NEW YORK CITY ENVIRONMENTAL QUALITY REVIEW
ENVIRONMENTAL ASSESSMENT STATEMENT

SPECIAL FLUSHING WATERFRONT DISTRICT
BOROUGH OF QUEENS

Prepared For:

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CEQR Number: 20DCP083Q
13 December 2019

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ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) FULL FORM
(CITY ENVIRONMENTAL QUALITY REVIEW)

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

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

Part I: GENERAL INFORMATION

PROJECT NAME Special Flushing Waterfront District

1. *Reference Numbers*

CEQR REFERENCE NUMBER (to be assigned by lead agency) 20DCP083Q	BSA REFERENCE NUMBER (if applicable) N/A
ULURP REFERENCE NUMBER (if applicable) 200033 ZMQ, N 200034 ZRQ	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 on behalf of the New York City City Planning Commission			**2b. *Applicant Information*** NAME OF APPLICANT FWRA LLC		
NAME OF LEAD AGENCY CONTACT PERSON Olga Abinader, Director, Environmental Assessment and Review Division			NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON Ross Moskowitz Stroock & Stroock & Lavan LLP		
ADDRESS 120 Broadway, 31st Floor			ADDRESS 180 Maiden Lane		
CITY New York	STATE NY	ZIP 10271	CITY New York	STATE NY	ZIP 10038
TELEPHONE (212) 720-3493	EMAIL oabinad@planning.nyc.gov		TELEPHONE 212-806-5550	EMAIL rmoskowitz@stroock.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):
6 NYCRR 617.4 (b)(5)(v)

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, FWRA LLC, seeks City Planning Commission (CPC) approval of discretionary actions (the "Proposed Actions") to facilitate the development of an approximately 29-acre waterfront area (the "Project Area"), which includes nine new mixed-use buildings on four sites (the "Proposed Project"). The Project Area is generally bound by 40th Road to the south, College Point Boulevard to the east, Lot 212 at 36th Avenue to the north, and Flushing Creek to the west. The Proposed Actions would establish a new special purpose district, the Special Flushing Waterfront District (SFWD), in the Flushing neighborhood of Queens, Community District 7.

The Proposed Actions include a Zoning Text Amendment and Zoning Map Amendment to establish the SFWD, coterminous with the Project Area. A Zoning Map Amendment would rezone the northern part of the Project Area from M3-1 and C4-2 to an M1-2/R7-1 district. The M1-2/R7-1 district, the only part of the Project Area in which the maximum permitted density would be increased, would also be established as a new Mandatory Inclusionary Housing (MIH) Area. The SFWD would modify underlying and waterfront regulations related to bulk, use, parking, loading, and the public realm. The SFWD would also modify and update the Downtown Flushing Waterfront Access Plan (WAP Q-2) and establish a new CPC Certification within the SFWD to permit an increase in the maximum permitted building height of a development. The Applicant intends to apply for ministerial Waterfront Certifications (ZR Article VI, Chapter 2, Section 62-81) and the new CPC Height Certifications after approval of the Proposed Actions to permit the Proposed Project. A detailed description of the Proposed Actions is provided in Attachment A, "Project Description."

The Applicant is comprised of three property owners within the Project Area. The Applicant-owned property consists of Site 1 (Block 4963, Lots 7, 8, and 9); Site 2 (Block 4963, Lot 65); Site 3 (Block 4963, Lot 85); and Site 4 (Block 4963, Lots 212 and 249). All four sites are located within the SFWD and Site 4 is located within the proposed M1-2/R7-1 district. The underlying C4-2 floor area ratio (FAR) regulations for Sites 1, 2, and 3 would not be modified by the Proposed Actions. The proposed rezoning to an M1-

2/R7-1 district would permit a wider range of uses at a greater FAR than is currently permitted on Site 4. The Proposed Actions would require the development of a publicly accessible private street network as part of the construction of the Proposed Project on Sites 1, 2, and 3. All four sites would be subject to the proposed WAP.

Under the Proposed Actions, the Project Area would be split into three subdistricts. Subdistrict A would be made up of Block 4963, Lots 200, 210, 212, and 249; Subdistrict B is made up of Block 4963, Lots 1, 7, 8, 9, 65, 75, and 85; and Subdistrict C is made up of Block 5066, Lots 7503 and 7507.

Overall, the Proposed Project would comprise 1,725 dwelling units; 1,397,040 gross square feet (gsf) of commercial use (made up of 298,811 gsf retail, 714,588 gsf hotel, and 383,641 gsf office); and 21,913 gsf of community facility use. Construction of the Proposed Project is expected to begin in 2020 with all components complete and fully operational by 2025.

Project Location

BOROUGH Queens	COMMUNITY DISTRICT(S) 7	STREET ADDRESS 131-01 40th Road; 131-01 Roosevelt Avenue; 39-02 Janet Place; 39-08 Janet Place; 131-01 39th Avenue; 37-52 College Point Boulevard; 37-02 College Point Boulevard; 36-30 College Point Boulevard; 35-50 College Point Boulevard; 35-32 College Point Boulevard; 40-26 College Point Boulevard
TAX BLOCK(S) AND LOT(S) Block 4963, Lots 1, 7, 8, 9, 65, 75, 85, 200, 210, 212, and 249; and Block 5066, Lots 7503 and 7507		ZIP CODE 11354
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The Project Area is generally bounded by 40th Road to the south, College Point Boulevard to the east, Lot 212 at 36th Avenue to the north, and Flushing Creek to the west.		
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY C4-2, M3-1		ZONING SECTIONAL MAP NUMBER: 10a, 10b

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: Create a new City Planning Commission Certification for additional height	

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

Board of Standards and Appeals: ☐ YES ☒ NO

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

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

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

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

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

☐ LANDMARKS PRESERVATION COMMISSION APPROVAL

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

***State or Federal Actions/Approvals/Funding*:** ☒ YES ☐ NO If "yes," specify: DEC/USACE Joint Permit Application

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

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

☒ SITE LOCATION MAP ☒ ZONING MAP ☒ SANBORN OR OTHER LAND USE MAP
☒ TAX MAP ☒ FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)
☒ PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 1,268,885 sf
Waterbody area (sq. ft.) and type:
Roads, buildings, and other paved surfaces (sq. ft.): 1,187,428 sf
Other, describe (sq. ft.): 81,457 sf (undeveloped shoreline area)

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): 3,376,643 gsf (*Note: Includes square feet dedicated to parking*)

NUMBER OF BUILDINGS: 9

GROSS FLOOR AREA OF EACH BUILDING (sq. ft.):
Site 1: 472,634 gsf; 313,452 gsf; 265,435 gsf
Site 2: 556,502 gsf; 343,677 gsf
Site 3: 673,770 gsf; 475,838 gsf
Site 4: 197,767 gsf; 77,568 gsf

HEIGHT OF EACH BUILDING (ft.):
Site 1
Lot 7: 177 ft. (North Tower) 209 ft. (South Tower)
Lot 8: 190 ft.
Lot 9: 209 ft.
Site 2
Western Building: 235 ft.
Eastern Building: 239 ft.
Site 3
Western Building: 237 ft. (North Tower) 147 ft. (South Tower)
Eastern Building: 237 ft. (North Tower) 239 ft. (South Tower)
Site 4
Western Building: 200 ft.
Eastern Building: 130 ft.

NUMBER OF STORIES OF EACH BUILDING:
Site 1: 16, 18, 18
Site 2: 19, 19
Site 3: 20, 11, 20, 17
Site 4: 16, 10

Does the proposed project involve changes in zoning on one or more sites? ☒ YES ☐ NO
If "yes," specify: The total square feet owned or controlled by the applicant: 522,345 (Block 4963, Lots 7, 8, 9, 65, 85, 212 and 249)
The total square feet not owned or controlled by the applicant: 746,453 (Block 5066, Lots 7503 and 7507; Block 4963, Lots 1, 75, 200, 210)

Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? ☒ YES ☐ NO
If "yes," indicate the estimated area and volume dimensions of subsurface disturbance (if known):
AREA OF TEMPORARY DISTURBANCE: (width x length) 522,435 sf VOLUME OF DISTURBANCE: (width x length x depth) Approx. 6,269,220 sf
AREA OF PERMANENT DISTURBANCE: (width x length) Approx. 522,435 sf

8. *Analysis Year* CEQR Technical Manual Chapter 2

ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2025

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: Approximately 60 months	
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE? ☒ YES ☐ NO	IF MULTIPLE PHASES, HOW MANY?
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE: Refer to EAS Attachment R, Construction	

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

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

ATTACHMENT A: PROJECT DESCRIPTION

INTRODUCTION

FWRA LLC (the "Applicant") seeks City Planning Commission ("CPC") approval of discretionary actions (the "Proposed Actions") to facilitate the development of an approximately 29-acre waterfront area (the "Project Area," see Figures A-1 and A-2), which includes nine new mixed-use buildings on four sites (the "Proposed Project"). The Project Area is generally bound by 40th Road to the south, College Point Boulevard to the east, Lot 212 at 36th Avenue to the north, and Flushing Creek to the west. The Proposed Actions would establish a Special Flushing Waterfront District ("SFWD") in the Flushing neighborhood of Queens, Community District 7. The purpose of the Proposed Actions is to create more appropriate building envelopes, reduced parking requirements, modify use regulations to provide additional flexibility, and improve the pedestrian experience and public realm of the Project Area and waterfront.

