile source emission model. All arriving and departing vehicles were conservatively assumed to travel at an average speed of 5 miles per hour within the parking facility. In addition, all departing vehicles were assumed to idle for 1 minute before exiting. The parking lot resulting CO concentrations were predicted using the methodologies prescribed in the *CEQR Technical Manual Appendix*. The future with-action CO concentrations from the traffic along Kent Avenue that is closest to the proposed parking lot were also modeled using the EPA CAL3QHC dispersion model assuming an average travel speed of 5 miles per hour.

A total of four receptors were placed at the sidewalk closest to the parking lot, and along Kent Avenue, respectively (see **Figure 3.14-1**). To determine compliance with the NAAQS, CO concentrations were determined for the maximum 1- and 8-hour average periods by conservatively combining the worst-case contributions from 1) the parking lot, 2) traffic along Kent Avenue, and 3) ambient monitored background concentrations provided by the NYCDEP. The worst-case CO concentrations were predicted to be 2.7 ppm for the 1-hour average and 1.9 ppm for the 8-hour average, respectively. These CO levels are well below the respective 35 ppm 1-hour average NAAQS and 9 ppm 8-hour average NAAQS. Therefore the proposed parking lot would not result in significant adverse air quality impacts.

3.14.4 Stationary Sources

A screening analysis using the methodology described in the *CEQR Technical Manual* was performed to determine if the heat and hot water systems for the proposed buildings of the media campus would result in potential air quality impacts to any other existing building in the surrounding area, as well as to each other (project-on-project impacts). Potential stationary source impacts from existing surrounding development on the proposed project were also analyzed. This methodology determines the threshold of development size, below which existing and proposed development would not have a significant impact. The impacts from boiler emissions associated with a development are a function of the square footage size of the buildings, fuel type, stack heights, and the minimum distance from the source to the nearest building of concern.

Impact of Proposed Project on Existing Development in Surrounding Area

According to the *CEQR Technical Manual*, an action can result in stationary source air quality impacts when it creates new stationary sources of pollutants, such as emission stacks for industrial plants, hospitals, other large institutional uses, or even a large building's boiler that can affect uses surrounding a project site. The proposed action would facilitate approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the boundary of the Naval Annex. Outside the Naval Annex, the proposed action would support the development of the Backlot, approximately 70,000 square feet of new development near the northern tip of the project site. In addition, Steiner Studios intends to seek financial incentives from ESD in the future for the development of a 250,000 square-foot Kent Avenue Parking Structure in the area outside the Naval Annex, as discussed above. However, the Kent Avenue Parking Structure and the Backlot would not have boiler stacks, therefore, the assessment of potential project-related impacts to existing development in the surrounding area focuses on emissions from the development that would occur on the Naval Annex.



Steiner Studios Master Plan
Brooklyn Navy Yard

Emission Study Diagram for
Proposed Kent Avenue Parking
Structure
Figure 3.14-1

As discussed in **Chapter 2.0**, “Project Description,” and shown in **Figure 2.0-4** and **Table 2.0-1**, there are 15 Project-Generated Development Sites on the Naval Annex. According to the project sponsor, the renovated existing buildings and newly constructed buildings would use natural gas to fuel the boilers. The boiler stack height and development size of each building on the Naval Annex, were plotted on the Figure 17-8 screening graph, provided in the *CEQR Technical Manual – Air Quality Appendix* (See **Appendix C**). These screening graphs indicate the minimum distance between subject buildings and surrounding buildings (with operable windows, balconies, etc.) of a similar or greater height needed to avoid a potential air quality impact.

If the closest distance is greater than the minimum distance, a potential significant impact due to boiler stack emissions is unlikely and no further analysis is needed. A screening assessment for the potential of each Project-Generated Development Site to have an adverse impact on existing development in the area surrounding the Naval Annex is provided below.

- Project-Generated Development Site #1 – This site is a proposed two-story, approximately 33,500 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 32 feet from existing development located in the area surrounding the Naval Annex site to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #1 is more than 32 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #2 – This site is a proposed two-story, approximately 2,100 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to its to emissions from its boiler stack. Project-Generated Development Site #2 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #3 – This site is a 46,633 square-foot, three-story existing building on the project site. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 45 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #3 is more than 45 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #4 – This site is an existing 9,460 square-foot, three story building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #4 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #5 – This site consists of three, two-story buildings with a total of 7,668 square feet. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #5 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #6 – This site consists of three, two-story buildings with a total of 6,480 square feet. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a

building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex project site to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #6 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.

- Project-Generated Development Site #7 – This site consists of the existing 58,534 square-foot, four-story former Naval Hospital. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 48 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #7 is more than 48 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #8 – This site consists of an existing 9,800 square-foot, three-story former Surgeon's House. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #8 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #9 – This site is a proposed three-story, approximately 20,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #9 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #10 – This site is a proposed three-story, approximately 20,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex site to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #10 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #11 – This site is a proposed three-story, approximately 50,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 45 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Projected-Generated Development Site #11 is more than 45 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #12 – This site is a proposed three-story, approximately 30,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #12 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.

- Project-Generated Development Site #13 – This site is a proposed three-story, approximately 30,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #13 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #14 – This site is a proposed three-story, approximately 20,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #14 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.
- Project-Generated Development Site #15 – This site is a proposed two-story, approximately 5,800 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet from existing development located in the area surrounding the Naval Annex to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #15 is more than 30 feet from any existing development in the area surrounding the Naval Annex. Therefore, further analysis is not warranted.

As demonstrated above, all renovated existing buildings and newly constructed buildings associated with the proposed project would be located a sufficient distance from any existing development surrounding the project site. Therefore, no stationary source air quality impacts would occur as a result of potential project-related impacts to existing development in the surrounding area.

Project-on-Project Impacts

A project-on-project screening assessment was conducted for potential stationary source emissions impacts from the existing and proposed buildings within the Naval Annex on each other. Using the same CEQR methodology described above, for each building on the project site, the site stack height and development size were plotted on the Figure 17-8 screening graph, provided in the *CEQR Technical Manual – Air Quality Appendix* (See **Appendix C**). These screening graphs indicate the minimum distance between subject buildings and surrounding buildings (with operable windows, balconies, etc.) of a similar or greater height needed to avoid a potential air quality impact. If the closest distance is greater than the minimum distance, a potential significant impact due to boiler stack emissions is unlikely and no further analysis is needed. As discussed in **Chapter 2.0**, “Project Description,” and shown in **Figure 2.0-4** and **Table 2.0-1**, there are 15 proposed Project-Generated Development Sites on the Naval Annex. A screening assessment for the potential of each Project-Generated Development Site to lead to project-on-project impact at the Naval Annex is provided below.

- Project-Generated Development Site #1 – This site is a proposed two-story, approximately 33,500 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 32 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. The nearest project-generated site is Project-Generated Development Site #2. The emission stack for Project-Generated Development Site #1 is located approximately 113 feet from the nearest operable window at Project-Generated Development Site #2. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.
- Project-Generated Development Site #2 – This site is a proposed two-story, approximately 2,100 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant

adverse air quality impact related to emissions from its boiler stack. The nearest project-generated site is Project-Generated Development Site #1. The emission stack for Project-Generated Development Site #2 is situated approximately 40 feet from the nearest operable window at Project-Generated Development Site #1. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.

- Project-Generated Development Site #3 – This site is a 46,633 square-foot, three-story existing building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 45 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. The nearest project-generated site is Project-Generated Development Site #4. The emission stack for Project-Generated Development Site #3 is situated approximately 58 feet from the nearest operable window at Project-Generated Development Site #4. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.
- Project-Generated Development Site #4 – This site is an existing 9,460 square-foot, three-story building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. The nearest project-generated site is Project-Generated Development Site #3. The emission stack for Project-Generated Development Site #4 is situated approximately 40 feet from the nearest operable window at Project-Generated Development Site #3. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.
- Project-Generated Development Site #5 – This site consists of three, two-story buildings with a total of 7,668 square feet. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #5 is more than 30 feet from any project-generated site. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.
- Project-Generated Development Site #6 – This site consists of three, two-story buildings with a total of 6,480 square feet. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #6 is more than 30 feet from any project-generated site building. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.
- Project-Generated Development Site #7 – This site consists of the existing 58,534 square-foot, four-story former Naval Hospital. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 48 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. The nearest project-generated site is Project-Generated Development Site #12. The emission stack for Project-Generated Development Site #7 is situated approximately 55 feet from the nearest operable window at Project-Generated Development Site #12. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.
- Project-Generated Development Site #8 – This site consists of the existing 9,800 square-foot, three-story former Surgeon's House. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #8 is more than 30 feet from any project-generated site. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.

- Project-Generated Development Site #9 – This site is a proposed three-story, approximately 20,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #9 is more than 30 feet from any project-generated site. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.
- Project-Generated Development Site #10 – This site is a proposed three-story, approximately 20,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #10 is more than 30 feet from any project-generated site. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.
- Project-Generated Development Site #11 – This site is a proposed three-story, approximately 50,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 45 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. The nearest project-generated building is Project-Generated Development Site #14. It is assumed that the emission stack for Project-Generated Development Site #11 would be set back and centrally positioned on the roof of the new building, thus providing a sufficient distance from Project-Generated Development Site #14 and eliminate the need for further assessment.
- Project-Generated Development Site #12 – This site is a proposed three-story, approximately 30,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. The nearest project-generated building is Project-Generated Development Site #7. It is assumed that the emission stack for Project-Generated Development Site #12 would be set back and centrally positioned on the roof of the new building, thus providing a sufficient distance from Project-Generated Development Site #7 and eliminate the need for further assessment.
- Project-Generated Development Site #13 – This site is a proposed three-story, approximately 30,000 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #13 is more than 30 feet from any project-generated building. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.
- Project-Generated Development Site #14 – This site is a proposed three-story, approximately 20,000 square-foot building that would be used as a post-production building in the future with the proposed action. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #14 is more than 30 feet from any project-generated site. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.
- Project-Generated Development Site #15 – This site is a proposed two-story, approximately 5,800 square-foot building. Based on Figure 17-8 of the *CEQR Technical Manual - Air Quality Appendix*, a building this size would need a minimum distance of 30 feet to avoid the potential for a significant adverse air quality impact related to emissions from its boiler stack. Project-Generated Development Site #15 is more than 30 feet from any project-generated site. As this is a sufficient distance to avoid a potential air quality impact, further analysis is not warranted.

As discussed above, all renovated existing buildings and newly constructed buildings associated with the proposed project would be located a sufficient distance from each other within the project site to meet *CEQR Technical Manual* screening criteria. Therefore, no stationary source project-on project air quality impacts would occur as a result of the proposed project.

Existing Source Impacts on Project

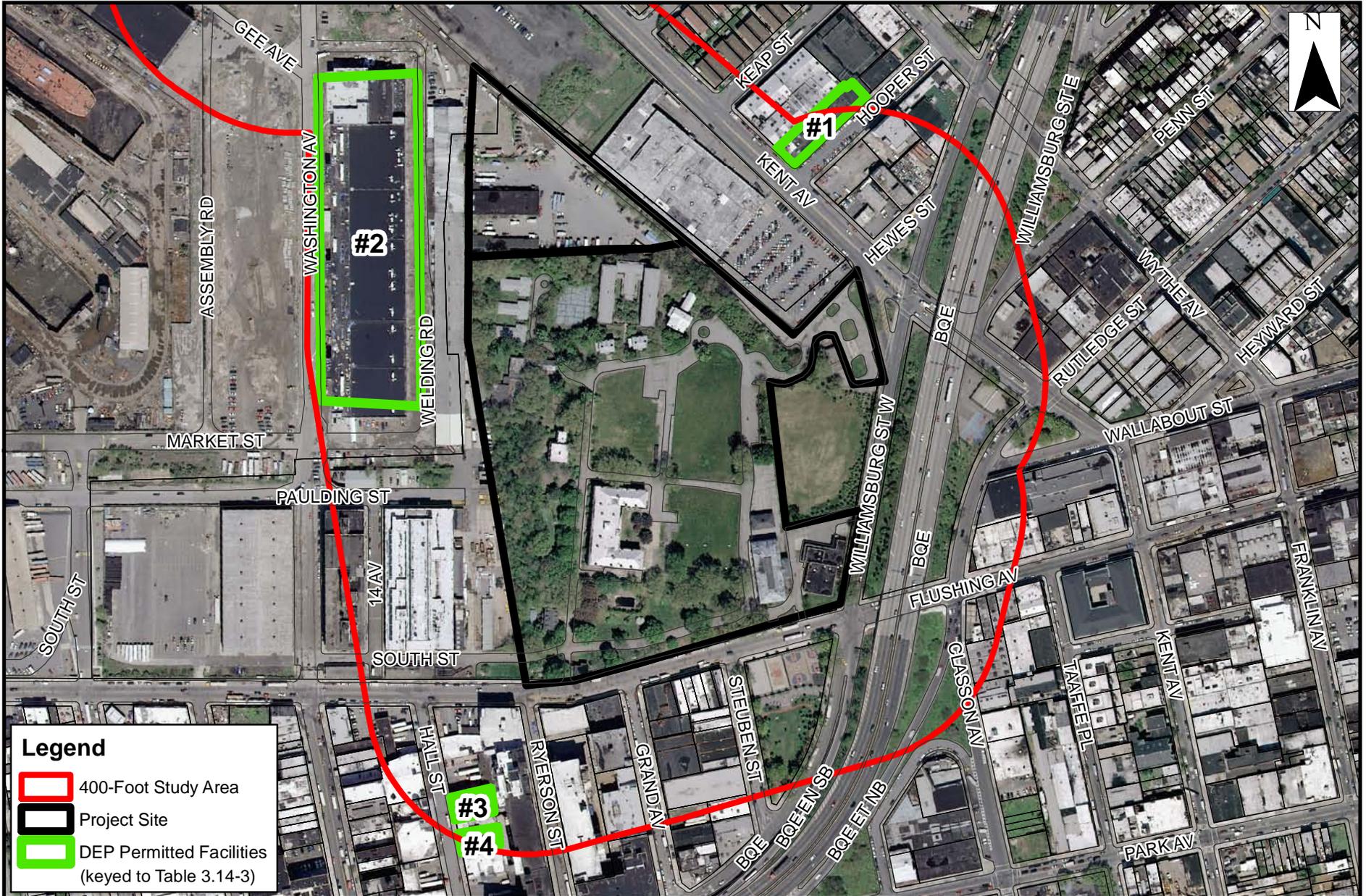
In order to determine if the proposed project could be impacted by any existing industrial emission sources in the immediate area, as the proposed project introduces new sensitive receptors within an existing manufacturing zoning district, a field search of active permitted stationary emissions sources in the study area was performed. A review of permit records provided by New York City Department of Environmental Protection (DEP) was conducted. It was determined that the project required a stationary source analysis because the project-generated new uses, specifically the proposed academic use, would be located within 400 feet of four NYCDEP-registered manufacturing facilities with known pollutants as summarized in **Table 3.14-2** and **Figure 3.14-2**. The pollutant types and corresponding permitted emissions rates are shown in **Table 3.14-3**

Table 3.14-2 NYCDEP-Registered Facilities within 400-foot Radius of Site

Key to Figure 3.14-1	Facility Name	Registration Number	Address	Permit Status	Process	Registered Pollutants
1	NAP Industries Co.	X421	667 Kent Ave.	Active	Electrically Heated Bag Machines	Particulates
					Flexographic Printing Presses	Ethyl Acetate
2	Steiner Studios	Y38118	15 Washington Ave.	Active	Spray Booth	Acetone
3	Green Wood Design	Y39756	27 Hall St.	Active	Spray Booth	Particulates
4	Y&V Custom Furniture	Y39965	37 Hall Street	Active	Gluing Station Exhaust	Acetone Hexane Toluene

Table 3.14-3 Permitted Hourly Emission Rates (lb/hour)

Facility	Process	PM	Ethyl Acetate	Acetone	Hexane	Toluene
NAP Industries Co.	Flexographic Printing Presses	0.5	710	-	-	-
Steiner Studios	Spray Booth	-	-	0.45	-	-
Green Wood Design	Spray Booth	0.01	-	-	-	-
Y&V Custom Furniture	Gluing Station Exhaust	-	-	2.75	1.729	0.943

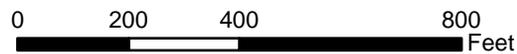


Legend

- 400-Foot Study Area
- Project Site
- DEP Permitted Facilities (keyed to Table 3.14-3)



**Steiner Studios Master Plan
Brooklyn Navy Yard**



**DEP Permitted Facilities
Within 400 Feet of Project Site**

Figure 3.14-2

Based on the permitted emission rates, as well as the facility building and exhaust stack configurations, a screening dispersion modeling was conducted to conservatively predict the worst-case downwind concentration levels for each permitted pollutant. The USEPA AERSCREEN model (Version 11126) was implemented in the modeling analysis. AERSCREEN is capable of predicting single source short maximum downwind concentrations using the default worst-case meteorological conditions as incorporated in AERSCREEN. AERSCREEN also considers building configurations and stack physical parameters to account for potential building/stack downwash effect on pollutant dispersion. Since AERSCREEN can only simulate single source worst-case downwind impact, emissions contributions from each exhaust were modeled separately at the closest point along the property line of the campus. The predicted downwind concentrations from each stack were then conservatively combined to determine the total concentration levels at the Project Site for each identified pollutant in the permit.

