



City Environmental Quality Review

ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) FULL FORM

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

Part I: GENERAL INFORMATION

PROJECT NAME Wildflower Studios

1. Reference Numbers

CEQR REFERENCE NUMBER (to be assigned by lead agency)
21DCP196Q

BSA REFERENCE NUMBER (if applicable)

ULURP REFERENCE NUMBER (if applicable)
210459 ZSQ, N210457 ZAQ, N210458 ZAQ, 210460 ZCQ

OTHER REFERENCE NUMBER(S) (if applicable)
(e.g., legislative intro, CAPA)

2a. Lead Agency Information

NAME OF LEAD AGENCY

New York City Department of City Planning

NAME OF LEAD AGENCY CONTACT PERSON

Olga Abinader

Director, Environmental Assessment and Review Division

2b. Applicant Information

NAME OF APPLICANT

WF Industrial IV LLC

NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON

Adam I. Gordon

ADDRESS 120 Broadway, 31st Floor

ADDRESS 80 8th Avenue, Suite 1602

CITY New York

STATE NY

ZIP 10271

CITY New York

STATE NY

ZIP 10011

TELEPHONE 212-720-3493

EMAIL

oabinad@planning.nyc.gov

TELEPHONE 917-837-4147

EMAIL

adam@wildflowerltd.com

3. Action Classification and Type

SEQRA Classification

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

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

☒ LOCALIZED ACTION, SITE SPECIFIC

☐ LOCALIZED ACTION, SMALL AREA

☐ GENERIC ACTION

4. Project Description

The Applicant, WF Industrial IV LLC, is seeking a special permit, authorizations, and certification related to Waterfront Zoning regulations (collectively, the "Proposed Actions") as well as permits from the New York State Department of Environmental Conservation (DEC) and the U.S. Army Corps of Engineers (USACE) to facilitate development at 35-15 19th Avenue in Astoria, Queens (Block 814, Lot 10; the "Development Site").

The Proposed Actions would facilitate a proposal by the Applicant to construct a seven-story, 160-foot tall (to the top of the bulkhead) media production studio (Use Group 10A), totaling 715,000 gross square feet (gsf), including accessory off-street parking (310 attended parking spaces) and loading and an approximately 34,620 sf of public open space, including a waterfront public access area along Luyster Creek ("the Proposed Development")

See Page 1a, "Project Description," for more information.

Project Location

BOROUGH Queens

COMMUNITY DISTRICT(S) 1

STREET ADDRESS 35-15 19th Avenue

TAX BLOCK(S) AND LOT(S) Block 814, Lot 10

ZIP CODE 11105

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS Northern side of 19th Avenue at street-end: Luyster Creek to the west, Astoria Energy (power plant) to the north, and Steinway Piano factory to the east.

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M3-1

ZONING SECTIONAL MAP NUMBER 9c

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

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

☐ CITY MAP AMENDMENT

☒ ZONING CERTIFICATION

☐ CONCESSION

☐ ZONING MAP AMENDMENT

☒ ZONING AUTHORIZATION

☐ UDAAP

☐ ZONING TEXT AMENDMENT

☐ ACQUISITION—REAL PROPERTY

☐ REVOCABLE CONSENT

☐ SITE SELECTION—PUBLIC FACILITY

☐ DISPOSITION—REAL PROPERTY

☐ FRANCHISE

☐ HOUSING PLAN & PROJECT

☐ OTHER, explain:

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION Special Permit pursuant to 62-837(a), modifying 62-341(c)(1), (2), (5), and (6); Authorization pursuant to 62-822(a), modifying 62-52, 62-53, and 62-57; authorization pursuant to 62-822(b) to modify WPAA design requirements; Certification pursuant to 62-811

Project Description

A. INTRODUCTION

The Applicant, WF Industrial IV LLC, is seeking a special permit pursuant to Zoning Resolution (ZR) sec. 62-837(a) as well as authorizations and a certification related to Waterfront Zoning regulations and permits from the New York State Department of Environmental Conservation (DEC) and the U.S. Army Corps of Engineers (USACE) (the “Proposed Actions”) to facilitate development at 35-15 19th Avenue in Astoria, Queens (Block 814, Lot 10; the “Development Site”). With the Proposed Actions, the Applicant would construct a seven-story, 160-foot tall (to the top of the bulkhead)¹ media production studio (Use Group 10A), totaling 715,000 gross square feet (gsf), including accessory off-street parking (310 attended parking spaces) and loading and approximately 34,800 sf of public open space, including a waterfront public access area along Luyster Creek (“the Proposed Development”).

B. PROPOSED ACTIONS

The Applicant is seeking the following approvals:

- Land use approvals from the New York City Planning Commission (CPC) related to Waterfront Zoning:
 - A special permit pursuant to ZR sec. 62-837(a) to modify (i) minimum setback and maximum base height requirements of ZR 62-3419(a)(2) and ZR 62-341(c)(1); (ii) maximum building height requirements of ZR 62-341(c)(2); (iii) maximum length of walls facing shoreline requirements of ZR 62-341(c)(5); and (iv) the ground floor streetscape provisions of ZR 62-341(c)(6).
 - An authorization pursuant to ZR sec. 62-822(a) to modify waterfront public access and supplementary public access requirements.
 - An authorization pursuant to ZR sec. 62-822(b) to modify design requirements within a waterfront public access area.
 - A certification pursuant to ZR sec. 62-811 to confirm the plans for the Proposed Development comply with applicable waterfront zoning regulations, as modified.
- DEC and USACE permits related to the proposed shoreline improvements:
 - The Development Site’s shoreline along Luyster Creek contains land that is within DEC’s Article 25 (Tidal Wetlands) adjacent area jurisdiction.² A small portion of the Proposed Development (5,226 sf) is located within the DEC’s Article 25 adjacent area. Therefore, the Proposed Development requires a DEC Article 25 permit.
 - Construction of the Proposed Development’s waterfront public access area requires shoreline improvement work which involves in-water construction activities that are regulated by DEC (Article 15 [Protection of Waters]) and

¹ This EAS analyzes a maximum height of approximately 160 feet above curb level (including rooftop bulkheads) for the Proposed Development. The Proposed Building heights used in the land use application materials are measured from the Flood Resistant Construction Elevation (“FRCE,” +15’ NAVD88), as noted in the Special Permit Drawing set and footnote 1 of the LR 3 Project Description. The heights used in this EAS are measured from curb level/grade and represent the absolute heights for the Proposed Building. The Proposed Building is therefore 150 feet to the top of the bulkhead as measured from the FRCE and 160 feet to the top of the bulkhead as measured from grade.

² Defined by the 10-foot contour line from the 1966 United State Geological Survey Map (7.5 Minutes Series, Central Park Quadrangle, 1988 edition).

USACE (Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act). The Applicant is seeking approval through a joint permit application to DEC (pursuant to Article 15 [Protection of Waters]) and USACE (pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act).

The Applicant is seeking the CPC Waterfront Zoning approvals, the DEC Article 25 and 15 permits, and the USACE permit for the Proposed Development concurrently.

C. PROJECT AREA

The Development Site is located at the western terminus of 19th Avenue in Astoria, Queens, adjacent to Luyster Creek, aka Steinway Creek (see Figure 1 of the EAS). The Steinway Piano factory currently operates on the property to the east of the Development Site (Block 814, Lot 1), and the Development Site and the Steinway Piano factory site form a single zoning lot. Historically, the Development Site was part of the Steinway Piano factory campus, but was purchased by the Applicant as a development site. It contained buildings formerly associated with the Steinway Piano factory, the majority of which have been demolished, and the site is largely vacant. The Development Site has a lot area of approximately 228,693 square feet (sf)³ and is zoned M3-1.

The Development Site includes approximately 500 linear feet of shoreline along Luyster Creek. The shoreline features a steep slope that has been hardened with boulders, concrete and asphalt, and miscellaneous debris. The northern reach of the shoreline includes the deteriorated remnants of a cribbing-type retaining structure. The southern reach of the shoreline is less steep and is covered with rocks and construction debris of various sizes.

D. PROPOSED PROJECT

The Applicant is proposing to construct a seven-story, 160-foot tall (to the top of the bulkhead) media production studio (Use Group 10A), totaling 715,000 gross square feet (gsf) (approximately 495,000 sf of zoning floor area [zsf]). The Proposed Development includes approximately 38,000 zsf of excess developments rights from the Steinway Piano factory lot (Lot 1), which will be purchased pursuant to a contract option between the Applicant and the Steinway Piano factory property owner, resulting in an FAR of 2.16 on the Development Site. The Proposed Development includes approximately 461,000 gsf of film and television production studio space (consisting of 11 sound stages and accessory facilities for stage support, dressing/wardrobe areas, hospitality, pre- and post-production rooms, and common areas) and approximately 251,000 gsf of loading facilities, attended accessory off-street parking (310 required attended parking spaces⁴) and mechanical rooms. The sound stages would be served by internal circulation roadways and ramps within the building allowing for truck access and loading.⁵

The Proposed Development would also include an approximately 30,600 sf waterfront public access area along Luyster Creek, with a circulation path accessed from the terminus of 19th Avenue (from the sidewalk on the north side of the street), seating, and landscaping. The waterfront public access area would also include coastal buffer plantings and bioretention basins (part of the Proposed Development's stormwater management system). The shoreline area would be stabilized with the removal of existing concrete, asphalt, stone debris, garbage, and dilapidated wharf/bulkhead remnants and installation of 325 feet of a new protective rip-rap stone revetment (from 19th Avenue north) and an earth stabilized precast seawall, 6 feet to 8 feet high, constructed atop existing timber cribbing and stone fill remnants for the remaining 175 feet. An approximately 16-foot building setback along the 19th Avenue frontage would provide an additional approximately 4,200 sf of landscaped public access area adjacent to the existing sidewalk.

³ The Development Site is part of a single zoning lot comprised of the Development Site and the Steinway Piano Factory (Block 814, Tax Lot 1).

⁴ ZR 44-21. The parking requirement for the Proposed Development is determined based on building capacity, at a rate of one parking space per 8 persons capacity.

⁵ Such internal roadways and ramps will not be accessible to the public.

E. BUILD YEAR

It is expected that development would occur in a single phase. It is assumed that the Proposed Actions—as well as the DEC and USACE permits required for the project, which are being sought concurrently with the Proposed Actions (discussed above)—will be approved in 2021. Site preparation began in late 2020, and the Applicant has received permits from the New York City Department of Buildings (DOB) to begin construction associated with the as-of-right last mile distribution center that the Applicant will construct on the Development Site absent the Proposed Actions (discussed below).⁶ The planned completion date for construction of the Proposed Development is the fourth quarter of 2023; therefore, for purposes of analysis, the Build Year is 2023.

F. PURPOSE AND NEED

The Proposed Development requires several discretionary approvals in order to provide appropriate space for the intended media production facility. The Applicant is seeking a bulk modification special permit pursuant to ZR Section 62-837(a) to modify (i) minimum setback and maximum base height requirements of ZR 62-3419(a)(2) and ZR Section 62-341(c)(1), to allow a proposed 160-foot-tall (to top of the bulkhead) new building on the Development Site to rise without setbacks from its waterfront yard; (ii) maximum building height requirements of ZR Section 62-341(c)(2), to allow the 160-foot-tall (to the top of the bulkhead) new building; (iii) maximum length of walls facing shoreline requirements of ZR Section 62-341(c)(5), to allow an approximately 475-foot wall along the building's waterfront yard; and (iv) the ground floor streetscape requirements of ZR 62-341(c)(6). The Applicant also seeks authorizations pursuant to ZR Sections 62-822(a) and (b) for modification of waterfront public access area and supplemental public access area requirements. Finally, the Applicant seeks a non-discretionary certification pursuant to ZR Section 62-811 to confirm the resulting plans for the Proposed Development comply with applicable waterfront zoning regulations, as modified.

The vertical studio village concept incorporated into the design for the Proposed Development requires a building envelope with a larger footprint than what is permitted as-of-right and is taller than what is permitted as-of-right. The minimum dimensions for a state-of-the-art sound stage are 150 feet by 120 feet with a height of approximately 60 feet. This means that, given the 110-foot maximum building height in the Development Site's zoning district, only one story of suitable sound stages could be constructed on the Development Site as-of-right. Additional setbacks from the Proposed Development's waterfront yard above the as-of-right maximum 60-foot base height would cut into the area required for 4 of the Proposed Development's 11 sound stages, rendering them unusable. Similarly, modification of the 100-foot maximum length of walls facing shoreline requirement of the waterfront regulations, which applies to each story wholly above 60 feet, would prevent the Applicant from constructing any sound stages on the Proposed Development's second sound stage level, because each sound stage alone—without accounting for required accessory uses or circulation space—must have a minimum dimension of 120 feet. Increasing the proposed waterfront public access area on the Development Site would similarly cut into area needed for sound stages. Decreasing the number of sound stages on the Development Site, or decreasing the area available for support of the sound stages (including ground floor parking and loading), would impair the functionality and financial feasibility of the Proposed Development.

As noted above, a small portion of the Proposed Development (5,226 sf) is located within the DEC's Article 25 adjacent area. Therefore, the Proposed Development requires a DEC Article 25 permit in order to expand the footprint of the development into the DEC-regulated tidal wetland adjacent area. In addition, the proposed shoreline improvements, which are required to provide upland structural stabilization for the Proposed Development's waterfront public access area, involve in-water construction activities that are regulated by DEC (Article 15 [Protection of Waters]) and USACE (Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act). Therefore, the Proposed Development requires

⁶ On December 4, 2020, DOB issued a foundations-only permit for the No Action last-mile distribution center on the Development Site pursuant to a New Building (NB) application filed by the Applicant. Later that month, the Applicant submitted plans and specifications for a “multi-level film production studio” for DOB's review as an amendment to the last-mile distribution center NB filing. The distribution center and production studio plans filed with DOB have the same building footprint. Because the production studio materials were filed as an amendment to the distribution center application, DOB required that all filings and permits, including the December 4, 2020 foundations-only permit, be updated to note “multi-level film production studio.” The Building Code use listed on the foundations-only permit remains “S-2 Storage.” The Applicant does not intend to pull any DOB permits for construction of the production studio unless and until the Proposed Actions are approved.

DEC Article 25 and 15 permits, and the USACE permit. The Applicant is seeking the DEC and USACE permits concurrently with the proposed Zoning approvals.

G. ANALYSIS FRAMEWORK

This Environmental Assessment Statement (EAS) has been prepared in accordance with the guidelines presented in the 2014 *City Environmental Quality Review (CEQR) Technical Manual*. For each technical assessment, the analysis includes descriptions of existing conditions, conditions in the future without the Proposed Development (the “No Action” condition), and conditions in the future with the Proposed Development (the “With Action” condition). For each relevant technical area, the incremental difference between the No Action and With Action condition is analyzed to determine the potential environmental effects of the Proposed Development.

The Proposed Actions—a special permit, authorizations, and certification related to Waterfront Zoning regulations and DEC and USACE permits—are being sought to facilitate development of a media production studio on the Development Site (Block 814, Tax Lot 10—35-15 19th Avenue). The Proposed Actions would facilitate a building envelope that would better match the built context of the surrounding industrial area than the underlying regulations allow. No other sites would be affected by the Proposed Actions. Therefore, the Reasonable Worst Case Development Scenario (RWCDS) for the Proposed Actions is limited to the Development Site.

EXISTING CONDITION

The analysis framework begins with an assessment of existing conditions on the Development Site and in the relevant study area because these can be most directly measured and observed. The assessment of existing conditions does not represent the condition against which the Proposed Development is measured, but serves as a starting point for the projection of future conditions with and without the Proposed Development and the analysis of project impacts. The existing conditions on the Development Site are described above in the Project Area section.

NO ACTION CONDITION

Absent the Proposed Actions (the No Action condition), the Applicant would construct an as-of-right development on the Development Site (i.e., a development that would not require any discretionary approvals by the CPC and/or DEC and USACE permits). Specifically, the Applicant would construct a last-mile distribution center in the No Action condition. A last-mile distribution center allows shipping entities, such as e-commerce companies (e.g., Amazon) or private shipping companies (e.g., FedEx), to sort large, regional shipments into smaller, area-specific shipments. This allows large trucks to deliver goods to the last-mile distribution center and smaller trucks or vans to cover the “last mile” from the distribution center to the ultimate consumer. With such a facility on the Development Site, trucks could receive goods at LaGuardia Airport and larger warehouses in the metropolitan region and transport those goods to the distribution center, where they would be sorted by neighborhood and loaded onto vans. From the distribution center, each van would be able to deliver goods to the nearby area (Astoria, Long Island City, etc.), resulting in more efficient delivery routes, reduced carbon emissions, and fewer large trucks on local residential streets.

The Applicant is a subsidiary of Wildflower, which has developed over 1.6 million gsf of last-mile warehouse, industrial and self-storage uses in the metropolitan area, including distribution centers at JFK Airport and in East New York, Brooklyn. Demand for last-mile distribution centers continues to grow with the increase in e-commerce activity nationally and in the City. Based on their extensive experience, Wildflower believes the Development Site’s M3-1 zoning, proximity to LaGuardia Airport, accessibility to the Grand Central Parkway and Brooklyn Queens Expressway, and adjacency to dense residential neighborhoods in Astoria, Long Island City, and the surrounding portions of Queens and western Long Island, coupled with the lack of available development sites in the City, make the Development Site highly suitable for use as a last-mile distribution center. As noted above, the Applicant purchased the Development Site as a development site, and, even if the Proposed Actions were not approved, the Applicant would seek to make a reasonable return on its purchase of the Development Site by developing it as a last-mile distribution center.

The No Action last-mile distribution center would be a 4-story (150-foot-tall [to the top of the bulkhead]) building totaling 518,849 gsf (457,394 zsf). The facility would consist of approximately 360,000 gsf of distribution/warehouse and storage use; 43,300 gsf of accessory office and employee back-of-house use; and 115,550 gsf of accessory parking (229 required unattended spaces), loading and delivery vehicle storage (see (see **Figures 7 and 8**). This Use Group 16 facility would be

exempt from the bulk and waterfront regulations of ZR Article VI, Chapter 2 and would fully comply with the underlying M3-1 district regulations.

With the No Action distribution center, the waterfront area on the Development Site would continue to be planted with native coastal plantings and used for stormwater retention, but would not be accessible to the public. The plantings would not require a DEC permit and the stormwater retention system would not require construction of new outfalls requiring a permit from USACE.⁷ The No Action distribution center would not require any shoreline improvements and, as it would not involve in-water construction activities under DEC and USACE jurisdiction, it would not require a DEC Article 15 permit or USACE permit. In addition, the No Action distribution center would be located outside of the DEC's tidal wetlands jurisdiction and would not require a DEC Article 25 permit. Finally, a DEC State Pollutant Discharge Elimination System (SPDES) permit is not required for the dewatering expected to occur during construction of the No Action distribution center.⁸ Therefore, no state or federal permitting approvals are required for the No Action scenario.

WITH ACTION CONDITION

As discussed above, the Proposed Development (the With Action condition) would be a 160-foot-tall (to the top of the bulkhead), seven-story building containing 715,000 gsf of media production studio facilities as well as landscaped and publicly accessible open space. The Proposed Development would be set back approximately 16 feet from 19th Avenue at its ground level, and the setback area would contain approximately 4,200 sf of landscaped publicly accessible area adjacent to the 19th Avenue sidewalk. The Proposed Development would also be set back from the Luyster Creek shoreline, and this setback would be improved with an approximately 30,600 sf waterfront public access area, accessed from the 19th Avenue sidewalk at the terminus of 19th Avenue. The Proposed Development's street wall would rise to the full building height without setback in order to accommodate its 11 sound stages (see **Figures 9 and 10**). The Proposed Development would not be financially viable without 11 standard-sized sound stages; therefore, the Proposed Development has been designed to achieve the dimensions of the sound stages, and this design necessitates the Proposed Actions.

The Proposed Development would contain 11 sound stages and accessory production facilities, arranged as a vertical "studio village." The Proposed Development's 11 sound stages would be stacked two levels high above one story of accessory off-street parking and loading. Its core would house all of the accessory uses provided on a traditional studio lot, as well as freight elevators connected directly to the Proposed Development's accessory loading berths. The Proposed Development would also contain an "elevated driveway" with a ramp from the building's vehicular entrance to the first level of sound stages, allowing for circulation of vehicles within the first story of the building. The elevated driveway would be accessed from the interior of the Proposed Development and would be used only for circulation within the Proposed Development (i.e., it would not be open to the public).

As noted above, the Proposed Development will include approximately 38,000 zsf of development rights to be purchased from the Steinway Lot (Lot 1); these development rights will be purchased pursuant to a contract option to be exercised prior to completion of this application.

INCREMENT OF ANALYSIS

The increment of analysis—the difference between the No Action and With Action conditions on the Development Site—is shown below in **Table 1**.

⁷ As the No Action project would not include waterfront publicly accessible open space, it does not require structural improvements that are regulated by TWAA permits. Under 6 NYCRR Part 661, Tidal Wetlands—Land Use Regulations, the establishment of plantings within a tidal wetland adjacent area falls under Use 9, Establishing Plantings, for which no permit is necessary. In addition, a Stormwater Pollution Protection Plan (SWPPP) is required for the No Action development under the DEC SPDES General Permit for the Discharge of Stormwater from construction activities (any activity disturbing soil over an acre must comply with the general permit), and a permit for construction dewatering is required under existing DEP and DEC regulations; this work does not require a discretionary permit from DEC or DEP. Therefore, all shoreline activities for the No Action distribution center are as-of-right and do not require any discretionary permits or approvals.

⁸ In a Notice Of Determination of No Jurisdiction dated October 14, 2020, DEC concluded that they would not take jurisdiction over the discharge of the groundwater recovered during dewatering on the Development Site.

Table 1

Reasonable Worst Case Development Scenario Summary—Development Site

Development Site	Existing	No Action	With Action	Increment for Analysis
Use	Vacant	Last-Mile Distribution Center (Use Group 16)	Media Production Studio (Use Group 10A)	Change in use: media production studio in place of distribution center
FAR	N/A ¹	2.00	2.16 ³	+0.16
Zoning Square Feet (zsf)	±900	457,394	495,000	+37,606
Gross Square Feet (gsf)	±900	518,849 ²	715,000 ⁴	+196,151
Accessory Parking Spaces	N/A	229	310	+81
Public Open Space	N/A	N/A	34,800 sf ⁵	+34,800 sf open space

Notes:

- ¹ The Development Site contained buildings formerly associated with the Steinway Piano factory, the majority of which have been demolished, and the site is largely vacant.
- ² Includes 360,000 gsf of distribution/warehouse and storage use; 43,300 gsf of accessory office and employee back-of-house use; and 115,550 gsf of accessory parking, loading and delivery vehicle storage
- ³ The Development Site is part of a single zoning lot comprised of the Development Site and the Steinway Piano Factory (Block 814, Tax Lot 1). With Action scenario includes approximately 38,000 zsf of development rights to be purchased from the Steinway Lot.
- ⁴ Includes approximately 461,000 gsf of film and television production studio space (11 sound stages and accessory facilities for stage support, dressing/wardrobe areas, hospitality, pre- and post-production rooms, and common areas) and approximately 251,000 gsf of loading facilities, accessory off-street parking, and mechanical rooms, and internal circulation roadways and ramps.
- ⁵ Includes 4,200 sf public access area adjacent to the 19th Avenue sidewalk and 30,600 sf waterfront public access area along Luyster Creek.

H. PROJECT COMPONENTS RELATED TO THE ENVIRONMENT

The Applicant has committed to implementing the following project components related to the environment (PCRE) that would preclude any potential impacts related to transportation and construction as summarized below and described in detail in Attachment G, “Transportation,” and Attachment I, “Construction.” The Applicant will enter a Restrictive Declaration, to be recorded against the Development Site in association with the Proposed Actions, requiring the implementation of these PCREs.

TRANSPORTATION

The Proposed Development will include a weekday shuttle service for employees and other studio users. Final details of the shuttle service, including location of shuttle stops and the shuttle route, shall be subject to approval by the New York City Department of Transportation (NYCDOT) and New York City Transit (NYCT).

CONSTRUCTION

Measures would be taken to reduce air pollutant and noise emissions during construction in accordance with all applicable laws, regulations, and building codes. In addition, the following measures would be implemented to further reduce air pollutant and noise emissions during construction:

AIR QUALITY

- **Best Available Tailpipe Reduction Technologies.** Non-road diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract for the Proposed Development), including but not limited to concrete mixing and pumping trucks, would utilize the best available technology (BAT) for reducing diesel particulate matter emissions (currently diesel particulate filters).
- **Utilization of Newer Equipment.** EPA’s Tier 1 through 4 standards for non-road engines regulate the emission of criteria pollutants from new engines, including PM, CO, NOx, and hydrocarbons (HC). To the extent

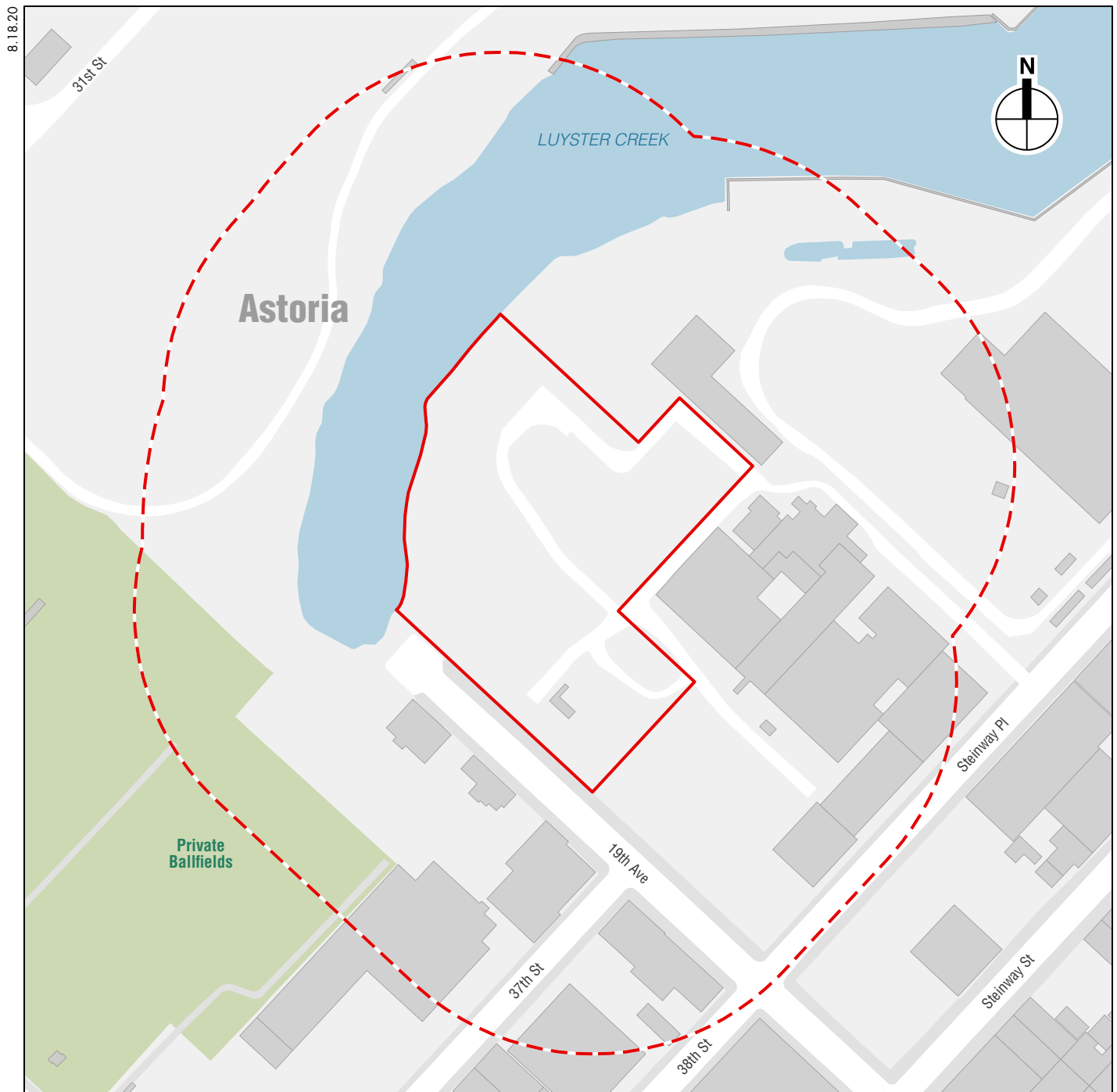
practicable, all diesel-powered non-road construction equipment with a power rating of 50 hp or greater would meet at least the Tier 3 emissions standard and be retrofitted with diesel particulate filters. All diesel-powered engines in the project rated less than 50 hp would meet at least the Tier 2 emissions standard.

NOISE

- The Applicant is committed to the use of auger drill rigs for pile installation rather than impact pile driving during excavation and foundation construction of the Proposed Project.

With these measures in place and as presented in this EAS, the Proposed Development would not have a significant adverse impact on the environment.

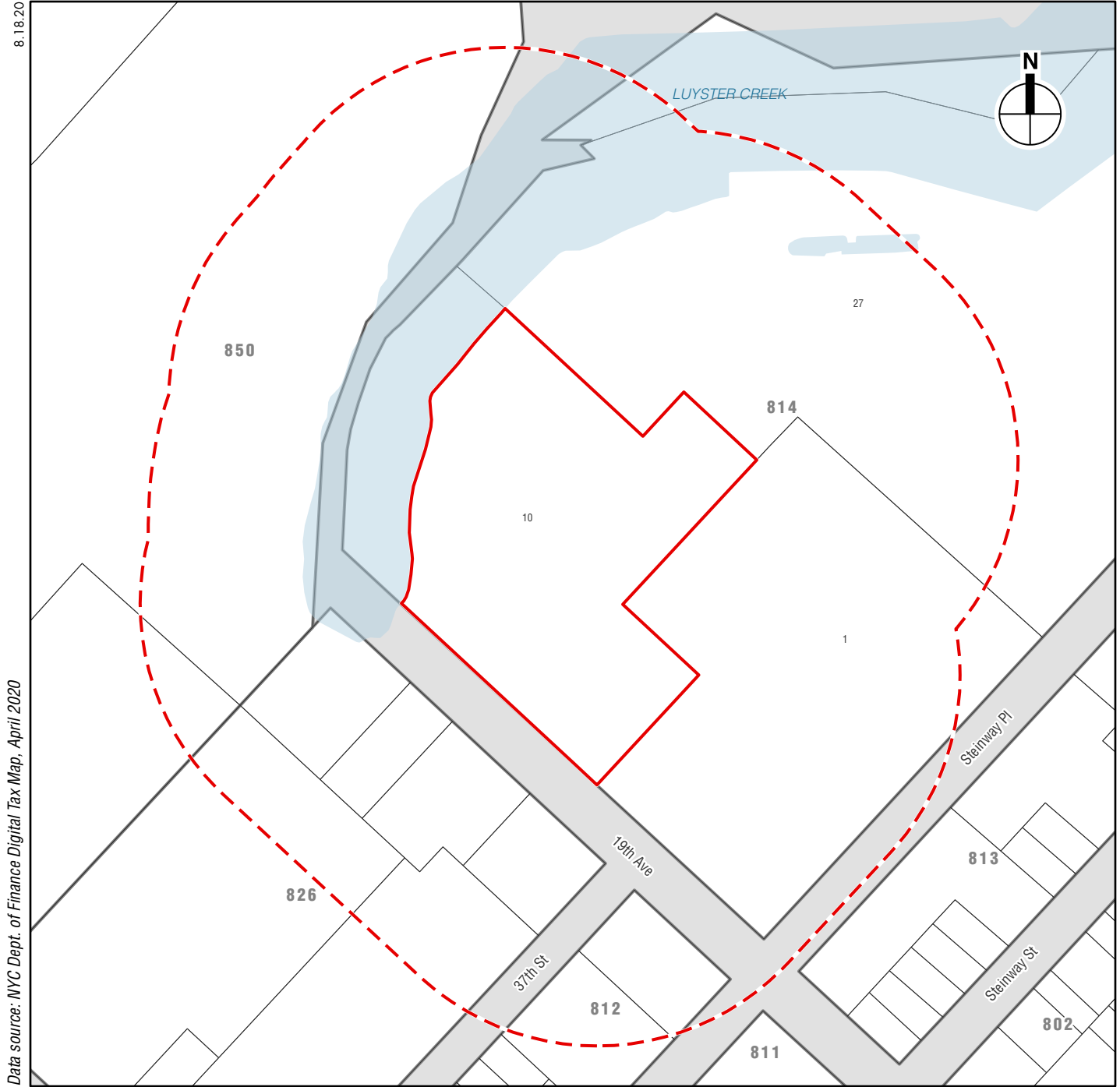
Board of Standards and Appeals: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
<input type="checkbox"/> VARIANCE (use) <input type="checkbox"/> VARIANCE (bulk) <input type="checkbox"/> SPECIAL PERMIT (if appropriate, specify type: <input type="checkbox"/> modification; <input type="checkbox"/> renewal; <input type="checkbox"/> other); EXPIRATION DATE:	
SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION	
Department of Environmental Protection: <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If "yes," specify:	
Other City Approvals Subject to CEQR (check all that apply)	
<input type="checkbox"/> LEGISLATION <input type="checkbox"/> RULEMAKING <input type="checkbox"/> CONSTRUCTION OF PUBLIC FACILITIES <input type="checkbox"/> 384(b)(4) APPROVAL <input type="checkbox"/> OTHER, explain:	<input type="checkbox"/> FUNDING OF CONSTRUCTION, specify: <input type="checkbox"/> POLICY OR PLAN, specify: <input type="checkbox"/> FUNDING OF PROGRAMS, specify: <input type="checkbox"/> PERMITS, specify:
Other City Approvals Not Subject to CEQR (check all that apply)	
<input type="checkbox"/> PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMC)	<input type="checkbox"/> LANDMARKS PRESERVATION COMMISSION APPROVAL <input type="checkbox"/> OTHER, explain:
State or Federal Actions/Approvals/Funding: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If "yes," specify:	
DEC Article 25 (Tidal Wetlands) and Article 15 (Protection of Waters) permits; USACE permit pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act	
6. Site Description: The directly affected area consists of the project site and the area subject to any change in regulatory controls. Except where otherwise indicated, provide the following information with regard to the directly affected area.	
Graphics: The following graphics must be attached and each box must be checked off before the EAS is complete. Each map must clearly depict the boundaries of the directly affected area or areas and indicate a 400-foot radius drawn from the outer boundaries of the project site. Maps may not exceed 11 x 17 inches in size and, for paper filings, must be folded to 8.5 x 11 inches.	
<input checked="" type="checkbox"/> SITE LOCATION MAP <input checked="" type="checkbox"/> TAX MAP <input checked="" type="checkbox"/> PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP	<input checked="" type="checkbox"/> ZONING MAP <input type="checkbox"/> FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S) <input checked="" type="checkbox"/> SANBORN OR OTHER LAND USE MAP
Physical Setting (both developed and undeveloped areas)	
Total directly affected area (sq. ft.): 228,693	Waterbody area (sq. ft.) and type: N/A
Roads, buildings, and other paved surfaces (sq. ft.): 228,693	Other, describe (sq. ft.): N/A
7. Physical Dimensions and Scale of Project (if the project affects multiple sites, provide the total development facilitated by the action)	
SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 715,000	
NUMBER OF BUILDINGS: 1	GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 715,000
HEIGHT OF EACH BUILDING (ft.): 160'	NUMBER OF STORIES OF EACH BUILDING: 7
Does the proposed project involve changes in zoning on one or more sites? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If "yes," specify: The total square feet owned or controlled by the applicant:	
The total square feet not owned or controlled by the applicant:	
Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
If "yes," indicate the estimated area and volume dimensions of subsurface disturbance (if known):	
AREA OF TEMPORARY DISTURBANCE: 228,693 sq. ft. (width x length)	VOLUME OF DISTURBANCE: TBD cubic ft. (width x length x depth)
AREA OF PERMANENT DISTURBANCE: 228,693 sq. ft. (width x length)	
8. Analysis Year CEQR Technical Manual Chapter 2	
ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2023	
ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 34 (includes work commenced in 2020)	
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF MULTIPLE PHASES, HOW MANY?	
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Assumes approval of the Proposed Actions in 2021 as well as approval of the DEC and USACE permits required for the project. Construction of foundations began in 2020 pursuant to permits from DOB for the No Action scenario last-mile distribution center, which would proceed were the requested actions not approved. Development will occur in a single phase. See also Attachment I, Construction.	
9. Predominant Land Use in the Vicinity of the Project (check all that apply)	
<input type="checkbox"/> RESIDENTIAL <input checked="" type="checkbox"/> MANUFACTURING <input checked="" type="checkbox"/> COMMERCIAL <input type="checkbox"/> PARK/FOREST/OPEN SPACE <input type="checkbox"/> OTHER, specify:	



0 200 FEET

- Development Site
- Study Area (400-foot perimeter)



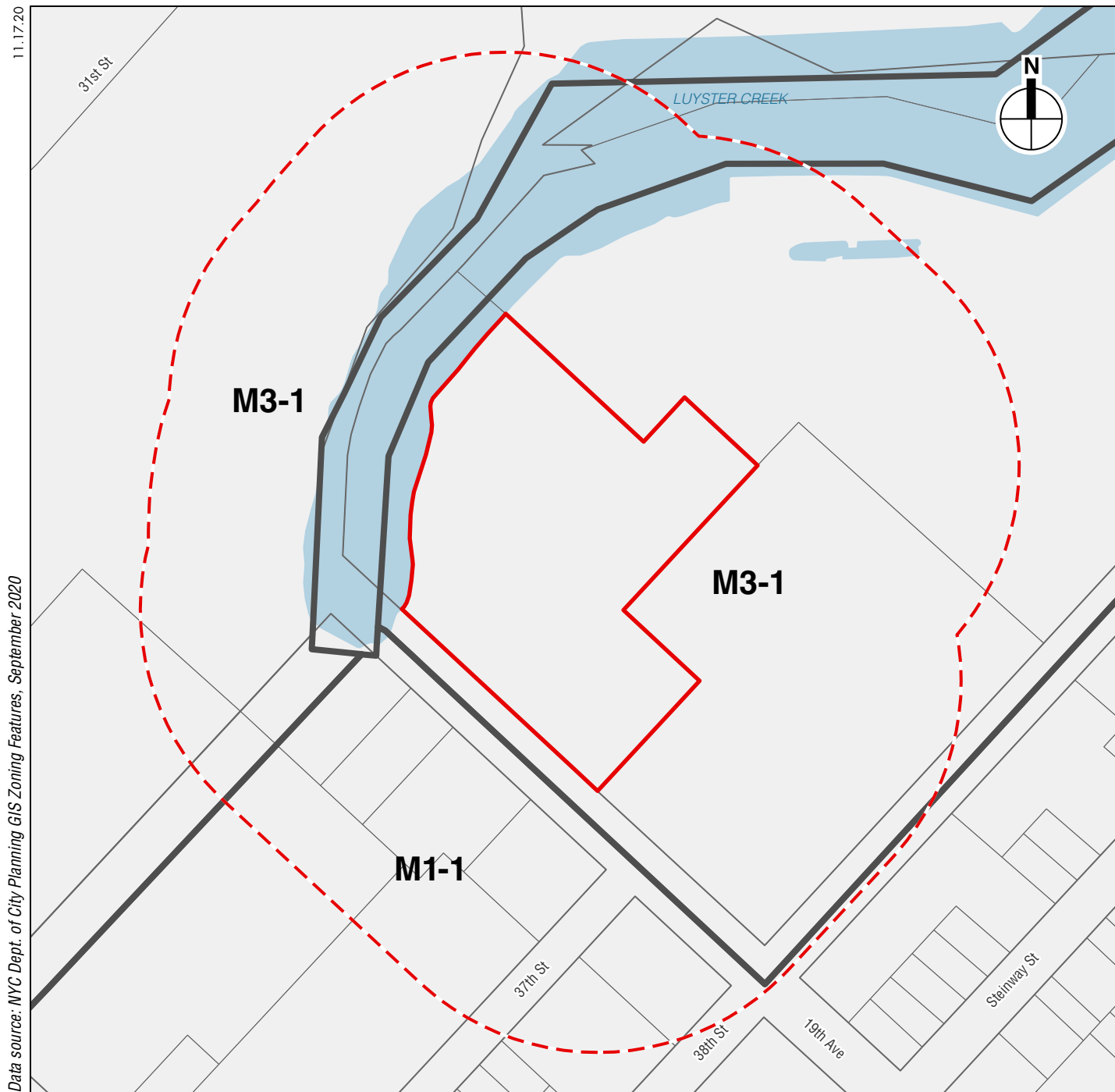


8.18.20

Data source: NYC Dept. of Finance Digital Tax Map, April 2020

- Development Site
- Study Area (400-foot perimeter)
- 1 Tax Lot Boundary
- 1 Tax Block Boundary

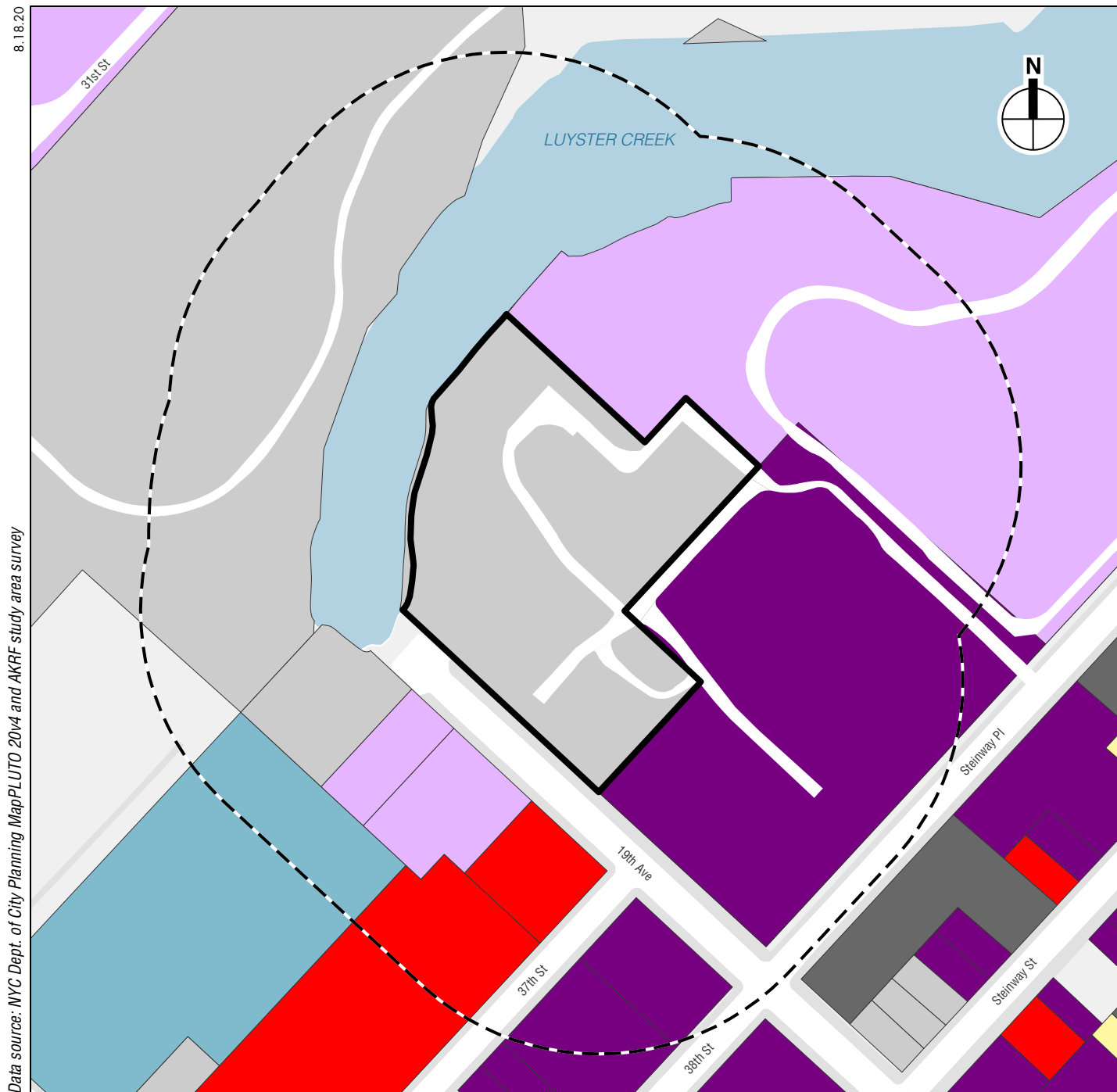
0 200 FEET



Data source: NYC Dept. of City Planning GIS Zoning Features, September 2020

- Development Site
- Study Area (400-foot perimeter)
- Zoning District Boundary

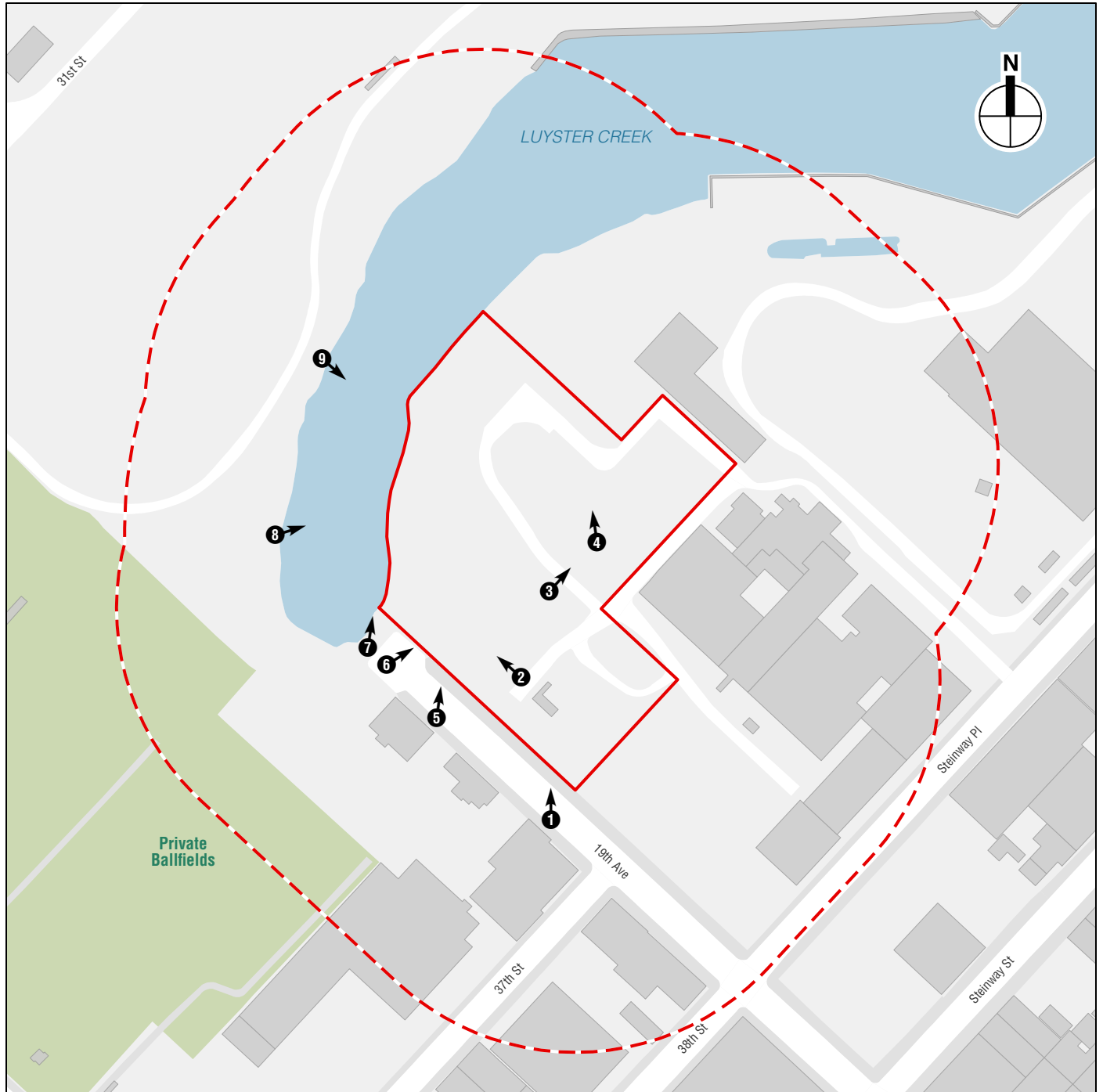
Note: Proposed Actions do not include any change to zoning districts on the Development Site and in the Study Area



- Development Site
- Study Area (400-foot perimeter)
- Commercial and Office Buildings
- Industrial and Manufacturing
- Parking Facilities
- Public Facilities and Institutions
- Residential
- Transportation and Utility
- Vacant Land

0 200 FEET

Existing Land Use
Figure 4



-  *Development Site*
-  *Study Area (400-foot perimeter)*
-  *Photograph View Direction and Reference Number*

0 200 FEET



Photograph, August 2020

1



Photograph, August 2020

2



Photograph, August 2020 **3**



Photograph, August 2020 **4**



Photograph, August 2020

5



Photograph, August 2020

6



Photograph, August 2020

7

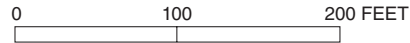
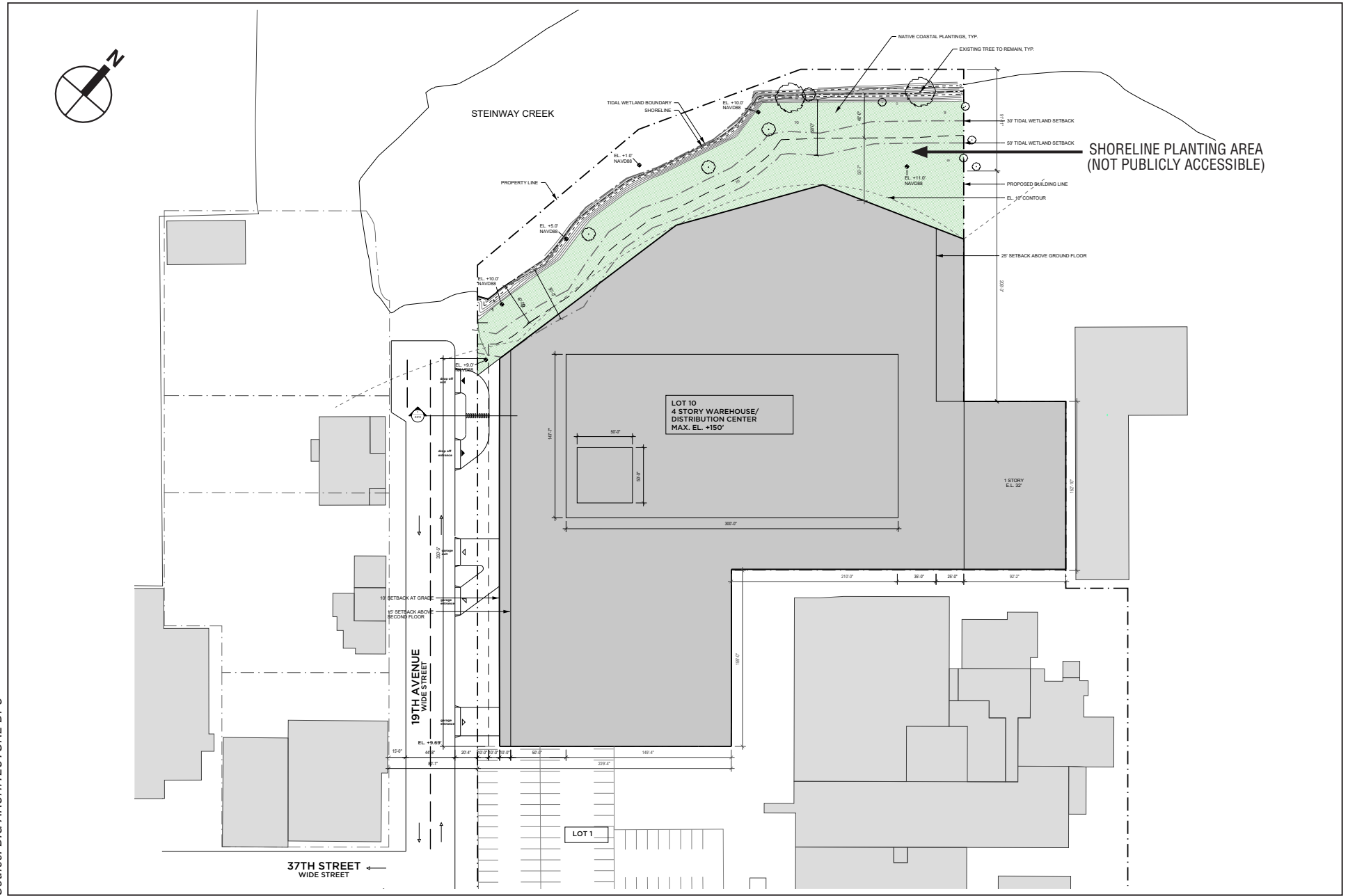


Photograph, May 2020

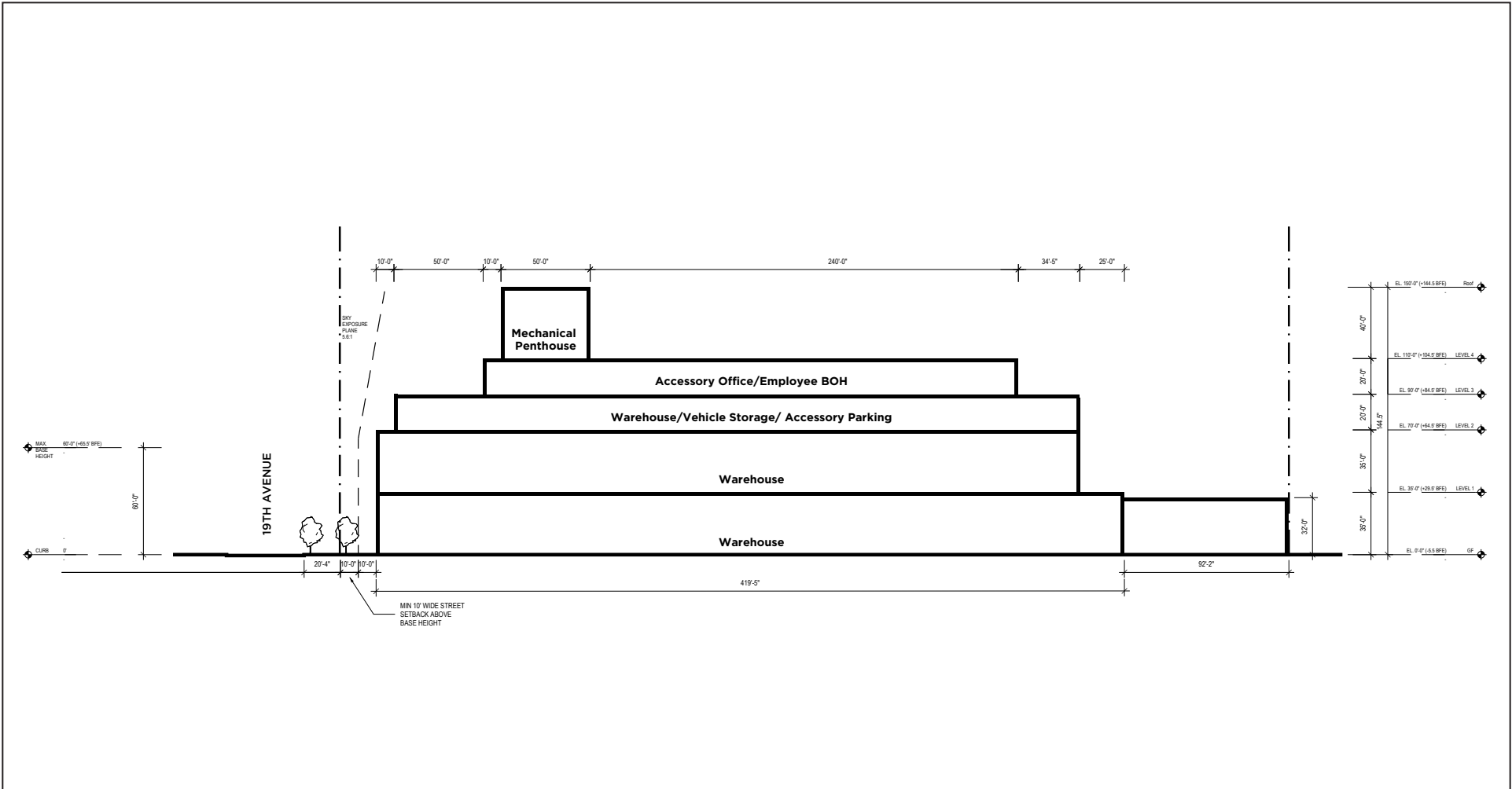
8



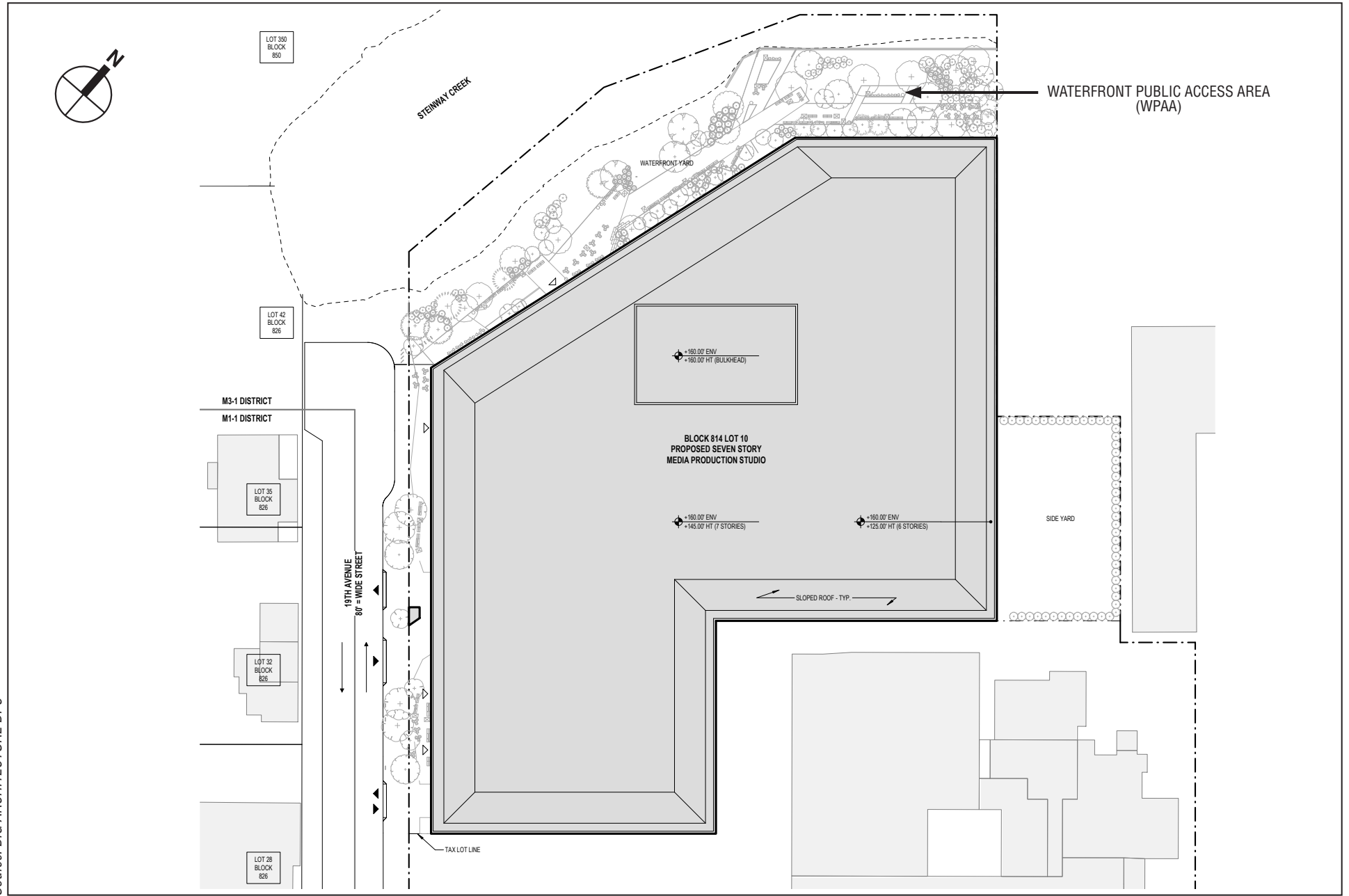
Photograph, May 2020 **9**



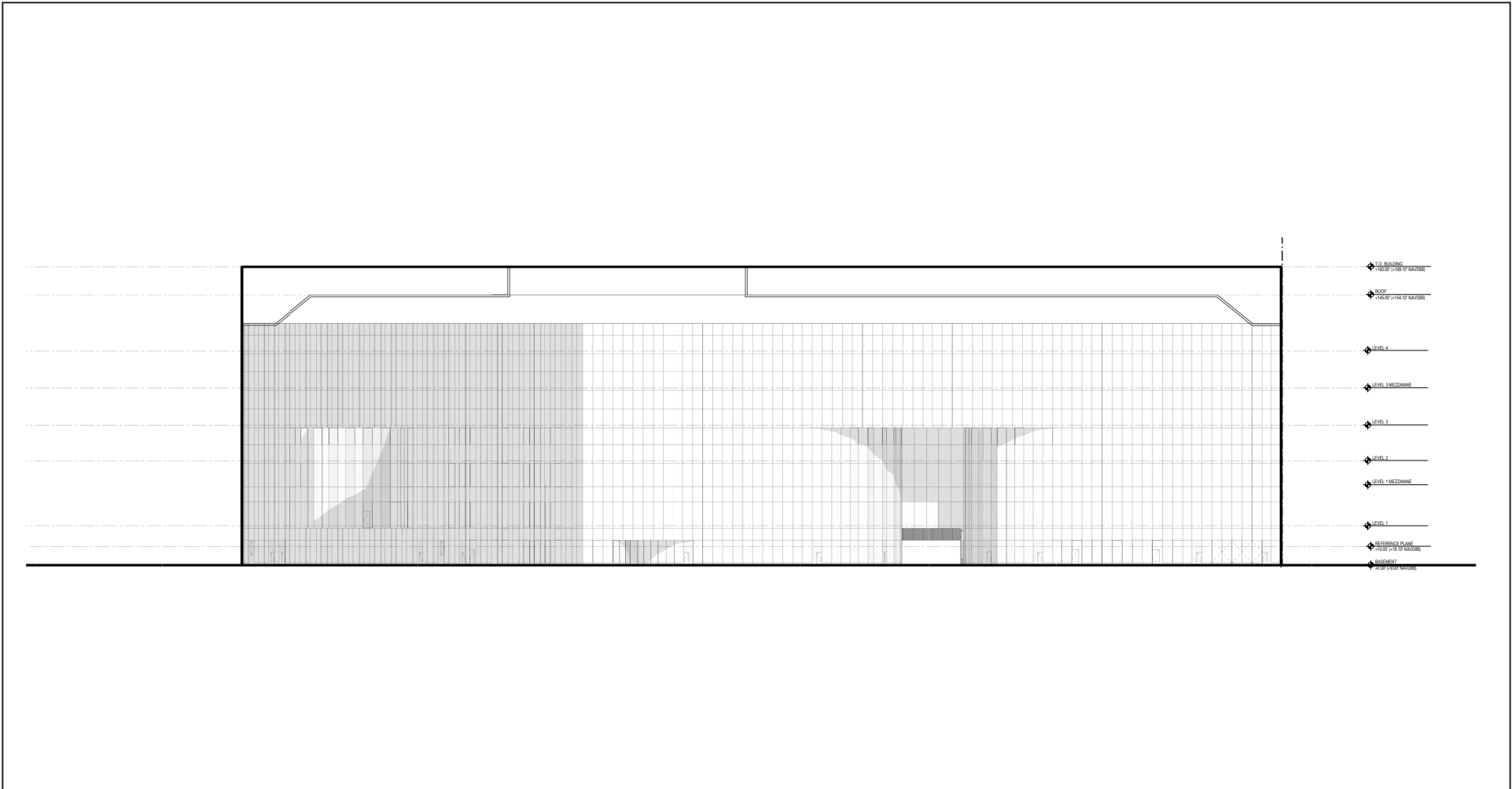
Source: BIG ARCHITECTURE DPC



No Action Section
Figure 8



Source: BIG ARCHITECTURE DPC



DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS

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

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," specify the following:				
Describe type of residential structures				
No. of dwelling units				
No. of low- to moderate-income units				
Gross floor area (sq. ft.)				
Commercial	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
If "yes," specify the following:				
Describe type (retail, office, other)		Distribution Center/Warehouse (UG 16)	Film and Television Production Studio (UG 10A)	
Gross floor area (sq. ft.)		518,849 Includes approximately 360,000 gsf of distribution/warehouse and storage use; approximately 43,300 gsf of accessory office and employee back-of-house use; 115,550 gsf of accessory parking (229 unattended spaces), loading and delivery vehicle storage	715,000 Includes approximately 461,000 gsf film and television production studio use; 251,000 gsf of loading facilities, attended accessory off-street parking (310 spaces), and mechanical rooms.	(+) 196,151
Manufacturing/Industrial	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," specify the following:				
Type of use				
Gross floor area (sq. ft.)				
Open storage area (sq. ft.)				
If any unenclosed activities, specify:				
Community Facility	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," specify the following:				
Type				
Gross floor area (sq. ft.)				
Vacant Land	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," describe:				
Publicly Accessible Open Space	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):			Waterfront Open Space (30,600 sf) and public access area along 19th Avenue (4,200 sf)	(+) Publicly Accessible Waterfront Open Space (30,600 sf) and public access area along 19th Avenue (4,200 sf)
Other Land Uses	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," describe:				
PARKING				
Garages	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," specify the following:				
No. of public spaces				

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
No. of accessory spaces				
Operating hours				
Attended or non-attended				
Lots	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
If "yes," specify the following:				
No. of public spaces				
No. of accessory spaces		229 (Unattended)	310 (Attended)	(+) 81
Operating hours		TBD	TBD	
Other (includes street parking)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," describe:				
POPULATION				
Residents	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If "yes," specify number:				
Briefly explain how the number of residents was calculated:				
Businesses	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
If "yes," specify the following:				
No. and type		1 warehouse/distribution center	1 media production studio	
No. and type of workers by business		533 [360 warehouse/distribution center; 173 accessory office]	715	(+) 182
No. and type of non-residents who are not workers				
Briefly explain how the number of businesses was calculated:	No Action condition: 1 employee per 1,000 sf for warehouse/distribution center space; 1 employee per 250 sf for accessory office space With Action condition: 1 employee per 1,000 sf for media production studio use.			
Other (students, visitors, concert-goers, etc.)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
If any, specify type and number:				
Briefly explain how the number was calculated:				
ZONING				
Zoning classification	M3-1	M3-1	M3-1	No change
Maximum amount of floor area that can be developed	2.0 FAR Manufacturing	2.0 FAR Manufacturing	2.0 FAR Manufacturing	
Predominant land use and zoning classifications within land use study area(s) or a 400 ft. radius of proposed project	Industrial and Utility	Industrial and Utility	Industrial and Utility	
Attach any additional information that may be needed to describe the project.				
If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

Part II: TECHNICAL ANALYSIS

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


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

	YES	NO
1. LAND USE, ZONING, AND PUBLIC POLICY: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Is there the potential to affect an applicable public policy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) If "yes," to (a), (b), and/or (c), complete a preliminary assessment and attach. See Attachment A		
(e) Is the project a large, publicly sponsored project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," complete a PlanYC assessment and attach.		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," complete the Consistency Assessment Form . See Appendix A		
2. SOCIOECONOMIC CONDITIONS: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
o Generate a net increase of more than 200 residential units or 200,000 square feet of commercial space?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ If "yes," answer <i>both</i> questions 2(b)(ii) and 2(b)(iv) below.		
o Directly displace 500 or more residents?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ If "yes," answer questions 2(b)(i), 2(b)(ii), and 2(b)(iv) below.		
o Directly displace more than 100 employees?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ If "yes," answer questions under 2(b)(iii) and 2(b)(iv) below.		
o Affect conditions in a specific industry?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
▪ If "yes," answer question 2(b)(v) below.		
(b) If "yes" to any of the above, attach supporting information to answer the relevant questions below. If "no" was checked for each category above, the remaining questions in this technical area do not need to be answered.		
i. Direct Residential Displacement		
o If more than 500 residents would be displaced, would these residents represent more than 5% of the primary study area population?	<input type="checkbox"/>	<input type="checkbox"/>
o If "yes," is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?	<input type="checkbox"/>	<input type="checkbox"/>
ii. Indirect Residential Displacement		
o Would expected average incomes of the new population exceed the average incomes of study area populations?	<input type="checkbox"/>	<input type="checkbox"/>
o If "yes:"		
▪ Would the population of the primary study area increase by more than 10 percent?	<input type="checkbox"/>	<input type="checkbox"/>
▪ Would the population of the primary study area increase by more than 5 percent in an area where there is the potential to accelerate trends toward increasing rents?	<input type="checkbox"/>	<input type="checkbox"/>
o If "yes" to either of the preceding questions, would more than 5 percent of all housing units be renter-occupied and unprotected?	<input type="checkbox"/>	<input type="checkbox"/>
iii. Direct Business Displacement		
o Do any of the displaced businesses provide goods or services that otherwise would not be found within the trade area, either under existing conditions or in the future with the proposed project?	<input type="checkbox"/>	<input type="checkbox"/>
o Is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it?	<input type="checkbox"/>	<input type="checkbox"/>
iv. Indirect Business Displacement		
o Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	<input type="checkbox"/>	<input type="checkbox"/>
o Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	<input type="checkbox"/>	<input type="checkbox"/>
v. Effects on Industry		

	YES	NO
○ Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?	<input type="checkbox"/>	<input type="checkbox"/>
○ Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?	<input type="checkbox"/>	<input type="checkbox"/>
3. COMMUNITY FACILITIES: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, health care facilities, day care centers, police stations, or fire stations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Indirect Effects		
i. Child Care Centers		
○ Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
○ If "yes," would the project result in a collective utilization rate of the group child care/Head Start centers in the study area that is greater than 100 percent?	<input type="checkbox"/>	<input type="checkbox"/>
○ If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	<input type="checkbox"/>	<input type="checkbox"/>
ii. Libraries		
○ Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
○ If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	<input type="checkbox"/>	<input type="checkbox"/>
○ If "yes," would the additional population impair the delivery of library services in the study area?	<input type="checkbox"/>	<input type="checkbox"/>
iii. Public Schools		
○ Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
○ If "yes," would the project result in a collective utilization rate of the elementary and/or intermediate schools in the study area that is equal to or greater than 100 percent?	<input type="checkbox"/>	<input type="checkbox"/>
○ If "yes," would the project increase this collective utilization rate by 5 percent or more from the No-Action scenario?	<input type="checkbox"/>	<input type="checkbox"/>
iv. Health Care Facilities		
○ Would the project result in the introduction of a sizeable new neighborhood?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
○ If "yes," would the project affect the operation of health care facilities in the area?	<input type="checkbox"/>	<input type="checkbox"/>
v. Fire and Police Protection		
○ Would the project result in the introduction of a sizeable new neighborhood?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
○ If "yes," would the project affect the operation of fire or police protection in the area?	<input type="checkbox"/>	<input type="checkbox"/>
4. OPEN SPACE: CEQR Technical Manual Chapter 7		
(a) Would the project change or eliminate existing open space?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Is the project located within an under-served area in the Bronx , Brooklyn , Manhattan , Queens , or Staten Island ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) If "yes," would the project generate more than 50 additional residents or 125 additional employees?	<input type="checkbox"/>	<input type="checkbox"/>
(d) Is the project located within a well-served area in the Bronx , Brooklyn , Manhattan , Queens , or Staten Island ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) If "yes," would the project generate more than 350 additional residents or 750 additional employees?	<input type="checkbox"/>	<input type="checkbox"/>
(f) If the project is located in an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(g) If "yes" to questions (c), (e), or (f) above, attach supporting information to answer the following:		
○ If in an under-served area, would the project result in a decrease in the open space ratio by more than 1 percent?	<input type="checkbox"/>	<input type="checkbox"/>
○ If in an area that is not under-served, would the project result in a decrease in the open space ratio by more than 5 percent?	<input type="checkbox"/>	<input type="checkbox"/>
○ If "yes," are there qualitative considerations, such as the quality of open space, that need to be considered? Please specify:	<input type="checkbox"/>	<input type="checkbox"/>
5. SHADOWS: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow would reach any sunlight-sensitive resource at any time of the year. See Attachment B		

	YES	NO
6. HISTORIC AND CULTURAL RESOURCES: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Attachment C		
7. URBAN DESIGN AND VISUAL RESOURCES: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) If "yes" to either of the above, please provide the information requested in Chapter 10 . See Attachment D		
8. NATURAL RESOURCES: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," list the resources and attach supporting information on whether the project would affect any of these resources. See Attachment E		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," complete the Jamaica Bay Watershed Form and submit according to its instructions .		
9. HAZARDOUS MATERIALS: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (e.g., gas stations, oil storage facilities, heating oil storage)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(h) Has a Phase I Environmental Site Assessment been performed for the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: See Attachment F		
(i) Based on the Phase I Assessment, is a Phase II Investigation needed? See Attachment F	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. WATER AND SEWER INFRASTRUCTURE: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	<input type="checkbox"/>	<input type="checkbox"/>
(c) If the proposed project located in a separately sewer area , would it result in the same or greater development than that listed in Table 13-1 in Chapter 13 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas , including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	<input type="checkbox"/>	<input type="checkbox"/>
(f) Would the proposed project be located in an area that is partially sewer or currently unsewered?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	YES	NO
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation. See Page 9a		
11. SOLID WASTE AND SANITATION SERVICES: CEQR Technical Manual Chapter 14		
(a) Using Table 14-1 in Chapter 14 , the project's projected operational solid waste generation is estimated to be (pounds per week): 56,485		
o Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	<input type="checkbox"/>	<input type="checkbox"/>
12. ENERGY: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15 , the project's projected energy use is estimated to be (annual BTUs): 154.6 billion		
(b) Would the proposed project affect the transmission or generation of energy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. TRANSPORTATION: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) If "yes," conduct the appropriate screening analyses, attach back up data as needed for each stage, and answer the following questions:		
o Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? <i>**It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.</i>	<input type="checkbox"/>	<input type="checkbox"/>
o Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway/rail trips per station or line?	<input type="checkbox"/>	<input type="checkbox"/>
o Would the proposed project result in more than 200 pedestrian trips per project peak hour?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14. AIR QUALITY: CEQR Technical Manual Chapter 17		
(a) <i>Mobile Sources:</i> Would the proposed project result in the conditions outlined in Section 210 in Chapter 17 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) <i>Stationary Sources:</i> Would the proposed project result in the conditions outlined in Section 220 in Chapter 17 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17 ? (Attach graph as needed)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Does the proposed project involve multiple buildings on the project site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See Attachment H		
15. GREENHOUSE GAS EMISSIONS: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project fundamentally change the City's solid waste management system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Would the proposed project result in the development of 350,000 square feet or more?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) If "yes" to any of the above, would the project require a GHG emissions assessment based on guidance in Chapter 18 ?	<input type="checkbox"/>	<input type="checkbox"/>
o If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (See Local Law 22 of 2008 ; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	<input type="checkbox"/>	<input type="checkbox"/>
16. NOISE: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See Page 9a		
17. PUBLIC HEALTH: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20 , "Public Health." Attach a preliminary analysis, if necessary. See Page 9a, Additional Technical Information for EAS		

		YES	NO
18. NEIGHBORHOOD CHARACTER: CEQR Technical Manual Chapter 21			
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21 , "Neighborhood Character." Attach a preliminary analysis, if necessary. See Page 9a, Additional Technical Information for EAS			
19. CONSTRUCTION: CEQR Technical Manual Chapter 22			
(a) Would the project's construction activities involve:			
<input type="checkbox"/> Construction activities lasting longer than two years?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/> Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/> Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/> The operation of several pieces of diesel equipment in a single location at peak construction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/> Closure of a community facility or disruption in its services?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/> Activities within 400 feet of a historic or cultural resource?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<input type="checkbox"/> Disturbance of a site containing or adjacent to a site containing natural resources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22 , "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See Attachment I, Construction			
20. APPLICANT'S CERTIFICATION			
I swear or affirm under oath and subject to the penalties for perjury that the information provided in this Environmental Assessment Statement (EAS) is true and accurate to the best of my knowledge and belief, based upon my personal knowledge and familiarity with the information described herein and after examination of the pertinent books and records and/or after inquiry of persons who have personal knowledge of such information or who have examined pertinent books and records.			
Still under oath, I further swear or affirm that I make this statement in my capacity as the applicant or representative of the entity that seeks the permits, approvals, funding, or other governmental action(s) described in this EAS.			
APPLICANT/REPRESENTATIVE NAME	SIGNATURE	DATE	
Alex Lieber, AICP Technical Director, AKRF, Inc.		June 4, 2021	

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

Additional Technical Information for EAS Part II

A. WATER AND SEWER INFRASTRUCTURE

Water service to the Development Site is available by a 12-inch water main under 19th Avenue. In both the No Action and With Action scenarios, the Development Site would be redeveloped with commercial facilities (a last-mile distribution center and a media production studio, respectively), both of which feature large loading and vehicle circulation spaces that do not generate significant demand for water. In addition to being a different use, the With Action scenario would be approximately 191,000 gross square feet (gsf) larger than the No Action scenario. Accounting for the No Action development, the proposed project is not expected to result in incremental demand for water exceeding 1 million gallons per day (gpd). Therefore, the proposed project is not expected to result in significant adverse impacts to water supply, and further analysis is not warranted.

The Development Site is located in a portion of Queens that is served by the Bowery Bay Wastewater Treatment Plant (WWTP). The existing sewer infrastructure in the area of the Development Site includes a 66-inch diameter sewer under 19th Avenue which is classified as a Combined Sewer Overflow (CSO) and permitted for stormwater connections, connecting to an outfall at the end of 19th Avenue that discharges to Luyster Creek. There are no sanitary sewers fronting the Development Site on 19th Avenue: sanitary service in the area is provided by a 90-inch-by-72-inch combined sewer east of the Development Site, under 37th Street, and a future 12-inch diameter sanitary sewer within Steinway Place. As noted above, as compared to the No Action development, the proposed project would not result in substantial incremental development on the Development Site, and is therefore not expected to result in a significant increase in sanitary sewage generation. In order to provide sanitary service to the proposed project, improvements would be made to connect to the combined sewer at 37th Street (the same improvements would be required for the No Action development): this may include a new on-site ejector pump and private force main sewer constructed to connect to the combined sewer main at 37th Street, subject to the review and approval of the New York City Department of Environmental Protection (DEP).

Stormwater on the Development Site is currently discharged directly to Luyster Creek through on-site drainage structures and piping which connect to three on-site outfall structures. With both the No Action development and the proposed project, stormwater improvements would be made in accordance with applicable DEP and New York State Department of Environmental Conservation (DEC) regulations and stormwater would continue to be directly discharged to the creek. This would include a stormwater management system to detain and treat stormwater prior to discharging to the creek. The stormwater management system is expected to include reusing the three on-site storm outfalls, with bioretention areas on the western portion of the Development Site in the shoreline open area. Additional bioretention areas would be provided along the 19th Avenue frontage, which would collect and detain stormwater from a portion of the Development Site before discharging to the creek through the existing CSO sewer and outfall on 19th Avenue (which is permitted for stormwater connections). Therefore, in consideration of sanitary sewer and stormwater management improvements that would be made in accordance with DEP and DEC regulations, the proposed project would not result in a significant adverse impact on the City's wastewater treatment or stormwater management infrastructure, and further analysis is not warranted.

B. NOISE

Following *CEQR Technical Manual* guidelines, a noise analysis determines whether a proposed action would result in increases in noise levels that could have a significant adverse impact on nearby sensitive receptors and also considers potential impacts of ambient noise sources (e.g., vehicular traffic from adjacent roadways and surrounding playgrounds) on any noise-sensitive land uses that would be introduced by a proposed project (e.g., residential space).