The Proposed Actions include a Zoning Text Amendment and Zoning Map Amendment to establish the SFWD, a new Special Purpose District coterminous with the Project Area. The Zoning Map Amendment would rezone the northern part of the Project Area from M3-1 and C4-2 to an M1-2/R7-1 district. The Zoning Text Amendment would map this part of the Project Area, the only part of the Project Area where the Proposed Actions would increase the permitted density, as a new Mandatory Inclusionary Housing (MIH) Area. The SFWD would modify and update the Downtown Flushing Waterfront Access Plan (WAP Q-2) and establish a new CPC Certification within the SFWD to permit an increase in the maximum permitted building height of a development. The Proposed Project would require ministerial waterfront and additional height certifications which would be sought after approval of the Proposed Actions. The SFWD would modify underlying and waterfront regulations related to bulk, use, parking, loading, and the public realm. A detailed description of the Proposed Actions is provided below.

The Proposed Actions would facilitate the construction of 2,993,768 gross square feet (gsf) of mixed-use development. The Proposed Project would include 383,641 gsf of commercial office space, 298,811 gsf of commercial retail space, 714,588 gsf of hotel space (879 hotel units), 21,913 gsf of community facility space, and 1,725 dwelling units (1,574,815 gsf). The Proposed Project would satisfy the requirements of Option 2 of the MIH program. This document will analyze 20 percent[1] of residential units within the MIH Area as affordable, which is discussed in the "Analysis Framework" section of this assessment. The Proposed Project would also include 1,533 accessory parking spaces (382,876 sf) and a total of 3.14 acres of publicly accessible open space. Construction of the Proposed Project is expected to begin in 2020 with all components complete and fully operational by 2025.

The Proposed Actions are CPC discretionary approvals subject to City Environmental Quality Review (CEQR), which is New York City's process for implementing the New York State Environmental Quality Review Act (SEQRA), by which city agencies review proposed discretionary actions to identify and disclose the potential effects those actions may have on the environment. This Environmental Assessment Statement (EAS) has been prepared pursuant to Mayoral Executive Order

[1] The percentage used will be 30 percent for the purpose of conservative analysis in Attachment E, "Community Facilities and Services."

No. 91 of 1977, as amended, the CEQR Rules of Procedure found at Title 62 RCNY Chapter 5, and the implementing regulations for SEQRA found at 6 NYCRR Part 617. This EAS informs the New York City Department of City Planning (DCP), acting as lead agency on behalf of the CPC, in making the determination whether the Proposed Actions have the potential to result in significant adverse impacts on the environment and require further environmental quality review.

BACKGROUND AND EXISTING CONDITIONS

During much of the eighteenth and nineteenth centuries, Flushing was a rural farming settlement known for its tree and plant nurseries. The town grew in the mid-1800s following a railroad connection to Hunter's Point, and development further accelerated in the early twentieth century after the completion of Queensboro Bridge and the introduction of rail service to Manhattan (the Long Island Railroad in 1910 and the NYC IRT subway in 1928). Flushing grew to be a suburban-style town during the first half of the twentieth century with its commercial core on Main Street, anchored by the RKO Keith's Theater. As commercial activity increased in Flushing, warehouses and industrial uses settled on the waterfront along Flushing Creek. The W. & J. Sloane Furniture Company was constructed in the mid-1920s in the Project Area. With its central clock tower and cupola, today it houses a U-Haul moving and storage facility.

By the 1960s, Flushing was one of the largest commercial districts in Queens. Today, it continues to be a hub of activity. The Proposed Actions build on a two-decade history of planning efforts in the Downtown Flushing neighborhood. The Downtown Flushing Planning Framework was created in 1993 with the goal of creating a comprehensive plan that would improve transportation, expand the range of community facilities, provide waterfront public access, and expand commercial, retail, and residential uses. The 1993 Framework was implemented in 1998 through the rezoning of Downtown Flushing and the creation of the Downtown Flushing Waterfront Action Plan (CEQR No. 95DCP052Q). The 1998 action rezoned part of the Project Area from low-density M1-1 and M3-1 manufacturing districts to the current medium-density commercial C4-2 designation. The remainder of the Project Area to the north has been M3-1 since the approval of the 1961 Zoning Resolution.

The Downtown Flushing Development Framework was created in 2004, a joint Economic Development Corporation ("EDC") and DCP community-based initiative that resulted in a land use planning strategy for the future growth and sustainability of Downtown Flushing, the Flushing Creek waterfront, and the Willets Point peninsula. While the 1998 Rezoning and Downtown Flushing WAP resulted in areas west of Prince Street to be rezoned from manufacturing to commercial districts, and required the redevelopment of waterfront sites to provide public access, the 2004 Framework identified additional issues related to the area's development quality and zoning that the 1998 Rezoning and WAP did not address. One of the overarching goals was to promote a cleaner river to unite the two sides of the waterfront. The Framework ultimately resulted in a consensus vision for Downtown Flushing with three major goals: (1) Reconnect and renew downtown; (2) Revitalize the waterfront; and (3) Redevelop Willets Point.

In 2010, the Flushing Willets Point Corona Local Development Corporation ("FWCLDC") received a grant under the New York State Brownfield Opportunity Areas ("BOA") Program to produce the Flushing Waterfront BOA Nomination Planning Study (the "BOA Study"). The BOA Program provides funds to community organizations and municipalities to develop community plans for brownfield

areas with vacant or underutilized properties, where contamination or perceived contamination has impeded redevelopment. In 2014, FWCLDC partnered with DCP to prepare report documents for the BOA Study and to create a master plan known as the Flushing Waterfront BOA Master Plan ("the BOA Master Plan").

The purpose of the BOA Master Plan was to facilitate the development of a vibrant, inclusive mixed-use neighborhood that would serve as an extension of Downtown Flushing and provide a distinct waterfront destination for residents, workers, and visitors. The BOA Master Plan recommended several land use objectives that are to be implemented through the Proposed Actions described in this document, including the creation of market-rate and affordable housing opportunities, a variety of retail and commercial services, and well-defined waterfront access. To accomplish these goals, the BOA Master Plan recommended various zoning map and text amendments, including the creation of a special district, and has served as a roadmap for private applicants to use in the redevelopment of the Flushing waterfront. In 2017, the BOA Study and Master Plan were submitted to the New York Department of State and in 2018, the Flushing waterfront received official BOA designation.

PROJECT AREA

The Project Area is generally bound by 40th Road to the south, College Point Boulevard to the east, Lot 212 at 36th Avenue to the north, and Flushing Creek to the west (Figure A-2). The Project Area is comprised of Queens Block 4963, Lots 1, 7, 8, 9, 65, 75, 85, 200, 210, 212, and 249, and Block 5066, Lots 7503 and 7507 (Figure A-3). Lots 7, 8, 9, 65, 85, 212, and 249 are owned by the Applicant, while Lots 1, 75, 200, 210, 7503, and 7507 are not owned by the Applicant. The lots within the Project Area have a combined area of approximately 1,268,885 sf (29.13 acres). The Applicant is comprised of three property owners within the Project Area. The Applicant-owned property, as shown in Figure A-4, consists of Site 1 (Block 4963, Lots 7, 8, and 9), Site 2 (Block 4963, Lot 65), Site 3 (Block 4963, Lot 85) and Site 4 (Block 4963, Lots 212 and 249). Photographs of the Project Area and the surrounding area are provided in Appendix A.

The Project Area generally slopes gradually from higher elevations in the eastern portion near College Point Boulevard to lower elevations in the western portion near Flushing Creek. Flushing Creek is a one-mile-long, natural tidal waterbody adjacent to the Project Area that flows north to Flushing Bay, which discharges to the East River (see Photo 15 in Appendix A). The existing shoreline of the Project Area is neglected, consisting of debris and remnants of timber piles, and is not publicly accessible. According to the New York State Department of Environmental Conservation (NYSDEC), there are no freshwater wetlands located on the Project Area. The open waters of Flushing Creek within the Project Area are tidally influenced and are mapped by NYSDEC as Tidal Wetlands. Small portions of the littoral zone are located at the Project Area. NYSDEC regulates the wetland-adjacent areas and requires a high percentage of pervious surfaces in order to help absorb rainfall and reduce runoff to the creek. The majority of the Project Area is within the 100-year floodplain (Zone AE), with portions in the 500-year floodplain.