Using USEPA's AP-42 Generalized Particle Size Distributions for phthalic anhydride, and paint and varnish processes, particulate emissions were used to estimate PM₁₀ and PM_{2.5} emission rates based on the registered PM rates.

The short-term hourly concentrations were converted to daily and annual average levels using the US EPA-defined conversion factors to reflect varying hourly meteorological conditions. 0.4 and 0.08 temporal factors were applied to the AERSCREEN-predicted worst-case hourly levels to derive 24-hour and annual average concentrations, respectively. The total impact levels for criteria pollutants, PM₁₀ and PM_{2.5}, and hazardous pollutants are summarized in **Tables 3.14-4** and **3.14-5**, respectively. The predicted concentrations using the conservative screening model are below the applicable NAAQS and/or NYSDEC AGC/SGC guideline thresholds. Therefore, the potential air quality impacts on the proposed project as a result of the operation of existing neighborhood sources would not be significant, and further assessment is not warranted.

Table 3.14-4 PM₁₀ and PM_{2.5} Concentrations

Type	PM ₁₀ 24-hour Average (ug/m ³)	PM _{2.5} 24-hour Average (ug/m ³)	PM _{2.5} Annual Average (ug/m ³)
Existing Source Contribution	11.8	9.7	1.5
Background ¹	47	23.4	9.8
Total	59	33	11
NAAQS	150	35	12

¹ Background obtained from NYS DEC monitoring data: <http://www.dec.ny.gov/chemical/29310.html>
 PM₁₀: 24 hr. value based on 24 hr maximum concentration at Division Street.
 PM_{2.5}: 24 hr. value based on 3 yr. average of 98th percentile at JHS 126.
 Annual average value based on 3 yr. average of annual mean at JHS 126.

Table 3.14-5 Hazardous Air Pollutant Concentrations

Pollutant	One-Hour (ug/m ³)		Annual (ug/m ³)	
	Predicted Concentration	SGC	Predicted Concentration	AGC
Total Particulates	95	380	2	45
Ethyl Acetate	-	-	755	3400
Acetone	4107	180000	25	30000
Hexane	-	-	3	700
Toluene	2228	37000	1	5000

3.15 GREENHOUSE GAS EMISSIONS and CLIMATE CHANGE

Introduction

As discussed in the *CEQR Technical Manual*, increased concentrations of greenhouse gas (GHG) emissions are changing the global climate, resulting in wide-ranging effects on the environment, including rising sea levels, increases in temperature, and changes in precipitation levels. Although this is occurring on a global scale, the environmental effects of climate change are also likely to be felt at the local level. Through *PlaNYC*, the City has established sustainability initiatives and goals for both greatly reducing GHG emissions and adapting to climate change in the city. The goal to reduce citywide GHG emissions to 30 percent below 2005 levels by 2030 was codified by Local Law 22 of 2008, known as the New York City Climate Protection Act (the “GHG reduction goal”).

The contribution of a proposed project’s GHG emissions to global GHG emissions would be insignificant when measured against the scale and magnitude of global climate change. However, certain projects’ contribution of GHG emissions still should be analyzed to determine their consistency with the city’s GHG reduction goal, which is currently the most appropriate standard by which to analyze a project under CEQR. The *CEQR Technical Manual* recommends that for any project conducting an EIS that would result in development of 350,000 square feet or greater, a GHG analysis may be warranted to quantify project-related GHG emissions and assess the project’s consistency with the citywide GHG reduction goal.

The proposed action would facilitate approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the boundary of the Naval Annex. Outside the Naval Annex, an approximately 70,000-square-foot Backlot would be constructed near the northern tip of the project site, and a 250,000-square-foot Kent Avenue Parking Structure would be built directly north of the Naval Annex.

This new development would generate new demands for energy consumption and increased emission of GHG. Since the total development scale exceeds the threshold subject to a quantification of project-related GHG emissions, GHG emissions related to project energy consumptions were estimated for the 2027 analysis year. The results of that analysis, along with an assessment of the proposed project’s consistency with the citywide GHG reduction goal, are presented in this chapter.

Pollutants of Concern

Some GHGs occur naturally and are emitted into the atmosphere through natural processes and human activities, such as carbon dioxide (CO₂). The principal GHGs emitted as a result of human activities are described below.

- Carbon Dioxide (CO₂): CO₂ enters the atmosphere via the combustion of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as a result of other chemical reactions (e.g., manufacture of cement). CO₂ is also removed from the atmosphere (or “sequestered”) when it is absorbed by plants as part of the biological carbon cycle.
- Methane (CH₄): CH₄ is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices, as well as by the decay of organic waste in municipal solid waste landfills.
- Nitrous Oxide (N₂O): N₂O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste.
- Fluorinated Gases: Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are powerful synthetic greenhouse gases that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances (e.g., chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), and halons). These gases are

typically emitted in smaller quantities. However, because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases (High GWP gases).

The *CEQR Technical Manual* lists six GHGs that could potentially be included in the scope of an EIS: CO₂, N₂O, methane, Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), and Sulfur Hexafluoride (SF₆). GHGs differ in their ability to trap heat. To compare emissions of GHGs, compilers use a weighting factor called a Global Warming Potential (GWP), where the heat-trapping ability of one metric ton (1,000 kilograms) of CO₂ is taken as the standard, and emissions are expressed in terms of CO₂ equivalents (CO₂e), but can also be expressed in terms of carbon equivalents. The GWPs for the main GHGs are presented in **Table 3.15-1**.

Table 3.15-1 Global Warming Potential for Primary Greenhouse Gases

Greenhouse Gas	Common sources	Global Warming Potential
CO ₂ - Carbon Dioxide	Fossil fuel combustion, forest clearing, cement production	1
CH ₄ - Methane	Landfills, production and distribution of natural gas and petroleum, anaerobic digestion, rice cultivation, fossil fuel combustion	21
N ₂ O - Nitrous Oxide	Fossil fuel combustion, fertilizers, nylon production, manure	310
HFCs - Hydrofluorocarbons	Refrigeration gases, aluminum smelting, semiconductor manufacturing	140-11,700*
PFCs - Perfluorocarbons	Aluminum production, semiconductor manufacturing	6,500-9,200*
SF ₆ - Sulfur Hexafluoride	Electrical transmissions and distribution systems, circuit breakers, magnesium production	23,900

Notes: Since the Second Assessment Report (SAR) was published in 1995, the IPCC has published updated GWP values in its Third Assessment Report (TAR) and Fourth Assessment Report (AR4) that reflect new information on atmospheric lifetimes of greenhouse gases and an improved calculation of the radiative forcing of CO₂. However, GWP values from the SAR are still used by international convention to maintain consistency in GHG reporting, including by the United States when reporting under the United Nations Framework Convention on Climate Change.

The GWPs of HFCs and PFCs vary depending on the specific compound emitted. A full list of these GWPs is available in Table ES-1 of the U.S. Environmental Protection Agency's *Inventory of Greenhouse Gas Emissions and Sinks: 1990-2008*, available at:

<http://epa.gov/climatechange/emissions/usinventoryreport.html>.

Methodology

A project's GHG emissions can generally be assessed in two steps:

- Estimate the GHG emissions of the proposed project; and
- Examine the proposed project in terms of the qualitative goals for reducing GHG emissions consistent with *PlaNYC* goals.

The *CEQR Technical Manual* recommends that the project's emissions be estimated with respect to the following main emissions sources:

- On-site stationary operational GHG emissions (direct and indirect);
- Mobile source GHG emissions (direct and indirect); and
- Construction GHG emissions and GHG emissions from solid waste management (when applicable).

Stationary and mobile source operational GHG emissions were estimated for the proposed project and are presented below. GHG emissions from construction include both direct emissions, such as emissions from construction equipment and delivery trucks, and emissions embedded in the production of materials, such as emissions from the production of steel, rebar, aluminum, and cement used for construction. Emissions associated with construction have not been estimated explicitly for the proposed project. As discussed in **Chapter 3.19**, "Construction," no specific development designs have been prepared for the project site. The emissions from construction activity and associated equipment operations are unlikely to be a significant part of total project emissions. Thus, as per *CEQR Technical Manual* guidance, a quantitative construction emissions analysis is not warranted. Similarly, because the project is not expected to change the city's solid waste management system, no estimate of emissions from solid waste management is warranted.

3.15.1 Existing Conditions

As discussed in **Chapter 3.1**, "Land Use, Zoning, and Public Policy," the project site consists of unoccupied buildings and surface areas used for parking and storage. As a result, there are limited GHG emissions from the project site under existing conditions.

3.15.2 Future No-Action Condition (Future Without the Action)

Under the Future No-Action condition, the project site would remain largely in its present state of unoccupied buildings and surface areas used for parking. Therefore, the level of GHG emissions from the project site would be the same as under existing conditions.

3.15.3 Future Action Condition (Future With the Action)

By the year 2027, the proposed action would facilitate approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the boundary of the Naval Annex. Outside the Naval Annex, the proposed action would support the development of the Backlot, approximately 70,000 square feet of new development near the northern tip of the project site. In addition, Steiner Studios intends to seek financial incentives for the development of a 250,000-square-foot Kent Avenue Parking Structure in the area outside the Naval Annex.

Stationary Source Operational Emissions

According to the *CEQR Technical Manual*, a project's annual GHG emissions should be estimated based on projected energy usage. Since the specific fuel types to be used are unknown, the *CEQR Technical Manual* recommends that annual GHG emissions be calculated based on the project's built floor area and the carbon intensities of New York City building types, as provided in Table 18-3 of the manual.

The predicted GHG emissions, expressed in terms of CO₂ equivalent (CO₂e), are summarized in **Table 3.15-2**. As shown, stationary source operational GHG emissions are estimated to be approximately 4,414.55 metric tons on an annual basis. This level represents less than 0.0001 percent of the city's overall GHG emissions in 2011 of 54.3 million metric tons (per the city's inventory amount of September 2011).

Table 3.15-2 Stationary Source Operational GHG Emissions (Year 2027)

Building Type	Building Size (square feet)	CO _{2e} Emission Factor (Kg/sf/year) ²	GHG Annual Emissions (Kg/Year)	GHG Annual Emissions (Metric Tons per Year)
Commercial	315,000 ¹	9.43	2,970,450	2,970.5
Institutional/Academic	105,000	11.42	1,199,100	1,199.1
Parking	250,000	0.98	245,000	245.0
Total Stationary Source GHG Annual Emissions				4,414.55

¹ 315,000 square feet includes new commercial area inside the Naval Annex and the 70,000-square foot Backlot, located outside the Naval Annex.

² GHG intensity for parking structure based on the *Victoria Theater Redevelopment Project FEIS* (2013). All other GHG Intensities were obtained from the *CEQR Technical Manual*, Table 18-3.

Mobile Source Operational Emissions

The numbers of annual weekday and weekend vehicle trips by mode (auto, taxi, and truck) that would be generated from the proposed project were calculated based on the transportation planning assumptions as described in the **Chapter 3.13**, "Transportation." The assumptions used in the calculation include average daily weekday person trips and delivery trips by proposed use, the percentage of vehicle trips by mode, and the average vehicle occupancy. Travel distances shown in Table 18-4 of the *CEQR Technical Manual* for areas outside of Manhattan were used in the calculations of annual vehicle miles traveled by cars, taxis, and trucks. An average one-way truck trip was assumed to be 38 miles, as per the *CEQR Technical Manual*. Table 18-6 of the *CEQR Technical Manual* was used to determine the percentage of vehicle miles traveled by road type and the mobile GHG emissions calculator was used to obtain an estimate of auto and truck GHG emissions attributable to the proposed project. As shown in **Table 3.15-3**, mobile source operational GHG emissions are estimated to be approximately 4,816.2 metric tons on an annual basis.

Table 3.15-3 Mobile Source Operational GHG Emissions (Year 2027)

Road Type	Passenger Vehicle	Taxi	Truck	GHG Annual Emissions (Metric Tons per Year)
Local	160.98	33.48	1,043.17	1,237.63
Arterial	299.31	62.04	1,804.82	2,166.18
Expressway	201.07	40.97	1,170.35	1,412.39
Total Mobile Source GHG Annual Emissions				4,816.20

Consistency With The GHG Reduction Goal

According to the *CEQR Technical Manual*, the assessment of consistency with the city GHG reduction goal should answer the following question: "Is the project consistent with the goal of reducing GHG emissions, specifically the attainment of the city's established GHG reduction goal of reducing citywide GHG emissions by 30 percent below 2005 levels by 2030?"

Four major goals are cited for projects in the *CEQR Technical Manual*, as follows:

- Pursue transit-oriented development.

- Generate clean, renewable power through replacement of inefficient power plants with state-of-the-art technology and expanding the use of clean distributed generation (not applicable in the case of this proposed project).
- Construct new resource- and energy-efficient buildings, including the use of sustainable construction materials and practices, and improve the efficiency of existing buildings.
- Encourage sustainable transportation through improving public transit, improving the efficiency of private vehicles, and decreasing the carbon intensity of fuels.

The project site is located in an area supported by many transit options. There are multiple MTA subway stations in the vicinity of this site—including the G, J, M, and Z subway lines. Several MTA bus lines service the neighborhood as well, including the B48, B54, B57, B62, B67, and B69 bus routes. The B57 bus line travels along Flushing Avenue. The eastbound B57 bus stop is proximate to the intersection of Flushing and Washington Avenues and the westbound B57 bus stop is one block from the project site near the intersection of Flushing and Waverly Avenues. A Citibike station is located at Washington and Park Avenues. Finally, the BNY offers shuttle service to nearby subway stations.

The proposed project would result in the reuse and redevelopment of some of the existing inactive buildings in the Naval Annex, as well as the development of new buildings on the project site. It is expected that renovated buildings would utilize energy-efficient features. The new and reused buildings would be compliant with the New York City Energy Conservation Code, which sets minimum energy standards for the design and construction of all new buildings and substantial renovation of existing buildings within New York City. Thus, the project would support sustainability initiatives, as well as help support the city's gradual transition to a greener city, and help contribute to meeting the goal of reducing the city's greenhouse gas emissions by 30 percent.

Climate Change

Portions of the project site are located within a federally designated flood hazard area, as defined by the Flood Insurance Rate Map (FIRM) for the respective geographic area (City of New York, Panel 204 of 457, Map Number 3604970204F), issued by the Federal Emergency Management Agency (FEMA). The FIRMs show portions of the project site that include the Backlot and the proposed Kent Avenue Parking Structure subject to flooding by a storm or flood event that has a one percent chance (100-year flood) and half a percent chance (500-year flood) of being equaled or exceeded in any given year. The Naval Annex is not currently located within a flood zone.

To address the fact that proposed buildings would be located in a flood zone, it is expected that several design measures would be incorporated and implemented when development as part of the Media Campus plan is carried out at the project site. Examples of such methods would be raising the first floor of new development and/or mechanical space above the existing base flood elevation. While not currently in a flood zone, if future revisions to the FIRM include portion of the Naval Annex, design measures incorporated into existing buildings could include retrofitting the perimeter of existing building with flood prevention systems (either temporary or permanently installed flood gates/shutters), potentially in conjunction with an emergency flood protection plan. Coastal floodplains are influenced by astronomic tide and meteorological forces and not by fluvial flooding and, as such, are not affected by the placement of obstructions within the floodplain. Therefore, the construction and operation of the proposed project would not exacerbate future projected flooding conditions. Furthermore, all construction work at the project site would meet the standards of the New York City Building Code and the Best Available Flood Hazard Data available from FEMA at the time of their construction.

Conclusion

The potential GHG emissions associated with the proposed project have been projected and are presented above. The proposed project is supportive of transit and non-motorized commuting options. It

is expected that the new and renovated buildings would utilize energy-efficient features and be compliant with the New York City Energy Conservation Code. Furthermore, all construction work at the project site would meet the standards of the New York City Building Code and the Best Available Flood Hazard Data available from FEMA at the time of their construction. Thus, the project is consistent with the citywide GHG reduction goal and would not result in a significant climate change impact.

3.16 NOISE

Introduction

The *CEQR Technical Manual* defines noise as any unwanted sound, and sound is defined as any air pressure variation that the human ear can detect. According to the CEQR guidelines, an assessment of potential noise impacts evaluates three principal types of noise sources: mobile, stationary and construction. An assessment of potential mobile and stationary source impacts is provided in this chapter and an assessment of construction-related noise impacts is provided in **Chapter 3.19**, “Construction.”

3.16.1 Acoustical Fundamentals

Sound is a fluctuation in air pressure. Sound pressure levels are measured in units called “decibels” (“dB”). The particular character of the sound that we hear is determined by the speed, or “frequency,” at which the air pressure fluctuates, or “oscillates.” Frequency defines the oscillation of sound pressure in terms of cycles per second. One cycle per second is known as 1 Hertz (“Hz”). People can hear over a relatively limited range of sound frequencies, generally between 20 Hz and 20,000 Hz, and the human ear does not perceive all frequencies equally well.