In terms of mobile sources, the number of incremental vehicle trips generated by the Proposed Development at intersections adjacent to noise-sensitive land uses (e.g., residential, school, open space, commercial office, etc.) would be lower than the threshold that would require any detailed analysis (see Attachment G, “Transportation”). Consequently, with the relatively moderate to high numbers of vehicles in the immediate area of noise sensitive receptors, it is not expected that the Proposed Development would result in sufficient traffic to have the potential to cause a significant adverse noise impact (i.e., it would not result in a doubling of noise passenger car equivalents [Noise PCEs], which would be necessary to cause a 3 dBA increase in noise levels). Therefore, significant adverse mobile source noise impacts would not be expected, and further assessment is not warranted.

The facilities that would be included in the Proposed Development (film and television production studio space and accessory facilities for stage support, dressing/wardrobe areas, hospitality, pre- and post-production rooms, and common areas) are not considered noise-sensitive land uses under CEQR guidelines. In addition, the Proposed Development’s mechanical systems (i.e., heating, ventilation, and air conditioning systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings [DOB] Code) to avoid producing levels that would result in any significant increase in ambient noise levels. Therefore, significant adverse stationary source noise impacts would not be expected, and further assessment is not warranted.

C. PUBLIC HEALTH

According to the guidelines of the *CEQR Technical Manual*, a public health assessment may be warranted if an unmitigated significant adverse impact is identified in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise. As discussed throughout this EAS, the Proposed Actions would not result in any significant adverse impacts in these areas (see also Attachment E, “Natural Resources”; Attachment F, “Hazardous Materials”; and Attachment H, “Air Quality”). Therefore, the Proposed Actions would not result in any significant adverse impacts to public health, and further assessment is not warranted.

D. NEIGHBORHOOD CHARACTER

According to the *CEQR Technical Manual*, an analysis of neighborhood character is warranted when a proposed project has the potential to alter certain elements contributing to the affected area’s neighborhood character. The elements that define neighborhood character are described in other technical analysis areas—land use, zoning, and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise. Following *CEQR Technical Manual* guidance, a preliminary assessment of neighborhood character may be appropriate if the analysis finds that the project would have the potential to result in any significant adverse impacts in these technical areas.

As discussed throughout this EAS, the Proposed Development would not have the potential to result in any significant adverse impacts in the areas that contribute to neighborhood character. The Development Site is located in a portion of the Astoria neighborhood that is characterized primarily by energy and light industrial uses, including the Steinway Piano factory located adjacent to the Development Site. The Astoria Energy power plant, which contains fuel storage tanks, is located to the northwest, and several one to two-story buildings containing a variety of light industrial storage, manufacturing, transportation, and contracting uses are located to the south along 19th Avenue. Furthermore, in the future absent the Proposed Actions (the No Action scenario), the Applicant would redevelop the Development Site with a last-mile distribution center, which is an as-of-right Use Group 16 use under zoning regulations. Therefore, in comparison to the No Action scenario and in consideration of the predominantly light industrial uses in the study area, the Proposed Development would not represent a significant new development on the Development Site that would have the potential to negatively affect land uses in the study area.

Moreover, as compared to the No Action scenario, the Proposed Development would enliven the Development Site with publicly accessible components, in particular a waterfront access area along Luyster Creek; in comparison, the No Action scenario would not include any publicly accessible space within the distribution center or access to the waterfront. Therefore, the Proposed Development introduces new pedestrian activity to the Development Site and study area and would not result in any significant adverse impacts to urban design characteristics of the Development Site (see also Attachment A, “Land Use, Zoning, and Public Policy,” and Attachment D, “Urban Design and Visual Resources”).


As compared to the No Action development, the Proposed Development would result in an increase in commercial space of less than 200,000 gsf and would not exceed any of the *CEQR Technical Manual* thresholds warranting an analysis of socioeconomic conditions. Similarly, as discussed in Attachment C, “Historic and Cultural Resources,” there are no known architectural resources on the Development Site, and no known architectural resources or potential architectural resources have been identified in the study area. Therefore, historic resources are not a defining feature of the area’s character, and Proposed Development would not have the potential to adversely affect historic architectural resources. In terms of open space, there are no existing publicly accessible open spaces in the study area. In terms of shadows, as compared to the No Action development, the Proposed Development would cast new shadow on one sunlight-sensitive resource (Luyster Creek), but would not cast new shadow on any publicly accessible open spaces. The shadow analysis concluded that project-generated shadows would not result in significant adverse impacts to Luyster Creek, the only sunlight-sensitive resource within the study area; therefore, shadows from the Proposed Development would not have the potential to negatively affect any neighborhood resources.

As discussed in Attachment G, “Transportation,” compared to the No Action development, the Proposed Development would result in an incremental increase in vehicle trips that exceeds the *CEQR Technical Manual* threshold of 50 vehicle trips per hour at two intersections (19th Avenue at 37th Street and 19th Avenue at 38th Street) located adjacent to the Development Site. The detailed analysis finds that the incremental traffic in the With Action condition would result in a slight increase in delays at the two affected intersections. However, the lane groups at these intersections are expected to operate at an acceptable level of service (LOS) C or better in the With Action condition. No individual movements at the affected intersections would be so significantly worse in delay to be considered significantly or adversely impacted pursuant to *CEQR Technical Manual* impact criteria. Similarly, as discussed above under “Noise,” the number of incremental vehicle trips generated by the Proposed Development would be lower than the threshold that would require any detailed analysis. Therefore, the Proposed Development would not result in any significant adverse traffic or noise impacts that would have the potential to negatively affect neighborhood character.

Overall, the Proposed Development would result in limited changes to the Development Site that would have the potential to adversely affect neighborhood character, and would not result in any significant adverse impacts in the areas that contribute to neighborhood character. Therefore, the Proposed Development would not have the potential to result in a significant adverse impact to neighborhood character, and further assessment is not warranted.

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

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

1. For each of the impact categories listed below, consider whether the project may have a significant adverse effect on the environment, taking into account its (a) location; (b) probability of occurring; (c) duration; (d) irreversibility; (e) geographic scope; and (f) magnitude.		Potentially Significant Adverse Impact	
IMPACT CATEGORY		YES	NO
Land Use, Zoning, and Public Policy		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Socioeconomic Conditions		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Community Facilities and Services		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Open Space		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shadows		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Historic and Cultural Resources		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Urban Design/Visual Resources		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Natural Resources		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hazardous Materials		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water and Sewer Infrastructure		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Solid Waste and Sanitation Services		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Energy		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Transportation		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Air Quality		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Greenhouse Gas Emissions		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Noise		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Public Health		<input type="checkbox"/>	<input type="checkbox"/>
Neighborhood Character		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction		<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Are there any aspects of the project relevant to the determination of whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? If there are such impacts, attach an explanation stating whether, as a result of them, the project may have a significant impact on the environment.		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Check determination to be issued by the lead agency:			
<input type="checkbox"/> Positive Declaration: If the lead agency has determined that the project may have a significant impact on the environment, and if a Conditional Negative Declaration is not appropriate, then the lead agency issues a <i>Positive Declaration</i> and prepares a draft Scope of Work for the Environmental Impact Statement (EIS).			
<input type="checkbox"/> Conditional Negative Declaration: A <i>Conditional Negative Declaration</i> (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. The CND is prepared as a separate document and is subject to the requirements of 6 NYCRR Part 617.			
<input checked="" type="checkbox"/> Negative Declaration: If the lead agency has determined that the project would not result in potentially significant adverse environmental impacts, then the lead agency issues a <i>Negative Declaration</i> . The <i>Negative Declaration</i> may be prepared as a separate document (see template) or using the embedded Negative Declaration on the next page.			
4. LEAD AGENCY'S CERTIFICATION			
TITLE Director, Environmental Assessment and Review Division		LEAD AGENCY City Planning Commission	
NAME Olga Abinader		DATE June 4, 2021	
SIGNATURE 			

NEGATIVE DECLARATION**Statement of No Significant Effect**

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

Reasons Supporting this Determination

The above determination is based on information contained in this EAS, which finds the proposed actions sought before the City Planning Commission would not have a significant adverse impact on the environment. Reasons supporting this determination are noted below.

Land Use, Zoning, and Public Policy

A detailed analysis of land use, zoning, and public policy is included in the EAS. The Applicant, WF Industrial IV LLC, is seeking a special permit, authorizations, and certification related to Waterfront Zoning regulations (collectively, the "Proposed Actions") as well as permits from the New York State Department of Environmental Conservation (DEC) and the U.S. Army Corps of Engineers (USACE) to facilitate development at 35-15 19th Avenue in Astoria neighborhood of Queens, Community District 1 (Block 814, Lot 10; the "Development Site"). The Proposed Actions would facilitate a proposal by the Applicant to construct a seven-story, 160-foot tall (to the top of the bulkhead) media production studio (Use Group 10A), totaling 715,000 gross square feet (gsf), including accessory off-street parking (310 attended parking spaces) and loading. The Applicant also intends to develop an approximately 34,620 sf publicly accessible open space, including a waterfront public access area situated along Luyster Creek ("the Proposed Development"). The analysis finds that the Proposed Development would not have any significant adverse impacts on land use, zoning, or public policy. The Proposed Development would result in a new land use on the Development Site that would be compatible with and complementary to nearby light industrial uses and would not affect zoning regulations in the study area and would be consistent with, and supportive of, public policies applicable to the Development Site, in particular the Waterfront Revitalization Program (WRP# 19-243).

Shadows

A detailed analysis of shadows is included in the EAS, which focuses on incremental shadows cast on Luyster Creek, the only sunlight sensitive resources within the study area. The detailed analysis shows that the project-generated shadows would be transient and limited in areal extent. No one area of the creek would receive incremental shadow for more than approximately 3 hours, and incremental shadow would never cover more than 6 percent of the creek at any given time. In winter, incremental shadow would move across areas of the creek over the course of the day, shading some areas in the morning and others in the afternoon. In spring, summer, and fall, incremental shadow would move across portions of the creek in the mornings and would exit completely at noon (on March 21 and September 21) and by late morning (in the late spring and summer months). The incremental shadow would not be expected to affect primary productivity of the aquatic resources (plankton), nor would shadows impede fish and benthic invertebrate movement within or use of the creek in the future with the Proposed Development. Therefore, the project-generated shadows would not result in significant adverse shadow impacts to Luyster Creek.

Transportation

A detailed analysis of traffic is included in the EAS. As the incremental increase in vehicle trips would exceed the CEQR Technical Manual threshold of 50 vehicle trips per hour, a detailed analysis of operating conditions is provided at two intersections (19th Avenue at 37th Street and 19th Avenue at 38th Street) located adjacent to the Development Site. As the lane groups at these intersections are expected to operate at level of service (LOS) D or better under the 2023 With-Action conditions and none of the analyzed intersections can be considered a high crash location, the Proposed Actions are not expected to result in significant adverse impacts.

As incremental project-generated pedestrian and transit trips would not exceed City Environmental Quality Review (CEQR) Technical Manual analysis thresholds, detailed analyses of pedestrian and transit conditions are not warranted. As part of the Proposed Development, the Applicant will enter a Restrictive Declaration, to be recorded against the Development Site in association with the Proposed Actions, requiring the implementation of project components related to the environment that would preclude any potential transportation impacts including a weekday shuttle service for employees and other studio users. Final details of the shuttle service, including location of shuttle stops and the shuttle route, shall be subject to approval by the New York City Department of Transportation (NYCDOT) and New York City Transit (NYCT).

Air Quality

An (E) designation (E-627) related to air quality would be established as part of the approval of the proposed actions. Refer to "Determination of Significance Appendix: (E) designation" for the applicable (E) designation requirements. The air quality analysis concludes that with the (E) designation in place, the proposed actions would not result in a significant adverse impact related to air quality.

Construction


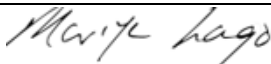
A detailed analysis related to Construction is included in this EAS. Construction would occur over an approximately 36-month period, and would adhere to the applicable laws, regulations, and building codes that govern construction in New York City. As detailed in the construction assessment in the EAS, the Proposed Project would not result in significant adverse construction impacts in the key technical areas of transportation, air quality, and noise. The applicant will enter a Restrictive Declaration, to be recorded against the Development Site in association with the Proposed Actions, requiring the implementation of project components related to the environment that would preclude any potential impacts to air quality or noise related to construction activities, including the use of best available tailpipe reduction technologies, and utilization of newer equipment, as well as the use of auger drill rigs for pile installation rather than impact pile driving during excavation and foundation. Therefore, the Proposed Project would not result in construction-period significant adverse impacts and no further analysis is warranted.

Project Name: Wildflower Studios

CEQR # 21DCP196Q

SEQRA Classification: Type I

No other significant effects upon the environment that would require the preparation of a Draft Environmental Impact Statement are foreseeable. This Negative Declaration has been prepared in accordance with Article 8 of the New York State Environmental Conservation Law (SEQRA). Should you have any questions pertaining to this Negative Declaration, you may contact Evren Ulker-Kacar, AICP at evulker@planning.nyc.gov or 212-720-3493.

TITLE Director, Environmental Assessment and Review Division	LEAD AGENCY Department of City Planning on behalf of the City Planning Commission 120 Broadway, 31 st Fl. New York, NY 10271 212.720.3493
NAME Olga Abinader	DATE June 4, 2021
SIGNATURE 	
TITLE Chair, City Planning Commission	
NAME Marisa Lago	DATE June 7, 2021
SIGNATURE 	

Project Name: Wildflower Studios

CEQR # 21DCP196Q

SEQRA Classification: Type I

Determination of Significance Appendix

The Proposed Action(s) were determined to have the potential to result in changes to development on the following site(s):

Development Site	Borough	Block and Lot
Development Site	QN	Block 814, Lot 10

(E) Designation Requirements

To ensure that the proposed actions would not result in significant adverse impacts related to hazardous materials, air quality, and noise an (E) designation (**E-627**) would be established as part of approval of the proposed actions on the **Development Site** as described below:

Development Site	Hazardous Materials	Air Quality	Noise
Development Site		X	

Air Quality

The (E) designation requirements for air quality would apply as follows:

Development Site: *Any new development on Block 814, Lot 10 must utilize only natural gas in any fossil fuel fired heating and hot water equipment, be fitted with low NOx (9 ppm) burners, and have heating and hot water exhaust stacks located at least 157.5 feet above grade, at least 49 feet from any outdoor amenity spaces located on the building, to avoid potential significant adverse air quality impacts.*

Any new development on Block 814, Lot 10 must utilize a mechanical ventilation system for occupied spaces, with air intakes that include high efficiency filters having a minimum- MERV rating of 13.

A. INTRODUCTION

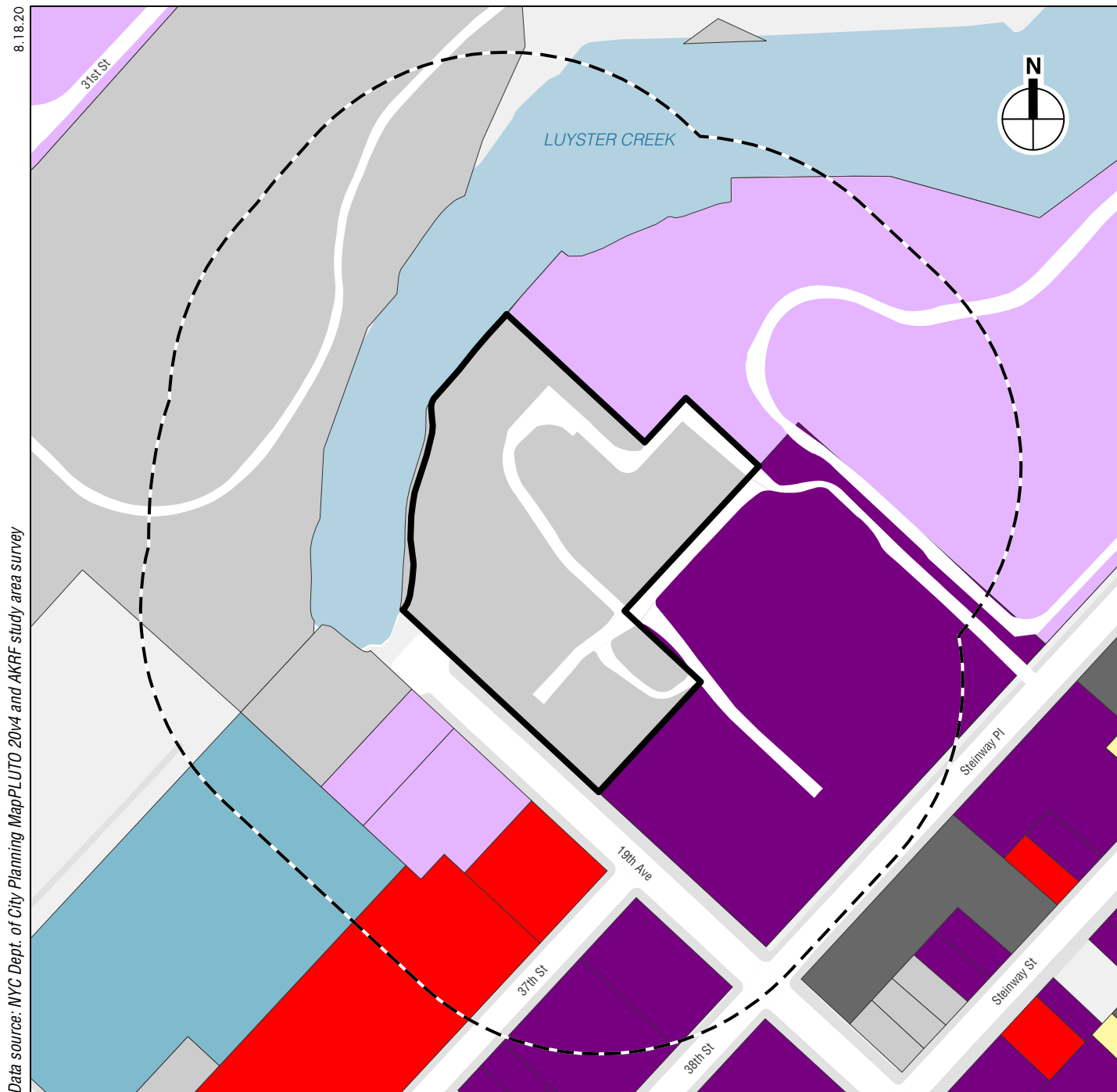
The Applicant is proposing to construct a 715,000 gross square foot (gsf) media production studio (the “Proposed Development”) in Queens (Block 814, Lot 10; the “Development Site”). As described on Page 1a, Project Description, to facilitate the Proposed Development, the Applicant is seeking several discretionary approvals—including a bulk modification special permit, authorizations for modification of water public access area and supplemental public access area requirements, a certification related to Waterfront Zoning regulations, a permit to construct within the New York State Department of Environmental Conservation (DEC) Tidal Wetlands adjacent area jurisdiction, and permits for in-water construction activities that are regulated by DEC and the U.S. Army Corps of Engineers (USACE) (the “Proposed Actions”). This attachment assesses the potential for the Proposed Development to affect land use, zoning, and public policy within a 400-foot study area in accordance with the 2014 *City Environmental Quality Review (CEQR) Technical Manual*. The analysis characterizes existing conditions, evaluates changes in land use and zoning that are expected to occur independent of the Proposed Development, and identifies and addresses any potential impacts to land use, zoning, and public policy associated with the Proposed Development.

Overall, the assessment finds that the Proposed Development would not have any significant adverse impacts on land use, zoning, or public policy. The Proposed Development would result in a new land use on the Development Site that would be compatible with and complementary to nearby light industrial uses. The Proposed Development would not affect zoning regulations in the study area and would be consistent with, and supportive of, public policies applicable to the Development Site, in particular the Waterfront Revitalization Program (WRP).

B. METHODOLOGY

The Development Site (35-15 19th Avenue) is located at the western terminus of 19th Avenue, adjacent to Luyster Creek (aka Steinway Creek) in the Astoria neighborhood of Queens Community District 1. This analysis of land use, zoning, and public policy examines the area within 400 feet of the Development Site, which is generally bounded by vacant land and Luyster Creek to the north and west, Steinway Place to the east, the Astoria Energy power plant to the northwest, and properties on the southern side of 19th Avenue to the south (see **Figure A-1**).

The analysis begins by documenting existing conditions in the study area in terms of land use, zoning, and public policy. The analysis then projects land use, zoning, and public policy changes expected to occur absent the Proposed Actions (the No Action condition) and with the Proposed Actions (the With Action condition) by the analysis year of 2023. The potential impacts of the Proposed Development are assessed by comparing conditions with the No Action condition.



Data source: NYC Dept. of City Planning MapPLUTO 20v4 and AKRF study area survey

- | | | | |
|--|---------------------------------|--|------------------------------------|
| | Development Site | | Commercial and Office Buildings |
| | Study Area (400-foot perimeter) | | Industrial and Manufacturing |
| | | | Parking Facilities |
| | | | Public Facilities and Institutions |
| | | | Residential |
| | | | Transportation and Utility |
| | | | Vacant Land |

0 200 FEET

C. EXISTING CONDITIONS

LAND USE

DEVELOPMENT SITE

The Development Site contained buildings formerly associated with the Steinway Piano factory, which currently operates on the property to the east. The Development Site has a lot area of approximately 228,693 square feet (sf).¹ The Development Site has approximately 500 linear feet of shoreline along Luyster Creek, consisting primarily of concrete, asphalt, and stone debris; this shoreline area contains land that is within the New York State Department of Environmental Conservation's (DEC's) Article 25 (Tidal Wetlands) adjacent area jurisdiction.² The Applicant recently purchased the Development Site from the Steinway Piano factory property owner as a development site. The majority of the buildings on the Development Site have been demolished, and the site is largely vacant.

STUDY AREA

The study area is characterized primarily by energy and light industrial uses, including the Steinway Piano factory located adjacent to the Development Site. The Astoria Energy power plant, which contains fuel storage tanks adjacent to the northern side of the Development Site, is located to the northwest, and several one to two-story buildings containing a variety of uses including light industrial storage, manufacturing, transportation, and contracting uses, and a commercial (supermarket) use are located to the south along 19th Avenue. The northern portion of the study area contains Luyster Creek (aka Steinway Creek) as well as vacant land located to the north of the Steinway Piano factory campus.

ZONING

DEVELOPMENT SITE

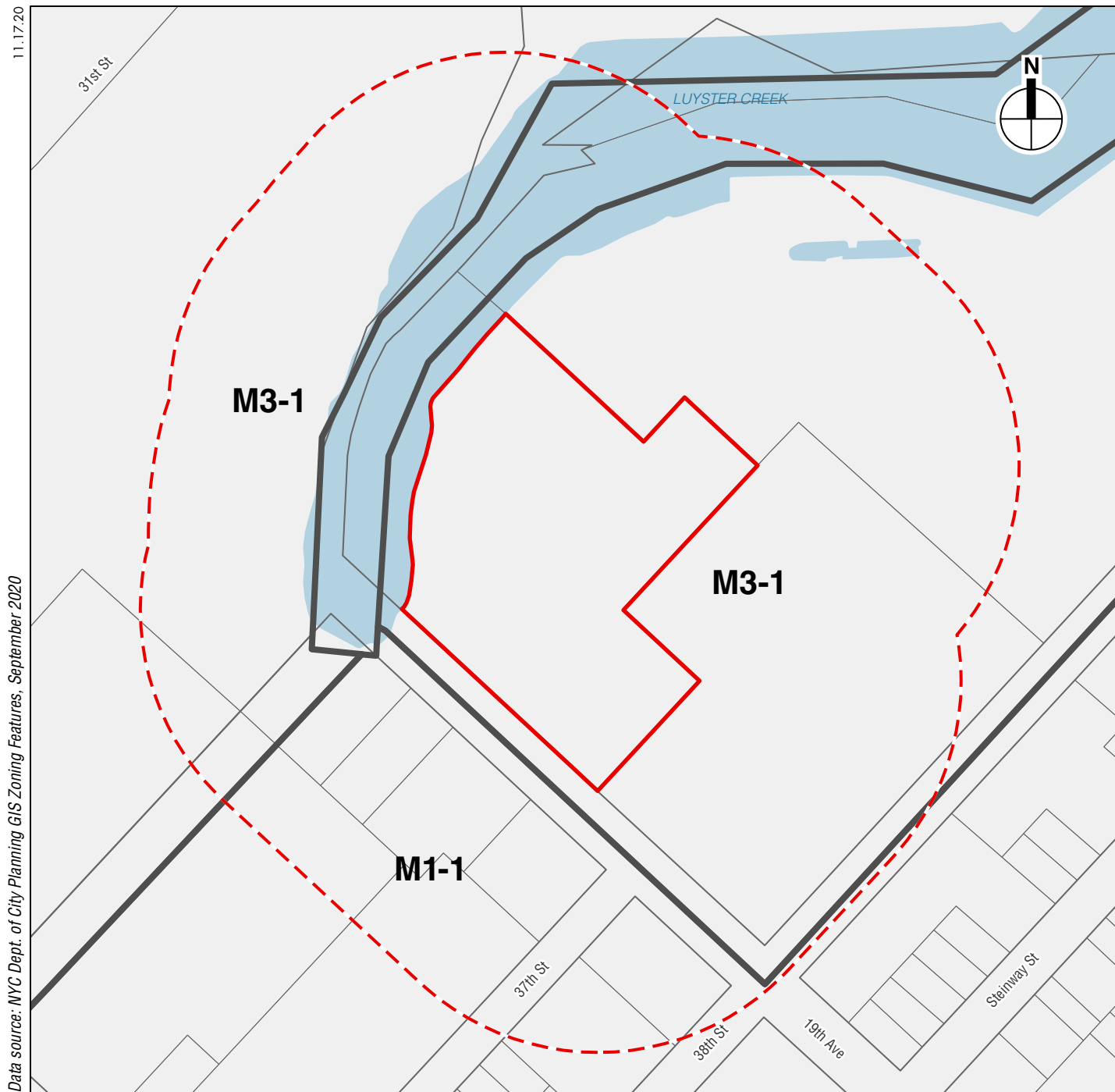
The Development Site is located in an M3-1 zoning district, a manufacturing district that is mapped along a large portion of the Astoria waterfront (see **Figure A-2**). M3-1 districts allow for heavy industrial uses that generate noise, traffic, or pollutants, and are typically mapped in waterfront areas (a result of the City's historic working waterfront) and away from residential areas. Typical uses include power plants and fuel supply depots, although commercial uses are also permitted. The M3-1 district permits a maximum floor area ratio (FAR) of 2.0, and parking is generally required at a rate of one space per 1,000 square feet (sf) for industrial uses or one space per 300 square feet for commercial uses.

STUDY AREA

In addition to the M3-1 zoning district described above, the study area contains an M1-1 zoning district, located to the south of the Development Site. M1-1 zoning districts are manufacturing districts characterized by one- to two-story light industrial uses, such as repair shops, wholesale service, and storage facilities. A maximum FAR of 1.0 is permitted, and parking is generally

¹ The Development Site is part of a single zoning lot comprised of the Development Site and the Steinway Piano Factory (Block 814, Tax Lot 1).

² Defined by the 10-foot contour line from the 1966 United State Geological Survey Map (7.5 Minutes Series, Central Park Quadrangle, 1988 edition).



- Development Site
- Study Area (400-foot perimeter)
- Zoning District Boundary

Note: Proposed Actions do not include any change to zoning districts on the Development Site and in the Study Area

required at a rate of one space per 1,000 sf for industrial uses or one space per 300 square feet for commercial uses.

The zoning districts in the study area are summarized in **Table A-1**.

Table A-1
Study Area Zoning Districts

Zone	Allowable Floor Area Ratio (FAR)	Use
M1-1	1.0 Commercial; 1.0 Manufacturing	Light manufacturing; high performance standards
M3-1	2.0 Commercial; 2.0 Manufacturing	Heavy manufacturing; low performance standards
Sources: New York City Zoning Resolution.		

WATERFRONT ZONING

Under Article VI, Chapter 2 of the New York City Zoning Resolution (“Waterfront Zoning”), properties on blocks adjacent to or intersected by the shoreline (defined as “waterfront blocks”), such as the Development Site, are subject to special zoning regulations, which, among other policy objectives, encourage active water dependent uses and assure access to the City’s waterfront. Waterfront zoning regulations mandate that most developments on waterfront zoning lots provide public open space along the water’s edge with pedestrian links to upland communities. Waterfront zoning also governs the location, minimum size, proportion, and type of design elements for waterfront public access areas. In addition, waterfront zoning regulations provide for visual corridors (unobstructed views of the shoreline from upland public areas) through special urban design rules. Waterfront Zoning regulations generally do not apply to developments in manufacturing districts consisting primarily of industrial uses in Use Groups 16, 17 and 18; however, the regulations are applicable to commercial uses (e.g., uses in Use Group 10).

In relation to the Waterfront Zoning regulations, a recent text amendment—Zoning for Coastal Flood Resiliency Text Amendment—was referred in October of 2020. This amendment to the Waterfront Zoning regulations is intended to improve upon and make permanent the existing flood resilience zoning already in place in New York City’s waterfront areas (based off of 2013 Flood Resilience Zoning Text and 2015 Special Regulations for Neighborhood Recovery), and to promote resilient buildings and reduce flood risks in these most vulnerable areas now and in the future. Furthermore, the text includes special provisions to help facilitate the city’s long-term recovery from the COVID-19 pandemic and its associated economic effects by providing more time for existing nonconforming uses to reopen and for builders to undertake certain construction projects.

PUBLIC POLICY

ASTORIA INDUSTRIAL BUSINESS ZONE (IBZ)

The Development Site and study area are located in the Astoria Industrial Business Zone (IBZ), one of 16 Industrial Business Zones established by the City where expanded business services are available for industrial and manufacturing businesses with the goal of protecting existing manufacturing districts and encouraging industrial growth citywide. The IBZs foster high-performing business districts by creating competitive advantages over locating in areas outside of New York City, and provide for tax credits for businesses relocating within them, zone-specific planning efforts, and direct business assistance.

WATERFRONT REVITALIZATION PROGRAM

The Development Site is located in the Coastal Zone designated by New York State and City and is subject to the Coastal Zone management policies of both the City (Waterfront Revitalization Program [WRP]) and the State (Coastal Management Program [CMP]).

New York City's WRP is the City's principal Coastal Zone management tool and establishes a broad range of public policies for the City's coastal areas. The guiding principle of the WRP is to maximize the benefits derived from economic development, environmental conservation, and public use of the waterfront, while minimizing the conflicts among these objectives. A local waterfront revitalization program, such as New York City's, is subject to approval by the New York State Department of State (NYSDOS) with the concurrence of the United States Department of Commerce pursuant to applicable state and federal law, including the Waterfront Revitalization of Coastal Areas and Inland Waterways Act and the Federal Coastal Zone Management Act. The WRP was originally adopted by the City of New York in 1982, revised in 2002 and revised again in 2013. The most recent revisions were approved by the NYSDOS in February 2016 and November 2018.

All proposed actions subject to CEQR, the Uniform Land Use Review Procedure (ULURP), or other local, state, or federal agency discretionary actions (including projects receiving permit approvals from DEC) that are situated within New York City's designated Coastal Zone boundary must be reviewed and assessed for their consistency with the WRP. The WRP Consistency Assessment Form and the WRP consistency assessment have been included with this EAS (see Appendix A).

D. THE FUTURE WITHOUT THE PROPOSED DEVELOPMENT

LAND USE

DEVELOPMENT SITE

Absent the Proposed Development, in the No Action condition, the Applicant would construct a 4-story (150 feet tall to the top of the bulkhead) last-mile distribution center. A last-mile distribution center allows shipping entities, such as e-commerce companies (e.g., Amazon) or private shipping companies (e.g., FedEx), to sort large, regional shipments into smaller, area-specific shipments. This allows large trucks to deliver goods to the last-mile distribution center and smaller trucks or vans to cover the "last mile" from the distribution center to the ultimate consumer. As discussed on Page 1a, "Project Description," the Applicant is a subsidiary of Wildflower LTD., which has extensive experience developing industrial projects in the New York City metro area, including last-mile facilities at JFK Airport and in East New York, Brooklyn. As the Applicant purchased the Development Site as a development site and has determined that it is highly suitable for use as a last-mile distribution center, if the Proposed Actions were not approved, the Applicant would seek to make a reasonable return on its purchase of the Development Site by developing it as a last-mile distribution center.

This Use Group 16 facility is an as-of-right use under zoning regulations: specifically, it would be exempt from the bulk and waterfront regulations of ZR Article VI, Chapter 2 (Waterfront Zoning) and would fully comply with the underlying M3-1 district regulations applicable to the Development Site. The distribution center would contain 518,849 gsf (457,394 zoning square feet [zsf]), consisting of approximately 360,000 gsf of distribution/warehouse and storage use; 43,300 gsf of accessory office and employee back-of-house use; and 115,550 gsf of accessory parking (229 required unattended spaces), loading, and delivery vehicle storage. With the No Action

scenario distribution center, the waterfront area on the Development Site would be planted with native coastal plantings and used for stormwater retention, but would not be accessible to the public. The plantings would not require a DEC permit and the stormwater retention system would not require construction of new outfalls requiring a permit from USACE. The No Action distribution center would not require any shoreline improvements and therefore would not require a DEC Article 15 permit or USACE permit. In addition, the No Action distribution center would be located outside of the DEC's tidal wetlands jurisdiction and would not require a DEC Article 25 permit. Finally, a DEC State Pollutant Discharge Elimination System (SPDES) permit is not required for the dewatering expected to occur during construction of the No Action distribution center.³ Therefore, no state or federal permitting approvals are required for the No Action scenario.

STUDY AREA

There is currently one development planned within the study area that is expected to be complete by 2023. To the south and west of the Development Site, opposite Luyster Creek, the New York City Department of Sanitation (DSNY) is proposing to construct a 113,775 gsf garage and storage facility with accompanying salt shed at 31-11 20th Avenue. The planned development would also contain an access road immediately to the southwest of the Development Site. The facility is planned to replace another DSNY garage located in the area. The DSNY project, which requires local approval subject to New York City's Uniform Land Use Review Procedure (ULURP), is currently undergoing review, and has yet to be approved. According to the project's Environmental Assessment Statement (EAS) (CEQR no. 18DOS008Q), it is not expected to be complete until 2023. No impacts to land use are anticipated from the planned DSNY facility, which is similar to the other existing uses within the study area; overall, in the No Action condition, the study area is expected to contain primarily energy and light industrial uses.

ZONING AND PUBLIC POLICY

As noted above, absent the Proposed Actions, the Applicant would construct a last-mile distribution center, which would be constructed as-of-right under zoning. In addition, the Zoning for Coastal Flood Resiliency amendment to the Waterfront Zoning regulations is currently under consideration, and may be in place by 2023. No other changes to zoning regulations or public policies applicable to the Development Site and study area are expected to occur in the No Action condition. Furthermore, no impacts to zoning or public policy are anticipated from the planned DSNY facility within the study area.

E. THE FUTURE WITH THE PROPOSED DEVELOPMENT

LAND USE

The Proposed Actions would facilitate development of the Proposed Development, a 160-foot-tall (to the top of the bulkhead), seven-story building containing 715,000 gsf of media production studio facilities including landscaped and publicly accessible open space. The Proposed Development would be set back approximately 16 feet from 19th Avenue at its ground level, and the setback area would contain approximately 4,200 sf of landscaped public access area adjacent to the 19th Avenue sidewalk. The Proposed Development would also be set back from the Luyster Creek shoreline, and this setback would be improved with an approximately 30,600 sf waterfront

³ In a Notice Of Determination of No Jurisdiction dated October 14, 2020, DEC concluded that they would not take jurisdiction over the discharge of the groundwater recovered during dewatering on the Development Site.

public access area, accessed from the 19th Avenue sidewalk at the terminus of 19th Avenue. The Proposed Development's street wall would rise to the full building height without setback in order to accommodate its 11 sound stages.

The Proposed Development's 11 sound stages and accessory production facilities would be arranged as a vertical "studio village." The 11 sound stages would be stacked two levels high above one story of accessory off-street parking and loading. Its core would house all of the accessory uses provided on a traditional studio lot, as well as freight elevators connected directly to the Proposed Development's accessory loading berths. The Proposed Development would also contain an "elevated driveway" with a ramp from the building's vehicular entrance to the first level of sound stages, allowing for circulation of vehicles within the first story of the building. The elevated driveway would be accessed from the interior of the Proposed Development and would be used only for circulation within the Proposed Development (i.e., it would not be open to the public).

The Proposed Development will include approximately 38,000 zsf of development rights to be purchased from the Steinway Piano Factory Lot (Lot 1); these development rights will be purchased pursuant to a contract option to be exercised prior to completion of this application. The Proposed Development would not affect land uses on any other site within the study area, and would be consistent with the predominantly light industrial uses in the area.

ZONING AND PUBLIC POLICY

The Proposed Development requires several discretionary approvals in order to provide appropriate space for the intended media production facility. The Applicant seeks a bulk modification special permit pursuant to ZR Section 62-837(a) to modify (i) minimum setback and maximum base height requirements of ZR 62-3419(a)(2) and ZR Section 62-341(c)(1), to allow a proposed 160-foot-tall (to the top of the bulkhead) new building on the Development Site to rise without setbacks from its waterfront yard; (ii) maximum building height requirements of ZR Section 62-341(c)(2), to allow the 160-foot-tall (to the top of the bulkhead) new building; (iii) maximum length of walls facing shoreline requirements of ZR Section 62-341(c)(5), to allow an approximately 475-foot wall along the building's waterfront yard; and (iv) the ground floor streetscape requirements of ZR 62-341(c)(6). The Applicant also seeks authorizations pursuant to ZR Sections 62-822(a) and (b) for modification of waterfront public access area and supplemental public access area requirements. Finally, the Applicant seeks a non-discretionary certification pursuant to ZR Section 62-811 to confirm the plans for the Proposed Development comply with applicable waterfront zoning regulations, as modified.

As noted above, the Development Site's shoreline along Luyster Creek contains land that is within DEC's Article 25 (Tidal Wetlands) adjacent area jurisdiction. A small portion of the Proposed Development (5,226 sf) is located within the DEC's Article 25 adjacent area. In addition, the proposed shoreline improvements, which are required to provide upland structural stabilization for the Proposed Development's waterfront public access area, involve in-water construction activities that are regulated by DEC (Article 15 [Protection of Waters]) and USACE (Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act). Therefore, the Proposed Development requires DEC Article 25 and 15 permits, and the USACE permit. The Applicant is seeking the DEC and USACE permits concurrently with the proposed Zoning approvals.

The Proposed Development would affect zoning regulations applicable to the Development Site but would not affect zoning regulations applicable to other sites within the study area, which would maintain the M3-1 and M1-1 zoning districts. In addition, it would be consistent with the public

policies that currently govern the site and the surrounding area, including the IBZ and the WRP (see the WRP assessment in **Appendix A**).

Overall, the Proposed Development would not result in any significant adverse impacts to land use, zoning or public policy and further assessment is not warranted. *

A. INTRODUCTION

The Applicant is proposing to construct a 715,000 gross square foot (gsf) media production studio (the “Proposed Development”) in Queens (Block 814, Lot 10; the “Development Site”). As described on Page 1a, Project Description, to facilitate the Proposed Development, the Applicant is seeking several discretionary approvals—including a bulk modification special permit, authorizations for modification of water public access area and supplemental public access area requirements, a certification related to Waterfront Zoning regulations, a permit to construct within the New York State Department of Environmental Conservation (DEC) Tidal Wetlands adjacent area jurisdiction, and permits for in-water construction activities that are regulated by DEC and the U.S. Army Corps of Engineers (USACE) (the “Proposed Actions”). This attachment assesses the potential for the Proposed Development to cast new shadows that would adversely impact any sunlight-sensitive resources. Following the guidelines of the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, sunlight-sensitive resources include publicly accessible parks and open space, features of historic resources that depend on sunlight, and natural resources that depend on sunlight.

Per CEQR guidelines, an assessment of shadows is required if a proposed project would result in structures 50 feet or larger in height, or of any height if the project site is located adjacent to, or across the street from, a sunlight-sensitive resource. As discussed on Page 1a, “Project Description,” the Proposed Development is located adjacent to a sunlight-sensitive natural resource—Luyster Creek (also referred to as Steinway Creek)—and would be in a different massing than the facility that would be constructed on the Development Site in the No Action condition; in particular, the portion of the building near the shoreline would be taller. Therefore, a shadows assessment is warranted.

B. DEFINITIONS AND METHODOLOGY

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

DEFINITIONS

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

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

- *Public open space* such as parks, beaches, playgrounds, plazas, schoolyards (if open to the public during non-school hours), greenways, and landscaped medians with seating. Planted

areas within unused portions of roadbeds that are part of the Greenstreets program are also considered sunlight-sensitive resources.

- *Features of architectural resources that depend on sunlight for their enjoyment by the public.* Only the sunlight-sensitive features need be considered, as opposed to the entire resource. Such sunlight-sensitive features might include: design elements that depend on the contrast between light and dark (e.g., recessed balconies, arcades, deep window reveals); elaborate, highly carved ornamentation; stained glass windows; historic landscapes and scenic landmarks; and features for which the effect of direct sunlight is described as playing a significant role in the structure's importance as a historic landmark.
- *Natural resources* where the introduction of shadows could alter the resource's condition or microclimate. Such resources could include surface water bodies, wetlands, or designated resources such as coastal fish and wildlife habitats.

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

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

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

METHODOLOGY

Following the guidelines of the *CEQR Technical Manual*, a preliminary screening assessment must first be conducted to ascertain whether a project's shadow could reach any sunlight-sensitive resources at any time of year. The preliminary screening assessment consists of three tiers of analysis. The first tier determines a simple radius around the proposed building representing the longest shadow that could be cast. If there are sunlight-sensitive resources within this radius, the analysis proceeds to the second tier, which reduces the area that could be affected by project shadow by accounting for the fact that shadows can never be cast between a certain range of angles south of the project site due to the path of the sun through the sky at the latitude of New York City.

If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by project shadow by looking at specific representative days in each season and determining the maximum extent of shadow over the course of each representative day.

If the third tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a detailed shadow analysis is required to determine the extent and duration of the incremental shadow resulting from the project. The detailed analysis provides the data needed to assess the shadow impacts. The effects of the new shadows on the sunlight-sensitive resources are

described, and their degree of significance is considered. The results of the analysis and assessment are documented with graphics, a table of incremental shadow durations, and narrative text.

C. PRELIMINARY SCREENING ASSESSMENT

A base map was developed using Geographic Information Systems (GIS)¹ showing the location of the Proposed Development and the surrounding street layout (see **Figure B-1**). In coordination with the land use, historic and cultural resources, and natural resources assessments presented in other sections of this EAS, potential sunlight-sensitive resources were identified and shown on the map.²

TIER 1 SCREENING ASSESSMENT

For the Tier 1 assessment, the longest shadow that the proposed building could cast is calculated, and, using this length as the radius, a perimeter is drawn around the Development Site. Anything outside this perimeter representing the longest possible shadow could never be affected by project generated shadow, while anything inside the perimeter needs additional assessment.

According to the *CEQR Technical Manual*, the longest shadow that a structure can cast at the latitude of New York City occurs on December 21, the winter solstice, at the start of the analysis day at 8:51 AM, and is equal to 4.3 times the height of the structure.

Therefore, at a maximum height of approximately 160 feet above curb level, including rooftop bulkheads, the Proposed Development could cast a shadow up to approximately 688 feet in length (160 x 4.3). Using this length as the radius, a perimeter was drawn around the Proposed Development footprint (see **Figure B-1**).

The Tier 1 assessment showed that one sunlight-sensitive resource is located in the longest shadow study area: a portion of Luyster Creek (also referred to as Steinway Creek), a tidal tributary of the East River and DEC³-mapped littoral zone tidal wetlands. Therefore, the next tier of assessment was required. No publicly accessible open spaces or historic resources with sunlight-sensitive features are located in the longest shadow study area.

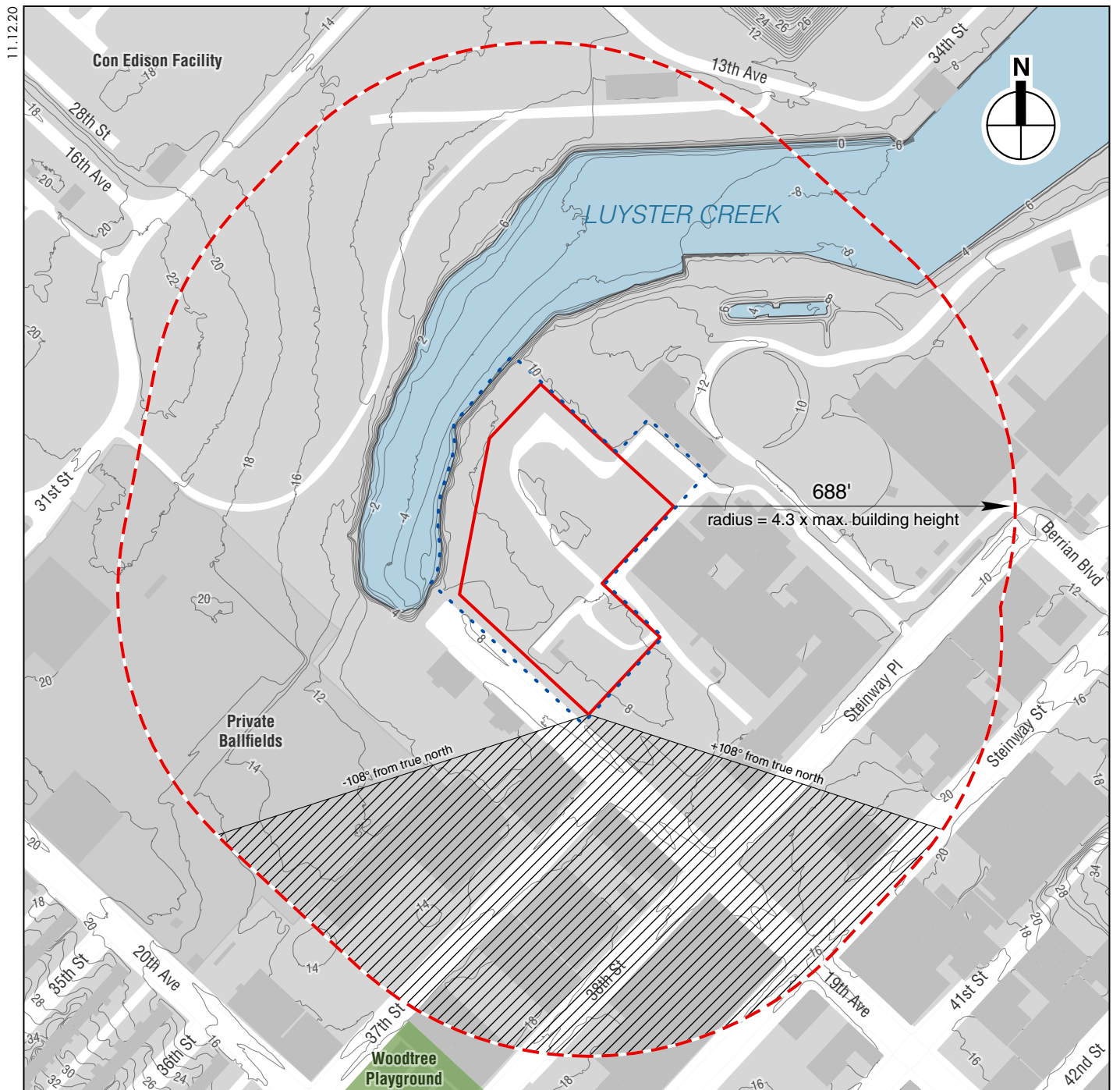
TIER 2 SCREENING ASSESSMENT

Because of the path that the sun travels across the sky in the northern hemisphere, no shadow can be cast in a triangular area south of any given project site. In New York City this area lies between -108 and +108 degrees from true north. **Figure B-1** illustrates this triangular area south of the project site. The complementary area to the north within the longest shadow study area represents the remaining area that could potentially experience new project generated shadow. A portion of Luyster Creek is located in the remaining study area, and therefore the next tier of assessment was required.

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

² Regarding the ballfields southwest of the Development Site, between 19th and 20th Avenues, according to best available information these are privately owned, used for pay-to-play leagues and camps, and not publicly accessible. Consequently they are not included in the inventory of resources.

³ New York State Department of Environmental Conservation



- Development Site
- Proposed Development
- Tier 1: Longest Shadow Study Area Perimeter
- Tier 2: Area South of Site That Could Never Be Shaded by Proposed Facility
- Publicly Accessible Open Space
- Historic Resources with Sunlight-Sensitive Features (none located in visible map extent)
- Natural Water Body (Sunlight Sensitive)
- Contour lines (2-ft intervals, elevation referenced to NAVD88)

0 400 FEET

Tier 1 and Tier 2 Assessments

Figure B-1

TIER 3 SCREENING ASSESSMENT

The direction and length of shadows vary throughout the course of the day and also differ depending on the season. In order to determine whether project-generated shadow could fall on a sunlight-sensitive resource, three-dimensional computer modeling software⁴ is used in the Tier 3 assessment to calculate and display the Proposed Development's shadows on individual representative days of the year. A computer model was developed containing three-dimensional representations of the elements in the base map used in the preceding assessments, the topographic information of the study area, and a reasonable worst-case three-dimensional representation of the Proposed Development.

REPRESENTATIVE DAYS FOR ANALYSIS

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

TIMEFRAME WINDOW OF ANALYSIS

The shadow assessment considers shadows occurring between 90 minutes after sunrise and 90 minutes before sunset. At times earlier or later than this timeframe window of analysis, the sun is down near the horizon and the sun's rays reach the Earth at very tangential angles, diminishing the amount of solar energy and producing shadows that are very long, move fast, and generally blend with shadows from existing structures. Consequently, shadows occurring outside the timeframe window of analysis are not considered significant under CEQR, and their assessment is not required.

TIER 3 SCREENING ASSESSMENT RESULTS

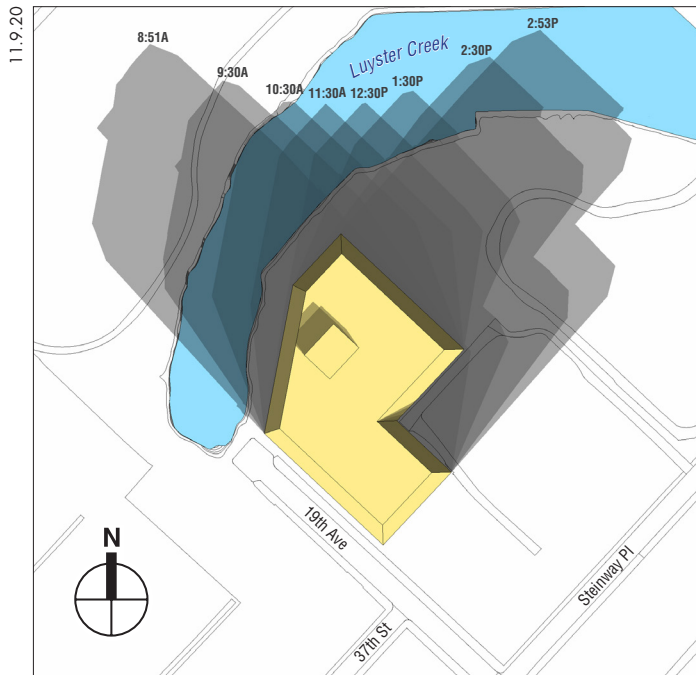
Figure B-2 illustrates the range of shadows that would occur, in the absence of intervening buildings, from the Proposed Development on the four representative days for analysis. As they move east and clockwise over the landscape, the shadows are shown occurring approximately every 60 minutes from the start of the analysis day (90 minutes after sunrise) to the end of the analysis day (90 minutes before sunset).

The Tier 3 screening assessment concluded that project-generated shadow could fall on Luyster Creek on all four representative analysis days and therefore, a detailed analysis is warranted for each of the four representative days.

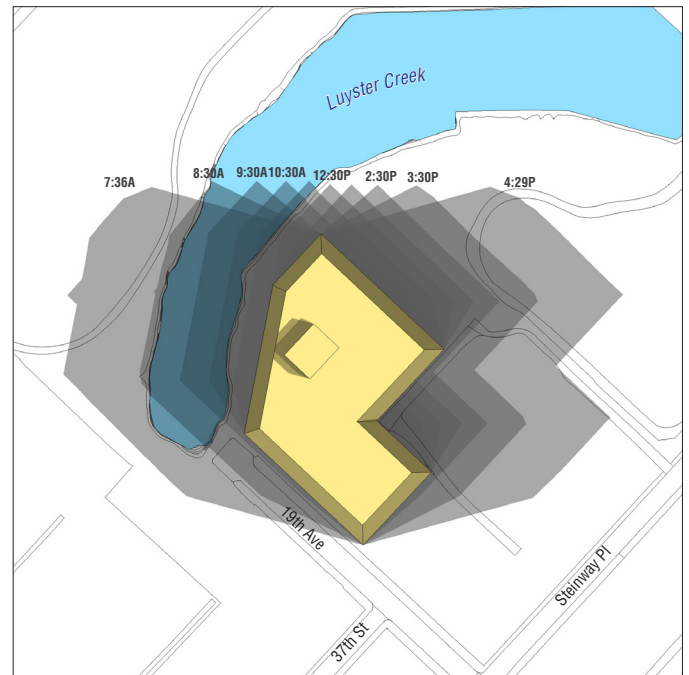
D. DETAILED SHADOW ANALYSIS

The purpose of the detailed analysis is to determine the extent and duration of new incremental shadows that fall on sunlight-sensitive resources as a result of the project, and to assess their potential effects. The detailed analysis accounts for intervening and surrounding buildings. The baseline or future No Action condition is established, containing existing and future No Action

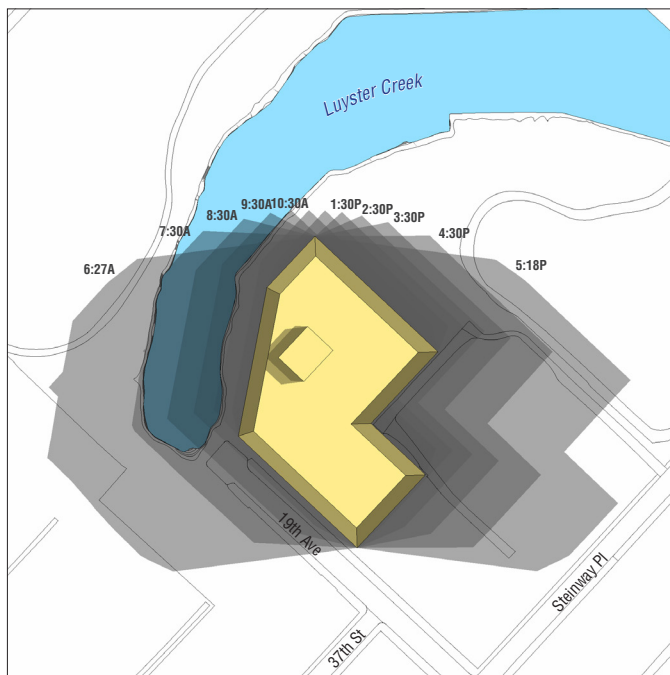
⁴ Bentley MicroStation



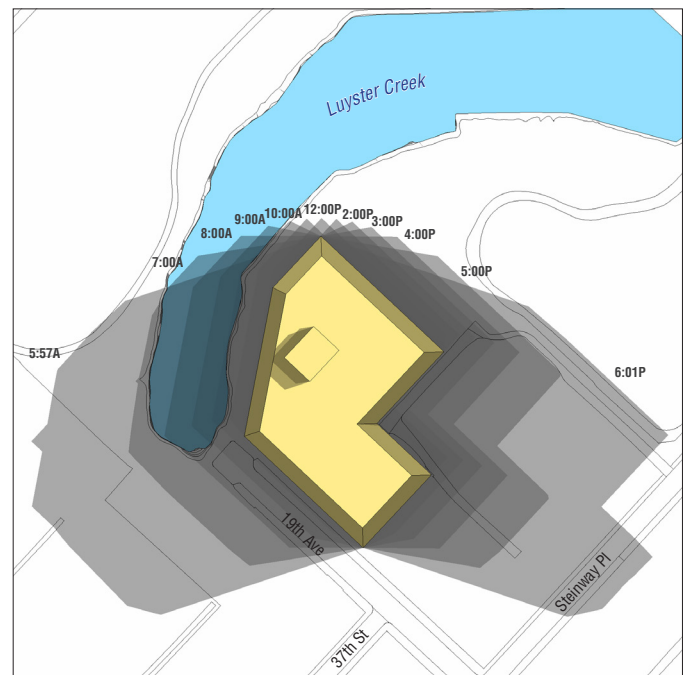
December 21



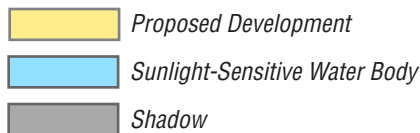
March 21 / September 21



May 6 / August 6



June 21



This figure illustrates the range of shadows that would occur from the proposed building on each of the four representative analysis days. The shadows are shown occurring approximately every 60 minutes from the start of the analysis day (90 minutes after sunrise) to the end of the analysis day (90 minutes before sunset). The Tier 3 assessment does not account for future No Action shadows, and the shadows shown in this figure do not represent incremental shadows. The Tier 3 assessment serves to illustrate the daily path or "sweep" of the proposed building's shadows across the landscape, indicating which resources could potentially be affected on that analysis day, absent intervening or surrounding buildings, by project-generated shadow. Daylight Saving Time was not used, per *CEQR Technical Manual* guidelines.

buildings on the project site and planned in the area, to illustrate the baseline shadows. The future condition with the Proposed Development and its shadows can then be compared to the baseline condition to determine the incremental shadows that would result with the Proposed Development.

Following the analysis framework described in the Project Description (EAS form, page 1a), the shadows assessment was performed for the analysis year of 2023, comparing the Proposed Development to the future No Action condition, in which a smaller, 4-story as-of-right development (i.e., a development that would not require any discretionary approvals by the CPC and/or DEC and USACE) would be constructed on the Development Site (see **Figure B-3**).

Three-dimensional representations of the existing buildings in the study area were developed using data obtained from the New York City Department of Information Technology (NYC DoITT), building plans on file with the City, and photos taken during project site visits, and were added to the three-dimensional model used in the Tier 3 assessment.

Shadows are in constant movement. The computer simulation software produces an animation showing the movement of shadows over the course of each analysis period. The analysis determines the time when incremental shadow would enter each resource, and the time it would exit. Shadow analyses were performed for each of the representative days and analysis periods indicated in the Tier 3 assessment.

Table B-1 summarizes the entry and exit times and total duration of incremental shadows on each affected sun-sensitive resource. **Figures B-5 to B-9** document the results of the analysis by providing graphic representations from the computer animation of times when incremental shadow would fall on a sun-sensitive resource. The figures illustrate the extent of additional incremental shadow at that moment in time, highlighted in red, and also show existing shadow and remaining areas of sunlight.

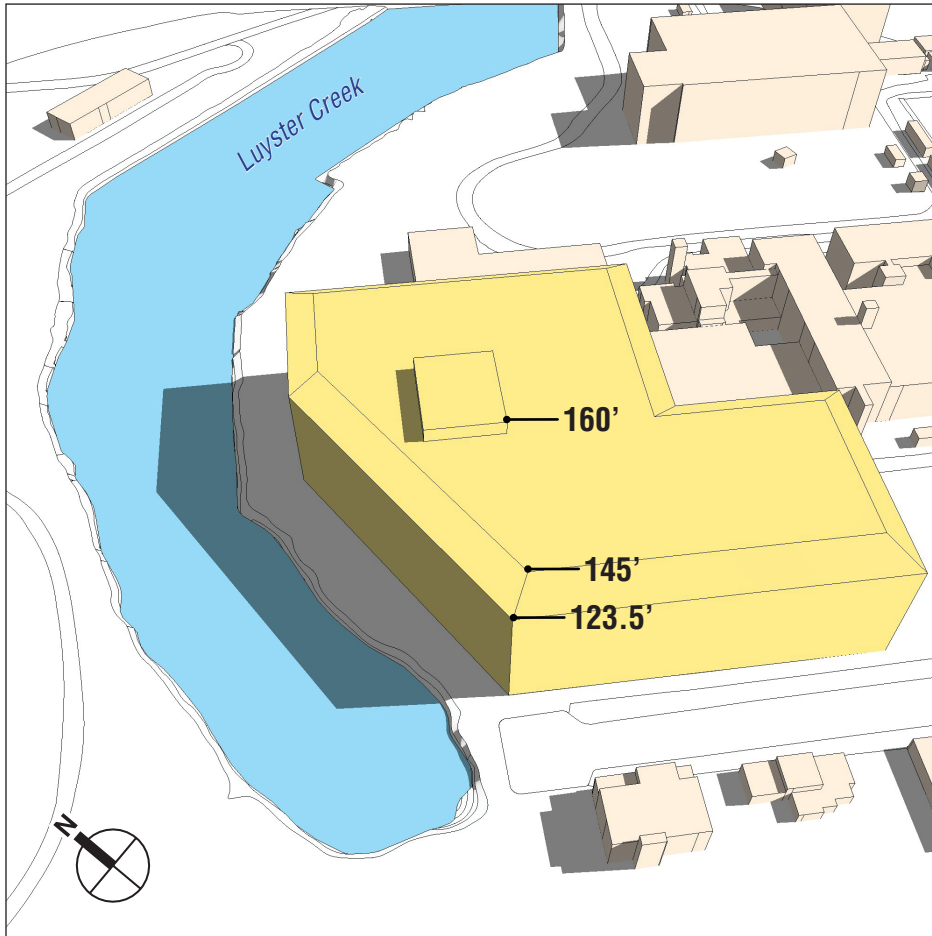
Table B-1
Incremental Shadow Durations

Analysis day and timeframe window	December 21 8:51 AM–2:53 PM	March 21/Sept. 21 7:36 AM–4:29 PM	May 6/August 6 6:27 AM–5:18 PM	June 21 5:57 AM–6:01 PM
Luyster Creek	8:51 AM–2:53 PM Total: 6 hr 2 min	7:36 AM–12:00 PM Total: 4 hr 24 min	6:27 AM–10:45 AM Total: 4 hr 18 min	5:57 AM–10:35 AM Total: 4 hr 38 min
Notes: Table indicates entry and exit times and total duration of incremental shadow for each sunlight-sensitive resource. Daylight saving time is not used—times are Eastern Standard Time, per <i>CEQR Technical Manual</i> guidelines. However, as Eastern Daylight Time is in effect for the March/September, May/August, and June analysis periods, add one hour to the given times to determine the actual clock time.				

ASSESSMENT OF SHADOW EFFECTS ON LUYSTER CREEK

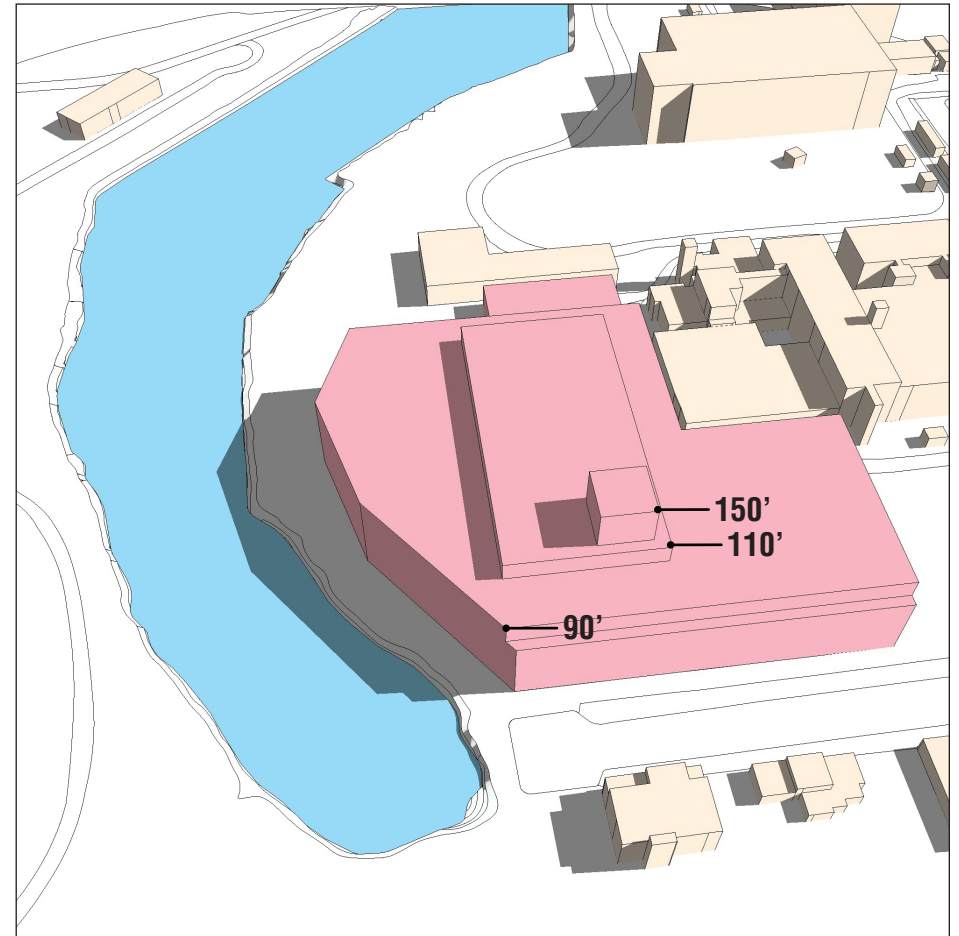
LUYSTER CREEK

Luyster Creek is mapped by DEC as littoral zone tidal wetlands; **Figure B-4** provides a photo of the creek looking north from the terminus of 19th Avenue. The surface waters of Luyster Creek receive two Combined Sewer Overflow (CSOs); one located at the terminus of 19th Avenue and the second located on the opposite bank of Luyster Creek, slightly north and east of the 19th Avenue CSO. There are no vegetated tidal wetland communities present along the shoreline. Primary productivity within the creek is generated mainly from phytoplankton. Marsh elder (*Iva annua*) or high-tide bush (*Iva frutescens*) are intermittently present within the hardened slope. The creek is a tributary of the East River. It is saline (marine) and is currently designated Use Class



Proposed Development (With Action)

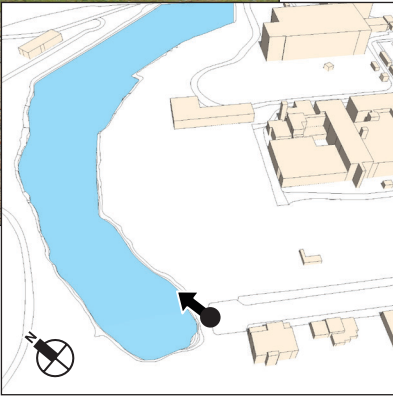
Given heights are above grade, which is at approximately 9' elevation (referenced to North American Vertical Datum 1988).



As-of-Right Development (No Action)

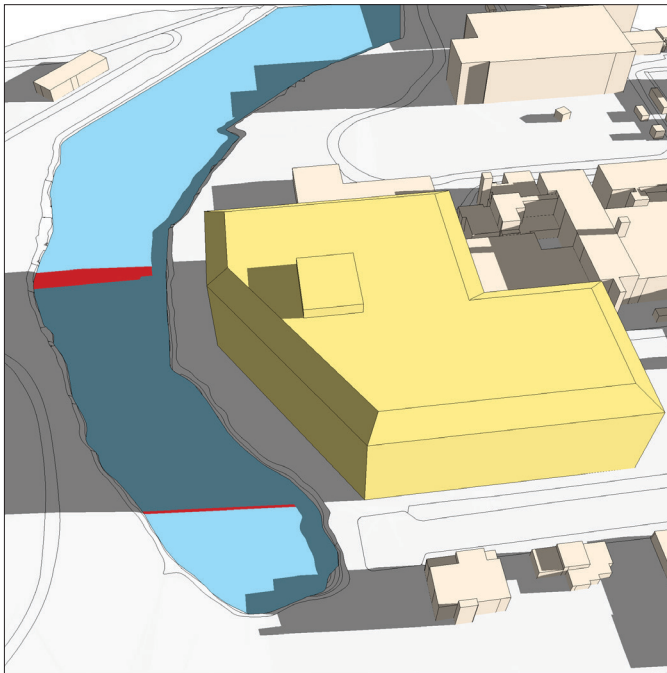
Three-Dimensional Computer Models for Detailed Analysis

Figure B-3

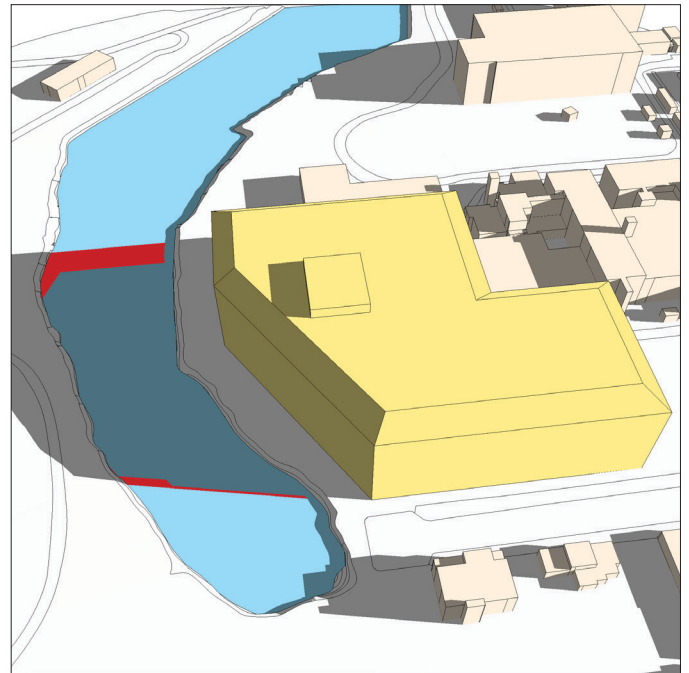


Luyster Creek (Existing Conditions)
Figure B-4

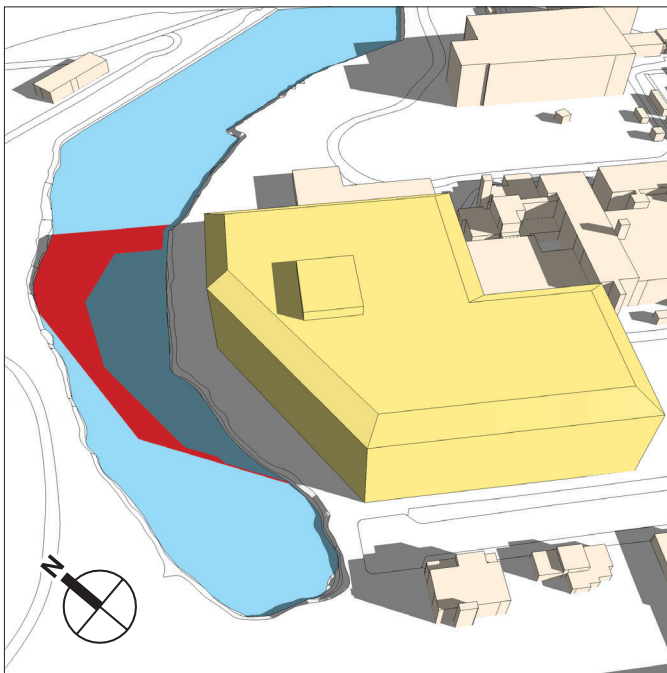
7.9.20



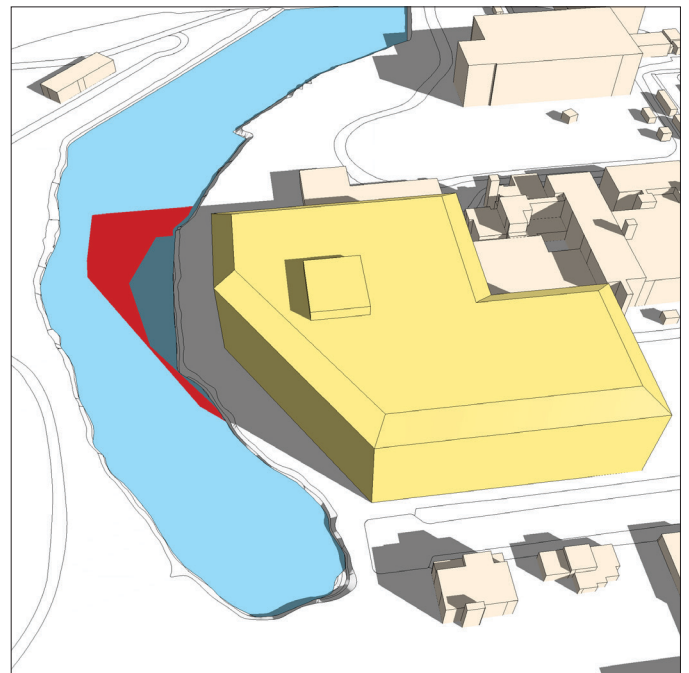
8:51 AM




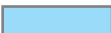

9:30 AM



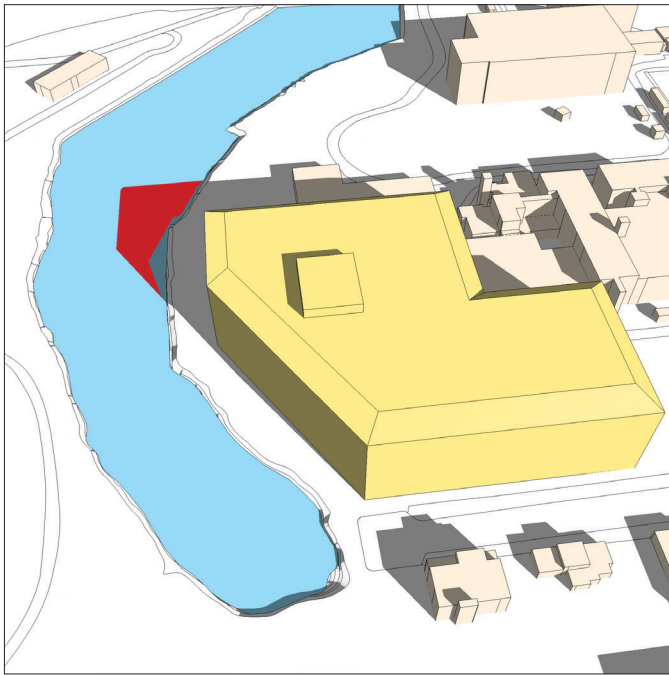
10:30 AM



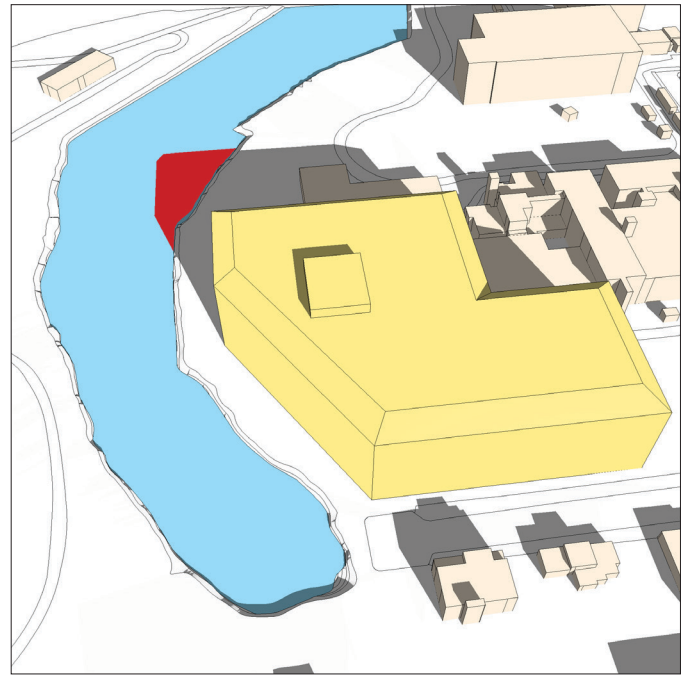
11:30 AM

-  *Proposed Development*
-  *Sunlight-Sensitive Water Body*
-  *Incremental Shadow on Sun-Sensitive Water Body*

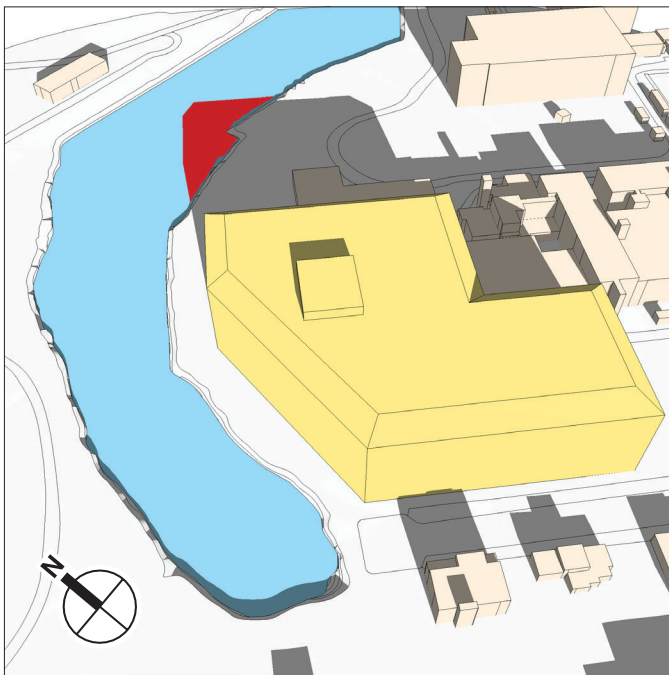
NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the proposed project. All other shadow is future No Action shadow, i.e. baseline shadow from existing buildings and the future No Action building.



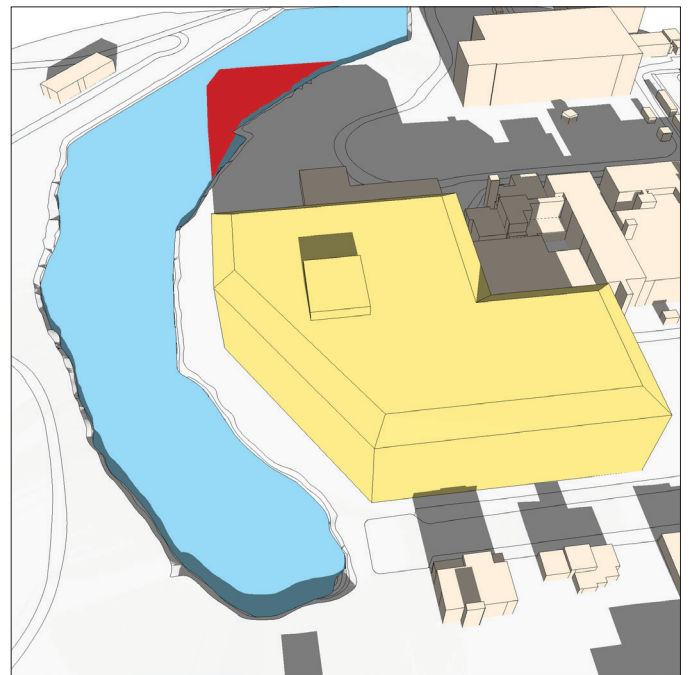
12:30 PM



1:30 PM



2:30 PM

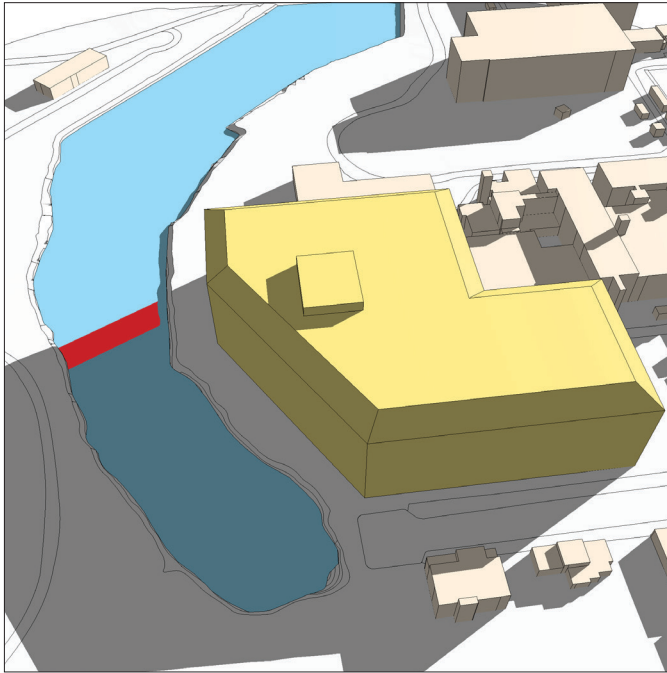


2:53 PM

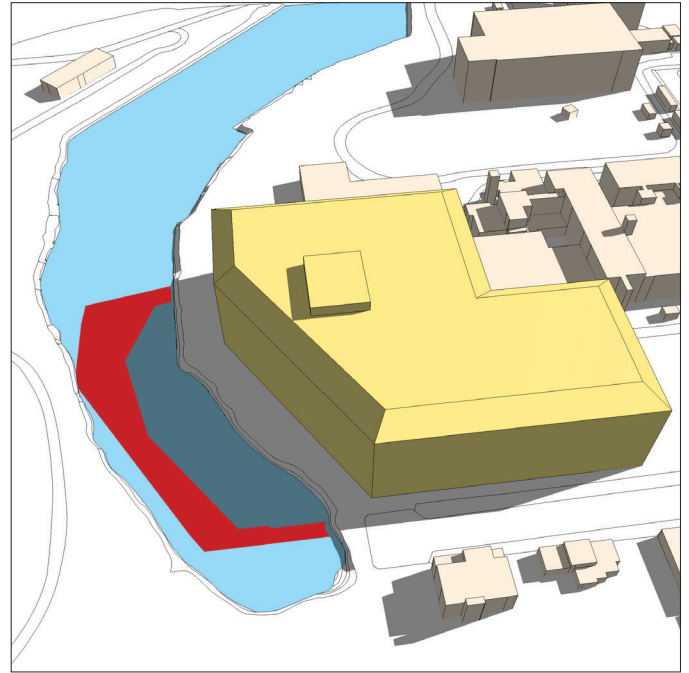
- Proposed Development*
- Sunlight-Sensitive Water Body*
- Incremental Shadow on Sun-Sensitive Water Body*

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the proposed project. All other shadow is future No Action shadow, i.e. baseline shadow from existing buildings and the future No Action building.