The Project Area is served by multiple forms of public transportation and major roadways, with both the MTA New York City Transit (NYCT) 7 train and Long Island Rail Road (LIRR) Port Washington line within 0.3 miles. The Van Wyck Expressway intersects the Whitestone Expressway just northwest of the Project Area. Streets surrounding the Project Area are generally arranged in a grid

pattern with Main Street and College Point Boulevard serving as the primary north-south oriented local streets, and Northern Boulevard and Roosevelt Avenue serving as the primary east-west local streets. Other than two-way traffic along 36th Avenue, the east-west local streets between Northern Boulevard, Main Street, Roosevelt Avenue, and College Point Boulevard are one-way local streets with on-street parking available on both sides of the street (Figure A-2). East of College Point Boulevard is Downtown Flushing, centered by Main Street. The Project Area is in close proximity (less than two miles) to LaGuardia Airport and lies underneath the airport's primary approach path.

Sky View Parc is the only site in the Project Area south of Roosevelt Avenue. The approximately 14-acre site is improved with a mixed-use development (constructed in phases from 2008 to 2016) with more than one million square feet of floor area comprising residential and commercial uses. Sky View Parc comprises multiple residential towers atop a commercial shopping podium. The maximum building height exceeds 200 feet and has 17 stories. A shore public walkway is also developed along Sky View Parc's frontage along Flushing Creek.

Previous environmental investigations in the Project Area have identified contaminants in soil, soil vapor and groundwater as a result of the historic manufacturing use of the Project Area and surrounding properties. Lots 7, 8, 9, 65, 75, and 85 have (E) Designations for hazardous materials as well as noise (Former Lot 7 was subdivided in 2017 and is now current Lots 7, 8, and 9). Solid waste material, hazardous wastes, toxic pollutants, and other substances hazardous to the environment would be managed through the (E) Designation program for these sites.

Historically, the Project Area has been developed with industrial and commercial uses. Site 1 was developed around 1917 and used as a lumber yard and coal company into the 1930s, after which it was a concrete company through 1980 and a mixed industrial/commercial business into the late 1990s. Site 2 has been occupied by commercial and industrial facilities since the 1960s, including an electric instrument company, post office, and supermarket use. Site 3 was historically used as a woodworking facility and a petroleum facility (Island Petroleum Corporation). Site 4 was used as a coal yard, masonry yard, asphalt plant, and scrap recycler. Lot 75 was historically occupied by an auto sales business, and Lot 200 has been occupied by a furniture company and zipper manufacturer.

Currently, the Project Area is developed with mixed-use commercial and residential uses (Sky View Parc), surface parking, light industrial uses, and vacant land (Figure A-5). Site 1 is currently vacant and used for construction staging activities (see Photo 10 in Appendix A). Site 2 is also vacant (Photo 11 in Appendix A). Site 3 is a surface parking lot and temporary construction staging area. Lot 75 contains a one-story, 13,440-sf vacant commercial building with an adjacent surface parking lot. Lot 200 contains a surface parking lot and a four-story, State and National Register (S/NR) eligible 110,000-sf building that houses a U-Haul business (see Photo 14). Site 4 is currently vacant and used as a construction storage yard. Lot 210, adjacent to Site 4, contains a vacant auto-body shop.

Most of the Project Area is currently mapped with a C4-2 zoning district, although part of the Project Area (Lots 210, 212, 249, and a portion of Lot 200) are mapped with an M3-1 zoning district (Figure A-6).[2] C4 districts are mapped in regional centers located outside of central business districts and permit residential, commercial, community facility, and mixed use development pursuant to height factor and quality housing regulations. As shown in Table A-1, C4-2 zoning permit development at a

[2] Lot 200 is currently a split zoning lot; a portion is zoned C4-2 and a portion is zoned M3-1.

maximum Floor Area Ratio (FAR) of 2.43 for residential uses (Use Groups 1-2, R6 equivalent). Commercial uses (Use Groups 5-6, 8-10, 12) are permitted as-of-right at a maximum FAR of 3.40 and community facility uses (Use Groups 3-4) are permitted as-of-right at a maximum FAR of 4.80. In C4-2 districts, general retail or service uses require one accessory parking space per 300 sf of floor area. Off-street parking is required for 70 percent of dwelling units. Overall, bulk regulations are identical across the C4-2 zoning district, which does not permit design flexibility for each development site in the Project Area.

Table A-1: Existing Zoning Districts within the Project Area

Name	Definition/ General Use	Maximum FAR
Commercial Districts		
C4-2	C4 districts are mapped in regional commercial centers that are located outside of the central business districts. Use groups 5, 6, 8, 9, 10, and 12 include most retail establishments and are permitted in C4 districts. C4-2 districts are mapped in more densely built areas.	R: 2.43[1], C: 3.4, CF: 4.8[3]
Manufacturing Districts		
M3-1	M3 districts are designated for areas with heavy industries that generate noise, traffic or pollutants. M3 districts are usually located near the waterfront and buffered from residential areas. Typical uses include power plants, solid waste transfer facilities, and recycling plants.	C: 2.0, M: 2.0
Source: *Zoning Resolution of the City of New York* ***Notes:*** *R=Residential; C=Commercial; CF=Community Facility; M=Manufacturing* *[1]Residential Far may be increased to 3.0 on wide streets outside the Manhattan Core under Quality Housing Program regulations. FAR may differ in inclusionary Housing designated areas.*		

M3 districts are designated for areas with heavy industries that generate noise, traffic or pollutants. Typical uses located in M3 districts include power plants, solid waste transfer facilities and recycling plants, as well as fuel depots. The M3-1 zoning district permits development at a maximum FAR of 2.00 for manufacturing (Use Groups 16-18) and commercial uses (Use Groups 6-14). In an M3-1 district, residential and community facilities uses are not allowed, however most retail and commercial uses are permitted as-of-right. Basic parking requirements for general retail or office uses are one space per 300 sf. For manufacturing uses, new facilities require one parking space for every three employees or every 1,000 sf of floor area, whichever is greater. Warehouses and other storage facilities would require one space for every three employees or every 2,000 sf of floor area, whichever is fewer.

The Project Area is subject to Special Regulations Applying around Major Airports (ZR Article VI, Chapter 1). In these areas, the maximum height of buildings is limited in order to prevent obstructions to air navigation. Development is able to penetrate the set height limits if authorized by a special permit from the Board of Standards and Appeals (BSA) that involves verification from the Federal Aviation Administration (FAA). Across the Project Area, the as-of-right height limits would not exceed 175 feet above mean sea level (AMSL), and would not exceed 210 feet AMSL if a BSA special permit were to be granted.

The majority of the Project Area is also governed by Special Regulations Applying in the Waterfront Area (ZR Article VI, Chapter 2). Waterfront zoning regulations apply to lots within waterfront blocks, which are blocks adjacent to or intersected by the shoreline. They address the form, size, and location of new development, as well as the type of waterfront public access required with new development. The Downtown Flushing WAP emphasizes continuous public open space along the waterfront with enhanced public access, from 40th Road (Sky View Parc) to Lot 200. It requires that all new development along the waterfront provide a minimum 20-foot-wide esplanade (also known as a shore public walkway), upland connections to the shore public walkway, and visual corridors in specific locations (per Appendix B, Existing Downtown Flushing WAP Maps). Upland connections are pedestrian walkways that provide a public access route to the shore public walkway at regular intervals. Visual corridors provide an unobstructed view to the shoreline from upland streets. Currently, the existing visual corridors and upland connections do not effectively support the envisioned public circulation throughout the waterfront area, as they split up the zoning lots in several locations.

Additional connections between the upland areas and the shoreline are needed. Additionally, the existing WAP reduces the width of the shore public walkway to 20 feet in certain locations, compared to 40 feet per standard waterfront zoning requirements. Greater public open space within the shore public walkway is necessary to meet the goals of the Proposed Project.

SURROUNDING AREA

The surrounding area is characterized by a diverse mix of residential, commercial, and manufacturing/industrial land uses and building types. The section of Flushing Creek just north of the Project Area is lined by industrial uses, including concrete and asphalt plants. Generally, industrial uses are located north and west of the Project Area, and commercial, residential, and mixed use areas are to the south and east, an area that includes Downtown Flushing. The Downtown Flushing neighborhood is bounded by 36th Avenue to the north, Union Street to the east, Sanford Avenue to the south, and Flushing Creek/Van Wyck Expressway to the West. Downtown Flushing is comprised of a mix of office, retail, residential and institutional uses. The wide range of commercial uses (offices, service businesses, retail stores, grocery stores, restaurants, and hotels) densely line both main thoroughfares and side streets, with the main retail core located at the intersection of Roosevelt Avenue and Main Street. The No. 7 subway line runs underneath Roosevelt Avenue, with the Main Street-Flushing subway station located at Roosevelt Avenue and Main Street. The Long Island Railroad (LIRR) runs through Downtown Flushing, south of Roosevelt Avenue, with a station stop at 41st Avenue and Main Street. Downtown Flushing is well-serviced with MTA bus lines with numerous bus stop locations. The area is located less than two miles from LaGuardia Airport.