A-Weighted Sound Level – dB(A)

In order to establish a uniform noise measurement that simulates people’s perception of loudness and annoyance, the decibel measurement is weighted to account for those frequencies most audible to the human ear. This is known as the A-weighted sound level, or dB(A), and it is the descriptor of noise levels most often used for community noise. As shown in **Table 3.16-1**, the threshold of human hearing is defined as 0 dB(A); very quiet conditions are approximately 40 dB(A); levels between 50 dB(A) and 70 dB(A) define the range of noise levels generated by normal daily activity; levels above 70 dB(A) would be considered noisy, and then loud, intrusive, and deafening as the scale approaches 130 dB(A). Generally, changes in noise levels of less than 3 dB(A) are barely perceptible to most listeners, whereas changes in noise levels of 10 dB(A) are normally perceived as doubling (or halving) of noise loudness. These guidelines permit direct estimation of an individual’s probable perception of changes in noise levels.

Sound Level Descriptors

Because the sound pressure level unit of dB(A) describes a noise level at just one moment, and because very few noises are constant, other ways of describing noise over more extended periods have been developed. One way is to describe the fluctuating noise heard over a specific 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 period (e.g., one hour, denoted by $L_{eq}(1)$, or 24 hours, denoted by $L_{eq}(24)$), conveys the same sound energy as the actual time-varying sound. Statistical sound level descriptors, such as L_1 , L_{10} , L_{50} , L_{90} , and L_x , are sometimes used to indicate noise levels that are exceeded 1, 10, 50, 90, and x percent of the time, respectively. For purposes of the proposed project, the L_{10} descriptor has been selected as the noise descriptor to be used in this noise impact evaluation. The one-hour L_{10} is the noise descriptor used in the *CEQR Technical Manual* noise exposure guidelines for city environmental impact review classification.

Table 3.16-1 Common Noise Levels

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

Source: Cowan, James P. Handbook of Environmental Acoustics, Van Nostrand Reinhold, New York, 1994. Egan, M. David, Architectural Acoustics. McGraw-Hill Book Company, 1988.

3.16.2 Noise Impact Criteria

The *CEQR Technical Manual* contains noise exposure guidelines for use in New York City environmental impact review, and attenuation values to achieve acceptable interior noise levels. These values are shown in **Table 3.16-2**. Noise exposure is classified into four categories: “acceptable,” “marginally acceptable,” “marginally unacceptable,” and “clearly unacceptable.” The *CEQR Technical Manual* criteria are based on maintaining an interior noise level for the worst-case hour L_{10} less than or equal to 45 dB(A).

Additionally, according to the noise impact assessment guideline provided in the *CEQR Technical Manual*, to determine a significant impact during daytime hours, 65 dB(A) $L_{eq}(1)$ is the absolute noise level that should not be significantly exceeded. Therefore a three (3)-dB(A) L_{eq} increase over Future No-Action condition, although just barely perceptible to most listeners, is considered an indicator of noise impact significance when the daytime level is at or above 62 dB(A). These assessment guidelines were used to assess noise impacts from the proposed project.

Table 3.16-2 Noise Exposure Guidelines

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 \leq 60 dBA -----	NA	NA	NA	NA	NA	NA
2. Hospital, Nursing Home		$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 65$ dBA	----- $60 < L_{dn} \leq 65$ dBA -----	$65 < L_{10} \leq 80$ dBA	(1) $65 < L_{dn} \leq 70$ dBA, (2) $70 \leq L_{dn}$	$L_{10} > 80$ dBA	----- Ldn \leq 75 dBA -----
3. Residence, residential hotel or motel	7 AM to 10 PM	$L_{10} \leq 65$ dBA		$65 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
	10 PM to 7 AM	$L_{10} \leq 55$ dBA		$55 < L_{10} \leq 70$ dBA		$70 < L_{10} \leq 80$ dBA		$L_{10} > 80$ dBA	
4. School, museum, library, court, house of worship, transient hotel or motel, public meeting room, auditorium, out-patient public health facility		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)	Same as Residential Day (7 AM-10 PM)	Same as Residential Day (7 AM-10 PM)			
5. Commercial or office		Same as Residential Day (7 AM-10 PM)		Same as Residential Day (7 AM-10 PM)	Same as Residential Day (7 AM-10 PM)	Same as Residential Day (7 AM-10 PM)			
6. Industrial, public areas only ⁴	Note 4	Note 4	Note 4	Note 4	Note 4				

Notes:

- (i) In addition, any new activity shall not increase the ambient noise level by 3 dB(A) or more.
- ¹ Measurements and projections of noise exposures are to be made at appropriate heights above site boundaries as given by American National Standards Institute (ANSI) Standards; all values are for the worst hour in the time period.
- ² Tracts of land where serenity and quiet are extraordinarily important and serve an important public need and where the preservation of these qualities is essential for the area to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks or open spaces dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet. Examples are grounds for ambulatory hospital patients and patients and residents of sanitariums and old-age homes.
- ³ One may use the FAA-approved L_{dn} contours supplied by the Port Authority, or the noise contours may be computed from the federally approved INM Computer Model using flight data supplied by the Port Authority of New York and New Jersey.
- ⁴ External Noise Exposure standards for industrial areas of sounds produced by industrial operations other than operating motor vehicles or other transportation facilities are spelled out in the New York City Zoning Resolution, Sections 42-20 and 42-21. The referenced standards apply to M1, M2, and M3 manufacturing districts and to adjoining residence districts (performance standards are octave band standards).

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

3.16.3 Impact Analysis

The noise analysis for the proposed project consists of two parts—a screening analysis to determine whether traffic generated by the proposed project would have the potential to result in significant noise impacts, and an analysis to determine the level of building attenuation necessary to ensure that the proposed project's interior noise levels satisfy applicable interior noise criteria because the proposed project would introduce sensitive receptors. Since the proposed project would not introduce any significant stationary sources as defined in the *CEQR Technical Manual*, a stationary source impact analysis is not warranted and not discussed in this chapter.

Project Mobile Source Impact Screening

Mobile noise sources are those sources (principally automobiles, buses, trucks, aircraft, and trains) that move in relation to a noise-sensitive receptor. The proposed project would induce passenger vehicle trips to and from the project site.

The methodology for predicting future on-road traffic noise levels assumes that existing noise levels are dominated by, and are a function of, existing traffic volumes. Changes in future noise levels can therefore be determined by the proportional increase in traffic on the adjacent roadway due to a project. For example, if the existing traffic volume at an intersection were 100 vehicles per hour (vph), and the future traffic volume increased by 50 vph to 150 vph, the noise levels would increase by approximately 1.8 decibels (dB(A)). For an increase of 100 vph (a doubling of traffic volume) for a total of 200 vehicles per hour, noise levels would increase by 3 dB(A). However, as different noise levels are generated by different types of vehicles (cars, trucks, buses, etc.), the *CEQR Technical Manual* recommends using Passenger Car Equivalents (PCEs) to create a common unit of measurement to conservatively estimate noise from traffic. The PCE conversion factors are summarized below:

- Each Automobile or Light Truck: 1 Noise PCE
- Each Medium Truck: 13 Noise PCEs
- Each Bus: 18 Noise PCEs
- Each Heavy Truck: 47 Noise PCEs

According to the traffic analysis results described in **Chapter 3.13**, "Transportation," and the project-associated PCEs as summarized below in **Table 3.16-3**, the proposed project would not result in PCEs doubling at sensitive receptors in the project area during any peak hour. Thus, as PCEs would not double in the study area, no significant adverse mobile source noise impacts (i.e., an increase of 3-dB(A) or greater) due to project-generated vehicular traffic are anticipated as a result of the proposed action.

Table 3.16-3 PCEs Comparison

Location	Worst-case Peak Hour Condition			Representative Noise Monitoring Location	Significant Noise Impact?
	No-Action PCE	With-Action PCE	Noise Increment (dB(A))		
Flushing Avenue & Williamsburg Street West	20,724	20,825	0.02	M1	No
Proposed Development Site near Brooklyn Naval Hospital Cemetery	13,594	13,594	0.00	M2	No

Analysis of Background Noise Impacts on Project Sensitive Receptors

As discussed in the *CEQR Technical Manual*, if the project would be located in an area with existing high ambient noise levels, further noise analysis may be warranted to determine the attenuation measures that are appropriate for the proposed project. As discussed in **Chapter 2.0**, "Project Description," the buildings in which academic uses would be clustered would be in the southeastern portion of the project site near the intersection of Flushing Avenue and Williamsburg Street West and the elevated Brooklyn-Queens Expressway (I-278). Due to the proximity of the academic uses to these heavily-trafficked thoroughfares, it is anticipated that the noise levels at the project site would be high and therefore ambient noise levels were measured to assess the potential for existing ambient noise to have a significant adverse effect on future academic uses on the project site, which would be considered sensitive receptors under *CEQR Technical Manual* guidelines.

Two noise monitoring locations immediately adjacent to the project site were selected. The location of each noise monitoring site is shown on **Figure 3.16-1**. Noise measurements were conducted on Thursday, June 19th, 2014. The first noise monitor was placed along the property line near the intersection of Flushing Avenue and Williamsburg Street West. The second noise monitor was placed along the eastern edge of the project site near the Brooklyn Naval Hospital Cemetery. These monitoring locations are generally representative of locations with the maximum potential for ambient noise to affect the cluster of proposed academic uses in the southeastern portion of the project site.

At each receptor location, 20-minute noise measurements were made for three weekday time periods—AM (8:00 to 9:00 AM), midday (12:00 to 1:00 PM), and PM (4:00 to 5:00 PM) to determine existing noise levels. Primary contributors to the ambient noise profile included vehicular traffic and pedestrian activity. **Table 3.16-4** summarizes the results of the baseline measurements for the weekday AM, midday and PM analysis hours. It was observed during the measurement that noise levels are generally higher (i.e., above 70 dB(A)) at the location closer to Flushing Avenue and Williamsburg Street West and the elevated Brooklyn-Queens Expressway as shown at monitoring Site 1. Conversely, noise levels are lower (i.e., below 70 dB(A)) where the receptors are located further away from these main roadways in the neighborhood as shown from the levels monitored at Site 2.

Table 3.16-4 Measured Noise Levels (dB(A))

Noise Monitoring Location ¹	Time	L _{eq}	L ₁₀
1	AM	72.5	74.8
	MD	71.0	72.9
	PM	66.5	69.0
2	AM	66.1	67.8
	MD	64.6	66.2
	PM	57.4	58.6

¹ – Locations are shown on Figure 3.16-1

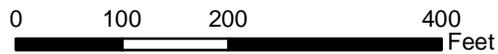


Legend

- Project Site
- Media Campus Building
- 1 Noise Monitor Location



**Steiner Studios Media Campus EIS
Brooklyn Navy Yard**



Noise Monitor Locations

Figure 3.16-1

The measured ambient noise levels indicate that the project-induced sensitive receptors would be in an area that exceeds the marginally acceptable levels as defined in the *Noise Exposure Guidelines* summarized in CEQR Table 19-2. Therefore a significant impact would occur unless the building designs provide a composite building attenuation that would be sufficient to reduce these levels to an acceptable interior noise level. These values are shown in **Table 3.16-5**.

Table 3.16-5 Attenuation Values to Achieve Acceptable Interior Noise Levels

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

Source: CEQR Technical Manual

Notes:

¹ The above composite window-wall attenuation values are for residential dwellings. Commercial and office spaces/meeting rooms would be 5 dB(A) less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.

² Required attenuation values increase by 1 dB(A) increments for L_{10} values greater than 80 dB(A).

As indicated in **Table 3.16-4**, at the first noise monitoring location (Site 1), near the intersection of Flushing Avenue and Williamsburg Street West and the elevated Brooklyn-Queens Expressway, a maximum L_{10} of 74.8 dB(A) was measured during the AM peak period. Thus, the site falls under "Marginally Unacceptable" conditions. At the second noise monitoring location, near the eastern project site boundary and adjacent to the Brooklyn Naval Hospital Cemetery and away from those main travel roadways, a maximum L_{10} of 67.8 dB(A) during the AM peak period was measured. Thus, the noise levels at this location would not fall within the "Marginally Unacceptable" or "Clearly Unacceptable" conditions.

Based on the results of the noise monitoring program and the guideline for acceptable interior noise levels, the academic uses proposed for the southeastern portion of the project site would require a composite Outdoor-Indoor Transmission Class (OITC) rating greater than or equal to the 31 dB(A) window wall attenuation for the building façade, unless further analysis indicated that it was not required at every facade. The OITC classification is defined by American Society for Testing and Materials (ASTM) International (ASTM E1332-10) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. Steiner Studios is committed to adhering to these design specifications, and the buildings that would house academic uses on the project site would provide sufficient attenuation to achieve the city's interior noise level guideline of 45 dB(A) or lower at the project-induced sensitive receptors.

Therefore, significant adverse noise impacts are not expected to occur as a result of the proposed action, and further noise assessments are not warranted.

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3.17 PUBLIC HEALTH

According to the CEQR Technical Manual, for most proposed projects a public health analysis is not necessary. Where no significant unmitigated adverse impact is found in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise, no public health analysis is warranted. As discussed in the foregoing analyses, the proposed project would not result in significant adverse impacts in these technical areas.

As described in **Chapter 3.9**, "Hazardous Materials," Phase I Environmental Site Assessments conducted for the project site identified potential sources of contamination. Phase II site investigation activities were also conducted at the project site, including the collection of soil and groundwater samples for laboratory analysis. The Phase II site investigation confirmed evidence of petroleum contamination and other exceedances of soil and groundwater guidelines and standards.

As part of the overall development of the project site, the project sponsor is committed to the proper handling and disposal of hazardous materials on site in accordance with local, state and federal regulations and guidance. A soils management plan would be developed and implemented for the removal of any soils excavated from the project site and any dewatering required during the construction activities that require discharge to sewers would be performed in compliance with the appropriate effluent limitation through permits obtained from NYCDEP, and as such sewage discharge from the site would be treated on site as required and sampled in accordance with permit requirements. The project sponsor would develop a RAP and CHASP to avoid the potential of significant impacts related to Hazardous Materials. A vapor barrier or other form of vapor control would be installed below the proposed new construction at the project site and any petroleum-contaminated soil, groundwater, or underground storage tanks unexpectedly encountered during site development would be reported to the appropriate government agency. With implementation of these measures, the proposed project would not result in any significant adverse impacts related to hazardous materials that would affect public health.

As described in **Chapter 3.14** "Air Quality" the proposed project would not exceed the 170-peak-hour trip-CEQR preliminary screening threshold for CO and no CO microscale impact analysis is warranted by the project. According to the PM_{2.5} hot spot screening results at each affected intersection, all intersections pass the screening based on conservative peak-hour traffic increments and no further hot spot PM_{2.5} analysis is warranted. Potential impacts from the proposed parking structure from CO concentrations were assessed at multiple receptor locations. The predicted CO levels are well below the respective 35 ppm of 1-hour average NAAQS and 9 ppm of 8-hour average NAAQS and the proposed parking structure would not result in significantly adverse air quality impacts from CO concentrations.

All renovated existing buildings and newly constructed buildings associated with the proposed project would be located a sufficient distance from each other within the project site and no stationary source project-on-project air quality impacts would occur as a result of the proposed project. Moreover, all renovated existing buildings and newly constructed buildings associated with the proposed project would be located a sufficient distance from any existing development surrounding the project site and no stationary source air quality impacts would occur as a result of potential project-related impacts to existing development in the surrounding area.

A review of permit records provided by New York City Department of Environmental Protection (DEP) was conducted of NYCDEP-registered manufacturing facilities with known pollutants within 400 feet of the project site. The predicted concentrations using the conservative screening model at the proposed Facility are below the applicable NAAQS and/or NYSDEC AGC/SGC guideline thresholds and potential air quality impacts on the proposed project as a result of operation of existing neighborhood minor sources would not be significant, and further assessment is not warranted. Thus, the proposed project would not result in any significant adverse impact related to air quality that would affect public health.

As described in **Chapter 3.16**, “Noise,” based on the results of the noise monitoring program, the academic buildings clustered around the southeastern portion of the project site would require a composite Outdoor-Indoor Transmission Class (OITC) rating greater than or equal to the 31 dB(A) window wall attenuation for façades facing Flushing Avenue and Williamsburg Street West. The OITC classification is defined by ASTM International (ASTM E1332-10) and provides a single-number rating that is used for designing a building façade including walls, doors, glazing, and combinations thereof. Steiner Studios is committed to adhering to these design specifications, and the buildings that would house academic uses on the project site would provide sufficient attenuation to achieve the city’s interior noise level guideline of 45 dB(A) or lower at sensitive receptors. In addition, the proposed buildings’ mechanical systems (i.e., heating, ventilation, air conditioning and refrigeration systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code, the New York City Department of Buildings Code and Section 926 of the New York City Mechanical Code) and to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, significant adverse noise impacts are not expected to occur as a result of the proposed action that would affect public health.

Therefore, the proposed project would not result in significant public health impacts.