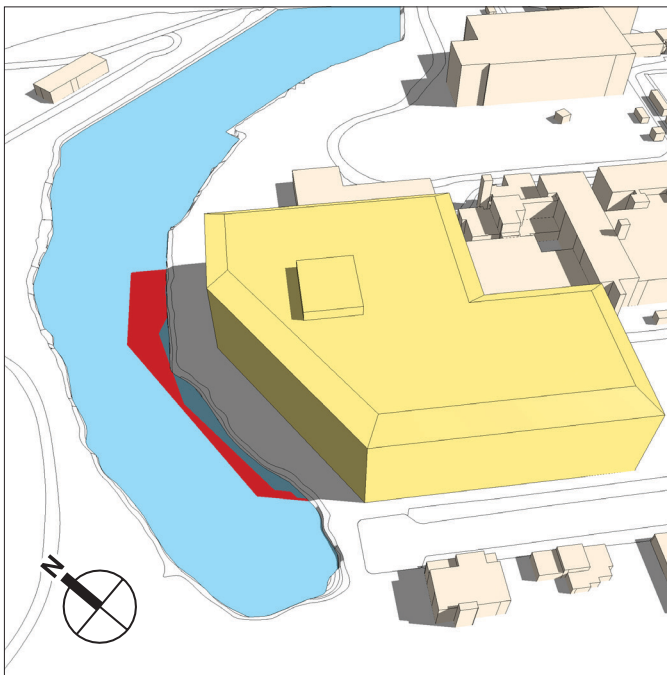
7.9.20



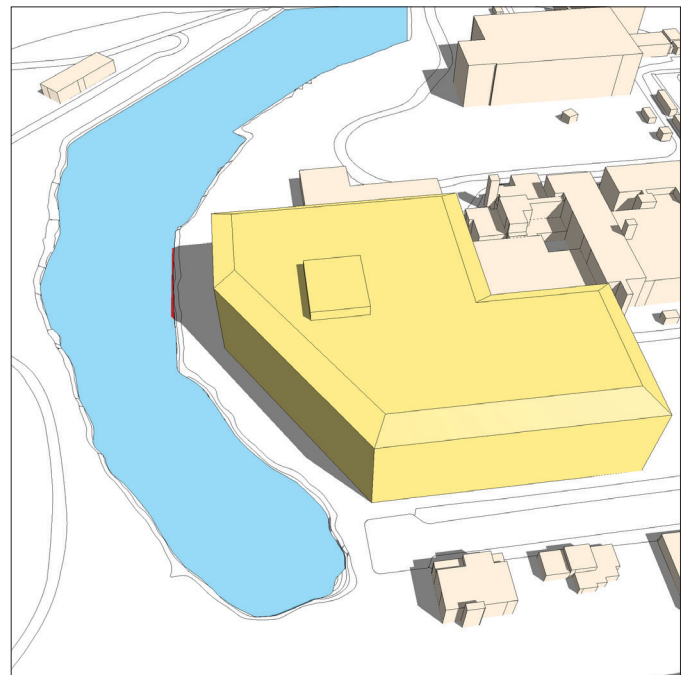
7:36 AM



9:00 AM



10:30 AM

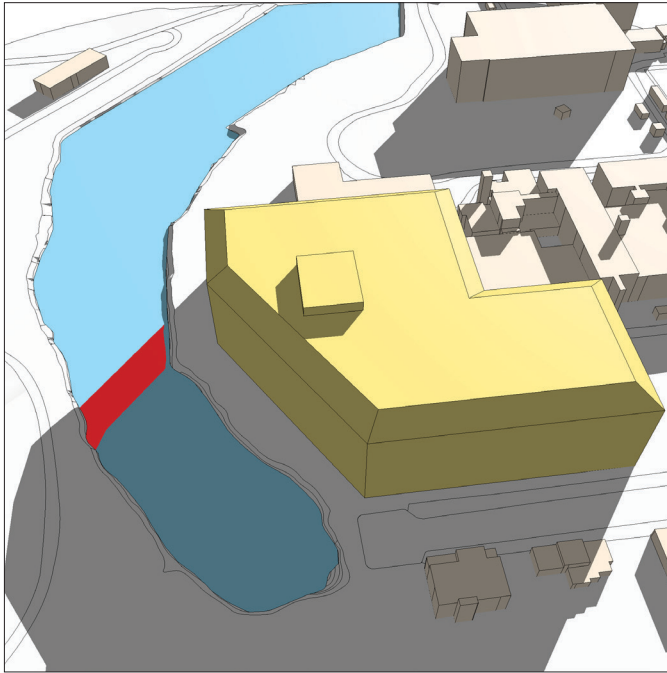


12:00 PM

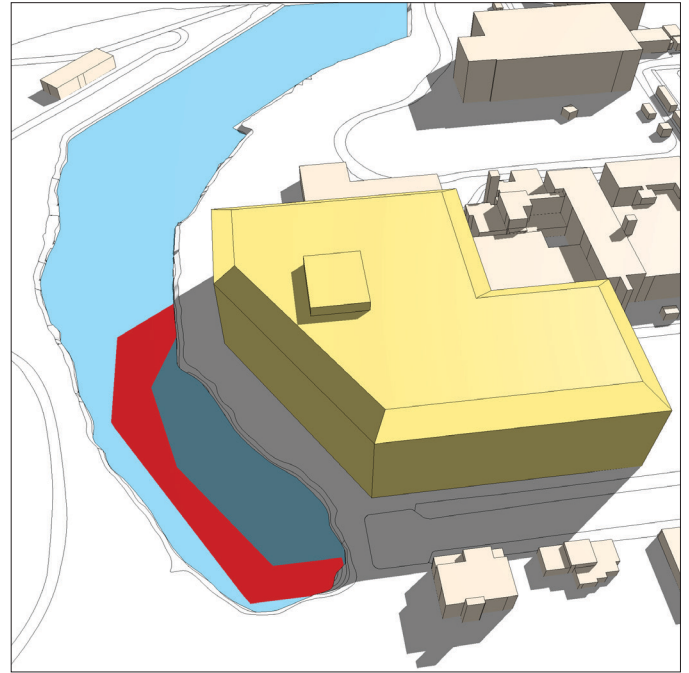
- Proposed Development*
- Sunlight-Sensitive Water Body*
- Incremental Shadow on Sun-Sensitive Water Body*

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the proposed project. All other shadow is future No Action shadow, i.e. baseline shadow from existing buildings and the future No Action building. Daylight Saving Time was not used, per *CEQR Technical Manual* guidelines.

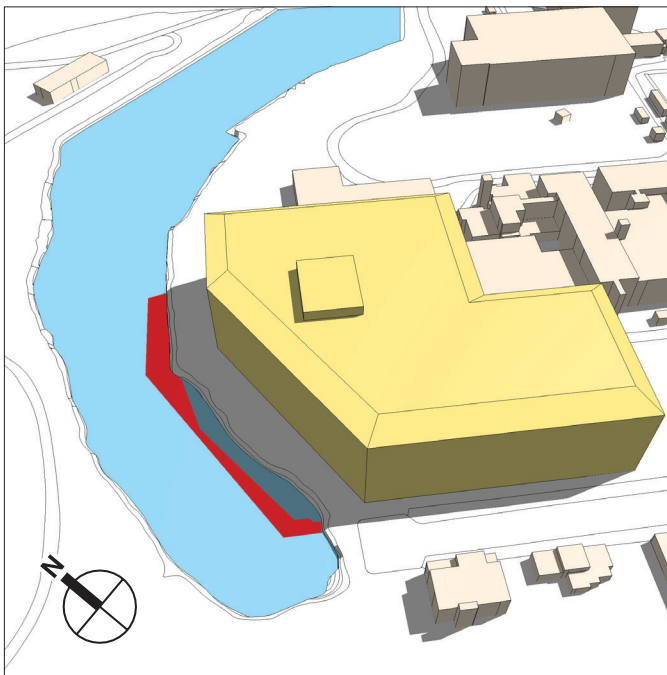
March 21 / September 21



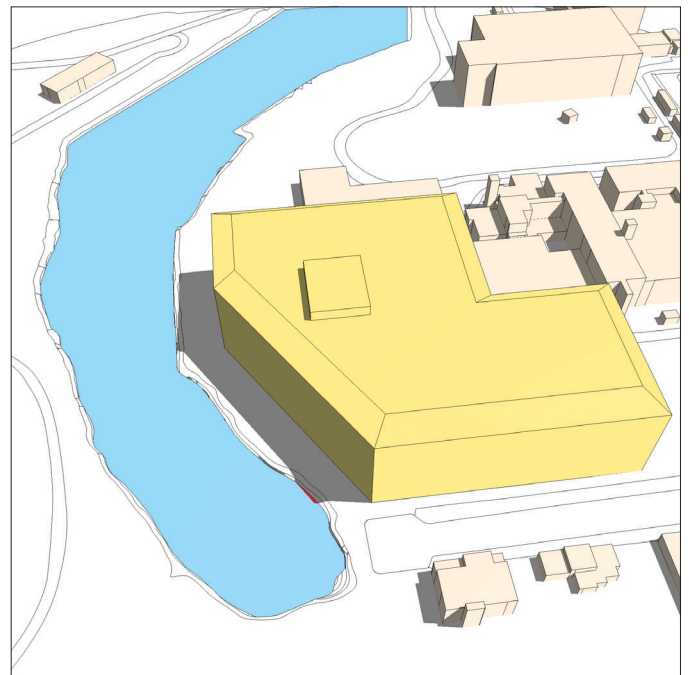
6:27 AM



8:00 AM



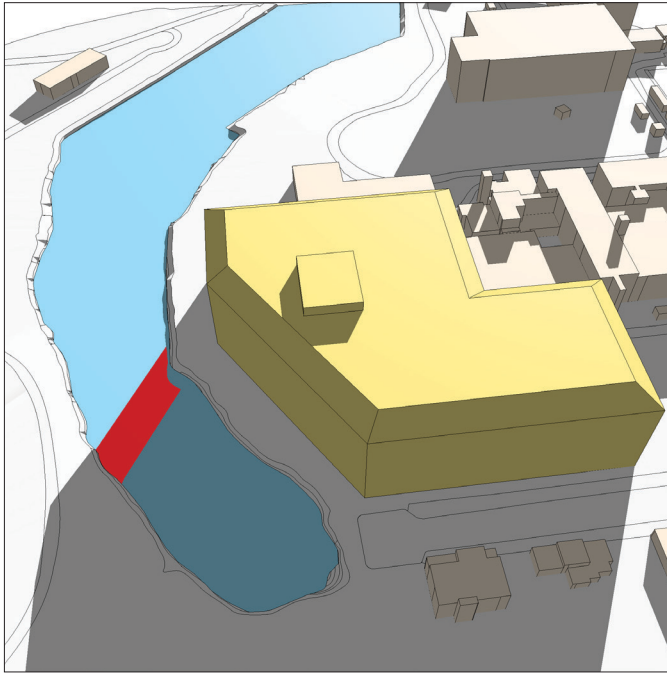
9:30 AM



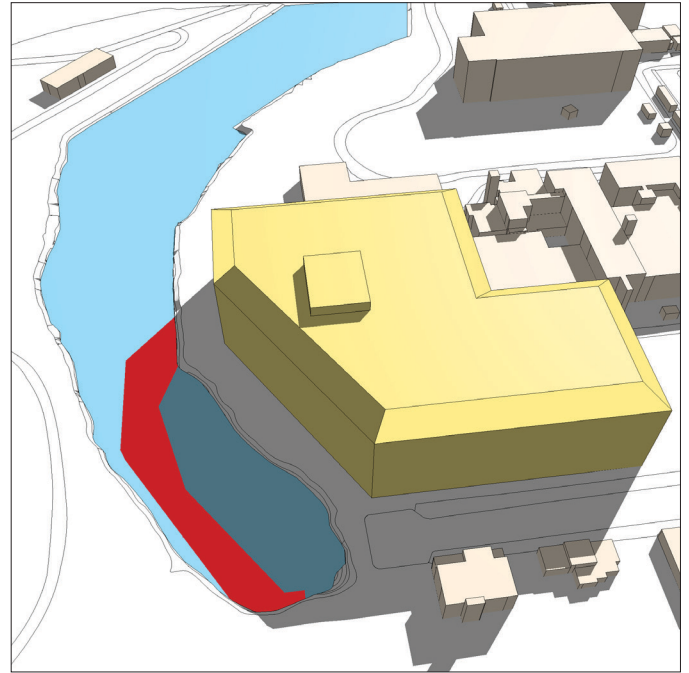
10:45 AM

- Proposed Development*
- Sunlight-Sensitive Water Body*
- Incremental Shadow on Sun-Sensitive Water Body*

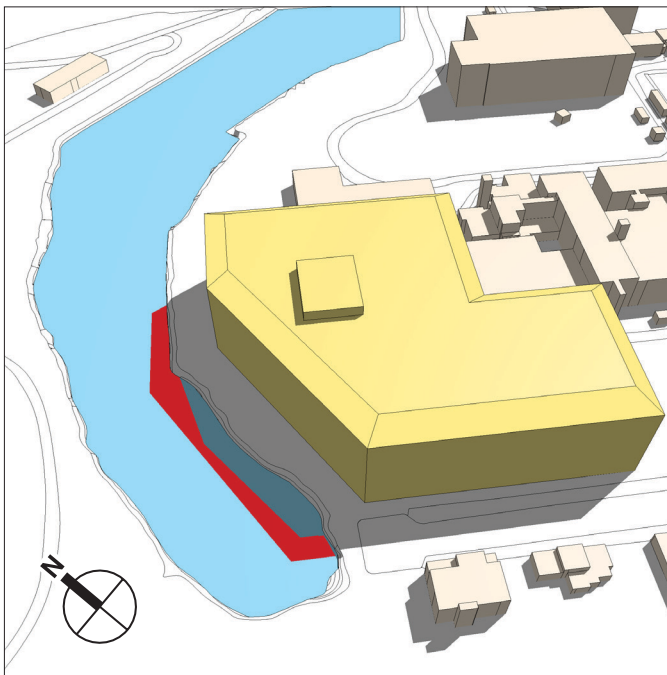
NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the proposed project. All other shadow is future No Action shadow, i.e. baseline shadow from existing buildings and the future No Action building. Daylight Saving Time was not used, per *CEQR Technical Manual* guidelines.



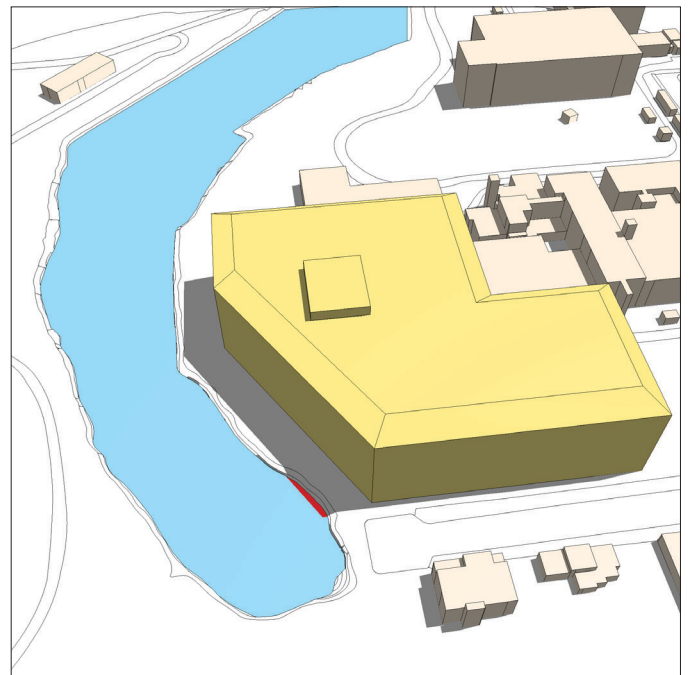
5:57 AM



7:30 AM



9:00 AM



10:30 AM

- Proposed Development*
- Sunlight-Sensitive Water Body*
- Incremental Shadow on Sun-Sensitive Water Body*

NOTES: Only the areas of shadow highlighted in red represent incremental shadow resulting from the proposed project. All other shadow is future No Action shadow, i.e. baseline shadow from existing buildings and the future No Action building. Daylight Saving Time was not used, per *CEQR Technical Manual* guidelines.

SD by DEC. The SD classification is generally given to waters that, because of natural or man-made conditions, cannot meet the requirements for primary or secondary contact (i.e. swimming or boating) or fish propagation. The creek is approximately 559,400 square feet, or 12.84 acres, in total area.⁵

INCREMENTAL SHADOWS BY SEASON

The detailed analysis showed that project-generated incremental shadow would fall on adjacent and nearby portions of the creek in all seasons. In winter, when shadows are longest, incremental shadow would fall on portions of the creek throughout the day. In spring, summer and fall, incremental shadow would be limited to the morning hours and would generally be smaller.

December 21 (Figures B-5 and B-6)

Incremental shadow would remain small during the first hour of the analysis day (beginning at 8:51 AM) when shadows are long and the No Action shadow would be similar on the creek compared with the With Action, as shown in **Figure B-5**. Later in the morning, as shadows move clockwise and east, the No Action shadow would become smaller while the With Action shadow would remain larger. Incremental shadow would increase to nearly its largest extent on the creek at around 10:30 AM when it would cover approximately 34,100 square feet (0.78 acres), shown in **Figure B-5**. Incremental shadow would then begin to decrease in size through the mid-day and early afternoon hours, so that by 1:30 PM the incremental shadow would cover approximately 18,300 square feet (0.42 acres), as shown in **Figure B-6**, and then increase in size again during the final hour of the analysis day, reaching its maximum extent at the end of the analysis day at 2:53 PM, when it would be approximately 34,600 square feet (0.80 acres), shown in **Figure B-6**.

The incremental shadow would fall on different areas of the creek as it moves over the course of the day, falling on different areas in the afternoon compared with the morning. The longest it would fall on any one portion of the creek would be approximately 3 hours, on a small area north of the proposed building and near the embankment; other affected areas of the creek would receive less shadow. At the maximum extent, at 2:53 PM, about 6% of the creek would be in incremental shadow.

March 21/September 21 (Figure B-7)

Incremental shadow would be small at the start of the analysis day at 7:36 AM, when shadows are long and the No Action shadow would be similar on the creek compared with the With Action. Shadows would then move clockwise and east, and the size of the incremental shadow would increase, reaching its largest extent around 9:00 AM when it would cover approximately 31,000 square feet (0.71 acres). The incremental shadow would continue to shift eastward and become smaller as it exits the east side of the creek. By 10:30 AM it would be less than half the maximum size, at approximately 14,200 square feet (0.33 acres), and would mostly be falling on different areas of the creek compared to earlier in the morning. The incremental shadow would continue to move clockwise and east becoming smaller on the creek and exiting completely at noon, for a total duration on the creek of just under 4 and a half hours. The longest time that incremental shadow would fall on any one portion of the creek would be approximately 3 hours, on a small area of the creek north of the project site and near the embankment; other areas would receive less shadow.

⁵ NYC Planimetrics – Hydrography, Department of Information Technology and Telecommunications (DoITT) GIS Unit, 2016

At the maximum extent, at approximately 9:00 AM, just under 6% of the creek would be in incremental shadow.

May 6/August 6 (Figure B-8)

Incremental shadow would be small at the start of the analysis day at 6:27 AM, when shadows are long and the No Action shadow would be similar on the creek compared with the With Action. Shadows would then move clockwise, and the size of the incremental shadow would increase, reaching its largest extent around 8:00 AM when it would cover approximately 28,100 square feet (0.65 acres). The incremental shadow would continue to move, and become smaller; by 9:30 AM it would be approximately 11,500 square feet (0.26 acres) in size and would generally be falling on different areas of the creek compared to earlier in the morning. The incremental shadow would continue to move clockwise and east, becoming smaller on the creek and exiting completely at 10:45 AM, for a total duration on the creek of approximately 4 and a quarter hours. The longest it would fall on any one portion of the creek would be approximately 3 hours, on a small area northeast of the project site and near the embankment. Other areas would receive less shadow. At its maximum extent, at about 8:00 AM, about 5% of the creek would be in incremental shadow.

June 21 (Figure B-9)

Incremental shadow would be small at the start of the analysis day at 5:57 AM, when shadows are long and the No Action shadow would be similar on the creek compared with the With Action. Shadows would then move clockwise, and the size of the incremental shadow would increase, reaching its largest extent around 7:30 AM when it would cover approximately 24,900 square feet (0.57 acres). The incremental shadow would continue to move, and become smaller; by 9:00 AM it would be approximately 12,500 square feet (0.27 acres) in size and would generally be falling on different areas of the creek compared to earlier in the morning. The incremental shadow would continue to move clockwise and east, becoming smaller on the creek and exiting the east side of the creek completely at 10:35 AM, for a total duration on the creek of approximately 4 and three-quarter hours. The longest it would fall on any one portion of the creek would be approximately 3 hours, on a small area northeast of the project site and near the embankment. Other areas would receive less shadow. At its maximum extent, at about 7:30 AM, less than 5% of the creek would be in incremental shadow.

INCREMENTAL SHADOW EFFECTS ON LUYSTER CREEK

Light requirements for phytoplankton are low, and the reduction in light within the shadow footprint would have a negligible impact on phytoplankton populations. In addition, the natural tidal cycle of the creek and East River would move phytoplankton in and out of the shaded areas throughout the day, limiting their exposure to shaded conditions to a relatively short period of time. As described in the section above and shown in Figures B-5 to B-9, different areas of the creek would be affected over the course of the day as shadows move. Mobile organisms, such as fish and epibenthic macroinvertebrates (e.g., crabs), would be expected to move through the areas of incremental shadows. The portion of the creek receiving project-generated shadows is small for most of each day at any given moment, relative to the creek's overall size, so the area of aquatic habitat affected by the incremental shadows would be small. Similar to the other waters of the East River estuary, naturally suspended sediment in the creek's water, typical of estuarine environments, would limit light and shadow penetration, further limiting the area of aquatic habitat affected by incremental shadows. When considered with the abundance of foraging habitat available within the East River, any temporary reduction of suitable foraging habitat within the

creek due to shadows resulting from the Proposed Development would not result in significant adverse impacts to fish species of the East River.

E. CONCLUSION

Project-generated shadows would be transient and limited in areal extent. No one area of the creek would receive incremental shadow for more than approximately 3 hours, and incremental shadow would never cover more than 6 percent of the creek at any given time. In winter, incremental shadow would move across areas of the creek over the course of the day, shading some areas in the morning and others in the afternoon. In spring, summer, and fall, incremental shadow would move across portions of the creek in the mornings and would exit completely at noon (on March 21 and September 21) and by late morning (in the late spring and summer months). The incremental shadow would not be expected to affect primary productivity of the aquatic resources (plankton), nor would shadows impede fish and benthic invertebrate movement within or use of the creek in the future with the Proposed Development. Therefore, the project-generated shadows would not result in significant adverse impacts to Luyster Creek, the only sunlight-sensitive resource within the study area. *

A. INTRODUCTION

This attachment assesses the potential of the Proposed Development to affect historic and cultural resources, which include archaeological and architectural resources. The Development Site (Block 814, Lot 10) is located at 35-15 19th Avenue in Astoria, Queens (see **Figure C-1**). The Development Site contained buildings formerly associated with the Steinway Piano factory, the majority of which have been demolished, and the site is largely vacant, with paved and unpaved areas. The Development Site also includes approximately 500 linear feet of shoreline along Luyster Creek (aka Steinway Creek) to the north that is within the New York State Department of Environmental Conservation (DEC)'s Article 25 (Tidal Wetlands) adjacent area jurisdiction.

As described on Page 1a, Project Description, to facilitate the Proposed Development, the Applicant is seeking several discretionary approvals—including a bulk modification special permit, authorizations for modification of water public access area and supplemental public access area requirements, a certification related to Waterfront Zoning regulations, a permit to construct within the DEC Tidal Wetlands adjacent area jurisdiction, and permits for in-water construction activities that are regulated by DEC and the U.S. Army Corps of Engineers (USACE) (the “Proposed Actions”). With the Proposed Actions, the Applicant proposes to build a seven-story, approximately 160-foot-tall (to the top of the bulkhead) film and television production studio on the Development Site (the “Proposed Development”). Absent the Proposed Actions, the Applicant will construct a four-story, approximately 150-foot-tall (to the top of the bulkhead) last-mile distribution center (the “as-of-right development”).

Construction of the either development requires approval of a Stormwater Pollution Prevention Plan (SWPPP) in connection with the DEC State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity.¹ While the as-of-right distribution center would be located outside of the DEC's tidal wetlands jurisdiction, the Proposed Development's building footprint would extend into DEC's Article 25 adjacent area jurisdiction, requiring a DEC Article 25 permit. In addition, the Proposed Development's proposed shoreline improvements involve in-water construction activities that are regulated by DEC (Article 15 [Protection of Waters]) and the U.S. Army Corps of Engineers (USACE) (Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act) and require approval of a joint permit application to DEC and USACE. The Applicant is seeking the DEC and USACE permits concurrently with the proposed Waterfront Zoning approvals.

This attachment considers the potential of the Proposed Development to impact historic and cultural resources in comparison to the last-mile distribution center that could be built absent the Proposed Actions.

¹ The Applicant has already obtained a SWPPP approval for the as-of-right development.

As described below, this analysis concludes that the Proposed Actions would have no adverse impacts on historic and cultural resources.

B. METHODOLOGY

ARCHAEOLOGICAL RESOURCES

The study area for archaeological resources is the Development Site itself, representing the area that would be disturbed by the project's construction (see **Figure C-1**). To assess the archaeological sensitivity of the Development Site, AKRF, Inc., prepared a Disturbance Memorandum and Preliminary Archaeological Assessment ("Disturbance Memorandum") of the Development Site in August 2020, the results of which are summarized below (see **Appendix B**).² The Disturbance Memorandum was designed to examine the land use and development history of the Development Site to identify areas of archaeological sensitivity (if any) and to determine whether additional research (e.g., a Phase 1A Archaeological Documentary Study or Phase 1B archaeological testing) is warranted. In a comment letter dated September 9, 2020 (see **Appendix B**), the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) determined that the Proposed Development would have no impacts on archaeological resources. In a comment letter dated October 14, 2020, LPC concluded that the Development Site does not possess archaeological significance (see **Appendix B**). Therefore, no additional archaeological analysis is warranted.

ARCHITECTURAL RESOURCES

To evaluate potential effects due to on-site construction activities, and also to account for visual or contextual impacts, the architectural resources study area has been defined as the area within an approximately 400-foot radius of the Development Site. The study area is roughly bounded by Luyster Creek (aka Steinway Creek) and vacant land to the north and west, Sterling Place to the east, and the mid-block between 19th and 20th Avenues to the south (see **Figure C-1**). As defined in the New York City Department of Building's (DOB) *Technical Policy and Procedure Notice (TPPN) #10/88*, adjacent construction is defined as any construction activity that would occur within 90 feet of an architectural resource.³ Chapter 33 of the New York City Building Code outlines measures to ensure protection of adjoining property and includes additional safeguards for historic structures located within 90 feet.

Consistent with the guidance of the 2020 *City Environmental Quality Review (CEQR) Technical Manual*, designated ("known") architectural resources that were analyzed include New York City Landmarks (NYCL), Interior Landmarks, Scenic Landmarks, New York City Historic Districts (NYCHD); resources calendared for consideration as one of the above by the New York City Landmarks Preservation Commission (LPC); resources listed on or formally determined eligible for inclusion on the State and National Registers of Historic Places (S/NR), or contained within a district listed on or formally determined eligible for listing on the S/NR; resources recommended

² AKRF, Inc. "Wildflower Studios; 1 Steinway Place (Block 814, Lot 10), Astoria, Queens County, New York: Disturbance Memorandum and Preliminary Archaeological Assessment." August 2020. Prepared for WF Industrial IV LLC c/o Wildflower Ltd LLC; New York, NY.

³ *TPPN #10/88* was issued by DOB on June 6, 1988, to supplement Building Code regulations with regard to historic structures. *TPPN #10/88* outlines procedures for the avoidance of damage to historic structures resulting from adjacent construction, defined as construction within a lateral distance of 90 feet from the historic resource.



0 200 FEET



Development Site



Study Area (400-foot perimeter)



Photograph View Direction and Reference Number



by the New York State Board for listing on the S/NR; and National Historic Landmarks (NHL). Additionally, a survey was conducted to identify any previously undesignated properties in the study area that appear to be potentially eligible for NYCL designation or S/NR listing (“potential architectural resources”).

Consistent with the guidance of the *CEQR Technical Manual*, in order to determine whether the Proposed Development could potentially affect architectural resources, this attachment considers whether the Proposed Development would result in a physical change to any resource or to the setting of any resource (such as context or visual prominence), and, if so, whether the change is likely to alter or eliminate the significant characteristics of the resource that make it important. More specifically, as set forth in the *CEQR Technical Manual*, potential impacts to architectural resources may include the following:

- Physical destruction, demolition, damage, alteration, or neglect of all or part of an historic property;
- Changes to an architectural resource that cause it to become a different visual entity;
- Isolation of the property from, or alteration of, its setting or visual relationships with the streetscape, including changes to the resource’s visual prominence;
- Introduction of incompatible visual, audible, or atmospheric elements to a resource’s setting;
- Replication of aspects of the resource so as to create a false historical appearance;
- Elimination or screening of publicly accessible views of the resource;
- Construction-related impacts, such as falling objects, vibration, dewatering, flooding, subsidence, or collapse; and
- Introduction of significant new shadows, or significant lengthening of the duration of existing shadows, over an historic landscape or on an historic structure (if the features that make the resource significant depend on sunlight) to the extent that the architectural details that distinguish that resource as significant are obscured.

C. EXISTING CONDITIONS

ARCHAEOLOGICAL RESOURCES

The existing conditions of the Development Site/archaeological resources study area were documented in the Disturbance Memorandum prepared in August 2020. The Disturbance Memorandum assessed the Development Site’s precontact (Native American) and historic period archaeological sensitivity. It documented known archaeological sites in the vicinity of the Development Site, described the Development Site’s environmental setting, summarized the Development Site’s development history, and assessed the extent to which the Development Site has been disturbed. The conclusions of the Disturbance Memorandum are summarized below.

ASSESSMENT OF LANDSCAPE MODIFICATION

The memorandum concluded that the Development Site was historically inundated marshland adjacent to what is now Luyster Creek to the west of the Development Site. The wetland would have formed as a result of rising sea levels several thousand years ago. The landscape of the Development Site was extensively modified through landfilling in association with the construction of the Steinway & Sons piano manufacturing plant in the 1870s. The factory was expanded many times during the 19th and 20th centuries and many buildings and infrastructure associated with the plant were constructed on the Development Site throughout the historic period.

The Disturbance Memorandum included a thorough review of more than sixty soil boring logs in an attempt to identify the extent of landscape modification and disturbance across the Development Site. Some of the borings included deposits associated with peat or organic clay containing vegetation. A dense, discrete layer of such material can sometimes represent the original base layer of a marsh or wetland prior to landfilling activities. However, it was determined that the borings do not appear to depict a consistent peat layer across the Development Site. Previous development activities and landscape modification may have therefore resulted in the disturbance and/or redeposition of peat and organic material in different portions of the Development Site, although such a layer may be preserved in isolated places.

PRECONTACT ARCHAEOLOGICAL SENSITIVITY

The precontact sensitivity of sites in New York City is generally evaluated by the site's proximity to level slopes, water courses, well-drained soils, and previously identified precontact archaeological sites. Furthermore, precontact archaeological sites are generally found at shallow depths, usually within 5 feet of the original ground surface. As documented in the Disturbance Memorandum, numerous precontact archaeological sites have been identified within one mile of the Development Site, which was in relatively close proximity to the waterfront. While the Development Site was formerly inundated marshland, it may have been dry, inhabitable coastal land prior to the rise of sea levels around 3,000 years ago. The Development Site would therefore have been an attractive setting for a long- or short-term occupation site or resource processing location. However, as described previously, the assessment of landscape modification determined that a consistent, intact peat or organic clay layer is not present across the entirety of the Development Site. The Development Site was therefore determined to have low sensitivity for precontact archaeological resources.

HISTORIC PERIOD ARCHAEOLOGICAL SENSITIVITY

As described above, the Development Site was occupied by the Steinway & Sons Rikers Avenue piano manufacturing plant, which operated there through the 21st century. Portions of the Development Site have been redeveloped at various times, with the most recent developments occurring in the southern half of the Development Site, which was used for lumber storage until the early- to mid-20th century. The Disturbance Memorandum determined that much of the historic ground surface has been disturbed as a result of the construction and demolition of buildings, streets, utilities, and grading/paving. Given the disturbance of the Development Site and the absence of historic period development with the exception of the Steinway plant, the Development Site was determined to have low sensitivity for archaeological resources associated with the historic period.

ARCHITECTURAL RESOURCES

DEVELOPMENT SITE

As noted above, the Development Site contained buildings formerly associated with the Steinway Piano factory, the majority of which have been demolished, and the site is largely vacant, with paved and unpaved areas (see **Figure C-2**). In a comment letter dated September 9, 2020, OPRHP determined that no historic properties, including historic resources, would be affected. In addition, LPC issued comments on October 14, 2020 determining that the Development Site has no architectural significance (see **Appendix B**). Therefore, the Development Site does not contain any architectural resources.



View northeast across Development Site 1



View along waterfront portion of the Development Site 2

STUDY AREA

There are no known architectural resources in the study area and no potential architectural resources have been identified in the study area. The study area includes an energy power plant to the northeast of the Development Site; vacant land to the north of the Development Site; several one- and two-story industrial buildings to the south and west of the Development Site; a one-story L-shaped commercial building to the southwest; and paved parking and storage lots among the buildings. The power plant's large cylindrical fuel storage tanks (located adjacent to the northern side of the Development Site) were built in the early 2000s, replacing earlier structures at that site. The industrial buildings south of 19th Avenue were built in the 1930s through 1970s and have been altered over time. The commercial building was built in the 1970s and altered in the 1980s and early 2000s. These buildings are not architecturally or culturally distinctive.

Located east of the Development Site is a grouping of buildings associated with the Steinway Piano factory complex at 18-1 Steinway Place (Block 814, Lot 1) (see **Figures C-1 and Figures C-3 and C-4**). Steinway & Sons, which was founded in 1851 by Heinrich Engelhard Steinweg (anglicized to Henry Steinway), relocated its factory from Manhattan to a large waterfront site in Astoria in the 1870s. Over time, the company grew into a leading piano manufacturer in the United States.

The factory complex in the study area consists of a large grouping of interconnected buildings that were built between the late 19th century and mid-20th century as the Steinway Piano factory expanded (see **Figure C-1**). Located closest to the Development Site is a large 1960s two-story brick-faced industrial building with small, irregularly-spaced window openings. The center portion of the complex includes three industrial buildings whose visibility is limited by the adjacent buildings in the complex. These center buildings are: a late 19th century four-story long, rectangular machinery and cabinetry building that is faced in brick, with an arched roof and small paired window openings; a mid-20th century four-story brick-faced warehouse with large window openings and a large footprint; and a five-story reinforced concrete building with a rectangular footprint that was built in 1912. The late 19th century building was altered in the 1960s with the construction of two new buildings that abut the 19th century building to allow for interior connections among these buildings. The 1912 building was also altered to connect to the 1960s buildings to the east and south. A grouping of one- to four-story brick-faced older industrial buildings and brick chimneys is located at the north of the complex and connect to the older buildings in the complex. The easternmost building in the complex is a large, 1960s rectangular two- and four-story office building that fronts on Steinway Place. The building is faced in brick with banded window openings. This building connects to the four-story 1960s building to the west and the 1912 rectangular building to the north (see **Figures C-3 and C-4**).

The Steinway Piano factory complex includes older and modified buildings as well as more recently constructed buildings. The integrity and setting of the Steinway Piano factory has been substantially altered with the removal of the vacant buildings that formerly occupied the western portion of the complex (the Development Site). The historic integrity of the factory buildings in the study area has also been compromised through substantial alterations to integrate the older factory buildings with the larger buildings built in the 1960s. Further, the 1960s buildings are largely utilitarian, industrial buildings that are not architecturally distinctive. While the primary entrance to the Steinway Piano factory that fronts on Steinway Place has a decorative door surround and a broken pediment that allude to earlier periods of architectural history, they do not represent the 1960s architecture of this part of the building complex. Therefore, the Steinway Piano factory complex does not appear to meet eligibility criteria for NYCL designation or S/NR

Source: BIG



Steinway Piano Factory, view west on Steinway Place

3

Source: BIG



Steinway Piano Factory, view northwest from 19th Avenue

4



Steinway Piano Factory, view northeast from 19th Avenue 5

listing. As per comments from OPRHP and LPC dated September 9, 2020 and October 14, 2020, respectively, no architectural resources would be affected by the Proposed Development (see **Appendix B**).

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

DEVELOPMENT SITE

ARCHAEOLOGICAL RESOURCES

The Disturbance Memorandum (see **Appendix B**) concluded that the Development Site has low sensitivity for archaeological resources associated with the precontact and historic occupation of the area. The conclusions of the memo were approved by OPRHP and LPC in comment letters dated September 9, 2020 and October 14, 2020, respectively (see **Appendix B**). As the Development Site is not considered to be archaeologically sensitive, no archaeological resources would be disturbed in the future without the Proposed Development.

ARCHITECTURAL RESOURCES

In the future No Action condition, a four-story, approximately 150-foot-tall (to the top of the bulkhead) last-mile distribution center would be built on the Development Site. The facility would include an approximately 523,900-gsf distribution warehouse and storage facility with office and support space, accessory parking, and delivery vehicle storage. With the No Action scenario distribution center, the waterfront area on the Development Site would be planted with native coastal plantings and used for stormwater retention, but would not be accessible to the public. The No Action development would be completed by the 2023 analysis year.

STUDY AREA

As described in Attachment A, “Land Use, Zoning, and Public Policy,” there is one development project in the study area that is expected to be complete by the 2023 Build year. It is anticipated that the New York City Department of Sanitation (DSNY) will construct an approximately 114,000-gsf garage and storage facility with a salt shed at 31-11 20th Avenue. An access road would be located southwest of the Development Site, across 19th Avenue. This facility would replace an existing DSNY garage at that location. As there are no known or potential architectural resources on the Development Site or in the study area, the No Action development would not affect any architectural resources.

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

The New York City Building Code provides some measures of protection for all properties against accidental damage from adjacent construction by requiring that all buildings, lots, and service facilities adjacent to foundation and earthwork areas be protected and supported. Chapter 33 of the New York City Building Code outlines measures to ensure protection of adjoining property and includes additional safeguards for historic structures located within 90 feet, by requiring the

monitoring of historic structures within 90 feet from the edge of a lot where excavation is occurring during the course of excavation work.

E. PROBABLE IMPACTS OF THE PROPOSED DEVELOPMENT

ARCHAEOLOGICAL RESOURCES

The Disturbance Memorandum (see **Appendix B**) concluded that the Development Site has low sensitivity for archaeological resources associated with both the precontact occupation of the Development Site and the historic period. In a comment letter dated September 9, 2020 (see **Appendix B**), the OPRHP determined that the Proposed Development would have not result in impacts on archaeological resources. In a comment letter dated October 14, 2020, LPC also concluded that the project site does not possess archaeological significance (see **Appendix B**). Therefore, no further archaeological analysis is warranted and the Proposed Development would not result in adverse impacts on archaeological resources.

ARCHITECTURAL RESOURCES

DEVELOPMENT SITE

In the future with the Proposed Actions, the Applicant would redevelop the Development Site with an approximately 160-foot-tall (to the top of the bulkhead), seven-story film and television production studio on the Development Site and a publicly accessible waterfront access area along Luyster Creek, with a circulation path accessed from the terminus of 19th Avenue (from the sidewalk on the north side of the street), seating, and landscaping. As noted above, in a September 9, 2020 comment letter, OPRHP determined that no historic properties, including historic resources, would be affected. In addition, LPC issued comments on October 14, 2020 determining that the Development Site has no architectural significance (see **Appendix B**). As there are no architectural resources on the Development Site, the Proposed Development would have no adverse impacts on such resources.

STUDY AREA

As there are no known or potential architectural resources in the study area, the Proposed Development would not result in any adverse impacts to any such resources.

Overall, the Proposed Actions would not result in any adverse impacts to historic and cultural resources (see **Appendix B**). *

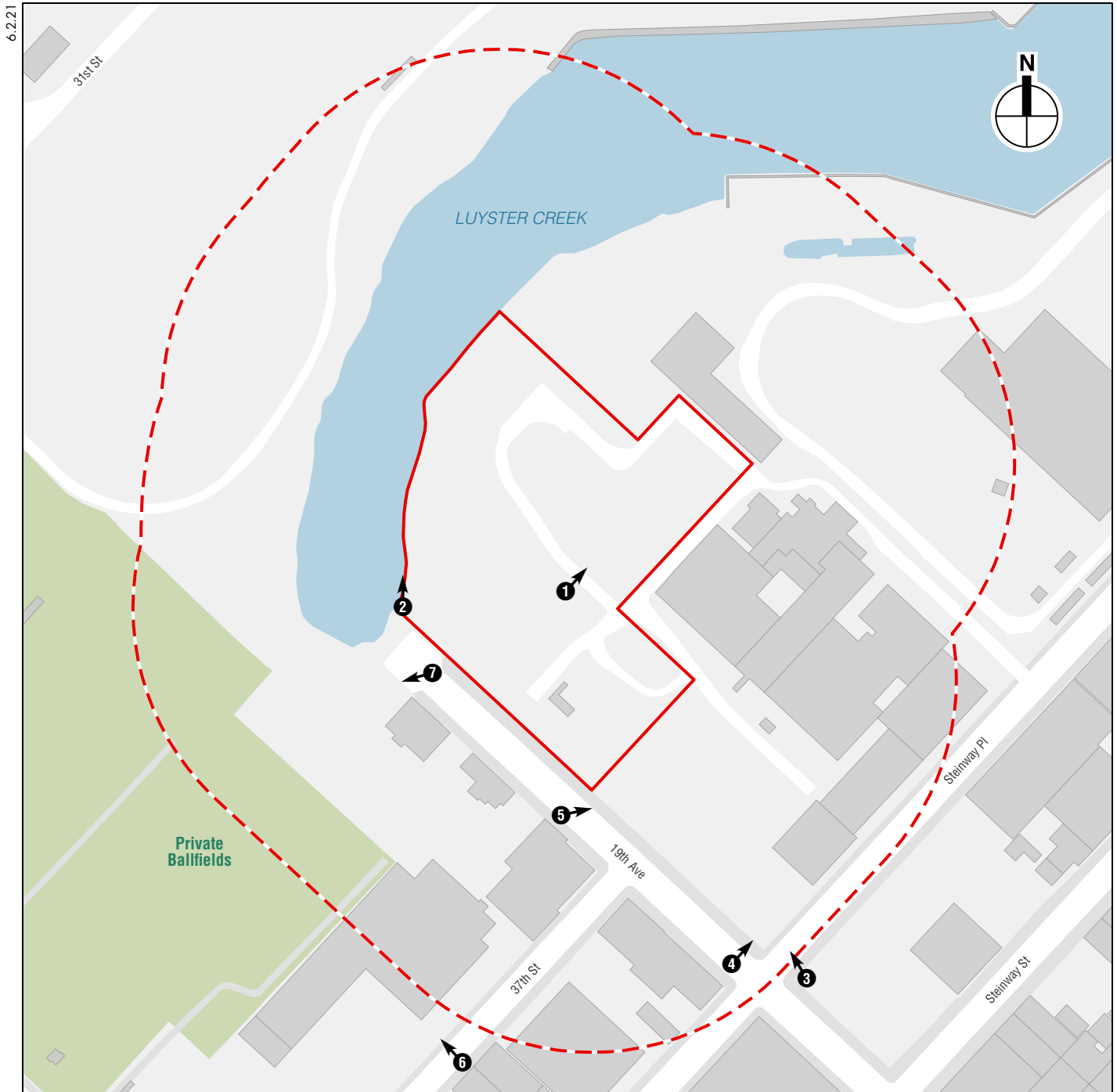
A. INTRODUCTION

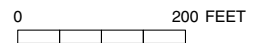
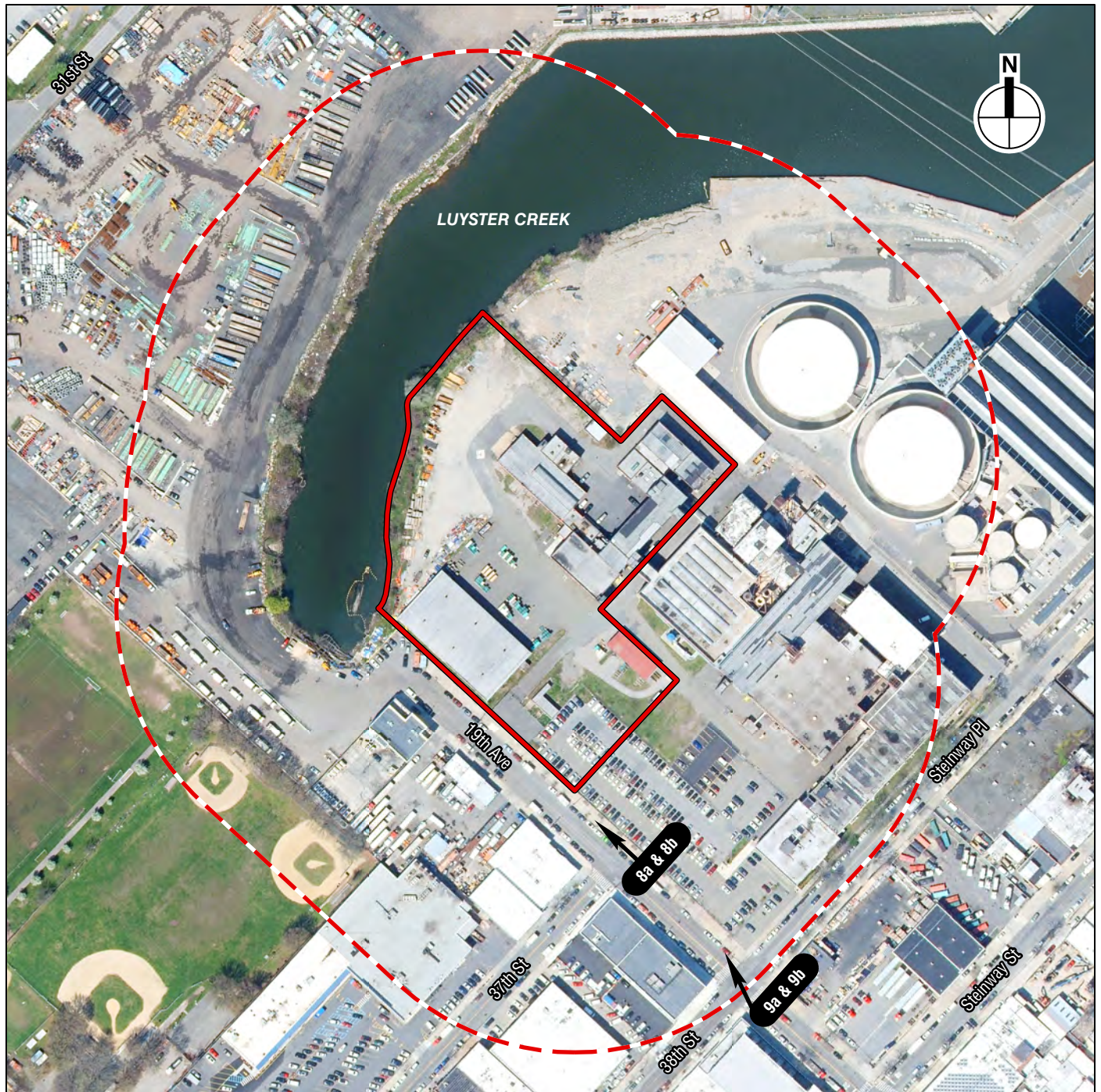
This attachment considers the potential of the Proposed Development to affect urban design and visual resources. The Development Site is located at 35-15 19th Avenue (Block 814, Lot 10; the “Development Site”) at the western terminus of 19th Avenue, adjacent to Luyster Creek (aka Steinway Creek) in Astoria, Queens (see **Figures D-1 and D-2**). The Development Site contained buildings formerly associated with the Steinway Piano factory, the majority of which have been demolished, and the site is largely vacant, with paved and unpaved areas. The Development Site also includes approximately 500 linear feet of shoreline along Luyster Creek to the north that is a tidal wetland within the jurisdiction of the New York State Department of Environmental Conservation (DEC).

As described on Page 1a, Project Description, to facilitate the Proposed Development, the Applicant is seeking several discretionary approvals—including a bulk modification special permit, authorizations for modification of waterfront public access area and supplemental public access area requirements, a certification related to Waterfront Zoning regulations, a permit to construct within the DEC Tidal Wetlands adjacent area jurisdiction, and permits for in-water construction activities that are regulated by DEC and the U.S. Army Corps of Engineers (USACE) (the “Proposed Actions”).

With the Proposed Actions, the Applicant proposes to build a film and television production studio on the Development Site. The building would be a seven-story, approximately 160-foot-tall (to the top of the bulkhead) production studio (Use Group 10A), totaling approximately 715,000 gross square feet (gsf), including accessory off-street parking (310 attended parking spaces) and loading, and an approximately 30,600-square-foot (sf) waterfront access area along Luyster Creek (the “Proposed Development”). Absent the Proposed Actions, the Applicant will construct a four-story, approximately 150-foot-tall (to the top of the bulkhead), last-mile distribution center totaling approximately 518,849 gsf, including distribution/warehouse, delivery vehicle storage, and parking (the “as-of-right development”).

As defined in the 2020 *City Environmental Quality Review (CEQR) Technical Manual*, urban design is the totality of components that may affect a pedestrian’s experience of public space. These components include streets, buildings, visual resources, open spaces, natural resources, and wind conditions. An urban design assessment under CEQR must consider whether and how a project may change the experience of a pedestrian in a project area. The *CEQR Technical Manual* guidelines recommend the preparation of a preliminary assessment of urban design and visual resources, followed by a detailed analysis if warranted, based on the conclusions of the preliminary assessment. The analysis provided below addresses urban design characteristics and visual resources for existing conditions, the Future without the Proposed Actions (the “No Action” condition), and the Future with the Proposed Actions (the “With Action” condition) in 2023 when development facilitated by the Proposed Actions is expected to be completed.





As described below, this preliminary assessment concludes that the Proposed Actions would not result in any significant adverse impacts to urban design or visual resources. Development facilitated by the Proposed Actions would be compatible with the urban design of the study area and would not adversely impact the pedestrian experience, and no further analysis is warranted.

B. METHODOLOGY

Based on the *CEQR Technical Manual*, a preliminary assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning. Examples include projects that permit the modification of yard, height, and setback requirements, and projects that result in an increase in built floor area beyond what would be allowed “as-of-right” or in the future without the Proposed Development. As detailed below, with the Proposed Actions, the Proposed Development would include physical alterations observable by pedestrians that are not allowed by existing zoning. Therefore, the Proposed Development meets the threshold for a preliminary assessment of potential impacts to urban design and visual resources.

According to the *CEQR Technical Manual*, the study area for urban design is the area where the project may influence land use patterns and the built environment, and is generally consistent with the information used for the land use analysis. For visual resources, the view corridors within the study area, from which such resources are publicly viewable, should be identified. Consistent with CEQR methodologies, the study area for the urban design and visual resources analysis has been defined as a 400-foot radius around the Development Site, consistent with the analysis of land use, zoning, and public policy. The study area is roughly bounded by Luyster Creek (aka Steinway Creek) and vacant land to the north and west, Steinway Place to the east, and the mid-block area between 19th and 20th Avenues to the south (see **Figures D-1 and D-2**).

The *CEQR Technical Manual* recommends an analysis of pedestrian wind conditions for projects “involving multiple, tall buildings at or in close proximity to waterfront sites [that] may result in an exacerbation of wind conditions due to ‘channelization’ or ‘downwash’ effects that may affect pedestrian comfort or safety.” Because the Proposed Actions would result in the construction of a single building with a maximum height of approximately 145 feet at the rooftop (160 feet to the top of the bulkhead), the proposed project does not meet the criterion of a project involving multiple, tall buildings. Further, the Proposed Development would not be located near other tall buildings; therefore, channelization of wind, which can result in accelerated wind conditions near a building, would not occur. In addition, while the proposed building would be taller than other existing study area buildings, it would be of a scale and form that would not have the potential to significantly alter wind conditions in the surrounding area. The building would not have tall sheer facades that would intercept winds at higher elevations and create a downwash effect.

Although the Development Site is located at the terminus of Luyster Creek, a narrow channel, it is not located along an open waterway. Pedestrian wind studies are typically performed for sites adjacent to or near much larger open bodies of water, e.g., the Hudson River or East River. Further, the Development Site is located in an area that has limited pedestrian activity, as this area is largely industrial and is characterized by vehicular traffic, including the areas immediately to the west, north, and east of Luyster Creek. For these reasons, a pedestrian wind analysis is not warranted.

C. EXISTING CONDITIONS

URBAN DESIGN

DEVELOPMENT SITE

The Development Site (Block 814, Lot 10) is an irregularly-shaped site adjacent to Luyster Creek that contains approximately 228,693 sf of lot area¹ and is within an M3-1 zoning district, a manufacturing district that allows for heavy industrial uses that that can include power plants, fuel supply depots, and commercial uses. As noted above, the Development Site contained buildings formerly associated with the Steinway Piano factory, the majority of which have been demolished, and the site is largely vacant, with paved and unpaved areas (see **Figures D-1 through D-3**).

The Development Site includes approximately 500 linear feet of shoreline along Luyster Creek, which is characterized by concrete, asphalt, and stone debris (see View 2 of **Figure D-3**). The waterfront area includes tidal wetlands that are located within the jurisdiction of DEC. The Development Site has an approximately 410-foot-long frontage on 19th Avenue; a chainlink fence establishes the boundary of the Development Site on 19th Avenue. There are some street trees on the sidewalk adjacent to the Development Site.

STUDY AREA

The discussion below focuses first on the area's urban design—its basic layout and structures—and then describes its view corridors and visual resources.

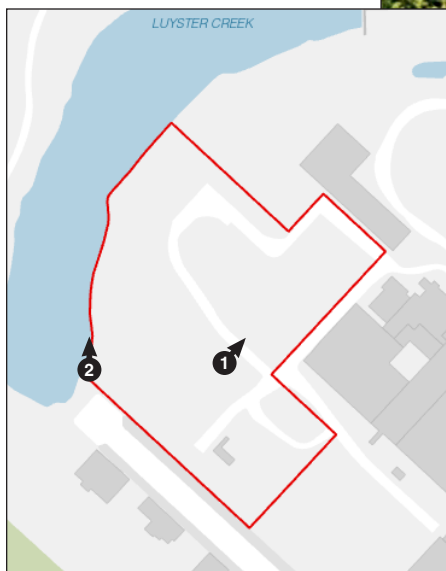
Streets and Streetscape

The study area includes short segments of streets that are part of the rectilinear street grid that continues beyond the study area south of the Development Site. There are no mapped streets in the study area north of the Development Site: this part of the study area includes winding access roads within large industrial parcels to the northwest and northeast of the Development Site (see **Figures D-1 and D-2**).

Immediately south of the Development Site is 19th Avenue, a wide street (approximately 80 feet wide) that extends northwest-southeast and terminates at Luyster Creek southwest of the Development Site. 19th Avenue carries two-way vehicular traffic and has curbside parking. The streetscape of 19th Avenue includes a large surface parking lot south of the Development Site, overhead power lines and poles, small street trees, and one- and two-story industrial buildings with large footprints. 19th Avenue has an inconsistent streetwall, with vacant lots or parking lots interrupting the streetwall on the south side of 19th Avenue; the north side of 19th Avenue within the study area does not have a built streetwall (see **Figures D-1 and D-2, and View 3 of Figure D-4**).

Steinway Place is an approximately 70-foot-wide street that extends northeast-southwest in the study area. Steinway Place is not a through-street; it terminates east of the Development Site. Steinway Place carries two-way traffic, with curbside parking located on both sides of the street. The streetscape of Steinway Place includes narrow sidewalks, mature street trees, overhead power lines and poles, and narrow grassy areas with mature trees between the sidewalk and the street

¹ The Development Site is part of a single zoning lot comprised of the Development Site and the Steinway Piano Factory (Block 814, Tax Lot 1).



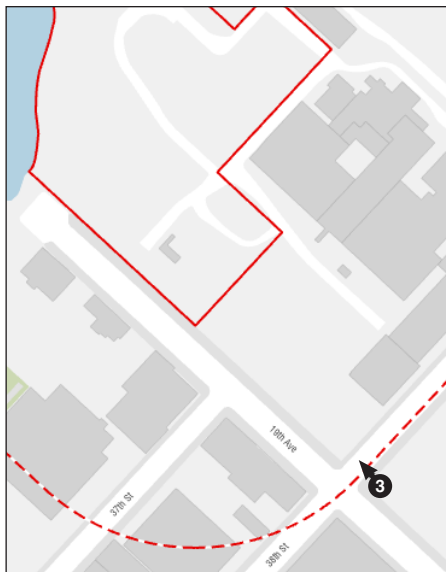
View northeast across Development Site 1



View along waterfront portion of the Development Site 2



View northwest on 19th Avenue from Steinway Place **3**



adjacent to the Steinway Piano factory buildings (see View 4 of **Figure D-5**). Southwest of 19th Avenue, the name of Steinway Place changes to 38th Street.

A small segment of 37th Street is in the study area south of 19th Avenue (see **Figures D-1 and D-2**). 37th Street is a 60-foot-wide street that carries two-way traffic and has curbside parking. It has several wide curb cuts and mature trees in tree pits.

Street furniture in the study area is limited and includes wooden poles with cobra head street lamps, fire hydrants, garbage cans, overhead utility lines and poles. Street trees throughout the study area include both smaller trees and some mature street trees. There is minimal pedestrian activity throughout the study area.

Natural Features and Open Space

The topography of the study area is generally flat. Luyster Creek extends into the northern portion of the study area and terminates at the foot of 19th Avenue adjacent to the Development Site. The shoreline along Luyster Creek is largely characterized by concrete, asphalt, and stone debris, along with grassy areas and some small trees (see View 2 of **Figure D-3**). A small portion of a privately owned park with baseball diamonds and a soccer field is located within the southwestern portion of the study area, south of 19th Avenue. As the park is not publicly accessible, the ballfields are not considered public open space. Other natural features in the study area are limited to street trees.

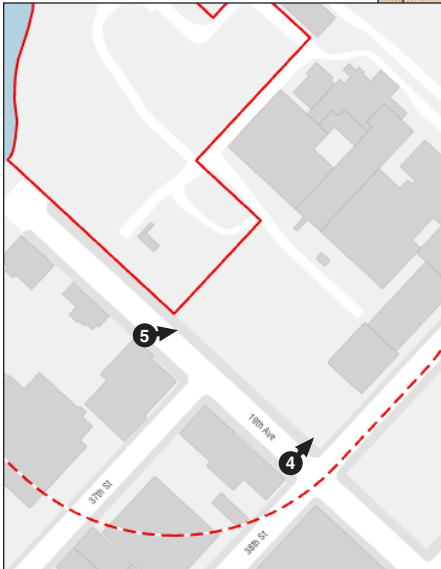
Built Environment

The study area is characterized by a mix of industrial, manufacturing, and commercial buildings; utility facilities; vacant land; Luyster Creek; and surface parking lots.

The remainder of Block 814, immediately east of the Development Site, is a grouping of interconnected buildings associated with the Steinway Piano factory on Lot 1 (see Views 4 and 5 of **Figure D-5**). The Steinway Piano Factory lot is part of a single zoning lot with the Development Site, and the Proposed Development will include development rights to be purchased from the lot; however, no changes to the lot will occur with the Proposed Actions. The Proposed Actions do not include any zoning text or map amendments that would alter the zoning on the lot. The buildings in the Steinway Piano factory complex were built in the late 19th century through the mid-20th century. The building located closest to the Development Site is a large mid-20th century two-story brick-faced industrial building with small window openings. The center portion of the complex includes three industrial buildings whose visibility is limited by the adjacent buildings in the complex. These center buildings are: a late 19th century four-story long, rectangular brick-faced building with an arched roof and small paired window openings; a mid-20th century four-story brick-faced warehouse with large window openings and a large footprint; and a 1912 five-story reinforced concrete building with a rectangular footprint. A grouping of one- to four-story brick-faced older industrial buildings and brick chimneys is located at the north of the complex that connect to the older buildings in the complex. The easternmost building in the complex is a large, mid-20th century rectangular two- and four-story office building that fronts on Steinway Place. The building is faced in brick with banded window openings. This building connects to the four-story mid-20th century building to the west and the 1912 rectangular building to the north. Together, the interconnected buildings have a large footprint and are set back from the sidewalk by a large parking lot on 19th Avenue and narrow grassy yard areas on Steinway Place.

The remainder of the study area is also characterized by both older and newer industrial buildings and an energy power plant. These buildings are generally one- and two-story buildings with large

Source: BIG



Steinway Piano Factory, view northwest from 19th Avenue

4



Steinway Piano Factory, view northeast from 19th Avenue

5

footprints, built to the sidewalk, and used for storage, manufacturing, and transportation. These buildings are concentrated on 19th Avenue and 37th and 38th Streets. The older buildings are generally faced in masonry while the newer buildings have metal and masonry cladding. The energy power plant is located on a large parcel northeast of the Development Site that includes two large, approximately 45-foot-tall cylindrical fuel tanks and an approximately 87- and 92-foot-tall, L-shaped building (see View 1 of **Figure D-3**).

Part of a one-story, L-shaped commercial building is located in the southwest portion of the study area. It comprises connected buildings with projecting awnings over paved sidewalks and is set back from 37th Street by surface parking lots (see View 6 of **Figure D-6**).

Several surface parking lots and storage lots are located throughout the study area, including a large parking lot on 19th Avenue southeast of the Development Site and a surface parking area and access road associated with a New York City Department of Sanitation (DSNY) site across 19th Avenue from the Development Site (see View 7 of **Figure D-6**). These lots have chainlink fencing at the sidewalk.

VIEW CORRIDORS AND VISUAL RESOURCES

DEVELOPMENT SITE

As described above, the Development Site contained buildings formerly associated with the Steinway Piano factory, the majority of which have been demolished, and the site is largely vacant, with paved and unpaved areas. The 500-linear-foot shoreline along Luyster Creek is characterized by concrete, asphalt, and stone debris and is, therefore, not considered a visual resource. Views from the waterfront include the large vacant parcel across Luyster Creek from the Development Site to the northwest and the energy power plant to the northeast. These views are not considered view corridors or visual resources.

Views from the sidewalks adjacent to the Development Site include several industrial and manufacturing buildings across 19th Avenue, along with an access point to an industrial site northwest of the Development Site. Views northeast from the Development Site are limited by the two large cylindrical fuel storage tanks that characterize the power plant site on the immediately adjacent parcel. Views southeast from the Development Site include the varied structures on the Steinway Piano factory complex—older three- and four-story brick-faced and concrete buildings with large window openings and mid-20th century brick-faced buildings with banded window openings—along with a large paved parking lot. Other views from the Development Site include long views southeast on 19th Avenue that include the one- and two-story industrial buildings that characterize this avenue.

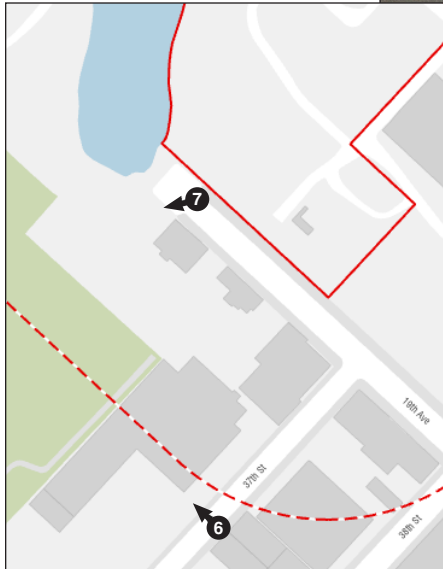
STUDY AREA

Views in the study area vary. Views on 19th Avenue include industrial buildings and surface lots that line the street. While southwest views are long and uninterrupted, northeast views terminate at plantings at the end of 19th Avenue where it meets Luyster Creek. Views southwest on 37th Street and 38th Street/Steinway Place are long and include industrial buildings that line the streets while northeast views on these streets terminate at buildings that are part of large industrial complexes (see View 3 of **Figure D-4** and Views 4 and 5 of **Figure D-5**). There are no publicly accessible views to Luyster Creek from the study area. While longer views are available, these views do not include any visually prominent structures or visual resources as these views are characterized by the industrial buildings that line these streets. While the Steinway Piano factory



View northwest to the L-shaped commercial building on 37th Street

6



View southwest to the surface parking area and access road on 19th Avenue

7

buildings are visible in northeast views from streets adjacent to the factory, the buildings are not visually prominent or architecturally distinctive. The factory is not considered a visual resource. Therefore, there are no visual resources in the study area.

D. FUTURE WITHOUT THE PROPOSED DEVELOPMENT

DEVELOPMENT SITE

Absent the Proposed Development, the Applicant would construct an as-of-right four-story, approximately 110-foot-tall (to the top of the roof) (approximately 150-foot-tall to the top of the bulkhead) last-mile distribution center (the “No Action” development). The distribution center would have an irregular footprint and would contain approximately 518,849 gsf, including a distribution/warehouse, storage space, and accessory office and employee back-of-house space; accessory parking (229 required unattended spaces); and delivery vehicle storage (see EAS Figures 7 and 8 and **Figures D-8 and D-9**). The facility would have an approximately 350-foot frontage on 19th Avenue and would be set back from the 19th Avenue sidewalk by approximately 10 feet. The facility would have an approximately 70-foot-tall streetwall, with an approximately 10-foot wide setback above the second floor (with a roof height of approximately 90 feet); the fourth floor (with a roof height of approximately 110 feet) would be set back an additional 50 feet. The setbacks at the overall roof height and the small rectangular form of the bulkhead would have minimal visibility from nearby vantage points on 19th Avenue and 38th Street (see **Figures D-8 and D-9**). The facility would have three garage access points and a drop off entrance/exit driveway on 19th Avenue.

This Use Group 16 facility would be exempt from the bulk and waterfront regulations of ZR Article VI, Chapter 2 and would fully comply with the underlying M3-1 district regulations. The No Action distribution center would be set back from the Luyster Creek shoreline. The waterfront area on the Development Site would be planted with native coastal plantings and used for stormwater retention, but would not be accessible to the public; the plantings would not require a DEC permit and the stormwater retention system would not require construction of new outfalls requiring a permit from USACE (see EAS Figures 7 and 8 and **Figure D-7**). The No Action distribution center would not require any shoreline improvements and therefore would not require a DEC Article 15 permit or USACE permit. In addition, the No Action distribution center would be located outside of the DEC’s tidal wetlands jurisdiction and would not require a DEC Article 25 permit. Finally, a DEC State Pollutant Discharge Elimination System (SPDES) permit is not required for the dewatering expected to occur during construction of the No Action distribution center.² Therefore, no state or federal permitting approvals are required for the No Action scenario. The No Action development would be completed by the 2023 analysis year.

EFFECTS OF OTHER FUTURE PROJECTS

As described in Attachment A, “Land Use, Zoning, and Public Policy,” there is one development project in the study area that is expected to be complete by the 2023 Build Year. It is anticipated that the New York City Department of Sanitation (DSNY) will construct an approximately 114,000-gsf garage and storage facility with a salt shed at 31-11 20th Avenue. An access road

² In a Notice Of Determination of No Jurisdiction dated October 14, 2020, DEC concluded that they would not take jurisdiction over the discharge of the groundwater recovered during dewatering on the Development Site.

Source: BIG Architects



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Production Studio, view from 19th Avenue

Source: BIG Architects



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

Proposed Production Studio, view from 19th Avenue toward entrance and waterfront area

Urban Design and Visual Resources – Proposed Production Studio



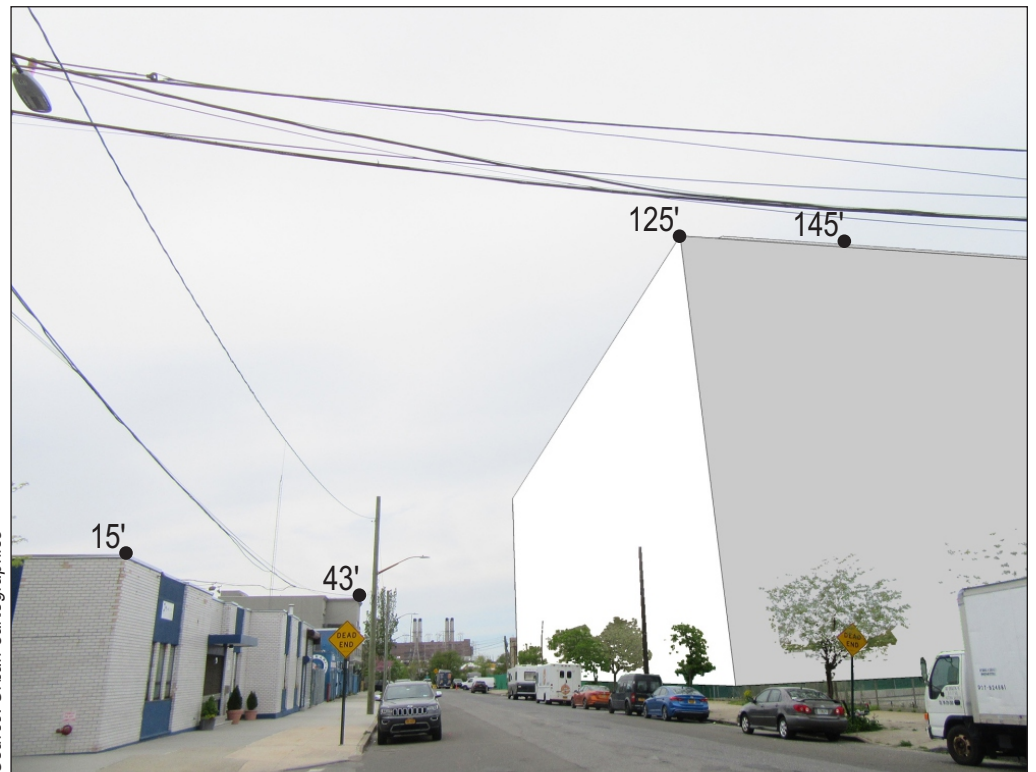
Source: Urban Cartographics



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

No Action Scenario **8a**

Source: Urban Cartographics



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

With Action Scenario **8b**

Urban Design and Visual Resources – Comparative Views
Northwest on 19th Avenue toward the Development Site



Source: Urban Cartographics



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

No Action Scenario 9a

Source: Urban Cartographics



NOTE: FOR ILLUSTRATIVE PURPOSES ONLY

With Action Scenario 9b

Urban Design and Visual Resources – Comparative Views
View northwest on 19th Avenue from
38th Street toward the Development Site
Figure D-9

would be located northwest of the Development Site, across 19th Avenue. This facility would replace an existing DSNY garage at that location.

E. PROBABLE IMPACTS OF THE PROPOSED DEVELOPMENT

The *CEQR Technical Manual* guidelines state that if the preliminary assessment shows that changes to the pedestrian environment are sufficiently significant to require greater explanation and further study, then a detailed analysis is appropriate. Examples include projects that would potentially obscure view corridors, compete with icons in the skyline, or make substantial alterations to the streetscape of a neighborhood by noticeably changing the scale of buildings. Detailed analyses are also generally appropriate for area-wide rezonings that include an increase in permitted floor area or changes in height and setback requirements, general large-scale developments, or projects that would result in substantial changes to the built environment of a historic district or components of a historic building that contribute to the resource's historic significance.

URBAN DESIGN

DEVELOPMENT SITE

As discussed in Attachment A, "Land Use, Zoning, and Public Policy," the Proposed Actions would facilitate the Proposed Development of a seven-story, approximately 145-foot-tall to the top of the roof (approximately 160-foot-tall to the top of the bulkhead) film and television production studio. The bulkhead would be located toward the waterfront side of the building, substantially limiting its visibility from the street from vantage points near the building on 19th Avenue, and also from longer views from 38th Street (see EAS Figures 9 and 10 and **Figures D-7 through D-9**). The production studio would have an irregular footprint and would contain approximately 715,000 gsf of media production studio facilities. The production studio would contain two stacked levels of 11 sound stages above one story of off-street parking and loading. The production studio would have an approximately 350-foot frontage on 19th Avenue and would be set back from the sidewalk by approximately 16 feet, which would provide an approximately 4,200-sf landscaped public access area adjacent to the existing sidewalk. The production studio's streetwall would rise to the full building height without setbacks. It would have three garage access points and a drop off entrance/exit driveway on 19th Avenue. It would also have accessory off-street parking (310 attended parking spaces) and loading. The production studio would be set back from the Luyster Creek shoreline and would include an approximately 30,600-sf publicly accessible waterfront access area along Luyster Creek, with a circulation path accessed from the terminus of 19th Avenue (from the sidewalk on the north side of the street), seating, and landscaping (see EAS Figures 9 and 10 and **Figures D-7 through D-9**).

The Proposed Actions include a special permit to modify maximum base height and maximum building height requirements to allow for the proposed approximately 145-foot-tall to the top of the roof (approximately 160-foot-tall to top of bulkhead) studio on the Development Site. The Proposed Actions also include modifications to waterfront requirements, including modifications to the maximum length of walls facing the shoreline to allow an approximately 475-foot wall along the building's waterfront yard, modifications to ground floor streetscape requirements, and modifications to requirements for waterfront public access area and supplemental public access areas (see EAS Figures 9 and 10 and **Figures D-7 through D-9**). In addition, the Proposed Actions

include a non-discretionary certification to confirm the plans for the Proposed Development comply with applicable waterfront zoning regulations, as modified.

With both the No Action distribution center and the With Action production studio, the Development Site would be redeveloped with a large, new building that would have an approximately 350-foot-wide streetwall on 19th Avenue, with vehicular and pedestrian entrances. While the No Action distribution center would have a roof height of approximately 110 feet (approximately 150 feet to the top of the bulkhead) and would have a setback above the second floor at 90 feet high, the With Action production studio would be modestly taller with a roof height of approximately 145 feet (approximately 160 feet to the top of the bulkhead) and would not have a setback, but would have a sloped roof at the sixth floor (at approximately 125 feet high) (see **Figures D-7 through D-9**). In addition, in contrast to the No Action development, the With Action development would include public space outside the building along 19th Avenue that would contribute to the experience of urban design of the Development Site. Further, while both the No Action and With Action developments would include improvements to the waterfront with new plantings, only the Proposed Development would provide public access to the waterfront area with an access point from 19th Avenue (see EAS Figures 7 through 10).

With the Proposed Actions, the Proposed Development would enliven the Development Site with publicly accessible components, including the public space outside the building along 19th Avenue and a waterfront access area along Luyster Creek, with a circulation path accessed from the terminus of 19th Avenue (from the sidewalk on the north side of the street), seating, and landscaping. In comparison, the No Action Development would not include any public space on 19th Avenue or any publicly accessible waterfront amenities (see EAS Figures 8 and 9 and **Figure D-7 through D-9**). These With Action project components would introduce new pedestrian activity to the Development Site and study area. Therefore, with the Proposed Actions, the Proposed Development would not result in any significant adverse impacts to urban design characteristics of the Development Site.

STUDY AREA

Both the No Action and With Action developments would be constructed on an existing block and would not entail any changes to streets or street patterns, public open space, or natural features in the study area.

Both the No Action distribution center and the With Action production studio would change the streetscape in the study area near the Development Site with the introduction of a tall, blocky building with a large footprint that would be sited adjacent to Luyster Creek. Both the No Action and With Action buildings would be taller than other industrial buildings in the study area. However, the large footprint and blocky massing of both buildings would be consistent with the urban design character of the study area's large industrial buildings. The two approximately 45-foot-tall cylindrical fuel storage tanks and approximately 87- and 92-foot-tall, L-shaped building on the power plant site to the northeast are larger structures in the study area (and just outside the study area) that have a different form and massing than other study area buildings. However, they contribute to the variety of built structures in the study area. While the new building would be taller than existing buildings in the study area, both the No Action and With Action buildings would contribute to the mix of older and newer industrial buildings and would be located among other large industrial buildings, warehouses, and structures, including the two large fuel storage tanks and L-shaped building to the northeast (see **Figures D-2 and D-9**). Further, the With Action production studio, in contrast to the No Action development, would include design elements that

would contribute to the pedestrian experience of urban design, including publicly accessible space on 19th Avenue adjacent to the Development Site and along the waterfront.

Like the No Action distribution center, it is anticipated that the Proposed Development would enhance the vitality, walkability, and visual character of the study area with a new active use. However, unlike the No Action development, the new publicly accessible space on 19th Avenue adjacent to the production studio and along the waterfront that would be created in the With Action development have been designed to positively contribute to the pedestrian experience of urban design near the Development Site.

VISUAL RESOURCES

DEVELOPMENT SITE

As described in “Existing Conditions,” there are no visual resources on the Development Site. Therefore, both the No Action distribution center and the With Action production studio would have no significant adverse impact on visual resources on the Development Site. Further, there are no views to any visual resources from the Development Site.

STUDY AREA

Since there are no visual resources or view corridors in the study area, the Proposed Development, like the No Action development, would not obstruct views to any such resources, nor would it adversely affect any view corridors.