Downtown Flushing is comprised of C4-2, M1-1, and M3-1 zoning districts. Residential uses are not permitted within the manufacturing zoning districts; therefore, these areas are predominately occupied with low-rise commercial and industrial buildings. Within the C4-2 district, there is a mix of residential, office and retail uses. Portions of the surrounding area are also located within a Transit Zone, a Business Improvement District (the Downtown Flushing Transit Hub BID), a Coastal Zone, and a FRESH Zone, specific to the Accelerated Sales Tax Exemption Program (ASTEP).

West of the Project Area across Flushing Creek is the Willets Point area, a historically industrial neighborhood that consists of low-density auto-related uses. The area has been the focus of City redevelopment efforts for over a decade, including the approval of the Special Willets Point District in 2008. Van Wyck Expressway borders Willets Point, along the west bank of Flushing Creek across from the Project Area.

South of Roosevelt Avenue along College Point Boulevard is Sky View Parc, and to the east of Sky View Parc along Roosevelt Avenue are a strip of commercial uses ranging from two-story retail buildings to an over 40-unit condominium mixed-use building. Five multi-family elevator buildings known as the Bland Houses, owned by NYCHA, are on the opposite side of College Point Boulevard across from Sky View Parc. Further south of the Project Area is Flushing Meadows Corona Park, an almost 900-acre regional park and the largest park in Queens. The park was the site of two of the twentieth-century's World's Fairs, in 1939 and 1964.

PURPOSE AND NEED FOR THE PROPOSED ACTIONS

As described above, the Project Area has been well studied through various studies and planning efforts. However, the goals of the 1998 Rezoning and Downtown Flushing WAP were not accomplished in full with respect to the Project Area due to several factors. Many of the development sites are large, having a lot area in the range of 100,000 square feet, with depths reaching as much as 582 feet. They are subject to a changing and unique topography and grade that was not fully realized by the requirements of the Downtown Flushing WAP, which has upland connections and visual corridors in locations that constrain the sites. Additionally, they are subject to a number of environmental conditions that require approval of City and/or State remediation programs. These factors in combination add substantial complexity to the design and development of the Project Area and create a situation in which the as-of-right zoning is fairly restrictive.

The creation of the publicly accessible private street network, zoning bulk and use flexibility, and increased waterfront access, as recommended in the BOA Master Plan, would achieve a unified and accessible waterfront and an expansion of the existing business sector at this unique, underdeveloped, yet critical area of New York City. Moreover, the three largest development sites (Sites 1, 2, and 3) have been acquired by owners that are willing and able to work together to construct the private street network to allow for the Project Area to be developed and the community's goals to be met. As such, the Proposed Actions seek to make the objectives of the BOA Master Plan a reality by facilitating the development of the Project Area.

DESCRIPTION OF THE PROPOSED ACTIONS

Zoning Map Amendments

The Proposed Actions include the following zoning map amendments:

1. Establish the Special Flushing Waterfront District
2. Change C4-2 to M1-2/R7-1 (Block 4963, p/o Lot 200)
3. Change M3-1 to M1-2/R7-1 (Block 4963, Lots 210, 212, 249, and p/o Lot 200)

The Applicant seeks approval to amend Zoning Maps 10a and 10b with the above outlined changes to establish the SFWD and to rezone the existing manufacturing and commercial district to allow for a mixture of appropriate uses at an appropriate scale for the existing neighborhood conditions and needs as described further in this assessment. The proposed M1-2/R7-1 district would allow existing light industrial businesses on these blocks to remain and expand while encouraging the redevelopment of vacant and/or underutilized land with residential and/or commercial uses. The district is proposed to combine an M1-2 district with an R7-1 district.

Zoning Text Amendments

The proposed text amendments would generally:

1. Establish the Special Flushing Waterfront District (in ZR Section 127-00);
2. Incorporate the existing Waterfront Access Plan Q-2 (pursuant to ZR section 62-952) into the Special Flushing Waterfront District, and modify the location and requirements of waterfront public access areas; and
3. Establish a new Mandatory Inclusionary Housing Area coterminous with the proposed M1-2/R7-1 district (in Appendix F of the ZR).

The Applicant seeks approval to amend the zoning text to establish the SWFD, to allow for more appropriate building envelopes to be developed in the Project Area through the creation of a publicly accessible private street network. In addition, the SFWD would modify the existing WAP (Q-2), and the modified WAP text would be part of the new special district text. The proposed zoning text and associated maps are provided in Appendix C.

Special Flushing Waterfront District (SFWD)

Under the Proposed Actions, the Project Area would be split into three subdistricts (Figure A-7). Subdistrict A would be made up of Block 4963, Lots 200, 210, 212, and 249; Subdistrict B is made up of Block 4963, Lots 1, 7, 8, 9, 65, 75, and 85; and Subdistrict C is made up of Block 5066, Lots 7503 and 7507. The below outlines the specific modifications to the zoning text.

Modifications to FAR

The SFWD would not increase the underlying permitted FAR in Subdistrict B and it would continue to be within a C4-2 zoning district. As stated above, a zoning map amendment would rezone Subdistrict A from existing C4-2 and M3-1 districts to an M1-2/R7-1 district (Figure A-8). Within the district, the proposed SFWD text establishes that the manufacturing uses would have a maximum FAR of 3.0, commercial uses would have a maximum of 3.0 FAR, community facility would be allowed at a maximum FAR of 4.8, and residential uses would be allowed at a maximum of 4.6.

Modifications to Height and Setback

New height and setback requirements would apply to Subdistricts A and B. The height and setback modifications allow for each site to achieve the maximum permitted FAR while also providing an active public realm and access ways to the waterfront through the publicly accessible private street network and upland connections. Primary and secondary street frontages would be designated as

part of the Proposed Actions. Each of the street frontages would have specific base height and setback requirements.

Subdistrict B would be permitted to reach a maximum height of 245 feet AMSL (including bulkheads) pursuant to a CPC Chairperson Certification that would be created as part of the Proposed Actions. Absent the CPC certification, the maximum height of a building would be subject to the existing requirements of ZR Article VI, Chapter 1 (Special Regulations Applying Around Major Airports). The maximum height for Subdistrict A would be 200 feet AMSL, including bulkheads, via the CPC Chairperson Certification.

Parking and Loading

Subdistricts B and C would be subject to the provisions regulating parking and loading in C4-4 districts. Accordingly, the existing requirement to provide parking for 70 percent of non-MIH dwelling units would be modified to 50 percent. The Proposed Actions would also reduce required commercial (retail) parking to 1 space per 1,000 square feet of commercial uses. Subdistrict A would require commercial or manufacturing uses to provide either one parking space for every 1,000 sf of floor area or to provide parking spaces at the rate required per specific use for the M1-2 district, whichever is smaller. Residential and community facility uses in Subdistrict A would be subject to the requirements of R7-1 (60 percent of dwelling units or 50 percent if quality housing).

Publicly Accessible Private Streets

Within Subdistrict B, the SFWD would provide a framework for a publicly accessible private street network within the Project Area. The publicly accessible private street network would provide greater circulation between Sites 1, 2, and 3, and would consist of new streets and private extensions of existing mapped streets. All private streets would be 34 feet wide with 13-foot sidewalks on each side for a total of 60 feet of publicly accessible space. The SFWD would allow for the phasing of the private street network to allow for the sites to be constructed independently.

WAP-Related Provisions

The SFWD would establish a new WAP for all waterfront parcels within Subdistrict A, Subdistrict B, and Subdistrict C.[3] The WAP would require a minimum 40-foot wide shore public walkway, four upland connections, and three visual corridor locations. The upland connections would be located at the 39th Avenue extension, 38th Avenue extension, and the 37th Avenue extension. Additionally, as shown on Map 6 in Appendix C, a flexible zone would established from the 36th Road extension to the 36th Avenue extension, allowing the required upland connection to be located within this zone. Unlike the existing Downtown Flushing WAP, the location of the upland connections in the proposed WAP would be at zoning lot property lines and split equally into the bounding parcels rather than splitting up zoning lots. The SFWD would allow for the phasing of the shore public walkway and shared upland connections and facilitate the independent construction of the development sites. Visual corridors would be required on the southern boundary of Lots 7 and 8; at the 39th Avenue extension; and midway through Lot 200, at the 36th Road extension.

[3] The existing WAP in ZR Section 62-952 would be removed from the zoning text and no longer applicable to the Project Area.