3.18 NEIGHBORHOOD CHARACTER

Introduction

As defined in the *CEQR Technical Manual*, neighborhood character is considered to be an amalgam of the various elements that give a neighborhood its distinct personality. These elements include land use, socioeconomic conditions, historic and cultural resources, urban design and visual resources, transportation, noise, open space and shadows, as well as any other physical or social characteristics that help to define a community. An assessment of neighborhood character is generally needed when an action would exceed preliminary thresholds for the technical areas listed above, or have moderate effects on several of these technical areas. Examples of how changes in the elements that comprise neighborhood character may have an effect on the overall character of a neighborhood include:

- **Land Use.** Development resulting from a proposed action could alter neighborhood character if it introduces new land uses, conflicts with land use policy or other public plans for the area, changes land use character, or generates significant land use impacts.
- **Socioeconomic Conditions.** Changes in socioeconomic conditions have the potential to affect neighborhood character if it results in substantial direct or indirect displacement or addition of population, employment, or businesses; or substantial differences in population or employment density.
- **Historic and Cultural Resources.** If an action would result in substantial direct changes to a historic and cultural resource or substantial changes to public views of a resource, or when a historic and cultural resource analysis identifies a significant impact in this category, there is a potential to affect neighborhood character.
- **Urban Design and Visual Resources.** In developed areas, urban design changes have the potential to affect neighborhood character by introducing substantially different building bulk, form, size, scale, or arrangement. Visual resource changes could affect neighborhood character if the changes directly alter key visual features such as unique and important public view corridors and vistas, or block public visual access to such features.
- **Transportation.** Changes in traffic and pedestrian conditions can affect neighborhood character if it leads to traffic changes such as: substantial changes in level of service; change in traffic patterns; change in roadway classifications; change in vehicle mixes, substantial increase in traffic volumes on residential streets; substantially different pedestrian activity and circulation, or significant traffic impacts.
- **Noise.** If an action generates a significant adverse noise impact it could affect neighborhood character.
- **Open Space.** If an action would potentially have a direct or indirect effect on open space that would adversely affect utilization of existing resources, there is a potential to affect neighborhood character.
- **Shadows.** If shadows from a proposed project fall on a sunlight-sensitive resource and substantially reduce or completely eliminate direct sunlight exposure, there is a potential to affect neighborhood character.

Methodology

A preliminary assessment determines whether changes expected in other technical areas may affect a contributing element of neighborhood character. The assessment should answer the following two questions:

1. What are the defining features of the neighborhood?
2. Does the project have the potential to affect the defining features of the neighborhood, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical areas?

This chapter reviews the defining features of the neighborhood and examines the proposed project's potential to affect the neighborhood character of the project site and the 400-foot surrounding study area. The study area is generally coterminous with the study area used for the analysis in **Chapter 3.1**, "Land Use, Zoning, and Public Policy." The assessment begins with a review of existing conditions and the neighborhood of the study area. Following existing conditions is a concise discussion of the changes anticipated on the project site and within the study area by the 2027 analysis year under the Future No-Action Scenario. A brief overview of the proposed project is then presented, along with an analysis of whether any anticipated significant adverse impacts and moderate adverse effects in the aforementioned relevant technical assessment categories would adversely affect any of the defining features of neighborhood character.

3.18.1 Existing Conditions

The larger portion of the project site is made up of the Naval Annex, which formerly consisted of a naval hospital and ancillary buildings that supported the Brooklyn Navy Yard (BNY), as well as residences for medical staff. The Naval Annex is a complex of unoccupied buildings in a campus setting located at the southeastern end of the BNY. The grounds of the Naval Annex are separated from the rest of the BNY, as well as from public access, by a wall that runs the perimeter of the site, with gates located in multiple locations. Photos of the project site are displayed in **Figure 3.1-3**.

The focal point of the campus is the U.S. Naval Hospital that sits on an elevated site overlooking the rest of the Naval Annex. Aside from the hospital building, the majority of the other buildings in the Naval Annex were used as residences. The Surgeon's House sits in the western portion of the yard, near the hospital building. In the northern portion of the yard are several former naval personnel residences. The largest of these buildings is the Nurses' Quarters. Also near the Nurses' Quarters is Quarters No. 4, also referred to as the Lab Director's House.

In the northwestern corner of the Naval Annex are the Infectious Disease Quarters. Sitting in the southwestern corner of the Naval Annex are the Bachelor Officers' Quarters. Other nonresidential buildings and structures are scattered throughout the Naval Annex. The Naval Annex campus creates an open setting that is characterized by ornamental trees adjacent to roadways, grass lawns and playing fields, including a football field. Remnants of a greenhouse, tennis courts and a pool and an associated bathhouse can also be found on the campus.

The Naval Annex site is part of the State/National Registers of Historic Places- (S/NRHP) listed Brooklyn Navy Yard Historic District. There are 26 contributing and seven non-contributing resources to the historic district located on the Naval Annex. Two resources within the Naval Annex are designated New York City Landmarks by the New York City Landmarks Preservation Commission. These include the Surgeon's House (R1) and the U.S. Naval Hospital (R95). A complete list of historic resources on the project site (see **Table 3.6-1**) and a graphic showing the location of all the historic resources (see **Figure 3.6-5**) is provided in **Chapter 3.6**, "Historic and Cultural Resources."

The portions of the project site that are located outside the Naval Annex area currently consist of paved open surface areas that are used for parking and storage. The area proposed as the site of the Kent Avenue Parking structure would potentially overlap with the boundaries of the Brooklyn Navy Yard Historic District. The site of the proposed Backlot is not located within the Brooklyn Navy Yard Historic District.

The Study Area

The majority of the study area encompasses an area within the BNY. To the west of the project site, near Flushing Avenue, is the Foundry building (Building 2). The Foundry building is currently occupied by Capsys, a manufacturer of prefabricated modular homes. West of the Foundry building is 25 Washington Avenue (Building 1), which is also a World War II-era, industrial building that stands at the entrance of the Steiner Studios media campus in the Brooklyn Navy Yard. The building was recently renovated as production space for Steiner Studios, as well as some space reserved for future academic uses.

The portion of the study area north of Buildings 1 and 2 includes the current Steiner Studios campus. Steiner Studios is a walled enclave inside the BNY that includes over 500,000 square feet of space for media, film, and television production spread across approximately 15 acres. The current Steiner Studios campus is characterized by several large, attached buildings used for soundstages and supporting warehouse buildings. Each building contains multiple loading bays to facilitate equipment delivery and materials for production set construction.

North of Steiner Studios, the study area includes industrial buildings and open areas for storage and surface parking. The northern portion of the study area includes the Wallabout Chanel, a small channel that connects to the East River. Along the western side of Kent Avenue, within the confines of the BNY, the study area includes an industrial building and parking lot that has a chain-link fence along its perimeter. This area is occupied by the Brink's Corporation that provides armored car and other security services. To the south on the Brink's site is the Naval Hospital Cemetery that served as the cemetery for the U.S. Naval Hospital from 1824 to 1910. The cemetery is not within the project site, but is a contributing element of the Brooklyn Navy Yard Historic District.

Jacob's Ladder Playground, an approximately one-acre open space resource with active and passive recreational facilities is located in the northeastern portion of the study area. South of the playground, along Kent Avenue, is primarily developed with multifamily residential uses. Historic resources present outside the BNY include the buildings that comprise the S/NRHP-listed Wallabout Industrial Historic District.

The elevated Brooklyn-Queens Expressway (I-278) swings northeast near Kent Avenue and Flushing Avenue in the southeastern portion of the study area. The expressway acts as a barrier, separating the majority of the study area located west of the expressway, from the smaller portion of the study area located east of the expressway. The Brooklyn-Queens Expressway (I-278) contributes to the traffic volumes in the area, due to the proximate vehicle access points for the highway. Photos of the study area are displayed in **Figure 3.1-5**.

3.18.2 Future No-Action Condition (Future Without the Action)

In the future without the proposed project, the approximately 170,000 square feet of new development would not occur inside the Naval Annex, buildings within the Naval Annex site would not be removed, and the existing buildings on the project site would remain unoccupied. In addition, the 70,000-square-foot Backlot and a 250,000-square-foot Kent Avenue Parking Structure would not be developed in the area outside the Naval Annex and these areas would continue to be open areas used for parking and storage.

Steiner Studios, working closely with BNYDC has developed a conceptual plan for future expansion of the Steiner Studios operations. Several proposed projects that would occur within the 400-foot study area, but outside the Naval Annex are all part of Steiner Studios overall expansion plans. The projects that would occur as part of Steiner Studios' expansion plans in the area outside the Naval Annex, in the future without the proposed action, are not contingent on Empire State Development (ESD) funding in order to occur (as discussed in **Section 2.2** "Description of the Proposed Action").

The Future No-Action projects include the following projects discussed below. To the west of the Naval Annex is Building 1 at 25 Washington Avenue, inside the BNY. Steiner Studios recently redeveloped the building to accommodate TV and film production uses and, starting in 2015, the production uses would share the building with academic uses. Steiner Studios was granted a zoning override from the Office of the Deputy Mayor for Economic Development in December 2013 to allow the non-complying academic uses in the industrially-zoned

Building 1 at 25 Washington Avenue. Further west, along Flushing Avenue, Steiner Studios intends to build the West Parking Structure, a parking facility with approximately 1,000 accessory parking spaces. Steiner Studios also plans to build the North Parking Structure. This parking facility would be developed near the current service entrance to Steiner Studios on Assembly Road and would have approximately 210 accessory parking spaces.

Bordering the northwestern portion of the Naval Annex is the current warehouse building (Building 664) for B&H Photo, an electronics retailer. B&H Photo intends to vacate the building when their lease expires and Steiner Studios plans to take over the building and convert it into a space for production uses. To the north of the Naval Annex, Steiner Studios plans to develop four production stages to be known as the Kent Stages. These new stages would be located along Kent Avenue, in the area between the proposed Backlot and the site currently occupied by the Brink's Corporation. To allow for any academic uses, Steiner Studios would pursue either a zoning text amendment from the New York City Planning Commission or a zoning override from the Office of the Deputy Mayor for Economic Development at the time that specific plans have been developed.

To the east of the Naval Annex, the Brooklyn Greenway Initiative, working with BNYDC, plans to create a 1.7-acre park in the former Brooklyn Naval Hospital Cemetery. The site, which is on Williamsburg Street West, between Kent and Flushing Avenues will have a walkway, landscape areas and other features.

3.18.3 Future Action Condition (Future With the Action)

As discussed in **Chapter 2.0**, "Project Description," Steiner Studios' expansion plans envisions the creation of a state-of-the-art, full service media campus in the former Naval Annex that is located in the southeast corner of the BNY, as well as development in areas that surround the Naval Annex. There would be approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the boundary of the Naval Annex. Steiner Studios is seeking financial incentives from ESD to help fund some of the key infrastructure improvements needed to implement the Media Campus development inside the Naval Annex and to implement the related development that would occur in areas outside the Naval Annex

A review of potential changes to the elements that comprise neighborhood character that would possibly affect the overall character of the neighborhood follows below:

Land Use

The proposed project would alter the land use on the project site from a vacant naval hospital campus to Steiner Studios' Media Campus for TV and film production, including related academic uses. The new development would be compatible with and complementary to surrounding land uses. Steiner Studios is currently a major tenant of the BNY and occupies space in the yard north and west of the project site. The proposed studio production use is consistent with adjacent industrial land uses found in the BNY. The academic uses would only occupy a portion of the project site building and would complement the as-of-right uses, and would not introduce a land use that would be considered out of character with the project site or study area. Finally, the proposed project would provide for the rehabilitation and adaptive reuse of historic structures in the Naval Annex. As a result, the proposed action would not lead to any significant adverse impacts to land use that would affect neighborhood character.

Socioeconomic Conditions

No residential or business uses currently exist on the project site, thus direct residential or business displacement would not occur as a result of the proposed action. The proposed project does not include new residential development and no significant impacts from indirect residential displacement are considered likely. The proposed project would not affect business conditions in a specific industry or involve a citywide regulatory change that would lead to significant adverse impacts to conditions in any specific industry. Finally, the proposed project is not expected to introduce trends that would affect other local businesses in the area that would potentially lead to significant adverse impacts from indirect business displacement. Therefore, no significant adverse impacts to socioeconomic conditions are expected as a result of the proposed project that would affect neighborhood character.

Historic and Cultural Resources

While the proposed action would lead to a significant adverse effect on the S/NRHP-listed Brooklyn Navy Yard Historic District, it would allow for the rehabilitation of 15 contributing resources within the Naval Annex. The project sponsor will consult with the SHPO to arrive at mutually agreeable and appropriate measures that the project sponsor would implement to mitigate the adverse effect. It is anticipated that the project sponsor would consult to prepare a Letter of Resolution (LOR) that would describe the actions to be undertaken prior to project implementation. LOR signatories are expected to include the SHPO, the project sponsor, BNYDC, ESD, and possibly NYCLPC. Measures to mitigate these impacts may include documentation in accordance with federal standards, construction protection plans, mothballing of pending resources and context-sensitive architectural design. In addition, the BNY Historic District is surrounded by a wall and not visible from the surrounding neighborhood; thus, the changes that are expected to occur on the project site would not adversely affect the Wallabout Historic District.

Urban Design and Visual Resources

All development that would occur as a result of the proposed project would be constructed in conformance with the bulk regulations of the New York City *Zoning Resolution*, and constructed within the existing zoning envelope. The project would provide for the adaptive reuse of the historic resources on the Naval Annex site, allowing some of the historic buildings in the Naval Annex to be renovated and reoccupied with new uses. Thus, no significant adverse impacts to urban design and visual resources are expected as a result of the proposed action.

Transportation

As discussed in **Chapter 3.13**, "Transportation," with proposed traffic network mitigation measures in place, future traffic volumes projected to occur on the roadway network during critical periods of peak traffic activity under the future with the proposed project, specifically, during the peak 15-minute period of the weekday AM and PM peak hours would be mitigated. In addition, the parking demand of the proposed project would be accommodated on the project site. No significant adverse pedestrian impacts are projected to occur at any studied intersection during the weekday AM, midday, and PM peak hours as a result of the proposed action. And, no one subway station is projected to experience an incremental increase of more than 200 subway trips. Therefore, the proposed development is not projected to result in any significant adverse transportation impacts that would potentially affect neighborhood character.

Noise

As demonstrated in **Chapter 3.16**, "Noise", the traffic generated by the proposed project would not have the potential to produce significant increases to noise levels at any sensitive receptors within the project study area. Noise monitoring near the intersection of Flushing Avenue and Williamsburg Street West, (near the elevated Brooklyn-Queens Expressway) showed noise levels in the "Marginally Unacceptable" range due to traffic noise exposures. Significant adverse impacts to project-generated sensitive uses would be avoided by providing sufficient window wall attenuation for the building façade to achieve the city's interior noise level guideline of 45 dB(A) or lower at the project-induced sensitive receptors. Therefore, noise impacts are not expected to occur as a result of the proposed project that would affect neighborhood character.

Open Space

The proposed action would not result in any direct effects on any open space resources, as the project would not result in a physical loss of any public open spaces either by encroaching on any open spaces or displacing any open spaces. The proposed project would not change the use of any open space so that they no longer serve the same user population, nor would the proposed project limit public access to an open space or result in increased noise, air pollutant emissions, odors, or shadows on any public open spaces that would affect their usefulness.

As part of the proposed project, the Naval Annex's approximately 2.3-acre green space would be rehabilitated as a campus landscape. The large field at the center of the Naval Annex (behind the Naval Hospital) would serve as an outdoor gathering space for employees and visitors to the project site and a Grand Stair Plaza would provide a new landscaped, monumental stair plaza to connect the Naval Annex to Steiner Studios and create a gathering place for students, employees and visitors. Given the insular nature of the proposed Steiner Studios Media Campus, it is expected that much of the demand for passive open spaces by the nonresident population generated by the proposed project would be met by the passive open space amenities that would be created as part of the rehabilitation of the project site. Therefore, significant adverse open space impacts that would affect neighborhood character are not expected to result from the proposed action.

Shadows

As demonstrated in **Chapter 3.5**, "Shadows", while there would be new project-generated shadows on sunlight-sensitive resources from new development on the project site, the duration and coverage of the new shadows would be limited and would not affect the vitality or usage of the sunlight-sensitive resources identified in the study area. The analyses show that ample time for sunlight will remain during the growing season and the proposed project would not result in a significant reduction in sunlight available to any sunlight-sensitive features or any other resources to less than the minimum time necessary for its survival. Therefore, significant adverse impacts are not expected from new shadows as a result of the proposed project that would adversely affect neighborhood character.

Conclusion

Of the relevant technical areas specified in the *CEQR Technical Manual* that comprise of neighborhood character, the proposed project would not cause significant adverse impacts related to land use, socioeconomic conditions, historic and cultural resources, urban design and visual resources, transportation, noise, open space and shadows. The project site is separated from the surrounding community by a wall and the development proposed for the site would not affect the technical areas (except for transportation) that comprise neighborhood character. Furthermore, moderate adverse effects that would affect such a defining feature, either singly or in combination, have also not been identified. The proposed action would not result in a significant adverse neighborhood character impact and would not result in a significant adverse impact to a defining feature of the neighborhood and no further analysis is necessary.

3.19 CONSTRUCTION IMPACTS

Introduction

Construction activities, although temporary in nature, can sometimes result in significant adverse impacts and have disruptive and noticeable effects on the area that surrounds a project site. As stated in the *CEQR Technical Manual*, a project's construction activities may affect a number of technical areas analyzed for the operational period, for example air quality, noise, and traffic. The determination of significance and need for related mitigation is generally based on the duration and magnitude of the potential construction impacts.