Overall, the Proposed Development would not be expected to result in any significant adverse impacts to urban design or visual resources on the Development Site or in the study area, and therefore, no further analysis is required. *

A. INTRODUCTION

This attachment evaluates the potential impacts from the proposed development at 35-15 19th Avenue in Astoria, Queens (Block 814, Lot 10; the “Development Site”). With the Proposed Actions, the Applicant would construct a seven-story, 160-foot-tall (to top of bulkhead) media production studio, totaling 715,000 gross square feet (gsf), including accessory off-street parking and loading and an approximately 30,600 sf waterfront publicly accessible area along Luyster Creek (“the Proposed Development”). The waterfront publicly accessible area would include 1) approximately 18,300 square feet (sf) of coastal buffer plantings, 2) bioretention basins planted with native vegetation to accommodate stormwater generated by the Proposed Development, 3) pedestrian circulation path, seating, and amenities to provide access to the waterfront and an overlook platform at Luyster Creek, 4) removal of existing concrete, asphalt, stone debris, and dilapidated bulkhead remnants along the shoreline, and 5) a new protective rip-rap stone revetment comprising three feet of 12-inch to 24-inch armor stone laid upon stone bedding and geotextile fabric along 375 feet of the waterfront, and an earth stabilized precast retaining wall, 6 ft to 8 ft high, constructed atop existing timber cribbing and stone fill remnants along the remaining 175 feet of the waterfront. This attachment describes:

- The regulatory programs that protect surface and ground water resources, wetlands, floodplains, terrestrial and aquatic resources, threatened or endangered species, or other natural resources within the Development Site;
- The current condition of natural resources within the Development Site including aquatic and terrestrial biota, threatened or endangered species and species of special concern, surface and ground waters, water quality, and floodplain;
- The conditions of natural resources in the future without the Proposed Development (the “No Action” condition);
- The potential impact of the Proposed Development (the “With Action” condition) on natural resources; and
- The measures that would be developed and implemented, as necessary, to avoid, minimize, or mitigate any of the Proposed Development’s potential adverse effects on natural resources.

As described in this attachment, the Proposed Development would not result in any significant adverse impacts on natural resources including surface and ground water resources, wetlands, floodplains, terrestrial and aquatic resources, threatened or endangered species, or other natural resources within the project Development Site or in Luyster Creek. Planned improvements to the upland areas along the Luyster Creek shoreline and proposed stormwater management improvements would benefit both terrestrial and aquatic natural resources.

B. METHODOLOGY

The study area for the natural resources evaluated in this attachment is limited to the Development Site and the immediate vicinity. An exception was made for the identification of endangered and threatened species, which were evaluated for a distance of at least 0.5 miles from the Development Site. The study area for water quality and aquatic resources included the overall aquatic resources within Luyster Creek and the Upper East River.

Existing conditions and potential impacts for floodplain, water quality, and natural resources within the study area under the No Action and With Action conditions were assessed by characterizing and evaluating the following existing information and on-site investigations:

- Existing literature and database resources including New York City Department of Environmental Protection Harbor Water Quality Survey (NYCDEP 2018); New York State Department of Environmental Conservation (NYSDEC) Tidal Wetlands Inventory Maps; NYSDEC Environmental Resource Mapper and NYSDEC Environmental Assessment Mapper; New York Natural Heritage Program Nature Explorer Mapper; US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Maps; lists of federally threatened or endangered species for maintained by the USFWS for Queens County and by National Marine Fisheries Service (NMFS) for East River/Luyster Creek; Federal Emergency Management Agency (FEMA) flood insurance rate maps; other studies conducted within Bowery Bay and Upper East River; and Habitat enhancement/restoration and water quality improvement actions associated with New York/New Jersey Harbor Estuary Program, New York City Department of Environmental Protection (NYCDEP), and others.
- Field observations made at the Development Site on April 4, 2019 and May 29, 2020.
- Subsurface investigations including test borings and ground water observation wells conducted in July 2019 and February 2020.
- Hydrographic survey of Luyster Creek adjacent to the Development Site.

C. REGULATORY CONTEXT

The following federal and state legislation and regulatory programs pertain to activities in surface waters, wetlands, floodplains, and coastal areas and to the protection of species of special concern.

FEDERAL

- Clean Water Act (33 USC §§ 1251 to 1387): The Clean Water Act, also known as the Federal Water Pollution Control Act, is intended to restore and maintain the chemical, physical, and biological integrity of U.S. waters. It regulates point sources of water pollution (i.e., discharges of municipal sewage, industrial wastewater, stormwater, and the discharge of dredged or fill material into navigable waters and other waters of the U.S.) and non-point source pollution (i.e., runoff from streets, agricultural fields, construction sites, and mining). Section 404 of the Clean Water Act requires authorization from the Secretary of Army, acting through the U.S. Army Corps of Engineers (USACE), before dredged or fill material may be discharged into waters of the United States.
- Rivers and Harbors Act of 1899: Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the USACE for: the construction of any structure in or over any navigable waters of the U.S.; the excavation from or deposition of material in these waters; or any

obstruction or alteration in these waters. The purpose of this Act is to protect navigation and navigable channels.

- Magnuson-Stevens Act (16 USC §§ 1801 to 1883): The Magnuson-Stevens Act was established to protect and restore productive fisheries and rebuild depleted stocks in the U.S. The law establishes Essential Fish Habitat (EFH) for nearly 1,000 species of fish. For each species, the EFH is the waters and substrate necessary for fish for spawning, breeding, feeding, or growth to maturity. This law requires Federal agencies to consult with the National Oceanic and Atmospheric Administration's (NOAA's) NMFS on Federal actions that may adversely affect areas designated as EFH.
- Endangered Species Act of 1973 (16 USC §§ 1531 to 1544): The Endangered Species Act prohibits the importation, exportation, taking, possession, and other activities involving species covered under the Act. The Act also provides for the protection of critical habitats on which endangered or threatened species depend for survival. This Act requires Federal agencies to consult with the USFWS and NMFS for any actions that may jeopardize threatened or endangered species, or destroy or adversely modify their critical habitats.
- Fish and Wildlife Coordination Act (PL 85-624; 16 USC 661-667D): The Fish and Wildlife Coordination Act entrusts the Secretary of the Interior and NOAA with providing assistance to, and cooperation with, Federal, state, and public or private agencies and organizations, to ensure that wildlife conservation receives equal consideration and coordination with other water-resource development programs. These programs can include the control (such as a diversion), modification (such as channel deepening), or impoundment (such as a dam) of a body of water.

NEW YORK

- Protection of Waters, Article 15, Title 5 of the New York Environmental Conservation Law (ECL), Implementing Regulations 6 New York Code of Rules and Regulations (NYCRR) Parts 602 and 608: The Protection of Waters permit program regulates activities that affect surface waters (streams, lakes, and ponds) of New York State. Surface water and groundwater quality standards and effluent limitations in New York State are regulated pursuant to 6 NYCRR Parts 701 and 703. Part 701, Classifications—Surface Waters and Groundwater, assigns specific categories to New York waters. These standards establish the designated uses to be achieved and specify the water quality criteria necessary to protect surface waters.
- State Pollution Discharge Elimination System (SPDES) (ECL Article 3, Title 3, Article 15; Article 17, Titles 3, 5, 7, and 8; Article 21; Article 70, Title 1; Article 71, Title 19; Implementing Regulations 6 NYCRR Article 2 and 3): New York State has established the SPDES program for controlling wastewater and stormwater discharges to groundwaters and surface waters; the SPDES program is an authorized program under the Clean Water Act.
- Tidal Wetlands Act, Article 25, ECL, Implementing Regulations 6 NYCRR Part 661: Tidal wetlands regulations apply anywhere tidal inundation occurs on a daily, monthly, or intermittent basis, including along the tidal waters of the Hudson River. The regulations govern activities within mapped wetlands or a designated adjacent area.
- Endangered and Threatened Species of Fish and Wildlife; Species of Special Concern (ECL, Sections 11-0535 [1]-[2], 11-0536[2], [4], Implementing Regulations 6 NYCRR Part 182): These regulations prohibit the taking, import, transport, possession, or selling of any endangered or threatened species of fish or wildlife, or any hide, or other part of species listed in the regulations.

D. EXISTING CONDITIONS

This section describes the existing natural resource conditions within the terrestrial, aquatic, and water quality resources study areas.

FLOODPLAINS AND WETLANDS

The entirety of the 5.25-acre Development Site is within the 100-year Floodplain boundary (Special Flood Hazard Area AE), representing inundation by the 1% annual chance flood, as shown on **Figure E-1**. The existing base flood elevation (BFE) for the site is +13 feet North American Vertical Datum 1988 (NAVD88). No areas within the 500-year floodplain, representing inundation by the 0.2% annual chance flood, are identified on the Development Site.

The 5.25-acre Development Site includes approximately 500 linear feet of shoreline along Luyster Creek (also referred to as Steinway Creek). Luyster Creek is a 16.5-acre embayment that is a tributary to the Upper East River (NYSDEC Waterbody Segment ID # 1702-0010). The creek is approximately 0.5 miles in length and, in the vicinity of the Development Site, approximately 200 feet wide. Luyster Creek is shallow in the vicinity of the Development Site with most of the creek bottom exposed as mudflats and bars at mean lower low water (MLLW) tidal levels. The mean tidal range is 7.2 feet.

The shoreline features a steep slope that has been hardened with boulders, concrete and asphalt, and miscellaneous debris. The northern reach of the shoreline includes the deteriorated remnants of a cribbing-type retaining structure. The southern reach of the shoreline is less steep and is covered with rocks and construction debris of various sizes.

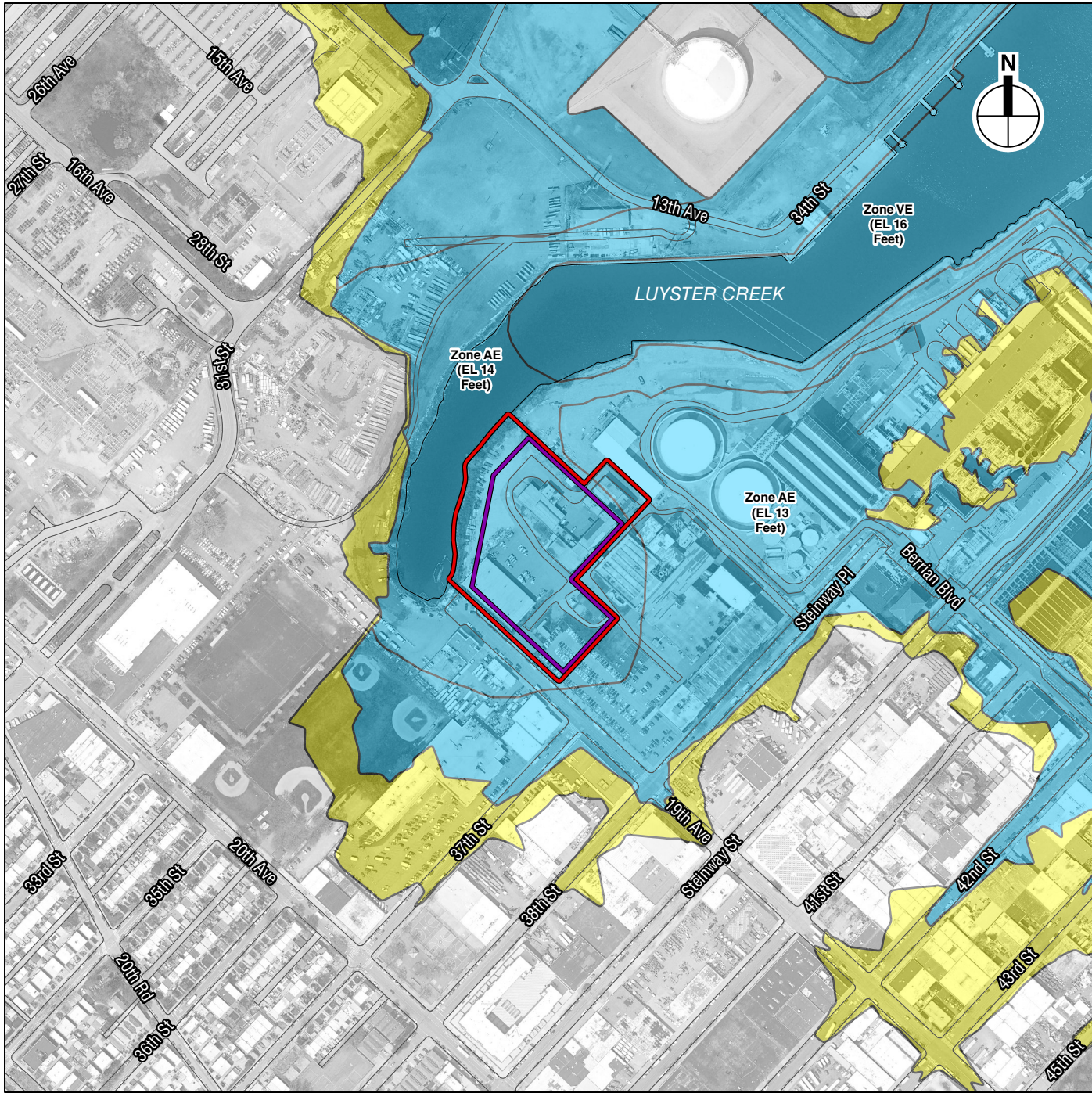
The shoreline and waters of Luyster Creek are identified on the New York State Tidal Wetlands Inventory Maps and USFWS NWI Maps. NYSDEC maps most of Luyster Creek as “Littoral Zone” tidal wetlands (see **Figure E-2**). The littoral zone includes all lands under tidal waters extending seaward from the shore to a depth of six feet at mean low water. Title 6 of the New York Code of Rules and Regulations (NYCRR) Part 661.4 define littoral zone as:

“The tidal wetlands zone designated LZ on an inventory map, that includes all lands under tidal waters which are not included in any category except as otherwise determined in a specific case as provided in Section 661.16. Provided there shall be no littoral zone under waters deeper than six feet at mean low water...”

NYSDEC maps a band along the western shore of Luyster Creek as “Coastal Shoals, Bars, and Mudflats” tidal wetlands. Coastal shoals, bars, and mudflats are defined as:

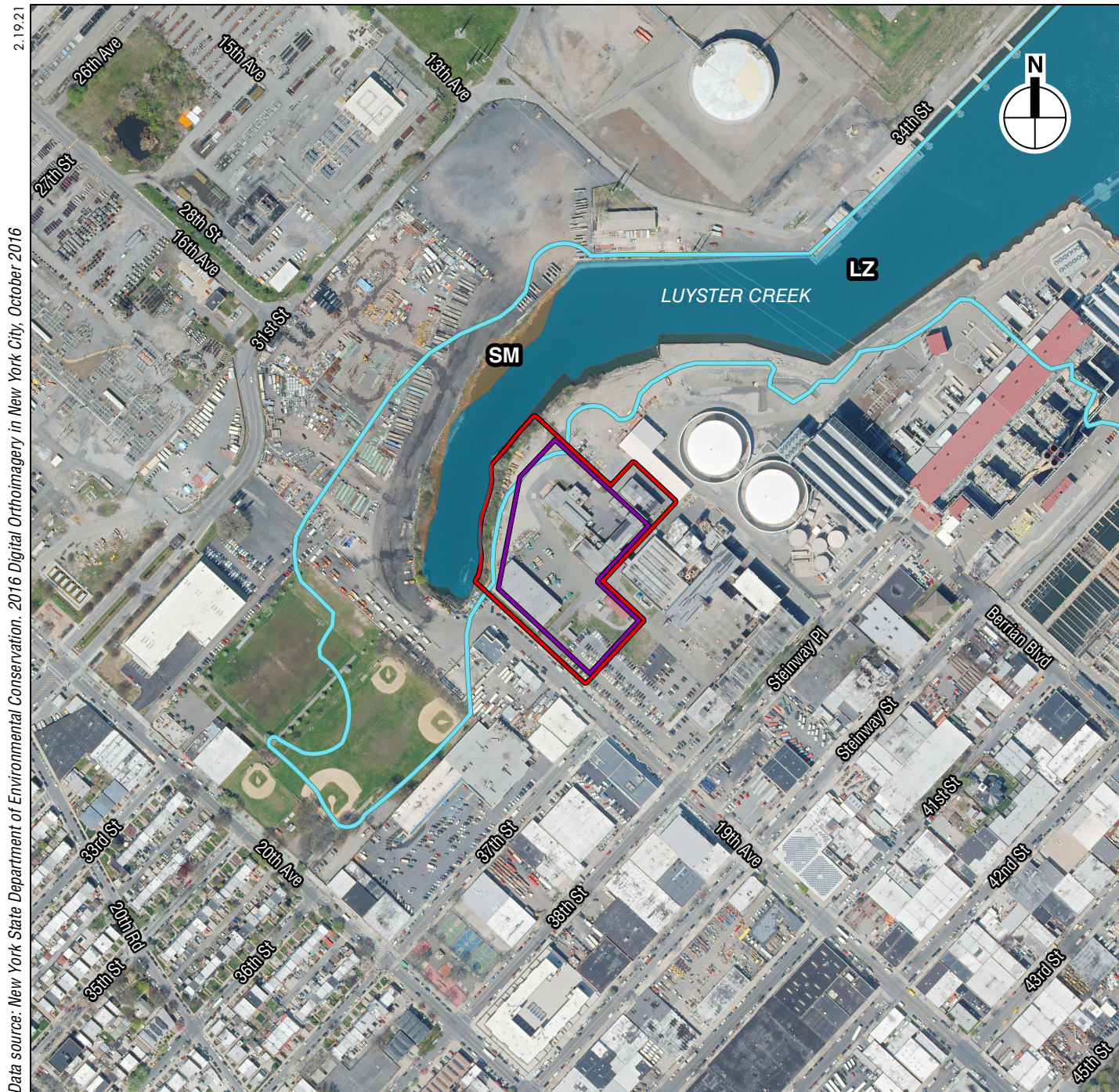
“The tidal wetlands zone designated on an inventory map that i) at high tide is covered by water, ii) at low tide is exposed or is covered by water to a minimum depth of approximately one foot, and iii) is not vegetated by low marsh cordgrass, *Spartina alterniflora*, except as otherwise determined in a specific case as provided in Section 661.16 of this part.”

The USFWS NWI maps Luyster Creek as Estuarine Subtidal Unconsolidated Bottom Excavated (see **Figure E-3**). Subtidal wetlands have continuously submerged substrates covered with tidal water (i.e., located below extreme low water). Wetlands with unconsolidated bottoms have at least 25 percent cover of particles smaller than stones (less than 6-7 cm), and a vegetative cover less than 30 percent. Excavated wetlands are basins or channels that were excavated by humans.



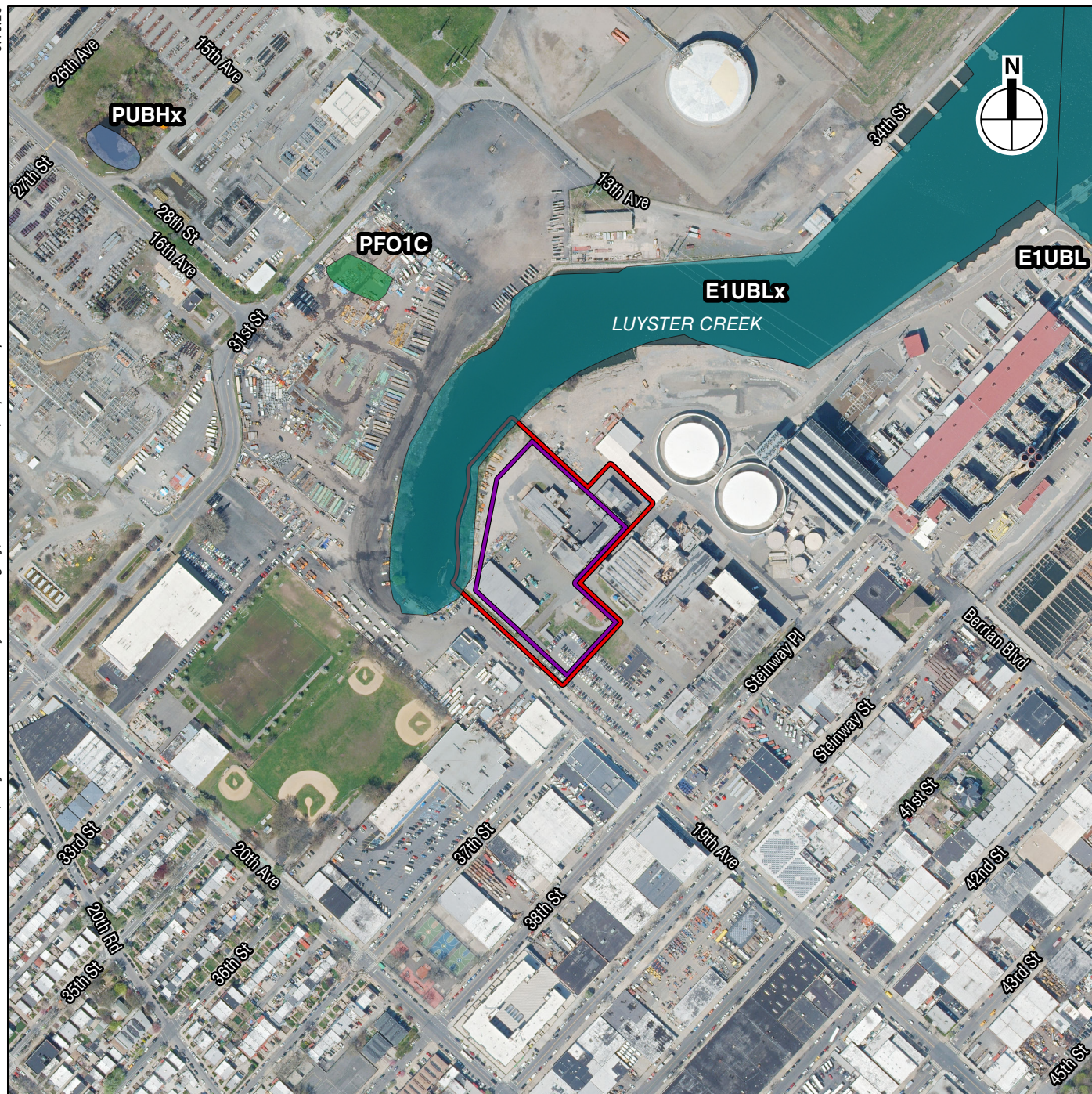
- Development Site
- Proposed Development
- 1% Annual Chance of Flooding
- 0.2% Annual Chance of Flooding

0 500 FEET



-  Development Site
-  Proposed Development
-  Tidal Wetland Adjacent Area Boundary
-  Littoral Zone
-  Coastal Shoals, Bars and Mudflats

0 500 FEET



- Development Site
- Proposed Development
- Estuarine and Marine Deepwater (E1, M1)
- Freshwater Forested/Shrub Wetland (PFO, PSS)
- Freshwater Pond (PUB, PAB)

0 500 FEET

These NYSDEC- and NWI-mapped wetlands are not vegetated and subsequently do not meet the definition of wetlands used by the US Army Corps of Engineers (USACE) and the US Environmental Protection Agency (USEPA)¹, however, these areas are regulated as Waters of the United States by USACE. There are no NYSDEC-mapped freshwater wetlands within the study area. Luyster Creek is very shallow adjacent to the Development Site. Water depths at mean low water (MLW), based on a recent bathymetric survey, range from approximately 0-feet near the toe of the site's shoreline slope to approximately 1 foot at a distance 40 feet seaward of the toe of the shoreline slope.

While vegetated tidal wetland communities are present within the creek, marsh elder or high-tide bush (*Iva frutescens*) occurs within the hardened slope and corresponds to the limit of high water. Occasional seaside lavender plants (*Limonium carolinianum*) are present within the hardened shoreline and rockweed (*Fucus sp.*) and other macroalgae are present on the shoreline's boulders and hard surfaces below high water.

The NYSDEC's Tidal Wetlands Adjacent Area (TWAA) jurisdiction extends landward from the NYSDEC mapped tidal wetland boundary to the 10 foot above mean sea level contour, as represented on the 10-foot contour line from the 1966 United State Geological Survey Map (7.5 Minutes Series, Central Park Quadrangle, 1988 edition). The TWAA on the Development Site is 33,088 sf and ranges in width from approximately 40 feet near the southern property boundary to approximately 130 feet at the northern property boundary.

EXISTING WATER QUALITY CONDITIONS

NYSDEC classifies the Upper East River, from Hells Gate to the Whitestone Bridge as use classification Class I. Class I waters are best suited for fishing and secondary contact recreation and are suitable for fish propagation and survival, but not for water supply or for public bathing use. Luyster Creek is a tributary to the Upper East River. NYSDEC classifies it as Use Class SD. The SD classification is generally given to waters that, because of natural or man-made conditions, cannot meet the requirements for primary or secondary contact (i.e. swimming or boating) or fish propagation. NYSDEC lists Luyster Creek as an impaired waterbody in the most current Waterbody Inventory/Priority Waterbodies List water quality assessment for the Bronx River/East River watershed (NYSDEC 2017).

Two combined sewer outfalls (CSOs) discharge to Luyster Creek, one at the terminus of 19th Avenue, and the other on the western bank of the creek opposite the Development Site.

Water quality standards for fecal and total coliform, dissolved oxygen (DO), and pH for Class SD waters, such as Luyster Creek, waters are as follows (there are no New York State Standards for chlorophyll *a* or water clarity):

- Fecal coliform— The monthly geometric mean, from a minimum of five examinations, shall not exceed 200 colonies /100 milliliters (mL) from five or more samples.

¹ Wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Definition of wetlands as used by USACE and the USEPA since the 1970s for regulatory purposes. [<https://www.epa.gov/cwa-404/section-404-clean-water-act-how-wetlands-are-defined-and-identified>]

- Total coliform—The monthly median value and more than 20 percent of the samples from a minimum of five examinations shall not exceed 2,400 and 5,000 colonies/100 mL, respectively.
- Dissolved oxygen—Shall not be less than 3 milligrams per liter (mg/L) at any time.
- pH—The normal range shall not be extended by more than 0.1 of a pH unit.

NYCDEP has monitored surface water quality in the New York Harbor estuary for over 90 years (Harbor Survey). The Upper East River- Western Long Island Sound monitoring region includes Luyster Creek. NYCDEP produces an annual report summarizing the results of the current survey and recent trends in coliform counts, chlorophyll *a*, dissolved oxygen, and Secchi transparency.

The results of the most recent Harbor Survey (NYCDEP 2018) suggest that the water quality of the New York Harbor Estuary has improved significantly since the 1970s as a result of the measures undertaken by the City. These measures include eliminating all raw dry-weather sewage discharges, reducing illegal discharges, increasing the capture of wet-weather related floatables, and major construction or upgrades at the City's 14 wastewater treatment plants (NYCDEP 2018). The year-round disinfection requirement for discharges to waters within the Interstate Environmental Commission's district (including the New York Harbor Estuary) has contributed significantly to water quality improvements in coliform counts since 1989 (IEC 2009).

The following provides a brief summary of the water quality conditions in the sampling region (Upper East River- Western Long Island Sound Area) of the Harbor Survey, which includes the project area. The closest sampling station (E4) is located west of the project area within Hells Gate. **Table E-1** presents a summary of the water quality measurements at this station between 2015 and 2020.

Table E-1
2015-2020 NYCDEP Water Quality Data for the Hells Gate Sampling Station

Parameter	Surface			Bottom		
	Min	High	Mean	Min	High	Mean
Total Fecal Coliforms (per 100 mL)	1	1540	110.3	NM	NM	NM
Dissolved Oxygen (mg/L)	3.26	12.13	6.54	3.06	12.02	6.44
Temperature (°C)	0.9	25.39	18.34	0.77	25.35	18.26
Salinity (ppt)	16.86	26.44	23.49	18.15	26.7	23.68
Chlorophyll <i>a</i> (µg/L)	4.84	36.5	4.96	NM	NM	NM
Secchi Transparency (ft)	2	5	3.33	NM	NM	NM
Note: NM = Not Measured						
Sources: NYCDEP (https://data.cityofnewyork.us/Environment/Harbor-Water-Quality/5uug-f49n)						

Luyster Creek is a tributary to the Upper Reach of the East River, which is assessed as an impaired waterbody in NYSDEC (2017). Recreational uses are considered to be impaired by floatable debris, PCBs and other toxics, urban stormwater runoff, pathogens and oxygen demanding substances from CSOs, contaminated sediment, and marine traffic and the industrial use of the waterway. Recent data shows dissolved oxygen levels in this reach typically meet applicable water quality standards for support of aquatic life (NYSDEC 2017). The NYS Department of Health lists the consumption of various fish species and blue crab as impaired due to elevated PCB and cadmium levels.

FISH

Information on the saltwater fisheries expected to occur within Luyster Creek is not available. However, data collected from fish trawls in Bowery Bay located to the north and northeast of Luyster Creek provide a representation of fish species likely to be present within Luyster Creek. Fish trawls conducted in October 1982 indicated the presence of northern searobin (*Prionotus carolinus*), winter flounder (*Pseudopleuronectes americanus*), weakfish (*Cynoscion regalis*), bluefish (*Pomatomus saltatrix*), Atlantic tomcod (*Microgadus tomcod*), windowpane flounder (*Scophthalmus aquosus*), and cunner (*Tautoglabrus adspersus*) (Port Authority of New York and New Jersey 1989). The diversity of fish species possibly reflects seasonal movements of fish populations in response to water temperature and dissolved oxygen (Port Authority of New York and New Jersey, 1989). Finfish surveys in the East River have collected more than fifty species of marine, estuarine, or migratory fish including species such as Atlantic menhaden (*Brevoortia tyrannus*), Atlantic silversides (*Menidia menidia*), bay anchovy (*Anchoa mitchilli*), American eel (*Anguilla rostrata*) and striped bass (*Morone saxatilis*) (Woodhead 1994). Many of the fish species collected in Bowery Bay or East River surveys are anticipated to occur within Luyster Creek. The shallow water depths (or mudflat conditions) within Luyster Creek at low tide will result in several of these fish species, which prefer deeper water depths, being present only near the mouth of the creek or on a transient basis during high water conditions. Seasonal differences in the species composition of fish utilizing Luyster Creek as habitat is also expected based on changes in temperature and dissolved oxygen concentrations.

ESSENTIAL FISH HABITAT (EFH)

NMFS designates EFH within 10-minute by 10-minute squares identified by latitude and longitude coordinates. Luyster Creek is located within an EFH square including the following waters: Manhattan Island, New York City, College Point, Long Island City, Brooklyn, Port Morris, Unionport, Flushing Bay, Astoria, LaGuardia Airport, Badland Island, Rikers Island, Roosevelt Island, Wards Island, and Hells Gate along with the East River, Harlem River, and the Bronx River. EFH designations by NMFS for Luyster Creek were obtained using the NMFS EFH Mapper.² EFH designations for the following species and life stage of fish identified for this portion of the New York Harbor Estuary containing Luyster Creek are provided in **Table E-2**. No Habitat Areas of Particular Concern were identified for the Luyster Creek.

GROUND WATER

Ground water was measured at depths ranging between 2.1 and 6 feet below ground surface (bgs) at three ground water monitoring wells at the Development Site (Tectonic Engineering, 2000). These depths correspond to ground water elevations ranging from approximately +2.2 to +5.4 feet NAVD88. Ground water elevations are expected to fluctuate with time of year, changing weather conditions, pumping activity, and tidal conditions. Due to the proximity to a tidal shoreline, ground water at the Development Site may be partially saline or brackish. Weathered gneiss bedrock transitioning to competent bedrock is encountered at a depth of 15 to 61 feet bgs. The ground water on the Development Site is part of the Upper Glacial Aquifer, an unconfined aquifer located directly under the ground surface. The Upper Glacial Aquifer is typically found in glacial till and outwash. At the Development Site, sediment overlying bedrock consists, in turn, of uncontrolled fill, native alluvial deposits, clay and silt, and weathered rock.

² (<https://www.habitat.noaa.gov/application/efhmapper/index.html>)

Table E-2

Essential Fish Habitat Designations in the Vicinity of Luyster Creek¹

Species	Eggs	Larvae	Juveniles	Adults
Black Sea Bass (<i>Centropristus striata</i>)				x
Atlantic Sea Herring (<i>Clupea harengus</i>)		x	x	x
Longfin Inshore Squid (<i>Doryteuthis pealeii</i>)	x		x	x
Little Skate (<i>Leucoraja erinacea</i>)			x	x
Winter Skate (<i>Leucoraja ocellate</i>)			x	x
Summer Flounder (<i>Paralichthys dentatus</i>)			x	x
Atlantic Butterfish (<i>Peprilus triacanthus</i>)	x	x	x	x
Pollack (<i>Pollachius virens</i>)			x	x
Bluefish (<i>Pomatomus saltatrix</i>)			x	x
Winter Flounder (<i>Pseudopleuronectes americanus</i>)	x	x	x	x
Atlantic Mackerel (<i>Scomber scombrus</i>)	x	x	x	x
Windowpane Flounder (<i>Scophthalmus aquosus</i>)	x	x	x	x
Scup (<i>Stenotomus chrysops</i>)	x	x	x	x
Red Hake (<i>Urophycis chuss</i>)	x	x	x	x
Note: ¹ National Marine Fisheries Service EFH Mapper (https://www.habitat.noaa.gov/application/efhmapper/index.html)				

USEPA designates Sole Source Aquifers, i.e., those aquifers that supply at least 50 percent of the drinking water for its service area without reasonably available alternative drinking water sources should the aquifer become contaminated. The Proposed Development is within the Brooklyn-Queens Sole Source Aquifer System. The Brooklyn-Queens Sole Source Aquifer System does not supply drinking water to New York City, but the geographic boundaries of Kings and Queens Counties are within the recharge zone for the aquifers underlying the southeastern portion of Queens County. Ground water associated with the Upper Glacial Aquifer at the Development Site is not suitable for drinking water supply due to the limited depth of the ground water (e.g., bedrock is found 15 to 61 feet bgs) and presumed salt water intrusion due to proximity to tidal waters.

TERRESTRIAL RESOURCES

The Development Site contains approximately 9,000 sf of natural vegetation located along the top of the hardened shoreline with the large majority (approximately 89 percent) of the upland portion of the property comprising existing building, asphalt, and gravel surfaces. The ecological community in this shoreline area would be characterized as an urban vacant lot, according to the Ecological Communities of New York State (Edinger et al 2014). Ecological surveys were conducted at the Development Site on April 4, 2019 and May 29, 2020. The plant community is dominated by invasive and early successional species typical of disturbed sites. Scattered trees are present along the top of the shoreline slope, including Siberian elm (*Ulmus pumila*), hackberry (*Celtis occidentalis*), black cherry (*Prunus serotina*), and white mulberry (*Morus alba*). Ground-layer vegetation is dominated by mugwort (*Artemisia vulgaris*), bitter dock (*Rumex obtusifolius*), cleavers (*Galium aparine*), Asiatic bittersweet (*Celastrus orbiculatus*), and downy chess (*Bromus tectorum*). **Table E-3** lists the plant species observed on the project Development Site.

Table E-3

Plant Species Observed at 35-15 19th Avenue (Astoria, Queens)

Common Name	Scientific Name
Norway Maple	<i>Acer platanoides</i>
Box Elder	<i>Acer negundo</i>
Tree-of-Heaven	<i>Ailanthus altissima</i>
Mimosa	<i>Albizia sp.</i>
Mugwort	<i>Artemisia vulgaris</i>
Groundsel Bush	<i>Baccharis halimifolia</i>
Hedge Bindweed	<i>Calystegia sepium</i>
Asiatic Bittersweet	<i>Celastrus orbiculatus</i>
Hackberry	<i>Celtis occidentalis</i>
Orchard Grass	<i>Dactylis glomerata</i>
Honey Locust	<i>Gleditsia triacanthos</i>
Marsh Elder	<i>Iva frutescens</i>
Privet	<i>Ligustrum sp.</i>
Seaside Lavender	<i>Limonium carolinianum</i>
Japanese Honeysuckle	<i>Lonicera japonica</i>
Apple	<i>Malus sp</i>
White Mulberry	<i>Morus alba</i>
Virginia Creeper	<i>Parthenocissus quinquefolia</i>
Pokeweed	<i>Phytolacca americana</i>
Black Cherry	<i>Prunus serotina</i>
Winged Sumac	<i>Rhus copallinum</i>
Bitter Dock	<i>Rumex obtusifolius</i>
Seaside Goldenrod	<i>Solidago sempervirens</i>
Crown Vetch	<i>Securigera varia</i>
Bitter Nightshade	<i>Solanum dulcamara</i>
Poison Ivy	<i>Toxicodendron radicans</i>
Red Clover	<i>Trifolium pratense</i>
Siberian Elm	<i>Ulmus pumila</i>
Common Mullein	<i>Verbascum thapsus</i>

The wildlife that are expected to utilize the limited natural habitat present on the Development Site include species tolerant of urban environments, human activity, and disturbance. These species include commonplace birds including rock dove (*Columba livia*), mourning dove (*Zenaida macroura*), common grackle (*Quiscalus quiscula*), house sparrow (*Passer domesticus*), song sparrow (*Melospiza melodia*), mockingbird (*Mimus polyglotta*), and European starling (*Sternus vulgaris*). Wildlife species expected to utilize the Development Site include raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), and Norway rat (*Rattus norvegicus*). The waters of Luyster Creek may be used by various waterfowl and waterbirds such as mallard (*Anas platyrhynchos*), American black duck (*Anas americana*), Canada goose (*Branta canadensis*), great egret (*Ardea alba*), snowy egret (*Egretta thula*), double-crested cormorant (*Phalacrocorax auratus*), herring gull (*Larus argentatus*), great black-backed gull (*Larus marinus*), ring-billed gull (*Larus delawarensis*), bufflehead (*Bucephala albeola*), red-breasted merganser (*Mergus serrator*), and American coot (*Fulica americana*).

SIGNIFICANT, SENSITIVE, OR DESIGNATED NATURAL RESOURCES

New York City recognizes the following natural resources as significant, sensitive, and worthy of protections including federal or state protected wildlife or plant species, Significant Coastal Fish

and Wildlife Habitats, Critical Environmental Areas, City Zoning Special Natural Area Districts, Special Natural Waterfront Areas, and Wildlife Refuges and Sanctuaries.

Neither the Development Site nor nearby areas of Luyster Creek are designated as Significant Coastal Fish and Wildlife Habitats, Critical Environmental Areas, City Zoning Special Natural Area Districts, Special Natural Waterfront Areas, and Wildlife Refuges and Sanctuaries.

Neither the Development Site nor nearby areas are expected to provide habitat for any wildlife or plant species listed as endangered or threatened by the USFWS or endangered, threatened, special concern, or rare by the NYSDEC. This assessment is based on the desktop review of environmental databases including the NYSDEC Environmental Resource Mapper, New York State Environmental Assessment Mapper, and New York Natural Heritage Program Nature Explorer Mapper. Endangered and threatened species that may potentially occur within Queens County (New York), as per the USFWS include piping plover (*Charadrius melodus*), roseate tern (*Sterna dougallii dougallii*), red knot (*Calidris canutus rufa*), seabeach amaranth (*Amaranthus pumilus*), Northern long-eared bat (*Myotis septentrionalis*), hawksbill sea turtle (*Eretmochelys imbricata*), and leatherback sea turtle (*Dermochelys coriacea*). The following additional marine species listed as Federally endangered or threatened by NMFS may occur in the East River and its tributaries, pursuant to the NOAA Section 7 ESA mapper (<https://www.fisheries.noaa.gov/resource/map/greater-atlantic-region-esa-section-7-mapper>), including Atlantic sturgeon (*Acipenser oxyrinchus*), shortnose sturgeon (*Acipenser brevirostrum*), Kemp's ridley sea turtle (*Lepidochelys kempii*), green sea turtle (*Chelonia mydas*), and loggerhead sea turtle (*Caretta caretta*).

Field investigation indicates that the Development Site's small naturally vegetated area (approximately 9,000 sf) consisting of plant species typical of urban vacant lots and disturbed shoreline habitats do not provide adequate habitat for any Federal or New York State-listed species. Furthermore, upland areas within 0.5 miles of the Development Site comprise mostly high-density residential properties and commercial/industrial uses with very limited areas of natural vegetation and habitat for any of the protected wildlife or plants listed previously. Specifically, piping plover (*Charadrius melodus*) utilize open, sparsely vegetated beaches and forage in various intertidal habitats proximal to these beaches (NYNHP 2019a). Seabeach amaranth is found on maritime beaches between the spring high water line and the foredune and in overwash areas (NYNHP 2011). Roseate Terns nest almost exclusively on rocky islands, barrier beach island, and salt marsh islands and forage in shallow water areas close to nesting colonies Sites (NYNHP 2019b). The northern long-eared bat can utilize a wide variety of upland woodland and forest types (NYNHP 2019c), but are typically associated with mature interior forest (Carroll et al 2002). Northern long-eared bats roost during the day in dead or live trees under loose bark, or in cavities and crevices (US Fish and Wildlife Service 2013). Habitat for piping plover, seabeach amaranth, roseate tern, and northern long-eared bat is not present on the Development Site.

Migrating flocks of red knots forage on extensive intertidal beach and mudflat habitats in the Northeastern United States with abundant concentrations of horseshoe crab eggs and juvenile clams and mussels (USFWS 2014). The intertidal habitats within Luyster Creek are small in area with inadequate prey concentrations due to poor sediment quality from CSO discharge and past industrial activity. Accordingly, the intertidal mudflats and bars do not provide suitable habitat for red knot.

Critical habitat for the Atlantic sturgeon designated by NMFS occurs from the Hudson River at the Troy Lock and Dam to the mouth of New York Harbor (NMFS 2017). Atlantic sturgeon require hard bottom substrate in low salinity for settlement of fertilized eggs and the development of early

life stages. Juvenile sturgeon develop between the river mouth and upstream spawning sites in areas with soft substrate and salinities between 0.5 to 30 ppt. Waters between the river mouth and spawning sites must be deep enough (e.g., at least 1.2 m) to ensure continuous flow at all times for any sturgeon life stage and have adequate water quality related to temperature, salinity, and dissolved oxygen. Habitat for juvenile sturgeon must be no more than 30°C and no less than 6 mg/L or greater dissolved oxygen. In addition, the New York Natural Heritage Program (2019d) report that this species only occurs in New York State between tidal reaches of the Hudson River to Troy Dam. Therefore, Atlantic sturgeon are not expected to be found in Luyster Creek due to shallow water depth (i.e., no water and exposed mudflats in Luyster Creek), poor water and sediment quality, and the location of the Development Site outside of the main stem of the Hudson River,

Shortnose sturgeon are restricted to the Hudson River between New York City and the Troy Dam (NYNHP 2019e). Shortnose sturgeon prefer deep pools with soft substrates and vegetated bottoms, but other habitats may be used (Seibel 1991 cited in NYNHP 2019e). Juvenile shortnose sturgeon remain in the Hudson River near the salt front whereas older individuals spend time in the lower estuary or possibly go out to sea (Carlson 1986). Adult shortnose sturgeon may migrate through the East River between spawning grounds in the Hudson and Connecticut Rivers and overwintering grounds in the lower Hudson River or Long Island Sound estuaries. Shortnose sturgeon have limited potential to be found in Luyster Creek due to the shallow water depth and poor water and sediment quality.

Several species of sea turtles may utilize the New York Harbor Estuary, Long Island Sound, and the Peconic and South Shore Estuaries as foraging habitat in the summer months. These species do not nest in New York State nor inhabit New York waters year-round (Morreale and Standora 1993).

Marine organisms protected under the Endangered Species Act, such as marine turtles and short-nosed and Atlantic sturgeons are not expected to utilize Luyster Creek due to the absence of vegetated tidal wetland communities and submerged aquatic vegetation (SAV) beds, shallow water depth and corresponding mudflat conditions at low tide, and poor water and sediment quality due to effects of the two CSOs at Luyster Creek and historical industrial activity.

E. FUTURE WITHOUT THE PROPOSED PROJECT

WITHIN THE PROJECT DEVELOPMENT SITE

Absent the Proposed Development, the Applicant would construct an as-of-right development on the site (i.e., a development that would not require any discretionary approvals by the New York City Planning Commission [CPC] and/or NYSDEC and USACE). Specifically, the Applicant would construct a 4-story last-mile distribution warehouse (150-foot-tall) building totaling 518,849 gsf and occupying approximately 172,000 sf of the Development Site's ground area. The footprint of the proposed warehouse would be entirely outside the NYSDEC TWAA. Under the No Action condition, approximately 31,000 sf of native coastal plantings would be established along the Luyster Creek shoreline in an area that currently consists of compacted gravel bordered by stands of invasive herbaceous plants (i.e., mugwort) and a few successional trees. These coastal plantings would be located within the NYSDEC-regulated TWAA and would enhance its ecological function by increasing the potential for removal of sediment and pollutants from runoff before entering Luyster Creek and would improve wildlife habitat by increasing the abundance and diversity of native vegetation. No public access to the restored coastal buffer would be provided under the No Action condition. The No Action distribution center would not require any shoreline improvements and therefore would not require a NYSDEC Article 15 permit or USACE

permit. In addition, the No Action distribution center would be located outside of the NYSDEC's tidal wetlands jurisdiction and would not require a NYSDEC Article 25 permit.³ A Stormwater Pollution Prevention Plan (SWPPP) would be developed in compliance with the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit GP-20-001 for stormwater discharges from construction activity. Finally, a NYSDEC SPDES permit is not required for the dewatering expected to occur during construction of the No Action distribution center. Therefore, no state or federal permitting approvals are required for the No Action scenario.

FLOODPLAINS AND WETLANDS

Under the No Action condition, the distribution warehouse would be constructed entirely within the 100-year floodplain boundary (Special Flood Hazard Area AE) representing inundation by the 1% annual chance flood on the Development Site. The Development Site is subject to flooding associated with coastal storms. Development within the Site's coastal flood zone would not be expected to result in the obstruction of coastal flood waters, the displacement of coastal flood waters to adjacent properties, or enhancement of storm surge or water velocity on adjacent properties. No natural coastal protective features, such as beaches or dunes, are present at the Development Site nor would shoreline erosion be expected to increase on adjacent properties as a result of the Proposed Development. The proposed last-mile distribution center shall comply with pertinent regulations in the New York City Building Code Appendix G and New York City Construction Code related to re-development in designated flood hazard areas. Therefore, no significant impacts to floodplain function are expected to result from the Proposed Development.

There are no vegetated tidal wetlands on the subject property and, accordingly, there will be no significant impact to vegetated tidal wetland communities under the No Action condition. The distribution center would be located entirely landward of the NYSDEC TWAA.

Temporary adverse impacts to the littoral zone tidal wetlands and coastal shoals and bars of Luyster Creek during construction would be minimized by the use of appropriate erosion and sediment control measures including silt fence, inlet protection, stockpile protection practices, and construction entrances implemented in accordance with a SWPPP developed in compliance with the NYSDEC SPDES General Permit GP-20-001 for stormwater discharges from construction activity (as noted above, any activity disturbing soil over an acre must comply with the general permit; this work does not require a discretionary permit from NYSDEC).

The No Action condition would result in an increase in impervious surfaces on the Development Site as compared to the existing conditions (i.e., approximately 179,000 sf compared to approximately 147,000 sf). Approximately 31,000 sf of shoreline within the TWAA would be planted with native coastal vegetation. Stormwater from the existing impervious surfaces associated with the Steinway facility is conveyed directly to Luyster Creek through three drainage pipes and, to a limited degree, overland flow. Under the No Action condition, stormwater runoff from the most of the Development Site would be managed in accordance with a SWPPP that

³ As the No Action project would not include waterfront publicly accessible open space, it does not require structural improvements that are regulated by TWAA permits. Under 6 NYCRR Part 661, Tidal Wetlands—Land Use Regulations, the establishment of plantings within a tidal wetland adjacent area falls under Use 9, Establishing Plantings, for which no permit is necessary. Therefore, all shoreline activities for the No Action distribution center are as-of-right and do not require any discretionary permits or approvals.

would include bioretention basins and street planter beds that receive runoff from a private sidewalk area along 19th Street connected to the existing NYCDEP outfall on 19th Street.

FISH AND ESSENTIAL FISH HABITAT

The No Action condition would not result in any significant adverse impacts to fish or EFH in Luyster Creek. The existing intertidal habitats consist of mudflats and an existing hardened shore-line slope comprised of a deteriorated cribbing wall and various boulders, concrete and asphalt, and miscellaneous debris. These areas do not provide high quality spawning habitat, nursery sites for juvenile fish, foraging habitat, and shelter because of the absence of vegetated wetlands/submerged aquatic vegetation and poor water and sediment quality due to discharge of two CSOs.

GROUND WATER

Ground water recharge under the No Action condition would be reduced due to an overall increase in impervious surfaces. The No Action condition results in approximately 179,000 sf of impervious surfaces associated with the distribution warehouse compared to the approximately 147,000 sf of existing building, asphalt roadway and parking surfaces, and concrete associated with the Steinway facility. Ground water recharge within the Development Site is currently impacted by the presence of approximately 147,000 sf of existing impervious surfaces and the direct conveyance of stormwater from these existing impervious surfaces to the surface waters of Luyster Creek. No new water supply wells or permanent ground water withdrawals are proposed under the No Action condition. Ground water on the Development Site is part of the Upper Glacial Aquifer, which is not utilized for drinking water supply. In addition, no ground water dependent aquatic resources, such as freshwater wetlands or surface waters, are proximal to the Development Site. The absence of important groundwater functions and values, such as water supply and/or freshwater resources, indicates that reduction of groundwater recharge associated with the proposed increase in impervious surfaces would not result in any significant adverse impacts to ground water resources under the No Action condition.

During construction, temporary dewatering would be needed for the installation of foundation pilings and footings. Recovered water associated with temporary construction-related dewatering would be treated in accordance with NYCDEP or NYSDEC permit requirements before being discharged to the city sewer or Luyster Creek through an existing stormwater outfall, respectively (as noted above, this work does not require a discretionary permit from NYCDEP or NYSDEC). Compliance with all necessary mitigation and environmental protection measures required under NYCDEP and NYSDEC approvals would minimize the potential for adverse impacts to ground water within the Brooklyn-Queens Sole Source Aquifer as a result of construction activities.

TERRESTRIAL RESOURCES

Under the No Action condition, an approximately 31,000 sf coastal buffer with native plants would be established. The new coastal buffer would be located in an area of the Development Site that currently consists largely of compacted gravel bordered by stands of invasive herbaceous plants, specifically mugwort (*Artemisia vulgaris*), and a few successional trees. The proposed native coastal vegetation would consist of large native trees, various flowering shrubs, and herbaceous grasses, wildflowers, and ferns. The planted buffer would 1) serve as a naturally vegetated transition between Luyster Creek and the proposed warehouse and 2) enhance ecological benefits and habitat quality by providing food resources for songbirds and pollinators and increasing habitat structural complexity by creating a multi-layered shoreline habitat comprised on ground-level vegetation, small groves of flowering shrubs, and tree crowns.

During construction of the No Action condition, the limited wildlife that utilize the existing habitat would be displaced. The wildlife species that are expected to occur in this area are commonplace and abundant species tolerant of human disturbance and urban habitats. The displacement or loss of any individuals of these abundant species is not likely to adversely impact the regional New York City populations of these species. Over the long-term, the wildlife habitat and terrestrial resources present on the Development Site would benefit from the establishment of the proposed native coastal buffer vegetation.

SIGNIFICANT, SENSITIVE, OR DESIGNATED RESOURCES

Evaluation of the habitat required for wildlife or plant species listed as endangered or threatened by the US Fish and Wildlife Service or the NYSDEC with potential to occur in Queens County or in the East River reach of New York Harbor Estuary Habitat indicates that suitable habitat for these protected species is not present on or adjacent to the Development Site and, therefore, no adverse impacts to these species or resources would occur under the No Action condition.

OUTSIDE THE PROJECT DEVELOPMENT SITE

NEW YORK CITY DEPARTMENT OF SANITATION

The New York City Department of Sanitation (DSNY) is proposing to construct a 113,775 gsf garage and storage facility with accompanying salt shed at 31-11 20th Avenue located to the south and west of the Development Site, opposite Luyster Creek. The planned development would also contain an access road immediately to the southwest of the Development Site. The facility is planned to replace another DSNY garage located in the area. The DSNY project requires local approval subject to New York City's Uniform Land Use Review Procedure (ULURP), is currently undergoing review, and has yet to be approved. According to the project's Environmental Assessment Statement (EAS) (CEQR no. 18DOS008Q), it is not expected to be complete until 2023. The DSNY is proposing to minimize impacts to wetlands and aquatic resources associated with Luyster Creek by utilizing a Filterra subsurface system to remove sediments and other pollutants from stormwater runoff prior to discharge to Luyster Creek and use of erosion control measures specified under a Stormwater Pollution Prevention Plan during construction.

FUTURE WATER QUALITY IMPROVEMENT PROJECTS

There are several proposed and ongoing projects aimed at improving water quality and aquatic resources in the New York Harbor Estuary that have the potential to result in water quality and aquatic habitat improvements in the East River in the vicinity of the project area. These projects are independent of the Proposed Development. Improvements that would result from these projects are described below.

New York/New Jersey HEP Projects: Several future water quality improvement efforts in the New York Harbor Estuary will be coordinated by the New York/New Jersey Harbor Estuary Program (HEP) pursuant to the Hudson-Raritan Estuary (HRE) Comprehensive Restoration Plan (CRP). The Comprehensive Restoration Plan (CRP) for the Hudson-Raritan Estuary (HRE) is a master plan to guide ecosystem restoration efforts throughout the estuary. Restoration opportunities identified in the CRP within the Harlem and East River Region located in the immediate vicinity of the Development Site include shoreline and forest improvements at South Brother Island and salt marsh restoration at Bowery Bay (HEP 2014). NY/NJ HEP actions with respect to these Development Sites will occur with or without the Proposed Actions.

Comprehensive Port Improvement Plan: The Comprehensive Port Improvement Plan (CPIP), sponsored by the Port Authority of New York and New Jersey (PANYNJ), is a multi-agency plan for implementing economic development and environmental improvement decisions for the PANYNJ. Among the priority objectives for the plan are the identification and protection of significant habitats, the investigation of innovative best management practices for the reduction of non-point sources of water pollutants, and the incorporation of green technologies in port improvement projects.

Waterbody Total Maximum Daily Load (TMDL) Standards: The NYSDEC and NJDEP, in coordination with the Interstate Environmental Commission (IEC) will continue to develop TMDLs and to identify priority waterbodies in bi-annual 305C reports to the USEPA.

New York City Department of Environmental Protection (NYCDEP): Combined Sewer Outfalls are the single largest source of pollutants and pathogens in the New York Harbor Estuary. NYCDEP has taken several steps in recent years to mitigate discharges from CSOs, which are expected to result in future improvement in the coliform, DO, and floatable debris levels in the New York Harbor. Improvements have included replacing deteriorating and obsolete equipment and pilot testing new technologies (IEC 2005). These improvements have led to increased wet-weather capture and treatment at Water Pollution and Control Plants from just 30 percent in 1980, to over 80 percent today (NYCDEP 2018).

NYCDEP has constructed additional storm sewers to increase the capacity and reduce both local street flooding and discharge from CSOs. In nearby Flushing Bay, subsurface sewer upgrades took place at five key locations, including improvements at the Bowery Bay Wastewater Resource Recovery Facility that have reduced sewer overflows into Flushing Bay by 225 million gallons annually (NYCDEP 2018). Additionally, NYCDEP has attempted to enhance wetland habitat and functions in Flushing Bay by constructing more than three acres of wetlands along the southern shore of Flushing Bay (NYCDEP 2018). These water quality projects are expected to result in improvement in coliform, dissolved oxygen, nutrients, and floatable debris in the East River, Flushing Bay, and their tributaries.

F. FUTURE WITH THE PROPOSED ACTION:

FLOODPLAINS

Under the With Action condition, a 715,000 gsf, 7-story media production studio building (with ground level footprint of approximately 161,000 sf) along with rip rap revetment, concrete seawall, and bioretention areas would be constructed within the 100-year floodplain. The Development Site is subject to flooding associated with coastal storms. Development within the Site's coastal flood zone would not be expected to result in the obstruction of coastal flood waters, the displacement of coastal flood waters to adjacent properties, or enhancement of storm surge or water velocity on adjacent properties. No natural coastal protective features, such as beaches or dunes, are present at the Development Site nor would shoreline erosion be expected to increase on adjacent properties as a result of the Proposed Development. The proposed media production studio would comply with pertinent regulations in the New York City Building Code Appendix G and New York City Construction Code related to re-development in designated flood hazard areas. Under the With Action condition, design measures to minimize risks and/or losses from coastal flooding are expected to include wetproofing of parking and loading uses located below design flood elevation (DFE); placement of all mechanical, electrical, and HVAC systems above the DFE; providing elevated access/egress routes and areas of refuge; minimization of program uses

(i.e., building lobby) constructed below the DFE and use of dryproofing design measures to minimize flood impacts in these limited areas, such as deployable perimeter flood barriers at building openings. In addition, the installation of approximately 9,900 sf of bioretention areas planted with native vegetation with overflow drains to existing outfalls to Luyster Creek would contribute to the capacity of coastal flood or storm waters to drain from the Development Site after flooding events. Therefore, no significant impacts to floodplain function are expected to result from the Proposed Development.

WETLANDS AND AQUATIC RESOURCES

There are no vegetated tidal wetlands on the Development Site and, accordingly, there would be no significant impact to vegetated tidal wetland communities. Under the With Action condition, approximately 5,200 sf of the movie production studio would be located within the NYSDEC Tidal Wetland Adjacent Area (TWAA) near the northern property boundary. Similar to the No Action condition, approximately 30,600 sf of shoreline area would be improved with bioretention areas and native coastal vegetation that would provide water quality treatment for stormwater runoff that would benefit the quality of nearby littoral zone tidal wetlands. The 5,200 sf encroachment into the TWAA would not result in a significant adverse impact to the functioning of the TWAA in protecting the tidal wetlands within Luyster Creek when compared to the No Action condition.

Similar to the No Action condition, temporary adverse impacts to the adjacent littoral zones and coastal shoals and bars during construction of the media production studio building and upland components (i.e., movie production studio) would be minimized by the use of appropriate erosion and sediment control measures including silt fence, inlet protection, stockpile protection practices, and construction entrances implemented in accordance with a SWPPP developed in compliance with the NYSDEC SPDES General Permit GP-20-001 for stormwater discharges from construction activity. These impacts would be temporary during an anticipated 18-month construction duration.

Temporary adverse impacts to aquatic resources during construction of the proposed rip-rap stone revetment and concrete seawall and associated shoreline re-grading and debris removal would be minimized by 1) cessation of work should a noticeable increase in turbidity occur, 2) installation of turbidity curtains, as needed, around the work area to minimize turbidity in Luyster Creek, 3) completion of construction located below the MHW line at low tide, and 4) the use of hay bales or silt fences to manage stormwater from upland portions of the slope. These impacts would be temporary during an anticipated two-month period of shoreline improvement construction.

The With Action condition would reduce direct stormwater flow to Luyster Creek from the Development Site and increase stormwater quality relative to existing conditions. Stormwater from the Development Site's impervious surfaces is currently conveyed directly to Luyster Creek through three drainage pipes and, to a limited degree, overland flow. Under the With Action condition, stormwater runoff from the majority of the Development Site (176,500 square feet) would be collected and infiltrated through 9,900 sf of bioretention areas (vegetated with native plant species) located within the coastal buffer. Runoff from the private sidewalk area (approximately 5,500 square feet) along 19th Avenue would drain to street planter beds that would connect to the existing NYCDEP outfall on 19th Street. The bioretention areas would be designed in conformance with the NYS Stormwater Management Manual standards for re-development projects. Under the With Action condition, stormwater quality would be improved by settling of stormwater within the bioretention basins and passage of stormwater through the rooting zone;

underlying bioinfiltration soil, sand, and stone layers; and geotextile before discharging to Luyster Creek. Stormwater volume in excess of the design parameters would be conveyed to Luyster Creek through existing drainage outfalls. The approximately 9,900 sf of bioretention areas and street planter beds would provide the same water quality treatment and benefits to the surface waters and aquatic resources as compared to the No Action condition.

FISH AND ESSENTIAL FISH HABITAT

The With Action condition would not result in any significant adverse impacts to fish or EFH in Luyster Creek. The existing intertidal habitats consist of mudflats and an existing hardened shoreline slope comprised of a deteriorated cribbing wall and various boulders, concrete and asphalt, and miscellaneous debris. These areas do not provide high quality spawning habitat, nursery sites for juvenile fish, foraging habitat, and shelter because of the absence of vegetated wetlands/submerged aquatic vegetation and poor water and sediment quality due to discharge of two CSOs.

The proposed earth stabilized precast retaining wall located landward of mean high water and removal of existing concrete, asphalt, stone debris, and dilapidated bulkhead remnants along the shoreline would result in a decrease in coverage and volume of hardened surfaces and debris below mean high water. Under the With Action condition, hardened surfaces and debris located below mean high water would decrease by 1,333 sf and 135 cubic yards, thereby resulting in a slight increase in natural substrate along the shoreline. As stated above, temporary construction-related impacts, such as increased turbidity, would be minimized by conducting construction "in the dry" above the tide level and utilizing turbidity curtains or other practices, as needed. Over the long-term, water quality would benefit from the With Action condition as compared to the No Action condition, which proposes no removal of concrete, asphalt, stone debris, and dilapidated bulkhead remnants. Fish and aquatic organisms would benefit from the removal of these deleterious materials previously placed or dumped to harden the shoreline and replacement with clean quarry stone, and reduction of direct stormwater contributions and increased stormwater quality to Luyster Creek resulting from the proposed bioretention practices.

GROUND WATER

Ground water recharge under the With Action condition is not significantly different than the No Action condition, due to the minor difference in impervious surface coverage (i.e., only approximately 5,200 sf greater in the With Action condition). Ground water recharge is currently adversely impacted under existing conditions, as the Development Site includes mostly a building and asphalt parking and road surfaces. Runoff from the Development Site is directly conveyed to the surface waters of Luyster Creek.

No new water supply wells or permanent ground water withdrawals are proposed under the Proposed Development; accordingly, no impacts to ground water levels/volume or ground water flow paths are expected. Furthermore, there are no ground water dependent aquatic resources, such as freshwater wetlands or surface waters, within or adjacent to the Development Site. The hydrology of Luyster Creek is not dependent on ground water flow due to its tidal influence.

During construction, temporary dewatering would be needed for the installation of foundation pilings and footings. Dewatering discharges associated with temporary construction-related dewatering would be discharged to surface waters through the existing stormwater conveyance system. Temporary dewatering during construction would incorporate all necessary mitigation and

environmental protection measures required by the NYSDEC to avoid potential environmental impacts associated to temporary dewatering.

No permanent adverse impacts to ground water resources are expected under the With Action condition due to 1) negligible increase in impervious coverage under the With Action condition compared to the No Action condition, 2) no permanent ground water withdrawals, and 3) compliance with any necessary environmental protection measures specified under NYSDEC temporary dewatering approvals.

TERRESTRIAL RESOURCES

Under the Proposed Actions, an approximately 30,600 sf waterfront publicly accessible area along Luyster Creek would be established between the proposed seawall and the proposed media production studio, with a circulation path accessed from the terminus of 19th Avenue (from the sidewalk on the north side of the street), seating, and landscaping. The waterfront publicly accessible area would also include coastal buffer plantings and bioretention basins. Examples of plant species proposed for the coastal planting area include bayberry (*Morella pensylvanica*), beach plum (*Prunus maritima*), highbush blueberry (*Vaccinium corymbosum*), fragrant sumac (*Rhus aromatica*), spicebush (*Lindera benzoin*), little bluestem (*Schizachyrium scoparium*), switch grass (*Panicum virgatum*), prairie dropseed (*Sporobolus heterolepis*), seaside goldenrod (*Solidago sempervirens*), black-eyed susan (*Rudbeckia hirta*), wild bergamot (*Monarda fistulosa*), button blazing star (*Liatris spicata*), tulip tree (*Liriodendron tulipifera*), hackberry (*Celtis occidentalis*), black tupelo (*Nyssa sylvatica*), sweet gum (*Liquidambar styraciflua*), serviceberry (*Amelanchier canadensis*), and eastern red cedar (*Juniperus virginiana*). This new coastal buffer would result in a slightly smaller footprint of coastal plantings as compared with the No Action condition to allow for public access. Just as with the No Action condition, the proposed native coastal vegetation would consist of large native trees (between 3.5-4.0 caliper), various flowering shrubs, and herbaceous grasses, wildflowers, and ferns. The planted buffer would 1) serve as a naturally vegetated transition between Luyster Creek and the Proposed Development and 2) enhance ecological benefits and habitat quality by providing food resources for songbirds and pollinators and increasing habitat structural complexity by creating a multi-layered shoreline habitat comprised on ground-level vegetation, small groves of flowering shrubs, and tree crowns. The With Action condition proposes a similar coastal buffer as the No Action condition; however, the With Action condition provides public access.

During construction, the limited wildlife that utilize the existing habitat would be displaced. The wildlife species that are expected to occur in this area are commonplace and are tolerant of human disturbance and urban habitats. The displacement or loss of any individuals of these species is not likely to adversely impact the regional New York City populations of these species. After establishment of the proposed native coastal vegetation, the wildlife habitat and terrestrial resources present on the Development Site would be improved.

SIGNIFICANT, SENSITIVE, OR DESIGNATED RESOURCES

Similar to the No Action condition, evaluation of the habitat required for wildlife or plant species listed as endangered or threatened by USFWS or NYSDEC with potential to occur in Queens County or in the East River reach of New York Harbor Estuary Habitat indicates that suitable habitat for these protected species is not present on or adjacent to the Development Site and, therefore, no impacts to these species would result from this project.

G. LITERATURE CITED

- Carlson D. 1986. A review of population characteristics of the shortnose sturgeon in the Hudson River. New York State Department of Environmental Conservation. Stamford, NY.
- Carroll SK, TC Carter and GA Feldhamer. 2002. Placement of nets for bats: effects on perceived fauna. *Southeastern Naturalist* 1:193-198.
- Edinger GJ, DJ Evans, S Gebauer, TG Howard, DM Hunt, and AM Olivero. 2014. *Ecological Communities of New York State*. Second Edition. A revised and expanded edition of Carol Reschke's *Ecological Communities of New York State*. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.
- HEP. 2014. Hudson-Raritan Estuary Comprehensive Restoration Plan: Potential Restoration Opportunities Project Summary Sheets for Harlem River, East River and Bronx River. https://www.nan.usace.army.mil/Portals/37/docs/harbor/CRP%20Planning%20Regions/PR_Harlem_East_Rivers_8_2014.pdf
- Interstate Environmental Commission. 2009. 2009 Annual Report of the Interstate Environmental Commission.
- Morreale SJ and EA Standora. 1998. Early life stage ecology of sea turtles in northeastern U.S. waters. U.S. Dep. Commer. NOAA Tech. Mem. NMFS-SEFSC-413. 49pp
- NMFS. 2017. Designation of Critical Habitat for the Gulf of Maine, New York Bight, and Chesapeake Bay Distinct Population Segments of Atlantic Sturgeon. <https://repository.library.noaa.gov/view/noaa/18671>
- New York Natural Heritage Program. 2011. Online Conservation Guide for *Amaranthus pumilus*. Available from: <https://guides.nynhp.org/seabeach-amaranth/>. Accessed June 2, 2020.
- New York Natural Heritage Program. 2019a. Online Conservation Guide for *Charadrius melodus*. Available from: <https://guides.nynhp.org/piping-plover/>. Accessed June 2, 2020.
- New York Natural Heritage Program. 2019b. Online Conservation Guide for *Sterna dougallii*. Available from: <https://guides.nynhp.org/roseate-tern/>. Accessed June 2, 2020.
- New York Natural Heritage Program. 2019c. Online Conservation Guide for *Myotis septentrionalis*. Available from: <https://guides.nynhp.org/northern-long-eared-bat/>. Accessed June 2, 2020.
- New York Natural Heritage Program. 2019d. Online Conservation Guide for *Acipenser oxyrinchus*. Available from: <https://guides.nynhp.org/atlantic-sturgeon/>. Accessed June 7, 2020.
- New York Natural Heritage Program. 2019e. Online Conservation Guide for *Acipenser brevirostrum*. Available from: <https://guides.nynhp.org/shortnose-sturgeon/>. Accessed June 7, 2020.
- NYSDEC. 2017. FINAL New York State 2016 Section 303(d) List of Impaired/TMDL Waters. http://www.dec.ny.gov/docs/water_pdf/wiatllismrrr.pdf
- Port Authority of New York and New Jersey. 1989. Environmental Assessment for the East End Terminal at Lagoon Airport: Final Report.

- Tectonic Engineering. 2000. Final Geotechnical Report for Wildflower Film Studios (87 19th Avenue, Queens, New York). 22 pgs.
- United State Fish and Wildlife Service. 2013. 12-Month finding on a petition to list the eastern small-footed bat and the northern long-eared bat as threatened or endangered; Listing the northern long-eared bat as an endangered species; Proposed rule. Vol. 78 No. 191, Department of the Interior.
- United State Fish and Wildlife Service. 2014. Rufa Red Knot (*Calidris canutus rufa*) Fact Sheet. U.S. Fish and Wildlife Service Northeast Region. Hadley, MA. https://fws.gov/northeast/red-knot/pdf/Redknot_BWfactsheet092013.pdf 01035
- Woodhead PMJ. 1994. Effects of Tide Gates on the Fish Community of the East River. Annals of New York Academy of Sciences. 742(1): 57-68.
- Seibel, D. 1991. Habitat selection, movement, and response to illumination of shortnose sturgeon in the Connecticut River. M. A. thesis, University of Massachusetts, Amherst.

✱

A. INTRODUCTION

This attachment addresses the potential for the presence of hazardous materials resulting from previous and existing uses at or near the 5.25-acre Development Site, located at 35-15 19th Avenue (Block 814, Lot 10), and potential risks to the Proposed Development with respect to any such hazardous materials. The Development Site contained buildings formerly associated with the Steinway Piano factory, the majority of which have been demolished, and the site is largely vacant. Construction of the new building requires soil disturbance and excavation.

This assessment is based on a May 2019 *Phase I Environmental Site Assessment* (ESA), a May 2019 *Phase II Limited Site Investigation* (LSI) report, a July 2020 *Soil Vapor Investigation* (SVI), and a February 2021 *Remedial Action Plan* (RAP), incorporating a Construction Health and Safety Plan (CHASP), all prepared by The Vertex Companies, Inc. The ESA included the findings of a reconnaissance of the Development Site, an evaluation of readily available historical information, and selected environmental databases and electronic records in accordance with American Society for Testing and Materials (ASTM) E1527-13. The LSI included 15 soil borings for the collection and laboratory analysis of soil and groundwater samples. The SVI included the installation of six probes for the collection and laboratory analysis of soil vapor samples. The RAP and CHASP set out procedures that would be followed during excavation/construction associated with the Proposed Development.

B. EXISTING CONDITIONS

SUBSURFACE CONDITIONS

The Development Site is approximately 10 to 15 feet above mean sea level, and was filled historically. Fill material (sandy silt with brick, ash, concrete, asphalt, and rock) was encountered in nine of the LSI borings, at depths from 0.5 to 9 feet below grade (discussed further below). Based on topography and the west adjacent Luyster Creek (aka Steinway Creek), groundwater flow is anticipated to be towards the northeast. Groundwater was first encountered at between 2 and 9 feet below grade in the borings. Groundwater in Queens is not used as a source of potable water.

PHASE I ESA

The Development Site and its former buildings were used by Steinway & Sons for piano manufacturing, piano storage, piano maintenance and refurbishing, lumber stacking, storage, and administrative operations. The east adjacent property has been the Steinway & Sons piano manufacturing facility since the late 1800s.

The Phase I ESA identified the following Recognized Environmental Conditions (RECs) which, per ASTM E 1527-13, are conditions that indicate “the presence or likely presence of hazardous substances or petroleum products in, on, or at a property”:

- The historical piano manufacturing operations conducted onsite from the late 1800s to the present, which included foundry, bronzing, metal working, machine shop, the use of hazardous materials and petroleum products, and the generation of hazardous waste.
- The western portion of the Development Site included a petroleum bulk storage tank with no closure documentation provided.
- The north adjacent property included a dye works and a petroleum bulk storage facility from the late 1800s to the present. There are multiple release listings associated with this facility.

Other non-REC environmental concerns were identified, including:

- Hazardous substances and petroleum products were observed stored in various previous existing Development Site buildings.
- Hydraulic oil staining and oily sludge were observed near the lumber stacker hydraulic equipment.
- Potential sources of vapor intrusion included historical on-site and off-site industrial operations.
- Based on the construction date of the buildings, asbestos-containing materials (ACM) and lead-based paint (LBP) may be present.

PHASE II LSI

The LSI included the installation of 15 borings to a maximum depth of 12 feet. Groundwater was first encountered at 2 to 9 feet below grade. Eight of the borings were converted into temporary monitoring wells for the collection of groundwater samples. Elevated photoionization detector (PID) readings, indicating the presence of volatile organic compounds (VOCs), were measured in nine of the borings. A soil sample was collected from each boring (at the depth of the highest PID reading, where applicable) and these samples were analyzed for VOCs, semi-volatile organic compounds (SVOCs), and metals. Additionally, for waste characterization purposes, a soil sample composited from five of the borings was analyzed for polychlorinated biphenyls (PCBs), pesticides, herbicides, extractable petroleum hydrocarbons (EPH), toxicity characteristic leaching procedure (TCLP) metals, and cyanide. Groundwater samples were analyzed for VOCs, SVOCs, and metals (total and dissolved).

Soil sampling results were compared to the Title 6 (Department of Environmental Conservation) New York Codes, Rules and Regulations Part 375 Restricted Use Soil Cleanup Objectives (SCOs) for Industrial Use (ISCOs), for Commercial Use (CSCOs), and for Unrestricted Use (UUSCOs). Given the proposed future commercial use of the Development Site, the most appropriate of these are the CSCOs. The soil sampling identified three of the 15 samples had exceedances of CSCOs, but these were limited to SVOCs (which, although they can be associated with petroleum, are also common in urban fill material) in three samples and arsenic in one sample (also most likely related to the fill). The composite sample showed no exceedances of CSCOs or other criteria that would have indicated the potential need to manage excavated soil as regulated hazardous waste.

The groundwater sampling results were compared to New York State Department of Environmental Conservation (DEC) Ambient Water Quality Standards (AWQS) and Class GA Standards. These standards were developed assuming use of groundwater as a source of drinking

water which does not currently occur and would not occur in the future with or without the Proposed Development. There were exceedances in all eight samples for SVOCs and certain metals (both total and dissolved), though the dissolved metals exceedances were limited to antimony, iron, magnesium, manganese, and sodium, all of which may well be naturally occurring. The elevated SVOC and total metal detections in the samples are likely due to high turbidity, i.e., the presence of suspended soil particles, in the temporary wells. These findings are consistent with the Development Site's fill material. Additionally the sampling results identified no exceedances of the New York City Limitations for Effluent to Sanitary or Combined Sewers, should dewatering be needed in the future.

SOIL VAPOR INVESTIGATION

The SVI included the installation of six probes beneath existing concrete slabs for the collection and laboratory analysis of soil vapor samples. Laboratory soil vapor sample results were compared to NYS Department of Health "Decision Matrices." There were slight exceedances of the most stringent sub-slab guidelines (indicating mitigation, such as installation of a vapor barrier around the new foundations, could be required) for two chlorinated solvent compounds (trichloroethene and cis-1,2-dichloroethene) at one location in the northeastern portion of the Development Site, beneath a former machine shop. Both compounds were commonly historically used for cleaning/degreasing.

C. FUTURE WITHOUT THE PROPOSED DEVELOPMENT

In the future without the proposed project (the "No Action" condition), it is assumed that a last-mile distribution facility would be built. In order to construct this facility, the Development Site's remaining building would be demolished and soil disturbance/excavation would be required for the new construction (for foundations, utilities, etc.). The No Action development would need to meet applicable regulatory requirements, e.g., removing asbestos prior to demolition, properly managing lead-based paint during demolition, properly disposing of any excess soil, and reporting (and addressing) any encountered petroleum tanks or spills to DEC. If dewatering were to be needed for construction, it would need to be performed in accordance with applicable New York City Department of Environmental Protection (DEP) regulatory requirements. However, unlike with the Proposed Development, no Remedial Action Plan (RAP) or Construction Health and Safety Plan (CHASP) would be required for the No Action development.

D. FUTURE WITH THE PROPOSED DEVELOPMENT

The Proposed Development would be a media production studio facility which would occupy the majority of the Development Site, similar to the No Action development. However, the footprint of the facility would extend to occupy a 5,226 square foot wetland adjacent area on the Development Site which is under DEC's jurisdiction. As in the No Action condition, the Development Site's existing remaining building would be demolished and soil disturbance/excavation would be required for the new construction.

As with the No Action development, with the Proposed Development, any demolition would be conducted in compliance with applicable regulatory requirements, e.g., for asbestos-containing materials, lead-based paint, etc. In addition, applicable regulatory requirements would be followed during construction of the Proposed Development, e.g., properly disposing of any excess soil; reporting to DEC any signs of a petroleum spill (removing and registering encountered tanks); and following DEP requirements should dewatering be required. However, in order to avoid human

exposure to any contaminated materials present in the subsurface, additional measures would be incorporated into the Proposed Development beyond those that would be incorporated into the No Action development, including:

- The Phase I ESA and the Phase II LSI have been submitted to DEP along with the Remedial Action Plan (RAP), which incorporates a Construction Health and Safety Plan (CHASP). These have been approved by DEP and the RAP would be implemented during the subsurface work associated with construction of the Proposed Development. The RAP addresses the conditions identified by the LSI and provides for contingencies that may arise during construction, including specifying appropriate measures to be implemented (including air monitoring) if underground storage tanks, soil and groundwater contamination, or other unforeseen environmental conditions were to be encountered. It also addresses procedures for: soil testing, management and disposal; dust control and stockpile management; imported material criteria; dewatering; and a cap/cover system consisting of concrete, stone and clean cover soil. The CHASP includes a hazard analysis, procedures for air monitoring and action levels training, and an emergency response plan.
- To address the findings of the Soil Vapor Investigation and to protect future occupants in the new construction, the RAP requires a vapor barrier (minimum thickness of 20 mil) be installed below the building's foundation and outside of subgrade walls. It should also be noted that the lowest level of the building would include a 310-space parking garage, which would also include a loading area. The parking/loading area would be separately ventilated from the occupied spaces above, in accordance with the New York City Building Code/Mechanical Code. This would also serve to prevent any residual subsurface vapors migrating into the occupied spaces.

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

✱

A. INTRODUCTION

This attachment presents the findings from the analysis of traffic, transit, and pedestrian conditions for the Proposed Actions and the resultant development at 35-15 19th Avenue (Block 814, Lot 10; the “Development Site”) in Astoria, Queens. As described in Attachment A, “Project Description,” the Applicant, WF Industrial IV LLC, would construct a seven-story, 160-foot tall (to top of bulkhead) media production studio, totaling 715,000 gross square feet (gsf), including accessory off-street parking and loading and an approximately 30,600 sf waterfront public access area along Luyster Creek (the “Proposed Development”). The Proposed Development would consist of approximately 461,000 gsf to be used for 11 sound stages and accessory facilities for stage support, wardrobe, hospitality, and pre- and post-production; and approximately 251,000 gsf of accessory off-street parking (310 required attended parking spaces) and loading. The With-Action development will include a weekday shuttle service for employees and other studio users. The Applicant will enter a Restrictive Declaration to be recorded against the Development Site in association with the Proposed Actions, requiring the implementation of project components related to the environment that would preclude and potential impacts including a weekday shuttle service for employees and other studio users. Final details of the shuttle service, including location of shuttle stops and the shuttle route, shall be subject to approval by the New York City Department of Transportation (NYCDOT) and New York City Transit (NYCT).

The Proposed Development at 35-15 19th Avenue is expected to be completed and occupied by 2023. Absent the Proposed Actions (the “No-Action condition”), it is anticipated that the Applicant would construct an as-of-right development on the Development Site. This approximately 518,849 gsf development would be a last-mile delivery center, consisting of about 360,000 gsf of distribution/warehouse and storage use; approximately 43,300 gsf of accessory office and employee back-of-house use; and approximately 115,550 gsf of accessory parking (229 required spaces), loading and delivery vehicle storage. The incremental development at the site forms the basis of the transportation impact analysis and would consist of a net increase of 461,000 gsf of film and television production studio space, a decrease of 360,000 gsf of last-mile distribution space, and a decrease of 43,300 gsf of office space. A comparison of the No-Action and With-Action scenarios is provided in **Table G-1**. The incremental difference between the No-Action condition and the Proposed Development provides the basis by which the potential environmental effects are evaluated.