Mandatory Inclusionary Housing Area (MIHA)

An MIHA would be established within Subdistrict A in Appendix F of the Zoning Resolution (Figure A-9). Under MIH, a share of new housing is required to be permanently affordable when land use actions create significant new housing potential, either as part of a City neighborhood plan or private land use application. MIH consists of two main options: Option 1, in which 25 percent of residential floor area must be affordable housing units for households with income at a weighted average of 60 percent of the average median income ("AMI"); or Option 2, under which 30 percent of residential floor area must be affordable housing units to households with income at a weighted average of 80 percent of the AMI. As part of this application, Option 2 is proposed to apply within the MIHA, although this would be finalized through the ULURP process.

DESCRIPTION OF THE PROPOSED PROJECT

As it exists today, the Project Area is predominantly vacant and not accessible to the public. Through the Proposed Actions, the Proposed Project is intended to enhance the safety and accessibility of the Project Area through the creation of a private street network. It would allow for the mixed-use development of the Project Area, providing a host of amenities to the neighborhood such as hotels, retail, and residential uses, encouraging economic development of this underutilized area. The Proposed Actions would also result in the development of, and provide access to the waterfront, and improve the environmental conditions of the area. Selected drawings and renderings from the Master Plan are provided in Appendix D.

The Proposed Project would consist of development on four distinct parcels and include residential, retail, office, hotel, and community facility uses. Commercial uses would primarily be on the ground floor to enhance the pedestrian realm. A new internal private road network would provide access to each development site. Development facilitated by the Proposed Project would also provide the community with approximately 3.14 acres of publicly-accessible open space and walkways along the Flushing Creek waterfront.[4] The shore public walkway would consist of a 12-foot-wide pedestrian path with seating, benches, and planters.

The Applicant will implement, as part of the Proposed Project, certain Project Components Related to the Environment (PCRE) that were material to the analysis of environmental impacts conducted in this EAS. A Restrictive Declaration (i.e., a legally binding mechanism) will be recorded at the time of approval of Proposed Actions to ensure the implementation of the PCREs.

Sites 1, 2, and 3 would be subject to the installation of the publicly accessible private street network (see Map 2, "Publicly Accessible Private Street Network," in Appendix C). The underlying FAR for Sites 1, 2, and 3 would remain subject to the underlying C4-2 floor area regulations: 2.43 FAR for residential, 3.4 for commercial, and 4.8 for community facility uses. The proposed rezoning to an M1-2/R7-1 district would allow for Site 4 to be comprised of light industrial, commercial, residential, and community facility uses. Manufacturing uses would have an FAR of 3.0, commercial uses would have a FAR of 3.0, community facility uses would have an FAR of 4.8, and residential uses would have an FAR of 4.6. All four sites would be subject to the proposed zoning text for the

[4] 3.14 acres includes an additional 2,000 sf public open space provided just east of the new private street on Projected Development Site 2.

SFWD. The SFWD would modify height, setback, location of uses, parking and façade articulation requirements.

Sidewalks would be provided along all private roads within the new network and would range from 13 to 18 feet in width. Pedestrian and vehicular traffic within the private street network would be controlled via signage; there would be no signalized intersections. Parking would not be permitted on the private roads due to safety and fire department concerns.

Upland connections at the 39th, 38th, and 37th Avenue extensions would provide direct pedestrian access to the Flushing waterfront at regular intervals (see Map 6, "Public Access Areas," in Appendix C). The upland connections at 39th and 38th Avenue would be 60 feet wide, while the connection at 37th Avenue would be 50 feet wide. Pedestrian access to the waterfront would also be provided along Roosevelt Avenue, south of Site 1. Upland connections would be provided on Site 4 and the adjacent parcel (Block 4963, Lot 200). Visual corridors would be provided at the locations shown on Map 5, "Visual Corridors," in Appendix C, providing views to Flushing Creek at regular opportunities along each development site.

Table A-2 presents the building programming, height, and open space details for the Proposed Project.

Site 1

The site is currently vacant so would not require any demolition activities. Minor soil remediation activities would be required prior to the start of construction. Site 1 would be developed with three buildings. Commercial podiums would align with the lot line boundaries of Lots 7, 8, and 9. Two towers would be located on the podium on Lot 7, while Lots 8 and 9 would each contain one podium and one tower (the four towers would be located on the northeast, northwest, southeast, and southwest portions of Site 1). The heights of the towers, not including bulkhead, are as follows: the northeast tower would be 209 feet in height, the northwest tower would be 177 feet in height, the southeast tower would be 190 feet in height, and the southwest tower would be 209 feet in height.

Retail space would be located on the ground floor of each podium, and parking would be provided on the second floor. Approximately 510 above-grade parking spaces would be provided across the three podiums. Within Lot 7, approximately 42,869 sf (0.98 acres) would be dedicated to enhancing the Flushing Creek waterfront, including a shorefront public walkway, new trees, sidewalks, benches, and a playground. The new private street that travels north from Roosevelt Avenue would bisect Site 1, separating the building on Lot 7 from the buildings on Lots 8 and 9. There would be four curb cut locations on Janet Place, an existing public street.

Site 1 would contain approximately 958,828 gsf, which is comprised of approximately 458,604 gsf of residential use (approximately 546 market-rate dwelling units), 495,924 gsf of commercial use, and 4,300 of community facility use. The commercial use would be comprised of hotel use (146,100 gsf or 353 hotel rooms), retail use (168,989 gsf), and office use (180,835 gsf). Site 1 would contain a total of 92,693 gsf of parking, providing a total of 510 parking spaces.

Site 2

The site is currently vacant so would not require any demolition activities. Construction would require a deep foundation and involve remediation through New York State's Brownfield Cleanup Program (BCP). All towers would be located on a common single foundation. Site 2 would contain two buildings. One building would contain a hotel tower (east side of Lot 65) that would also contain retail uses, and one building would contain two residential towers (west side of Lot 65) with a podium containing retail and community facility uses, and a banquet hall for the adjacent hotel. The new private street would travel north from Site 1, bisecting Site 2 and separating the residential towers from the hotel tower. The new private streets would bound the hotel building with the 39th Avenue extension to the south (two-way traffic), 38th Avenue extension to the north (one-way traffic heading east), and Janet Place extension to the east (one-way traffic heading south). The heights of the towers, not including the bulkheads, are as follows: the northwest residential tower would be 235 feet in height, the southwest residential tower would be 235 feet in height, and the eastern hotel tower would vary from 223 to 239 feet in height.

Site 2 would contain a total of 817,328 gsf, which is comprised of 398,646 gsf of residential use (368 market rate dwelling-units), 405,177 gsf of commercial use, and 13,505 gsf of community facility use. The commercial use would be comprised of hotel use (350,873 gsf or 301 hotel rooms), and retail use (54,304 gsf). Site 2 would contain a total of 82,852 gsf of parking, providing a total of 318 below-grade parking spaces.

A new publicly accessible open area (approximately 2,000 square feet), situated between the eastern hotel tower and the private street bisecting the site, would also be provided. The open area would be lined with retail storefronts and the 39th Avenue upland connection would be lined with a hotel entrance and both retail and community facility storefronts. Site 2 would also provide 34,810 sf (0.79 acres) of publicly-accessible open space within the shore public walkway. The shore public walkway would enhance the pedestrian realm along the Flushing Creek waterfront by implementing a pedestrian path, new trees, and benches.

Site 3

This site is vacant and would not require any demolition activities. A Remedial Action Plan (RAP) would be prepared and approved through the State or City BCP Program. Site 3 slopes downward from College Point Boulevard to Flushing Creek. The site would be bisected by a north-south private street that would be an extension of Janet Place with traffic headed south. As shown on Map 2 in Appendix C, new private streets would bound this site on the north with the 37th Avenue extension (one-way traffic west) and on the south with the 38th Avenue extension (one-way traffic east). The site would be developed with two buildings on the western and eastern portions of the site. On the west, the building would contain a curved residential tower fronting Flushing Creek, a hotel tower to the south, and ground floor retail. On the east, the building would contain a residential tower to the north and an office tower to the south, as well as retail. The height of the towers, not including the bulkheads, are as follows: the northwestern residential tower would be 237 feet, the southwestern hotel tower would be 147 feet, the northeast residential tower would be 237 feet, and the southeast office tower would be 239 feet.

Site 3 would contain a total of 971,048 gsf, which is comprised of 490,570 gsf of residential use (providing a total of 507 market rate dwelling-units), 478,804 gsf of commercial use, and 1,674 gsf of community facility use. The commercial use would be comprised of hotel use (217,615 gsf or 225 hotel rooms), retail use (58,383 gsf), and office use (202,806 gsf). Site 3 would contain a total of 178,650 gsf of parking, providing a total of 539 parking spaces.

Retail programming would be provided on all road frontages, and as such it would front the shore public walkway with a series of landscaped terraces. Parking would be provided from two basement parking levels. Site 3 would also provide approximately 41,800 sf (0.96 acres) of publicly-accessible open space within the shore public walkway.