Steiner Studios, working closely with BNYDC, has developed a conceptual plan for future expansion of the Steiner Studios operations. Steiner Studios envisions the creation of a state-of-the-art, full service Media Campus in the former Naval Annex that is located in the southeast corner of the Brooklyn Navy Yard (BNY), as well as development in areas that surround the Naval Annex. In the Naval Annex, the proposed action would facilitate approximately 350,000 square feet of floor area, including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures. Steiner Studios intends to renovate many of the existing Naval Annex buildings, without the need for excavation, or the creation of foundation and new structures. Thus, a substantial portion of activity at the project site would be redevelopment of existing structures, representing a less intense level of construction activity.

Outside the Naval Annex, the proposed action would facilitate an approximately 70,000 square-foot new "Backlot." The proposed Backlot entails stacking shipping containers around the perimeter of the site to create an outdoor studio lot and involves minimal construction. In addition, the project sponsor intends to seek financial incentives from ESD in the future for the development of a 250,000-square-foot Kent Avenue Parking Structure (650 accessory parking spaces) that is envisioned for the area outside the Naval Annex. The proposed project would also include infrastructure (e.g., water and sewer) improvements, as well as the construction of a Grand Stair Plaza, a Campus Pedestrian Passage, and a new Kent Avenue Vehicular Entrance at Kent Avenue and Wilson Street that would provide direct access to the Naval Annex and the northern end of the studio lot (See **Chapter 2.0**, "Project Description" for further description). It is anticipated that construction activities associated with the proposed project would occur over a 12-year period.

3.19.1 Construction Activities

Construction activities generated by the proposed project would be gradual, taking place over a 12-year period. The schedule of construction at the project site would ultimately depend on market considerations and need for particular project elements. However, a conceptual reasonable worst-case construction scenario has been developed to determine if there would be a potential for significant adverse construction-related impacts. See **Figure 3.19-1** for a graphical representation of the reasonable worst-case construction scenario. **Table 3.19-1** below includes a list of all the Projected Development Sites included in the construction scenario. The following is a general outline of construction activities that would be expected to occur for new development on the project site. Not all new structures would be in construction at the same time.

- Site Clearance, Excavation, and Foundation. The first stage of construction for a new structure would entail site clearance; digging, pile-driving, pile capping, and excavation for the foundation; and reinforcing and pouring of foundations. Typical equipment used for these activities would include excavators, backhoes, tractors, pile-drivers, hammers, and cranes. Trucks would arrive at the site with pre-mixed concrete and other building materials, and would remove any excavated material and construction debris.

- Erection of Superstructure. Once the foundations have been completed, the construction of the building's steel framework and decking would take place. This process involves the installation of beams, columns and decking, and would potentially warrant the use of cranes, derricks, hoists, and welding equipment, as warranted.
- Façade and roof construction, mechanical installation, interior and finishing work. This would include the assembly of exterior walls and cladding; installation of heating, ventilation and air conditioning (HVAC) equipment and ductwork; installation and checking of elevator, utility, and life safety systems; and work on interior walls and finishes. During these activities, hoists and cranes potentially would be used, and trucks would remain in use for material supply and construction waste removal. It should be noted that much of this work occurs when the building is fully enclosed, and therefore is not disruptive to the surrounding neighborhood.

Table 3.19-1 Future Projected Development Sites at Steiner Studios

Key to Figure 2.0-4	Existing Site (Resource Designation, Name Resource also Referred to As)	Proposed Use	Development under Future No-Action Scenario (SF)	Development under Future With-Action Scenario (SF)	Development Generated by Proposed Action (SF)
Steiner Studios - Development Inside Naval Annex (Media Campus)					
1	Medical Supply Depot (RD, Lab Building)	Production Office, Adv. Digital Media Lab, Academic Use	0	33500	33500
2	Lumber Shed (R426, Morgue Building)	Production Office, Adv. Digital Media Lab, Academic Use	0	2,100	2,100
3	Nurses' Quarters (RG, Unmarried Officer's Club)	Post-Production	0	46,633	46,633
4	Quarters No. 4 (R4, Lab Director's House)	Production Office	0	9,460	9,460
5	Carriage House/Stable/Garage (R103, R109, R103A)	Production Support	0	7,668	7,668
6	Infectious Disease Quarters (R5, R6, R7, Bungalows)	Writers' Cottages	0	6,480	6,480
7	U.S. Naval Hospital (R95)	Production Office	0	58,534	58,534
8	Surgeon's House (R1)	Production Office	0	9,800	9,800
9	Not Developed	Underwater Stage	0	20,000	20,000
10	Not Developed	Production Office, Adv. Digital Media Lab, Academic Use	0	20,000	20,000
11	Not Developed	Production Office, Adv. Digital Media Lab, Academic Use	0	50,000	50,000
12	Not Developed	Production Office	0	30,000	30,000
13	Not Developed	Production Office	0	30,000	30,000
14	Not Developed	Post-Production	0	20,000	20,000
15	Bachelor Officers' Quarters (R8, R9)	Production Office	0	5,800	5,800
Outside Naval Annex (Media Campus)					
16	B&H Building (Building 664)	Production Support/Academic Space	160,383	160,383	0
17	Parking Area	Kent Stages/Academic Space	175,000	175,000	0
18	Parking Area	Back Lot	0	70,000	70,000
19	Back Gate to Steiner Studios	North Parking Structure	88,000	88,000	0
20	Parking Area	West Parking Structure	315,000	315,000	0
21	Parking Area	Kent Ave Parking Structure	0	250,000	250,000
22	25 Washington Ave (Building 1)	Production Office/Production Support/Academic	175,623	175,623	0

All Construction staging and equipment storage would occur within the secured confines of the BNY and would not extend within portions of sidewalks, bike lanes and travel lanes of public streets adjacent to the construction sites. The one exception would be construction of the new entrance to Steiner Studios at Kent Avenue and Wilson Street. While there would be some disruption of pedestrian and bike movement during the construction of the new entrance, with rerouting of pedestrian and bike traffic via jersey barriers away from the construction site, the disruption would be temporary. Moreover, creating a new entrance is not a construction-intensive effort and the effects would be short in duration as a new entrance is built, a new curb cut is installed and bike and traffic lanes in the area are re-stripped.

The work required to renovate existing buildings would include stabilization, cleaning, and repairs. Interior work would include the construction of interior partitions, installation of lighting fixtures and other electrical fixtures, interior finishing (flooring, painting, etc.), and mechanical work. The condition of utility connections would be tested and utility improvements made at the site would include upgrading water, sewer, electric and gas connections. Construction activities related to the infrastructure improvements would include trenching to expose and assess the existing conditions of piping and connections, replacing and upgrading the existing infrastructure and backfilling, and compacting and re-grading (if necessary) the trenches. Construction of the proposed Backlot would entail resurfacing of the existing area and the

stacking of shipping containers along the perimeter. The configuration of the interior of the Backlot would depend on the needs of a given production project.

Construction Work Hours

Construction activities for buildings in the city generally take place Monday through Friday, with exceptions that are discussed separately below. In accordance with city laws and regulations, construction work would generally begin at 7:00 AM on weekdays, with workers arriving to prepare work areas between 6:00 AM and 7:00 AM. Normally, work would end at 3:00 PM. If the workday needs to be extended to complete some specific tasks beyond normal work hours, such as completing the drilling of piles, finishing a concrete pour for a floor deck, or completing the bolting of a steel frame erected that day, the extended workday would generally last until about 6:00 PM and would not include all construction workers on-site, but just those involved in the specific task requiring additional work time.

Weekend work requires a permit from the New York City Department of Buildings (NYCDOB) and all construction work in New York City requires a noise mitigation plan from the New York City Department of Environmental Protection (NYCDEP), as per the New York City Noise Code. The New York City Noise Control Code, as amended December 2005, and effective July 1, 2007, limits construction (absent special circumstances as described below) to weekdays between the hours of 7:00 AM and 6:00 PM, and sets noise limits for certain specific pieces of construction equipment. Construction activities occurring after hours (weekdays between 6:00 PM and 7:00 AM and on weekends) may be permitted only to accommodate: (i) emergency conditions; (ii) public safety; (iii) construction projects by or on behalf of city agencies; (iv) construction activities with minimal noise impacts; and (v) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts and/or financial considerations. In such cases, the numbers of workers and pieces of equipment in operation would be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend work would be less than a normal workday. The typical weekend workday, if any are needed, would be on Saturday from 7:00 AM with worker arrival and site preparation to 5:00 PM for site cleanup.

Government Coordination and Oversight

The governmental oversight of construction in New York City is extensive and involves a number of city, state, and federal agencies. **Table 3.19-2** shows the main agencies involved in construction oversight and each agency's areas of responsibility. The primary responsibilities lie with New York City agencies. The NYCDOB has the primary responsibility for ensuring that the construction meets the requirements of the Building Code and that buildings are structurally, electrically, and mechanically safe. In addition, NYCDOB enforces safety regulations to protect both construction workers and the public. The areas of responsibility include installation and operation of construction equipment, such as cranes and lifts, sidewalk shed, and safety netting and scaffolding. NYCDEP enforces the Noise Code and regulates water disposal into the sewer system where construction requires dewatering. The New York City Fire Department (FDNY) has primary oversight for compliance with the Fire Code and for the installation of tanks containing flammable materials. The New York City Department of Transportation (NYCDOT) reviews and approves any traffic lane and sidewalk closures.

The New York State Department of Environmental Conservation (NYSDEC) regulates direct discharge of water into rivers and streams (if needed for dewatering), disposal of hazardous materials, and construction, operation, and removal of bulk petroleum and chemical storage tanks. The New York State Department of Labor (DOL) licenses asbestos abatement workers. On the federal level, the EPA has wide ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons. Much of the responsibility is delegated to the state level. The U.S. Occupational Safety and Health Administration (OSHA) sets standards for work site safety and the construction equipment.

Table 3.19-2 Construction Oversight in New York City

Agency	Area(s) of Responsibility
New York City	
Department of Buildings	Primary oversight for Building Code and site safety
Department of Environmental Protection	Noise, hazardous materials, dewatering
Fire Department	Compliance with Fire Code, tank operation
Department of Transportation	Traffic lane and sidewalk closures
New York State	
Department of Labor	Asbestos workers
Department of Environmental Conservation	Dewatering, hazardous materials, tanks, Stormwater Pollution Prevention Plan, Industrial SPDES, if any discharge into the Hudson River
United States	
Environmental Protection Agency	Air emissions, noise, hazardous materials, toxic substances
Occupational Safety and Health Administration	Worker safety

3.19.2 Preliminary Assessment

Transportation

As described in the *CEQR Technical Manual*, construction activities may affect several elements of the transportation system, including traffic, transit, pedestrians, and parking. A transportation analysis of construction activities is predicated upon the duration, intensity, complexity and/or location of construction activity. It is expected that the proposed development on the project site would occur gradually, over a 12-year period. All construction activities would take place within the walled confines of the BNY. This includes all construction staging and equipment storage. There would be no intrusion onto traffic lanes, sidewalks or bike lanes in the surrounding neighborhood from construction activities. As such, queuing of construction-related traffic on local roadways is not anticipated. Construction trucks and other deliveries, as well as arrivals and departures of construction worker traffic, would typically occur outside of the peak commuting hours, when traffic volumes are lower. Construction trucks would use NYCDOT-designated truck routes, including Kent Avenue and Flushing Avenue. Construction-related traffic would also take advantage of the close proximity of the project site to the Brooklyn-Queens Expressway (I-278) with access provided near Flushing Avenue. During the construction process, construction workers would travel to and from the project site by personal vehicle, bus, and subway. The project site is served by mass transit, including the G, J, M, and Z subway lines and the B44, B48, B54, B57, B62, B67, and B69 bus routes.

Construction Trip Generation - Average Daily Construction Trips per Calendar Quarter

For each of the proposed development sites (See **Chapter 2.0**, "Project Description" for further description of proposed development sites), the total numbers of construction workers and construction trucks were forecast based on building sizes, material quantities, man-power rates, and other factors. In accordance with *CEQR Technical Manual* guidelines, truck trips were converted to Passenger Car Equivalents, or PCEs. PCE values of 1.0 per auto, 2.0 per three-axle trucks, and 2.5 per four-axle trucks were used in these projections. These calculated numbers of workers and truck PCEs were then distributed over the anticipated periods of construction for each building to estimate the average daily number of construction workers and truck PCEs projected to travel to the site in each calendar quarter.

The resultant estimate of the average daily numbers of construction workers and truck PCEs, for each calendar quarter over the 12-year construction period is summarized in **Table 3.19-3**.

Table 3.19-3: Estimated Average Daily Number of Construction Workers and Construction Trucks (PCEs) On-Site, Per Calendar Quarter

Year	2015				2016				2017			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Trucks (PCEs)	0	0	0	46	46	47	47	47	47	48	48	2
Workers	0	0	0	37	37	51	51	51	51	54	54	18
Total (PCEs)	0	0	0	83	83	98	98	98	98	101	101	21
Year	2018				2019				2020			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Trucks (PCEs)	2	2	2	2	2	2	2	1	1	1	1	0
Workers	18	18	18	18	18	16	16	10	10	10	15	7
Total (PCEs)	21	21	21	21	21	18	18	11	11	11	16	8
Year	2021				2022				2023			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Trucks (PCEs)	0	0	0	0	0	0	0	0	0	0	0	0
Workers	7	7	7	6	6	6	5	4	4	4	4	4
Total (PCEs)	8	8	7	7	7	7	5	4	4	4	4	4
Year	2024				2025				2026			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Trucks (PCEs)	2	2	2	4	4	5	5	5	4	3	3	2
Workers	15	21	21	38	45	49	49	58	44	37	37	19
Total (PCEs)	16	23	23	42	50	53	53	63	48	40	40	21
Year	2027											
Quarter	1st	2nd	3rd	4th								
Trucks (PCEs)	1	1	1	0								
Workers	12	9	9	0								
Total (PCEs)	13	10	10	0								

As shown in **Table 3.19-3**, the proposed construction schedule assumes construction activities and construction trips would peak in the second and third quarters of 2017 with a daily average of 101 total PCE trips coinciding with simultaneous renovation of the nurses' quarters, as well as construction of the Kent Avenue parking garage, the underwater stage, and new infrastructure. None of the proposed new buildings would be open and operational at this time. In addition, a lower peak would occur during the fourth quarter of 2025, with a daily average of 63 total PCE trips. During this point in the construction schedule, renovation of existing buildings would be complete and the underwater stage would be open and operational. All remaining new construction activities (i.e., Projected Development Sites 10-14) would be in construction during the 2025 lower peak period.

The two time periods described above represent the peak days of construction work, and as shown in **Table 3.19-3**, a substantial amount of other time periods during the 12-year construction period would have fewer construction workers and trucks on-site. For a conservative reasonable worst-case analysis of potential construction traffic impacts, these two peak periods of construction activity were used as the basis for estimating peak-hour construction traffic volumes.

Travel Demand Assumptions for Construction

The construction schedule assumes that most site activities would take place during the typical construction shift of 7:00 AM to 3:00 PM. Construction worker travel would typically take place during the hours before and after the work shift. It is estimated that 80 percent of all workers would arrive in the 60-minute period before the start of the construction shift, and also leave in the 60-minute period after the end of each shift. The remaining workers (i.e., 20 percent) would travel in the hours immediately before and after these times, due to slight variations in the particular schedules and day-to-day work activities of the various construction trades.

It is anticipated that construction workers would travel to and from the development sites primarily by private vehicles (approximately 90 percent of the total workforce), at an average vehicle-occupancy of approximately 1.1 persons per auto, with a lesser percentage (approximately 10 percent of the total workforce) using public transit (subway or bus) to travel to and from the site. Construction truck trips would generally occur throughout the day during the hours of the construction shift (7:00 AM to 3:00 PM). However, to avoid traffic congestion and ensure that materials are on-site for the start of the shift, some trucks would arrive between 5:00 and 7:00 AM. Trucks would generally remain on-site for relatively short durations (less than one hour).

Peak Hour Construction Trips

Table 3.19-4 shows hourly construction worker auto trips and construction truck trips (PCEs) during the first (highest and longest) construction peak period (2017). **Table 3.19-5** shows similar information for the second (lower and shorter) peak in 2025.

As shown in these tables, the estimated daily vehicle trips were distributed to various hours of the day based on the typical work shift allocations and conventional arrival/departure patterns of construction workers and trucks described above. For construction workers, as noted above, the substantial majority (80 percent) of the arrival and departure trips are expected to take place during the hour before and after each shift. For construction trucks, deliveries would occur throughout the time period while the construction site is active. To avoid traffic congestion and ensure that materials are on-site for the start of each shift, some construction truck deliveries would occur during the hours before the regular day shift begins, overlapping with construction worker arrival traffic.

As shown in **Table 3.19-4**, construction traffic associated with the first (and highest) peak construction period (i.e., 2017) would generate a peak of 41 total PCEs during the 6:00 AM to 7:00 AM hour, and 35 total PCEs during the 3:00 to 4:00 PM hour, which are below the *CEQR Technical Manual* analysis threshold of 50 PCEs in any one peak hour.