Table G-1: Comparison of 2023 No-Action and With-Action Conditions

Use	No-Action	With-Action ¹	Increment
Film & Television Production Studio	0 gsf	461,000 gsf	+461,000 gsf
Last-Mile Freight Distribution Facility	360,000 gsf	0 gsf	-360,000 gsf
Office	43,300 gsf	0 gsf	-43,300 gsf
Parking	229 spaces	310 spaces	+81 spaces

B. PRINCIPAL CONCLUSIONS

The Proposed Actions would generate additional vehicular, transit and pedestrian trips in the surrounding area. As incremental project-generated pedestrian and transit trips would not exceed *City Environmental Quality Review (CEQR) Technical Manual* analysis thresholds, detailed analyses of pedestrian and transit conditions are not warranted. As the incremental increase in vehicle trips would exceed the *CEQR Technical Manual* threshold of 50 vehicle trips per hour, a detailed analysis of operating conditions is provided at two intersections (19th Avenue at 37th Street and 19th Avenue at 38th Street) located adjacent to the Development Site. As the lane groups at these intersections are expected to operate at level of service (LOS) D or better under the 2023 With-Action conditions and none of the analyzed intersections can be considered a high crash location, the Proposed Actions are not expected to result in significant adverse impacts.

C. PRELIMINARY ANALYSIS METHODOLOGY

The *CEQR Technical Manual* describes a two-level screening procedure for the preparation of a “preliminary analysis” to determine if a more detailed analysis of transportation conditions is warranted. The preliminary analysis first analyzes trip generations (Level 1) to estimate the number of person and vehicle trips attributable to the proposed actions and subsequent development. According to the *CEQR Technical Manual*, if the proposed actions are expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further analysis is not warranted. If the proposed actions and resultant development would exceed these trip thresholds, detailed trip assignments (Level 2) are performed to estimate the incremental trips that may occur at specific transportation elements and to identify potential locations for further analysis. If the trip assignments show that the proposed actions would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a sidewalk, corner area, or crosswalk, then further analysis may be warranted, depending on which threshold is tripped, to assess the potential for significant adverse impacts on traffic, transit, pedestrians, and vehicular and pedestrian safety.

D. LEVEL 1 SCREENING ASSESSMENT

A Level 1 trip generation screening assessment was conducted to estimate the number of peak hour person and vehicle trips by mode expected to be generated by the proposed development. The peak hour person and vehicle trip estimates were then compared to the *CEQR Technical Manual* analysis thresholds to determine if a Level 2 screening is warranted. The travel demand assumptions used for the Level 1 assessment, including a detailed travel demand forecast, are discussed below.

TRANSPORTATION PLANNING FACTORS

In order to conduct a Level 1 Trip Generation Screening Assessment for the proposed action, a travel demand forecast was prepared for a typical peak hour during the weekday AM, midday, and PM periods. The transportation planning factors used to forecast travel demand for the future with and without the Proposed Actions are summarized in **Table G-2** and discussed below. Factors are

shown for the weekday AM, MD, and PM peak hours (typical peak periods for heaviest travel demand). A forecast for the Saturday midday peak hour was not conducted, as film and television studios typically operate Monday through Friday. It is anticipated that the trips made during the weekend would not exceed the number of trips forecasted during the weekdays. The trip generation rates, temporal distributions, modal splits, vehicle occupancies, and truck trip factors for each land use were primarily based on the 2020 *CEQR Technical Manual*, census data, New York City Department of Transportation (NYCDOT) data and guidance, data collected at an NYC studio, census data, and studies that have been used in previous environmental assessment/impact statements for projects with similar uses. These factors include trip generation rates, temporal and directional distributions, mode choice factors, and vehicle occupancies for the With-Action net increment in increase film and television production studio, last-mile facility, and office spaces.

FILM & TELEVISION PRODUCTION STUDIO

The person trip generation rate and AM/PM temporal distributions for the proposed film and television production studio were based on data from the *CEQR Technical Manual* and are also consistent with the 2015 *Steiner Studios Media Campus FEIS*. However, the midday temporal distribution was based on guidance from NYCDOT. In/out splits, as well as truck trip generation rates and temporal distributions were based on data collected by Philip Habib & Associates (PHA) in November 2019 at Steiner Studios in Brooklyn, New York. The modal splits of 50.0 percent by auto, 5.0 percent by taxi, 25.0 percent by subway (including the proposed shuttle to/from the Ditmars Boulevard subway station), 10.0 percent by bus, and 10.0 percent by walk/other modes for all periods, and the auto occupancy rate of 1.07 persons per vehicle were based on 2012-2016 AASHTO CTPP Reverse-Journey-to-Work data for Queens Census Tracts 107.01, 111, and 123.01, and adjusted to account for the studio use, distance from the subway, the proposed shuttle, and NYCDOT guidance. The taxi vehicle occupancy rate of 1.30 persons per vehicle was based on the 2015 *Steiner Studios Media Campus FEIS*. The truck trip generation rate of 0.36 trips per 1,000 gsf and temporal distributions of 8.7 percent, 9.7 percent, and 5.6 percent for the weekday AM, midday, and PM peak periods, respectively were also based on data collected at Steiner Studios in November 2019. A summary of the data collected at Steiner Studios in November 2019 can be found in Transportation Planning Factors Memorandum (**Appendix C**).

LAST-MILE FACILITY

The person trip generation rate of 5.85 trips per 1,000 gsf for the last-mile facility was based on data provided by NYCDOT. Weekday temporal distributions of 11.0 percent, 5.0 percent, and 10.0 percent for the AM, midday, and PM peak periods, respectively, as well as directional in/out splits for last-mile facility were also based on data provided by NYCDOT. The modal splits of 76.7 percent by auto, 0.0 percent by taxi, 8.8 percent by subway, 5.4 percent by bus, and 9.1 percent by walk/other modes for all periods and the auto occupancy rate of 1.07 persons per vehicle were based on 2012-2016 AASHTO CTPP Reverse-Journey-to-Work data for Queens Census Tracts 107.01, 111, and 123.01. Note that no shuttle service to/from the subway station would be provided in the No-Action condition, as a significant majority of the trips is anticipated to be via autos. The taxi occupancy of 1.30 persons per vehicle was based on the 2015 *Dutch Kills Rezoning and Related Actions FEIS*. The weekday truck trip generation rate of 12.17 trips per loading dock and temporal distributions of 20.7 percent, 4.7 percent, and 7.3 percent for the weekday AM, midday, and PM peak periods, respectively, were based on data provided by NYCDOT.

Table G-2: Transportation Planning Factors

Land Use:	<u>Film & Television</u>		<u>Last-Mile</u>		<u>Office</u>	
	<u>Production Studio</u>		<u>Facility</u>			
Size/Units:	461,000 gsf		360,000 gsf 8 docks		43,300 gsf	
Trip Generation:	(1)		(6)		(1)	
Weekday	10.0		5.85		18.0	
	per 1,000 sf		per 1,000 gsf		per 1,000 gsf	
Temporal Distribution:	(1)(5)(8)		(6)		(1)	
AM	12.0%		11.0%		12.0%	
MD	8.0%		5.0%		15.0%	
PM	11.0%		10.0%		14.0%	
Modal Splits:	(3)(4)(5)		(3)		(3)(7)	
	All Periods		All Periods		AM/PM	MD
Auto	50.0%		76.7%		76.7%	2.0%
Taxi	5.0%		0.0%		0.0%	1.0%
Shuttle to/from Subway	25.0%		0.0%		0.0%	0.0%
Subway/Railroad	0.0%		8.8%		8.8%	7.0%
Bus	10.0%		5.4%		5.4%	7.0%
Walk/Bike/Other	10.0%		9.1%		9.1%	83.0%
	100.0%		100.0%		100.0%	100.0%
In/Out Splits:	(2)		(6)		(7)	
	In	Out	In	Out	In	Out
AM	74.0%	26.0%	46.0%	54.0%	96%	4%
MD	49.0%	51.0%	53.0%	47.0%	39%	61%
PM	34.0%	66.0%	61.0%	39.0%	5%	95%
Vehicle Occupancy:	(3)(5)		(3)(7)		(3)(7)	
	All Periods		All Periods		All Periods	
Auto	1.07		1.07		1.07	
Taxi	1.30		1.30		1.42	
Truck Trip Generation:	(2)		(6)		(1)	
Weekday	0.36		12.17		0.32	
	per 1,000 sf		per dock		per 1,000 sf	
Temporal Distribution:	(2)		(6)		(1)	
AM	8.7%		10.0%		10.0%	
MD	9.7%		3.0%		11.0%	
PM	5.6%		11.0%		2.0%	
In/Out Splits:	In	Out	In	Out	In	Out
AM	71.0%	29.0%	1.0%	99.0%	50.0%	50.0%
MD	58.0%	42.0%	8.0%	92.0%	50.0%	50.0%
PM	55.0%	45.0%	87.0%	13.0%	50.0%	50.0%
Notes :						
(1)	2014 City Environmental Quality Review (CEQR) Technical Manual.					
(2)	Based on data collected by PHA at Steiner Studios in November 2019.					
(3)	AASHTO CTPP Reverse-Journey-to-Work 5-year data for Queens Census Tracts 107.01, 111, and 123.01.					
(4)	Modal split adjusted to account for studio use, distance from subway, the proposed shuttle, and guidance from NYCDOT.					
(5)	Steiner Studios Media Campus FEIS, 2015.					
(6)	Based on data provided by NYCDOT					
(7)	Dutch Kills Rezoning and Related Actions FEIS, 2015.					
(8)	Midday temporal distribution adjusted based on NYCDOT direction					

OFFICE

The trip generation rates and temporal distributions for the accessory office use in the No-Action condition were based on data from the *CEQR Technical Manual*. The modal splits of 76.7 percent by auto, 0.0 percent by taxi, 8.8 percent by subway, 5.4 percent by bus, and 9.1 percent by walk/other modes for the weekday AM and PM peak periods and the auto occupancy rate of 1.07 persons per vehicle for all periods were based on 2012-2016 AASHTO CTPP Reverse-Journey-to-Work data for Queens Census Tracts 107.01, 111, and 123.01. The weekday midday modal splits of 2.0 percent by auto, 1.0 percent by taxi, 7.0 percent by subway, 7.0 percent by bus, and 83.0 percent by walk/other modes for the weekday midday period, the taxi occupancy rate of 1.42 persons per vehicle for all periods, the directional in/out splits were based on data from the 2015 *Dutch Kills Rezoning and Related Actions FEIS*. Truck trip generation rates and temporal distributions for the accessory office use were also based on data from the 2020 *CEQR Technical Manual*.

TRAVEL DEMAND FORECAST

Table G-3 presents the incremental person trips expected to be generated by the Proposed Development, as compared to conditions in the future without the proposed actions. It should also be noted that the trip generation conservatively assumes that entire production studio space of 461,000 sf (all 11 sound stages) would be occupied simultaneously. However, a maximum of approximately one-half of the soundstages are typically in production (filming) simultaneously, with the remaining stages in pre- or post-production or vacant. As shown in **Table G-3**, the Proposed Development would generate approximately 227, 145, and 185 incremental person trips in the weekday AM, midday, and PM peak hours, respectively, as compared to the No-Action Condition. A discussion of the incremental person trips and vehicle trips, by mode, is provided below.

TRAFFIC

Based on the factors outlined above, the Proposed Actions would result in an incremental increase of 72 total vehicle trips in the weekday AM peak period, 135 total vehicle trips in the weekday midday peak period, and 50 total vehicle trips in the weekday PM peak period. As the number of incremental peak hour vehicle trips exceed the 50-trip CEQR threshold in the weekday AM, midday, and PM peak periods, a Level 2 screening analysis for quantified analysis was undertaken for these peak hours and is provided in the following section, Section E.

TRANSIT

According to the general thresholds used by the Metropolitan Transportation Authority (MTA) and specified in the *CEQR Technical Manual*, detailed transit analyses are generally not required if a proposed action is projected to result in fewer than 200 peak hour subway or bus transit riders. If a proposed action would result in 50 or more bus passengers being assigned to a single bus line (in one direction), or if it would result in an increase of 200 or more passengers at a single subway station, a detailed bus and/or subway analysis would be warranted.

Table G-3: Travel Demand Forecast

	With-Action Condition				No-Action Condition								Net Increment (With-Action - No-Action)			
Land Use:	<u>Film & Television Production Studio</u>				<u>Last-Mile Facility</u>		<u>Office</u>		<u>No-Action Total</u>				<u>Net Increment</u>			
Size/Units:	461,000	gsf			360,000	gsf	43,300	gsf								
Peak Hour Person Trips:					8 docks											
AM	553				232		94		326				227			
MD	369				106		118		224				145			
PM	507				212		110		322				185			
Person Trips:																
AM		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
	Auto	205	73	278	83	96	179	70	3	73	153	99	252	52	-26	26
	Taxi	20	7	27	0	0	0	0	0	0	0	0	0	20	7	27
	Shuttle to/from Subway	102	36	138	0	0	0	0	0	0	0	0	0	102	36	138
	Subway/Railroad	0	0	0	9	10	19	8	0	8	17	10	27	-17	-10	-27
	Bus	41	14	55	6	7	13	5	0	5	11	7	18	30	7	37
	Walk/Bike/Other	<u>41</u>	<u>14</u>	<u>55</u>	<u>10</u>	<u>11</u>	<u>21</u>	<u>8</u>	<u>0</u>	<u>8</u>	<u>18</u>	<u>11</u>	<u>29</u>	<u>23</u>	<u>3</u>	<u>26</u>
Total	409	144	553	108	124	232	91	3	94	199	127	326	210	17	227	
MD		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
	Auto	90	94	184	43	39	82	1	1	2	44	40	84	46	54	100
	Taxi	9	9	18	0	0	0	0	1	1	0	1	1	9	8	17
	Shuttle to/from Subway	46	47	93	0	0	0	0	0	0	0	0	0	46	47	93
	Subway/Railroad	0	0	0	4	4	8	3	5	8	7	9	16	-7	-9	-16
	Bus	18	19	37	3	3	6	3	5	8	6	8	14	12	11	23
	Walk/Bike/Other	<u>18</u>	<u>19</u>	<u>37</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>39</u>	<u>60</u>	<u>99</u>	<u>44</u>	<u>65</u>	<u>109</u>	<u>-26</u>	<u>-46</u>	<u>-72</u>
Total	181	188	369	55	51	106	46	72	118	101	123	224	80	65	145	
PM		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
	Auto	86	167	253	99	63	162	4	80	84	103	143	246	-17	24	7
	Taxi	9	17	26	0	0	0	0	0	0	0	0	0	9	17	26
	Shuttle to/from Subway	43	85	128	0	0	0	0	0	0	0	0	0	43	85	128
	Subway/Railroad	0	0	0	12	7	19	0	9	9	12	16	28	-12	-16	-28
	Bus	17	33	50	7	4	11	0	6	6	7	10	17	10	23	33
	Walk/Bike/Other	<u>17</u>	<u>33</u>	<u>50</u>	<u>12</u>	<u>8</u>	<u>20</u>	<u>1</u>	<u>10</u>	<u>11</u>	<u>13</u>	<u>18</u>	<u>31</u>	<u>4</u>	<u>15</u>	<u>19</u>
Total	172	335	507	130	82	212	5	105	110	135	187	322	37	148	185	

Table G-3: Travel Demand Forecast (cont.)

Land Use:		<u>Film & Television</u>			<u>Last-Mile</u>			<u>Office</u>			<u>No-Action Total</u>			<u>Total</u>		
Vehicle Trips :		<u>Production Studio</u>			<u>Facility</u>											
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
AM	Auto (Total)	192	68	260	78	90	168	65	3	68	143	93	236	49	-25	24
	Taxi	15	5	20	0	0	0	0	0	0	0	0	0	15	5	20
	Taxi Balanced	20	20	40	0	0	0	0	0	0	0	0	0	20	20	40
	Truck	10	4	14	0	10	10	1	1	2	1	11	12	9	-7	2
	Shuttle*	<u>3</u>	<u>3</u>	<u>6</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>3</u>	<u>6</u>
	Total	225	95	320	78	100	178	66	4	70	144	104	248	81	-9	72
MD	Auto (Total)	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
	Taxi	84	88	172	40	36	76	1	1	2	41	37	78	43	51	94
	Taxi Balanced	7	7	14	0	0	0	0	1	1	0	1	1	7	6	13
	Truck	14	14	28	0	0	0	1	1	2	1	1	2	13	13	26
	Shuttle	9	7	16	0	3	3	1	1	2	1	4	5	8	3	11
	Total	<u>2</u>	<u>2</u>	<u>4</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>2</u>	<u>2</u>	<u>4</u>
PM	Auto (Total)	109	111	220	40	39	79	3	3	6	43	42	85	66	69	135
	Taxi	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
	Taxi Balanced	80	156	236	93	59	152	4	75	79	97	134	231	-17	22	5
	Truck	7	13	20	0	0	0	0	0	0	0	0	0	7	13	20
	Shuttle*	20	20	40	0	0	0	0	0	0	0	0	0	20	20	40
	Total	5	4	9	9	1	10	0	0	0	9	1	10	-4	3	-1
PM	Auto (Total)	<u>3</u>	<u>3</u>	<u>6</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>3</u>	<u>6</u>
	Taxi	108	183	291	102	60	162	4	75	79	106	135	241	2	48	50
	Taxi Balanced															
	Truck															
	Shuttle*															
	Total															

*Shuttle assumes one bus with 40-person capacity.

As shown in **Table G-3** and discussed above, the Proposed Actions would generate an incremental increase of 111, 77, and 100 subway trips in the weekday AM, midday, and PM peak hours, respectively. The Proposed Actions would also generate an incremental increase of 37, 23, and 33 bus trips in the above mentioned peak hours, respectively. As such, these incremental subway and bus trips fall below the *CEQR Technical Manual* threshold of 200 or more new subway trips or 50 or more bus trips in each direction during any peak hour. Therefore, detailed subway and bus analyses are not warranted as a result of the Proposed Actions.

PEDESTRIANS

An analysis of pedestrian conditions is required where a substantial number of trips are generated by an action. This analysis focuses on sidewalks, corner areas, and crosswalks. As shown in **Table G-3**, the proposed development with the shuttle service to/from the subway station would generate approximately 26, -72, and 19 trips made entirely on foot (walk-only trips) during the weekday AM, midday, and PM hours, respectively. Including walk trips to/from public transit, the Proposed Development would generate a combined 36, -65, and 24 trips during the weekday AM, midday, and PM peak hours, respectively. As the number of incremental peak hour trips would not exceed the *CEQR Technical Manual* 200-trip analysis threshold in any peak hour, a Level 2 screening analysis is not needed and further pedestrian analysis is not warranted, as pedestrian impacts are not expected.

VEHICULAR AND PEDESTRIAN SAFETY

Under *CEQR Technical Manual* guidance, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high crash locations. These are defined as locations with 48 or more total reportable and non-reportable crashes or where five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, immediately adjacent to the Development Site, crash trends will be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips.

PARKING

Under *CEQR Technical Manual* guidance, on- and off-street parking analyses may be warranted if a quantified traffic analysis is necessary based on the Levels 1 and 2 screening analyses. Based on the screening analyses detailed above, a quantified traffic analysis was found to be warranted for the Proposed Actions. A parking demand forecast was prepared to determine if the proposed 310 spaces of on-site accessory parking would be sufficient to accommodate all of the projected demand from the proposed studios and provided in the following section, Section E.

E. LEVEL 2 SCREENING

A Level 2 screening assessment involves the assignment of project-generated trips to the study area street network and pedestrian elements, and the identification of specific locations where the incremental increase in demand may potentially exceed *CEQR Technical Manual* analysis thresholds and therefore require a quantitative analysis.

TRAFFIC

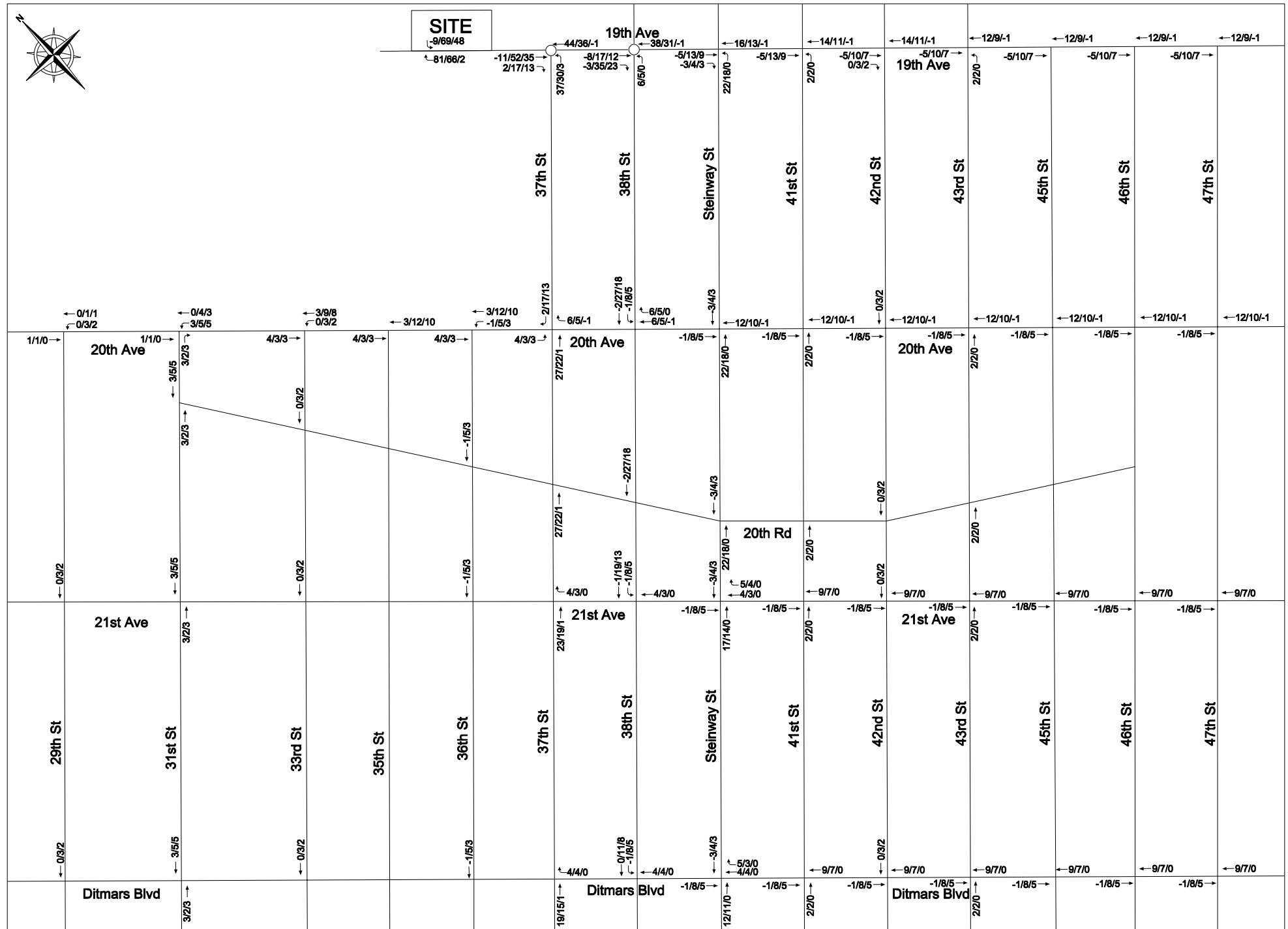
Incremental project-generated vehicle trips were assigned to area intersections for the AM, midday, and PM peak hours (i.e., the peak hours when vehicle trips would exceed the 50-trip CEQR screening threshold with a total of 72, 135, and 50 net incremental vehicle trips during the weekday AM, midday, and PM peak hours, respectively). Overall, in these peak hours, new trips would be most concentrated at intersections adjacent to the Development Site, particularly at 37th Street and 19th Avenue.

Figure G-1 shows the assignment of vehicle trips to and from the Development Site in each peak hour. The origins and destinations of project increment auto and taxi trips were estimated based on 2012-2016 AASHTO CTPP reverse-journey-to-work data in the vicinity of the project area. All auto trips were conservatively assigned to/from the Proposed Development's parking garage entrance on 19th Avenue, and taxis were assigned to the Proposed Development's frontage. Trucks were assigned to/from the nearest local truck routes along Steinway Street, 19th Avenue, and 20th Avenue. As shown in **Figure G-1**, the CEQR analysis threshold of 50 vehicle trips would be exceeded at two intersections, namely 19th Avenue at 37th Street and 19th Avenue and 38th Street. Therefore, these intersections were selected for detailed analysis to assess for the potential of significant adverse traffic impacts as a result of the Proposed Actions. These intersections are the two nearest intersections to the Development Site.

PARKING

As discussed above in Section A, the Proposed Development would provide 310 accessory off-street attended parking spaces on the Development Site; this would represent an increment of 81 spaces over No-Action conditions. As a quantified traffic analysis is necessary and parking demand is expected to increase as a result of the Proposed Development, a parking demand forecast was prepared to determine whether the Proposed Development would sufficiently accommodate the forecasted parking demand. As shown in **Table G-4**, the Proposed Development would generate a peak weekday parking demand of approximately 310 parking spaces between 9:30 AM and 10:30 AM. As the Proposed Development would include 310 parking spaces, there would be sufficient parking to accommodate peak parking demand. Therefore, no significant adverse parking impacts are anticipated and further detailed parking analysis is not warranted.

Assignment Peak Hour Incremental Vehicle Trips



LEGEND: ○ Analysis Location ← 4/4/0 Incremental Vehicle Trip (AM/MD/PM)

Table G-4: Weekday Parking Demand Forecast

Time	Production Studio		
	In	Out	Accumulation
12:30-1:30 AM	2	0	52
1:30-2:30 AM	5	3	54
2:30-3:30 AM	8	5	57
3:30-4:30 AM	11	5	63
4:30-5:30 AM	13	8	68
5:30-6:30 AM	53	10	111
6:30-7:30 AM	104	124	91
7:30-8:30 AM	116	35	172
8:30-9:30 AM	192	68	296
9:30-10:30 AM	59	45	310
10:30-11:30 AM	38	44	304
11:30 AM -12:30 PM	84	88	300
12:30-1:30 PM	43	44	299
1:30-2:30 PM	39	70	268
2:30-3:30 PM	46	82	232
3:30-4:30 PM	80	156	156
4:30-5:30 PM	75	95	136
5:30-6:30 PM	76	103	109
6:30-7:30 PM	13	26	96
7:30-8:30 PM	8	21	83
8:30-9:30 PM	5	18	70
9:30-10:30 PM	5	13	62
10:30-11:30 PM	3	10	55
11:30 PM -12:30 AM	0	5	50

Note: Pattern based on data collected by PHA in November 2019 at Steiner Studios. Travel demand factors: 10 trips/1,000 gsf; 1.07 persons/auto; auto share of 50%. Data adjusted to be consistent with temporal distributions in Table G-2 (AM:12%/MD:8%/PM:15%).

F. ANALYSIS METHODOLOGY

TRAFFIC

ANALYSIS METHODOLOGY

The traffic analysis examines conditions in the weekday AM, midday, and PM peak hours when the increased travel demand attributable to the Proposed Actions is expected to be the greatest. Traffic data was collected at the two intersections nearest to the Development Site in January 2021. Peak hours were based on existing traffic volumes in the study area, as reflected in automatic traffic recorder (ATR) count data. Based on existing peak traffic volumes along corridors in the study area, the peak hours selected for analysis include are the weekday 8:00-9:00 AM, 12:00-1:00 PM, and 4:45-5:45 PM periods. Given the period of disruption caused by the COVID-19 pandemic, it is important to note that pre-pandemic data from the 2019 *DSNY Queens District 1 Garage & Salt Shed EAS* was utilized to appropriately adjust and expand the traffic volume data collected in January 2021 at the two analysis locations.

The capacity analyses at intersections are based on the methodology presented in the Highway Capacity Manual (HCM) and utilize HCS+ Version 5.5 software. Traffic data required for these analyses include the hourly volumes on each approach, the number of turning movements, the percentage of trucks and buses, and pedestrian conflicting volumes at crosswalks. Field inventories are also necessary to document the physical layout and street widths, lane markings, curbside parking regulations, and other relevant characteristics needed for the analysis. The HCM methodology yields a volume-to-capacity (v/c) ratio for each signalized intersection approach. The v/c ratio represents the ratio of traffic volume on an approach congested conditions in dense urban areas to its capacity; when higher than this value, the ratio reflects increasing congestion. At a v/c ratio between 0.95 and 1.0, near-capacity conditions are reached, and delays can become substantial. Ratios of greater than 1.0 indicate saturated conditions with queuing. The HCM methodology also expresses the quality of traffic flow in terms of level of service (LOS), which is based on the amount of delay that a driver typically experiences at an intersection. Levels of service range from A, representing minimal delay (ten seconds or less per vehicle), to F, which represents long delays (greater than 80 seconds per vehicle).

For unsignalized intersections, the HCM methodology generally assumes that traffic on major streets is not affected by traffic flows on minor streets. Left turns from a major street are assumed to be affected by the opposing, or oncoming, traffic flow on that major street. Traffic on minor streets is affected by all conflicting movements. Similar to signalized intersections, the HCM methodology expresses the quality of traffic flow at unsignalized intersections in terms of LOS based on the amount of delay that a driver experiences. Level of service definitions used to characterize traffic flows at unsignalized intersections differ somewhat from those used for signalized intersections, primarily because drivers anticipate different levels of performance from the two different kinds of intersections. For unsignalized intersections, LOS ranges from A, representing minimal delay (ten seconds or less per vehicle, as it is for signalized intersections), to F, which represents long delays (greater than 50 seconds per vehicle, compared to greater than 80 seconds per vehicle for signalized intersections).

Table G-5 shows the LOS/delay relationship for signalized and unsignalized intersections using the HCM methodology. LOS A, B, and C generally represent highly favorable to fair levels of traffic flow. At LOS D, the influence of congestion becomes noticeable. LOS E is considered to be the limit of acceptable delay, and LOS F is considered to be unacceptable to most drivers. In these traffic impact analyses, a signalized lane grouping operating at LOS E or F or with a v/c ratio of 0.90 or more is identified as congested. For unsignalized intersections, a movement with LOS E or F is also identified as congested.

Table G-5: Intersection Level of Service Criteria

LOS	Description	Average Delay per Vehicle (seconds)	
		Signalized Intersections	Unsignalized Intersections
A	Satisfactory – Little/No Delay	Less than 10.1	Less than 10.1
B	Satisfactory – Minor Delay	10.1 to 20.0	10.1 to 15.0
C	Satisfactory – With Some Delay	20.1 to 35.0	15.1 to 25.0
D	Borderline Congestion	35.1 to 55.0	25.1 to 35.0
E	Marginally Acceptable Congestion	55.1 to 80.0	35.1 to 50.0
F	Unsatisfactory – Highly Congested	Greater than 80.0	Greater than 50.0

Source: 2000 Highway Capacity Manual

SIGNIFICANT IMPACT CRITERIA

The identification of significant adverse traffic impacts at analyzed intersections is based on criteria presented in the *CEQR Technical Manual*. If a lane group in the With-Action condition would operate at LOS A, B, C, or marginally acceptable LOS D (i.e., delay less than or equal to 45.0 seconds per vehicle for signalized intersections and 30.0 seconds per vehicle for unsignalized intersections), the impact is not considered significant. If the lane group LOS would deteriorate from LOS A, B, or C in the No-Action condition to worse than mid-LOS D or to LOS E or F in the With-Action condition, a significant traffic impact is identified. For a lane group that would operate at LOS D in the No-Action condition, an increase in delay of 5.0 seconds or more in the With-Action condition is considered a significant impact if the With-Action delay would exceed mid-LOS D. For a lane group that would operate at LOS E in the No-Action condition, a projected With-Action increase in delay of 4.0 seconds or more is considered a significant impact. For a lane group that would operate at LOS F in the No-Action condition, a projected With-Action increase in delay of 3.0 seconds or more is considered a significant impact.

The same criteria apply to signalized and unsignalized intersections. However, for traffic on a minor street at an unsignalized intersection to result in a significant impact, 90 passenger car equivalents (PCEs) must be projected in the future With-Action condition in any peak hour.

G. DETAILED TRAFFIC ANALYSIS

As discussed previously in Section E, “Level 2 Screening Assessment,” the analysis of traffic conditions focuses on a total of two intersections, where new trips generated by the Proposed Development are expected to exceed 50 trips in one or more peak hours. As shown in **Figure G-1**, these elements are located in the immediate proximity of the Development Site, 19th Avenue at 37th Street and 19th Avenue at 38th Street.

EXISTING CONDITIONS

STUDY AREA STREET NETWORK

The Astoria area street network provides adequate through-access to and from the Grand Central Parkway and Brooklyn-Queens Expressway, while also accommodating the local traffic demands of Astoria and surrounding neighborhoods. There are several arterials carrying heavy volumes of

through traffic, as well as minor roadways serving local Astoria traffic. In general, the heaviest traffic volumes along the principal streets in Astoria occur during the weekday AM and PM peak commuter periods. Although traffic volumes in the vicinity of the Development Site might reflect these AM and PM commuter peak periods, it should be noted that traffic in northern Astoria is not the result of typical office-use trips but rather a result of the industrial and manufacturing uses in the area.

The study area network is characterized by a typical street grid pattern, much of which is terminated or discontinuous in the north and west due to the East River and Luyster Creek. The Development Site is bounded by Luyster Creek to the west and the Steinway Piano Factory to the east, and fronts 19th Avenue. 19th Avenue is the only corridor that fronts and provides direct access to the Development Site. This corridor is considered a major collector that operates in the east-west direction. It collects traffic from principal arterials like Ditmars Boulevard and Grand Central Parkway to the southeast of the Development Site. 19th Avenue is a two-way street that extends from LaGuardia Airport in the east to the Development Site in the west, where it terminates. Near the Development Site, the 19th Avenue street bed is approximately 45 feet in width with parking permitted on both sides. It is also one of three designated local truck routes in the vicinity of the Development Site (along with 20th Avenue and Steinway Street). Many intersections on 19th Avenue are stop-controlled, particularly near the western terminus of the avenue.

37th Street is a local street that primarily operates in the northbound direction but functions as a two-way street between 19th and 20th Avenues. This length of 37th Street extends from Northern Boulevard in the south (Sunnyside, Queens) to 19th Avenue in the north, where it terminates near the Development Site. Near the Development Site, the 37th Street street bed is approximately 36 feet in width with parking permitted on both sides.

38th Street is also a local street that primarily operates in the northbound direction but functions as a two-way between 20th Avenue and immediately north of 19th Avenue, where it terminates. This length of 38th Street extends from the Grand Central Parkway in the south to a dead-end just northeast of the Development Site. Near the Development Site, the 38th Street street bed is approximately 42 feet in width with parking permitted on both sides.

TRAFFIC CONDITIONS

To establish the existing conditions traffic network, traffic data was collected on weekdays in January 2021 (turning movement counts and automatic traffic recorder counts) at/near the intersections of 19th Avenue at 37th Street and 19th Avenue at 38th Street. Volumes were counted in 15-minute increments over two-hour periods in the AM (7:00 AM to 9:00 AM), midday (12:00 PM to 2:00 PM), and PM (4:00 PM to 6:00 PM) peak periods. It should be noted that although the count was conducted during the pandemic, volumes are expected to be typical throughout the year as this area is industrial in nature and functions relatively uniformly throughout the year. Furthermore, based on the pre-pandemic data from the 2019 *DSNY Queens District 1 Garage & Salt Shed EAS*, a factor of 1.7 was conservatively utilized to appropriately adjust and escalate volume data collected. **Figure G-2**, below, shows existing traffic volumes during weekday AM, midday, and PM peak hours.

As shown in **Figure G-2**, in front of the Development Site, 19th Avenue is traversed by approximately 180 vehicles per hour (vph), 115 vph, and 160 vph in the eastbound direction during the weekday AM, midday, and PM peak hours, respectively. Westbound vehicular volumes are approximately 105 vph, 185 vph, and 160 vph during these same periods. Near the site, 37th Street is traversed by approximately 85 vph, 120 vph, and 130 vph in the northbound direction during the weekday AM, midday, and PM peak hours, respectively. Southbound vehicular volumes are approximately 115 vph, 130 vph, and 150 vph during these same periods. 38th Street is traversed by approximately 30 vph, 30 vph, and 65 vph in the northbound direction during the weekday AM, midday, and PM peak hours, respectively. Southbound vehicular volumes are approximately 75 vph, 90 vph, and 65 vph during these same periods.

INTERSECTION CAPACITY ANALYSIS

The v/c (volume/capacity) ratios, delays, and LOS (level of service) for the analyzed intersections during the weekday peak hours under existing conditions are shown in **Table G-6**. A lane group is considered congested if it operates at LOS E or F and/or with a v/c ratio of 0.90 or above. A v/c ratio of 1.00 or above reflects capacity conditions. As shown in **Table G-6**, all lane groups perform at LOS C or better with v/c ratios of 0.44 or less during all analyzed peak hours. There are no signs of any congestion in any analyzed peak hour under existing conditions.

Table G-6 – Existing Intersection Level of Service

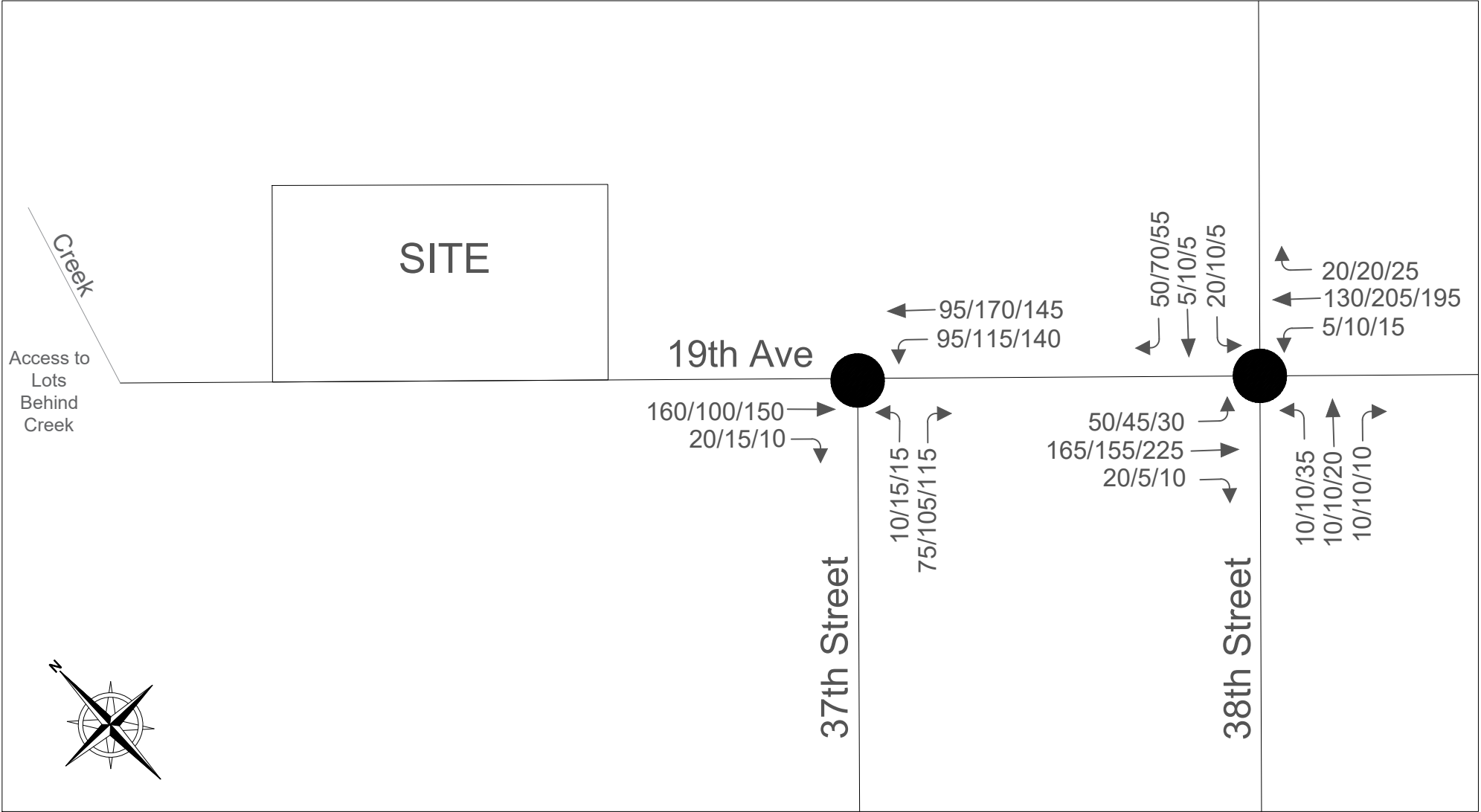
Intersections	Approach	Lane	Existing AM Peak Hour			Existing Midday Peak Hour			Existing PM Peak Hour		
			V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
19th Ave & 37th St	WB	LT	0.08	7.9	A	0.10	7.8	A	0.12	8.0	A
	NB	LR	0.13	10.7	B	0.19	10.7	B	0.22	11.4	B
<i>Unsignalized</i>											
19th Ave & 38th St	EB	LTR	0.39	13.5	B	0.38	13.9	B	0.44	15.1	C
38th St	WB	LTR	0.27	12.0	B	0.40	13.3	B	0.39	14.1	B
	NB	LTR	0.01	7.7	A	0.01	7.4	A	0.03	7.5	A
	SB	LTR	0.02	7.3	A	0.01	7.3	A	0.00	7.3	A

Notes: *Denotes a congested movement (LOS E or F, or V/C ratio ≥ 0.9). EB – Eastbound, WB – Westbound, NB – Northbound, SB – Southbound. L – Left, T – Through, R – Right, DfL – Analysis considers a default left-turn lane on this approach. V/C Ratio – Volume to capacity ratio; LOS – Level of service.

FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

The 2023 No-Action scenario also incorporates changes to the study area's traffic network as a result of the proposed DSNY facility located northwest of the Development Site (west of the creek and accessible through the western terminus of 19th Avenue), and the No-Action project on the development site absent of the Proposed Actions. Based on the DSNY's 24-hour travel demand detailed in the *DSNY Queens District 1 Garage & Salt Shed EAS*, hourly vehicle trips expected to traverse the two analyzed intersections during analyzed peak hours are incorporated in the analysis. It is worth noting that the DSNY facility is expected to generate peak demand outside of the analyzed peak hours. The No-Action project was assigned similar to the project increment (as discussed in the Section E), using the 2012-2016 AASHTO CTPP reverse-journey-to-work data and nearby truck routes. Apart from the proposed DSNY garage and the No-Action project, there are no other known developments within an approximate 1/2-mile radius of the Project Area that

Existing Peak Hour Vehicle Trips



LEGEND: ● Analysis Location

↶ 4/4/0 Existing Vehicle Trip (AM/MD/PM)

would be completed by the 2023 analysis year or would generate trips through the two analyzed intersections.

In addition, the 2023 No-Action scenario incorporates changes to the study area as it relates to general background growth and increased travel demand from new developments. As per *CEQR Technical Manual* guidelines, an annual background growth rate of 0.5 percent was assumed until 2023. This background growth rate is applied to account for general increases in travel demand not attributable to specific development projects in proximity to the study area. As such, volumes at the analyzed intersections are expected to generally increase through 2023 as a result of background growth and the proposed DSNY facility. **Figure G-3** shows the expected 2023 No-Action weekday AM, midday, and PM peak hour traffic volumes at analyzed intersections.

INTERSECTION CAPACITY ANALYSIS

The v/c ratios, delays, and LOS for the analyzed intersection during the weekday peak hours under 2023 No-Action conditions are shown in **Table G-7**. As shown in **Table G-7**, all lane groups would continue to perform acceptably at LOS C or better with v/c ratios of 0.67 or less during all peak hours. There would continue to be no congestion in any analyzed peak hour under No-Action conditions. The northbound left-right lane group at 19th Avenue and 37th Street would experience a deterioration in level of service, from LOS B to LOS C, between the Existing and No-Action conditions in the AM and PM analyzed peak hours. Similarly, the eastbound approach at 19th Avenue and 38th Street would deteriorate from LOS B to LOS C between the Existing and No-Action conditions in the AM and midday analyzed peak hours. The westbound approach at 19th Avenue and 38th Street would deteriorate from LOS B to LOS C between the Existing and No-Action conditions in the AM, midday, and PM analyzed peak hours.

Table G-7 – No-Action Intersection Level of Service

Intersections	Approach	Lane	Existing AM Peak Hour			No-Action AM Peak Hour			Existing Midday Peak Hour			No-Action Midday Peak Hour			Existing PM Peak Hour			No-Action PM Peak Hour		
			V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
19th Ave & 37th St	WB	LT	0.08	7.9	A	0.10	8.3	A	0.10	7.8	A	0.11	8.1	A	0.12	8.0	A	0.14	8.6	A
	NB	LR	0.13	10.7	B	0.44	20.5	C	0.19	10.7	B	0.29	13.5	B	0.22	11.4	B	0.51	22.1	C
<i>Unsignalized</i>																				
19th Ave & 38th St	EB	LTR	0.39	13.5	B	0.62	19.3	C	0.38	13.9	B	0.61	21.3	C	0.44	15.1	C	0.67	21.9	C
	WB	LTR	0.27	12.0	B	0.44	15.0	C	0.40	13.3	B	0.52	17.2	C	0.39	14.1	B	0.55	18.5	C
<i>Unsignalized</i>	NB	LTR	0.01	7.7	A	0.02	7.8	A	0.01	7.4	A	0.01	7.7	A	0.03	7.5	A	0.04	7.6	A
	SB	LTR	0.02	7.3	A	0.02	7.3	A	0.01	7.3	A	0.01	7.3	A	0.00	7.3	A	0.00	7.3	A

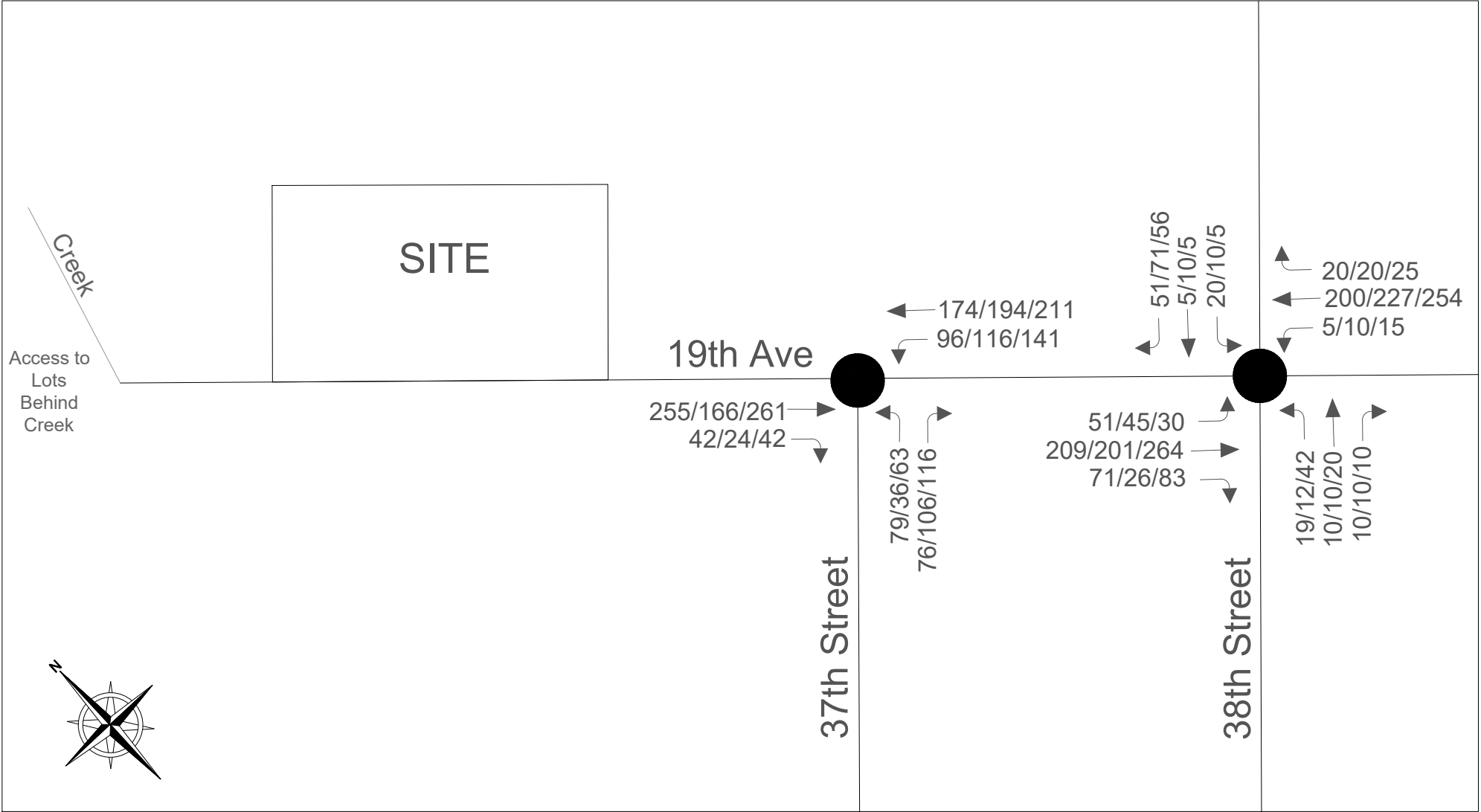
Notes: *Denotes a congested movement (LOS E or F, or V/C ratio ≥ 0.9). EB – Eastbound, WB – Westbound, NB – Northbound, SB – Southbound.

L – Left, T – Through, R – Right, DfL – Analysis considers a defacto left-turn lane on this approach. V/C Ratio – Volume to capacity ratio; LOS – Level of service.

FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

As discussed in Section D (“Level 1 Screening Assessment”) and shown in **Table G-3**, the Proposed Actions would result in an increase of 72, 135, and 50 vehicle trips traveling to and from the project area during the weekday AM, midday, and PM peak hours, respectively. As discussed in Section E (“Level 2 Screening Assessment”), vehicle trips generated by the Proposed Actions are expected to be most concentrated in proximity to the Development Site. As presented earlier in **Figure G-1**, the Proposed Actions would generate the highest concentrations of new vehicle trips through the two nearest intersections, 19th Avenue at 37th Street and 19th Avenue at 38th Street, by 2023. **Figure G-4** shows the weekday AM, midday, and PM traffic network volumes under 2023 future With-Action conditions. The volumes shown in **Figure G-4** are the sum of the net

No-Action Peak Hour Vehicle Trips



LEGEND: ● Analysis Location ↶ 4/4/0 No-Action Vehicle Trip (AM/MD/PM)

incremental traffic generated by the Proposed Actions (**Figure G-1**) and the No-Action traffic network (**Figure G-3**).

INTERSECTION CAPACITY ANALYSIS

The resulting v/c ratios, delays and LOS under 2023 With-Action conditions are shown in **Table G-8** for the weekday peak hours. **Table G-8** also shows the comparison between the No-Action conditions and With-Action conditions for each peak hour. As shown in **Table G-8**, the delays between No-Action conditions and With-Action conditions would slightly increase.

With the implementation of the Proposed Actions, the lane groups at the two analyzed intersections would perform at an LOS D or better with v/c ratios less than 0.78 during all analyzed peak hours. Although the intersection of 19th Avenue and 37th Street would have to process 100% of the traffic generated by the Proposed Actions, the addition of the Actions' traffic would cause minimal delay increase to the westbound approach and less than nine seconds of delay increase on the northbound approach during any one analyzed peak hour. This northbound approach would deteriorate from LOS C in the No-Action condition to LOS D in the With-Action condition in both the AM and PM analyzed peak hours. The northbound approach would deteriorate from LOS B in the No-Action condition to LOS C in the With-Action condition in the midday peak hour. The eastbound approach at 19th Avenue and 38th Street would deteriorate from LOS C to LOS D between the No-Action and With-action conditions in the AM and PM analyzed peak hours. No individual movements will be significantly worse in delay to be considered significantly or adversely impacted pursuant to the *CEQR Technical Manual's* significant impact criteria, outlined in Section F ("Analysis Methodology").

Table G-8 – With-Action Intersection Level of Service

Intersections	Approach	Lane	No-Action AM Peak Hour			With-Action AM Peak Hour			No-Action Midday Peak Hour			With-Action Midday Peak Hour			No-Action PM Peak Hour			With-Action PM Peak Hour		
			V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
19th Ave & 37th St	WB	LT	0.10	8.3	A	0.10	8.3	A	0.11	8.1	A	0.12	8.3	A	0.14	8.6	A	0.14	8.8	A
	NB	LR	0.44	20.5	C	0.62	29.3	D	0.29	13.5	B	0.46	19.4	C	0.51	22.1	C	0.57	25.7	D
<i>Unsignalized</i>																				
19th Ave & 38th St	EB	LTR	0.62	19.3	C	0.70	26.2	D	0.61	21.3	C	0.67	22.5	C	0.67	21.9	C	0.78	29.7	D
	WB	LTR	0.44	15.0	C	0.57	19.3	C	0.52	17.2	C	0.56	17.8	C	0.55	18.5	C	0.59	20.9	C
	NB	LTR	0.02	7.8	A	0.03	8.0	A	0.01	7.7	A	0.02	7.6	A	0.04	7.6	A	0.04	7.8	A
	SB	LTR	0.02	7.3	A	0.02	7.3	A	0.01	7.3	A	0.01	7.3	A	0.00	7.3	A	0.00	7.3	A

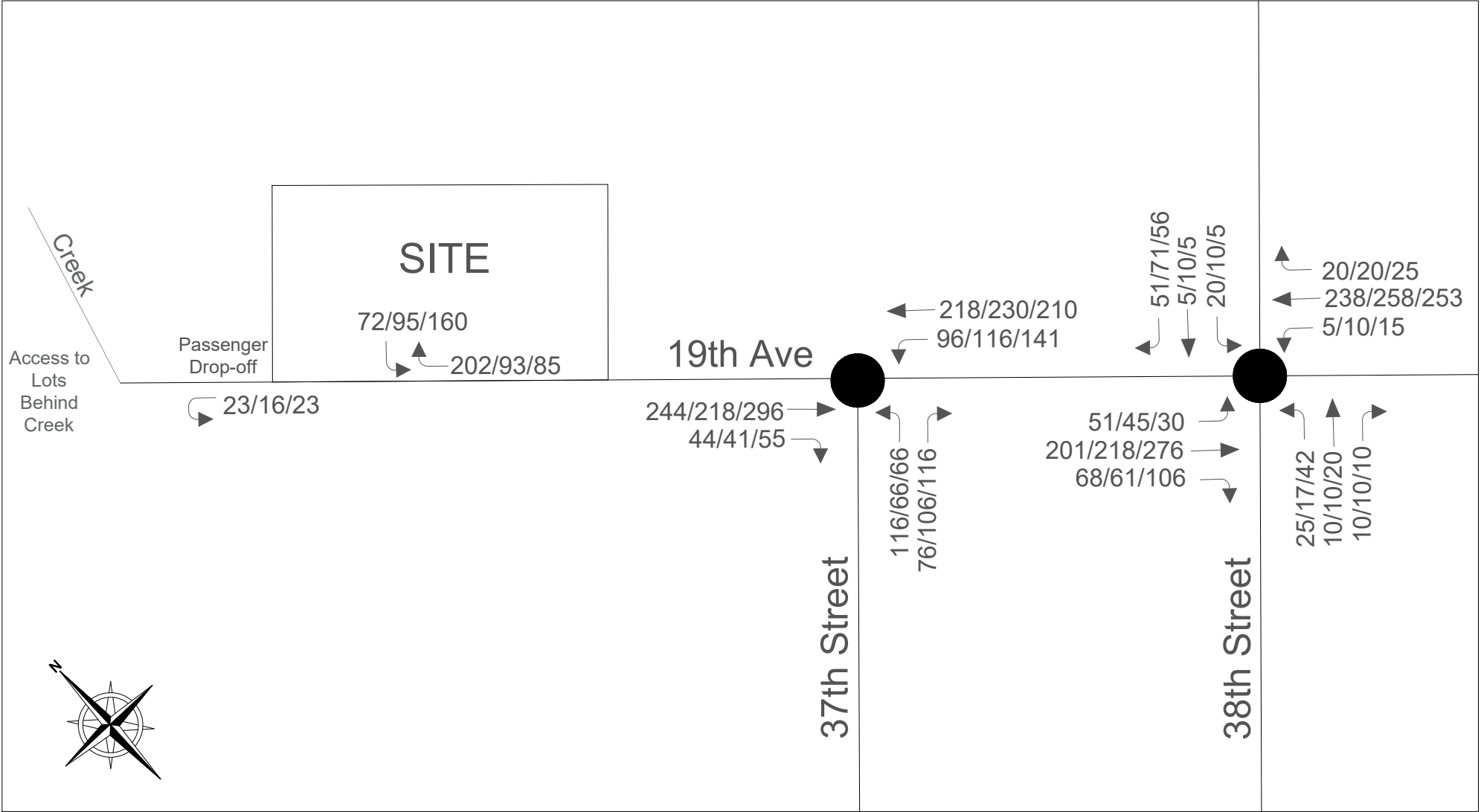
Notes: *Denotes a congested movement (LOS E or F, or V/C ratio ≥ 0.9). EB – Eastbound, WB – Westbound, NB – Northbound, SB – Southbound. L – Left, T – Through, R – Right, DfL – Analysis considers a default left-turn lane on this approach. V/C Ratio – Volume to capacity ratio; LOS – Level of service.

H. VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

STUDY AREA HIGH CRASH LOCATIONS

Under *CEQR Technical Manual* guidance, an evaluation of pedestrian and vehicular safety is typically needed for locations within the traffic and pedestrian study areas that have been identified as high crash locations. These locations are defined as locations where 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes have occurred in any consecutive twelve months of the most recent three-year period for which data are available. Reportable crashes are defined as those involving injuries, fatalities, and/or \$1,000 or more in property damage.

With-Action Peak Hour Vehicle Trips



LEGEND: ● Analysis Location ↗ 4/4/0 With-Action Vehicle Trip (AM/MD/PM)

Table G-9 shows summary crash data for the three-year reporting period between January 1, 2016 and December 31, 2018 that were obtained from NYCDOT. This is the most recent three-year period for which data are available. The table shows the total number of crashes each year and the number of crashes each year involving pedestrians and cyclists at intersections in proximity to the project area where the majority of new vehicular and pedestrian trips would be concentrated.

Table G-9: Crash Data Summary 2016 – 2018

Intersection		Pedestrian Injury Crashes			Bicycle Injury Crashes			Total Pedestrian/Bicyclist Injury Crashes			Total Crashes (Reportable + Non-Reportable)		
Roadway 1	Roadway 2	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
19th Ave	37th St	0	0	0	0	0	0	0	0	0	1	0	1
19th Ave	38th St/Steinway Pl	0	0	0	0	1	0	0	1	0	0	1	5

As shown in **Table G-9**, during the three-year reporting period, a total of eight total crashes (one pedestrian/bicyclist-related injury crash) occurred at analyzed study area intersections. None of these crashes involved fatalities. No intersections were found to have experienced a total of 48 or more crashes in any one year, nor were any intersections found to have experienced five or more pedestrian/bicyclist injury crashes in one year; therefore, none of the intersections are considered high crash locations.

*

A. INTRODUCTION

The Applicant is proposing to construct a 715,000 gross square foot (gsf) film and television production studio (the “Proposed Development”) in Astoria, Queens (Block 814, Lot 10; the “Development Site”). As described on Page 1a, Project Description, to facilitate the Proposed Development, the Applicant is seeking several discretionary approvals—including a bulk modification special permit, authorizations for modification of water public access area and supplemental public access area requirements, a certification related to Waterfront Zoning regulations, a permit to construct within the New York State Department of Environmental Conservation (DEC) Tidal Wetlands adjacent area jurisdiction, and permits for in-water construction activities that are regulated by DEC and the U.S. Army Corps of Engineers (USACE) (the “Proposed Actions”). This attachment assesses the potential for air quality impacts associated with the Proposed Development.

The maximum projected hourly incremental traffic volumes generated by the Proposed Development would not exceed the carbon monoxide (CO) screening threshold defined in the 2020 *City Environmental Quality Review (CEQR) Technical Manual* (170 peak hour vehicle trips at an intersection in the study area). However, the incremental traffic volumes would exceed the particulate matter (PM) emission screening threshold discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*. Therefore, a quantified assessment of PM emissions from traffic generated by the Proposed Development is required. The Proposed Development would include a 310-space parking garage, which would also include a loading area. Therefore, an analysis was conducted to evaluate potential future pollutant concentrations in the vicinity of the proposed parking garage.

Since the Proposed Development would include fossil fuel-fired heat and water systems, a stationary source analysis was conducted to evaluate the potential impact from these sources on air quality. The Development Site is in an area zoned for heavy manufacturing uses (M3-1) and; therefore, an analysis of potential emissions from industrial uses on the Proposed Development was performed, as per the *CEQR Technical Manual*. In addition, potential air quality impacts from large and major sources of emissions were analyzed.

As discussed in detail below, the Proposed Development would not result in any significant adverse impacts on air quality.

B. METHODOLOGY FOR PREDICTING POLLUTANT CONCENTRATIONS

MOBILE SOURCES

INTERSECTION ANALYSIS

The prediction of vehicle-generated emissions and their dispersion in an urban environment incorporates meteorological phenomena, traffic conditions, and physical configuration. Air pollutant dispersion models mathematically simulate how traffic, meteorology, and physical configuration combine to affect pollutant concentrations. The mathematical expressions and formulations contained in the various models attempt to describe an extremely complex physical phenomenon as closely as possible. However, because all models contain simplifications and approximations of actual conditions and interactions, and since it is necessary to predict the reasonable worst-case condition, most dispersion analyses predict conservatively high concentrations of pollutants, particularly under adverse meteorological conditions.

The mobile source analyses for the Proposed Development employ models approved by EPA that have been used for evaluating air quality impacts of projects in New York City, other parts of New York State, and throughout the country. The modeling approach includes a series of conservative assumptions relating to meteorology, traffic, and background concentration levels resulting in a conservatively high estimate of expected pollutant concentrations that could ensue from the Proposed Development.

Vehicle Emissions

Engine Emissions

Vehicular engine emission factors for PM₁₀ and PM_{2.5} were computed using the EPA mobile source emissions model, Motor Vehicle Emission Simulator (MOVES2014b).¹ This emissions model is capable of calculating engine, brake wear, and tire wear emission factors for various vehicle types, based on the fuel type (e.g., gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway type and grade, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. The inputs and use of MOVES incorporate the most current guidance available from DEC.

Vehicle classification data were based on field studies and mapped to the 13 vehicle categories based on New York State vehicle registration data in accordance with the current guidance in the *CEQR Technical Manual*. Appropriate credits were used to accurately reflect the inspection and maintenance program.² County-specific hourly temperature and relative humidity data obtained from DEC were used.

¹ EPA. Motor Vehicle Emission Simulator (MOVES): User Guide for MOVES2014a. EPA420B15095. November 2015.

² The inspection and maintenance programs require inspections of automobiles and light trucks to determine if pollutant emissions from each vehicle exhaust system are lower than emission standards. Vehicles failing the emissions test must undergo maintenance and pass a repeat test to be registered in New York State.

Road Dust

The contribution of re-entrained road dust to PM₁₀ concentrations, as presented in the PM₁₀ State Implementation Plan, is considered to be significant; therefore, the PM₁₀ estimates include both exhaust and road dust. PM_{2.5} emission rates were determined with fugitive road dust to account for their impacts in local microscale analyses. However, fugitive road dust was not included in the neighborhood scale PM_{2.5} microscale analyses, since DEP considers it to have an insignificant contribution on that scale.³ Road dust emission factors were calculated according to the latest procedure delineated by EPA⁴ and the *CEQR Technical Manual*.

Traffic Data

Traffic data for the intersection analysis were derived from existing traffic counts, projected future growth in traffic, and other information developed as part of the traffic analysis for the Proposed Development (see Attachment G, “Transportation”). Traffic data for the future without the project (the No-Action condition) and the With-Action condition were employed in the respective air quality modeling condition. The weekday morning (8:00 to 9:00 AM), midday (12:00 to 1:00 PM), evening (4:45 to 5:45 PM) peak periods were analyzed.

The peak weekday morning, midday, and evening traffic volumes were used as a baseline for determining off-peak volumes. Off-peak traffic volumes in the No-Action condition were determined by adjusting the peak period volumes by the 24-hour distributions of actual vehicle counts collected at appropriate locations, and off-peak increments from the Development Site were estimated based on the projected ins and outs for the Proposed Development’s parking garage.

Dispersion Models for Microscale Analysis

The CO and PM concentrations due to vehicular emissions adjacent to the analysis sites were predicted using the American Meteorological Society/Environmental Protection Agency Regulated Model (AERMOD) Version 19191.⁵ AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain, including updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and includes handling of terrain interactions. AERMOD has been a recommended model for transportation air quality analyses for several years and EPA mandated its use for transportation conformity purposes after a three-year transition period.⁶ Following EPA guidelines, the analysis was performed using an area source representation of emission sources in order to simulate traffic-

³ DEP. Interim Guidance for PM_{2.5} Analyses. March 3, 2008.

⁴ EPA. *Compilations of Air Pollutant Emission Factors AP-42*. Fifth Edition, Volume I: Stationary Point and Area Sources, Ch. 13.2.1. NC. <http://www.epa.gov/ttn/chief/ap42>. January 2011.

⁵ EPA. *User’s Guide for the AMS/EPA Regulatory Model (AERMOD)*. Office of Air Quality Planning and Standards. EPA-454/B-19-027. Research Triangle Park, North Carolina. August 2019.

⁶ EPA. Revisions to the Guideline on Air Quality Models: Final rule. Federal Register, Vol. 82, No. 10, January 2017.

related air pollutant dispersion.⁷ In addition, the weighted average release height and initial vertical source parameters were calculated for each modeled roadway. Hourly traffic volumes and associated emission factors were used to estimate hourly emission rates from each modeled roadway segment and predict traffic-related air pollutant concentrations at receptor locations.

Meteorology

In general, the transport and concentration of pollutants from vehicular sources are influenced by three principal meteorological factors: wind direction, wind speed, and atmospheric stability. Wind direction influences the direction in which pollutants are dispersed, and atmospheric stability accounts for the effects of vertical mixing in the atmosphere. These factors, therefore, influence the concentration at a particular prediction location (receptor).

The AERMOD model includes the modeling of hourly concentrations based on hourly traffic data and five years of monitored hourly meteorological data. The data consists of surface data collected at LaGuardia Airport and upper air data collected at Brookhaven, New York for the period 2015–2019. The meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevation over the five-year period. These data are processed using the EPA AERMET program to develop data in a format which can be readily processed by the AERMOD model. The land uses around the site where meteorological surface data were available were classified using categories defined in digital United States Geological Survey (USGS) maps.

Analysis Year

The microscale analyses were performed for 2023, the year by which the Proposed Development is likely to be completed. The future analysis was performed for both without the Proposed Development (the No Action condition) and with the Proposed Development (the With Action condition).

Background Concentrations

Background concentrations are those pollutant concentrations originating from distant sources that are not directly included in the modeling analysis, which directly accounts for vehicular emissions on the streets within 1,000 feet and in the line of sight of an analysis site. Background concentrations must be added to modeling results to obtain total pollutant concentrations at an analysis site.

The background concentrations for the nearest monitored location are presented in **Table H-1**. Concentrations are based on the latest available three years of monitored data (2017-2019) consistent with the statistical format of the NAAQS. These values were used as the background concentrations for the mobile source analysis.

⁷ EPA. *Project-Level Conformity and Hot-Spot Analyses*, available at: <https://www.epa.gov/state-and-local-transportation/project-level-conformity-and-hot-spot-analyses#pmguidance>

Table H-1

**Maximum Background Pollutant Concentrations
for Mobile Source Analysis**

Pollutant	Average Period	Location	Concentration	NAAQS
PM ₁₀ ⁽¹⁾	24-hour	IS 52	36 µg/m ³	150 µg/m ³
PM _{2.5} ⁽²⁾	24-hour	JHS 45	18.3 µg/m ³	35 µg/m ³
CO	1-hour	CCNY	2.52 ppm	35 ppm
	8-hour		1.2 ppm	9 ppm
Notes: (1) PM ₁₀ concentration represents the average of the maximum monitored concentration from the most recent three years of data. (2) PM _{2.5} concentration represents the average of the 98th percentile day from most recent three years of data. (3) CO concentrations represent the maximum second-highest monitored concentrations from the most recent three years of data. Source: New York State Air Quality Report Ambient Air Monitoring System, DEC, 2017-2019.				

Analysis Site

The two intersections analyzed in the traffic study were reviewed for microscale analysis based on the *CEQR Technical Manual* guidance. Both intersections analyzed in the traffic study were determined to exceed the PM screening thresholds referenced in the *CEQR Technical Manual*. Of these two intersections, 19th Avenue and 37th Street was selected because it has the highest incremental traffic volume.

Receptor Placement

Multiple receptors (i.e., precise locations at which concentrations are evaluated) were modeled at the selected site; receptors were placed along the approach and departure links at a 25 foot interval out to 125 feet in each direction. Ground-level receptors were placed at sidewalk or roadside locations near intersections with continuous public access, at a pedestrian height of 1.8 meters. Receptors in the analysis models for predicting annual average neighborhood-scale PM_{2.5} concentrations were placed at a distance of 15 meters from the nearest moving lane at each analysis location, based on the *CEQR Technical Manual* procedure for neighborhood-scale corridor PM_{2.5} modeling.

PARKING ANALYSIS

Emissions from vehicles using the proposed parking and loading facility could potentially affect ambient levels of CO and PM at adjacent receptors. An analysis of the emissions from potential outlet vents and their dispersion in the environment was performed, calculating pollutant levels in the surrounding area, using the methodology set forth in the *CEQR Technical Manual*. Emissions from vehicles entering, parking, and exiting the garage, as well as delivery trucks utilizing the loading berths and circulating on an internal elevated roadway, were estimated using the United States Environmental Protection Agency (EPA) MOVES mobile source emission model, as referenced in the *CEQR Technical Manual*. For all arriving and departing vehicles to the parking and loading areas, an average speed of five miles per hour was conservatively assumed for travel within the garage (10 miles per hour on ramp travel). In addition, all departing vehicles were assumed to idle for 1 minute before proceeding to the exit. Based on the current design, the exhaust for the garage would terminate on the roof of the building, vented through four outlets at a height of approximately 145 feet above grade (assuming no additional height offset from the roof).

Ventilation flow rate for the garage was based on current design information, at a combined flow of 97,100 cubic foot per minute. To determine compliance with the National Ambient Air Quality Standards (NAAQS), CO concentrations were determined for the maximum 8-hour average period.

To determine pollutant concentrations, the outlet vents were analyzed as a “virtual point source” using the methodology in the EPA *Workbook of Atmospheric Dispersion Estimates*, AP-26. This methodology estimates CO and PM concentrations at various distances from an outlet vent by assuming that the concentration in the garage is equal to the concentration leaving the vent, and determining the appropriate initial horizontal and vertical dispersion coefficients at the vent faces. It was assumed for the purpose of this analysis that all levels of the parking garage would be mechanically ventilated.

CO concentrations were determined for the time periods when overall garage usage would be the greatest, considering the hours when the greatest number of vehicles would enter and exit the facility. PM concentrations were determined on a 24-hour and annual average basis, based on the total number vehicles expected to be generated by the Proposed Development over a day derived from the trip generation analysis. Background and on-street concentrations were added to the modeling results to obtain the total ambient levels for CO. The 24-hour average background concentrations of particulate matter less than 2.5 micrometers in diameter (PM_{2.5}) was used to determine the *de minimis* criteria threshold.

STATIONARY SOURCES

HEATING AND HOT WATER SYSTEMS

Stationary source analyses were conducted using the methodology described in the *CEQR Technical Manual* to assess air quality impacts associated with emissions from the Proposed Development’s heat and hot water systems. An initial screening was prepared using basic project information and applying thresholds defined in the *CEQR Technical Manual*. However, since the screening analysis of the Proposed Project’s heating and hot water systems did not pass, further analysis was performed using the AERMOD dispersion model. AERMOD is EPA’s preferred regulatory stationary source model.

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

AERMOD incorporates the Plume Rise Model Enhancements (PRIME) downwash algorithm, which is designed to predict concentrations in the “cavity region” (i.e., the area around a structure which under certain conditions may affect an exhaust plume, causing a portion of the plume to become entrained in a recirculation region). AERMOD also uses the Building Profile Input Program for PRIME (BPIPPRM) to provide a detailed analysis of downwash influences on a direction-specific basis. BPIPPRM determines the projected building dimensions for modeling with the building downwash algorithm enabled. The modeling of plume downwash accounts for all obstructions within a radius equal to five obstruction heights of the stack.

The analysis was prepared both with and without downwash in order to assess the worst-case impacts at elevated locations close to the height of the source, which would occur without

downwash, as well as the worst-case impacts at lower elevations and ground level, which would occur with downwash, consistent with the *CEQR Technical Manual* guidance.

Potential 1-hour average NO₂ concentrations, added to representative background concentrations in the area, were compared with the NAAQS. Potential 24-hour and annual average incremental concentrations of PM_{2.5} were compared with the *de minimis* criteria defined in the *CEQR Technical Manual*. For the analysis of the 1-hour average NO₂ concentration from the building's heating and hot water systems, AERMOD's Plume Volume Molar Ratio Method (PVMRM) module was used to analyze chemical transformation within the model. PVMRM incorporates hourly background ozone concentrations to estimate NO_x transformation within the source plume. The model applied ozone concentrations measured in 2015–2019 at the nearest available DEC ozone monitoring station—the IS 52 monitoring station in the Bronx. An initial NO₂ to NO_x ratio of 10 percent at the source exhaust stack was assumed for boilers, which is considered representative.

Five years of surface meteorological data collected at LaGuardia Airport (2015–2019) and concurrent upper air data collected at Brookhaven, New York were used in the analysis.

Emission Rates and Stack Parameters

The Proposed Development would utilize natural gas-fired heating and hot water systems with the exhaust stacks located on the roof of the building.

Annual emission rates for heating and hot water systems were calculated based on fuel consumption estimates, using energy intensity estimates based on type of development and size of the building (715,000 gsf) as recommended in the *CEQR Technical Manual*, and applying emission factors for natural gas-fired boilers.⁸ NO_x emissions for the boilers were calculated assuming low NO_x burner technology would be employed, with a maximum emission concentration of 9 parts per million (ppm). Emissions for PM were calculated based on emission factors obtained from the EPA *Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: Stationary Point and Area Sources*. PM_{2.5} emissions include both the filterable and condensable components. For the maximum hourly PM_{2.5} and NO₂ emissions, the design estimate of 20 MMBtu was used for the boilers. The exhaust from the heat and hot water systems was assumed to be vented through a single stack located 10 feet above the roof of the building at a height of 157.5 feet above grade.

To calculate exhaust velocity, the fuel consumption estimated for the Proposed Development was multiplied by EPA's fuel factor for natural gas,⁹ providing the exhaust flow rate at standard temperature; the flow rate was then corrected for the exhaust temperature, and exhaust velocity was calculated based on the stack diameter. Assumptions for stack diameter and exhaust temperature for the proposed heating and hot water systems were obtained from a survey of boiler exhaust data provided by New York City Department of Environmental Protection (DEP),¹⁰ and were used to calculate the exhaust velocity.

The emission rates and exhaust stack parameters used in the modeling analyses are presented in **Table H-2**.

⁸ EPA. *Compilation of Air Pollutant Emission Factors AP-42*. 5th Ed., V. I, Ch. 1.4. September, 1998.

⁹ EPA. *Standards of Performance for New Stationary Sources*. 40 CFR Chapter I Subchapter C Part 60. Appendix A-7, Table 19-2. 2013.

¹⁰ DEP. *Boiler Database*. Provided August 11, 2017.

Table H-2
Exhaust Stack Parameters and Emission Rates

Stack Parameter	Value
Stack Height (feet)	157.5
Stack Diameter (feet)	3.0 ⁽¹⁾
Exhaust Velocity (meters/second)	0.49 ⁽²⁾
Exhaust Temperature (degrees Fahrenheit)	200 ⁽³⁾
<i>Emission Rate (grams/second)</i>	
NO ₂ (1-hour average)	0.027 ⁽⁴⁾
NO ₂ (Annual average)	0.0052
PM _{2.5} (24-hour average)	0.019
PM _{2.5} (Annual average)	0.00353
Note:	
1. Stack diameter based on design information.	
2. Stack parameter assumption was obtained from a survey of boiler exhaust data provided by DEP.	
3. Based on boiler specifications for similar equipment.	
4. Per design information, the boilers were modeled assuming 9 ppm low NO _x burners.	

Background Concentrations

For the AERMOD analysis, total 1-hour NO₂ concentrations were refined following a more detailed approach (EPA “Tier 3”). The methodology used to determine the total 1-hour NO₂ concentrations from the facility was based on adding the monitored background to modeled concentrations, as follows: hourly modeled concentrations from the boilers were first added to the seasonal hourly background monitored concentrations; then the highest combined daily 1-hour NO₂ concentration was determined at each location and the 98th percentile daily 1-hour maximum concentration for each modeled year was calculated within the AERMOD model; finally the 98th percentile concentrations were averaged over the latest five years.

PM_{2.5} impacts are assessed on an incremental basis and compared with the PM_{2.5} *de minimis* criteria. The PM_{2.5} 24-hour average background concentration based on the 98th percentile concentration, averaged over the years 2017-2019, was used to establish the *de minimis* value of 8.35 ug/m³. PM_{2.5} annual average impacts are assessed on an incremental basis and compared to the PM_{2.5} *de minimis* criteria, with considering the annual background. Therefore, the annual PM_{2.5} background is not presented in **Table H-3**.

Table H-3
Maximum Background Pollutant Concentrations

Maximum Background Pollutant Concentration				
Pollutant	Average Period	Location	Concentration (µg/m³)	NAAQS (µg/m³)
NO ₂	1-hour	IS 52, Bronx	110.6	188
	Annual		37.9	100
PM _{2.5}	24-hour	JHS 45, Brooklyn	18.3	35
	Annual		7.6	12
Source: New York State Air Quality Report Ambient Air Monitoring System, DEC, 2015–2019.				

Receptor Placement

Receptors (locations at which concentrations are projected) generally include operable windows in residential or other buildings, air intakes, and publicly accessible open space locations, as applicable. The nearest building of similar or greater height is located at a distance of more than

400 feet from the Development Site, and no buildings with sensitive uses were identified within this distance. Since there were no such buildings within 400 feet of the Proposed Development, ground level receptors were analyzed near the Development Site along a public access area and at a nearby shopping center. The rooftop terrace amenity space located at 132 feet 6 inches above grade on the Development Site was also modeled.

INDUSTRIAL SOURCES

Potential air quality impacts associated with industrial processes within 400 feet of the Development Site were evaluated, as per the *CEQR Technical Manual*. The Steinway Piano Factory currently operates on the property to the east of the Development Site; therefore, permitted sources of emissions associated with woodworking and spray coating operations were modeled. There are no other industrial and manufacturing uses within 400 feet of the Development Site.

The analysis was performed using the AERMOD dispersion model, using the same general assumptions and methodology described for the heating and hot water system analysis. The Steinway Piano Factory has both DEP air permits for individual emission sources or emission points, and a DEC Title V air permit that covers all regulated sources of emissions at the facility.

Table H-4 summarizes the DEP permit information for the modeled emission sources.

Table H-4
Industrial Sources of Emissions

DEP Permit ID	Description of Process	Bldg. No.	Stack Height (ft)	Stack Diameter (ft)	Flow Rate (scfm)
PA015078	Woodworking	50	56	1	16,300
PA132372	Woodworking	25	11	3	13,350
PA018977	Spray Booth	87	65	8.6	63,000
PA036984	Other Industrial	85	65	1.5	3,000
PA058190	Woodworking	85	14	1.3	3,094
PA122872	Woodworking	25	28	7	16,850
PA124472	Spray Booth	85	65	2.7	8,350
PA132172	Woodworking	86	11	7	23,000
PB000513	Woodworking	87	53	2	7,000
PB012403	Woodworking	27	66	1.3	20,000
PB012503	Woodworking	86	50	0.75	1,700
PB012603	Woodworking	25	66	0.75	1,700
PB034710	Spray Booth	87	24	2	12,000
PB035311	Spray Booth	39	24	2	12,000
PB043608	Woodworking	94	15	0	31,700
PB045201	Spray Booth	87	66	2.83	12,600
PB064511	Woodworking	27	66	0.75	3,000
PB064611	Woodworking	85	12	0.75	4,500
PB465203	Woodworking	85	12	1.6	7,500
PB479503	Woodworking	85	10	1.3	10,000
PW004518	Spray Booth	87	56	2.8	13,000

EPA and DEC have issued guidelines that establish acceptable ambient levels for air toxic compounds based on human exposure. The DEC DAR-1 guidance document presents guideline concentrations in micrograms per cubic meter for the one-hour and annual average time periods for various air toxic compounds. These values are provided in **Table H-5** for the compounds affecting receptors located at the Development Site. The compounds listed are those emitted by

existing sources of air toxics at the Steinway Piano Factory. Note that since the DEC Title V permit data is more current, that emission data was used in lieu of DEP data, where applicable.