Site 4

Site 4 would be developed with two buildings. A RAP would be prepared and approved through the State or City BCP Program prior to construction. The western building (at 200 feet, including bulkhead) along Flushing Creek would contain market-rate units, while the eastern building (130 feet, including bulkhead) along College Point Boulevard would contain affordable units through the MIH Program. Collectively, the buildings would contain 246,564, made up of 226,995 gsf of residential uses or 304 dwelling units. 61 units would be affordable through MIH Option 2; this would be finalized through the ULURP process. The development would also be comprised of 17,135 gsf of commercial (retail) uses and 2,434 gsf of community facility uses. Site 4 would provide 28,771 sf of below-grade parking (166 spaces) and 15,440 sf (0.356 acres) of publicly-accessible open space within the shore public walkway. All building entrances would be located off College Point Boulevard. Two curb-cut locations would be located on College Point Boulevard.

Table A-2: Proposed Project Development Sites

Development Site	Building Programming							Tower Height	Waterfront Access
	Dwelling Units	*Affordable Units*	*Retail*	*Hotel*	*Office*	*Community Facility*[5]	*Parking*		
1	546 (458,604 gsf)	-	168,989 gsf	353 rooms (146,100 gsf)	180,835 gsf	4,300 gsf	510 spaces	Lot 7: 177, 209 ft. Lot 8: 190 ft. Lot 9: 209 ft.	42,869 sf (0.98 acres)
2	368 (398,646 gsf)	-	54,304 gsf	301 rooms (350,873 gsf)	-	13,505 gsf	318 spaces	Northwest: 235 ft. Southwest: 235 ft. East: 239 ft.	34,810 sf (0.79 acres)
3	507 (490,570 gsf)	-	58,383 gsf	225 rooms (217,615 gsf)	202,806 gsf	1,674 gsf	539 spaces	Northwest: 237 ft. Southwest: 147 ft. Northeast: 237 ft. Southeast: 239 ft.	41,800 sf (0.96 acres)
4	304 (226,995 gsf)	61 (Option 2)[6]	17,135 gsf	-	-	2,434 gsf	166 spaces	West: 200 ft. East: 130 ft.	15,440 sf (0.356 acres)
Total	1,725 (1,574,815 gsf)	61	298,811 gsf	879 rooms (714,588 gsf)	383,641 gsf	21,913 gsf	1,533 spaces		134,919 sf (3.09 acres)

[5] Type of community facility use not known at this time.
[6] MIH Option would be finalized through ULURP.

ANALYSIS FRAMEWORK

Analysis Year

Following approval of the Proposed Actions, construction activity would commence on the applicant-owned parcels. Construction of the Proposed Project would occur over an approximately five-year period, with all development sites fully operational by the end of 2025. The analysis framework is based on the future environment in which the Proposed Project would be operational, and thus this document uses 2025 in order to assess potential impacts for all analyses. Each chapter will provide a description of existing conditions and an assessment of future conditions without the Proposed Actions (No-Action Condition) and with the Proposed Actions (With-Action Condition).

Reasonable Worst-Case Development Scenario (RWCDS)

In order to assess the potential effects of the Proposed Actions, a Reasonable Worst Case Development Scenario (RWCDS) was established for both the No-Action and With-Action conditions for the analysis year of 2025. The potential environmental impacts of the Proposed Actions are based on the incremental difference between the No-Action and With-Action conditions. The RWCDS is described below along with summary tables (detailed RWCDS tables by development sites are provided in Appendix E).

Identification of Development Sites

Sky View Parc (Block 5066, Lots 7503 and 7507)

As discussed previously in this chapter, the Sky View Parc development is a 14-acre development located south of Roosevelt Avenue. Sky View Parc is included as Subdistrict C as a beneficiary of certain zoning modifications within the SFWD, but is not expected to be affected by the Proposed Actions (except for the potential re-allotment of accessory parking within its existing parking garages) and thus is not assessed as part of the analysis framework.

Block 4963, Lots 1 and 210

Lot 1 is a small lot (approximately 1,021 sf) that is currently used as an easement for Con Edison so is not expected to be affected by the Proposed Actions. Lot 210 (approximately 7,172 sf) contains a vacant auto-body shop. Due to its irregular shape and small size limiting its development opportunity, it is also not expected to be affected by the Proposed Actions and is not assessed as part of the analysis framework.

Projected Development Sites

Applicant-owned sites will be termed "Projected Development Sites" and include Block 4963, Lots 7, 8, and 9 ("Projected Development Site 1"), Block 4963, Lot 65 ("Projected Development Site 2"), Block 4963, Lot 85 ("Projected Development Site 3"), and Block 4963, Lots 212 and 249 ("Projected Development Site 4") (Figure A-10).

Potential Development Sites

Block 4963, Lots 75 and 200 are not controlled by the Applicant and do not have any known redevelopment plans. However, due to their size and proximity to the Projected Development Sites, the analysis framework assumes that development may be reasonably expected to occur by the analysis year. Thus, Lot 75 will be identified as "Potential Development Site A" and Lot 200 will be identified as "Potential Development Site B" (Figure A-10). Potential Development Site A is currently a one-story, 13,440-sf vacant commercial building with an adjacent surface parking lot, and Potential Development Site B contains a surface parking lot and a four-story, S/NR-eligible 110,000-sf building that houses U-Haul. The development assumptions for these sites were adapted from the BOA Master Plan.

Development Site Assumptions

The number of dwelling units was based on a 1,000 gsf per unit standard, unless what was provided by the Applicant was more conservative (less than 1,000 sf per unit). For the purposes of conservative analysis, it is assumed that 20 percent of residential floor area would be reserved for households with incomes at or below 80 percent of the Area Median Income (AMI) for the units that would be developed pursuant to the MIH Program. The number of hotel units was based on an assumption of 400 gsf per unit.

According to the *CEQR Technical Manual*, Potential Development Sites are only assessed for site-specific impacts, and not for density-related impacts. Therefore, while the development program of Potential Development Sites A and B are presented in the below sections, the program associated with these sites is not included in the total or incremental calculations of the No-Action or With-Action conditions.

No-Action Condition

In the No-Action Condition, the Project Area would be developed with (i) approximately 1,335,821 gross square feet (gsf) of residential uses (1,463 dwelling units with no affordable housing); (ii) 1,403,479 gsf of commercial uses[7]; (iii) 19,875 gsf of community facility uses; (iv) 128,500 gsf of self-storage use, and (v) 835,313 sf of parking (3,268 spaces). Table A-3 shows the No-Action Condition by development site. An illustrative site plan of the No-Action Condition is provided in Figure A-11.

In the No-Action Condition, the Applicant would develop Projected Development Sites 1, 2, and 3 to the maximum permitted FAR pursuant to the existing C4-2 zoning. C4-2 districts permit commercial uses at an FAR of 3.4, residential uses at an FAR of 2.43, and community facility uses at an FAR of 4.8. Building heights are capped at approximately 175 feet (including penthouse) per special waterfront zoning regulations (ZR Section 62-341), not including the bulkhead. The maximum base heights would be 60 feet. New development would consist of high lot coverage buildings with active ground floor uses, and residential towers atop commercial podiums.

[7] This would be comprised of 794,327 gsf of hotel (1,985 rooms), 304,148 gsf of retail, and 305,004 gsf of office uses.

Under current zoning, parking is required for 70 percent of dwelling units.[8] For commercial uses, one space per eight hotel rooms and one space per 300 sf of retail and office uses would be required. New access driveways would be established along the prolongations of 39th Avenue and 37th Avenue (see Figure A-11). These driveways would provide access to each individual site, but would not provide for internal circulation among the development sites and thus would not be considered a street network. The driveways along the prolongations of 39th Avenue and 37th Avenue would also serve as upland connections pursuant to the existing Downtown Flushing WAP (Q-2) (see Appendix B). A shore public walkway with a minimum width of 40 feet would be developed within 50 feet north of Roosevelt Avenue (on Projected Development Site 1), as measured along the shoreline, and this shore public walkway would have a 20-foot width beyond 50 feet from Roosevelt Avenue (on Projected Development Sites 2 and 3).

Projected Development Site 4 would be developed under the existing M3-1 district, which permits a FAR of up to 2.0 for manufacturing and commercial uses. Projected Development Site 4 is not a part of the existing WAP. Parking would be provided pursuant to the requirement for warehouses and other storage establishments: one space for every three employees or every 2,000 sf of floor area. The Applicant anticipates that this site would be developed as a self-storage facility.

The development assumptions for Potential Development Sites A and B are based on the assumptions from the BOA Master Plan. Potential Development Site A would be redeveloped pursuant to the existing C4-2 zoning as a multi-story commercial building. No new development is anticipated for Potential Development Site B in the No-Action Condition, and the site would remain as existing conditions. The U-Haul self-storage and truck rental operation has been located on this site since 1979 and is part of a well-known self-storage and truck rental chain. The iconic cupola and clock tower and prominent business signage make this building an important visual neighborhood marker, and it is unlikely the business would relocate in the No-Action Condition. Below is a description of the No-Action development per each site. Figure A-11 is an illustrative site plan of the No-Action Condition with building massing and heights.