Table 3.19-4: Projected Daily Construction Vehicle Trips by Hour during Peak Quarters in 2017

Hour of Day	Construction Temporal Distributions				Car Trips (Workers)			Truck (PCE) Trips			Total Construction Vehicle Trips (PCEs)		
	Workers IN	Workers Out	Trucks IN	Trucks OUT	In	Out	Total	In	Out	Total	In	Out	Total
12-1AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
1-2 AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
2-3AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
3-4AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
4-5AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
5-6AM	10%	0%	6%	6%	4	0	4	3	3	6	7	3	10
6-7AM	80%	0%	6%	6%	35	0	35	3	3	6	38	3	41
7-8AM	10%	0%	11%	11%	4	0	4	5	5	10	10	5	15
8-9AM	0%	0%	11%	11%	0	0	0	5	5	10	5	5	10
9-10AM	0%	0%	11%	11%	0	0	0	5	5	10	5	5	10
10-11AM	0%	0%	11%	11%	0	0	0	5	5	10	5	5	10
11AM-12PM	0%	0%	11%	11%	0	0	0	5	5	10	5	5	10
12-1PM	0%	0%	11%	11%	0	0	0	5	5	10	5	5	10
1-2PM	0%	0%	11%	11%	0	0	0	5	5	10	5	5	10
2-3PM	0%	10%	11%	11%	0	4	4	5	5	10	5	10	15
3-4PM	0%	80%	0%	0%	0	35	35	0	0	0	0	35	35
4-5PM	0%	10%	0%	0%	0	4	4	0	0	0	0	4	4
5-6PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
6-7PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
7-8PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
8-9PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
9-10PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
10-11PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
11PM-12AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0
TOTAL =	100%	100%	100%	100%	44	44	88	48	48	95	92	92	183

Table 3.19-5: Projected Daily Construction Vehicle Trips by Hour during Peak Quarters in 2025

Peak Truck PCEs = 5 Peak Passenger Car PCEs = 58 Average Auto Occupancy = 1.1 persons/vehicle Worker Mode-Split Auto = 90% Worker Mode-Split Transit = 10%														
Hour of Day	Construction Temporal Distributions				Car Trips (Workers)			Truck (PCE) Trips			Total Construction Vehicle Trips (PCEs)			
	Workers IN	Workers Out	Trucks IN	Trucks OUT	In	Out	Total	In	Out	Total	In	Out	Total	
12-1AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
1-2 AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
2-3AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
3-4AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
4-5AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
5-6AM	10%	0%	6%	6%	5	0	5	0	0	1	5	0	5	
6-7AM	80%	0%	6%	6%	38	0	38	0	0	1	38	0	38	
7-8AM	10%	0%	11%	11%	5	0	5	1	1	1	5	1	6	
8-9AM	0%	0%	11%	11%	0	0	0	1	1	1	1	1	1	
9-10AM	0%	0%	11%	11%	0	0	0	1	1	1	1	1	1	
10-11AM	0%	0%	11%	11%	0	0	0	1	1	1	1	1	1	
11AM-12PM	0%	0%	11%	11%	0	0	0	1	1	1	1	1	1	
12-1PM	0%	0%	11%	11%	0	0	0	1	1	1	1	1	1	
1-2PM	0%	0%	11%	11%	0	0	0	1	1	1	1	1	1	
2-3PM	0%	10%	11%	11%	0	5	5	1	1	1	1	5	6	
3-4PM	0%	80%	0%	0%	0	38	38	0	0	0	0	38	38	
4-5PM	0%	10%	0%	0%	0	5	5	0	0	0	0	5	5	
5-6PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
6-7PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
7-8PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
8-9PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
9-10PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
10-11PM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
11PM-12AM	0%	0%	0%	0%	0	0	0	0	0	0	0	0	0	
TOTAL =	100%	100%	100%	100%	47	47	94	5	5	11	53	53	105	

Similarly, as shown in **Table 3.19-5**, construction traffic associated with the second peak construction period (i.e., 2025) would generate a peak of 38 total PCEs during the 6:00 AM to 7:00 AM hour, and 38 total PCEs during the 3:00 to 4:00 PM hour throughout the study area roadway network. These projected incremental numbers of vehicle-trips are below the *CEQR Technical Manual* analysis threshold of 50 PCEs.

According to the *CEQR Technical Manual*, if a project involves multiple development sites over varying construction timelines, a preliminary assessment should take into account whether the operational trips from completed portions of the project and construction trips associated with construction activities could overlap. Based on the projected construction schedule, in 2025, renovations of existing buildings would be complete and the underwater stage would be open and operational. All remaining new construction would be underway. Therefore, as shown in **Table 3.19-6**, in addition to the construction traffic increment, an operational traffic increment in 2025 of approximately 15 auto trips during the 6 to 7 AM construction peak hour and 35 auto trips during the 3 to 4 PM construction peak hour are expected in connection with completion of renovations on existing buildings and operation of the underwater stage. Consequently, the total incremental vehicle trips—53 PCEs during the AM construction peak hour and 73 PCEs during the PM construction peak hour—associated with combined construction activities and operational components of the project, would be disbursed to the access points at Flushing Avenue/Washington

Avenue and Kent Avenue/Wilson Avenue, and would not reach the CEQR Technical Manual analysis threshold of 50 PCEs at any one intersection in any peak hour.

Table 3.19-6: Comparison of Peak Hour Construction Vehicle Trips in 2025 with Operational Trips at Full Build-Out

Scenario	Trip Type	Trips Generated (PCEs)	
		Weekday AM	Weekday PM
Year 2025 Construction Peak	Construction Trips	38	38
	Operational Trips	15	35
	Total Trips	53	73

Based on these findings, and *CEQR Technical Manual* guidance, a detailed construction traffic analysis is not warranted, because no significant adverse construction traffic impacts would be expected to occur.

Air Quality

Emissions from on-site construction equipment and on-road construction-related vehicles, as well as dust generating activities, have the potential to affect air quality. In general, much of the heavy equipment used in construction has diesel-powered engines and produces relatively high levels of nitrogen oxides (NO_x) and particulate matter (PM). Gasoline engines produce relatively high levels of carbon monoxide (CO). Fugitive dust generated by construction activities is composed of particulate matter. As a result, the primary air pollutants of concern for construction activities include nitrogen dioxide (NO₂), particulate matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM₁₀), particulate matter with an aerodynamic diameter of less than or equal to 2.5 micrometers (PM_{2.5}), and CO.

Generally, if a transportation analysis is not needed with regard to construction activities, an air quality assessment of construction vehicles is not warranted. As demonstrated in the "Transportation" section above, the construction-related traffic generated by the proposed project does not warrant a detailed transportation analysis. The construction would not result in substantial increases in vehicle volumes, lane or roadway closures, or traffic diversions. Therefore, construction activities at the project site would not cause significant changes in air quality from vehicular traffic, and further mobile-source analysis is not required.

The main component of diesel exhaust that has been identified as having an adverse effect on human health is PM_{2.5}. In order to minimize the project's potential to have construction-period impacts on air quality, the following measures would be implemented, to the extent feasible:

- **Diesel Equipment Reduction.** Construction activities would minimize the use of diesel engines and use electric engines, to the extent practicable. This would reduce the need for on-site generators, and warrant the use of electric engines in lieu of diesel where practicable.
- **Clean Fuel.** To the extent practicable, ultra-low sulfur diesel (ULSD) would be used for diesel engines used at the project site.
- **Best Available Tailpipe Reduction Technologies.** To the extent feasible, nonroad diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract, such as concrete mixing and pumping trucks) would utilize the best available tailpipe (BAT) technology for reducing diesel particulate matter (DPM) emissions. Diesel particulate filters (DPFs) have been identified as being the tailpipe technology currently proven to have the highest reduction capability.

- *Utilization of Newer Equipment.* In addition to the tailpipe control commitments, construction equipment rated Tier 2 or higher would be used for all nonroad diesel engines with a power output of 50 hp or higher, to the extent practicable.
- *Dust Control.* Fugitive dust control plans would be required as part of contract specifications. For example, stabilized truck exit areas would be established for washing off the wheels of all trucks that exit the construction site. All trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the site. In addition to regular cleaning by the city, streets adjacent to the construction site would be cleaned as frequently as needed by the construction contractor. Chutes would be used for material drops during structure rehabilitation. Water sprays would be used for all transfer of spoils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air.
- *Idle Restriction.* In addition to adhering to the local law restricting unnecessary idling on roadways, on-site vehicle idle time would also be restricted to three minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.

ULSD, DPFs and construction equipment rated Tier 2 or higher are now readily available in New York City. The New York City Air Pollution Control Code regulates construction-related dust emissions. Overall, the reduction measures identified above would limit DPM emissions. Therefore, the construction on the proposed project site would not result in any significant adverse impact on air quality.

Noise

Construction noise levels are typically highest during any excavation and foundation phases, when several large pieces of construction equipment operate on construction sites. Construction noise from on-site equipment depends on the type and number of the machinery, which pieces of equipment are operating at any one time, how frequently the equipment operates throughout the work day, and how far removed it is from the site boundaries and from the nearest sensitive receptors. Peak noise levels from impact equipment (e.g., pile drivers, pavement breakers, etc.) can be close to or over 100 dB(A) or higher at 50 feet from the equipment. Locating noisy equipment away from site boundaries, and placing applicable noise barriers (e.g., temporary plywood walls) around the project site or the equipment itself can help reduce these potential temporary noise impacts where they occur.

Construction noise is regulated by the New York City Noise Control Code and by the EPA noise emission standards for construction equipment. These local and federal controls require that certain types of construction equipment and vehicles meet specific noise emission standards. Except under exceptional circumstances, city regulations also limit construction activity to weekdays between the hours of 7:00 AM and 6:00 PM, and construction materials must be handled and transported in a manner that avoids the generation of unnecessary noise. As part of the New York City Noise Control Code, a site-specific noise mitigation plan would be developed and implemented that may include source controls, path controls, and receiver controls. If weekend or after-hours work is necessary, permits would be required, as specified in the New York City Noise Control Code.

Typically, increased noise levels caused by construction activities can be expected to be greatest during the early stages of construction for new development including excavation (approximately 3 months), grading (approximately 2 months), and building construction (approximately 9 months). It is anticipated that the most significant noise source associated with the construction equipment would be pile drivers, bulldozers, excavators, backhoes, compaction equipment, and various types of trucks and earth moving equipment. As required by the New York City Noise Control Code, noise barriers (to a minimum height of eight feet) would be provided around the perimeter of the construction site. All construction activities would take place within the secured confines of the BNY, reducing the potential for construction-related noise to affect any nearby sensitive receptors. While noise associated with the construction activities may be considered noisy and intrusive, noticeable increases in noise levels as a result of construction-related activities would be expected to be of limited duration. In addition, noise levels would be less for the

interior work associated with the renovation of existing buildings. Therefore, no long-term, significant adverse noise impacts on adjacent noise sensitive uses are expected from construction activities that would occur as a result of the proposed action.

Historic and Cultural Resources

As discussed in **Chapter 3.5**, "Historic and Cultural Resources," a construction protection plan would be developed to protect historic resources during the demolition process. The plan would be developed in coordination with the SHPO and professional engineers. Several reference documents provide useful information on the development of construction protection plans, including *Technical Policy and Procedures Notice No. 10/88, Procedures for the Avoidance of Damage to Historic Structures Resulting from Adjacent Construction* prepared by New York City Department of Buildings, and *Protecting a Historic Structure During Adjacent Construction* prepared by NPS. The project sponsor would also prepare a means and methods plan for how the demolition and construction would proceed on site to ensure that elements to remain (e.g., buildings, structures, trees, landscaping paths) are protected during construction. With the above measures in place, the proposed project would not result in construction-related impacts on historic and cultural resources.

Hazardous Materials

The *CEQR Technical Manual* states 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, based on the conclusions of a CEQR hazardous materials analysis regarding the presence or absence of hazardous materials on a project site or sites. For any potential construction sites and areas along the routes of proposed utilities that have been found to have a potential to contain hazardous materials, the possible effects on construction workers and the surrounding community during construction should be assessed. Any impacts from in-ground disturbance that are identified should be identified for construction as well.

As discussed in **Chapter 3.9**, "Hazardous Materials," as part of the overall development of the project site, Steiner Studios would properly handle and, as appropriate, dispose of any hazardous materials encountered on site in accordance with local, state and federal regulations and guidance, and in accordance with the recommendations from the Phase II investigations. Prior to any renovation or demolition activities an ACM survey of the areas to be disturbed would be conducted and any ACM encountered removed and disposed of in accordance with local, state and federal requirements. Any activities with the potential to disturb lead-based paint would be performed in accordance with applicable requirements (including federal Occupational Safety and Health Administration regulation 29 CFR 1926.62 - Lead Exposure in Construction). Disposal of any encountered PCB materials would be performed in accordance with applicable federal, state and local requirements.

As also discussed in Chapter 3.9, a soils management plan would be developed and implemented for the removal of any soils excavated from the project site and any dewatering required during the construction activities that require discharge to sewers would be performed in compliance with the appropriate effluent limitation through permits obtained from NYCDEP, and as such sewage discharge from the site would be treated on site as required and sampled in accordance with permit requirements. The project sponsor would develop a RAP and CHASP to avoid the potential for significant impacts related to Hazardous Materials. The RAP would address: soil stockpiling, disposal and transportation; dust control; and contingency measures should petroleum tanks or unexpected contamination be encountered. The CHASP would include measures for worker and community protection, including dust control (e.g., dust covers for trucks, watering of demolition and excavation areas, roadways and trucks) personal protective equipment, air monitoring, and emergency response procedures. With the inclusion of the above measures, the proposed action would not result in significant adverse hazardous materials impacts and would not result in any significant adverse construction-related impacts to hazardous materials.

Natural Resources

The *CEQR Technical Manual* states that natural resources may be affected during construction, particularly during such activities as excavation; grading; site clearance or other vegetation removal; cutting; filling; installation of piles, bulkheads, or other waterfront structures; dredging; dewatering; or soil compaction from construction vehicles and equipment. A construction assessment is not needed for natural resources unless the construction activities would disturb a site or be located adjacent to a site containing natural resources. If there is a potential for the construction activities to disturb a natural resource, a preliminary natural resources assessment, should be conducted to determine whether, and the extent to which, the project's construction activities would disturb natural resources.

The project site is located within a disturbed urban setting and does not contain any natural resources of significance (e.g., wetlands, beaches, dunes, bluffs, thickets, significant grasslands, meadows, woodlands, or forests) as defined in the *CEQR Technical Manual*. No "built resources" that are known to contain or may be used as habitat for protected species, as defined in the Federal Endangered Species Act (50 CFR 17) or the State's Environmental Conservation Law (6 NYCRR Parts 182 and 193) exist within the project site. As discussed in **Chapter 3.8**, "Natural Resources," several large shade trees were observed throughout the project site. The project sponsor intends to incorporate existing large trees into future landscape designs, to the extent practicable, in order to maintain the campus setting of the Naval Annex. Protective measures would be utilized to preserve trees during construction. Protective measures would include a vehicle exclusion zone underneath the drip line, tree boxes, elevation pruning, and other activities. Thus, the proposed project would not result in construction-related impacts to natural resources.

Land Use and Neighborhood Character

As discussed above, all construction activities would take place within the walled confines of the BNY, minimizing the effect of construction activities on land uses in the surrounding area. Thus, construction activities at the project site are not expected to lead to significant adverse impacts to land use and neighborhood character.

Socioeconomic Conditions

Construction activities from the proposed project would have positive socioeconomic benefits resulting from expenditures on labor, materials, and services, and indirect socioeconomic benefits created by expenditures by material suppliers, construction workers, and others involved in the project. An example of these indirect benefits would be the construction workers' purchases from local retailers over the course of the construction period. Construction of the proposed project also would contribute to increased tax revenues for the city and state. Therefore, construction activities that would occur as a result of the proposed action would not have a significant adverse effect on socioeconomic conditions.

Community Facilities and Services

All construction activities would take place within the walled confines of the BNY. Further, no community facilities are located in the area immediately surrounding the project site. Thus, construction activities are not expected to have a significant adverse effect on community facilities and services.

Open Space

There are no publicly accessible open spaces within the project site. Construction activities would take place inside the walled confines of the BNY and would not affect open space resources in the area surrounding the project site. In addition, construction fencing would separate the Naval Annex from the future park planned at the former Brooklyn Naval Hospital Cemetery that would shield the park from construction activities. And, when the park is complete it will include a permanent wall separating the park from the Naval Annex. Construction of the proposed project would not limit access to the proposed park

or other open space resources in the vicinity of the project site. Therefore, construction of the proposed project would not result in significant adverse impacts to open space.

Infrastructure

As part of the proposed project there would be infrastructure upgrades at the project site that would allow the historic buildings in the Naval Annex to be renovated and re-occupied with new uses, as well as accommodate the new buildings constructed on the project site. The improvements to infrastructure would be site specific and are not expected to necessitate the rerouting of infrastructure lines that would cause a disruption of service to any areas outside the project site. Thus, the proposed project would not result in construction-related impacts to infrastructure.

Rodent Control

The proposed project would not involve engaging in any particular solid waste management practices that could attract vermin and result in an increase in pest populations. Construction contracts would include provisions for a rodent (mouse and rat) control program. Before the start of construction, the contractor would survey and bait the appropriate areas and provide for proper site sanitation. During the construction phase, as necessary, the contractor would carry out an ongoing prevention, inspection, and response program. Coordination would be maintained with appropriate public agencies. Only registered rodenticides would be permitted, and the contractor would be required to perform rodent control programs in a manner that avoids hazards to persons, domestic animals, and non-target wildlife.

Conclusion

As demonstrated above, construction-related activities are not expected to have any significant adverse impacts on transportation, air quality, noise, historic resources, hazardous materials, natural resources, or other technical areas as a result of the proposed project. Therefore, no significant adverse construction impacts are expected as a result of the proposed action.