Table H-5
Industrial Source Analysis:
Relevant NYSDEC Air Guideline Concentrations

Pollutant	CAS Number	SGC (µg/m ³)	AGC (µg/m ³)
1,4-Dioxane	000123-91-1	3,000	0.2
2-Pentanone, 4-Methyl	000108-10-1	31,000	3,000
4-4-Methylenediphenol Diisocyanate	000101-68-8	14	0.6
Acetaldehyde	000075-07-0	470	0.45
Benzene	000071-43-2	1300	0.13
Chromium	007440-47-3	--	45
Cobalt Compounds ¹	013586-82-8	--	0.0013
Dimethyl Phthalate	000131-11-3	--	12.00
Ethanol, 2-(2-Butoxyethoxy)	000112-34-5	370	200
Ethanol, 2-Butoxy-	000111-76-2	14,000	1,600
Ethylbenzene	000100-41-4	--	1,000
Ethylene Oxide	00075-21-8	18	0.019
Formaldehyde	000050-00-0	30	0.06
Isobutyl Acetate	000110-19-0	--	565
Methanol	000067-56-1	33,000	4,000
MEK	000078-93-3	13,000	5,000
MIBK	00108-10-1	31,000	3,000
Naphthalene	000091-20-3	7,900	3
Nickel	007440-02-0	2.0E-01	0.0042
Petroleum Ether	08032-32-4	--	900
Phenol	000108-95-2	5,800	20
Styrene	100-42-5	17,000	1,000
Toluene	00108-88-3	37,000	5,000
Toluene-2,4,2,5,-Di-Isocyanate	026471-62-5	14	0.07
VOC ²	998-00-0	98,000	7,000
Xylene	01330-20-7	22,000	100
Notes: ¹ Modeled as Cobalt. ² Modeled as isopropyl alcohol. Source: NYSDEC, DAR-1 AGC/SGC Tables, August 2016.			

PM_{2.5} emissions from woodworking and spray booth emissions were included in the modeling analysis for the Steinway Piano Factory's other regulated emission sources. Refer to the section "Large and Major Sources of Emissions" for further information.

Concentrations for the air contaminants were determined at air intake locations on the roof of the proposed building, based on design information.

Projected worst-case concentrations at the Development Site were compared with the short-term guideline concentrations (SGCs) and annual guideline concentrations (AGCs) summarized in

DEC's DAR-1 AGC/SGC tables.¹¹ These guidelines represent the airborne concentrations that are applied as a screening threshold to determine if the Development Site could be significantly impacted by nearby sources of air pollution.

LARGE AND MAJOR SOURCES OF EMISSIONS

The *CEQR Technical Manual* requires an analysis of projects that may result in a significant adverse impact due to certain types of new uses located near a "large" or "major" emissions source. Major sources are defined as those located at facilities that have a Title V or Prevention of Significant Deterioration air permit, while large sources are defined as those located at facilities that require a State Facility Permit. To assess the potential effects of these existing sources on the projected and potential development sites, a review of existing permitted facilities was conducted. Sources of information reviewed included the DEC Title V and State Facility Permit websites. One facility was identified that has sources of emissions within 1,000 feet of the Development Site: the Steinway Piano Factory, which has a Title V air permit. The Steinway facility has two boilers, rated at 24.2 million British Thermal Units (BTU) per hour and 25.2 mmBTU/hr. The boilers operate primarily with natural gas, with distillate fuel oil as a back-up. The facility emissions were calculated based on the actual fuel usage data, and applying USEPA's Compilations of Air Pollutant Emission Factors (AP-42)¹² emission factors for boilers. **Table H-6** presents the emission rates and stack parameters used in the AERMOD analysis for the facility.

Table H-6
Stack Parameters and Emission Rates from Steinway Piano Factory Boilers

Parameter	Natural Gas	Fuel Oil
Stack Height (ft) ⁽¹⁾	125	
Stack Diameter (ft) ⁽¹⁾	8	
Exhaust Flow Rate (ft/s) ⁽¹⁾	6.6	
Exhaust Temperature (°F) ⁽²⁾	307.8	
NO _x Short Term Emission Rate (g/s)	0.0877	0.010
NO _x Annual Emission Rate (g/s)	0.0877	0.010
SO ₂ Short Term Emission Rate (g/s)	0.00053	0.00010
PM ₁₀ Short Term Emission Rate (g/s)	0.0067	0.0010
PM _{2.5} Short Term Emission Rate (g/s)	0.0067	0.0010
PM _{2.5} Annual Emission Rate (g/s)	0.0067	0.0010
Notes:		
¹ Obtained from the NYSDEC Title V Permit.		
² Stack parameter assumption was obtained from a survey of boiler exhaust data provided by DEP.		

As discussed in the Section, "Industrial Sources," emissions of PM_{2.5} from the woodworking and spray booth processes were included in the modeling analysis of the combustion sources, to determine potential cumulative impacts from the Steinway Piano Factory on the Proposed Development.

¹¹ DEC. *Policy DAR-1: Guidelines for the Evaluation and Control of Ambient Air Contaminants under Part 212*. August 10, 2016.

¹² USEPA, *Compilations of Air Pollutant Emission Factors AP-42*, Fifth Edition, Volume I: Stationary Point and Area Sources, <http://www.epa.gov/ttn/chief/ap42>.

Concentrations for the air contaminants were determined at air intake locations on the roof of the proposed building, based on design information. The studio spaces would have special ventilation and filtration requirements that require increased removal of PM, which would include high efficiency filters with a minimum efficiency reporting value (MERV) rating of 13 or greater. Therefore, for the purpose of determining PM_{2.5} concentrations, the analysis accounted for the expected reductions of PM_{2.5} from modeled sources as well as the ambient air. Using representative manufacturer's information, PM less than 2.5 microns in diameter is expected to be removed at an aggregate efficiency of greater than 65 percent; therefore, this value was used for the analysis, to adjust the modeled and background PM_{2.5} concentrations.

C. THE FUTURE WITHOUT THE PROPOSED DEVELOPMENT

MOBILE SOURCES

PM₁₀ concentrations in the No Action condition were determined by using the methodology previously described. Predicted future PM₁₀ 24-hour concentrations, including background concentrations, at the analyzed intersections in the No-Action condition are presented in **Table H-7**. The values shown are the highest predicted concentrations for the receptor locations. As shown in the table, the maximum No-Action condition concentration is predicted to be well below the PM₁₀ NAAQS.

Table H-7
Maximum Predicted 24-Hour Average
PM₁₀ No Action Concentration (µg/m³)

Analysis Site	Location	Concentration
1	19th Avenue and 37th Street	59.8
Notes: NAAQS—24-hour average 150 µg/m ³ . Concentration includes a background concentration of 36.0 µg/m ³ .		

PM_{2.5} concentrations for the No Action condition are not presented, since impacts are assessed on an incremental basis.

D. PROBABLE IMPACTS OF THE PROPOSED DEVELOPMENT

MOBILE SOURCES

INTERSECTION ANALYSIS

PM₁₀ concentrations with the Proposed Development were determined using the methodology previously described and used in the No Action condition. **Table H-8** presents the maximum predicted PM₁₀ 24-hour concentration at the analyzed intersection in the With Action condition. The value shown is the highest predicted concentration for the modeled receptor locations and includes the background concentration.

Table H-8
Maximum Predicted 24-Hour Average PM₁₀
With Action Concentration (µg/m³)

Analysis Site	Location	No Action	With Action
1	19th Avenue and 37th Street	59.8	62.0
Notes: NAAQS—24-hour average 150 µg/m ³ . Concentrations presented include a background concentration of 36.0 µg/m ³ .			

Using the methodology previously described, maximum predicted 24-hour and annual average PM_{2.5} concentration increments were calculated so that they could be compared with the *de minimis* criteria. Based on this analysis, the maximum predicted localized 24-hour average and neighborhood-scale annual average incremental PM_{2.5} concentrations are presented in **Tables H-9 and H-10**, respectively. Note that PM_{2.5} concentrations in the No Action condition are not presented, since impacts are assessed on an incremental basis.

Table H-9
Maximum Predicted 24-Hour Average PM_{2.5}
With Action and Incremental Concentration (µg/m³)

Analysis Site	Location	No Action	With Action	Increment	Criterion
1	19th Avenue and 37th Street	-	-	0.6	8.35 ⁽¹⁾
		24.5 ⁽²⁾	25.1 ⁽²⁾	-	35 ⁽³⁾
Notes: (1) PM _{2.5} <i>de minimis</i> criterion—24-hour average, not to exceed more than half the difference between the background concentration (17.8 µg/m ³) and the 24-hour standard of 35 µg/m ³ . (2) The 24-hour PM _{2.5} concentration presented represents the maximum of the total 98th percentile. Concentrations presented include a background concentration of 18.3 µg/m ³ . (3) NAAQS.					

Table H-10
Maximum Predicted Annual Average PM_{2.5}
With Action Incremental Concentration (µg/m³)

Analysis Site	Location	No Action	With Action	Increment	Criterion
1	19th Avenue and 37th Street	-	-	0.04	0.1
		7.78 ⁽²⁾	7.82 ⁽²⁾	-	12 ⁽³⁾
Notes: ⁽¹⁾ PM _{2.5} <i>de minimis</i> criterion—annual (neighborhood scale), 0.1 µg/m ³ . ⁽²⁾ Concentrations presented include a background concentration of 7.6 µg/m ³ . ⁽³⁾ NAAQS					

The results show that overall, there would be no potential for significant adverse impacts on air quality from vehicle trips generated by the Proposed Development.

PARKING ANALYSIS

Based on the methodology previously described, the maximum predicted CO and PM_{2.5} concentrations from the parking garage for the Proposed Development were determined. Since the exhaust for the parking garage terminates on the roof, pollutant concentrations were modeled at an air intake on the roof (approximately 12 feet between an exhaust vent and the nearest air intake) at the height of the vent, a far-side sidewalk receptor across 19th Avenue (54 feet from the Development Site), and a building receptor for the terrace directly above the parking and loading facility on the ground floor at approximately 26.5 feet above grade (representing a terrace height of approximately 20.5 feet and a pedestrian height of 6 feet).

The maximum predicted 8-hour average CO concentration modeled is 1.3 ppm at the air intake receptor. This value includes a predicted concentration of 0.1 ppm from emissions within the parking facility, and a background level of 1.2 ppm. The maximum predicted concentration is substantially below the applicable standard of 9 ppm, and the incremental concentration of 0.2 ppm is below the *de minimis* CO criterion of 3.9 ppm.

The maximum predicted 24-hour and annual average PM_{2.5} increments from the vehicles using the garage are 1.73 µg/m³ and 0.29 µg/m³, respectively, at the air intake receptor. These values are below the respective PM_{2.5} *de minimis* criteria of 8.35 µg/m³ for the 24-hour average concentration and 0.3 µg/m³ for the annual average concentration.

Therefore, the proposed parking garage would not result in any significant adverse air quality impacts.

HEAT AND HOT WATER SYSTEMS

AERMOD ANALYSIS

The results of the AERMOD analysis for 1-hour and annual NO₂ and PM_{2.5} are presented in **Table H-11**. As shown, there are no exceedances of the NO₂ NAAQS. In addition, the maximum predicted incremental concentrations of PM_{2.5} are not predicted to exceed the CEQR *de minimis* criteria.

Table H-11
Maximum Modeled Pollutant Concentrations (µg/m³)

Pollutant	Averaging Period	Maximum Modeled Impact	Background	Total Concentration	Criterion
NO ₂	1-hour	125 ⁽¹⁾	N/A	125	188 ⁽²⁾
	Annual	0.23 ⁽³⁾	37.9	38.1	100 ⁽²⁾
PM _{2.5}	24-hour	8.23	N/A	8.23	8.35 ⁽⁴⁾
	Annual -Discrete	0.21	N/A	0.21	0.3 ⁽⁵⁾
	Annual - Neighborhood	0.0067	N/A	0.0067	0.1 ⁽⁶⁾

Notes:
 N/A – Not Applicable
 1. The 1-hour NO₂ concentration presented represents the maximum of the total 98th percentile 1-hour NO₂ concentration predicted at any receptor using seasonal-hourly background concentrations.
 2. NAAQS.
 3. Annual NO₂ impacts were estimated using a NO₂/NO_x ratio of 0.75.
 4. PM_{2.5} *de minimis* criteria—24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 µg/m³.
 5. PM_{2.5} *de minimis* criteria—annual (discrete receptor).
 6. PM_{2.5} *de minimis* criterion—annual (neighborhood scale), 0.1 µg/m³.

Overall, based on the analysis presented above, the Proposed Development's heating and hot water system would not result in any significant adverse air quality impacts.

To ensure that there are no potential significant adverse impacts of PM_{2.5} or NO₂, certain restrictions would be required as part of the Proposed Development through an Air Quality (E) Designation (E-627) that would be placed on the Development Site (Block 814, Lot 10). This restriction was assumed in the analysis results shown in **Table H-11** and would avoid the potential for significant air quality impacts from stationary sources using the assumptions used in the analysis. The E Designation restrictions are outlined below:

Any new development on Block 814, Lot 10 must utilize only natural gas in any fossil fuel-fired heating and hot water equipment, be fitted with low NO_x (9 ppm) burners, and have heating and hot water exhaust stacks located at least 157.5 feet above grade, at least 49 feet from any outdoor amenity spaces located on the building, to avoid potential significant adverse air quality impacts.

INDUSTRIAL SOURCES

Table H-12 presents the maximum potential modeled short-term and long-term impacts of the analyzed industrial sources on toxic air pollutant concentrations on the Proposed Development. The results were compared with the SGC and AGC values reported in the NYSDEC's DAR-1 guidance document to determine the potential for significant impacts.¹³

Table H-12

Maximum Predicted Pollutant Concentrations from Industrial Sources at the Steinway Piano Factory on the Proposed Development (µg/m³)

Pollutant	CAS No.	1-Hour Average (µg/m ³)	SGC (µg/m ³)	Annual Average (µg/m ³)	AGC (µg/m ³)
1,4-Dioxane	000123-91-1	0.0286	3,000	0.00013	0.2
4-4-Methylenediphenol Diisocyanate	000101-68-8	0.026	14	0.00003	0.60
Acetaldehyde	000075-07-0	0.049	470	0.00013	0.45
Benzene	000071-43-2	0.34	1300	0.0017	0.13
Chromium	007440-47-3	0.059	--	0.00015	45
Cobalt Compounds	013586-82-8	0.51	--	0.00066	0.0013
Dimethyl Phthalate	000131-11-3	0.77	--	0.0011	12
Ethanol, 2-(2-Butoxyethoxy)	000112-34-5	45	370	0.21	200
Ethanol, 2-Butoxy-	000111-76-2	198	14,000	1	1,600
Ethylbenzene	000100-41-4	1.1	--	0.0045	1,000
Ethylene Oxide	00075-21-8	0.049	18	0.00013	0.02
Formaldehyde	000050-00-0	0.00065	30	<0.00001	0.06
Isobutyl Acetate	000110-19-0	52	--	0.24	565
Methanol	000067-56-1	2.3	33,000	0.0093	4,000
MEK	000078-93-3	22	13,000	0.091	5,000
MIBK	00108-10-1	19	31,000	0.093	3,000
Naphthalene	000091-20-3	2.2	7,900	0.0068	3
Nickel	007440-02-0	0.011	0.2	0.00005	0.0042
Petroleum Ether	08032-32-4	17	--	0.12	900
Phenol	000108-95-2	1.1	5,800	0.0044	20.00
Styrene	000100-42-5	196	17,000	0.89	1,000
Toluene	00108-88-3	159	37,000	0.40	5,000
Toluene-2,4,2,5,-Di-Isocyanate	026471-62-5	0.051	14	0.000080	0.07
VOC	998-00-0	2,153	98,000	9.2	7,000
Xylene	01330-20-7	57	22,000	0.34	100

Source: NYSDEC Division of Air Resources. *DAR-1 AGS/SGC Tables*. August 2016.

LARGE OR MAJOR SOURCES

Potential stationary source impacts on the Proposed Development from the Steinway Piano Factory were determined using the AERMOD model. The maximum modeled concentrations were added to the background concentrations to estimate total concentrations on the Proposed Development. Total 1-hour NO₂ concentrations were determined following the refined EPA "Tier

¹³ NYSDEC, DAR-1 Guidelines for the Evaluation and Control of Ambient Air Contaminants Under Part 212; Appendix A, Toxicity Classification and Guideline Development Methodology for Annual and Short-Term Guideline Concentrations (AGC/SGC), August 2016.

3” approach described earlier for the heating and hot water system analysis. The results of the AERMOD analysis are presented in **Table H-13**.

Table H-13

**Maximum Modeled Pollutant Concentrations from the Steinway Piano Factory
on the Proposed Development ($\mu\text{g}/\text{m}^3$)**

Pollutant	Averaging Period	Modeled Concentration	Background	Total Concentration	NAAQS
NO ₂	1-hour	107 ⁽¹⁾	N/A	107	188
	Annual	0.48 ⁽²⁾	37.9	38.4	100
SO ₂	1-hour	0.10	13.5	13.6	196
PM _{2.5}	24-hour	24.5	18.3	15 ⁽³⁾	35
	Annual	0.36	7.6	2.7 ⁽³⁾	12
PM ₁₀	24-hour	51	36	87	150

Notes:
N/A – Not Applicable
1. The 1-hour NO₂ concentration presented represents the maximum of the total 98th percentile 1-hour NO₂ concentration predicted at any receptor using seasonal-hourly background concentrations.
2. Annual NO₂ impacts were estimated using a NO₂/NO_x ratio of 0.75.
3. The concentration presented reflects the sum of the modeled and background concentrations, with a 65 percent reduction in the total PM_{2.5} concentration at air intake locations, reflecting the use of high efficiency filters with a minimum MERV rating of 13 for the occupied spaces at the Proposed Development.

As shown in **Table H-13**, the predicted pollutant concentrations for all of the pollutant time averaging periods shown are below their respective NAAQS. Note that for PM_{2.5}, the maximum modeled concentrations reflect the application of high efficiency MERV 13 filters that are designed to capture fine PM. Therefore, no potential for significant adverse air quality impacts on the proposed project from the existing large source is predicted.

To ensure that there are no potential significant adverse impacts of PM_{2.5}, certain restrictions would be required as part of the Proposed Development through an Air Quality (E) Designation (E-627) that would be placed on the Development Site (Block 814, Lot 10). This restriction was assumed in the analysis results shown in **Table H-13** and would avoid the potential for significant air quality impacts from stationary sources using the assumptions used in the analysis. The E Designation restrictions are outlined below:

Any new development on Block 814, Lot 10 must utilize a mechanical ventilation system for occupied spaces, with air intakes that include high efficiency filters having a minimum-MERV rating of 13.

*

A. INTRODUCTION

The Applicant is proposing to construct a 715,000 gross square foot (gsf) media production studio (the “Proposed Development”) in Astoria, Queens (Block 814, Lot 10; the “Development Site”). As described on Page 1a, Project Description, to facilitate the Proposed Development, the Applicant is seeking several discretionary approvals—including a bulk modification special permit, authorizations for modification of water public access area and supplemental public access area requirements, a certification related to Waterfront Zoning regulations, a permit to construct within the New York State Department of Environmental Conservation (DEC) Tidal Wetlands adjacent area (TWAA) jurisdiction, and permits for in-water construction activities that are regulated by DEC and the U.S. Army Corps of Engineers (USACE) (the “Proposed Actions”). With the Proposed Actions, the Applicant proposes to build a seven-story, approximately 160-foot-tall (to the top of the bulkhead) film and television production studio on the Development Site (the “Proposed Development”). Absent the Proposed Actions, the Applicant will construct a four-story, approximately 150-foot-tall (to the top of the bulkhead) last-mile distribution center (the “as-of-right development”) on the Development Site. Including site preparation work that began in late 2020 under permits from the New York City Department of Buildings (DOB) to begin construction associated with the as-of-right last mile distribution center, construction of the Proposed Development is anticipated to take approximately 36 months to complete while the as-of-right development is anticipated to take approximately 32 months to complete. The Applicant will enter a Restrictive Declaration, to be recorded against the Development Site in association with the Proposed Actions, requiring the implementation of project components related to the environment that would preclude any potential impacts to air quality or noise related to construction activities, including the use of best available tailpipe reduction technologies, and utilization of newer equipment, as well as the use of auger drill rigs for pile installation rather than impact pile driving during excavation and foundation, as described further later in this section.

This section summarizes the planned construction program for the Proposed Development and assesses the potential for significant adverse impacts during the construction period. The city, state, and federal regulations and policies that govern construction are described, followed by the anticipated construction schedule and the types of activities likely to occur during construction. Finally, a comparison of the potential impacts from construction activity for the Proposed Development and the as-of-right development is provided.

B. GOVERNMENTAL COORDINATION AND OVERSIGHT

Construction oversight involves several city, state, and federal agencies. **Table I-1** lists the primary involved agencies and their areas of responsibility. For projects in New York City, primary construction oversight lies with the New York City Department of Buildings (DOB), which ensures that construction projects meet the requirements of the New York City Building Code and that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety

regulations to protect workers and the general public during construction: the areas of oversight include installation and operation of equipment such as cranes, sidewalk sheds, and safety netting and scaffolding. The New York City Department of Environmental Protection (DEP) enforces the New York City Noise Code, reviews and approves any needed Remedial Action Work Plans (RAWPs) and Construction Health and Safety Plans (CHASP), and regulates water disposal into the sewer system as well as abatement of hazardous materials. The City of New York Department of Sanitation (DSNY) has regulatory and enforcement oversight of the storage, transport, and disposal of asbestos waste. The New York City Fire Department (FDNY) has primary oversight of compliance with the New York City Fire Code and the installation of tanks containing flammable materials. The New York City Department of Transportation (DOT)'s Office of Construction Mitigation and Coordination (OCMC) reviews and approves any traffic lane and sidewalk closures. MTA coordinates construction work for the Proposed Development's below-grade transit concourse. The New York City Landmarks Preservation Commission (LPC) reviews any archaeological testing or monitoring that may be required. LPC also reviews and approves construction protection plans (CPPs) and any monitoring measures necessary to prevent damage to historic structures.

Table I-1
Construction Oversight in New York City

Agency	Areas of Responsibility
New York City	
Department of Buildings	Primary oversight for Building Code and site safety
Department of Environmental Protection	Noise, RAPs/CHASPs, dewatering, hazardous materials abatement
City of New York Department of Sanitation	Storage, transport, and disposal of asbestos waste
Fire Department	Compliance with Fire Code, fuel tank installation
Department of Transportation	Lane and sidewalk closures
Landmarks Preservation Commission	Historic and archaeological resources
New York State	
Department of Labor	Asbestos Workers
Department of Environmental Conservation	Hazardous materials and fuel/chemical storage tanks
United States	
Environmental Protection Agency	Air emissions, noise, hazardous materials, poisons
Occupational Safety and Health Administration	Worker safety

At the state level, the New York State Department of Labor (DOL) licenses asbestos workers. The New York State Department of Environmental Conservation (DEC) regulates disposal of hazardous materials, and construction and operation of bulk petroleum and chemical storage tanks. At the federal level, the U.S. Environmental Protection Agency (EPA) has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons, although much of the responsibility is delegated to the state level. The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.

C. CONSTRUCTION PHASING AND SCHEDULE

Table I-2 presents the anticipated construction schedule for the Proposed Development. Construction of the Proposed Development began in late 2020 and is anticipated to be complete by the end of 2023, over an approximately 36-month period. The overall construction duration for the as-of-right development is anticipated to be similar to the Proposed Development, to be completed over an approximately 32-month period.

Table I-2
Anticipated Construction Schedule—Proposed Development

Construction Task	Start Month	Finish Month
Excavation and Foundation	Month 1	Month 9
Superstructure	Month 11	Month 23
Exteriors	Month 11	Month 26
Fit-out	Month 11	Month 36
Source: WF Industrial IV LLC		

Construction would proceed in several stages, some of which would overlap: excavation and foundation, superstructure, exteriors, and fit-out. These stages are described in greater detail below. The overall construction activities are expected to be similar in intensity and duration for the Proposed Development and the as-of-right development.

D. CONSTRUCTION DESCRIPTION

The following provides a description of the general construction practices and activities, which would occur during the construction of both the Proposed Development and the as-of-right development.

GENERAL CONSTRUCTION PRACTICES

HOURS OF WORK

Construction would be carried out in accordance with New York City laws and regulations, which allow construction activities between 7 AM and 6 PM on weekdays. Construction work would typically begin at 7 AM on weekdays, with most workers arriving between 6 AM and 7 AM. Normally work would end at 3:30 PM, but it can be expected that, in order to complete certain critical tasks (e.g., finishing a concrete pour for a floor deck), the workday may occasionally be extended beyond normal work hours. Any extended workdays would generally last until approximately 6 PM and would not include all construction workers on-site, but only those involved in the specific task requiring additional work time.

Weekend or night work may also be occasionally required for certain construction activities. Appropriate work permits from DOB would be obtained for any necessary work outside of normal construction hours and no work outside of normal construction hours would be performed until such permits are obtained. The numbers of workers and pieces of equipment in operation for night or weekend work would typically be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend or night work would be less than that of a normal workday.

DELIVERIES AND ACCESS

During construction, access to the construction site would be fully controlled. Work areas would be fenced off, and limited access points for workers and trucks would be provided. Material deliveries to the construction site would be controlled and scheduled. MPT plans would be developed for any required temporary sidewalk and lane narrowing and/or closures to ensure the safety of the construction workers and the public passing through the area. Approval of these plans and implementation of the closures would be coordinated with DOT's OCMC. Measures specified in the MPT plans that are anticipated to be implemented would include parking lane closures, safety signs, safety barriers, and construction fencing.

PUBLIC SAFETY

A variety of measures would be employed to ensure public safety during the construction, including sidewalk bridges to provide overhead protection; safety signs to alert the public about active construction work; safety barriers to ensure the safety of the public passing by construction areas; flag persons to control trucks entering and exiting the construction areas and/or to provide guidance for pedestrians' and bicyclists' safety; and safety nettings as the superstructure work advances upward to prevent debris from falling to the ground. All DOB safety requirements would be followed and construction of the Proposed Development would be undertaken under the supervision of a Site Safety Manager, so as to ensure the safety of the community and the construction workers themselves.

RODENT CONTROL

Construction contracts would include provisions for a rodent (i.e., 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 construction, the contractor would carry out a maintenance program, as necessary. Signage would be posted and coordination would be conducted with appropriate agencies.

DESCRIPTION OF CONSTRUCTION ACTIVITIES

Prior to the commencement of construction, the work area would be prepared for construction, including the installation of public safety measures such as barriers, netting, and signs. The construction areas would be fenced off. Worker and truck access points would be established.

Construction would then proceed with excavation and foundation, superstructure, exteriors, and fit-out stages, which are discussed below.

EXCAVATION AND FOUNDATION

Excavation activities would be required at the Development Site for the building foundation. Excavation work would begin with the installation of temporary walls to contain soil around the excavation area, and excavators would then be used to excavate soil. The soil would be loaded onto dump trucks for transport to a licensed disposal facility or stored for reuse on any portion of the Development Site that needs fill. This stage of construction would also include the construction of the foundation of the proposed building. For the as-of-right building, piles could be installed with the use of drill rigs. For the Proposed Development, the applicant is committed to the use of auger drill rigs for pile installation rather than impact pile driving during excavation and foundation. This commitment will be memorialized in a Restrictive Declaration, to be recorded against the Development Site in association with the Proposed Actions. Concrete trucks would be

used to pour the building foundation. Excavation and foundation activities may also involve the use of bobcats, generators, and/or compressors, and a cherry picker. No blasting is anticipated for the construction of the Proposed Development.

Dewatering

Water from rain and snow collected in the excavation area during construction would be removed using a dewatering pump. If groundwater dewatering is required, it would be performed in accordance with DEP sewer use requirements.

SUPERSTRUCTURE

The superstructure work would include the framework for the proposed building, such as beams, slabs, and columns. Construction of the interior structure—or core—of the building would include elevator shafts; vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment rooms; core stairs; and restroom areas. A crane would first be brought onto the Development Site during the superstructure task and would be used to lift structural components and other large materials. Superstructure activities may also include the use of compressors, bar bending machine, concrete vibrators, concrete finishers, and a variety of trucks. In addition, temporary construction elevators (hoists) would be used for the vertical movement of workers and materials during superstructure activities.

EXTERIORS

During this stage of construction, the exterior envelope systems of the proposed building would be installed. The exterior precast units would be transported via a hoist to the appropriate floors for installation. This stage of construction would overlap with a portion of the superstructure work.

FIT-OUT

Activities during the fit-out stage would include the construction of interior partitions, installation of lighting fixtures and interior finishes (e.g., flooring, painting, etc.), and mechanical and electrical work, such as the installation of elevators and lobby finishes. Final cleanup and touchup of the building and final building system (e.g., electrical system, fire alarm, plumbing, etc.) testing and inspections would be part of this stage of construction. Equipment used during interiors and finishing would include a hoist, welders, and a variety of small handheld tools. In addition, during this stage of construction, there would be shoreline improvement work, including potentially 1 to 2 months of timber piles impact pile driving activities, for the waterfront public access area along Luyster Creek.

Fit-out work would typically be the quietest period of construction in terms of its effect on the public, because most of the construction activities would occur inside the building with the façades substantially complete and the proposed building enclosed.

E. ENVIRONMENTAL EFFECTS OF THE PROPOSED DEVELOPMENT'S CONSTRUCTION ACTIVITIES

Construction activities associated with the Proposed Actions would be expected to result in conditions typical of construction projects in New York City. It is assumed that the Proposed Actions—including the DEC and USACE permits required for the project, which are being sought concurrently with the proposed zoning approvals—will be approved in 2021. Site preparation

began in late 2020, and the Applicant has received permits from DOB to begin construction associated with the as-of-right last mile distribution center that the Applicant would construct on the Development Site absent the Proposed Actions (the as-of-right development). The approvals received include those for dewatering, foundation, and superstructure activities.¹ Including construction activities that began in 2020, construction of the Proposed Development is expected to take approximately 36 months, with a planned completion date of the fourth quarter of 2023. The No Action distribution center would be similar to the Proposed Development and would require a comparable activities and a slightly shorter duration of approximately 32 months.

As discussed above, in both the No Action and With Action conditions, construction activities would be carried out in accordance with New York City laws and regulations, which allow construction activities between 7:00 AM and 6:00 PM on weekdays. If work is required outside of normal hours, necessary approvals would be obtained from the appropriate agencies (i.e., DOB and DEP). All necessary measures would be implemented to ensure adherence to the New York City Air Pollution Control Code regulating construction-related dust emissions and the New York City Noise Control Code regulating construction noise. If needed, MPT plans would be developed for any curb-lane and/or sidewalk closures. Approval of these plans and implementation of all temporary closures during construction would be coordinated with DOT's OCMC. With the implementation of the measures described above, the construction effects of the Proposed Development on the surrounding area would be substantially reduced.

The following provides additional information on the overall temporary effects of the construction of the Proposed Development on transportation, air quality, and noise. As outlined below, construction on the Proposed Development would not result in any significant adverse impacts.

TRANSPORTATION

The construction transportation analysis assesses the potential for construction activities to result in significant adverse impacts to traffic, transit (i.e., subway and bus), pedestrian elements (i.e., sidewalks, corners, and crosswalks), and parking conditions. The analysis is based on the peak worker and truck trips during construction of the Proposed Development and the as-of-right development. As discussed above, the No Action distribution center would be similar to the Proposed Development and would require a comparable construction duration and activities. **Table I-3** shows the estimated average daily numbers of workers and deliveries for the Proposed Development by calendar quarter for all construction activities. For the Proposed Development, the combined peak construction worker vehicle and truck trip generation would occur during the third quarter of Year 2 construction. The average number of workers throughout the construction period would be 219 per day. The peak number of workers would be 360 per day in the first quarter of

¹ As discussed on Page 1a, "Project Description," on December 4, 2020, DOB issued a foundations-only permit for the No Action last-mile distribution center on the Development Site pursuant to a New Building (NB) application filed by the Applicant. Later that month, the Applicant submitted plans and specifications for a "multi-level film production studio" for DOB's review as an amendment to the last-mile distribution center NB filing. The distribution center and production studio plans filed with DOB have the same building footprint. Because the production studio materials were filed as an amendment to the distribution center application, DOB required that all filings and permits, including the December 4, 2020 foundations-only permit, be updated to note "multi-level film production studio." The Building Code use listed on the foundations-only permit remains "S-2 Storage." The Applicant does not intend to pull any DOB permits for construction of the production studio unless and until the Proposed Actions are approved.

Year 3 construction. For truck trips, the average number of trucks would be 16 per day, and the peak would occur in the third quarter of Year 2 construction, with 37 trucks per day.

Table I-3
Average Number of Daily Workers and Trucks by Quarter
Proposed Development

Year	Year 1				Year 2				Year 3				Peak	Average
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th		
Trucks	10	10	8	4	30	32	37	23	15	7	7	7	37	16
Workers	50	50	42	33	247	308	348	354	360	350	300	183	360	219

Source: Leeding Builders Group, March 2021

Table I-4 shows the estimated average daily numbers of workers and deliveries to the Development Site by calendar quarter for all construction activities for the No Action distribution center. The combined peak construction worker vehicle and truck trip generation for the No Action development would occur during the second quarter of Year 2 construction. The average number of workers throughout the construction period would be 152 per day. The peak number of workers would be 273 per day in the second quarter of Year 2 construction. For truck trips, the average number of trucks would be 13 per day, and the peak would occur in the second quarter of Year 2 construction, with 31 trucks per day.

Table I-4
Average Number of Daily Workers and Trucks by Quarter
No Action Distribution Center

Year	Year 1				Year 2				Year 3				Peak	Average
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th		
Trucks	10	10	8	4	26	31	30	17	9	6	5	0	31	13
Workers	50	50	42	30	222	273	270	241	253	225	163	0	273	152

Source: Leeding Builders Group, May 2021

TRAFFIC

Similar to other construction projects in New York City, most of the construction activities at the Development Site are expected to take place from 7:00 AM to 3:30 PM. While construction truck trips would occur throughout the day (with more trips during the morning), and most trucks would remain in the area for short durations, most construction workers would commute during the hours before and after the work shift. Based on the latest available U.S. Census data for workers in the construction and excavation industry (2000 Census), it is anticipated that 76.5 percent of construction workers would commute to the Development Site using private autos, with an average occupancy of approximately 1.16 persons per vehicle. Each truck delivery was assumed to result in two truck trips during the same hour (one “in” and one “out”), whereas each worker vehicle was assumed to arrive near the work shift start hour and depart near the work-shift end hour. Further, in accordance with the *City Environmental Quality Review (CEQR) Technical Manual*, it was assumed that each truck has a passenger car equivalent (PCE) of two.

The estimated daily vehicle trips would be distributed throughout the workday based on projected work shift allocations and likely arrival/departure patterns for construction workers and trucks. For construction workers, the majority (approximately 80 percent) of the arrival and departure trips would typically take place during the hour before and after each work shift (6 to 7 AM for

arrival and 3 to 4 PM for departure on a regular day shift). Construction truck deliveries into the construction site typically peak during the hour (25 percent) before each shift (6 to 7 AM), overlapping with construction worker arrival traffic; construction truck deliveries departing the construction site typically peak during the hour after the work shift has started (7 to 8 AM) since on-site activities do not commence until 7 AM.

Table I-5 presents the hourly trip projections for the peak construction period that is anticipated to occur during third quarter of Year 2 construction for the Proposed Development. As shown in **Table I-5**, the maximum construction-related traffic increments would be approximately 220 PCEs between 6 AM and 7 AM and 192 PCEs between 4 PM and 5 PM. As a comparison, **Table I-6** presents the hourly trip projections for the peak construction period that is anticipated to occur during second quarter of Year 2 construction for the No Action distribution center. As shown in **Table I-6**, the maximum construction-related traffic increments would be approximately 176 PCEs between 6 AM and 7 AM and 152 PCEs between 4 PM and 5 PM.

Table I-5

Peak Construction Vehicle Trip Projections – Proposed Development

Hour	Auto Trips			Truck Trips			Total					
	In	Out	Total	In	Out	Total	Vehicle Trips			PCE Trips		
							In	Out	Total	In	Out	Total
Third Quarter of Year 3 Construction												
6 AM–7 AM	184	0	184	9	9	18	193	9	202	202	18	220
7 AM–8 AM	46	0	46	4	4	8	50	4	54	54	8	62
8 AM–9 AM	0	0	0	4	4	8	4	4	8	8	8	16
9 AM–10 AM	0	0	0	4	4	8	4	4	8	8	8	16
10 AM–11 AM	0	0	0	4	4	8	4	4	8	8	8	16
11 AM–12 PM	0	0	0	3	3	6	3	3	6	6	6	12
12 PM–1 PM	0	0	0	3	3	6	3	3	6	6	6	12
1 PM–2 PM	0	0	0	2	2	4	2	2	4	4	4	8
2 PM–3 PM	0	12	12	2	2	4	2	14	16	4	16	20
3 PM–4 PM	0	184	184	2	2	4	2	186	188	4	188	192
4 PM–5 PM	0	34	34	0	0	0	0	34	34	0	34	34
Daily Total	230	230	460	37	37	74	267	267	534	304	304	608
Note: Hourly construction worker and truck trips were derived from an estimated quarterly average number of construction workers and truck deliveries per day, with each truck delivery resulting in two daily trips (arrival and departure).												

The incremental construction trips in PCEs are presented in **Table I-7**. Compared with the construction of the No Action distribution center, with peak quarter construction activities expected to yield 220 and 192 peak hour PCEs during the 6:00 AM to 7:00 AM and 3:00 PM to 4:00 PM hours, respectively, construction activities associated with the Proposed Development would generate 44 and 40 more PCEs, respectively. The incremental construction PCEs would not exceed the *CEQR Technical Manual* analysis threshold of 50 vehicle-trips during the 6:00 AM to 7:00 AM and 3:00 PM to 4:00 PM peak hours. Therefore, the Proposed Development is not expected to result in any significant adverse traffic impacts during construction.

Table I-6

Peak Construction Vehicle Trip Projections – No Action Distribution Center

Hour	Auto Trips			Truck Trips			Total					
	In	Out	Total	In	Out	Total	Vehicle Trips			PCE Trips		
							In	Out	Total	In	Out	Total
Second Quarter of Year 3 Construction												
6 AM–7 AM	144	0	144	8	8	16	152	8	160	160	16	176
7 AM–8 AM	36	0	36	3	3	6	39	3	42	42	6	48
8 AM–9 AM	0	0	0	3	3	6	3	3	6	6	6	12
9 AM–10 AM	0	0	0	3	3	6	3	3	6	6	6	12
10 AM–11 AM	0	0	0	3	3	6	3	3	6	6	6	12
11 AM–12 PM	0	0	0	3	3	6	3	3	6	6	6	12
12 PM–1 PM	0	0	0	2	2	4	2	2	4	4	4	8
1 PM–2 PM	0	0	0	2	2	4	2	2	4	4	4	8
2 PM–3 PM	0	9	9	2	2	4	2	11	13	4	13	17
3 PM–4 PM	0	144	144	2	2	4	2	146	148	4	148	152
4 PM–5 PM	0	27	27	0	0	0	0	27	27	0	27	27
Daily Total	180	180	360	31	31	62	211	211	422	242	242	484
Note: Hourly construction worker and truck trips were derived from an estimated quarterly average number of construction workers and truck deliveries per day, with each truck delivery resulting in two daily trips (arrival and departure).												

Table I-7

**Incremental Peak Hour
Construction Vehicle Trips in PCEs**

Scenario	Auto Trips			Truck Trips			Total (PCE)		
	In	Out	Total	In	Out	Total	In	Out	Total
Peak Hour (6:00 AM to 7:00AM)									
Proposed Project	184	0	184	9	9	18	202	18	220
No Action Distribution Center	144	0	144	8	8	16	160	16	176
Incremental	40	0	40	1	1	2	42	2	44
Peak Hour (3:00 PM to 4:00PM)									
Proposed Project	0	184	184	2	2	4	4	188	192
No Action Distribution Center	0	144	144	2	2	4	4	148	152
Incremental	0	40	40	0	0	0	0	40	40
Note: Peak construction worker and truck trips were derived from an estimated quarterly average number of construction workers and truck deliveries per day, with each truck delivery resulting in two daily trips (arrival and departure).									

TRANSIT

Based on 2000 U.S. Census data on workers in the construction and excavation industry, it is estimated that approximately 21.4 percent of construction workers would commute to the Development Site via transit (bus, subway, ferry, or rail). During the peak construction worker period (a maximum of 360 average daily construction workers in the 7:00 AM to 3:30 PM shift for the Proposed Development and 273 average daily construction workers for the No Action distribution center), an estimated 77 workers and 58 workers would travel by transit, respectively. With 80 percent of these workers arriving or departing during the construction peak hours, the estimated number of peak-hour transit trips would be 62 workers and 47 workers, respectively. Compared with the No Action distribution center, construction of the Proposed Development would generate 15 additional transit trips during the peak construction period, which would be

well below the 200-transit-trip *CEQR Technical Manual* analysis threshold for detailed analysis. Therefore, the Proposed Development would not result in any significant adverse construction transit impacts.

PEDESTRIAN

As summarized above, up to 360 average daily construction workers are projected in the 7:00 AM to 3:30 PM shift during peak construction for the Proposed Development and 273 average daily construction workers during peak construction for the No Action distribution center. With 80 percent of these workers arriving or departing during the construction peak hours (6:00 AM to 7:00 AM and 3:00 PM to 4:00 PM), the corresponding numbers of peak-hour pedestrian trips traversing the area's sidewalks, corners, and crosswalks would be approximately 288 and 218, respectively. **Table I-8** provides a summary of the peak pedestrian trip generation during peak construction for the Proposed Development and the No Action distribution center. As shown in **Table I-8**, compared with the No Action distribution center, construction of the Proposed Development would generate 70 additional pedestrian trips during the peak construction period, which would be below the *CEQR Technical Manual* analysis threshold of 200 pedestrian trips. Therefore, the Proposed Development would not result in any significant adverse construction pedestrian impacts.

Table I-8
Incremental Peak Hour
Construction Pedestrian Trip Projections

Scenario	Peak Construction Period	
	Daily Construction Workers	Peak Hour Construction Pedestrian Trips
Proposed Development	360	288
No Action Distribution Center	273	218
Incremental	87	70

PARKING

As described above, the estimated number of workers would be 360 and 273 per day during peak construction for the Proposed Development and the No Action distribution center, respectively. Based on the 2000 U.S. Census data for workers in the construction and excavation industry, it is estimated that approximately 76.5 percent of construction workers would commute to the Development Site by private autos at an average occupancy of approximately 1.16 persons per vehicle. The anticipated construction activities are therefore projected to generate a maximum parking demand of 237 parking spaces for Proposed Development and 180 parking spaces for the No Action distribution center. Compared with the No Action distribution center, construction of the Proposed Development would require an additional 57 parking spaces during the peak construction period. There are on-street spaces and off-street parking facilities (i.e., the 19-80 Steinway Street Garage with a capacity of 221 spaces and 31-11 20th Ave Parking with a capacity of 350 spaces) within a ½-mile radius of the Development Site as well as additional on-street parking or off-street parking beyond a ½-mile walk from the Development Site. In the event that there are not sufficient parking spaces available to accommodate the peak construction parking demand, the Proposed Development could result in a temporary parking shortfall during the construction period. As the project site is not located in an area that is well served by public transportation, pursuant to the *CEQR Technical Manual*, this could be considered to be a significant parking shortfall. This analysis assumes a conservative 76.5 percent auto share with an average occupancy of 1.16

persons per vehicle (based on 2000 U.S. census data), as compared to a 43 percent auto share with an average occupancy of 1.40 persons per vehicle from a survey that was conducted for the Halletts Point project. Although the Proposed Development could result in a temporary significant parking shortfall during the construction period, in accordance with the Section 450 of the CEQR Technical Manual, this would not be considered a significant adverse impact.

AIR QUALITY

As is typical with construction projects in New York City, construction of the Proposed Development would require use of both non-road construction equipment and on-road vehicles. Non-road construction equipment includes equipment operating on-site such as excavators, cranes and loaders. On-road vehicles include construction delivery trucks, dump trucks, concrete trucks, and construction worker vehicles arriving at and departing from the construction site as well as operating on-site. Emissions from non-road construction equipment and on-road vehicles have the potential to affect air quality. Emissions from dust-generating construction activities (i.e., truck loading and unloading operations) also have the potential to affect air quality. The *CEQR Technical Manual* lists several factors for consideration in determining whether a quantified on-site and/or off-site construction impact assessment for air quality is appropriate. These factors include the duration and intensity of construction activities, the location of nearby sensitive receptors, and emissions control measures.

The construction air quality assessment presented in this section includes a comparison of the air emissions from the Proposed Development's construction activity with the air emissions estimates for individual construction stages taken from detailed modeling analyses that have previously undergone the City environmental review and approval process. Two recently approved projects, the Two Bridges Large Scale Residential Development (LSRD) Final Environmental Impact Statement (FEIS) (CEQR No. 17DCP148M) and the Block 675 East FEIS (CEQR No. 17DCP159M), were identified with similar building construction activities and emissions reduction programs as the Proposed Development, and were therefore selected for the comparative assessment. However, unlike the Proposed Development, these two approved project included the construction of multiple buildings with potential sensitive receptor locations within the immediate vicinity of the construction sites for each of the buildings. Therefore, this comparative assessment represents a conservative estimate of the potential construction effects from the Proposed Development.

DURATION AND INTENSITY OF CONSTRUCTION ACTIVITIES

As is typical in New York City, construction of the Proposed Development would result in temporary disruption to the surrounding area. Although the overall construction duration for the Proposed Development is anticipated to be approximately 36 months, the most intense construction activities in terms of air pollutant emissions (when superstructure, exteriors, and interiors occur simultaneously) is anticipated to occur over a shorter period of approximately 16 months.

As shown in **Table I-9**, the duration of similar construction activities for the proposed buildings included in the Block 675 East and Two Bridges LSRD projects would be comparable to the durations anticipated for those under the Proposed Development. The overall construction duration for the Proposed Development would be within the construction durations of those proposed buildings, which range from 23 to 42 months. However, unlike the Proposed Development, both the Block 675 East and Two Bridges LSRD projects would include substantial construction overlaps between the proposed buildings. Therefore, the maximum construction intensity for the Proposed Development would be less, as discussed in the section below.

Table I-9
Conceptual Construction Duration (Months)¹

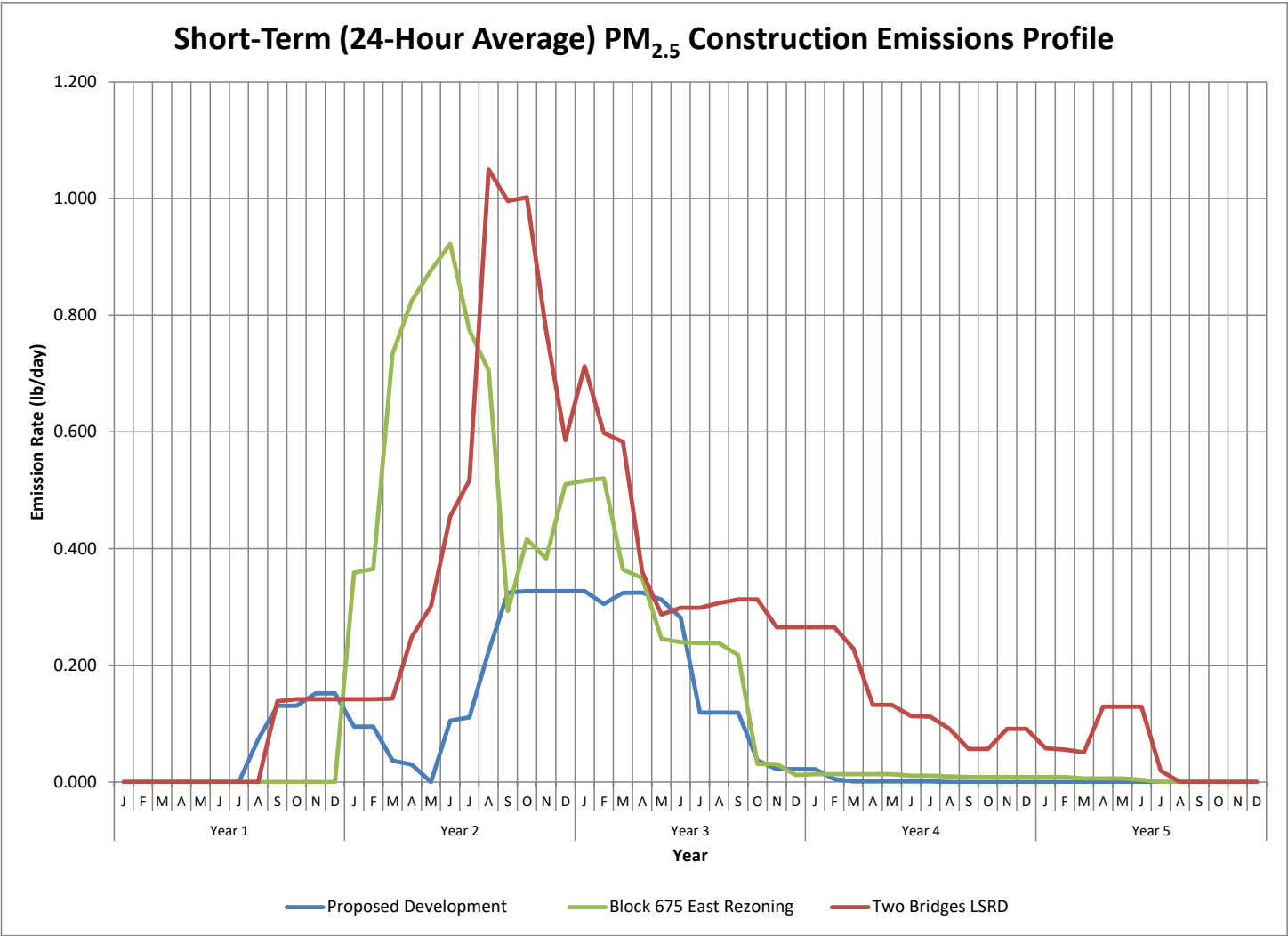
Construction Stage	Proposed Development	Block 675 East		Two Bridges LSRD		
		Project Site A	Project Site B	Site 4 (4A/4B)	Site 5	Site 6A
Demolition	N/A	1	2	1	N/A	N/A
Excavation and Foundation	9	9	6	13	9	10
Superstructure	13	11	6	8	10	14
Exteriors	16	20	6	11	11	17
Fit-Out	25	29	9	14	18	20
Site Work	N/A	N/A	N/A	7	3	3
Construction Duration by Building	36	42	23	36	35	34
Overall Construction Duration	34	42		36		
Notes: 1. Construction would proceed in several stages, some of which would overlap						
Sources: Block 675 East FEIS (CEQR No. 17DCP159M); Two Bridges LSRD FEIS (CEQR No. 17DCP148M)						

INTENSITY OF CONSTRUCTION ACTIVITIES

Construction-related emissions were calculated for each calendar year throughout the duration of construction on a peak day and an annual rolling basis for particulate matter (PM_{2.5}) (See **Figures I-1 and I-2**). PM_{2.5} was selected for determining the worst-case periods for all pollutants analyzed because the ratio of predicted PM_{2.5} incremental concentrations to the impact criteria is anticipated to be higher than for other pollutants.

As shown in **Table I-10**, the Proposed Development would result in a maximum short-term emission rate of 0.327 lbs per day and a maximum annual average emission rate of 0.215 lbs per day for Month 15 and the annual period from Month 13 to Month 24, respectively. These maximum PM_{2.5} emission rates predicted for the Proposed Development are comparable to those for the Block 675 East and Two Bridges LSRD projects, where the maximum short-term emission rates range from 0.208 lbs per day to 0.684 lbs per day, while annual average emission rates range from 0.096 lbs per day to 0.264 lbs per day. However, unlike the Proposed Development, both the Block 675 East and Two Bridges LSRD projects would include multiple buildings with substantial construction overlap. Therefore, as presented in **Table I-10**, the overall peak short-term and annual emissions for the Proposed Development would be less than those analyzed for the Block 675 East and Two Bridges LSRD projects, where the detailed air quality analyses performed for these projects concluded that there would be no significant air quality impacts.

The approach and procedures for the construction of the Proposed Development would be typical of the methods utilized in other building construction projects throughout New York City and therefore would not be considered out of the ordinary in terms of intensity. Construction sources would move around the Development Site over the construction period such that the air pollutant concentration increments would not persist in any single location. While the emissions from the overlap of superstructure, exteriors, and fit-out activities would result in the highest equipment emissions, they would not involve soil disturbance that generates dust emissions. Furthermore, fit-out activities would generally occur within an enclosed building, thereby shielding nearby sensitive receptors from construction activities. Therefore, emissions during this stage are also less likely to directly affect nearby sensitive receptor locations.



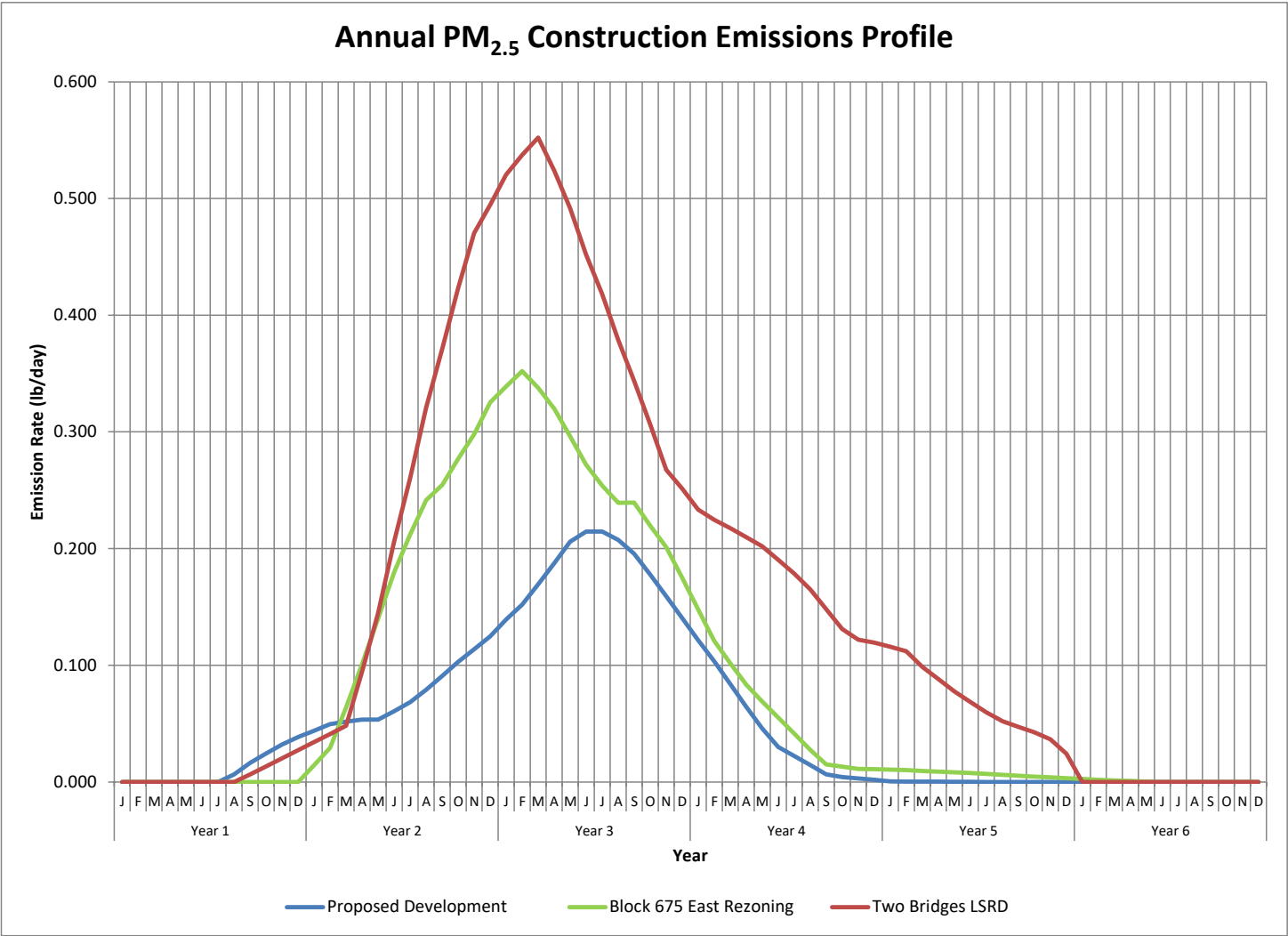


Table I-10
Construction Activity PM_{2.5} Emissions (lb per day)

Construction Stage	Proposed Development	Block 675 East		Two Bridges LSRD		
		Project Site A	Project Site B	Site 4 (4A/4B)	Site 5	Site 6A
Short-Term Emissions						
Demolition	N/A	0.144	0.214	0.138	N/A	N/A
Excavation and Foundation	0.095	0.684	0.239	0.143	N/A	0.426
Superstructure	0.327 ⁽¹⁾	0.339	0.192	0.040	N/A	0.149
Exteriors	0.327 ⁽¹⁾	0.000	0.000	0.048	N/A	0.040
Fit-Out	0.327 ⁽¹⁾	0.000	0.000	0.000	N/A	0.000
Peak Short-Term Emissions by Building	0.327	0.684	0.239	0.208	0.416	0.426
Overall Peak Short-Term Emissions	0.327	0.923		1.050		
Annual Emissions						
Peak Annual Emissions by Building	0.215	0.216	0.136	0.096	0.264	0.193
Overall Peak Annual Emissions	0.215	0.352		0.546		
Notes: ⁽¹⁾ A portion of the superstructure, exteriors, and fit-out construction stages for the Proposed Development would occur simultaneously.						
Sources: Block 675 East FEIS (CEQR No. 17DCP159M); Two Bridges LSRD FEIS (CEQR No. 17DCP148M)						

Overall, emissions associated with the construction of the Proposed Development would likely be lower than a typical project due to the emission control measures to be implemented during construction (see “Emission Control Measures”) and comparable to other projects that were committed to implementing similar emission control measures.

LOCATION OF NEARBY SENSITIVE RECEPTORS

There are no sensitive receptor locations immediately adjacent to the Proposed Development, as the area surrounding the Development Site is characterized primarily by energy and light industrial uses. The nearest sensitive receptor is the Peniel Baptist Church, located over 600 feet southeast of the Development Site. In addition, there are existing residences over 700 feet south of the Development Site. As discussed below, measures would be taken to reduce pollutant emissions during construction. For example, a watering program would be implemented to minimize dust emissions from construction activities and all measures required by the portion of DEP’s Construction Dust Rules regulating construction-related dust emissions would be strictly followed. In addition, to further minimize air pollutant emissions during construction, emissions reduction measures would be implemented, including the use of BAT and the use of newer and cleaner equipment. Furthermore, the construction areas would be fenced off, which would serve as a buffer between the emission sources and nearby sensitive receptor locations.

The construction analyses for the Block 675 East and Two Bridges LSRD projects included nearby sensitive receptor building locations that are within 100 feet of each of the project sites. However, as discussed above, there are no sensitive receptor locations immediately adjacent to the Proposed Development with the nearest sensitive receptor located over 600 feet southeast of the Development Site. Such great distances between the construction sources and the receptors would result in increased dispersion of pollutants. Therefore, the pollutant concentrations at nearby

receptor locations due to the construction of the Proposed Development would be much less than those experienced at sensitive receptor locations in the Block 675 East and Two Bridges LSRD projects.

EMISSION CONTROL MEASURES

Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. These include the use of clean fuel, diesel equipment reduction, dust suppression measures, and idling restrictions:

- **Clean Fuel.** Ultra-low-sulfur diesel (ULSD) fuel would be used exclusively for all diesel engines throughout the Development site.
- **Diesel Equipment Reduction.** Electrically powered equipment such as welders and saws would be used instead of diesel-powered versions of that equipment, to the extent feasible and practicable.
- **Dust Control Measures.** To minimize dust emissions from construction activities, a dust control plan, including a watering program, would be required as part of contract specifications. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the Development Site; and water sprays would be used for all demolition, excavation, and transfer of soils to ensure that materials would be dampened as necessary to avoid the suspension of dust into the air. All measures required by the portion of DEP's Construction Dust Rules regulating construction-related dust emissions would be implemented.
- **Idling Restriction.** As required by local law, all stationary vehicles on roadways adjacent to the Development Site would be prohibited from idling for more than three minutes. In addition, all trucks would be required to shut off their engines when in the loading dock. The idling restriction excludes vehicles that are 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.

In addition, the following measures would be implemented to further reduce air pollutant emissions during construction. These measures will be memorialized in a Restrictive Declaration to be recorded against the Development Site in association with the Proposed Actions:

- **Best Available Tailpipe Reduction Technologies.** Non-road diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract for the Proposed Development), including but not limited to concrete mixing and pumping trucks, would utilize the best available technology (BAT) for reducing diesel particulate matter emissions (currently diesel particulate filters).
- **Utilization of Newer Equipment.** EPA's Tier 1 through 4 standards for non-road engines regulate the emission of criteria pollutants from new engines, including PM, CO, NO_x, and hydrocarbons (HC). To the extent practicable, all diesel-powered non-road construction equipment with a power rating of 50 hp or greater would meet at least the Tier 3 emissions standard and be retrofitted with diesel particulate filters. All diesel-powered engines in the project rated less than 50 hp would meet at least the Tier 2 emissions standard.

Similar emission reduction measures were committed to in the Block 675 East and Two Bridges LSRD projects and the air quality analyses performed for these projects concluded that there

would be no significant air quality impacts. Overall, the emissions control program for the Proposed Development is expected to substantially reduce air pollutant emissions during construction, similar to the emission control programs for the Block 675 East and Two Bridges LSRD projects.

CONCLUSION

As shown in **Tables I-4 and I-5**, the construction of the Proposed Development would result in comparable construction durations and emission intensities as the Block 675 East and Two Bridges LSRD projects. Furthermore, the Proposed Development would include similar emission control measures. However, unlike the two approved projects in this comparative assessment, the Proposed Development does not include the construction of multiple buildings and there are no sensitive receptors located in the vicinity of the Development Site. Therefore, since the detailed air quality analyses performed for the Block 675 East and Two Bridges LSRD projects concluded that there would be no significant air quality impacts, construction of the Proposed Development would not result in any significant adverse construction air quality impacts, and no further analysis is required.

NOISE

Potential impacts on community noise levels during construction of the Proposed Development could result from construction equipment operation as well as worker vehicles and delivery vehicles traveling to and from the Development Site. Noise levels at a given location would be dependent on the type and number of pieces of construction equipment in operation, the acoustical utilization factor of the equipment (i.e., the percentage of time a piece of equipment is operating at full power), the distance from the construction site, and any shielding effects from structures such as buildings, walls, or barriers. Noise levels caused by construction activities would vary widely, depending on the stage of construction and the location of the construction relative to receptor locations. The most noise-intensive construction activities are typically intermittent and would not occur throughout the workday or the duration of the construction task. During hours when the loudest pieces of construction equipment would not be in use, receptors would experience lower construction noise levels. Construction noise levels would fluctuate during the construction period at each receptor, with the greatest levels of construction noise occurring for limited periods during construction. The most substantial construction noise sources are expected to be heavy equipment such as drill rigs, concrete mixer trucks, and excavators.

Construction noise is regulated by the requirements of the *New York City Noise Control Code* (also known as Chapter 24 of the *Administrative Code of the City of New York*, or Local Law 113) and the DEP Notice of Adoption of Rules for Citywide Construction Noise Mitigation (also known as Chapter 28). These requirements mandate that specific construction equipment and motor vehicles must meet specified noise emission standards; that construction activities be limited to weekdays between the hours of 7 AM and 6 PM; and that those construction materials be handled and transported in such a manner as not to create unnecessary noise. Permits would be required to be obtained, as specified in the *New York City Noise Control Code*, for weekend and after-hour work if they become necessary. As required under the *New York City Noise Control Code*, a site-specific noise mitigation plan for the Proposed Development would be developed and implemented that may include source controls, path controls, and receiver controls.

CONSTRUCTION NOISE IMPACT CRITERIA

Chapter 22 of the *CEQR Technical Manual* breaks construction duration into “short-term” and “long-term” and states that construction noise is not likely to require analysis unless it “affects a sensitive receptor over a long period of time.” Consequently, the construction noise analysis considers the potential for construction of a project to create high noise levels (the “intensity”), whether construction noise would occur for an extended period of time (the “duration”), and the locations where construction has the potential to produce noise (“receptors”) in evaluating potential construction noise effects.

Additionally, the *CEQR Technical Manual* characterizes noise exposure into “acceptable,” “marginally acceptable,” “marginally unacceptable,” or “clearly unacceptable” categories based on the $L_{10(1)}$ noise level and land use. For the purposes of construction noise evaluation, noise levels in the “acceptable” or “marginally acceptable” categories are not considered to exceed the screening threshold. If construction of the proposed project would result in “marginally unacceptable” or “clearly unacceptable” noise levels that exceed these noise impact criteria at a receptor, then further consideration of the intensity and duration of construction noise is warranted at that receptor. Generally, noise levels exceeding the “acceptable” and “marginally acceptable” ranges for a period shorter than 24 consecutive months are not considered to be significant impacts.

NOISE ANALYSIS FUNDAMENTALS

As stated above, construction activities for the Proposed Development would be expected to result in increased noise levels as a result of: (1) the operation of construction equipment on the Development Site; and (2) the movement of construction-related vehicles (i.e., worker trips and material and equipment trips) on the roadways to and from the Development Site. The effect of each of these noise sources was evaluated. The results presented below show the effects of construction activities (i.e., noise due to both on-site construction equipment and construction-related vehicle operation) on noise levels at nearby noise receptor locations.

Noise from the operation of construction equipment at a specific receptor location near a construction site is generally calculated by computing the sum of the noise produced by all pieces of equipment operating at the construction site. For each piece of equipment, the noise level at a receptor site is a function of the following:

- The noise emission level of the equipment;
- A usage factor, which accounts for the percentage of time the equipment is operating at full power;
- The distance between the piece of equipment and the receptor;
- Topography and ground effects; and
- Shielding from construction fencing, nearby buildings, etc.

Similarly, noise levels due to construction-related traffic are a function of the following:

- The noise emission levels of the type of vehicle (e.g., auto, light-duty truck, heavy-duty truck, bus, etc.);
- Volume of vehicular traffic on each roadway segment;
- Vehicular speed;

- The distance between the roadway and the receptor;
- Topography and ground effects; and
- Shielding.

CONSTRUCTION NOISE ANALYSIS METHODOLOGY

The construction noise analysis consists of the following:

- Identification of noise reduction measures that would be employed during construction of the Proposed Development.
- Consideration of potential noise impacts from mobile sources.
- Analysis of potential noise impacts from operation of construction equipment at the Development Site over the course of the construction of the Proposed Development. Consistent with the noise impact criteria discussed above, the analysis looks first at the intensity of noise levels during construction, then assesses the potential duration of those noise levels, and finally makes a determination of the potential for impact.
- Intensity of construction noise was estimated based on the projected number and type of equipment to simultaneously operate on the Development Site during the various stages of construction. The estimated construction noise levels are based on the equipment noise level and usage factor references included in the *CEQR Technical Manual*. To demonstrate the expected intensity of construction noise, a map was created for each construction stage with contour lines denoting the thresholds of the “clearly unacceptable,” “marginally unacceptable,” “marginally acceptable,” and “acceptable” categories.
- Duration of construction noise is assessed based on the planned construction schedule and the expected duration of each construction stage. The potential duration of any “clearly unacceptable” or “marginally unacceptable” noise levels expected to occur at any noise receptors were determined and compared to the criteria described above.
- Attenuation from the construction barriers was conservatively not considered in the construction noise analysis to further solidify analytical assurance.

NOISE RECEPTOR LOCATIONS

The Development Site (Block 814, Lot 10) is located in Astoria, Queens. The area surrounding the Development Site is characterized primarily by energy and light industrial uses. The nearest noise-sensitive uses include open spaces, religious uses, and residences.

The noise receptors closest to the proposed construction activities are listed in **Table I-11**.

Table I-11
Construction Noise Receptors

Location	Land Use	Distance from Development Site
19-54 38th Street	Religious	625 feet
18-32 Steinway Street	Residential	660 feet
Woodtree Playground	Open Space	710 feet
19-73 38th Street and 18-64 41st Street	Residential	750 feet
Residences on 20th Avenue between 33rd and 37th Streets	Residential	985 feet

Receptors other than those listed in **Table I-6** would be located outside of the “clearly unacceptable” and “marginally unacceptable” noise exposure zones during all stages of construction, and consequently would not have the potential to experience significant adverse noise impacts from construction of the Proposed Development.

NOISE REDUCTION MEASURES

Construction of the Proposed Development would be required to follow the requirements of the *NYC Noise Control Code* for construction noise control measures. Specific noise control measures would be incorporated in noise mitigation plan(s) required under the *NYC Noise Code*. These measures could include a variety of source and path controls.

In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with the *NYC Noise Code*:

- Equipment that meets the sound level standards specified in Subchapter 5 of the NYC Noise Control Code would be utilized from the start of construction. **Table I-12** shows the noise levels for typical construction equipment and the mandated noise levels for the equipment that would be used for construction of the Proposed Development. The applicant is committed to the use of auger drill rigs for pile installation rather than impact pile driving during excavation and foundation construction of the Proposed Project.
- As early in the construction period as logistics would allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders, water pumps, bench saws, and table saws (i.e., early electrification) to the extent feasible and practicable.
- Where feasible and practicable, construction sites would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than three minutes at the construction site based upon Title 24, Chapter 1, Subchapter 7, Section 24-163 of the NYC Administrative Code.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented:

- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations;
- Noise barriers constructed from plywood or other materials would be erected to provide shielding; and
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) for certain dominant noise equipment would be employed to the extent feasible and practical based on the results of the construction noise calculations. The details to construct portable noise barriers, enclosures, tents, etc. are shown in DEP’s “Rules for Citywide Construction Noise Mitigation.”²

² As found at: <https://codelibrary.amlegal.com/codes/newyorkcity/latest/NYCrules/0-0-0-29013>.

Table I-12

Typical Construction Equipment Noise Emission Levels (dBA)

Equipment List	NYCDEP Typical Noise Level at 50 feet ¹
All Other Equipment > 5 HP	85
Auger Drill Rig	85
Bar Bender	80
Compressor	80
Concrete Mixer Truck	85
Concrete Pump	82
Concrete Trowel	67 ²
Crane	85
Dozer	85
Dump Truck	84
Excavator	85
Front End Loader	80
Generator	82
Hoist	75 ³
Hydraulic Break Ram	90
Impact Pile Driver	101
Jackhammer / Chipping Gun	85
Pump	77
Scissor Lift	85
Vibratory Concrete Mixer	80
Welder	73

Sources:
 1 "Rules for Citywide Construction Noise Mitigation," Chapter 28, DEP, 2007, except where noted.
 2 Columbia Manhattanville Noise Certification.
 3 "Noise Control for Construction Equipment..." Report for Hydro Quebec, 1985.

MOBILE SOURCE CONSTRUCTION NOISE ANALYSIS

Throughout the construction period, vehicles (construction-related trucks and worker vehicles) would travel near the Development Site. Most of these vehicles are expected to use 19th Avenue, 37th Street, and 38th Street along which there are no noise-sensitive locations near the Development Site. As described above, the amount of traffic generated by the construction of the Proposed Development would be low compared with existing traffic volumes on major feeder streets in the neighborhood. Additionally, the construction-related vehicles would be distributed amongst the different routes to and from the Development Site. Accordingly, construction-generated traffic on roadways to and from the Development Site would not have the potential to result in significant adverse construction noise impacts at locations away from the construction work area (i.e., at locations other than the areas specified above as receptors).

CONSTRUCTION NOISE ANALYSIS RESULTS

As discussed above, the on-site construction noise analysis looks at the intensity of noise levels during construction, assesses the potential duration of those noise levels, and then makes a determination of the potential for impact. Projected construction noise levels at the receptors listed in **Table I-11** are discussed below. Receptors further from the construction work area would experience construction noise levels no higher than "marginally acceptable" range according to *CEQR Technical Manual* noise evaluation criteria. Consequently, receptors outside of these distances would not have the potential to experience significant adverse construction noise impacts.

The conservative projections of noise levels associated with construction of the Proposed Development are shown in **Figures I-3** through **I-6**. Additionally, since existing noise levels at each of the receptors discussed below are expected to be 57 dBA or greater (as is typical throughout New York City), the maximum projected noise level at the nearest receptor (i.e., approximately 71 dBA during excavation and foundation construction), noise level increments of 15 dBA or greater (i.e., “objectionable” increases in noise) are not projected to occur for a prolonged period of 12 months or longer at any receptors.

19-54 38th Street

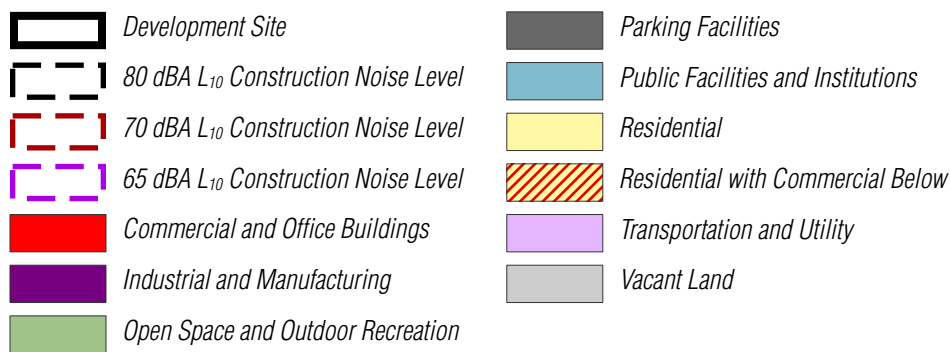
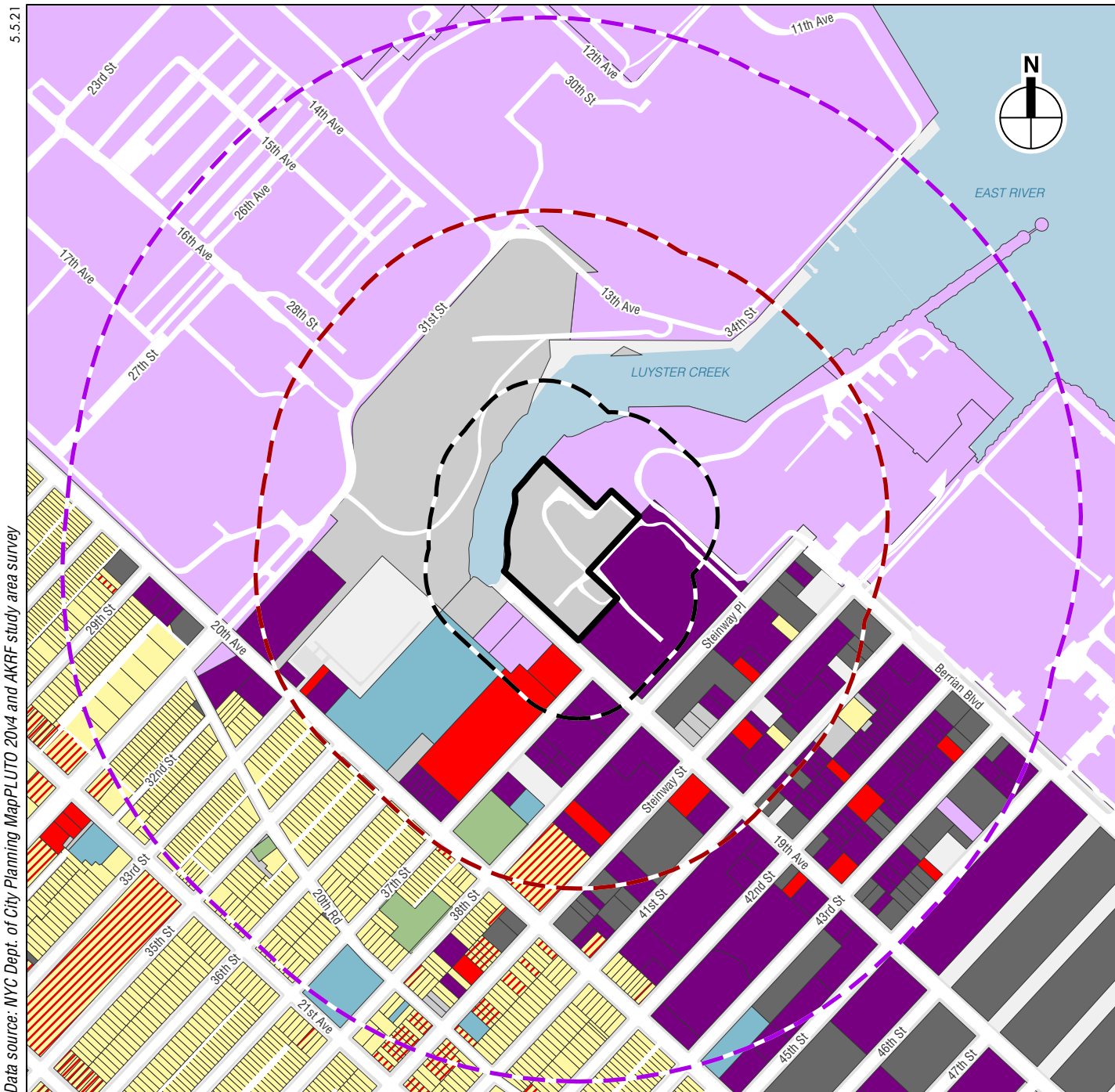
The church located at 19-54 38th Street is located approximately 625 feet from the Development Site. At this distance, worst-case noise levels resulting from construction of the Proposed Development would be in the “marginally unacceptable” category at times over the course of excavation and foundation construction, as well as during the overlap of superstructure construction with exteriors construction, fit-out, and waterfront construction. Noise levels at this receptor would be in the “marginally acceptable” category during the overlap of exteriors construction with fit-out and waterfront construction and in the “acceptable category” during the overlap of fit-out with waterfront construction. Consequently, this receptor would experience up to 21 non-consecutive months of “marginally unacceptable” noise levels and 13 months of “marginally acceptable” or “acceptable” noise levels from construction. While noise from construction of the Proposed Development may be perceptible at times, since it would reach the “marginally unacceptable” category only for 21 non-consecutive months, it would not rise to the level of a significant adverse impact at this receptor.

Woodtree Playground

Woodtree Playground is located approximately 710 feet from the Development Site. At this distance, worst-case noise levels resulting from construction of the Proposed Development would be in the “marginally unacceptable” category at times over the course of excavation and foundation construction, as well as during the overlap of superstructure construction with exteriors construction, fit-out, and waterfront construction. Noise levels at this receptor would be in the “marginally acceptable” category during the overlap of exteriors construction with fit-out and waterfront construction and in the “acceptable category” during the overlap of fit-out with waterfront construction. Consequently, this receptor would experience up to 21 non-consecutive months of “marginally unacceptable” noise levels and 13 months of “marginally acceptable” or “acceptable” noise levels from construction. While noise from construction of the Proposed Development may be perceptible at times, since it would reach the “marginally unacceptable” category only for 21 non-consecutive months, it would not rise to the level of a significant adverse impact at this receptor.