Projected Development Site 1

Projected Development Site 1, in the No-Action Condition, would be developed with one mixed-use building with a 60-foot podium. Above the podium level, there would be three 185-foot residential towers (135 feet plus a 40-foot penthouse and 10-foot bulkhead) on the western portion of the site. Two 185-foot commercial towers, one for office use and one for hotel use, would be developed in eastern portion of the site.

The shore public walkway would be approximately 40 feet wide, and an upland connection would be provided along the prolongation of 39th Avenue, adjacent to Projected Development Site 2. The development would contain approximately 458,604 gsf of residential uses, comprising approximately 546 market-rate dwelling units; 146,100 gsf of hotel use, comprising approximately 365 rooms (based on an assumption of 400 gsf per hotel room); 168,989 gsf of retail uses; 180,835 gsf of office uses; and 4,300 gsf of community facility uses. Pursuant to existing parking requirements, 1,598 parking spaces would be provided, comprising approximately 290,438 sf. The shore public

[8] This applies to market-rate units and is lowered to 50 percent if the lot area is less than 10,000 sf or if Quality Housing provisions are used.

walkway would provide approximately 10,024 square feet (0.23 acres) of publicly accessible open space.

Projected Development Site 2

Projected Development Site 2, in the No-Action Condition, would be developed with one mixed-use building. A cul-de-sac driveway would be provided off an access driveway along the 39th Avenue prolongation. Above the 60-foot podium, three residential towers would be developed to a height of 175 feet with a 30-foot bulkhead. In addition to the 20-foot-wide shore public walkway along Flushing Creek, an upland connection would be provided along the southern zoning lot boundary and along the prolongation of 39th Avenue that would also serve as a visual corridor.

Projected Development Site 2 would be developed with 398,646 gsf of residential uses, comprising 399 market-rate dwelling units (based on an assumption of 1,000 gsf per dwelling unit); 350,873 gsf of hotel use comprising approximately 877 rooms (based on an assumption of 400 gsf per hotel room); 54,304 gsf of retail use; and 13,505 gsf of community facility use. Approximately 582 parking spaces would be provided pursuant to existing requirements, equaling approximately 151,635 square feet. The shore public walkway would provide approximately 6,415 square feet (0.15 acres) of publicly accessible open space.

Projected Development Site 3

Projected Development Site 3, in the No-Action Condition, would be developed with two buildings separated by a private driveway along the prolongation of 37th Avenue. The southern building would have a four-story commercial podium with a street wall height of 60 feet. Three residential towers and three hotel towers (each 175 feet tall plus a 30-foot bulkhead) would be developed above the southern building podium, each of which would be set back from the podium along the 39th Avenue prolongation and the shore public walkway. The northern building would contain one building containing residential use; the tower would also rise to 175 feet plus a 30-foot bulkhead. An upland connection would be provided between College Point Boulevard and the shore public walkway along a driveway on the prolongation of 37th Avenue, which would also serve as a visual corridor. A 20-foot-wide shore public walkway would be developed along Flushing Creek.

The development would contain approximately 478,571 gsf of residential uses comprising 518 market-rate dwelling units; 297,354 gsf of hotel use, comprising approximately 743 rooms (based on an assumption of 400 gsf per hotel room); 80,855 gsf of retail use; and 124,169 gsf of office use. Pursuant to existing parking requirements, 1,034 parking spaces would be provided (372,240 sf). The shore public walkway would provide approximately 9,450 sf (0.22 acres) of publicly accessible open space.

Projected Development Site 4

Projected Development Site 4, in the No-Action Condition, would be developed with an approximately 128,500-gsf self-storage facility and a surface parking lot (21,000 sf) with 54 parking spaces. Due to the self-storage use, the size of the surface parking lot would provide sufficient circulation for moving trucks and other vehicles. Projected Development Site 4 is located wholly outside of the WAP, and no shore public walkway would be required to be developed along Flushing

Creek. Underlying waterfront zoning does not require shore public walkways for Use Group 16 developments, which includes self-storage facilities.

Potential Development Site A

Potential Development Site A would be developed with a commercial building of 152 feet (162 feet including the bulkhead). Under existing zoning, the building would be permitted to cover 100 percent of the lot area. The building would have approximately 107,182 gsf of commercial uses, comprising 81,963 gsf of hotel (205 rooms), 9,457 gsf of retail, and 15,762 gsf of office use. Approximately 110 parking spaces would be provided, comprising 22,000 sf based on an estimate of 200 sf per parking space.

Potential Development Site B

As described above, the existing use on Potential Development Site B would remain: a 65-foot-tall building containing approximately 110,000 gsf of self-storage and truck rental use (the U-Haul facility) and a surface parking lot (approximately 82,502 sf).

With-Action Condition

In the With-Action Condition, the Project Area would be developed with (i) approximately 1,574,815 gross square feet (gsf) of residential use (1,756 dwelling units with 61 affordable units); (ii) 1,397,040 gsf of commercial use[9]; (iii) 21,913 gsf of community facility use; (iv) 110,00 gsf of self-storage use, and (v) 382,876 sf of parking (1,533 spaces). Table A-4 shows the With-Action Condition by development site. An illustrative site plan of the With-Action Condition is provided in Figure A-12.

In the With-Action Condition, the Proposed Project would be constructed and operational as described above in "Description of the Proposed Project." Three subdistricts would be established: Subdistrict A is the area subject to the proposed M1-2/R7-1 district; Subdistrict B is the area in which the private road network would be located; and Subdistrict C is Sky View Parc. All subdistricts would be subject to the proposed WAP and special district text. As discussed earlier in this assessment, Sky View Parc is a large, recently completed mixed-use development and is not expected to be affected by the Proposed Actions, thus will not be assessed as part of this analysis framework.

A new WAP would be established for all waterfront parcels within the Project Area.[10] The WAP would require a minimum 40-foot-wide shore public walkway and five upland connections. The upland connections would be located at the 39th Avenue extension, 38th Avenue extension, and 37th Avenue extension. Additionally, a "flexible zone" would be established from the 36th Road extension to the 36th Avenue extension, allowing the required upland location to be located within this zone (see Map 6 in Appendix C). Unlike the existing WAP, these upland connections would be located at zoning property lines and would be split equally into the bounding parcels, rather than splitting up the zoning lots. The Proposed Actions would allow for the phasing of the shore public walkway, the

[9] This would be comprised of 714,588 gsf of hotel (1,786 rooms), 298,811 gsf of retail, and 383,641 gsf of office use.
[10] The existing WAP in ZR Section 62-952 would be removed from the zoning text and no longer applicable to the Project Area.

shared upland connections, and the street network in order to allow each Projected Development Site to be constructed independently.

In Subdistrict B (Projected Development Sites 1, 2, and 3 and both Potential Development Sites), the special district text would not increase the underlying permitted FAR, but would modify height, setbacks, location of uses, parking, and façade articulation requirements. These modifications would provide additional design flexibility to accommodate the currently permitted maximum FAR and the additional publicly accessible circulation areas and open space. The Proposed Actions would provide a framework for a publicly accessible private street network within Projected Development Sites 1, 2, and 3 (Map 2 in Appendix C). The network would consist of new streets and private extensions of existing mapped streets. All streets would be 34 feet wide with 13-foot sidewalks on each side.

Subdistrict A would be subject to a proposed zoning map amendment, from the existing M3-1 district on Projected Development Site 4 and M3-1/C4-2 district on Potential Development Site B, to an M1-2/R7-1 district. The proposed district would allow for a wider range of uses while allowing existing light industrial businesses such as the U-Haul building to remain. Manufacturing uses would have an FAR of 3.0, commercial uses would have a FAR of 3.0, community facility uses would have an FAR of 4.8, and residential uses would have an FAR of 4.6. Subdistrict A would also be subject to the special district text described above relating to height, setbacks, location of uses, parking, and façade articulation requirements. An MIH Area would be established in Subdistrict A, and it is assumed that 20 percent of residential floor area would be reserved for households with incomes at or below 80 percent of the Area Median Income (AMI) for the units that would be developed pursuant to the MIH Program, which only applies to Projected Development Site 4.

Under the Proposed Actions, developments within Subdistrict B would be permitted to reach a height of 245 feet (including bulkhead) pursuant to a CPC Chairperson Certification created as part of the Proposed Actions. Pursuant to DCP's outreach to the Federal Aviation Administration (FAA) and the Port Authority of New York and New Jersey (PANYNJ), the maximum height for Subdistrict A would be 200 feet (including bulkhead) under the CPC certification. The Applicant intends to follow this certification process and thus the With-Action Condition assumes that the Projected Development Sites would reach these maximum heights. Figure A-12 is an illustrative site plan of the With-Action Conditions with building massing and heights.