3.20 ALTERNATIVES

Introduction

The selection of alternatives to a proposed project is determined by taking into account the nature of the specific project, its stated purpose and need, potential impacts, and the feasibility of potential alternatives. The *CEQR Technical Manual* notes that there is no prescribed number of alternatives that need to be examined. The only alternative required to be considered is the No-Action Alternative, and a lead agency may exercise its discretion in selecting the remaining alternatives to be considered.

An EIS must demonstrate that all reasonable efforts have been made to avoid adverse environmental impacts. As detailed in **Chapters 3.6** and **3.13**, there would be significant adverse historic and cultural resources and transportation impacts resulting from the proposed project. With the implementation of the measures identified in **Chapter 3.21**, "Mitigation," the significant adverse impacts to transportation and historic and cultural resources would be mitigated.

As part of the proposed project, 15 contributing resources to the BNY Historic District would be rehabilitated; however, five contributing resources to the BNY Historic District are proposed to be demolished. An alternative that adaptively reuses all contributing resources to the BNY Historic District was considered, but it was concluded that it is not feasible to reuse the five contributing resources that are proposed to be removed from the Naval Annex for the following reasons:

- **R2 and R3 (Quarters No. 2 & 3)** – These two Colonial Revival-style houses were constructed in 1905 for medical staff at the Naval Hospital. With alterations and deterioration over time, these buildings have lost much of their historical integrity. The buildings block views and limit access to the Unmarried Officer's Quarters (RG) to the north, which is planned for a complete renovation. Furthermore, due to the deterioration of the two buildings, the cost to renovate these buildings as code-compliant uses would be financially infeasible.
- **Building 311** – This vacant building was constructed as part of the World War II building campaign at the Brooklyn Navy Yard. The function of the building was to provide motion picture reels for on-board ship entertainment. The interior layout is not conducive for adaptive reuse and the building would require substantial upgrades to building systems such as electrical and plumbing. As a result, the building has little reuse value, making it financially infeasible to renovate into a code compliant building.
- **Greenhouse remnants and Tennis Courts** – The remains of the greenhouse and the tennis courts have foundations that are severely deteriorated and these resources have no potential for adaptive reuse in the Steiner Studios Media Campus.

An Alternatives Analysis was prepared for the proposed project and is provided in **Appendix B**. The Alternative Analysis was reviewed by SHPO and the agency provided their concurrence that there are no prudent or feasible alternative to demolition of these few resources. Therefore, there is no feasible alternative that would allow for the adaptive reuse of all contributing resources that would preclude the need for the removal of the five identified contributing resources. The functional inefficiencies resulting from retaining these five resources, and the high costs associated with renovations, would render the project financially and programmatically infeasible and would prevent the project from moving forward.

This chapter includes an examination of a No-Action Alternative. The No-Action Alternative has been used in other chapters of this EIS as the baseline against which impacts of the proposed project are measured. The section below compares the potential effects of the No-Action Alternative to those of the proposed project.

3.20.1 No-Action Alternative

The No-Action Alternative, analyzed throughout the document as the Future No-Action Condition, consists of normal and anticipated growth patterns by the 2027 analysis year of the proposed project, along with other separately planned projects within the surrounding area, but does not include the construction of the proposed Steiner Studios Media Campus. Under this alternative, the approximately 350,000 square feet of development would not occur (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex. The Naval Annex would continue to be underused and the unoccupied historic buildings in the Naval Annex would continue to deteriorate. In addition, the 70,000-square-foot Backlot and a 250,000-square-foot Kent Avenue Parking Structure would not be developed in the area outside the Naval Annex, and these areas would continue to be open areas used for parking and storage.

Under the No-Action Alternative, the project site is expected to remain largely in its existing condition. Steiner Studios, working closely with BNYDC, has developed a conceptual plan for future expansion of the Steiner Studios operations at BNY. Several proposed projects that would occur within the 400-foot study area, but outside the Naval Annex, are all part of Steiner Studios overall plans for expansion. The projects identified under the No-Action Alternative that would occur as part of the Steiner Studios expansion into the area outside the Naval Annex, are not contingent on funding from Empire State Development (ESD). These projects would not need extensive infrastructure improvements in order to be built; therefore, Steiner Studios would finance and construct these projects without funding assistance from ESD or other public funding sources.

The No-Action Alternative includes the following projects. To the west of the Naval Annex is Building 1 at 25 Washington Avenue, inside the Brooklyn Navy Yard (BNY). Steiner Studios recently redeveloped the building to accommodate TV and film production uses and, starting in 2015, the production uses would share the building with academic uses. Further west, along Flushing Avenue, Steiner Studios intends to build the West Parking Structure, a parking facility with approximately 1,000 accessory parking spaces. Steiner Studios also plans to build the North Parking Structure. This parking facility would be developed near the current service entrance to Steiner Studios on Assembly Road and would have approximately 210 accessory parking spaces.

Bordering the northwestern portion of the Naval Annex is the current warehouse building (Building 664) for B&H Photo, an electronics retailer. B&H Photo intends to vacate the building when their lease expires and Steiner Studios plans to take over the building and convert it into a space for its production uses. To the north of the Naval Annex, Steiner Studios plans to develop four production stages to be known as the Kent Stages. These new stages would be located along Kent Avenue, in the area between the proposed Backlot and the site currently occupied by the Brink's Corporation.

To the east of the Naval Annex, the Brooklyn Greenway Initiative, working with BNYDC, plans to create a 1.7-acre park in the former Brooklyn Naval Hospital Cemetery. The site, which is on Williamsburg Street West, between Kent and Flushing Avenues will have a walkway, landscape areas and other features.

Land Use, Zoning, and Public Policy

The new development under the No-Action Alternative would be compatible with and complementary to surrounding land uses and would not introduce a land use that would be considered out of character with the study area. The proposed project would not alter or change the zoning on the project site or within the study area and would comply with all applicable bulk zoning regulations. Thus, neither the proposed project nor the No-Action Alternative would result in significant adverse impacts related to land use, zoning, and public policy.

Socioeconomic Conditions

Under the No-Action Alternative, the project site is expected to remain in its present underutilized condition through the 2027 analysis year and no new development would take place. Thus, there would be no potential for direct or indirect residential or business displacement, or impacts to specific industries, under the No-Action Alternative. Similar to the proposed project, the No-Action Alternative would not

result in any socioeconomic changes that would result in significant adverse impacts, but it would also not generate any of the economic benefits of an expanded Steiner Studios campus, including related academic uses.

Community Facilities and Services

Under the No-Action Alternative, the project site would not be redeveloped and the area would remain in its present underutilized condition. No changes to police and fire services, health care, libraries, educational facilities or child care services are expected under the No-Action Alternative. Therefore, neither the proposed project nor the No-Action Alternative would have a significant adverse impact on community facilities and services.

Open Space

There would be an increase in nonresidents in the open space study area in the future without the proposed project. One known publicly accessible open space resource would be created in the study area in the future without the proposed project. The Brooklyn Greenway Initiative, working with BNYDC, plans to create a 1.7-acre park in the former Brooklyn Naval Hospital Cemetery. The site of the new park, located on Williamsburg Street West, between Kent and Flushing Avenues, will have a walkway, landscape areas and other features for passive recreation.

As discussed in **Chapter 3.4**, "Open Space," the 2.52 acres of passive open space under the existing condition would increase to 4.22 acres of passive open space in the future without the proposed project. Under the No-Action Alternative, the open space ratio (OSR) for the study area would decrease from 0.38 acres per 1,000 nonresidents under the existing condition to 0.30 acres per 1,000 nonresidents, a 21 percent decrease. However, the OSR under the No-Action Alternative would continue to be above the city's planning goal of 0.15 acres per 1,000 nonresidents. Under the Future With-Action condition, there would be an additional increase in nonresidents, which would decrease the OSR from 0.30 acres per 1,000 nonresidents to 0.27 acres per 1,000 nonresidents, an 11.3 percent decrease. However, the OSR under the Future With-Action condition would continue to be above the city's planning goal of 0.15 acres per 1,000 nonresidents. Thus, neither the proposed project nor the No-Action Alternative is projected to result in an adverse open space impact. Furthermore, the open space created as part of the rehabilitation of the Naval Annex campus would not occur under the No-Action Alternative.

Shadows

Under the No-Action Alternative, there would be no new development on the project site and, therefore, no new shadows on nearby sun-sensitive resources. Unlike the proposed project this alternative would not cast new shadows on portions of the proposed new park on the Naval Hospital Cemetery and the Wallabout Channel. However, as described in **Chapter 3.5**, "Shadows," the new shadows from the proposed project would not cause a significant adverse shadows impact. Therefore, neither the proposed project nor the No-Action Alternative would result in significant adverse impacts related to shadows.

Historic and Cultural Resources

Under the No-Action Alternative, the State/National Registers of Historic Places (S/NRHP) listed Naval Hospital building would not be rehabilitated and no new construction or demolition would occur in the Naval Annex; therefore, no subsurface ground disturbance would occur as the result of proposed project action. Consequently, there would be no effect on known or potential archaeological resources associated with the Naval Hospital Archaeological Site within the Naval Annex.

Under the No-Action Alternative, contributing and non-contributing resources within the Naval Annex of the Brooklyn Navy Yard Historic District would not be rehabilitated. Therefore, it is expected that the condition of most of the buildings, structures, and objects that form part of the district would continue to decline, primarily as a result of exposure to the elements. Although other contributing and non-contributing resources within the hospital campus would not be removed, ongoing deterioration would

diminish aspects that contribute to their historic significance, such as the strong variety of 19th- and 20th-century architectural styles in a self-contained campus with a cohesive layout. Along with the Shipyard and Residential areas, the hospital campus is one of the three key areas that define the Brooklyn Navy Yard Historic District. Therefore, its worsening condition may result in an adverse effect on the historic district because the hospital campus would be neglected. In contrast to the No-Action Alternative, while the proposed project would lead to a significant adverse effect on the S/NRHP-listed Brooklyn Navy Yard Historic District, it would allow for the rehabilitation of 15 contributing resources. Furthermore, with the implementation of the measures identified in **Chapter 3.21**, "Mitigation," the significant adverse impacts to historic and cultural resources would be mitigated.

Urban Design and Visual Resources

Under the No-Action Alternative, the project site would remain in its present state and no construction would take place; thus, there would be no effect on urban design and visual resources. Under the proposed project, all development that would occur on the project site would be developed in conformance with the bulk regulations of the New York City *Zoning Resolution*, and constructed within the existing zoning envelope. In addition, the proposed project would have a beneficial effect on existing visual resources as it would lead to key infrastructure improvements needed at the historic Naval Annex that would facilitate the redevelopment of the project site, including the rehabilitation of historic buildings and the campus at the Naval Annex. Therefore, neither the proposed project, nor the No-Action Alternative would have a significant adverse impact on urban design and visual resources.

Natural Resources

As described in **Chapter 3.8**, "Natural Resources," the project site is located within a disturbed urban setting and does not contain any natural resources of significance. Therefore, neither the proposed project nor the No-Action Alternative would have a significant adverse impact on natural resources.

Hazardous Materials

Unlike the proposed project, under the No-Action Alternative there would be no development activity at the project site that could potentially disturb hazardous materials. However, as discussed in **Chapter 3.9**, "Hazardous Materials," the project sponsor would develop a remedial action plan (RAP) and construction health and safety plan (CHASP) to avoid the potential of significant impacts related to Hazardous Materials. A vapor barrier or other form of vapor control would be installed below the proposed new construction at the project site and any petroleum-contaminated soil, groundwater, or underground storage tanks unexpectedly encountered during site development would be reported to the appropriate government agency and handled in accordance with applicable regulations. With the inclusion of the above measures, the proposed action would not result in significant adverse hazardous materials impacts. Therefore, neither the No-Action Alternative nor the proposed project would result in significant adverse impacts related to hazardous materials.

Water and Sewer Infrastructure

Under the No-Action Alternative, the project site is expected to remain in its existing condition. No other projected development is planned by the 2027 analysis year of the proposed action. Therefore, total water consumption on the project site under the No-Action Alternative would be minimal, similar to the total water consumption estimated under existing conditions. Furthermore, there would be minimal sanitary wastewater generation or stormwater flows to the Newton Creek Waste Water Treatment Plant by the 2027 analysis year. Therefore, neither the proposed action nor the No-Action Alternative would result in significant adverse impacts on wastewater or stormwater systems.

Solid Waste and Sanitation Services

Under the No-Action Alternative, the site of the proposed Kent Avenue Parking Structure, Backlot, and the Naval Annex are expected to remain similar to existing conditions. No other projected development is planned to occur on the project site by the 2027 analysis year. Total solid waste generation on the project site under the No-Action Alternative is expected to remain minimal, similar to the total solid waste generation expected from the proposed project. Therefore, neither the proposed project nor the No-Action Alternative would result in significant adverse impacts on solid waste and sanitation services.

Energy

According to the *CEQR Technical Manual*, all new structures requiring heating and cooling are subject to the New York City Energy Conservation Code. Therefore, the need for a detailed assessment of energy impacts is limited to projects that may significantly affect the transmission or generation of energy. Neither the proposed project nor the No-Action Alternative would affect the transmission of energy and would not result in a significant adverse energy impact.

Transportation

Traffic

As further discussed in **Chapter 3.13**, "Transportation," the traffic generated by the proposed project would cause three of the five study area intersections to have one or more congested movements in one or more of the analyzed peak hours, as discussed below:

- **Flushing Avenue/Washington Avenue:**

- The westbound through/right-turn lane is projected to experience a potentially significant traffic impact during the weekday AM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday AM peak hour, delays for motorists in this lane are projected to increase from 148.8 seconds per vehicle (LOS "F") under Future No-Action Conditions, to 155.8 seconds per vehicle (LOS "F") under Future With-Action Conditions.
- The northbound approach is projected to experience potentially significant traffic impacts during the weekday AM and PM peak hours under the Future With-Action Condition, according to the stated criteria. During the weekday AM peak hour, delays for motorists on the northbound approach are projected to increase from 268.6 seconds per vehicle (LOS "F") under Future No-Action Conditions, to 436.9 seconds per vehicle (LOS "F") under Future With-Action Conditions. During the weekday PM peak hour, delays for motorists on the northbound approach are projected to increase from 215.4 seconds per vehicle (LOS "F") under Future No-Action Conditions, to 477.2 seconds per vehicle (LOS "F") under Future With-Action Conditions.
- The southbound through/right-turn lane is projected to experience a potentially significant traffic impact during the weekday PM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday PM peak hour, delays for motorists in this lane group are projected to increase from 41.8 seconds per vehicle (LOS "D") under Future No-Action Conditions, to 49.9 seconds per vehicle (LOS "D") under Future With-Action Conditions.

- **Flushing Avenue/Williamsburg Street West:**

- The eastbound through/right-turn lane is projected to experience a potentially significant traffic impact during the weekday PM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday PM peak hour, delays for motorists in

this lane group are projected to increase from 425.5 seconds per vehicle (LOS "F") under Future No-Action Conditions, to 434.9 seconds per vehicle (LOS "F") under Future With-Action Conditions.

- **Kent Avenue/Williamsburg Street West:**

- The westbound through/left-turn lane is projected to experience a potentially significant traffic impact during the weekday PM peak hour under the Future With-Action Condition, according to the stated criteria. During the weekday PM peak hour, delays for motorists in this lane group are projected to increase from 44.4 seconds per vehicle (LOS "D") under Future No-Action Conditions, to 49.4 seconds per vehicle (LOS "D") under Future With-Action Conditions.

Unlike the proposed project, the No-Action Alternative would not result in significant adverse traffic impacts at any of the studied intersections. However, as discussed in **Chapter 3.21**, "Mitigation," several traffic network improvements are proposed as mitigation measures for the significant adverse traffic impacts projected to occur as a result of the proposed project. With these recommended improvements in place, the potential traffic impacts of the proposed project during the weekday AM and PM peak hours can be mitigated.

Parking

The project sponsor intends to seek financial incentives from ESD in the future for the development of a 250,000-square-foot Kent Avenue Parking Structure that is envisioned for the area outside the Naval Annex. This garage is planned to accommodate a total of approximately 650 accessory parking spaces. As discussed in **Chapter 3.13**, "Transportation," the projected parking demand for the proposed project is expected to be adequately accommodated within the proposed garage. Under the No-Action Alternative, there would be no parking demand generated from the project site. Therefore, similar to the proposed project, no significant adverse parking impacts would occur under the No-Action Alternative.

Transit

As discussed in **Chapter 3.13**, "Transportation," the proposed project would generate fewer than 200 new subway trips during the weekday midday peak hour, and more than 200 new subway trips during the weekday AM and PM peak hours. However, following a spatial assignment of the weekday AM and PM peak hour trips among the multiple subway stations within one mile of the Navy Yard, no one subway station is projected to experience an incremental increase of more than 200 subway trips. Furthermore, the proposed project would generate fewer than 200 new public bus trips during each of the three weekday peak hours. Therefore, the proposed project is not projected to result in any significant adverse transit impacts. Transit trips generated at the project site under the No-Action Alternative would be nonexistent, due to the lack of development that would occur on the project site. As such, similar to the proposed project no significant adverse transit impacts are expected under the No-Action Alternative.