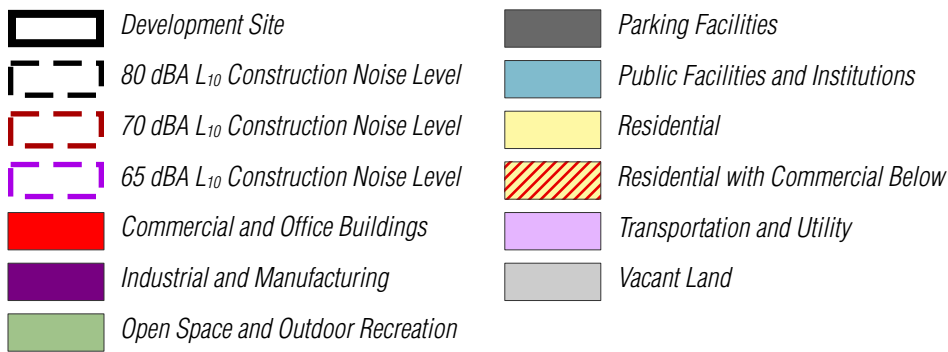
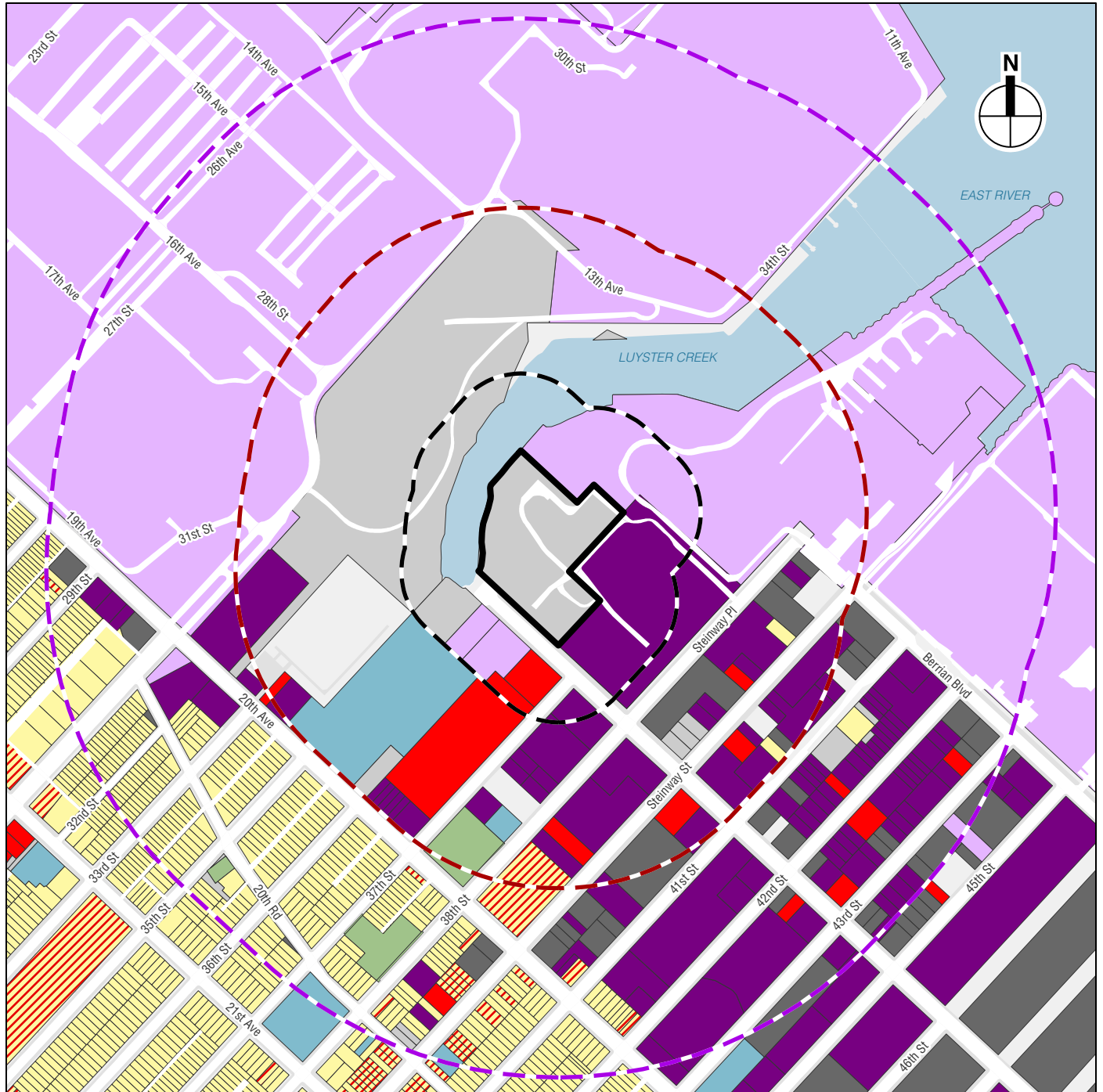
18-32 Steinway Street, 18-64 41st Street, and 19-73 38th Street

The residences located at 18-32 Steinway Street, 18-64 41st Street, and 19-73 39th Street are located at least 660 feet from the Development Site. At this distance, worst-case noise levels resulting from construction of the Proposed Development would be in the “marginally unacceptable” category at times over the course of excavation and foundation construction, as well as during the overlap of superstructure construction with exteriors construction, fit-out, and waterfront construction. Noise levels at these receptors would be in the “marginally acceptable” category during the overlap of exteriors construction with fit-out and waterfront construction and in the “acceptable category” during the overlap of fit-out with Waterfront construction. Consequently, these receptors would experience up to 21 non-consecutive months of “marginally



Excavation, Foundation Construction

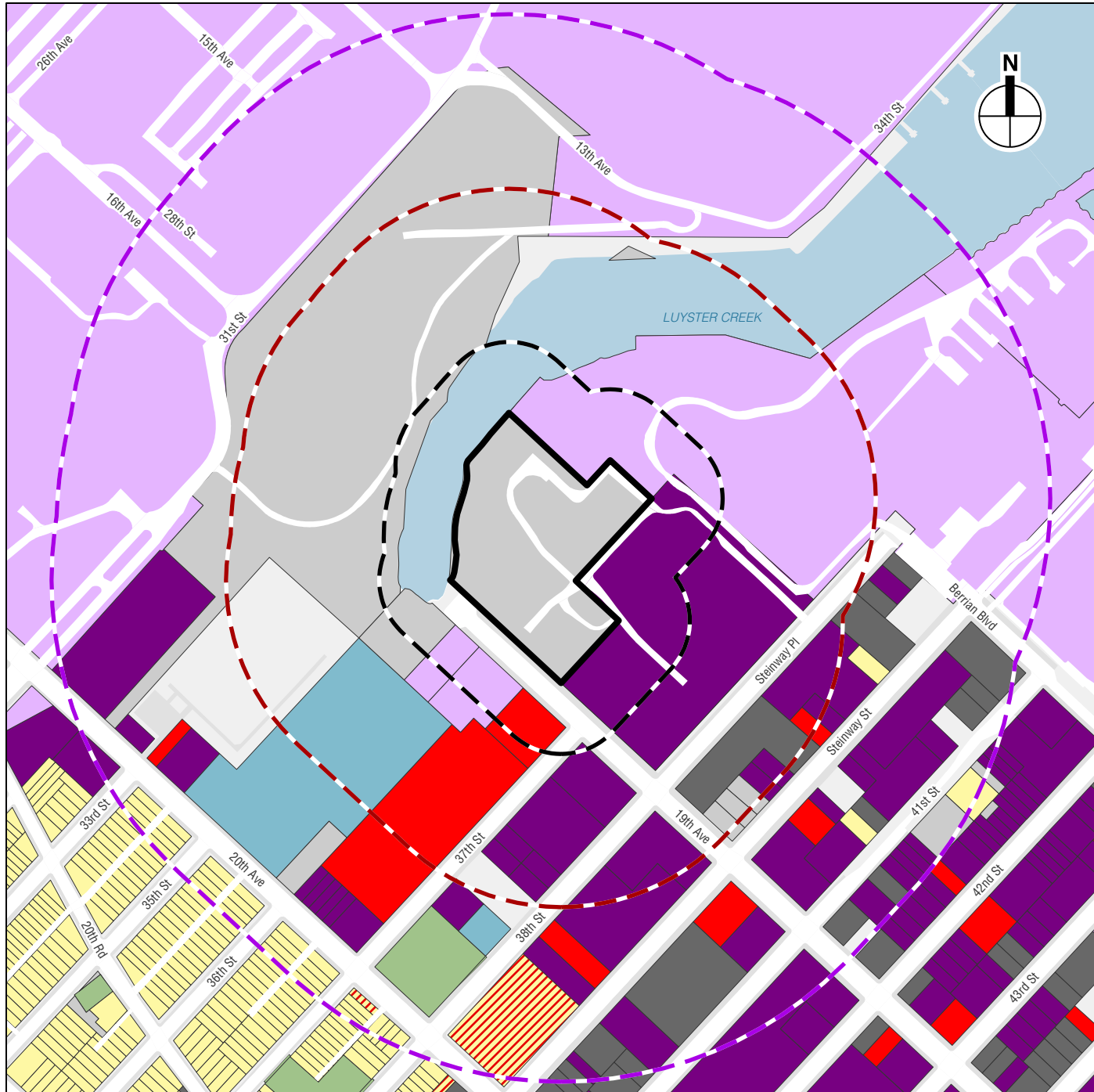
Figure I-3



0 400 FEET

5.28.21

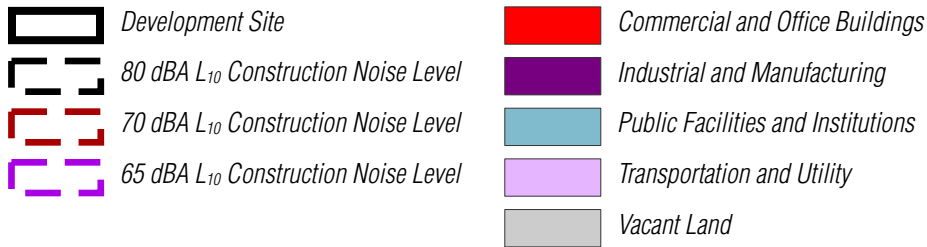
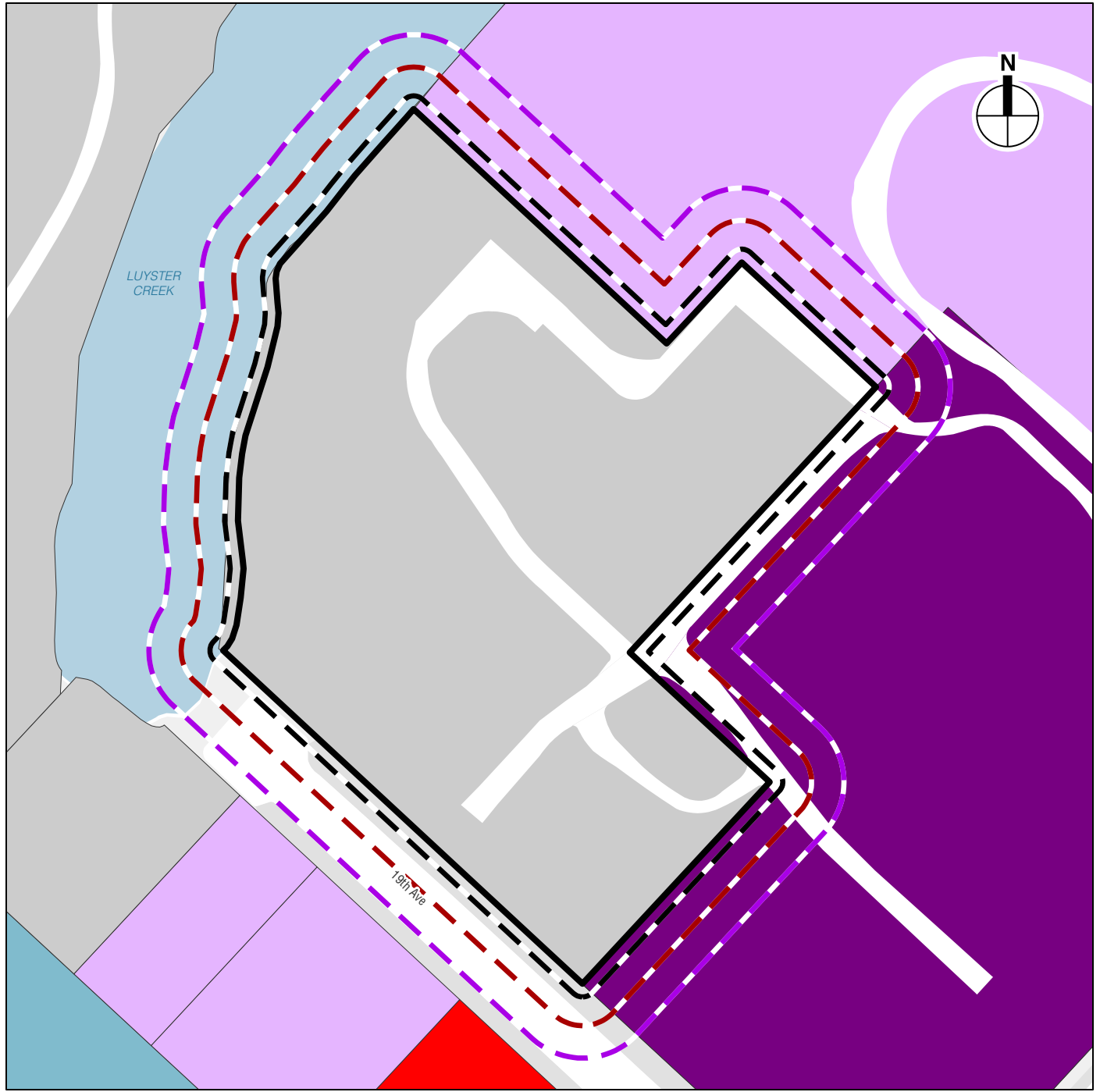
Data source: NYC Dept. of City Planning MapPLUTO 20v4 and AKRF study area survey



- | | | | |
|--|---|--|------------------------------------|
| | Development Site | | Parking Facilities |
| | 80 dBA L ₁₀ Construction Noise Level | | Public Facilities and Institutions |
| | 70 dBA L ₁₀ Construction Noise Level | | Residential |
| | 65 dBA L ₁₀ Construction Noise Level | | Residential with Commercial Below |
| | Commercial and Office Buildings | | Transportation and Utility |
| | Industrial and Manufacturing | | Vacant Land |
| | Open Space and Outdoor Recreation | | |

0 200 FEET

Exteriors, Fit-Out, Waterfront
Figure I-5



0 100 FEET

unacceptable” noise levels and 13 months of “marginally acceptable” or “acceptable” noise levels from construction. While noise from construction of the Proposed Development may be perceptible at times, since it would reach the “marginally unacceptable” category only for 21 non-consecutive months, it would not rise to the level of a significant adverse impact at these receptors.

Residences on 20th Avenue between 33rd and 37th Streets

The residences located along the south side of 20th Avenue between 33rd and 37th Streets are located approximately 985 feet from the Development Site. At this distance, worst-case noise levels resulting from construction of the Proposed Development would be in the “marginally unacceptable” category at times over the course of excavation and foundation construction. Noise levels at these receptors would be in the “marginally acceptable” or “acceptable” categories during the remainder of construction. Consequently, this receptor would experience up to 8 non-consecutive months of “marginally unacceptable” noise levels and 26 months of “marginally acceptable” or “acceptable” noise levels from construction. While noise from construction of the Proposed Development may be perceptible at times, since it would reach the “marginally unacceptable” category only for 8 months, it would not rise to the level of a significant adverse impact at these receptors.

CONCLUSION

As described above, the construction of the Proposed Development would include noise control measures as required by the New York City Noise Control Code and is located at least 625 feet from the nearest noise-sensitive receptor locations. Based on these control measures and the distance to the nearest receptor, noise resulting from construction of the Proposed Development would be in the “acceptable” or “marginally acceptable” categories at all nearby receptors during periods other than the most noise-intensive construction activities, which have a total duration of 21 non-consecutive months. Consequently, noise resulting from construction of the Proposed Development would be considered temporary and would not rise to the level of a significant adverse impact according to *CEQR Technical Manual* construction noise impact criteria. *

Appendix A

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM

Consistency Assessment Form

Proposed actions that are subject to CEQR, ULURP or other local, state or federal discretionary review procedures, and that are within New York City's Coastal Zone, must be reviewed and assessed for their consistency with the [New York City Waterfront Revitalization Program](#) (WRP) which has been approved as part of the State's Coastal Management Program.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, the New York City Department of City Planning, or other city or state agencies in their review of the applicant's certification of consistency.

A. APPLICANT INFORMATION

Name of Applicant: WF Industrial IV LLC

Name of Applicant Representative: Adam I. Gordon

Address: 80 8th Avenue, Suite 1602

Telephone: (917) 837-4147 Email: adam@wildflowerltd.com

Project site owner (if different than above): _____

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The Proposed Actions will allow for construction of a seven-story, 160-foot tall (to the top of the bulkhead) media production studio that would house 11 sound stages and accessory facilities for stage support, wardrobe, hospitality, and pre- and post-production, as well as accessory off-street parking and loading; an approximately 30,600 sf waterfront public access area along Luyster Creek that would include bioretention areas and native coastal plantings; and replacement of a dilapidated hardened shoreline with a new protective rip-rap stone revetment and an earth stabilized precast concrete seawall.

2. Purpose of activity

To redevelop an unused waterfront property by building a media production studio, establishing 30,600 square feet of waterfront public access along Luyster Creek, and stabilizing a dilapidated hardened shoreline.

C. PROJECT LOCATION

Borough: Queens Tax Block/Lot(s): Block 814/Lot 10

Street Address: 35-15 19th Avenue

Name of water body (if located on the waterfront): Luyster Creek

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission

☒ Yes ☐ No

- | | | |
|---|---|--|
| <input type="checkbox"/> City Map Amendment | <input checked="" type="checkbox"/> Zoning Certification | <input type="checkbox"/> Concession |
| <input type="checkbox"/> Zoning Map Amendment | <input checked="" type="checkbox"/> Zoning Authorizations | <input type="checkbox"/> UDAAP |
| <input type="checkbox"/> Zoning Text Amendment | <input type="checkbox"/> Acquisition – Real Property | <input type="checkbox"/> Revocable Consent |
| <input type="checkbox"/> Site Selection – Public Facility | <input type="checkbox"/> Disposition – Real Property | <input type="checkbox"/> Franchise |
| <input type="checkbox"/> Housing Plan & Project | <input type="checkbox"/> Other, explain: _____ | |
| <input checked="" type="checkbox"/> Special Permit | | |
- (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Board of Standards and Appeals

☐ Yes ☒ No

- ☐ Variance (use)
- ☐ Variance (bulk)
- ☐ Special Permit
- (if appropriate, specify type: ☐ Modification ☐ Renewal ☐ other) Expiration Date: _____

Other City Approvals

- | | |
|--|--|
| <input type="checkbox"/> Legislation | <input type="checkbox"/> Funding for Construction, specify: _____ |
| <input type="checkbox"/> Rulemaking | <input type="checkbox"/> Policy or Plan, specify: _____ |
| <input type="checkbox"/> Construction of Public Facilities | <input type="checkbox"/> Funding of Program, specify: _____ |
| <input type="checkbox"/> 384 (b) (4) Approval | <input checked="" type="checkbox"/> Permits, specify: <u>NYC Department of Buildings permit; SBS permits</u> |
| <input type="checkbox"/> Other, explain: _____ | |

State Actions/Approvals/Funding

- ☒ State permit or license, specify Agency: NYSDEC Permit type and number: Article 15 and 25, WQC
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Federal Actions/Approvals/Funding

- ☒ Federal permit or license, specify Agency: USACE Permit type and number: NWP 13
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Is this being reviewed in conjunction with a [Joint Application for Permits?](#)

☒ Yes

☐ No

E. LOCATION QUESTIONS

1. Does the project require a waterfront site? ☒ Yes ☐ No
2. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters? ☒ Yes ☐ No
3. Is the project located on publicly owned land or receiving public assistance? ☐ Yes ☒ No
4. Is the project located within a FEMA 1% annual chance floodplain? (6.2) ☒ Yes ☐ No
5. Is the project located within a FEMA 0.2% annual chance floodplain? (6.2) ☐ Yes ☒ No
6. Is the project located adjacent to or within a special area designation? See [Maps – Part III](#) of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).
 - ☐ Significant Maritime and Industrial Area (SMIA) (2.1)
 - ☐ Special Natural Waterfront Area (SNWA) (4.1)
 - ☒ Priority Maritime Activity Zone (PMAZ) (3.5)
 - ☐ Recognized Ecological Complex (REC) (4.4)
 - ☐ West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) (2.2, 4.2)

F. WRP POLICY ASSESSMENT

Review the project or action for consistency with the WRP policies. For each policy, check Promote, Hinder or Not Applicable (N/A). For more information about consistency review process and determination, see **Part I** of the [NYC Waterfront Revitalization Program](#). When assessing each policy, review the full policy language, including all sub-policies, contained within **Part II** of the WRP. The relevance of each applicable policy may vary depending upon the project type and where it is located (i.e. if it is located within one of the special area designations).

For those policies checked Promote or Hinder, provide a written statement on a separate page that assesses the effects of the proposed activity on the relevant policies or standards. If the project or action promotes a policy, explain how the action would be consistent with the goals of the policy. If it hinders a policy, consideration should be given toward any practical means of altering or modifying the project to eliminate the hindrance. Policies that would be advanced by the project should be balanced against those that would be hindered by the project. If reasonable modifications to eliminate the hindrance are not possible, consideration should be given as to whether the hindrance is of such a degree as to be substantial, and if so, those adverse effects should be mitigated to the extent practicable.

		Promote	Hinder	N/A
I	Support and facilitate commercial and residential redevelopment in areas well-suited to such development.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I.1	Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I.2	Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I.3	Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I.4	In areas adjacent to SMIA's, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
I.5	Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Promote	Hinder	N/A
2	Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.1	Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.2	Encourage a compatible relationship between working waterfront uses, upland development and natural resources within the Ecologically Sensitive Maritime and Industrial Area.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.3	Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4	Provide infrastructure improvements necessary to support working waterfront uses.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.5	Incorporate consideration of climate change and sea level rise into the planning and design of waterfront industrial development and infrastructure, pursuant to WRP Policy 6.2.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.1.	Support and encourage in-water recreational activities in suitable locations.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.2	Support and encourage recreational, educational and commercial boating in New York City's maritime centers.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.3	Minimize conflicts between recreational boating and commercial ship operations.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.4	Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.5	In Priority Marine Activity Zones, support the ongoing maintenance of maritime infrastructure for water-dependent uses.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	Protect and restore the quality and function of ecological systems within the New York City coastal area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1	Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.2	Protect and restore the ecological quality and component habitats and resources within the Ecologically Sensitive Maritime and Industrial Area.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.3	Protect designated Significant Coastal Fish and Wildlife Habitats.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.4	Identify, remediate and restore ecological functions within Recognized Ecological Complexes.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.5	Protect and restore tidal and freshwater wetlands.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.6	In addition to wetlands, seek opportunities to create a mosaic of habitats with high ecological value and function that provide environmental and societal benefits. Restoration should strive to incorporate multiple habitat characteristics to achieve the greatest ecological benefit at a single location.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.7	Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.8	Maintain and protect living aquatic resources.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Promote	Hinder	N/A
5	Protect and improve water quality in the New York City coastal area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.1	Manage direct or indirect discharges to waterbodies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2	Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3	Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.4	Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.5	Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Minimize loss of life, structures, infrastructure, and natural resources caused by flooding and erosion, and increase resilience to future conditions created by climate change.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.1	Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the site, the use of the property to be protected, and the surrounding area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.2	Integrate consideration of the latest New York City projections of climate change and sea level rise (as published in <i>New York City Panel on Climate Change 2015 Report, Chapter 2: Sea Level Rise and Coastal Storms</i>) into the planning and design of projects in the city's Coastal Zone.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.3	Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.4	Protect and preserve non-renewable sources of sand for beach nourishment.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.1	Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.2	Prevent and remediate discharge of petroleum products.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.3	Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Provide public access to, from, and along New York City's coastal waters.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.1	Preserve, protect, maintain, and enhance physical, visual and recreational access to the waterfront.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.2	Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.3	Provide visual access to the waterfront where physically practical.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.4	Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

		Promote	Hinder	N/A
8.5	Preserve the public interest in and use of lands and waters held in public trust by the State and City.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.6	Design waterfront public spaces to encourage the waterfront's identity and encourage stewardship.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Protect scenic resources that contribute to the visual quality of the New York City coastal area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.1	Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.2	Protect and enhance scenic values associated with natural resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	Protect, preserve, and enhance resources significant to the historical, archaeological, architectural, and cultural legacy of the New York City coastal area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.1	Retain and preserve historic resources, and enhance resources significant to the coastal culture of New York City.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.2	Protect and preserve archaeological resources and artifacts.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

G. CERTIFICATION

The applicant or agent must certify that the proposed activity is consistent with New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If this certification can be made, complete this Section.

"The proposed activity complies with New York State's approved Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent's Name: Sandy Collins, Senior Vice President, AKRF, Inc.

Address: 440 Park Avenue South, 7th Floor, New York, NY 10016

Telephone: 646-388-9657 Email: scollins@akrf.com

Applicant/Agent's Signature: 

Date: April 29, 2021

Submission Requirements

For all actions requiring City Planning Commission approval, materials should be submitted to the Department of City Planning.

For local actions not requiring City Planning Commission review, the applicant or agent shall submit materials to the Lead Agency responsible for environmental review. A copy should also be sent to the Department of City Planning.

For State actions or funding, the Lead Agency responsible for environmental review should transmit its WRP consistency assessment to the Department of City Planning.

For Federal direct actions, funding, or permits applications, including Joint Applicants for Permits, the applicant or agent shall also submit a copy of this completed form along with his/her application to the [NYS Department of State Office of Planning and Development](#) and other relevant state and federal agencies. A copy of the application should be provided to the NYC Department of City Planning.

The Department of City Planning is also available for consultation and advisement regarding WRP consistency procedural matters.

New York City Department of City Planning

Waterfront and Open Space Division

120 Broadway, 31st Floor

New York, New York 10271

212-720-3696

wrp@planning.nyc.gov

www.nyc.gov/wrp

New York State Department of State

Office of Planning and Development

Suite 1010

One Commerce Place, 99 Washington Avenue

Albany, New York 12231-0001

518-474-6000

www.dos.ny.gov/opd/programs/consistency

Applicant Checklist

- ☐ Copy of original signed NYC Consistency Assessment Form
- ☐ Attachment with consistency assessment statements for all relevant policies
- ☐ For Joint Applications for Permits, one (1) copy of the complete application package
- ☐ Environmental Review documents
- ☐ Drawings (plans, sections, elevations), surveys, photographs, maps, or other information or materials which would support the certification of consistency and are not included in other documents submitted. All drawings should be clearly labeled and at a scale that is legible.
- ☐ Policy 6.2 Flood Elevation worksheet, if applicable. For guidance on applicability, refer to the WRP Policy 6.2 Guidance document available at www.nyc.gov/wrp

A. NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM CONSISTENCY

The project site is located within the City’s designated Coastal Zone. Therefore, in accordance with the guidelines of the *CEQR Technical Manual*, an evaluation of the proposed project’s consistency with the New York City Waterfront Revitalization Program (WRP) policies is provided below.

CONSISTENCY OF PROPOSED PROJECT WITH THE WATERFRONT REVITALIZATION PROGRAM POLICIES

New York City’s WRP includes 10 principal 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. Assessments of the proposed project’s conformity with the City’s WRP policies are provided below for all policy questions answered “Promote” or “Hinder” on the Consistency Assessment Form.

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

Policy 1.1: Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.

The Development Site is zoned M3-1, which is a district designated for areas with heavy industries that generate noise, traffic or pollutants, typically located near the waterfront and buffered from residential areas. Typical uses in these districts are power plants, solid waste transfer facilities and recycling plants, and fuel supply depots. The Development Site is surrounded by predominantly energy and light industrial uses, including the Astoria Energy power plant, which is located to the northwest, and several one-to two-story buildings containing a variety of light industrial storage, manufacturing, transportation, and contracting uses that are located to the south along 19th Avenue. The Development Site contains a small one-story vacant building and paved and unpaved areas. The site is located in the Astoria Industrial Business Zone (IBZ), one of 16 Industrial Business Zones established by the City where expanded business services are available for industrial and manufacturing businesses with the goal of protecting existing manufacturing districts and encouraging industrial growth citywide. The IBZs foster high-performing business districts by creating competitive advantages over locating in areas outside of New York City, and provide for tax credits for businesses relocating within them, zone-specific planning efforts, and direct business assistance. The Proposed Development would facilitate the redevelopment of an underused property to promote economic development and enhance the city’s tax base. Therefore, the Proposed Development would promote this policy.

Policy 1.2: Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.

The Proposed Development would create waterfront publicly accessible space that would occupy approximately 30,600 square feet within the TWAA, replacing mostly compacted gravel bordered by stands of invasive herbaceous plants and a few successional shrubs and trees. The public waterfront would be accessed from the 19th Avenue sidewalk at the terminus of 19th Avenue. An additional 4,200 sf of landscaped publicly accessible area would be provided along 19th Avenue and the proposed media production studio. Therefore, the Proposed Development would promote this policy.

Policy 1.3: Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.

See response to Policy 1.1. The Proposed Development would affect zoning regulations applicable to the Development Site but would not affect zoning regulations applicable to other sites within the study area, which would maintain the existing M3-1 and M1-1 zoning districts. There would be no change in land use and it would not affect the land uses of surrounding sites. The Proposed Development would be consistent with the predominantly light industrial uses in the area. Therefore, the Proposed Development would promote this policy.

Policy 1.5: Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.

As described below under Policy 6.2, flood proofing measures would be implemented to address the potential risks of current and future flooding. The ground floor of the building, which would primarily contain wet-flood proofed accessory off-street parking and loading as well as some dry-flood proofed occupied floor area along 19th Avenue and the waterfront yard, would be built at grade. Therefore, the Proposed Development would promote this policy.

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

Policy 2.3: Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas or Ecologically Sensitive Maritime Industrial Area.

As stated above in Policy 1.1, the Development Site is located in the Astoria IBZ, one of 16 Industrial Business Zones established by the City where expanded business services are available for industrial and manufacturing businesses with the goal of protecting existing manufacturing districts and encouraging industrial growth citywide. The IBZs foster high-performing business districts by creating competitive advantages over locating in areas outside of New York City, and provide for tax credits for businesses relocating within them, zone-specific planning efforts, and direct business assistance. The Proposed Development would be consistent with the predominately light industrial uses in the area. Therefore, the Proposed Development would promote this policy.

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

As described below under Policy 6.2 and above in Policy 1.5, flood proofing measures would be implemented to address the potential risks of current and future flooding. The ground floor of the building, which would primarily contain wet-flood proofed accessory off-street parking and loading as well as some dry-flood proofed occupied floor area along 19th Avenue and the

waterfront yard, would be built at grade. Therefore, the Proposed Development would promote this policy.

Policy 4: Protect and restore the quality and function of ecological systems within the New York City coastal area.

Policy 4.5: Protect and restore tidal and freshwater wetlands.

Construction activities would take place along Luyster Creek, mapped by the New York State Department of Environmental Conservation (NYSDEC) as littoral zone tidal wetlands, and would take place within the littoral zone tidal wetland and littoral zone tidal wetland adjacent area (TWAA). During construction, erosion and sediment control measures would be implemented in accordance with a Stormwater Pollution Prevention Plan (SWPPP) developed in compliance with the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit GP-20-001 for stormwater discharges from construction activity, including silt fences and stockpile management, to minimize impact to littoral zone tidal wetlands adjacent to the Development Site. Any sediments resuspended during revetment rehabilitation will be minimized through the use of a turbidity curtain, will dissipate shortly after the completion of construction, and will not result in long term impacts to littoral zone tidal wetlands. Any water recovered during construction dewatering would be treated in accordance with New York City Department of Environmental Protection (DEP) or DEC permit requirements before being discharged to the city sewer or Luyster Creek through an existing stormwater outfall.

The proposed earth stabilized precast retaining wall located landward of mean high water and removal of existing concrete, asphalt, stone debris, and dilapidated bulkhead remnants along the shoreline would result in a decrease in coverage and volume of hardened surfaces and debris below mean high water. Hardened surfaces and debris located below mean high water would decrease by 1,333 sf and 135 cubic yards, thereby resulting in a slight increase in natural substrate along the shoreline.

The media production studio would occupy approximately 5,200 square feet of TWAA area. The waterfront public access space (native coastal plantings, bioretention areas, and pedestrian circulation path) would occupy approximately 30,600 square feet of TWAA landward of the revetment and seawall. The existing TWAA that would be modified by the Proposed Development comprises mostly compacted gravel bordered by stands of invasive herbaceous plants and a few successional shrubs and trees. The waterfront area would comprise 9,900 square feet of bioretention areas and native coastal plantings that would help filter and slow stormwater flow prior to being discharged to Luyster Creek, and pedestrian circulation path that is designed to be permeable, with metal grading or wood decking. Therefore, the Proposed Development would promote this policy.

Policy 4.8: Maintain and protect living aquatic resources.

The proposed earth stabilized precast retaining wall located landward of mean high water and removal of existing concrete, asphalt, stone debris, and dilapidated bulkhead remnants along the shoreline would result in a decrease in coverage and volume of hardened surfaces and debris below mean high water. Hardened surfaces and debris located below mean high water would decrease by 1,333 sf and 135 cubic yards, thereby resulting in a slight increase in natural substrate along the shoreline.

The Proposed Development would create public waterfront access space that would occupy approximately 30,600 square feet within the TWAA, replacing mostly compacted gravel bordered

by stands of invasive herbaceous plants and a few successional shrubs and trees. 30,600 square feet area of TWAA would be enhanced to create the new waterfront public access space. This area would comprise 9,900 square feet of bioretention areas and native coastal plantings that would help filter and slow stormwater flow prior to being discharged to Luyster Creek, and walkways that are designed to be permeable, with metal grading or wood decking. Therefore, the Proposed Development would promote this policy.

Policy 5: Protect and improve water quality in the New York City coastal area.

Policy 5.1: Manage direct or indirect discharges to waterbodies.

Approximately 30,600 sf of shoreline area would be improved with bioretention areas and native coastal vegetation that would provide water quality treatment for stormwater runoff. The 9,900 square feet of bioretention areas that would be placed within the TWAA would manage a portion of the stormwater runoff from the proposed media production studio. The bioretention areas would be designed in conformance with the NYS Stormwater Management Manual standards for re-development projects. Stormwater discharge would be improved by settling of stormwater within the bioretention basins and passage of stormwater through the rooting zone; underlying bioinfiltration soil, sand, and stone layers; and geotextile before discharging to Luyster Creek. During construction, appropriate erosion and sediment control measures including silt fence, inlet protection, stockpile protection practices, and construction entrances would be implemented in accordance with a Stormwater Pollution Prevention Plan (SWPPP) developed in compliance with the NYSDEC SPDES General Permit GP-20-001 for stormwater discharges from construction activity. Therefore, the Proposed Development would promote this policy.

Policy 5.2: Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

The Proposed Development would place approximately 9,900 square feet of bioretention areas within the TWAA to manage a portion of the stormwater runoff from the proposed media production studio in accordance with the New York State Stormwater Design Manual. The 9,900 square feet of bioretention areas would reduce the discharge of nonpoint source pollution from the Development Site. Therefore, the Proposed Development would promote this policy.

Policy 5.3: Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.

See response to Policy 4.5.

The proposed earth stabilized precast retaining wall located landward of mean high water and removal of existing concrete, asphalt, stone debris, and dilapidated bulkhead remnants along the shoreline would result in a decrease in coverage and volume of hardened surfaces and debris below mean high water. Hardened surfaces and debris located below mean high water would decrease by 1,333 sf and 135 cubic yards, thereby resulting in a slight increase in natural substrate along the shoreline. Best management practices would be used during construction to minimize the effects to tidal wetlands. Therefore, the Proposed Development would promote this policy.

Policy 5.4: Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.

The Proposed Development would place approximately 9,900 square feet of bioretention areas and native coastal plantings within the TWAA, replacing a hardened shoreline comprising mostly compacted gravel bordered by stands of invasive herbaceous plants and a few successional shrubs

and trees. The native coastal plantings would help filter stormwater and slow its flow prior to being discharged to Luyster Creek. Therefore, the Proposed Development would promote this policy.

Policy 5.5: Protect and improve water quality through cost-effective grey-infrastructure and in-water ecological strategies.

As stated above in Policies 4.5 and 5.4, the Proposed Development would improve the existing, mostly hardened shoreline along Luyster Creek with native coastal vegetation and permeable pedestrian circulation path, softening the shoreline. Therefore, the Proposed Development would promote this policy.

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

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

The project site is within the existing 1% annual chance floodplain within Zone AE (an area of high flood risk subject to inundation by the 1% annual chance flood event).¹ The existing base flood elevation (BFE) for the site is +13 feet NAVD88. Under Policy 6, the primary goal for projects in coastal areas is to reduce risks posed by current and future coastal hazards, particularly major storms that are likely to increase due to climate change and sea level rise. Construction of the Proposed Development is consistent with current uses of the site. The ground floor of the building, which would primarily contain wet-flood proofed accessory off-street parking and loading as well as some dry-flood proofed occupied floor area along 19th Avenue and the waterfront yard, would be built at grade. With these measures in place, the Proposed Development would minimize the potential for losses from flood damage and, therefore, would promote this policy.

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

Guidance provided by DCP² recommends a detailed methodology to determine a project's consistency with Policy 6.2. A summary of this process is provided below.

1. Identify vulnerabilities and consequences: assess the project's vulnerabilities to future coastal hazards and identify what the potential consequences may be.

a. Complete the Flood Evaluation Worksheet.

The information in the following subsections is based on the results of the completed worksheet, which is provided in **Attachment 1**.

¹ NYC Department of City Planning Flood Hazard Mapper, 2015 Preliminary Flood Insurance Rate Map

² NYC Planning. The New York City Waterfront Revitalization Program: Climate Change Adaptation Guidance. March 2017.

b. Identify any project features that may be located below the elevation of the 1% floodplain over the lifespan of the project under any sea level rise scenario.

The lifespan of buildings (commercial, industrial, etc.) is generally considered to be about 80 years; mechanical, electrical, and plumbing equipment located within a building typically has a lifespan of 50 years, with regular maintenance. The New York City Panel on Climate Change (NPCC) projects that sea levels are likely to increase by up to 10 inches by the 2020s, and up to 75 inches by 2100 under the High Scenario projections. Under current conditions, the Development Site is located within the 1% annual chance floodplain. The entire Development Site is within Zone AE with a BFE of +13 feet NAVD88, and a portion of the easternmost proposed bioretention area is also within the Limit of Moderate Wave Action³ (LiMWA). The ground floor of the media production studio would be constructed at a design elevation of approximately +9 feet NAVD88. The top of the seawall and pathway would also be at +9 feet NAVD88. The building would be within the 1% annual chance floodplain by the 2050s under the High Scenario projections. The revetment, seawall, pathway, and bioretention areas would remain below the floodplain elevation throughout their lifespans.

c. Identify any vulnerable, critical, or potentially hazardous features that may be located below the elevation of Mean Higher High Water (MHHW) over the lifespan of the project under any sea level rise scenario.

Based on the range of sea level rise predictions described above, MHHW at the NOAA station nearest the Development Site (currently +3.66 feet NAVD88 at NOAA Station #8518639 Port Morris) could range up to +9.91 feet by the end of the century. The vulnerable, critical, or potentially hazardous features of media production studio building would remain above MHHW through this period.

d. Describe how any additional coastal hazards are likely to affect the project, both currently and in the future, such as waves, high winds, or debris.

Wave action hazards (i.e., Zone VE) have not been designated for the Development Site. However, a portion of the bioretention area falls within the LiMWA. The area between Zone VE and the LiMWA, or the Coastal A Zone, is subject to flood hazards associated with floating debris and high-velocity flow.

2. Identify adaptive strategies: assess how the vulnerabilities and consequences identified in Step 1 are addressed through the project's design and planning.

a. For any features identified in Step 1(b), describe how any flood damage reduction elements incorporated into the project, or any natural elevation on the site, provide any additional protection. Describe how would any planned adaptive measures protect the feature in the future from flooding?

The Proposed Development would be constructed within the current floodplain, vulnerable, critical, or potentially hazardous features of the media production studio remaining above projected floodplain elevations throughout their lifespans. To account for current flood conditions, dry flood proofing measures would be employed for the ground floor of the building. Specific measures may include aluminum shielding and/or flood gates at entryways within the floodplain, and/or other appropriate methods that would be determined at a later point in the design process

³ Inland limit of the area expected to receive 1.5-foot or greater breaking waves during the 1% annual chance flood event.

and incorporated at the time of construction. All proposed new critical infrastructure (i.e., electrical, plumbing, mechanical equipment) would be elevated above the projected flood levels.

b. For any features identified in Step 1(c), describe how any flood damage reduction elements incorporated into the project, or any natural elevation on the site, provide any additional protection. Describe how would any planned adaptive measures protect the feature in the future from flooding?

As described above in Step 1(c), none of the vulnerable, critical, or potentially hazardous features project features would be below MHHW throughout their lifespans.

c. Describe any additional measures being taken to protect the project from additional coastal hazards such as waves, high winds, or debris.

This property is in FEMA Wind Zone II (up to 160 mph) and construction and materials would follow appropriate building and zoning standards.

d. Describe how the project would affect the flood protection of adjacent sites, if relevant.

Because the floodplain within New York City is controlled by astronomic tide and meteorological forces (e.g., nor'easters and hurricanes) and not by fluvial flooding, Proposed Development would not have the potential to adversely affect the floodplain or result in increased coastal flooding at adjacent sites or within the Development Site. The waterfront public access area, with its bioretention areas and native coastal plantings and permeable pedestrian circulation path, would facilitate the infiltration and drainage of stormwater.

3. Assess policy consistency: conclude whether the project is consistent with Policy 6.2 of the Waterfront Revitalization Program.

The entire Development Site is within the 1% annual chance floodplain (Zone AE) and a portion of the easternmost proposed bioretention area is within a wave impact zone (Coastal A Zone) in the flood hazard area. The proposed media production studio would be designed to include dry flood proofing measures where possible to protect against potential flood hazards. These may include the installation of aluminum shielding and/or flood gates, or other measures to be determined at a later point in the design process. Mechanical equipment would be placed at an elevation above +100 feet NAVD88. Ground floor uses of the building would be limited to wet-flood proofed accessory off-street parking and loading as well as some dry-flood proofed occupied space along 19th Avenue and the waterfront yard. The bioretention areas along the shoreline would be designed to be resilient to flooding. Therefore, with these measures in place, the Proposed Development would promote Policy 6.2.

Policy 7: Minimize environmental degradation and negative impacts on public health from solid waste, toxic pollutants, hazardous materials, and industrial materials that may pose risks to the environment and public health and safety.

Policy 7.1: Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution and prevent degradation of coastal ecosystems.

A Phase I Environmental Site Assessment (ESA) and a Phase II Limited Site Investigation (LSI) report were prepared in May 2019. The ESA included the findings of a reconnaissance of the Development Site, an evaluation of readily available historical information, and selected environmental databases and electronic records in accordance with American Society for Testing and Materials (ASTM) E1527-13. The LSI included 15 soil borings to a maximum of 12 feet for

the collection and laboratory analysis of soil and groundwater samples. In addition, a Soil Vapor Investigation (SVI) was prepared in July 2020. The SVI included the installation of six probes for the collection and laboratory analysis of soil vapor samples.

The ESA identified several Recognized Environmental Conditions (RECs) which, per ASTM E 1527-13, are conditions that indicate “the presence or likely presence of hazardous substances or petroleum products in, on, or at a property.” These RECs include the following: historical piano manufacturing operations conducted onsite from the late 1800s to the present, which included foundry, bronzing, metal working, machine shop, the use of hazardous materials and petroleum products, and the generation of hazardous waste; the western portion of the Development Site included a petroleum bulk storage tank with no closure documentation provided. The north adjacent property included a dye works and a petroleum bulk storage facility from the late 1800s to the present with multiple release listings. The Phase 1 ESA also identified five other non-REC environmental concerns on the property that include: hazardous substances and petroleum products observed stored in various previously existing Development Site buildings; hydraulic oil staining and oily sludge observed near the lumber stacker hydraulic equipment; potential sources of vapor intrusion included historical on-site and off-site industrial operations; and, based on the construction date of the building, potential asbestos-containing materials and lead-based paint.

The LSI soil sampling results were compared to the Title 6 (Department of Environmental Conservation) New York Codes, Rules and Regulations Part 375 Restricted Use Soil Cleanup Objectives (SCOs) for Industrial Use (ISCOS), for Commercial Use (CSCOs), and for Unrestricted Use (UUSCOs). Given the proposed future commercial use of the Development Site, the most appropriate SCOs are the CSCOs. The soil sampling identified three of the 15 samples had exceedances of CSCOs, but these were limited to SVOCs (which, although they can be associated with petroleum, are also common in urban fill material) in three samples and arsenic in one sample. The composite sample showed no exceedances of CSCOs or other criteria that would have indicated the potential need to manage excavated soil as regulated hazardous waste.

The LSI groundwater sampling results were compared to New York State Department of Environmental Conservation (DEC) Ambient Water Quality Standards (AWQS) and Class GA Standards, which were developed assuming use of groundwater as a source of drinking water, which does not currently occur and would not occur in the future. There were exceedances in all eight samples for SVOCs and certain metals (both total and dissolved), though the dissolved metals exceedances were limited to antimony, iron, magnesium, manganese, and sodium, all of which may well be naturally occurring. The elevated semi-volatile organic compounds (SVOCs) and total metal detections in the samples are likely due to high turbidity, i.e., the presence of suspended soil particles, in the temporary wells. These findings are consistent with the Development Site’s fill material. Additionally, the sampling results identified no exceedances of the New York City Limitations for Effluent to Sanitary or Combined Sewers.

The SVI laboratory soil vapor sample results were compared to NYS Department of Health “Decision Matrices.” There were slight exceedances of the most stringent sub-slab guidelines (indicating mitigation could be required) for two chlorinated solvent compounds (trichloroethene and cis-1,2-dichloroethene) at one location in the northeastern portion of the Development Site, beneath a former machine shop. Both compounds were commonly historically used for cleaning/degreasing.

During construction of the Proposed Development, a vapor barrier (minimum thickness of 20 mil) would be installed below the building’s foundation and outside of any subgrade walls. If dewatering were to be needed for construction, it would need to be performed in accordance with

applicable New York City Department of Environmental Protection (DEP) regulatory requirements. The Phase I ESA and the Phase II LSI have been submitted to DEP along with a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP). These have been approved by DEP and the RAP would be implemented during the subsurface work associated with construction of the Proposed Development. The RAP/CHASP addresses the conditions identified by the LSI and provides for contingencies that may arise during construction, including specifying appropriate measures to be implemented (during air monitoring) if underground storage tanks, soil and groundwater contamination, or other unforeseen environmental conditions were to be encountered. It also addresses procedures for: soil testing, management and disposal; dust control and stockpile management; imported material criteria; dewatering; and a cap/cover system consisting of concrete, stone and clean cover soil. To address the findings of the Soil Vapor Investigation and to protect future occupants in the new construction, the RAP requires a vapor barrier (minimum thickness of 20 mil) be installed below the building's foundation and outside of subgrade walls. With these measures in place, the Proposed Development would promote this policy.

Policy 7.2: Prevent and remediate discharge of petroleum products.

See response to Policy 7.1. Any encountered petroleum tanks or spills would be reported to NYSDEC and addressed in accordance with applicable local, state, and federal guidelines. Therefore, the Proposed Development would promote this policy.

Policy 7.3: Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.

See response to Policy 7.1. Should evidence of contaminated soil or other contaminants be encountered, these materials would be properly characterized, managed, and disposed of in accordance with applicable regulations. Therefore, the Proposed Development would promote this policy.

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

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

The Proposed Development would create waterfront publicly accessible space that would occupy approximately 30,600 square feet within the TWAA, replacing mostly compacted gravel bordered by stands of invasive herbaceous plants and a few successional shrubs and trees. The public waterfront would be accessed from the 19th Avenue sidewalk at the terminus of 19th Avenue. An additional 4,200 sf of landscaped publicly accessible area would be provided along 19th Avenue and the proposed media production studio. Therefore, the Proposed Development would promote this policy.

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

See response to Policy 8.1. Additionally, the Proposed Development would not result in a change in land use and is compatible with surrounding land uses. Therefore, the Proposed Development would promote this policy.

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

The Proposed Development would establish a waterfront pedestrian circulation path with seating, providing visual access to an area that was previously not accessible to the public. Therefore, the Proposed Development would promote this policy.

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

The Proposed Development would create public waterfront access space that would allow public access along Luyster Creek. Therefore, the Proposed Development promotes this policy.

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

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

The Development Site is located in an M3-1 zoning district, a manufacturing district which is mapped along a large portion of the Astoria waterfront. M3-1 districts allow for heavy industrial uses that generate noise, traffic, or pollutants, and are typically mapped away from residential areas. The immediate area is characterized by energy and light industrial uses. There would be no change in land use with the Proposed Development and it would not affect the land uses of surrounding sites. The Proposed Development would be consistent with the predominantly light industrial uses in the area. The mostly hardened shoreline would be stabilized with a rip-rap revetment and seawall and enhanced with native coastal plantings, bioretention areas, and pedestrian circulation path. Therefore, the Proposed Development would be compatible with the surrounding urban context and existing scenic elements and would promote this policy.

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

Policy 10.2: Protect and preserve archaeological resources and artifacts.

The Proposed Development has low sensitivity for archeological resources with both the precontact occupation of the Development Site and the historic period. In a comment letter dated September 9, 2020, the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) determined that the Proposed Development would have no impacts on archaeological resources. In a comment letter dated October 14, 2020, the New York City Landmarks Preservation Commission (LPC) concluded that the Development Site does not possess archaeological significance. Therefore, the Proposed Development would not result in adverse impacts on archaeological resources and would promote this policy.

✱

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Worksheet

COMPLETE INSTRUCTIONS ON HOW TO USE THIS WORKSHEET ARE PROVIDED IN THE "CLIMATE CHANGE ADAPTATION GUIDANCE" DOCUMENT AVAILABLE AT www.nyc.gov/wrp

Enter information about the project and site in highlighted cells in Tabs 1-3. Tab 4, "Summary Charts" contains primary results. Tab 5, "0.2%+SLR" produces charts to be used for critical infrastructure or facilities. Tab 6, "Calculations" contains background computations. Appendix A contains tide elevations for station across the city to be used for the elevation of MHHW if a site survey is not available. Non-highlighted cells have been locked.

Background Information	
Project Name	Wildflower Studios Astoria
Location	35-15 19th Avenue, Astoria, NY
Type(s)	<input checked="" type="checkbox"/> Residential, Commercial, Community Facility <input checked="" type="checkbox"/> Parkland, Open Space, and Natural Areas <input type="checkbox"/> Tidal Wetland Restoration <input type="checkbox"/> Critical Infrastructure or Facility <input type="checkbox"/> Industrial Uses <input type="checkbox"/> Over-water Structures <input checked="" type="checkbox"/> Shoreline Structures <input type="checkbox"/> Transportation <input type="checkbox"/> Wastewater Treatment/Drainage <input type="checkbox"/> Coastal Protection
Description	Construction of a 7-story, 160-foot-tall media production studio with approximately 30,600 sf waterfront publicly accessible area along Luyster Creek. The waterfront publicly accessible area would include approximately 18,300 square feet (sf) of coastal buffer plantings, bioretention basins planted with native vegetation to accommodate stormwater generated by the project, pedestrian circulation path, seating, and amenities to provide access to the waterfront. The shoreline area would be stabilized with the removal of existing concrete, asphalt, stone debris, garbage and dilapidated wharf/bulkhead remnants, and installation of a new protective rip-rap stone revetment and an earth stabilized precast concrete seawall.
Planned Completion Date	2023
Expected Project Lifespan	2100

The New York City Waterfront Revitalization Program Climate Change Adaptation Guidance document was developed by the NYC Department of City Planning. It is a guidance document only and is not intended to serve as a substitute for actual regulations. The City disclaims any liability for errors that may be contained herein and shall not be responsible for any damages, consequential or actual, arising out of or in connection with the use of this information. The City reserves the right to update or correct information in this guidance document at any time and without notice.

For technical assistance on using this worksheet, email wrp@planning.nyc.gov, using the message subject "Policy 6.2 Worksheet."

Last update: Sept. 7, 2018

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	3.66	3.66	NAVD88	<i>Appendix A, Port Morris NOAA Station</i>
1% flood height	13.00	13.00	NAVD88	<i>NYC Flood Hazard Mapper</i>
Design flood elevation	15.00	15.00	NAVD88	<i>Project design drawings</i>
<i>As relevant:</i>				
0.2% flood height	-->			

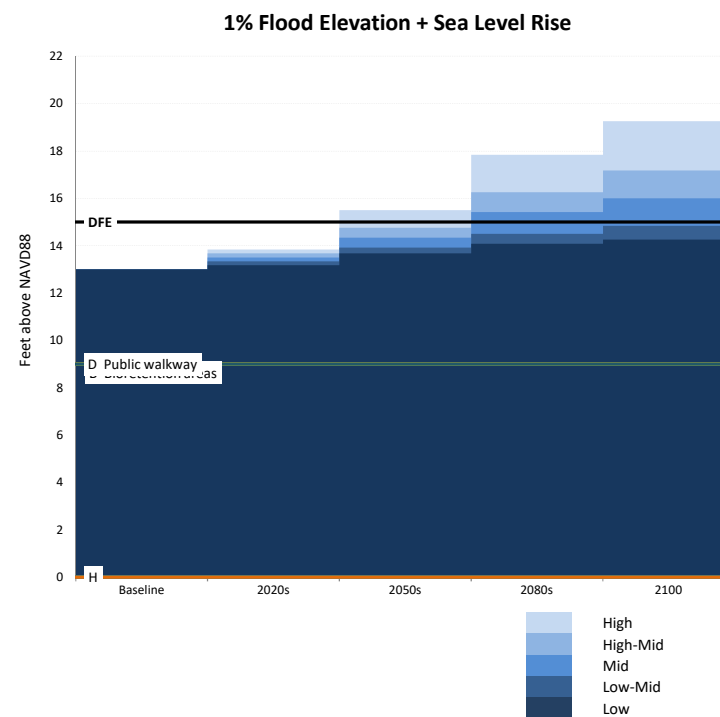
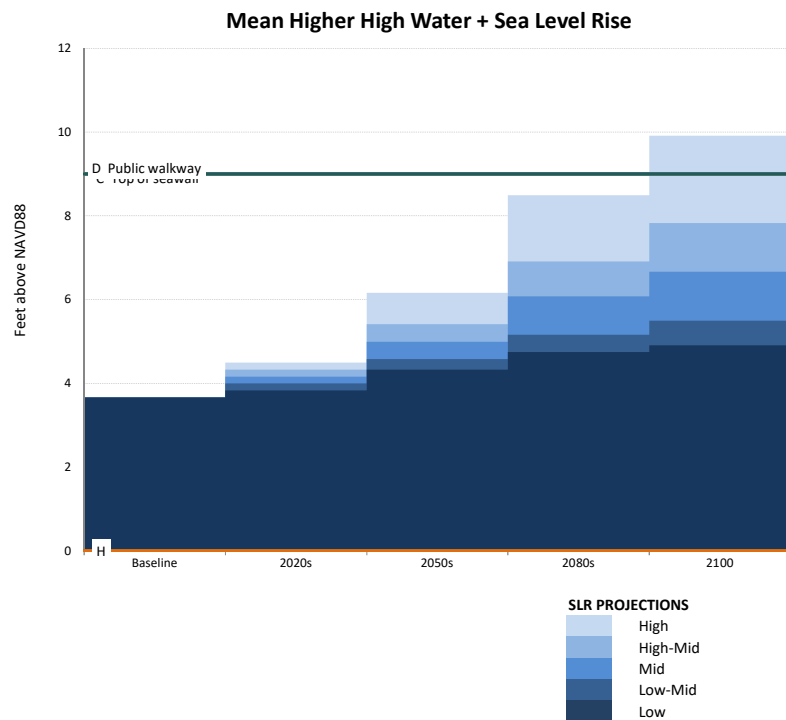
Data will be converted based on the following datums:

Datum	FT (NAVD88)
NAVD88	<i>0.00</i>
NGVD29	<i>-1.10</i>
Manhattan Datum	<i>1.65</i>
Bronx Datum	<i>1.51</i>
Brooklyn Datum (Sewer)	<i>0.61</i>
Brooklyn Datum (Highway)	<i>1.45</i>
Queens Datum	<i>1.63</i>
Richmond Datum	<i>2.09</i>

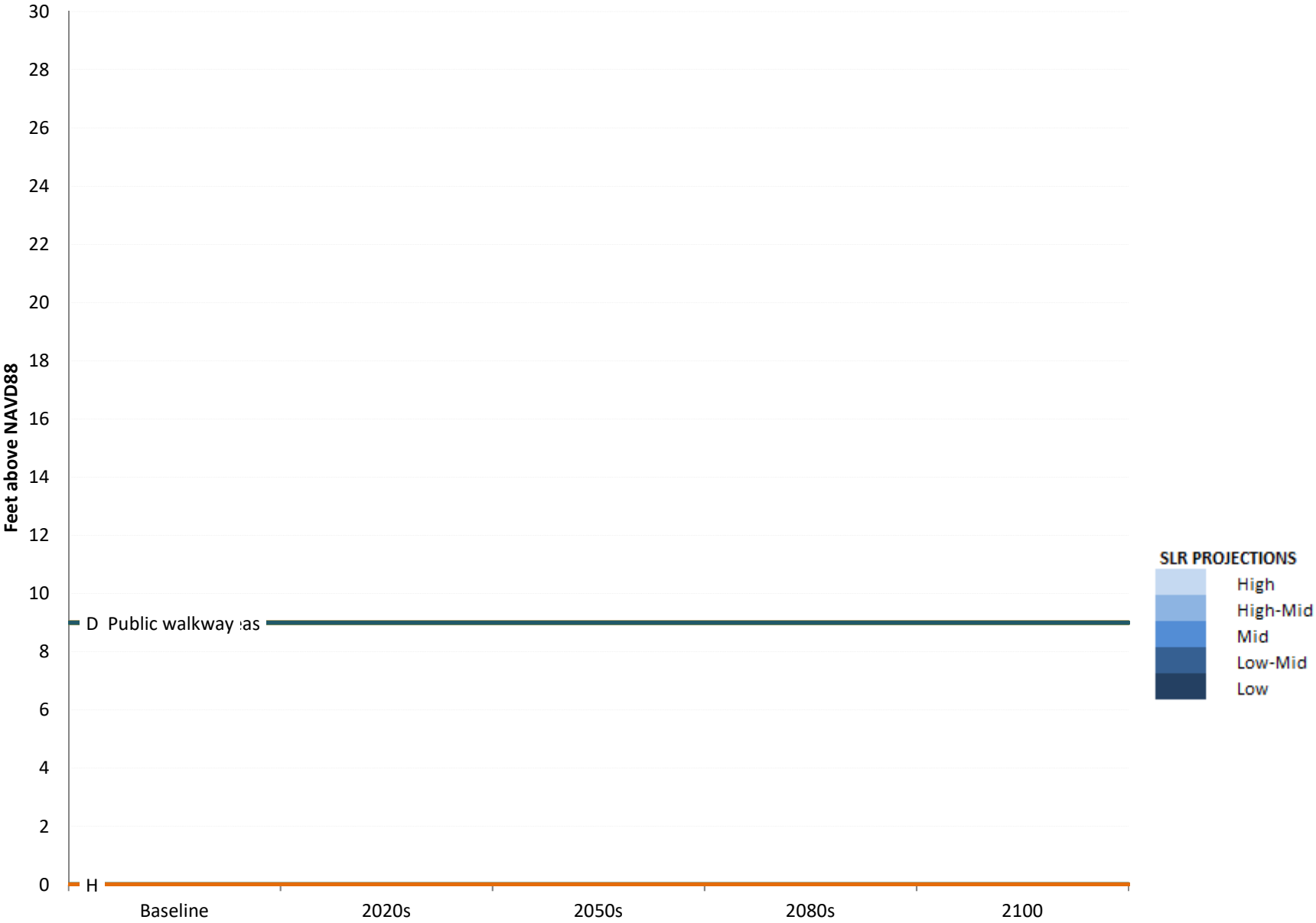
Describe key physical features of the project.

Feature (enter name)	Feature Category				Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 0.2% flood height
A Building	<input checked="" type="checkbox"/> Vulnerable	<input type="checkbox"/> Critical	<input type="checkbox"/> Potentially Hazardous	<input type="checkbox"/> Other	2100	9.0	Feet	NAVD88	9.0	9.0	5.3	#VALUE!
Ground floor elevation of building												
B Bioretention areas	<input type="checkbox"/> Vulnerable	<input type="checkbox"/> Critical	<input type="checkbox"/> Potentially Hazardous	<input checked="" type="checkbox"/> Other	2100	9.0	Feet	NAVD88	9.0	9.0	5.3	#VALUE!
Lowest point of the three bioretention areas												
C Top of seawall	<input type="checkbox"/> Vulnerable	<input type="checkbox"/> Critical	<input type="checkbox"/> Potentially Hazardous	<input checked="" type="checkbox"/> Other	2100	9.0	Feet	NAVD88	9.0	9.0	5.3	#VALUE!
Crest elevation of seawall placed landward of rehabilitated revetment												
D Public walkway	<input type="checkbox"/> Vulnerable	<input type="checkbox"/> Critical	<input type="checkbox"/> Potentially Hazardous	<input checked="" type="checkbox"/> Other	2100	9.0	Feet	NAVD88	9.0	9.0	5.3	#VALUE!
Pedestrian pathway just inland of the seawall and rehabilitated revetment												
E	<input type="checkbox"/> Vulnerable	<input type="checkbox"/> Critical	<input type="checkbox"/> Potentially Hazardous	<input type="checkbox"/> Other			Feet	NAVD88				
Description of Planned Uses and Materials												
F	<input type="checkbox"/> Vulnerable	<input type="checkbox"/> Critical	<input type="checkbox"/> Potentially Hazardous	<input type="checkbox"/> Other			Feet	NAVD88				
Description of Planned Uses and Materials												
G	<input type="checkbox"/> Vulnerable	<input type="checkbox"/> Critical	<input type="checkbox"/> Potentially Hazardous	<input type="checkbox"/> Other			Feet	NAVD88				
Description of Planned Uses and Materials												
H	<input type="checkbox"/> Vulnerable	<input type="checkbox"/> Critical	<input type="checkbox"/> Potentially Hazardous	<input type="checkbox"/> Other			Feet	NAVD88				
Description of Planned Uses and Materials												

Assess project vulnerability over a range of sea level rise projections.



0.2% Flood Elevation + Sea Level Rise



	SLR (ft)					
	Low	Low-Mid	Mid	High-Mid	High	
Baseline	0.00	0.00	0.00	0.00	0.00	2014
2020s	0.17	0.33	0.50	0.67	0.83	2020s
2050s	0.67	0.92	1.33	1.75	2.50	2050s
2080s	1.08	1.50	2.42	3.25	4.83	2080s
2100	1.25	1.83	3.00	4.17	6.25	2100

MHHW+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	3.66	3.66	3.66	3.66	3.66
2020s	3.83	3.99	4.16	4.33	4.49
2050s	4.33	4.58	4.99	5.41	6.16
2080s	4.74	5.16	6.08	6.91	8.49
2100	4.91	5.49	6.66	7.83	9.91

1%+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	13.00	13.00	13.00	13.00	13.00
2020s	13.17	13.33	13.50	13.67	13.83
2050s	13.67	13.92	14.33	14.75	15.50
2080s	14.08	14.50	15.42	16.25	17.83
2100	14.25	14.83	16.00	17.17	19.25

0.2%+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2020s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2050s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2080s	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2100	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!

	0	1
A Building	9	9
B Bioretention areas	9	9
C Top of seawall	9	9
D Public walkway	9	9
E	0	0
F	0	0
G	0	0
H	0	0
DFE	15.00	15.00

SLR (in)					
Low	Low-Mid		Mid	High-Mid	High
	0	0	0	0	0
	2	4	6	8	10
	8	11	16	21	30
	13	18	29	39	58
	15	22	36	50	75



NOAA Tide Station Data*(to be used only when a site survey is unavailable)*

Station ID	Station Name	Source MHHW (Feet, NAVD88)*	Adjusted MHHW (Feet, NAVD88)*
8518687	Queensboro Bridge	2.27	2.60
8530095	Alpine	2.11	2.44
8516614	Glen Cove	3.72	4.05
8516990	Willetts Point	3.72	4.05
8518639	Port Morris	3.33	3.66
8518699	Williamsburg Bridge	2.14	2.47
8518750	The Battery	2.28	2.61
8531680	Sandy Hook	2.41	2.74
8518490	New Rochelle	3.71	4.04
8531545	Keyport	2.66	2.99
8516891	Norton Point	2.08	2.41
8517201	North Channel	2.72	3.05
8517137	Beach Channel	2.10	2.43
8517756	Kingsborough	2.13	2.46
8519436	Great Kills	2.22	2.55
8531142	Port Reading	2.82	3.15
8519483	Bergen Point	2.56	2.89
8519050	USCG	2.28	2.61
8518902	Dyckman St	2.01	2.34
8517251	Worlds Fair Marina	3.59	3.92
8518668	Horns Hook	2.54	2.87
8518643	Randalls Island	2.60	2.93
8518526	Throggs Neck	3.68	4.01

* MHHW values include an addition 0.33 feet to account for changes in sea level since the 1983-20

Source
NOAA Tides and Currents
NOAA Tides and Currents
NOAA Tides and Currents
NOAA Tides and Currents
NOAA Tides and Currents
NOAA Tides and Currents
NOAA Tides and Currents
NOAA Tides and Currents
NOAA Tides and Currents
NOAA Tides and Currents
NOAA VDATUM
NOAA Tides and Currents
NOAA VDATUM
NOAA VDATUM
NOAA VDATUM
NOAA VDATUM
NOAA VDATUM
NOAA Tides and Currents
NOAA Tides and Currents
NOAA VDATUM
NOAA VDATUM
NOAA VDATUM
NOAA Tides and Currents

01 tidal epoch.





Appendix B

Wildflower Studios
1 Steinway Place (Block 814, Lot 10)
ASTORIA, QUEENS COUNTY, NEW YORK

Disturbance Memorandum and Preliminary Archaeological Assessment

Prepared for:

WF Industrial IV LLC c/o Wildflower Ltd LLC
80 Eighth Avenue, Suite 1602
New York, NY 10011

Prepared by:



AKRF, Inc.
440 Park Avenue South
New York, NY 10016
212-696-0670

AUGUST 2020

A. INTRODUCTION

WF Industrial IV LLC c/o Wildflower Ltd LLC (“Wildflower”) is proposing to construct a new commercial development (the “Proposed Development”) in the Astoria neighborhood of Queens, New York (see **Figure 1**). The 5.25-acre Development Site is located at 35-15 19th Avenue and includes Block 814, Lot 10 (see **Figure 2**). The Development Site was formerly developed with a number of vacant buildings associated with the Steinway Piano factory, which currently operates on the adjacent property to the east. Wildflower recently purchased the Development Site from the Steinway Piano factory property owner and proposes to construct a film and television production studio on the Development Site: this studio project requires zoning approvals by the New York City Planning Commission (CPC). Alternatively, absent the CPC approvals, Wildflower would construct a last-mile distribution center, which does not require any discretionary zoning approvals (i.e., it is “as-of-right” under zoning): the last-mile delivery center would allow shipping entities, such as e-commerce companies (e.g., Amazon) or private shipping companies (e.g., FedEx), to sort large, regional shipments into smaller, area-specific shipments. The building footprint would be similar for either the studio facility or the last-mile distribution center, and either facility would be constructed on an at-grade slab supported by subsurface piles driven to the depth of bedrock. With either facility, the Proposed Development would enhance the ecological quality of the site’s shoreline through the planting of an extensive native coastal buffer and by providing stormwater retention and filtration for runoff generated by the proposed impervious surfaces. The proposed coastal buffer would be established between the existing top of the hardened shoreline slope and the seaward edge of the proposed building.

The Development Site includes tidal wetlands included within the jurisdiction of the New York State Department of Environmental Conservation (DEC). As such, the project requires a DEC Article 25 permit in order to expand the footprint of the development (either a studio or a distribution center) into the DEC-regulated tidal wetland adjacent area. The portion of the project requiring a permit under Article 25 is subject to review under the New York State Environmental Quality Review Act (SEQRA) and the State Environmental Quality Review implementing regulations (6 NYCRR Part 617). DEC is serving as lead agency for the SEQR review. Under the New York State Waterfront Revitalization and Coastal Resources Act (Article 42 of the New York Executive Law) as implemented by 19 NYCRR Part 600, actions directly undertaken by state agencies within the New York State coastal area must be consistent with the New York State Coastal Management Program (CMP) and any Local Waterfront Revitalization Program (LWRP). Therefore, the SEQR evaluation reviews the activities within the tidal wetland adjacent area for consistency with the New York City Waterfront Revitalization Program (WRP). In addition, the project (either a studio or a distribution center) requires approval of a Stormwater Pollution Prevention Plan (SWPPP) in connection with the DEC State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. This disturbance memorandum and preliminary archaeological assessment has been prepared to assess the potential impacts of the proposed project on archaeological resources.

B. RESEARCH METHODOLOGY

In order to determine the extent to which archaeological resources, if present within the Development Site, may have been disturbed, several primary and secondary sources were examined including historic maps, photographs, newspaper records, local histories, previous archaeological and environmental investigations, and the digital records of the New York City Department of Buildings. This report also includes information on previously identified archaeological sites in the vicinity of the Development Site.

C. CURRENT CONDITIONS

The majority of the buildings on the project site formerly associated with the Steinway Piano factory were recently demolished to the depth of their slabs, as seen in the photographs included in **Figure 3**. Luyster Creek (also known as Steinway Creek and Berrian's Creek) is located to the west of the Development Site. The Creek's shoreline is lined with concrete, asphalt, and miscellaneous debris; large boulders; and the remnants of a deteriorated cribbing-type retaining structure.

D. ENVIRONMENTAL AND PHYSICAL SETTINGS

TOPOGRAPHY AND GEOLOGY

The Borough of Queens is located within a geographical region known as the Atlantic Coastal Plain Physiographic Province. The Atlantic Coastal Plain, which includes all of Long Island, tends to include flat, gently sloping land (Isachsen, et al. 2000). Glacial till characterizes the surficial geology of the site (Cadwell 1989). The bedrock beneath the glacial and alluvial deposits that make up the till is unknown, but believed to date to the relatively recent Quaternary period of the Cenozoic era, and may have been formed within the last 100 million years (Fisher, et al. 1995; Isachsen, et al. 2000). This till was deposited by the massive glaciers that retreated from the area towards the end of the Pleistocene 1.6 million years before present ("BP") to approximately 10,000 years BP. There were four major glaciations that affected New York City, culminating approximately 12,000 years ago with the end of the Wisconsin period. During the ice age, a glacial moraine bisected Long Island, running in a northeast-southwest direction through the center of what is now the borough of Queens (Isachsen, et al. 2000).

The 1891 USGS map of western Queens (see **Figure 4**) depicts the Development Site as situated on a level neck of land that was at sea level.¹ The landform was physically separated from the mainland by a marsh-bordered stream and was historically known as "Luyster's Island" (Seyfried 1984). Current USGS maps indicate that the site is largely situated at an elevation of 10 feet above sea level with a sharp slope to sea level at the western end of the Development Site along the waterfront. The "Final Maps" of Queens issued in 1935 and (modified through 1941) suggest that the western portion of the site is located in a formerly inundated area and that the site in its entirety was situated at an elevation of less than 5 feet above the "mean high water"² using elevation data that was surveyed in 1872.³ These historical elevations were compared to current Lidar information published by the United States Geological Survey (USGS) in 2014, which were fairly consistent with the late 19th-century topography. The Lidar elevations are measured relative to the North American Vertical Datum of 1988 (NAVD88). The Lidar data suggests that the elevation of the site increases slightly to the west from approximately 7 to 8 feet NAVD88, an approximation of sea level, to a maximum height of approximately 11 feet relative to NAVD88 near the waterfront, before steeply dropping to sea level at the western end of Lot 10. It would therefore appear that extensive landscape modification has occurred across the site as a result of landfilling, development, and waterfront modifications.

¹ The 1891 USGS map uses 20-foot elevation contour lines, and the Development Site is shown in an area situated between 0 and 20 feet above sea level.

² If the Queens map uses a datum similar to the Queens Borough Datum, an elevation of 5 feet above the datum would be the equivalent of 3.375 feet above NAVD88.

³ These maps are on file with the Queens Topographical Bureau, which is currently closed as a result of the COVID-19 pandemic. A request was submitted to the Bureau as part of the research for this memo, and the Bureau kindly transmitted Sheet 318 of the Final maps, which covered the southern two-thirds of the Development Site. The adjoining Sheet 319 was not made available for review.

HYDROLOGY

Retreating glaciers also left behind a trail of melting ice and water, resulting in the formations of wetlands and small bodies of water across the region. Between 12,000 and 6,000 years before present, sea levels fluctuated followed by a rapid rise in sea levels, reaching their current state by approximately 3,000 years ago (Geoarcheological Research Associates 2007). As described previously, the Development Site was originally part of a land mass that was separated from the mainland by a stream surrounded by thick marshland (see **Figure 4**). Several similar small necks of land and island areas were located on the northern shore of Astoria at that time that have since been consolidated into the mainland through landfilling efforts. The 1858 Whiting coastal survey of northern Queens indicates that the Development Site was entirely inundated by marshland (see **Figure 5**). Later historical maps (e.g., 1891 Wolverton; 1901 Ullitz) depict the lines of historic waterways and suggest that the southern portion of the Development Site was historically inundated by water or marshland. The previously described landscape modification, therefore, appears to have involved extensive landfilling. Furthermore, given the extent of documented sea level rise in the region, it is possible that, prior to the creation of the marshes around 3,000 years ago, the Development Site was previously exposed, dry land. Groundwater is situated between 2 and 7.8 feet below grade across the Development Site (Vertex 2019b).

SOILS

The Web Soil Survey maintained by the United States Department of Agriculture’s Natural Resources Conservation Service¹ indicates that soils within the Development Site are characterized as “Urban land, till substratum” (“UtA”). These soils are typically found in generally level (0 to 3 percent slopes), urban areas with a low, impervious surface. The typical soil profile for this complex includes approximately 15 inches of cemented material over gravely sandy loam to depths of at least 79 inches. These soils are well-drained and typically observed on summits.

A series of five soil borings was completed within the Development Site as part of a preliminary geotechnical investigation by Tectonic Engineering & Surveying Consultants, PC (“Tectonic Engineering”) in 2019 (Tectonic Engineering 2019). The borings were advanced to depths ranging between 30 and 50 feet below the ground surface. Deposits identified as “fill” were found in the top 2 to 9 feet of each boring; however it is unknown if the characterization of fill represents only the materials observed within the soil (e.g., construction debris including glass, concrete, and wood) or if it is meant to indicate that the materials were imported to the site to change the grade. As discussed previously, extensive portions of the site appear to be situated in areas of filled marsh. In three of the five borings located near the northwest, southwest, and northeast corners of the Development Site, an organic odor was reported at depths between 10 and 14 feet below ground surface. In a fourth boring near the central/southern part of the site, peat deposits were identified at a depth of 10 feet below grade. Bedrock was generally shallow in this area and was encountered between 20 and 35 feet below the ground surface.

Tectonic Engineering completed an additional 65 soil borings as part of a final geotechnical investigation of the project site (Tectonic Engineering 2020). These borings identified approximately 4 to 14 feet of fill across the site, with the shallower fill deposits situated near the southwest corner of the Development Site (ibid). Groundwater was observed between approximately 2 and 6 feet below the ground surface and bedrock was encountered at varying depths ranging between 19 and 65 feet below the ground surface (ibid). The typical soil profile included a layer of organic clay material under the fill, followed by fluvial sands and then gravel and silt (ibid). Peat is not specifically referenced in any of the borings. In a total of eight borings, a gray clay, silty clay, or clayey silt with “woody vegetation,” roots, or tree roots was observed between depths typically ranging between approximately 15 and 17 feet but in some places

¹ <https://websoilsurvey.sc.egov.usda.gov/>

extending between 12 and 20 feet or 10 to 14 feet below grade. Five of these borings were located in the southwestern portion of the site where fill levels were shallowest. In 33 of the 65 borings, levels of silty clay or clayey silt containing organic matter or trace amounts of organic material or that had an organic odor were observed. These deposits were of varying thickness and were observed at widely varying depths often between 10 to 17 feet below grade, but overall ranging between 7 and 22 feet below ground surface. Some borings containing multiple soil levels with traces of organic material separated by levels that contained none.

Additional shallow borings were completed within the Development Site by Vertex as part of a Phase II Environmental Site Investigation in 2019 (Vertex 2019a). Of the fifteen borings advanced to depths of 10 to 15 feet below grade, nine identified “fill” deposits between depths of 3 to 9 feet below grade. An additional ten borings identified peat or organic materials, although in five of those borings, only traces of peat were observed within layers containing silt and clay deposits. The soil levels that were identified as containing peat or traces of peat began at depths ranging between 1 and 9 feet below grade and extending to depths as deep as 4 to 14 feet below grade, including in areas beneath the buildings that were located on the Development Site at the time. If intact and undisturbed as a result of later development, these peat deposits could represent the lowest levels of the former marsh/wetland areas that occupied the site at one time. However, the borings do not appear to depict a consistent peat layer across the Development Site that would indicate a protective surface over a possible deeply buried ground surface. Previous development activities and landscape modification may have therefore resulted in the disturbance and redeposition of peat and organic material in different portions of the Development Site.

PRECONTACT HISTORY OF THE DEVELOPMENT SITE

In general, Native American habitation sites are most often located in coastal areas with access to marine resources, near fresh water sources and areas of high elevation. The precontact occupants of the area surrounding the Development Site would have benefitted from the varied resources offered by the area along the coastline of what is now Queens.

Further indication of the potential presence of Native American activity near a project site is indicated by the number of precontact archaeological sites that have been previously identified in the vicinity. Due to its proximity to other reported archaeological sites, the Development Site is situated within a generalized area of archaeological sensitivity as mapped in the New York State Cultural Information System (CRIS).¹ CRIS indicates that three previously identified precontact archaeological sites have been reported within one mile of the Development Site, as shown in **Table 1**. These sites were identified by early archaeologists (e.g., Parker 1920) and later described by the New York State Museum (NYSM) and the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) as part of their inventories of archaeological sites in the region. The sites appear to have been arbitrarily mapped by OPRHP in CRIS as they were waterfront sites that do not necessarily conform to the historic shoreline. However, these sites indicate a clear pattern of Native American occupation—both short and long term—in the waterfront areas in northern Astoria.

¹ <https://cris.parks.ny.gov/>

Table 1

Precontact Archaeological Sites within One Mile of the Development Site

Site Name/ Number	Site Type	Approximate Distance from the Development Site as Mapped in CRIS	Additional Source Information
Parker Site Queens 9 NYSM 4532 OPRHP Site 08101.000102	Burial Site	Overlaps southern portion of the site as mapped in CRIS, was probably further east/southeast	Parker 1920
Parker Site Queens 10 NYSM 4533	Shell midden	2,700 feet	Parker 1920
NYSM 4539	Shell midden	550 feet	Parker 1920
Note: OPRHP site 08101.000102 is mapped within NYSM site 4533 in CRIS but the attached documentation identifies it as the same site as NYSM site 4532.			
Sources: The New York State Cultural Resources Information System (CRIS).			

NYSM Site 4532 and OPRHP Site 08101.000102 both represent the archaeological site that Parker (1920) identified as Site 9 in Queens County. Parker described that site as follows: “Burial site on the Riker and Titus estates on the Bowery road to Steinway and North Beach” (Parker 1920: 672). The Old Bowery Road ran to the south of the Development Site in the vicinity of what is now 20th Road and historical maps (e.g., 1891 Wolverton) show that the Rikers and Titus estates were located to the southeast and east of the Development Site in areas that were shown on the 1858 Whiting survey as upland areas. As mapped in CRIS, NYSM site 4532 and OPRHP Site 08101.000102 are mapped more than 1,000 feet apart. The site inventory form for OPRHP Site 08101.000102 as posted in CRIS indicates that the site was reportedly reexamined by archaeologist Ralph Solecki in the 1930s, who reported that it had been destroyed. The forms also indicate that the site was located near the Lent homestead (previously the Riker home) at 78-03 19th Road,¹ a landmarked building approximately 3,500 feet southeast of the Development Site. The site therefore appears to be mapped in the wrong location in CRIS and the burial site was situated further to the east and southeast of the Development Site. This is more consistent with the maps prepared by Bolton (1922), which identify a Native American trail leading to the site at North Beach with no other trails or sites mapped in the vicinity of the Development Site.