Pedestrians

As discussed in **Chapter 3.13**, "Transportation," the number of pedestrian trips generated by the proposed project would exceed the 200-trip preliminary screening threshold. The pedestrian assessment performed for the proposed project demonstrated that all of the pedestrian elements at the Flushing Avenue/Washington Avenue intersection are projected to operate at LOS "C" or better, with the exception of:

- 5) The north crosswalk, which is projected to operate at LOS "D" during the weekday midday peak hour. However, there is no change to the pedestrian space at this crosswalk under the With-Action Condition, relative to the No-Action Condition, and thus no significant adverse pedestrian impact.

- 6) The east-west sidewalk on the northwest corner, which is projected to operate at LOS “D” during the weekday midday peak hour, with a decrease in the projected pedestrian space under the With-Action condition that is within the allowable CEQR threshold for a significant adverse pedestrian impact.

Therefore, no significant adverse pedestrian impacts are projected to occur at this intersection during the weekday AM, midday, and PM peak hours as a result of the proposed action. Under the No-Action Alternative there would be fewer projected pedestrian trips than the proposed action. However, the north crosswalk at the Flushing Avenue/Washington Avenue intersection would operate at LOS “D” during the weekday midday peak hour under the No-Action Alternative.

Air Quality

As described in **Chapter 3.14** “Air Quality” the proposed project would not exceed the 170-peak-hour trip-CEQR preliminary screening threshold for CO and no CO microscale impact analysis is warranted by the project. According to the PM_{2.5} hot spot screening results at each affected intersection, all intersections pass the screening based on conservative peak-hour traffic increments and no further hot spot PM_{2.5} analysis is warranted. Potential impacts from CO concentrations at the proposed parking structure were assessed at multiple receptor locations and it was determined that significant adverse air quality impacts from CO concentrations would not occur. All renovated existing buildings and newly constructed buildings associated with the proposed action would be located a sufficient distance from each other within the project site and would be located a sufficient distance from any existing development surrounding the project site to avoid significant adverse air quality impacts from HVAC sources. A review of permit records provided by New York City Department of Environmental Protection (DEP) DEP-registered manufacturing facilities with known pollutants within 400 feet of the project site showed that the operation of existing neighborhood minor sources would not affect potential sensitive receptors on the project site.

In contrast, under the No-Action Alternative, no development would occur on the project site, and thus no mobile or stationary sources air quality impacts would occur. Thus, neither the No-Action Alternative nor the proposed project would have significant adverse air quality impacts.

Greenhouse Gas Emissions and Climate Change

The potential greenhouse gas (GHG) emissions associated with the proposed project have been projected and are presented in **Chapter 3.15**. The proposed project is supportive of transit and non-motorized commuting options and it is expected that the new and renovated buildings would utilize energy-efficient features and be compliant with the New York City Energy Conservation Code. Thus, the project is consistent with the citywide GHG reduction goal. Under the No-Action Alternative, the project site is expected to remain in its existing condition. Furthermore, all construction work at the project site would meet the standards of the New York City Building Code and the Best Available Flood Hazard Data available from FEMA at the time of their construction. Therefore, the generation of GHG emissions on the project site and vulnerabilities to climate change under the No-Action Alternative are expected to be minimal.

Noise

As discussed in **Chapter 3.16**, “Noise,” based on the results of the noise monitoring program and the guideline for acceptable interior noise levels, the academic buildings proposed as part of the project clustered around the southeastern portion of the project site would require a composite Outdoor-Indoor Transmission Class (OITC) rating greater than or equal to the 31 dB(A) window wall attenuation for façades facing Flushing Avenue and Williamsburg Street West and the elevated Brooklyn-Queens Expressway due east. Steiner Studios is committed to adhering to these design specifications, and the buildings that would house academic uses on the project site would provide sufficient attenuation to achieve the city’s interior noise level guideline of 45 dB(A) or lower at the project-induced sensitive receptors. Under the No-Action Alternative no new noise sensitive uses would be introduced at the project site. Consequently, no noise attenuation would be provided for the buildings on the project site.

with this alternative. Thus, neither the No-Action Alternative nor the proposed project would have significant adverse noise impacts.

Public Health

As described in **Chapter 3.17**, "Public Health," the proposed project would not result in significant unmitigated adverse impacts in the technical areas related to public health, such as air quality, water quality, hazardous materials, or noise. Similarly, the No-Action Alternative would not be expected to result in public health impacts.

Neighborhood Character

Under the No-Action Alternative, the character of the neighborhood is not expected to substantially change. Existing conditions on the project site would remain largely the same, and no impacts would occur. As discussed in **Chapter 3.18**, "Neighborhood Character," the proposed project would not cause significant adverse impacts to the elements that comprise neighborhood character, including: land use, socioeconomic conditions, historic and cultural resources, urban design and visual resources, transportation, noise, open space and shadows. Moderate adverse effects that would affect such a defining feature, either singly or in combination, have also not been identified. Thus, under the proposed project and the No-Action conditions, no significant adverse neighborhood character impacts are expected to occur.

Construction Impacts

There would be no construction associated with the No-Action Alternative and, therefore, it would not result in any of the short-term construction disruptions to the surrounding area that would result from the proposed project. As discussed in **Chapter 3.19**, "Construction," construction-related activities associated with the proposed project are not expected to lead to any significant adverse impacts on transportation, air quality, noise, historic resources, hazardous materials or other technical areas. Therefore, neither the No-Action Alternative nor the proposed project would result in significant adverse construction impacts.

3.21 MITIGATION

Introduction

The preceding chapters of this EIS discussed the potential for significant adverse impacts to occur in each of the technical areas. Where significant impacts have been identified, in accordance with the *CEQR Technical Manual*, mitigation measures are examined to minimize or eliminate these impacts. These mitigation measures are discussed below.

3.21.1 Historic and Cultural Resources

Archaeological Resources

The proposed action could lead to an adverse effect on the State/National Registers of Historic Places (S/NRHP) eligible Naval Hospital Archaeological Site (#A04701.014975) because the planned ground disturbance associated with necessary utility infrastructure improvements could directly impact known and potential archaeological features within the site. In compliance with Section 14.09 and the archeological covenant included in the programmatic agreement (PA), consultation with the New York State Historic Preservation Office (SHPO) is required to develop appropriate measures to mitigate the adverse effect.

The archaeological covenant includes seven stipulations, the first of which is most relevant to the status of the Naval Hospital Archaeological Site in the current study area. The first stipulation states that no disturbance of the ground surface shall be undertaken or permitted to be undertaken on-site which would affect the physical integrity of the site without the express prior written permission of the SHPO, signed by a fully authorized representative thereof. Should the SHPO require, as a condition of the granting of such permission, that the Grantee conduct archeological data recovery operations or other activities designed to mitigate the adverse effect of the proposed activity on-site, the Grantee shall at his/her/its expense conduct such activities in accordance with the Secretary of the Interior's *Standards and Guidelines for Archeological Documentation* (48 FR 447344-37).

BNYDC is engaged in consultation with SHPO concerning the Steiner Studios' expansion plans. In a letter to the BNYDC dated June 16, 2014, the SHPO has recommended that any areas of planned ground disturbance within or within 50 feet of any designated sensitive area should be subjected to archaeological examination. It is anticipated that the project sponsor would consult with SHPO to prepare a Letter of Resolution (LOR) that would detail the archaeological activities to be undertaken to mitigate the adverse effect to the Naval Hospital Archaeological Site prior to project implementation. It is anticipated that Phase II archaeological survey would be conducted in areas of proposed ground disturbance that lie within the Naval Hospital Archaeological Site. Depending upon the results of the Phase II survey, Phase III, data recovery excavations may be required to mitigate the adverse effect. The LPC is conducting a coordinated review with SHPO for this undertaking and concurred with SHPO's archaeological findings in its comment letter dated January 21, 2015 (**Appendix B**).

Historic Architectural Resources

The proposed action would have a significant adverse effect on the Brooklyn Navy Yard Historic District because contributing resources would be removed and altered within the Naval Annex portion of the district. In accordance with Section 14.09 of the New York State Historic Preservation Act of 1980, and the historic preservation covenant in the PA and deed, the project sponsor must consult with the SHPO to arrive at mutually agreeable and appropriate measures that the project sponsor would implement to mitigate the adverse effect. It is anticipated that the project sponsor would consult to prepare a LOR that would describe the actions to be undertaken prior to project implementation. LOR signatories are expected to include the SHPO, the project sponsor, BNYDC, Empire State Development (ESD), and possibly the LPC if it is determined that LPC must be a signatory due to the proposed alterations to the LPC-designated U.S. Naval Hospital (Building R95) and the Surgeon's House (Building R1). Potential LOR mitigation measures are described below.

Documentation

As indicated in the historic preservation covenant in the quitclaim deed, to mitigate adverse effect, the project sponsor shall, at a minimum, undertake recordation of the Naval Annex in accordance with federal standards (i.e., Historic American Buildings (HABS)), and any applicable state recordation standards, or other standards to which the parties may mutually agree. The scope and content of the recordation would be defined in coordination with the SHPO. HABS documentation typically includes a physical description of the overall historic district, including setting; brief physical descriptions of the interior and exterior of buildings and structures, including significant alterations; historic context illustrated by historic photographs and/or maps; and large-format, archival, black-and-white photographs of the Naval Annex. It is expected that the SHPO would also assist the project sponsor in identifying adequate repositories for copies of the documentation.

Construction Protection Plan

It is anticipated that the proposed project would result in the removal of five contributing resources and six non-contributing resources from the Naval Annex. Portions of the wall on the north and west sides of the campus would also be altered. The Flagstaff (Object 463) and the Naval Hospital Cemetery are also near potential construction areas. Because 15 contributing resources would be rehabilitated, a construction protection plan would be developed to protect them, the Flagstaff, and the cemetery during the demolition process. As indicated in the *CEQR Technical Manual*, the plan would be developed in coordination with the SHPO and professional engineers that are anticipated to work with the project sponsor. Elements of the plan for buildings may include the following:

- Existing foundation and structural condition information for the buildings to be reused.
- Protection from falling objects.
- Monitoring during construction using tell-tales, and horizontal and lateral movement scales.

Several reference documents also provide useful information on the development of construction protection plans, including “Technical Policy and Procedures Notice No. 10/88, Procedures for the Avoidance of Damage to Historic Structures Resulting from Adjacent Construction” prepared by New York City Department of Buildings (NYCDOB), and “Protecting a Historic Structure During Adjacent Construction” prepared by National Park Service. The project sponsor would also prepare a means and methods plan for how the demolition and construction would proceed on site to ensure that elements to remain (e.g., buildings, structures, trees, landscaping paths) are protected during construction.

Context-Sensitive Design

New construction would be undertaken in a context-sensitive manner. The covenant in the PA and deed require ongoing consultation with the SHPO regarding new construction, and therefore, consultation between the project sponsor, BNYDC, ESD, and the SHPO would be ongoing until the designs are complete.

With these types of mitigation strategies, adverse impacts to these resources would be substantially minimized.

3.21.2 Transportation

As discussed in **Chapter 3.13**, “Transportation,” potential significant traffic impacts are projected to occur at the following intersections and traffic movements by time period:

- **Flushing Avenue/Washington Avenue**
 - Weekday AM peak hour (westbound through/right-turn lane)
 - Weekday AM and PM peak hours (northbound approach)

- Weekday PM peak hour (southbound through/right-turn lane)
- **Flushing Avenue/Williamsburg Street West**
 - Weekday PM peak hour (eastbound through/right-turn lane)
- **Kent Avenue/Williamsburg Street West**
 - Weekday PM peak hour (left-turn/through lane)

Based on these potential traffic impacts, the following transportation improvements are recommended:

- **Flushing Avenue/Washington Avenue:**
 - Prohibit on-street parking on the east and west sides of Washington Avenue, south of Flushing Avenue, in the vicinity of the intersection.
 - Restripe the northbound approach to accommodate one exclusive left-turn lane and one shared through/right-turn lane.
 - Restripe the southbound approach (Steiner Studios access driveway) to accommodate one exclusive left-turn lane, one exclusive through lane, and one shared through/right-turn lane.
 - Reallocate one second of green time from the north-south phase to the east-west phase during the weekday AM peak hour.
- **Flushing Avenue/Williamsburg Street West:**
 - Restripe the eastbound approach to widen both vehicular travel lanes from approximately 11 feet to 11.3 feet with a corresponding reduction in the width of the center median from approximately 8.0 feet to approximately 7.4 feet (a reduction of approximately 0.6 feet).
- **Kent Avenue/Williamsburg Street West:**
 - Reallocate one second of green time from the east-west phase to the southbound phase during the weekday PM peak hour.

These improvements are designed to accommodate the future traffic volumes projected to occur on the roadway network during critical periods of peak traffic activity under the future with the proposed project; specifically, during the peak 15-minute period of the weekday AM and PM peak hours. With these recommended improvements in place, the potential traffic impacts of the proposed action during the weekday AM and PM peak hours can be mitigated.

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3.22 UNAVOIDABLE ADVERSE IMPACTS

A significant adverse impact becomes unavoidable when it meets the following criteria:

- There are no reasonably practicable mitigation measures to eliminate the impact.
- There are no reasonable alternatives to the proposed project that would meet the purpose and need of the action, eliminate the impact, and not cause other or similarly significant adverse impacts.

As detailed in **Chapters 3.6** and **3.13**, there would be significant adverse transportation and historic and cultural resources impacts resulting from the proposed project. With the implementation of the measures identified in **Chapter 3.21**, "Mitigation," the significant adverse impacts to transportation and historic and cultural resources would be mitigated.

As discussed in **Chapter 3.20**, Alternatives, as part of the proposed project, 15 contributing resources to the BNY Historic District would be rehabilitated; however, five contributing resources to the BNY Historic District are proposed to be demolished. An alternative that adaptively reuses all contributing resources to the BNY Historic District was considered, but it was concluded that it is not feasible to reuse the five contributing resources proposed to be removed. The functional inefficiencies resulting from retaining these five resources, and the high costs associated with their adaptive reuse, would render the project financially and programmatically infeasible and would preclude the project from moving forward. An Alternatives Analysis was prepared for the proposed project and is provided in **Appendix B**. The Alternative Analysis was reviewed by SHPO and the agency provided their concurrence that there are no prudent or feasible alternative to demolition of these few resources.

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3.23 GROWTH INDUCING ASPECTS OF THE PROPOSED ACTION

This chapter provides an assessment of the potential growth-inducing aspects of the proposed project. These generally refer to “secondary” impacts that could trigger additional development in areas outside of the study area that would not have such development without the proposed project. The *CEQR Technical Manual* indicates that an analysis of the growth-inducing aspects of a proposed action is appropriate when an action:

- Adds substantial new land use, new residents, or new employment that could induce additional development of a similar kind or of support uses, such as retail establishments to serve new residential uses; and/or
- Introduces or greatly expands infrastructure capacity.

The proposed action would facilitate the development of the Media Campus, which would consist of approximately 350,000 square feet of floor area (including both the reuse of approximately 180,000 square feet of existing structures and approximately 170,000 square feet of new structures) inside the Naval Annex. Outside the Naval Annex, the proposed action would facilitate an additional approximately 70,000 square feet of new development for a new Backlot. In addition, the project sponsor intends to seek financial incentives from ESD in the future for the development of a 250,000-square-foot Kent Avenue Parking Structure that is envisioned for the area outside the Naval Annex. The project would redevelop the historic Naval Annex at the Brooklyn Navy Yard, while at the same time develop new buildings at the project site that would complement the renovated historic buildings.

The proposed project would occur inside the walled confines of the Brooklyn Navy Yard and would expand Steiner Studios’ existing media production studios, as well as potentially expand future academic uses that would be co-located with Steiner Studios. Local businesses, such as local retail and food establishments, as well as support businesses, such as catering companies, would benefit from the activated project site adding new employees and students to their customer base. Thus, the project would be consistent and compatible with adjacent land uses within and surrounding the Brooklyn Navy Yard. While the proposed action would facilitate upgrades to the infrastructure capacity at the project site, these upgrades to infrastructure capacity are related to key infrastructure improvements needed at the project site to allow for its redevelopment and would not have a growth-inducing impact in areas outside of the study area. Many of the buildings in the Naval Annex are in a state of disrepair and require infrastructure improvements to be reoccupied.

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3.24 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Resources, both natural and man-made, would be expended in the construction, renovation, reuse and operation of the development projected to occur as a result of the proposed action. These resources include the building materials used during construction and renovation; energy in the form of gas and electricity consumed during construction and operation of buildings by various mechanical and processing systems; and the human effort and funding required to develop, construct, renovate, and operate the various resources on the project site. These are considered irretrievably committed because their reuse for some other purpose would be highly unlikely.

The project would redevelop the historic Naval Annex at the Brooklyn Navy Yard, while at the same time develop new buildings at the project site that would complement the renovated historic buildings. The proposed project would require the irreversible and irretrievable commitment of energy, construction materials, human effort, and funding. The buildings and structures removed in the Brooklyn Navy Yard Historic District would also constitute a resource loss and potential impacts are discussed in detail in **Chapter 3.6**, "Historic and Cultural Resources." However, many of the historic buildings on the site would remain and be renovated, and in combination with new development proposed, the proposed action would allow for the re-use of the historic Naval Annex that has been vacant and in a state of disrepair for many years.

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