Of the other sites mapped in CRIS, NYSM 4533 represents the site Parker (1920) referred to as Queens Site 10, which Parker described as a “shell heap on the Jackson property on Poor Bowery at North Beach” (Parker 1920: 672). The “Poor Man’s Bowery” was the body of water in the vicinity of the modern Bowery Bay to the east of the Development Site, which was heavily altered following the development of the waterfront and the construction of what is now LaGuardia Airport. The North Beach area has produced extensive Native American archaeological resources, many of which were also excavated by Solecki (Smith 1950). A distinct pottery style known as the “North Beach Focus” that is believed to be one of the earliest ceramic types utilized in the region was named after the site (ibid).

Finally, NYSM Site 4539 is a shell midden that was mapped by Parker (1920) along the East River shoreline in the northwestern corner of Queens.

HISTORIC PERIOD

As described previously, the 1858 Whiting survey suggests that the Development Site was entirely inundated with marshland in the mid-19th century. The marshy deposits are depicted on a number of historical maps dating to that time period, including the 1837 Renard, 1852 Connor, 1852 Riker, 1859 Walling, and 1860 Walling maps. Originally known as Luyster’s Island, the Luyster family sold a parcel of land the area to Benjamin T. Pike, Jr. in 1854 and 1857 (Seyfried 1984). The 1860 Walling map shows the Pike home to the east of the marshes that occupied the Development Site and Seyfried (1984)

¹ The site inventory form incorrectly lists the address as 70-03 19th Road.

indicates that the house was east of what is now 41st Street, which was later the summer home of the Steinway family.

The Steinway factory was the first major development on the Development Site. William Steinway purchased the Pike and Luyster properties in 1870 and transformed them from their “primeval state” (Seyfried 1984:71). The first developments on the property were a foundry and a lumber mill as well as waterfront improvements including bulkheads and docks (Seyfried 1984; Steinway 2005). Berrian’s Creek (now known as Luyster Creek), to the west of the Development Site, was also channelized and bulkheaded at that time (Seyfried 1984). The 1873 Beers map depicts at least three structures in the vicinity of the Development Site, which are labeled “Steinway’s Foundry.” Throughout the 1870s and 1880s, the company transformed the isolated area into a small village that housed its factory operations as well as worker housing, a school, and streets to increase its accessibility, including Riker Avenue (now 19th Avenue) to the south of the Development Site and the former Blackwell Street (later 36th Street) to the east of the Development Site (ibid). By the late 1870s, the bulk of Steinway piano manufacturing efforts were completed at the Riker Avenue Plant.

The 1891 Wolverton atlas depicts the Berrian’s Creek canal to the west of the Development Site as well as a number of buildings on the Steinway factory property. The 1898 Sanborn map (see **Figure 6**) depicts the late-19th century development more clearly. Within the boundaries of the Development Site, four buildings are shown on that map, including a brick foundry, a metal and wood working plant, an engine house in the center of the Development Site, and a brick saw mill at the northern side of the Development Site. Additional small wood frame structures surrounded the brick buildings in the northern and central parts of the Development Site. The western and southern sides of the Development Site were lined with 20-foot-high lumber piles used for the construction of pianos. Hose boxes in two locations in the north and west of the Development Site suggest the presence of water lines throughout the Development Site. The 1915 Sanborn map (see **Figure 7**) depicts the same brick buildings but indicates that a greater number of wood frame buildings were constructed around the Development Site. The map also confirms that a 6-inch water pipe connected the hose boxes around the northern and western sides of the factory compound. The 1936 Sanborn map reflects the c. 1920 construction of a bronzing building to the south of the original foundry and two brick buildings north of the foundry. Additional wood frame structures and subsurface utility lines were constructed in the former lumber yard areas in the western and northwestern parts of the Development Site. By the publication of the 1948 Sanborn map, a large square fuel oil tank surrounded by a 3-foot-high brick wall had been built near the southwest corner of the Development Site (this was demolished by the late-20th century). Other buildings were constructed by then, including a large brick office building in the southeast corner of the Development Site, a brick pump house north of the former fuel tank on the Development Site, and a guard house in the south-central part of the Development Site.

SUMMARY OF DOCUMENTED DISTURBANCE

Extensive portions of the Development Site have been disturbed as a result of landscape modification/landfilling, the construction and demolition of buildings, the installation and maintenance of utilities, the grading of streets, and the development of waterfront infrastructure. Utilities extend through portions of the Development Site and are in the densest concentration in the vicinity of the former line of 36th Street to the east of the Development Site and in the areas immediately surrounding the former Steinway plant buildings within the Development Site (see **Figure 8**). While peat was identified in a number of soil borings, the borings do not confirm the presence of a consistent, undisturbed peat layer across the entire Development Site. This may suggest that landscape modification and development resulted in some disturbance to the underlying soils, including potential buried ground surfaces.

CONCLUSIONS

Based on the preliminary research above, the following conclusions have been reached:

PRECONTACT SENSITIVITY

The precontact sensitivity of a Development Site in New York City is generally evaluated by the site's proximity to level slopes (less than 10 to 12 percent), water courses, well-drained soils, and previously identified precontact archaeological sites (New York Archaeological Council 1994). Precontact archaeological sites are generally found at shallow depths, usually within 5 feet of the original ground surface. Numerous precontact archaeological sites have been identified within one mile of the Development Site. Furthermore, the Development Site was in relatively close proximity to the waterfront and while it was formerly inundated marshland, it may have been dry, inhabitable coastal land prior to the rise of sea levels around 3,000 years ago. The Development Site would therefore have been an attractive setting for a long- or short-term occupation site or resource processing location. However, as described previously, while soil borings depict the presence of some peat deposits, in many cases only traces of peat were observed within other soil deposits and the borings do not indicate that a consistent, intact peat or organic clay layer underlies the Development Site in its entirety although it may be preserved in isolated places. The Development Site is therefore determined to have low sensitivity for precontact archaeological resources.

HISTORIC SENSITIVITY

The Development Site was historically inundated until the early 1870s, when the Steinway piano factory was constructed. Numerous buildings associated with the Steinway plant have occupied the Development Site. Portions of the Development Site have been redeveloped at various times, especially in the southern half of the Development Site, which was largely used for lumber storage until the early- to mid-20th century, when it was developed with buildings. Much of the historic ground surface has been disturbed as a result of the construction and demolition of buildings, streets, utilities (including a large fuel oil tank that was formerly located in the southwest corner of the Development Site) and grading/paving. Given the disturbance of the Development Site and the absence of historic period development with the exception of the Steinway plant, the Development Site is determined to have low sensitivity for archaeological resources associated with the historic period.

RECOMMENDATIONS

The Development Site has been determined to have low sensitivity for both precontact and historic period resources. No additional archaeological analysis is recommended.

REFERENCES CITED

- Beers, F.W.
1873 *Atlas of Long Island, New York From Recent and Actual Surveys and Records*. New York: Beers, Comstock, and Cline.
- Beers, J.B.
1886 *New Map of Kings and Queens Counties, New York*. New York: J.B. Beers & Co.
- Bromley, G.W. and W.S.
1909 *Atlas of the City of New York: Borough of Queens*. Philadelphia: G.W. Bromley & Co.

Cadwell, Daniel, compiler/editor

1989 *Surficial Geologic Map of New York: Lower Hudson Sheet*. New York State Museum-Geological Survey, Map and Chart Series #40. Albany: New York State Museum.

Connor, R.F.O.

1852 *Map of Kings and Part of Queens Counties, Long Island, NY*. New York: M. Dripps.

Fisher, Donald W., Yngvar W. Isachsen, and Lawrence V. Rickard, compilers/editors

1995 *Geologic Map of New York: Lower Hudson Sheet*. Originally published 1970, reprinted 1995. New York State Museum and Science Service Map and Chart Series No. 15. Albany: New York State Museum.

Geoarcheological Research Associates

2007 “Geoarchaeological Study of Buried Landscapes for the Proposed 2nd Avenue Subway Between E 92nd and E 99th Streets, New York, New York.” Prepared for: Metropolitan Transportation Authority (MTA) and DMJM+HARRIS·ARUP, JV, New York, NY.

Higginson, J.H.

1860 Higginson's Map of Kings and a Large Part of Queens Counties. New York: J.H. Higginson.

Isachsen, Y.W., E. Landing, J.M. Lauber, L.V. Rickard, W.B. Rogers, editors.

2000 *Geology of New York: A Simplified Account*. Second Edition. New York: New York State Museum Educational Leaflet 28.

New York Archaeological Council

1994 *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State*. The New York Archaeological Council.

Parker, Arthur C.

1920 *The Archaeological History of New York*. Albany: The University of the State of New York.

Queens Topographical Bureau

1941 *Section 318 of the Final Maps of the Borough of Queens*. Jamaica: City of New York, Borough of Queens, Office of the President, Topographical Bureau.

Renard, Charles

1837 *Harlem River and Throgs Neck, New York; Register No. 15*. Washington, DC: US Coast Survey.

Riker, James

1852 *The Annals of Newtown in Queens County, New-York*. New York: D. Fanshaw.

Sanborn Map Company

1898 *Insurance Maps of the Borough of Queens, City of New York*. New York: Sanborn Map Co.

1915 *Insurance Maps of the Borough of Queens, City of New York*. New York: Sanborn Map Co.

1936 *Insurance Maps of the Borough of Queens, City of New York*. New York: Sanborn Map Co.

1948 *Insurance Maps of the Borough of Queens, City of New York*. New York: Sanborn Map Co.

1951 *Insurance Maps of the Borough of Queens, City of New York*. New York: Sanborn Map Co.

Seyfried, Vincent

1984 *300 Years of Long Island City, 1630–1930*. USA: Edgian Press, Inc.

Smith, Carlyle S.

1950 “The Archaeology of Coastal New York.” *Anthropological Papers of the American Museum of Natural History*. Volume 43, Number 2. New York: Published by the museum.

Steinway, Theodore E.

2005 *People and Pianos: A Pictorial History of Steinway & Sons*. Milwaukee, Wisconsin: Amadeus Press.

Tectonic Engineering & Surveying Consultants, Inc.

2019 “Preliminary Geotechnical Report: Wildflower Film Studios, 87 19th Avenue; Queens, New York.” Prepared for: WF Industrial IV, LLC; New York, NY.

2020 “Final Geotechnical Report: Wildflower Film Studios, 87 19th Avenue; Queens, New York.” Prepared for: WF Industrial IV, LLC; New York, NY.

Ullitz, Hugo

1904 *Atlas of the Borough of Queens, City of New York. Brooklyn, New York*: E. Belcher Hyde.

United States Geological Survey

1891 *New York: Harlem Sheet*. Washington, DC: United States Geological Survey.

2014 “USGS New York CMGP Sandy Lidar.” Accessed through:

<https://gis.ny.gov/elevation/metadata/USGS-NY-Sandy-Recovery-Lidar-Classified-LAS.xml>

Vertex

2019a “Phase II Limited Site Investigation: Steinway proposed Subdivision.” Prepared for: WF Industrial IV, LLC c/o Wildflower LLC; New York, NY.

2019b “Soil and Groundwater Management Plan: Steinway Proposed Subdivision.” Prepared for: WF Industrial IV, LLC c/o Wildflower LLC; New York, NY.

Walling, H.F.

1859 *Topographical map of the counties of Kings and Queens, New York*. New York: W.E. and A.A. Baker.

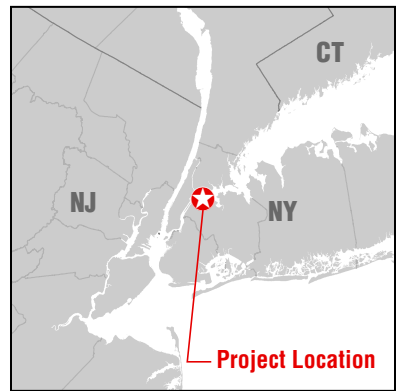
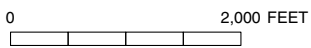
1860 *Map of New York and its Environs*. New York: S.F. Tilden.

Whiting, Henry L.

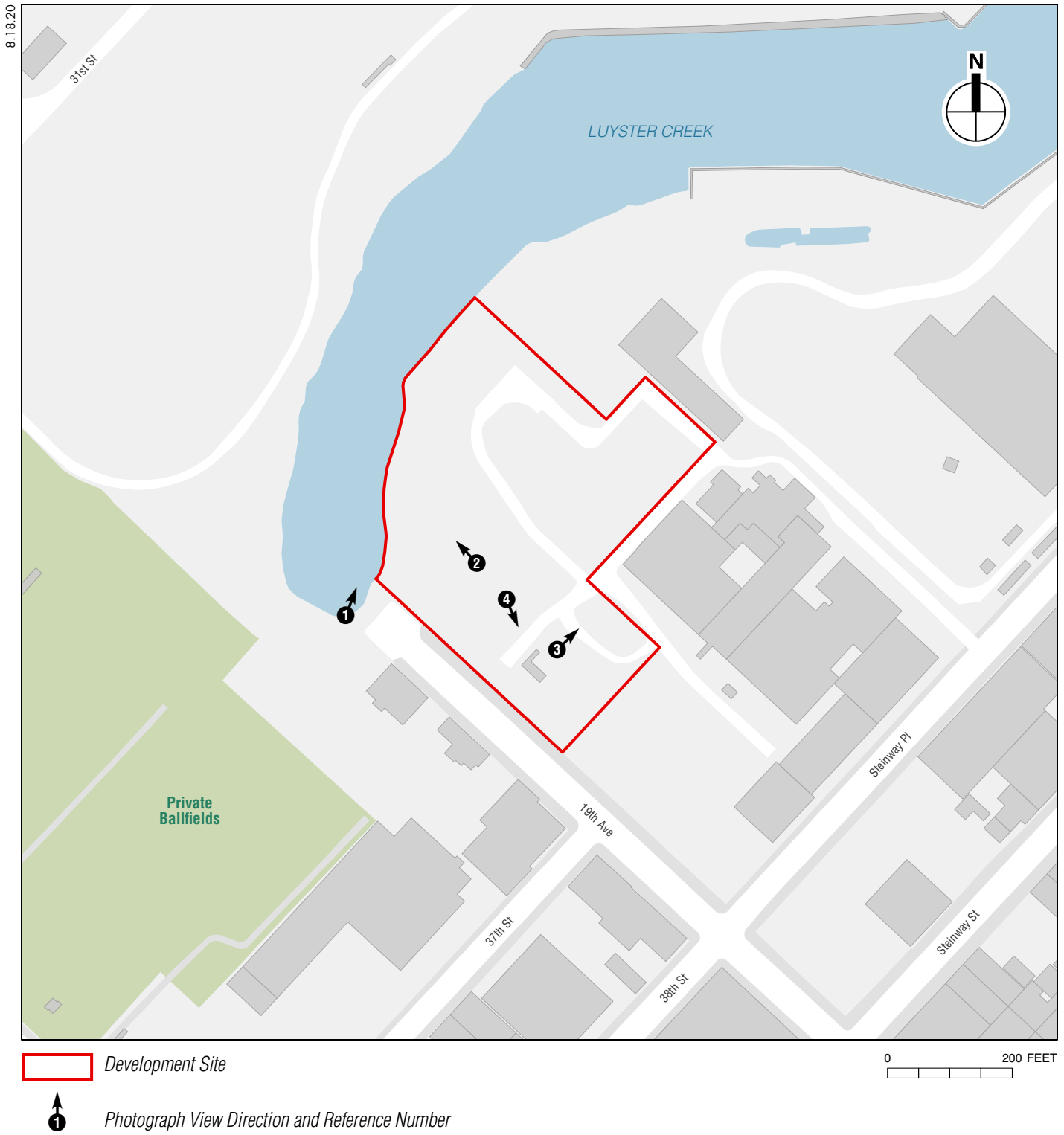
1858 New-York Harbor from Flushing Bay to Hunter’s Point. Washington, DC: U.S. Coast Survey.

Wolverton, Chester

1891 *Atlas of Queens County, Long Island, New York*. New York: Chester Wolverton.



USGS Topographic Map - Central Park Quadrangle
Figure 1





View north of Luyster Creek showing the Development Site to the east (right)

1



Looking west towards the southwest corner of the Development Site

2



View north at location of former building on the Development Site
and existing factory buildings north of the Development Site

3

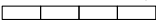


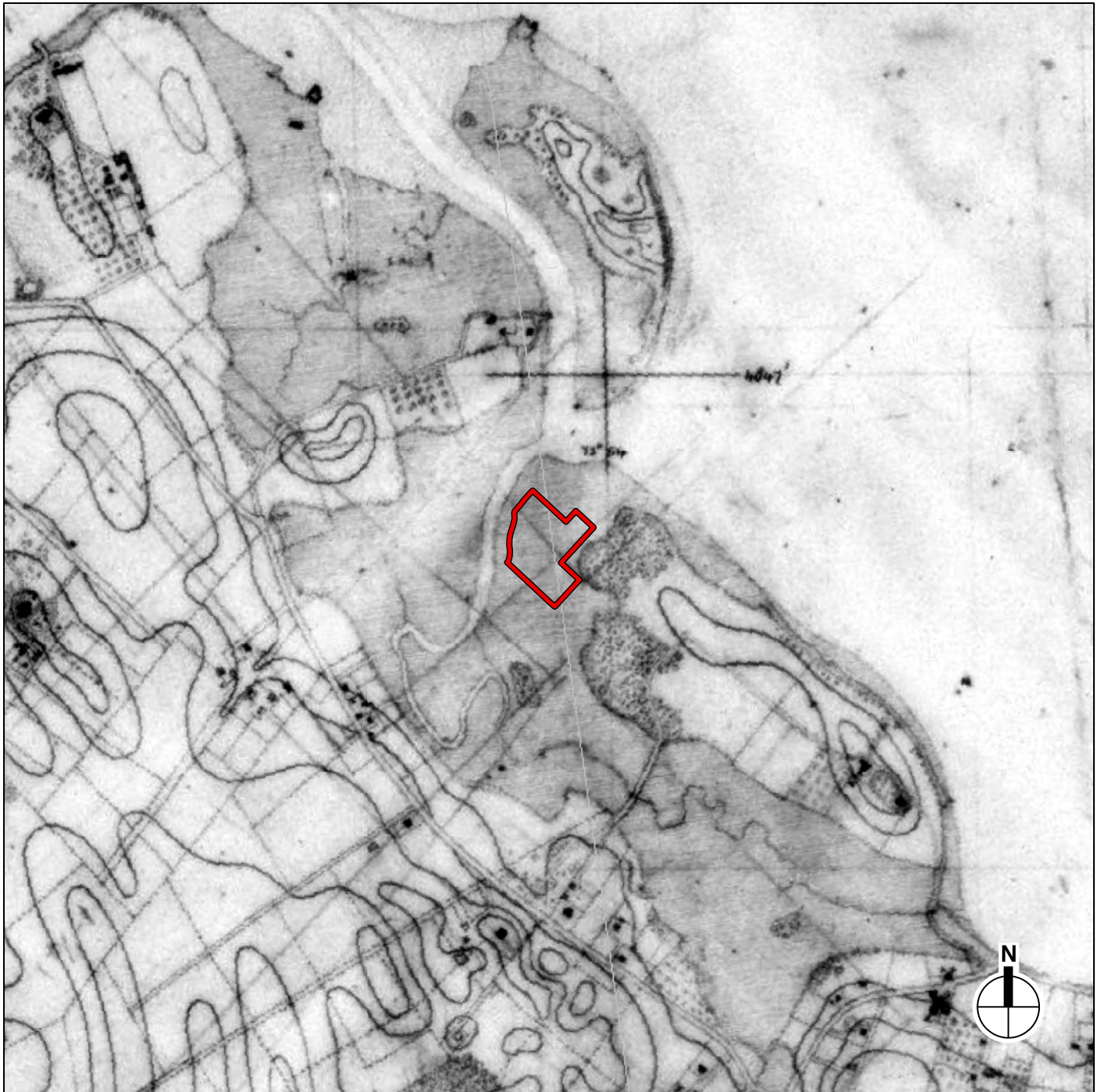
Looking east across south-central portion of Development Site

4




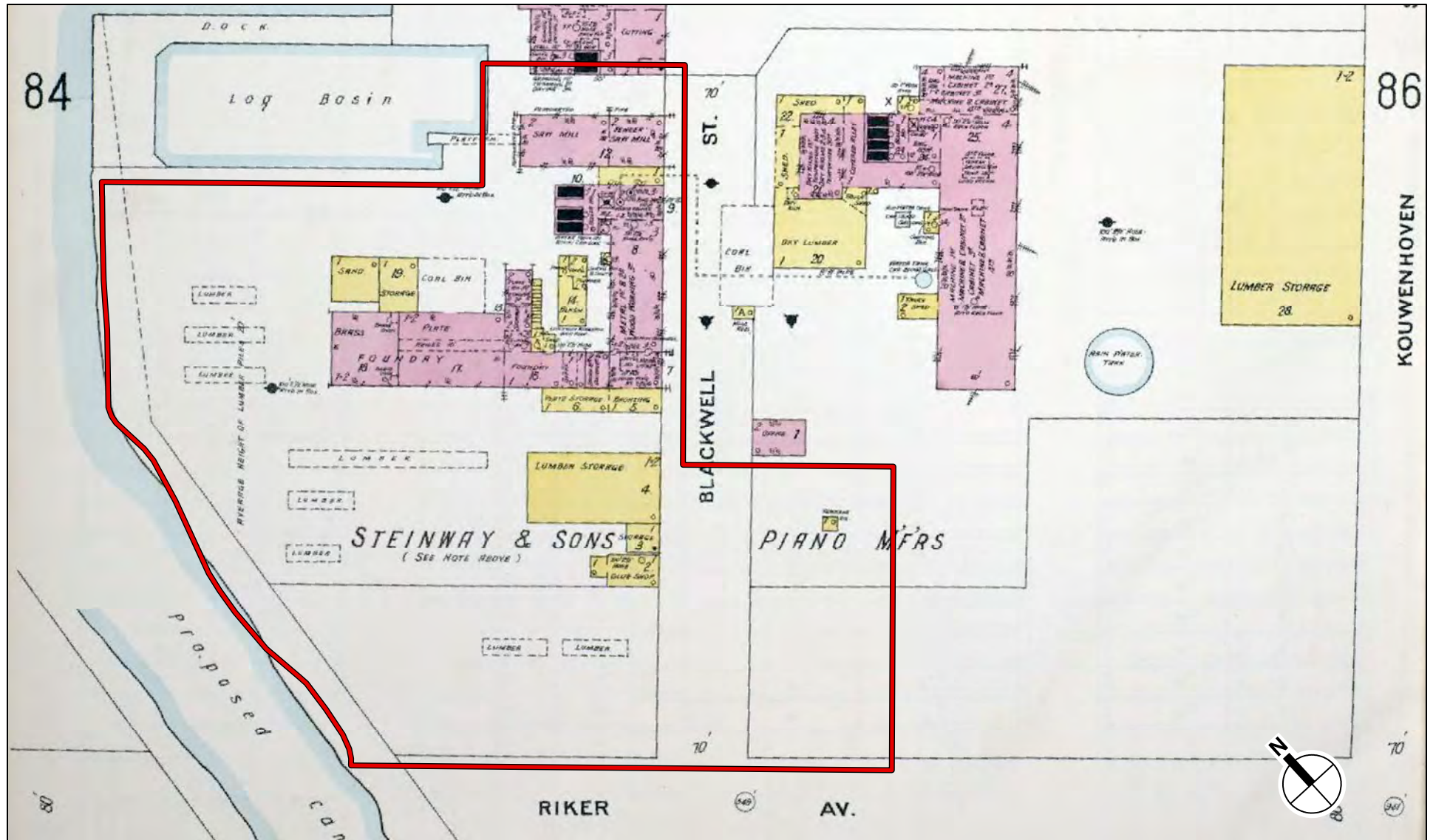
 *Development Site*

0 1,000 FEET




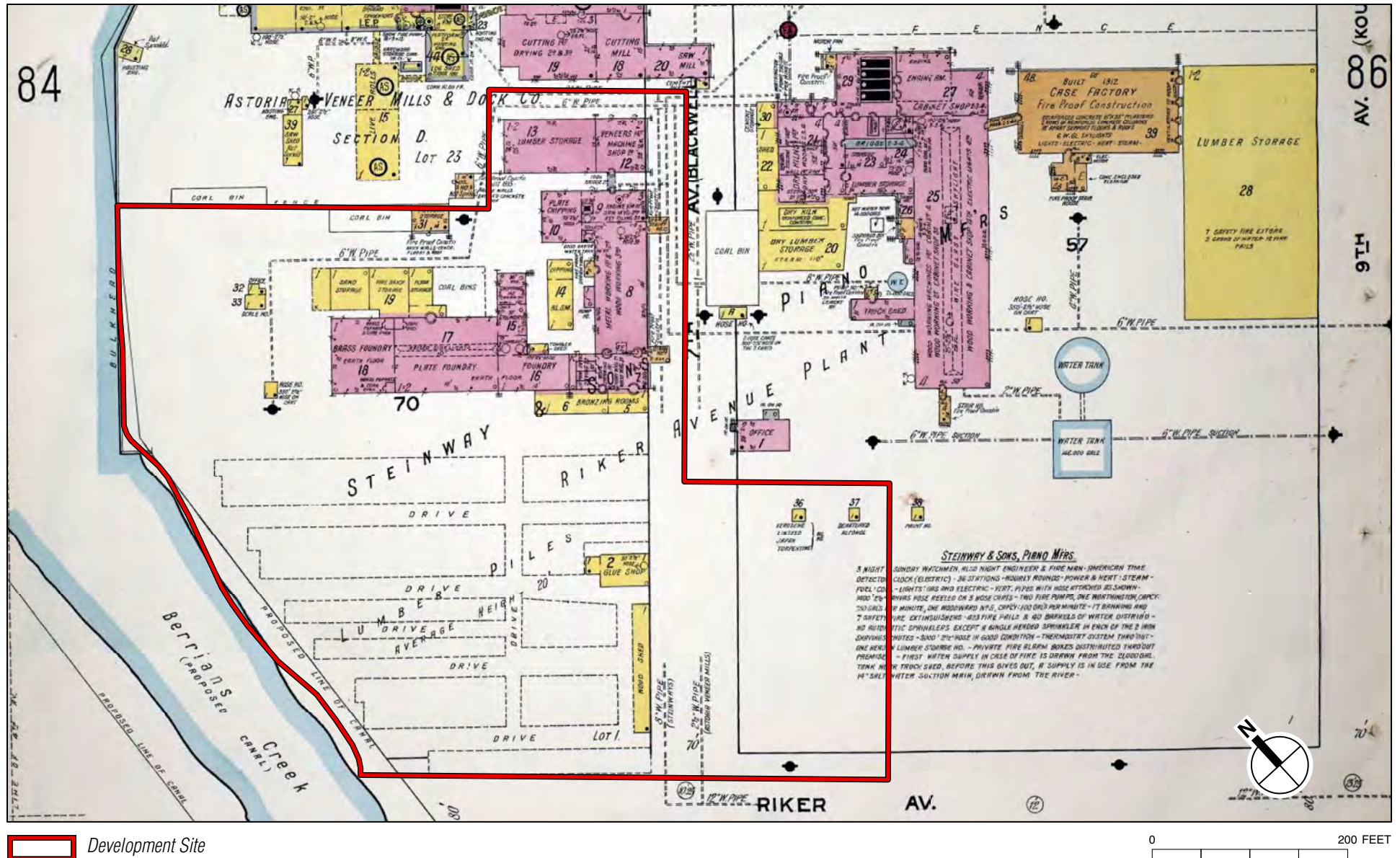
 *Development Site*

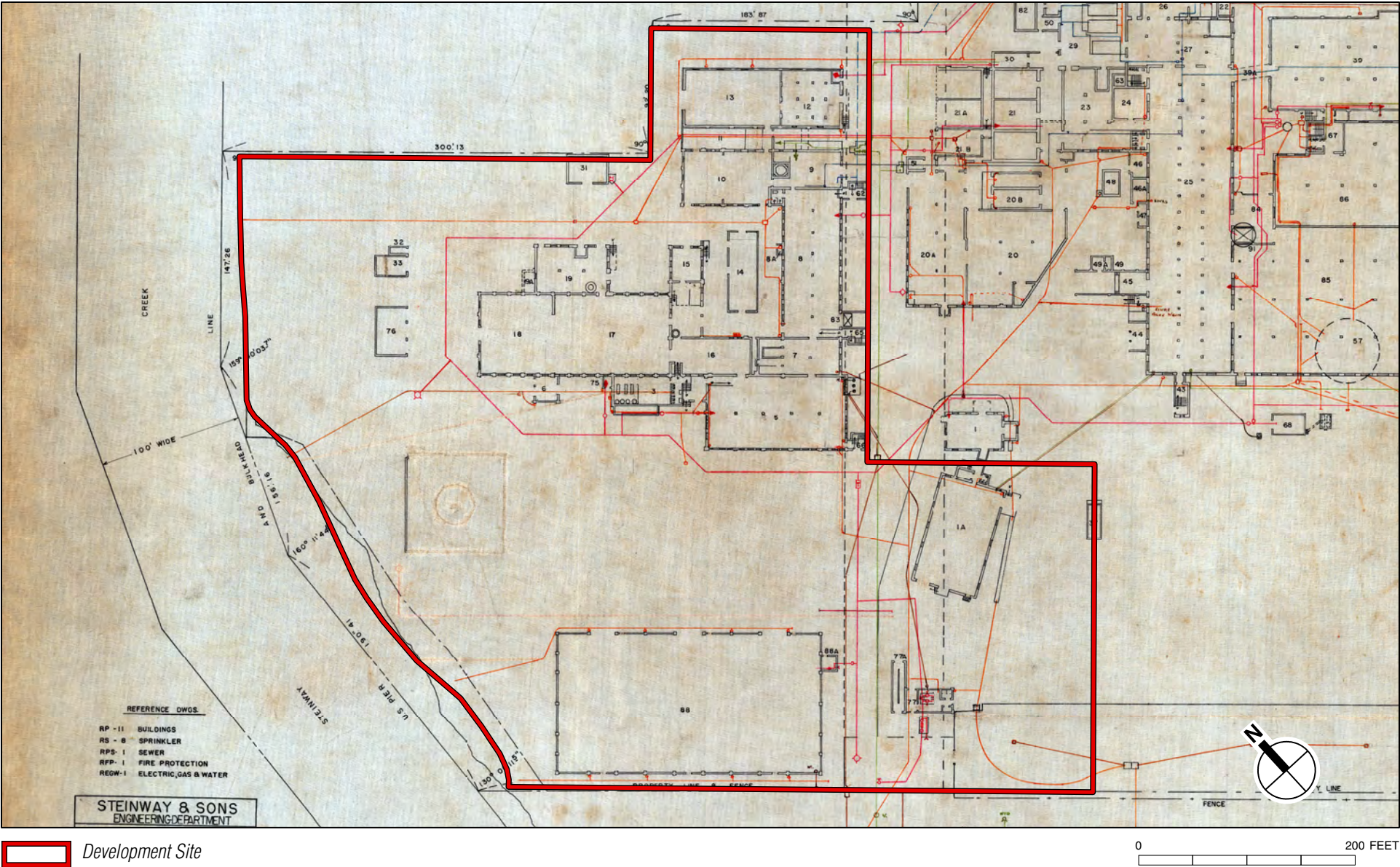
0 1,000 FEET




Development Site

0 200 FEET





1958 Utility Plan
Figure 8



**Parks, Recreation,
and Historic Preservation**

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

September 09, 2020

Nicholas Alexiades
225 W. 34th Street
New York, NY 10122

Re: USACE
Wildflower Studios
35-15 19th Ave, Astoria, NY 11105
20PR05074

Dear Nicholas Alexiades:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based upon this review, it is the opinion of the New York SHPO that no historic properties, including archaeological and/or historic resources, will be affected by this undertaking.

If further correspondence is required regarding this project, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

A handwritten signature in black ink that reads "R. Daniel Mackay".

R. Daniel Mackay

Deputy State Historic Preservation Officer
Division for Historic Preservation

ENVIRONMENTAL REVIEW

Project number: 77DCP756Q (DEPARTMENT OF CITY PLANNING)

Project: WILDFLOWER STUDIOS

Address: 36-01 19TH AVENUE BBL: 4008140010

Date Received: 9/18/2020

☒ **No architectural significance**

☒ **No archaeological significance**

☐ **Designated New York City Landmark or Within Designated Historic District**

☐ **Listed on National Register of Historic Places**

☐ **Appears to be eligible for National Register Listing and/or New York City
Landmark Designation**

☐ **May be archaeologically significant; requesting additional materials**

Gina Santucci

10/14/20

SIGNATURE

Gina Santucci, Environmental Review Coordinator

DATE

File Name: 35180_FSO_DNP_09252020.docx

Appendix C



TECHNICAL MEMORANDUM

TO: New York City Department of Transportation

FROM: Philip Habib & Associates (PHA)

DATE: February 2, 2021

PROJECT: Wildflower Studios

RE: Transportation Planning Factors and Travel Demand Forecast

This memorandum summarizes the transportation planning factors to be used for the analyses of traffic, parking, transit, and pedestrian conditions for the proposed Wildflower Film Studios development. Estimates of the peak travel demand in the future with the Proposed Actions are provided, along with a discussion of trip assignment methodologies and study area definitions.

THE PROPOSED ACTIONS

The Project Applicant, WF Industrial IV LLC, is seeking multiple discretionary approvals from the New York City Department of City Planning (DCP) to facilitate the development of an eight-story, approximately 160-foot tall (top of bulkhead), 715,000-gross square foot (gsf) film and television production studio (the “Proposed Development”) in the Astoria neighborhood of Queens. The Proposed Development would house 11 soundstages and accessory facilities for stage support, wardrobe, hospitality, and pre- and post-production, as well as approximately 310 accessory off-street attended parking spaces.

The Development Site (Block 814, Tax Lot 10 – 35-15 19th Avenue) totals 228,693 square feet (sf). It has frontage on 19th Avenue to the south and is bounded by Luyster Creek to the west and the Steinway Piano Factory to the east. The Development Site is currently vacant (see **Figure 1**). Due to site constraints, the Applicant is requesting multiple discretionary actions to facilitate construction of the Proposed Development. The anticipated discretionary approvals (“Proposed Actions”) include:

- Modification of ZR Section 62-341 to allow: (1) the 145-foot (160 feet to top of bulkhead) Proposed Development to rise without setbacks from its waterfront yard; (2) the Proposed Development to rise to a height of 145 feet (160 feet to top of bulkhead); (3) an approximately 475-foot long building-façade wall along the Proposed Development’s waterfront yard; and (4) modification



to ground floor streetscape requirements.

- Authorizations to modify waterfront public access and supplementary public access requirements as per ZR Section 62-822(a) and (b).¹

The Proposed Actions would facilitate the development of a 715,000 gsf new building, containing an approximately 461,000 gsf film and television production studio consisting of 11 total soundstages, stage support, dressing/wardrobe areas, pre- and post-production rooms, hospitality, common areas, and nearly 251,000 gsf of loading facilities, attended accessory off-street parking (about 310 spaces), and mechanical rooms.

The Proposed Development would also include an approximately 30,060 sf of publicly accessible waterfront open space and approximately 4,200 sf of planted area, landscaping, and seating areas along 19th Avenue. Additionally, a shuttle bus service between the Proposed Development site and the Astoria – Ditmars Boulevard subway station (serviced by the N and W lines) would be included as a result of the Proposed Actions. Construction of the Proposed Development is expected to begin in 2021 with all elements completed in 2023.

ANALYSIS FRAMEWORK

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

Under the 2023 No-Action scenario, the Proposed Actions would not be approved. As such, the No-Action condition assumes the development of an as-of-right, four-story (150-foot tall [top of bulkhead]), approximately 523,900 gsf last-mile delivery center, consisting of about 360,000 gsf of distribution/warehouse and storage use on the first, second, and a portion of the third story; approximately 43,300 gsf of accessory office and employee back-of-house use on a portion of the fourth floor; 60,496 sf of accessory parking (202 unattended spaces) on the first and third stories; and 60,105 gsf of delivery vehicle storage on the remainder of the third story.

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

Under the 2023 With-Action scenario, approval of the Proposed Actions would facilitate the development of a 715,000 gsf new building, containing an approximately 461,000 gsf film and television production studio consisting of 11 total soundstages, stage support, dressing/wardrobe areas, pre- and post-production rooms, hospitality, common areas, and nearly 251,000 gsf of loading facilities, attended accessory off-street parking (about 310 spaces), and mechanical rooms.

¹ In addition, the Applicant is seeking a non-discretionary certification pursuant to ZR Section 62-811 that the site plan for the proposed development complies with the Zoning Resolution's waterfront requirements.

Possible Effects of the Proposed Actions

A comparison of the No-Action and With-Action scenarios is provided in **Table 1**. The incremental difference between the No-Action condition and the Proposed Development provides the basis by which the potential environmental effects are evaluated.

Table 1: Comparison of 2023 No-Action and With-Action Conditions

Use	No-Action	With-Action ¹	Increment
Film & Television Production Studio	0 gsf	461,000 gsf	+461,000 gsf
Last-Mile Freight Distribution Facility	360,000 gsf	0 gsf	-360,000 gsf
Office	43,300 gsf	0 gsf	-43,300 gsf
Parking	202 spaces	310 spaces	+108 spaces

Notes: ¹All figures are approximated and subject to change.

TRANSPORTATION PLANNING FACTORS

The transportation planning factors used to forecast travel demand for the future with the Proposed Actions are summarized in **Table 2** and discussed below. Factors are shown for the weekday AM, MD, and PM peak hours (typical peak periods for heaviest travel demand). A forecast for the Saturday midday peak hour was not conducted, as film and television studios typically operate Monday through Friday. It is anticipated that the trips made during the weekend would not exceed the number of trips forecasted during the weekdays.

Film & Television Production Studio

The person trip generation rate and AM/PM temporal distributions for the proposed production studio were based on data from the 2014 *CEQR Technical Manual* and also consistent with the 2015 *Steiner Studios Media Campus FEIS*. However, the midday temporal distribution was based on guidance from DOT. In/out splits, as well as truck trip generation rates and temporal distributions, were based on data collected by PHA in November 2019 at Steiner Studios in Brooklyn, New York. The weekday AM and PM modal splits of 50.0 percent by auto, 5.0 percent by taxi, 25.0 percent by subway (including the proposed shuttle to/from the Ditmars Boulevard subway station), 10.0 percent by bus, and 10.0 percent by walk/other modes for all periods, and the auto occupancy rate of 1.07 persons per vehicle were based on 2012-2016 AASHTO CTPP Reverse-Journey-to-Work data for Queens Census Tracts 107.01, 111, and 123.01, adjusted to account for the studio use, distance from the subway, and the proposed shuttle, and some DOT guidance. The taxi vehicle occupancy rate of 1.30 persons per vehicle was also based on the 2015 *Steiner Studios Media Campus FEIS*.

Table 2: Transportation Planning Factors

Land Use:	<u>Film & Television</u>		<u>Last-Mile</u>		<u>Office</u>	
	<u>Production Studio</u>		<u>Facility</u>			
Size/Units:	461,000 gsf		360,000 gsf 8 docks		43,300 gsf	
Trip Generation:	(1)		(6)		(1)	
Weekday	10.0		5.85		18.0	
	per 1,000 sf		per 1,000 gsf		per 1,000 gsf	
Temporal Distribution:	(1)(5)(8)		(6)		(1)	
AM	12.0%		11.0%		12.0%	
MD	8.0%		5.0%		15.0%	
PM	11.0%		10.0%		14.0%	
	(3)(4)(5)		(3)		(3)(7)	
Modal Splits:	All Periods		All Periods		AM/PM	MD
Auto	50.0%		76.7%		76.7%	2.0%
Taxi	5.0%		0.0%		0.0%	1.0%
Shuttle to/from Subway	25.0%		0.0%		0.0%	0.0%
Subway/Railroad	0.0%		8.8%		8.8%	7.0%
Bus	10.0%		5.4%		5.4%	7.0%
Walk/Bike/Other	10.0%		9.1%		9.1%	83.0%
	100.0%		100.0%		100.0%	100.0%
	(2)		(6)		(7)	
In/Out Splits:	In	Out	In	Out	In	Out
AM	74.0%	26.0%	46.0%	54.0%	96%	4%
MD	49.0%	51.0%	53.0%	47.0%	39%	61%
PM	34.0%	66.0%	61.0%	39.0%	5%	95%
Vehicle Occupancy:	(3)(5)		(3)(7)		(3)(7)	
	All Periods		All Periods		All Periods	
Auto	1.07		1.07		1.07	
Taxi	1.30		1.30		1.42	
Truck Trip Generation:	(2)		(6)		(1)	
Weekday	0.36		12.17		0.32	
	per 1,000 sf		per dock		per 1,000 sf	
Temporal Distribution:	(2)		(6)		(1)	
AM	8.7%		10.0%		10.0%	
MD	9.7%		3.0%		11.0%	
PM	5.6%		11.0%		2.0%	
In/Out Splits:	In	Out	In	Out	In	Out
AM	71.0%	29.0%	1.0%	99.0%	50.0%	50.0%
MD	58.0%	42.0%	8.0%	92.0%	50.0%	50.0%
PM	55.0%	45.0%	87.0%	13.0%	50.0%	50.0%
Notes :						
(1)	2014 City Environmental Quality Review (CEQR) Technical Manual.					
(2)	Based on data collected by PHA at Steiner Studios in November 2019.					
(3)	AASHTO CTPP Reverse-Journey-to-Work 5-year data for Queens Census Tracts 107.01, 111, and 123.01.					
(4)	Modal split adjusted to account for studio use, distance from subway, the proposed shuttle, and guidance from NYCDOT.					
(5)	Steiner Studios Media Campus FEIS, 2015.					
(6)	Based on data provided by NYCDOT					
(7)	Dutch Kills Rezoning and Related Actions FEIS, 2015.					
(8)	Midday temporal distribution adjusted based on NYCDOT direction					

The truck trip generation rate of 0.36 trips per 1,000 gsf and temporal distributions of 8.7 percent, 9.7 percent, and 5.6 percent for the weekday AM, midday, and PM peak periods, respectively were also based the data collected at Steiner Studios in November 2019. A summary of the data collected at Steiner Studios in November 2019 can be found in **Appendix 1**.

Last-Mile Facility

The person trip generation rate of 5.85 trips per 1,000 gsf for the last-mile facility was based on data provided by NYCDOT. Weekday temporal distributions of 11.0 percent, 5.0 percent, and 10.0 percent for the AM, midday, and PM peak periods, respectively, as well as directional in/out splits for last-mile facility were also based on data provided by NYCDOT. The modal splits of 76.7 percent by auto, 0.0 percent by taxi, 8.8 percent by subway, 5.4 percent by bus, and 9.1 percent by walk/other modes for all periods and the auto occupancy rate of 1.07 persons per vehicle were based on 2012-2016 AASHTO CTPP Reverse-Journey-to-Work data for Queens Census Tracts 107.01, 111, and 123.01. The taxi occupancy rate of 1.30 persons per vehicle was based on the 2015 *Dutch Kills Rezoning and Related Actions FEIS*. The weekday truck trip generation rate of 12.17 trips per loading dock and temporal distributions of 20.7 percent, 4.7 percent, and 7.3 percent for the weekday AM, midday, and PM peak periods, respectively were also based on data provided by NYCDOT.

Office

The trip generation rates and temporal distributions for the accessory office use were based on data from the 2014 *CEQR Technical Manual*. The modal splits of 76.7 percent by auto, 0.0 percent by taxi, 8.8 percent by subway, 5.4 percent by bus, and 9.1 percent by walk/other modes for the weekday AM and PM peak periods and the auto occupancy rate of 1.07 persons per vehicle for all periods were based on 2012-2016 AASHTO CTPP Reverse-Journey-to-Work data for Queens Census Tracts 107.01, 111, and 123.01. The weekday midday modal splits of 2.0 percent by auto, 1.0 percent by taxi, 7.0 percent by subway, 7.0 percent by bus, and 83.0 percent by walk/other modes for the weekday midday period, the taxi occupancy rate of 1.42 persons per vehicle for all periods, the directional in/out splits were based on data from the 2015 *Dutch Kills Rezoning and Related Actions FEIS*. Truck trip generation rates and temporal distributions for the accessory office use were also based on data form the 2014 *CEQR Technical Manual*.

TRIP GENERATION

The net incremental change in person and vehicle trips expected to result from the Proposed Actions by the 2023 analysis year were derived based on the net change in land uses shown in **Table 1** and the transportation planning factors shown in **Table 2**. It should also be noted that the trip generation conservatively assumes that entire production studio space of 461,000 sf (all 11 sound stages) would be occupied simultaneously. However, it typical that a maximum of approximately one-half of the

soundstages are typically in production (filming) simultaneously, with the remaining stages in pre- or post-production or vacant. **Table 3** shows an estimate of the net incremental change in peak hour person trips and vehicle trips (compared to the No-Action condition) that would occur in 2023 with approval of the Proposed Actions. Person-trips generated by the Proposed Actions would primarily include employees (talent, crew, stagehands, etc.) associated with the proposed studio as well as visitors, while person-trips generated by the as-of-right last-mile distribution facility would primarily include office and distribution center employees as well as drivers of trucks making deliveries.

As shown in **Table 3**, the Proposed Actions would generate a net increase of approximately 227, 145, and 185 person trips (in + out combined) in the weekday AM, midday, and PM peak hours, respectively. Peak hour vehicle trips (including auto, truck, shuttle, and taxi trips) would increase by a net total of approximately 72, 135, and 50 trips in the weekday AM, midday, and PM peak hours, respectively. Peak hour person trips by subway (including those on shuttle buses) would increase by a net total of 111, 77, and 100 trips in the weekday AM, midday, and PM peak hours, respectively. Peak hour person trips by bus would increase by a net total of approximately 37, 23, and 33 in the weekday AM, midday, and PM peak hours, respectively. Lastly, person trips made entirely on foot (walk-only trips) and other modes would increase by approximately 26 and 19 trips during the weekday AM and PM hours, respectively, and decrease by approximately 72 trips during the weekday midday peak hour. Total pedestrian trips (including walk only and transit trips) would increase by a net total of approximately 36 and 24 trips during the weekday AM and PM peak hours, respectively, and decrease by a net total of approximately 65 trips during the weekday midday peak hour.

LEVEL 1 SCREENING ASSESSMENT

The *CEQR Technical Manual* describes a two-level screening procedure for the preparation of a preliminary analysis to determine if quantified operational analyses of transportation conditions are warranted. As discussed in the following sections, the preliminary analysis begins with a trip generation (Level 1) analysis to estimate the numbers of person and vehicle trips attributable to the Proposed Actions. According to the *CEQR Technical Manual*, if a proposed action is expected to result in fewer than 50 peak hour vehicle trips (including auto, taxi, and truck trips), fewer than 200 peak hour subway or bus trips, or fewer than 200 peak hour pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (a Level 2 assessment) are to be performed to estimate the incremental trips that could occur at specific transportation elements and to identify potential locations for further analysis. If the trip assignments show that the proposed action would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips at one point along a sidewalk, corner area, or crosswalk, then further quantified operational analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, and pedestrians.

Table 3: Travel Demand Forecast

		With-Action Condition			No-Action Condition									Net Increment (With-Action - No-Action)		
Land Use:		<u>Film & Television Production Studio</u>			<u>Last-Mile Facility</u>			<u>Office</u>			<u>No-Action Total</u>			<u>Net Increment</u>		
Size/Units:		461,000	gsf		360,000	gsf		43,300	gsf							
Peak Hour Person Trips:					8 docks											
AM				553			232			94			326			227
MD				369			106			118			224			145
PM				507			212			110			322			185
Person Trips:		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
AM	Auto	205	73	278	83	96	179	70	3	73	153	99	252	52	-26	26
	Taxi	20	7	27	0	0	0	0	0	0	0	0	0	20	7	27
	Shuttle to/from Subway	102	36	138	0	0	0	0	0	0	0	0	0	102	36	138
	Subway/Railroad	0	0	0	9	10	19	8	0	8	17	10	27	-17	-10	-27
	Bus	41	14	55	6	7	13	5	0	5	11	7	18	30	7	37
	Walk/Bike/Other	<u>41</u>	<u>14</u>	<u>55</u>	<u>10</u>	<u>11</u>	<u>21</u>	<u>8</u>	<u>0</u>	<u>8</u>	<u>18</u>	<u>11</u>	<u>29</u>	<u>23</u>	<u>3</u>	<u>26</u>
	Total	409	144	553	108	124	232	91	3	94	199	127	326	210	17	227
MD	Auto	90	94	184	43	39	82	1	1	2	44	40	84	46	54	100
	Taxi	9	9	18	0	0	0	0	1	1	0	1	1	9	8	17
	Shuttle to/from Subway	46	47	93	0	0	0	0	0	0	0	0	0	46	47	93
	Subway/Railroad	0	0	0	4	4	8	3	5	8	7	9	16	-7	-9	-16
	Bus	18	19	37	3	3	6	3	5	8	6	8	14	12	11	23
	Walk/Bike/Other	<u>18</u>	<u>19</u>	<u>37</u>	<u>5</u>	<u>5</u>	<u>10</u>	<u>3</u>	<u>6</u>	<u>9</u>	<u>44</u>	<u>65</u>	<u>109</u>	<u>-26</u>	<u>-46</u>	<u>-72</u>
	Total	181	188	369	55	51	106	46	72	118	101	123	224	80	65	145
PM	Auto	86	167	253	99	63	162	4	80	84	103	143	246	-17	24	7
	Taxi	9	17	26	0	0	0	0	0	0	0	0	0	9	17	26
	Shuttle to/from Subway	43	85	128	0	0	0	0	0	0	0	0	0	43	85	128
	Subway/Railroad	0	0	0	12	7	19	0	9	9	12	16	28	-12	-16	-28
	Bus	17	33	50	7	4	11	0	6	6	7	10	17	10	23	33
	Walk/Bike/Other	<u>17</u>	<u>33</u>	<u>50</u>	<u>12</u>	<u>8</u>	<u>20</u>	<u>1</u>	<u>10</u>	<u>11</u>	<u>13</u>	<u>18</u>	<u>31</u>	<u>4</u>	<u>15</u>	<u>19</u>
	Total	172	335	507	130	82	212	5	105	110	135	187	322	37	148	185

Table 3: Travel Demand Forecast (cont.)

Land Use:		<u>Film & Television</u>			<u>Last-Mile</u>			<u>Office</u>			<u>No-Action Total</u>			<u>Total</u>		
Vehicle Trips :		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
AM	Auto (Total)	192	68	260	78	90	168	65	3	68	143	93	236	49	-25	24
	Taxi	15	5	20	0	0	0	0	0	0	0	0	0	15	5	20
	Taxi Balanced	20	20	40	0	0	0	0	0	0	0	0	0	20	20	40
	Truck	10	4	14	0	10	10	1	1	2	1	11	12	9	-7	2
	Shuttle*	3	3	6	0	0	0	0	0	0	0	0	0	3	3	6
	Total	225	95	320	78	100	178	66	4	70	144	104	248	81	-9	72
MD	Auto (Total)	84	88	172	40	36	76	1	1	2	41	37	78	43	51	94
	Taxi	7	7	14	0	0	0	0	1	1	0	1	1	7	6	13
	Taxi Balanced	14	14	28	0	0	0	1	1	2	1	1	2	13	13	26
	Truck	9	7	16	0	3	3	1	1	2	1	4	5	8	3	11
	Shuttle	2	2	2	0	0	0	0	0	0	0	0	0	2	2	4
	Total	109	111	218	40	39	79	3	3	6	43	42	85	66	69	135
PM	Auto (Total)	80	156	236	93	59	152	4	75	79	97	134	231	-17	22	5
	Taxi	7	13	20	0	0	0	0	0	0	0	0	0	7	13	20
	Taxi Balanced	20	20	40	0	0	0	0	0	0	0	0	0	20	20	40
	Truck	5	4	9	9	1	10	0	0	0	9	1	10	-4	3	-1
	Shuttle*	3	3	6	0	0	0	0	0	0	0	0	0	3	3	6
	Total	108	183	291	102	60	162	4	75	79	106	135	241	2	48	50

*Assumes one bus (approximate 40-person capacity)

Traffic

Based on *CEQR Technical Manual* guidelines, a quantified traffic analysis is typically required if a proposed action would result in 50 or more vehicle trip ends (auto, taxi, and truck trips combined) in a peak hour at one or more intersections. As discussed above, the Proposed Actions would result in an incremental increase of 72 total vehicle trips (an increase of 24 autos, an increase of 40 taxis, an increase of 2 trucks, and an increase of 6 shuttle buses) in the weekday AM peak period, an increase of 135 total vehicle trips (an increase of 94 autos, an increase of 26 taxis, an increase of 11 trucks, and an increase of 4 shuttle buses) in the weekday midday peak period, and an incremental increase of 50 total vehicle trips (an increase of 5 autos, an increase of 40 taxis, a decrease of 1 truck, and an increase of 6 shuttle buses) in the weekday PM peak period. As the number of incremental peak hour vehicle trips exceed the 50-trip threshold in the weekday AM, midday, and PM peak periods, a Level 2 screening analysis is warranted to determine which intersections would require quantified analysis.

Transit

According to the general thresholds used by the Metropolitan Transportation Authority (MTA) and specified in the *CEQR Technical Manual*, detailed transit analyses are generally not required if a proposed action is projected to result in fewer than 200 peak hour subway or bus transit riders. If a proposed action would result in 50 or more bus passengers being assigned to a single bus line (in one direction), or if it would result in an increase of 200 or more passengers at a single subway station, a detailed bus and/or subway analysis would be warranted.

As shown in **Table 3** and discussed above, the Proposed Actions would generate an incremental increase of 111, 77, and 100 subway trips in the weekday AM, midday, and PM peak hours, respectively. The Proposed Actions would also generate an incremental increase of 37, 23, and 33 bus trips in the above mentioned peak hours, respectively. As such, these incremental subway and bus trips fall below the *CEQR Technical Manual* threshold of 200 or more new subway or bus passengers in any peak hour. Therefore, detailed subway and bus analyses are not warranted as a result of the Proposed Actions.

Pedestrians

According to *CEQR Technical Manual* guidelines, a quantified analysis of pedestrian conditions is typically required if a proposed action would result in 200 or more peak hour pedestrian trips at any pedestrian element (sidewalk, corner area, or crosswalk). As shown in **Table 3** and discussed above, the Proposed Actions would generate an increment of 36, -65, and 24 pedestrian trips (including walk-only, some subway, and bus trips) in the weekday AM, midday, and PM peak hours, respectively. As the number of incremental peak hour pedestrians trips do not exceed the 200-trip threshold in any peak period, a Level 2 screening analysis is not needed and further pedestrian analysis is not warranted as pedestrian impacts are not expected.

Vehicular and Pedestrian Safety

Under *CEQR Technical Manual* guidance, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high crash locations. These are defined as locations with 48 or more total reportable and non-reportable crashes or where five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, immediately adjacent to the Development Site, crash trends will be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips.

Parking

Under *CEQR Technical Manual* guidance, parking analyses may be warranted if a quantified traffic analysis is necessary based on the Levels 1 and 2 screening analyses. Based on the screening analyses detailed above, a quantified traffic analysis was found to be warranted for the proposed actions. Therefore, based on *CEQR Technical Manual* guidance, quantified parking analyses are warranted. A parking demand forecast will be prepared to determine if the proposed approximately 310 spaces of on-site accessory parking would be sufficient to accommodate all of the projected demand from the proposed studios. If it is determined that the on-site parking supply would be insufficient to accommodate projected peak demand, the potential for the Proposed Actions to result in significant parking shortfalls or impacts will be assessed.

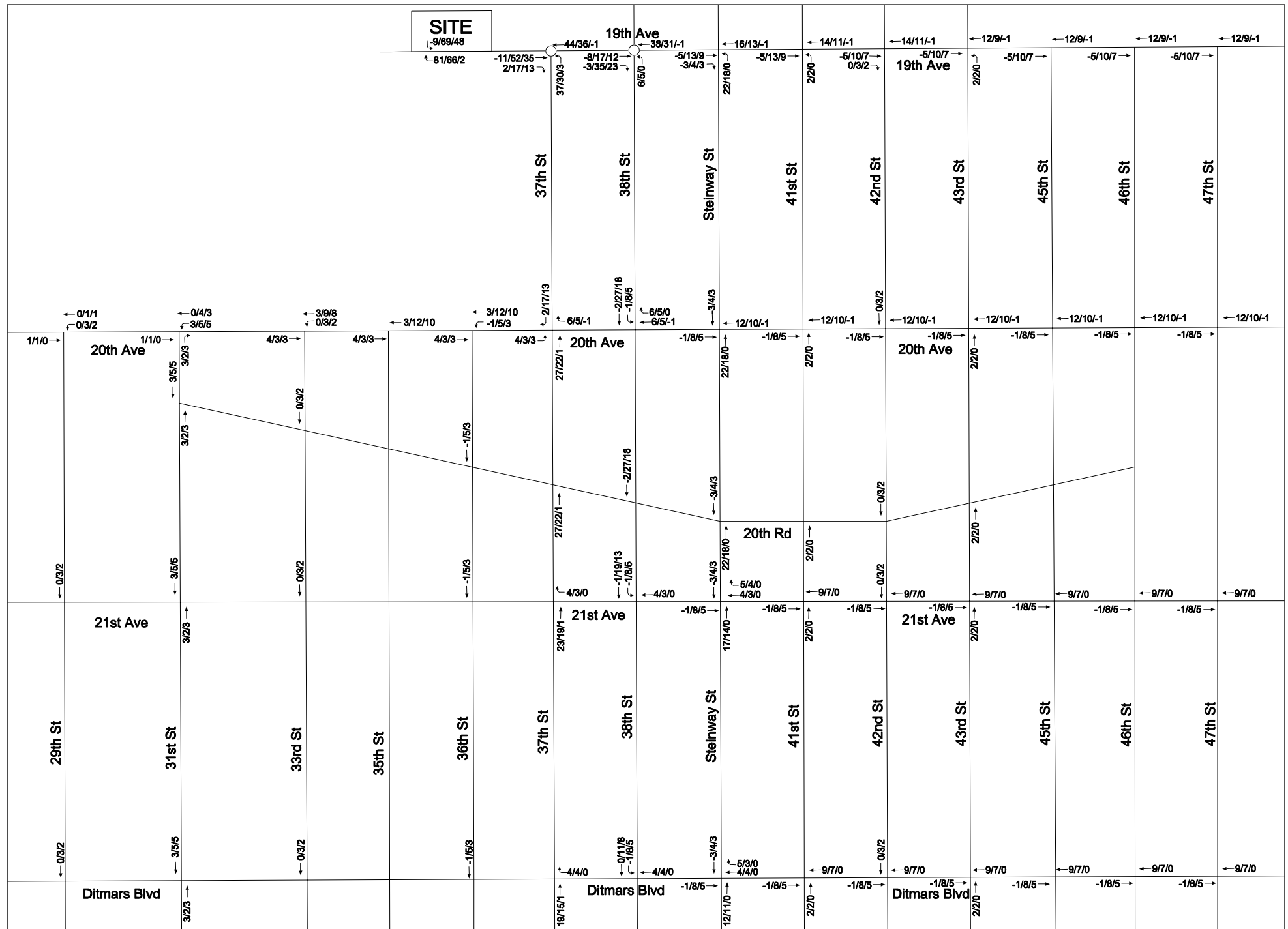
LEVEL 2 SCREENING ASSESSMENT

Traffic

Under *CEQR Technical Manual* guidance, detailed traffic analyses are generally warranted if a proposed action is projected to result in 50 or more new peak hour vehicle trips at any intersection. As discussed above, a total of 72, 135, and 50 net incremental vehicle trips are generated during the weekday AM, midday, and PM peak hours, respectively. Overall, in these peak hours, new trips would be most concentrated at intersections adjacent to the Development Site, particularly at 37th Street and 19th Avenue.

As the weekday AM, midday, and PM trips exceed the CEQR threshold of 50 incremental vehicle trips, a traffic assignment is provided to determine which intersections would require quantified analysis during each peak hour. The assignment of net incremental peak hour vehicle trips during the weekday AM, midday, and PM peak hours in proximity to the Development Site is shown in **Figure 2**. The origins and destinations of project increment auto and taxi trips were estimated based on 2012-2016 AASHTO CTPP reverse-journey-to-work data for Queens census tracts 107.01, 111, and 123.01. In the vicinity of the project area. Autos and taxis were first assigned to the most likely routes between these

Assignment Peak Hour Incremental Vehicle Trips



LEGEND: ○ Analysis Location

← 4/4/0 Incremental Vehicle Trip (AM/MD/PM)

origins/destinations and the project area. All auto trips were conservatively assigned to/from the proposed project's parking garage entrance on 19th Avenue. Taxis were assigned to the 19th Avenue terminus, along the project frontage site. Trucks were assigned to/from the nearest local truck routes along Steinway Street, 19th Avenue, and 20th Avenue, and to the nearest local roads nearest to the project site. As shown in **Figure 2**, incremental trips at a total of two stop-controlled intersections along 19th Avenue are expected to exceed the 50-trip CEQR Technical Manual analysis threshold in the weekday AM, midday, and/or PM peak hours, and these intersections have therefore been selected for detailed analysis focusing on the weekday AM, midday, and PM periods. These analyzed intersections include: 19th Avenue at 37th Street and 19th Avenue at 38th Street.

It is important to note a study was conducted for the proposed DSNY garage (to be located on the west side of Creek but accessible through 19th Avenue terminus on the east side of the Creek) in 2019. The study was summarized in the *DSNY Queens District 1 Garage & Salt Shed EAS*. Given the period of disruption caused by the COVID-19 pandemic, PHA will utilize the pre-pandemic data provided in the *DSNY Queens District 1 Garage & Salt Shed EAS* to appropriately adjust data collected during the pandemic at the two analysis locations.

CONCLUSIONS

A transportation forecast was prepared for the Proposed Actions, which would facilitate the development a 715,000 gsf new building, containing an approximately 461,000 gsf film and television production studio consisting of 11 total soundstages, stage support, dressing/wardrobe areas, pre- and post-production rooms, hospitality, common areas, and about 251,000 gsf of loading facilities, attended accessory off-street parking (approximately 310 spaces), and mechanical rooms. Absent approval of the Proposed Actions, the development of an as-of-right, four-story about 523,900 gsf last-mile delivery center, consisting of approximately 360,000 gsf of distribution/warehouse, approximately 43,300 gsf of accessory office, and 120,601 gsf of parking and vehicle storage, would be facilitated.

According to the 2014 *CEQR Technical Manual* guidelines, if a proposed development is expected to result in fewer than 200 peak hour pedestrian, subway, and bus trips, and fewer than 50 peak hour vehicle trips, further quantified analyses are not warranted. To determine the factors used for the travel demand forecast for the proposed production studio, data was collected by PHA at Steiner Studios in New York City in November 2019 and guidance from NYCDOT. Note that a summary of the 2019 data collection efforts for the production facility are included in **Appendix 1**.

As shown above in **Table 3**, the Proposed Development, as compared to the as-of-right development, would result in a net increase of approximately 72, 135, and 50 trips (including auto, taxi, truck, and shuttle trips) in the weekday AM, midday, and PM peak hours, respectively. Peak hour person trips by subway would increase by a net total of 111, 77, and 100 trips in the weekday AM, midday, and PM peak hours, respectively. Peak hour person trips by bus would increase by a net total of approximately 37, 23, and 33 in the weekday AM, midday, and PM peak hours, respectively. Lastly, total pedestrian trips

(including walk only and some transit trips) would increase by a net total of approximately 36 and 24 trips during the weekday AM and PM peak hours, respectively, and decrease by a net total of approximately 65 trips during the weekday peak hour. As the Proposed Actions would generate fewer than 200 subway, bus trips, and pedestrian trips during all weekday peak periods, detailed transit and pedestrians analyses are not warranted. However, as the Proposed Actions would generate more than 50 vehicle trips at the two nearest intersections along 19th Avenue during the AM, midday and PM peak hours, these intersections are selected for detailed analysis.

APPENDIX 1
STEINER STUDIOS DATA COLLECTION
NOVEMBER 2019



Philip Habib & Associates

Engineers and Planners • 102 Madison Avenue • New York, NY 10016 • 212 929 5656 • 212 929 5605 (fax)

TO: New York City Department of City Planning (DCP)

DATE: February 2, 2020

RE: Transportation Planning Factors – Film and Television Production Studio

INTRODUCTION

Since being adopted in 2011, the success of New York State's Film Tax Credit Program has contributed to substantial growth in film and television production in New York. New York City alone is the home to multiple film and television production facilities, including Steiner Studios, Kaufman Astoria Studios, Silvercup Studios, and Broadway Stages. Combined, these studios provide nearly 100 soundstages with over one million square feet of production area. Due to the amount of space needed to operate a production facility, most of the stages in New York City are located outside of central business districts and many are relatively far from public transportation. With the increase in streaming services and the ability to produce material more quickly, the demand for studio space is high.

To determine travel demand patterns and trip generation for future film and television production studios, production facilities in New York City were analyzed as well as industry trends and census reverse-journey-to-work modal splits for the above-mentioned facilities. As such, this memorandum summarizes the methodology and findings of data collected at Steiner Studios located at the Brooklyn Navy Yard in November 2019. The results are then applied to help determine the transportation planning factors and travel demand patterns to be used for future film and television production studio facilities located within New York City.

INDUSTRY TRENDS

Industry trends were identified through conversations/interviews with and analyses of production facilities in New York City. Typically, production facilities not only include soundstages for filming, but also stage support areas, hair, makeup, and wardrobe areas, production offices, and hospitality rooms. In addition, large studios campus also have traditional property management office workers.

Production Phasing

The development of a movie or television series can be broken down into three phases, (1) pre-production, (2) production, and (3) post-production.

Pre-Production

The pre-production phase includes set construction, the breakdown of individual scenes to identify locations for filming, props and wardrobe, and the special and visual effects needed, finalization of the script, and the development of a detailed shooting schedule for cast and crew members. Depending on the size of the project, this phase typically lasts between six to eight weeks. During pre-production, an average of 30 - 45 people per production on the site.

Production

Filming takes place during the production phase. Production is typically the longest phase of the project, lasting anywhere between four to five months of filming. Depending on the scope of the project (motion picture film, network television series, streaming service series, etc.) and the production schedule, an average of 125 to 150 people per production stage – including actors, the director, producers, costume/wardrobe members, camera/electric members, hair and makeup, and transportation, as well as office workers – could be on-site during filming. In some cases, one production may occupy two soundstages, in which the number of crew members, talent, and extras would be distributed between the two stages.

The duration of film and television shoots can sometimes last for 12 hours per day, with some lasting even longer. Due to varying film schedules and off-site shoots elsewhere in New York City, a lot of in/out vehicular movement occurs throughout the day during the production phase. Not all productions shoot every day, and not all productions begin shooting at the same time of day, so typical peak periods of traffic are more spread out throughout the day for production studios. Additionally, as previously mentioned, many productions not only shoot on-site at the studio, but they also go off-site to shoot on location around the City. As such, based on discussions with local studios, at most 50 percent of projects shoot on-site simultaneously, with the remaining projects shooting off-site, in the pre- or post-production phases, or on hiatus.

Post-Production

Post-production occurs when filming is complete and typically lasts four to five weeks. Tasks typically completed on the soundstages during post-production include the general winding down of production and set deconstruction, which is completed in approximately one week. Video editing, adding special visual and sound effects, and color and exposure correction are among tasks completed during the remaining time of the post-production phase, and are typically done in offices off-site. As such, an average of six to ten people per production could be on-site during the post-production phase.

Turn-Over

In addition to active productions, there are periods where soundstages may be inactive, such as if a soundstage is not leased, if it is transitioning between productions, or if a production is on hiatus (i.e., if a television show is on break over the summer).

Studio Occupancy

The travel demand generated by a production facility is the result of multiple factors, including the duration of each lease, the size of each production, and filming schedules and locations (i.e. filming on-

site on a soundstage or filming off-site on location). As such, the number of people traveling to/from a production facility on a daily basis varies significantly. As previously mentioned, based on discussions with local studios, up to a maximum of approximately one-half of the soundstages are typically in production (filming) simultaneously, with the remaining stages in pre- or post-production or vacant.

DATA COLLECTION

Interviews with local film studios (primarily located in Brooklyn and Queens) were conducted to better understand the nature of the film and television industry. These facilities contain soundstages ranging in size from 2,500 sf to 27,000 sf. Typical transportation patterns, modes of transportation, time frame for production, logistics of off-site shooting, and tasks completed during each phase of production were among the tasks discussed during these interviews.

Of the film production studios located in New York City, Steiner Studios, located in the Brooklyn Navy Yard, offers the widest range of production space and amenities. Steiner Studios, as the largest studio complex outside of Hollywood, comprises approximately 256,000 sf of soundstages, as well as an additional approximately 286,770 gsf for offices, dressing rooms, hair and make-up rooms, wardrobe rooms, scenic artist workshops, mill shops, commissaries, set dressing, and prop stages. Steiner Studios is located approximately one mile from the nearest subway station – the Marcy Avenue subway station (served by the J, M, and Z lines) and the Clinton-Washington Avenues subway station (served by the G line). Additionally, the Brooklyn Navy Yard provides a shuttle service to/from Atlantic Terminal in Downtown Brooklyn and to/from the York Street and High Street subway stations in the Dumbo neighborhood.

In/out vehicular data (broken down by auto, bus, and truck) was collected at Steiner's two entrances – Kent Avenue at Wilson Street and Flushing Avenue at Washington Avenue – on Wednesday, November 20 and Thursday, November 21, 2019 from 6:30 AM – 6:30 PM.

The travel demand variability of the film and television production industry was prominent in the results of the data collection. The number of autos (including private auto, taxi, and Uber/Lyft) leaving the Steiner Studios campus over the 12-hour count period (6:30 AM to 6:30 PM) was similar on both days of data collection (769 autos and 767 autos exiting the campus on Wednesday and Thursday, respectively). However, the number of autos entering the campus from 6:30 AM to 6:30 PM (500 autos and 746 autos entering the campus on Wednesday and Thursday, respectively) were dissimilar. As such, the patterns observed on Thursday are assumed to be more conservative and therefore were used for analysis. The results of the 12-hour in/out vehicular counts/patterns are summarized in **Table 1** below.

As shown in **Table 1**, auto patterns are spread out throughout the 12-hour count period. This is likely due to the variable nature of the industry, as mentioned above. Each production leasing a soundstage has a different filming schedule and may include night shoots and off-site shoots, resulting in transportation patterns distributed more uniformly throughout the day. Additionally, off-site shoots and the high demand for taxis and Uber/Lyft result in greater vehicular turnaround. A total of nine in/out bus trips were counted over the 12-hour period. Based on discussions with local studios, larger shuttle vans and buses are often used to transport actors, crew members, and props/wardrobe from the studio to/from off-site shoots. A total of 173 truck trips were also recorded during the 12-hour count period.

Table 1: Steiner Studios Vehicular Counts

TIME	Auto In ⁽¹⁾	Auto Out ⁽¹⁾	Bus In	Bus Out	Truck In	Truck Out
6:30 AM - 7:30 AM	94	100	0	0	8	13
7:30 AM - 8:30 AM	108	28	1	0	6	7
8:30 AM - 9:30 AM	109	38	1	2	12	5
9:30 AM - 10:30 AM	50	36	0	1	7	7
10:30 AM - 11:30 AM	31	35	0	0	8	8
11:30 AM - 12:30 PM	71	73	0	1	11	8
12:30 PM - 1:30 PM	34	35	0	0	5	3
1:30 PM - 2:30 PM	30	56	0	0	7	11
2:30 PM - 3:30 PM	35	66	1	1	5	8
3:30 PM - 4:30 PM	65	124	0	0	6	5
4:30 PM - 5:30 PM	59	86	1	0	6	7
5:30 PM - 6:30 PM	60	90	0	0	6	4
12-Hour Count Total	746	767	4	5	87	86
	1,513		9		173	
Estimated 24-Hour Total ⁽²⁾	1,712		10		196	

Note: Data collected on Thursday, November 21, 2019.

(1) Auto includes private autos and taxi/Uber/Lyft.

(2) 24-Hour in/out auto trips estimated by using 10 person trips per 1,000 sf, modal splits of 31 percent by private auto and 10 percent by taxi, and a vehicle occupancy of 1.3 persons per vehicle (*Steiner Studios Media Campus FEIS*, 2015).

To further identify the splits for private autos and taxis, supplemental data was collected at Steiner's two entrances – Kent Avenue at Wilson Street and Flushing Avenue at Washington Avenue – on Wednesday, December 4, 2019 from 7:30 AM – 9:30 AM. As shown in **Table 2** below, private autos accounted for approximately 73 percent of all automobile trips during the two-hour count period, while taxis (including ride-share services such as Uber and Lyft) accounted for approximately 27 percent of all automobile trips.

Table 2: Private Auto and Taxi Modal Split

TIME	Private Auto In	Private Auto Out	Taxi In	Taxi Out	Total in	Total Out
7:30 AM	34	9	3	3	37	12
7:45 AM	30	9	6	5	36	14
8:00 AM	58	4	7	7	65	11
8:15 AM	30	11	12	13	42	24
8:30 AM	27	8	5	5	32	13
8:45 AM	28	8	9	11	37	19
9:00 AM	23	12	5	6	28	18
9:15 AM	23	9	11	10	34	19
Total	253	70	58	60	311	130
(7:30 - 9:30 AM)	323		118		441	
	73%		27%		100%	

Note: Data collected on Wednesday, December 4, 2019.

Based on the *City Environmental Quality Review (CEQR) Technical Manual* trip generation rate of 10 person trips per 1,000 sq for a television studio, modal splits of 31 percent by private auto and 10 percent by taxi, and a taxi vehicle occupancy of 1.3 persons per vehicle, the Steiner Studio Campus

(approximately 542,815 gsf including soundstages, stage support, and office areas) would generate approximately 1,712 daily auto and taxi trips over a 24-hour period.

As such, based on the estimated 24-hour auto trips (approximately 1,712 in/out autos and taxis combined) shown in **Table 1** and the trip generation rates discussed above, temporal distributions of 8.6 percent for the weekday AM period (8:30 – 9:30 AM), 8.4 percent for the weekday midday period (11:30 AM – 12:30 PM), and 11.0 percent for the weekday PM period (3:30 – 4:30 PM) were determined for a typical production studio of approximately 542,815 gsf.

TRANSPORTATION PLANNING ASSUMPTIONS

The transportation planning factors used to forecast travel demand for the future film and television production studios are summarized in **Table 3** and discussed below. **Table 3** provides the daily trip generation rates, temporal and directional distributions, mode choice factors, vehicle occupancies, and truck trip factors. Factors are shown for the weekday AM, midday, and PM peak hours, as most productions film during the weekday and rarely on the weekends.

As shown in **Table 3**, the *CEQR Technical Manual* rate of 10 trips per 1,000 sf was used for the proposed production studio, as this rate is similar to what was analyzed at Steiner Studios. The *CEQR Technical Manual* uses 12 percent, 15 percent and 11 percent for the AM, midday, and PM peak hours, respectively, temporal distribution of a television studio; this differs from what was observed at Steiner Studios in 2019. The temporal distributions determined from the 2019 Steiner Studios analysis were 8.6 percent, 8.4 percent, and 11.0 percent for the weekday AM, midday, and PM periods, respectively. However, conservatively, the CEQR temporal distributions (consistent with the 2015 *Steiner Studios Media Campus FEIS*) for television studios was utilized for AM and PM temporal distributions. NYCDOT has also provided guidance to utilize an 8% temporal distribution for the weekday midday peak hour.

Modal splits were determined by comparing the proposed studio's reverse-journey-to-work (RJTW) 5-year data for Queens Census Tracts 107.01, 111, and 123.01 and the auto modal splits (private auto and taxi) observed from the 2019 Steiner Studios analysis. Additionally, DOT has also provided guidance on the share of auto and taxi. As shown in **Table 4** below, modal splits of 50.0 percent by auto, 5.0 percent by taxi, 25.0 percent by shuttle to/from subway, 10.0 percent by bus, and 10.0 percent by walk/other were used for the proposed studio in the AM, midday, and PM peak hours. Based on discussions with local New York City studios, many employees (including on-stage employees and office workers), use taxi and Uber/Lyft. As such, portions of the auto modal split determined from the RJTW census data were redistributed to the taxi modal split. Also, a slightly higher auto-to-taxi ratio than observed at Steiner Studios was conservatively used to account for studios located in more remote locations. Additionally, the proposed studio's subway modal split was increased from the RJTW census data to reflect a proposed shuttle service to/from public transportation, which is commonly being provided at production studios located within New York City (i.e. Steiner Studios).

The in/out vehicle splits to be used for future production studios were determined from the 2019 Steiner Studios analysis. The private auto occupancy rate of 1.07 persons per vehicle was based on the RJTW data, and the taxi occupancy rate of 1.30 persons per vehicle was based on the 2015 *Steiner Studios Media Campus FEIS*.

Table 3: Transportation Planning Assumptions

Land Use:	<u>Film & Television Production Studio</u>	
Trip Generation:	(1)	
Weekday	10.0	
	per 1,000 sf	
Temporal Distribution:	(1)(5)(6)	
AM	12.0%	
MD	8.0%	
PM	11.0%	
Modal Splits:	(3)(4)(5)	
	All Periods	
Auto	50.0%	
Taxi	5.0%	
Shuttle to/from Subway	25.0%	
Subway/Railroad	0.0%	
Bus	10.0%	
Walk/Bike/Other	10.0%	
	100.0%	
In/Out Splits:	(2)	
	In	Out
AM	74.0%	26.0%
MD	49.0%	51.0%
PM	34.0%	66.0%
Vehicle Occupancy:	(3)(5)	
	All Periods	
Auto	1.07	
Taxi	1.30	
Truck Trip Generation:	(2)	
Weekday	0.36	
	per 1,000 sf	
Temporal Distribution:	(2)	
AM	8.7%	
MD	9.7%	
PM	5.6%	
In/Out Splits:	In	Out
AM	71.0%	29.0%
MD	58.0%	42.0%
PM	55.0%	45.0%
Notes :		
(1)	2014 City Environmental Quality Review (CEQR) Technical Manual.	
(2)	Based on data collected by PHA at Steiner Studios in November 2019.	
(3)	AASHTO CTPP Reverse-Journey-to-Work 5-year data for Queens Census Tracts 107.01, 111, and 123.01.	
(4)	Modal split adjusted to account for studio use, distance from subway, and proposed shuttle.	
(5)	Steiner Studios Media Campus FEIS, 2015.	
(6)	Midday temporal distribution adjusted based on NYCDOT direction	

Table 4: Modal Split Comparison

Mode	Census Data¹	2015 Steiner FEIS Modal Splits	Proposed Production Studio Modal Splits
Auto	76.6%	31.0%	50.0%
Taxi	0.0%	1.0%	5.0%
Subway	8.9%	44.0%	-
Shuttle to/from Subway	-	-	25.0%
Bus	5.4%	14.0%	10.0%
Walk/Bike/Other	9.1%	10.0%	10.0%
Total	100.0%	100.0%	100.0%

Note: Based on the AASHTO CTPP 2012-2016 Reverse-Journey-to-Work data for Queens Tracts 107.01, 111, and 123.01.

CONCLUSIONS

The number of people traveling to a production facility on a daily basis is highly variable and dependent on multiple factors (such as the number of soundstages leased, the duration of each lease, the size of each production, and filming schedules and locations). Means of transportation via ride-share (such as Uber and Lyft) are becoming more common, which ultimately results in fewer people driving private autos. This also results in a high turnover of in/out taxi trips. Shuttle services from public transportation to production studios are also a rising trend for the film and television industry. As such, transportation planning factors were generated based on industry trends discussed with local New York City Production studios and data collected at local studios. These factors can be applied to future film and television production studio development located within New York City.