The With-Action Condition reflects a residential parking requirement of 50 percent of dwelling units and a commercial parking requirement of 1 space per 1,000 square feet, pursuant to the Proposed Actions.

Projected Development Site 1

Projected Development Site 1 would contain approximately 958,828 gsf, which is comprised of approximately 458,604 gsf of residential use (approximately 546 market-rate dwelling units), 495,924 gsf of commercial use, and 4,300 of community facility use. The commercial use would be comprised of hotel use (146,100 gsf or 365 hotel rooms), retail use (168,989 gsf), and office use (180,835 gsf). Projected Development Site 1 would contain 92,693 gsf of parking, providing a total of 510 parking spaces. The number of hotel rooms differs from what is anticipated as part of the

Proposed Project (353 rooms); 365 rooms is based on a 400 gsf per room assumption as discussed above under "Development Assumptions."

As previously discussed under "Description of the Proposed Project," Projected Development Site 1 would be developed with three buildings. The heights of the towers, not including bulkhead, are as follows: the northeast tower would be 209 feet in height, the northwest tower would be 177 feet in height, the southeast tower would be 190 feet in height, and the southwest tower would be 209 feet in height (see Figure A-12, "With-Action Illustrative Site Plan").

Retail space would be located on the ground floor of each podium, and parking would be provided on the second floor. Approximately 510 above-grade parking spaces would be provided across the three podiums. Within Lot 7, approximately 42,869 sf (0.98 acres) would be dedicated to enhancing the Flushing Creek waterfront, including a shorefront public walkway, new trees, sidewalks, benches, and a playground. The new private street that travels north from Roosevelt Avenue would bisect Projected Development Site 1, separating the building on Lot 7 from the buildings on Lots 8 and 9. There would be four curb cut locations on Janet Place, an existing public street.

Projected Development Site 2

Projected Development Site 2 would contain a total of 817,328 gsf, which is comprised of 398,646 gsf of residential use (399 market rate dwelling-units), 405,177 gsf of commercial use, and 13,505 gsf of community facility use. The commercial use would be comprised of hotel use (350,873 gsf or 877 hotel rooms), and retail use (54,304 gsf). Projected Development Site 2 would contain a total of 82,852 gsf of parking, providing a total of 318 below-grade parking spaces. The number of dwelling units and hotel rooms differs from what is anticipated as part of the Proposed Project (368 dwelling units and 301 hotel rooms); 399 dwelling units is based on a 1,000 gsf per unit assumption because it was more conservative than what the Applicant provided, and 877 hotel rooms is based on the 400 gsf per room assumption.

As discussed under "Description of the Proposed Project," Projected Development Site 2 would contain two buildings. One building would contain a hotel tower (east side of Lot 65) that would also contain retail uses, and one building would contain two residential towers (west side of Lot 65) with a podium containing retail and community facility uses, and a banquet hall for the adjacent hotel. The new private street would travel north from Projected Development Site 1, bisecting Projected Development Site 2 and separating the residential towers from the hotel tower. The new private streets would bound the hotel building with the 39th Avenue extension to the south (two-way traffic), 38th Avenue extension to the north (one-way traffic heading east), and Janet Place extension to the east (one-way traffic heading south). The heights of the towers, not including the bulkheads, are as follows: the northwest residential tower would be 235 feet in height, the southwest residential tower would be 235 feet in height, and the eastern hotel tower would vary from 223 to 239 feet in height.

A new publicly accessible open area (approximately 2,000 square feet), situated between the eastern hotel tower and the private street bisecting the site, would also be provided. The open area would be lined with retail storefronts and the 39th Avenue upland connection would be lined with a hotel entrance and both retail and community facility storefronts. Projected Development Site 2 would also provide 34,810 sf (0.79 acres) of publicly-accessible open space within the shore public walkway.

The shore public walkway would enhance the pedestrian realm along the Flushing Creek waterfront by implementing a pedestrian path, new trees, and benches.

Projected Development Site 3

Projected Development Site 3 would contain a total of 971,048 gsf, which is comprised of 490,570 gsf of residential use (providing a total of 507 market rate dwelling-units), 478,804 gsf of commercial use, and 1,674 gsf of community facility use. The commercial use would be comprised of hotel use (217,615 gsf or 544 hotel rooms), retail use (58,383 gsf), and office use (202,806 gsf). Projected Development Site 3 would contain a total of 178,650 gsf of parking, providing a total of 539 parking spaces. The number of hotel rooms differs from what is anticipated as part of the Proposed Project (225 rooms); 544 rooms is based on the 400 gsf per room assumption discussed above.

Projected Development Site 3 slopes downward from College Point Boulevard to Flushing Creek. The site would be bisected by a north-south private street that would be an extension of Janet Place with traffic headed south. New private streets would bound this site on the north with the 37th Avenue extension (one-way traffic west) and on the south with the 38th Avenue extension (one-way traffic east). The site would be developed with two buildings on the western and eastern portions of the site. On the west, the building would contain a curved residential tower fronting Flushing Creek, a hotel tower to the south, and ground floor retail. On the east, the building would contain a residential tower to the north and an office tower to the south, as well as retail. The height of the towers, not including the bulkheads, are as follows: the northwestern residential tower would be 237 feet, the southwestern hotel tower would be 147 feet, the northeast residential tower would be 237 feet, and the southeast office tower would be 239 feet. Projected Development Site 3 would also provide approximately 41,800 sf (0.96 acres) of publicly-accessible open space within the shore public walkway.

Projected Development Site 4

Projected Development Site 4 would contain 246,564, made up of 226,995 gsf of residential uses or 304 dwelling units. The analysis framework assumes that 20 percent of residential floor area would be reserved for households with incomes at or below 80 percent AMI. Consistent with this assumption, 61 units would be affordable and 243 of the units would be market-rate. The development would also be comprised of 17,135 gsf of commercial (retail) uses and 2,434 gsf of community facility uses.

As described in "Description of the Proposed Project," Projected Development Site 4 would be developed with two buildings. The western building along Flushing Creek would contain market-rate units, while the eastern building along College Point Boulevard would contain affordable units. The western building would be approximately 200 feet (including bulkhead), and the eastern building would be approximately 130 feet (including bulkhead). Projected Development Site 4 would provide 28,771 sf of below-grade parking (166 spaces). 15,440 sf (0.356 acres) of publicly-accessible open space would also be provided.

Potential Development Site A

Potential Development Site A would be developed with a commercial building of 152 feet (162 feet including the bulkhead). The building contain an approximately 107,182 gsf building containing commercial uses and 21,400 sf of parking (107 spaces). The commercial uses would be made up of 88,268 sf of hotel use (221 rooms) and 18,914 sf of retail use.

Potential Development Site B

As discussed under "No-Action Condition," the U-Haul self-storage and truck rental operation has been located on this site since 1979 and is part of a well-known self-storage and truck rental chain. It is unlikely the business would choose to demolish the structure and relocate the business in the With-Action Condition. However, due to the reduction in parking requirements in the proposed special district, the Proposed Actions could create opportunity for additional commercial development on this site. Although there are no known development plans for the U-Haul building, the analysis framework anticipates that the Proposed Actions could facilitate a 177,000-gross-square-foot (gsf) building that would contain office space.

Therefore, Potential Development Site B, which is currently improved with 110,000 gsf of self-storage/warehouse use (the U-Haul), would be developed to include a 177,000-gsf of commercial office building and 35,400 sf of parking (177 spaces) with a maximum height of 200 feet. The U-Haul's T-shaped building would not be altered, and the cupola and clock tower would remain visually prominent (see Figure G-2 in "Historic and Cultural Resources"). The new building would be set back from the northern façade of the U-Haul building to allow the required 50-foot-wide visual corridor at the extension of 36th Road. Due to this development, Potential Development Site B would be required as part of the Proposed Actions to provide waterfront public access. It is estimated that approximately 22,918 sf of publicly-accessible open space would be provided through the shore public walkway.

Increment

The difference between the No-Action and With-Action conditions, shown in Table A-5, provides the basis by which the potential environmental impacts of the Proposed Actions are evaluated. As shown, the incremental change that would result from the Proposed Actions is an increase of 293 dwelling units (238,994 gsf), made up of 232 market-rate and 61 affordable units; 78,637 gsf of commercial office uses; 2,038 of community facility uses; 111,030 sf of open space; 803 residents and 199 workers. The Proposed Actions would result in a decrease of 79,739 gsf of hotel space (199 rooms); 5,337 gsf of retail uses; 128,500 gsf of self-storage space; 1,735 parking spaces and 452,437 sf of parking.

In addition to what is shown in Table A-5, the Proposed Actions would also facilitate the creation of a street network on Projected Development Sites 1, 2, and 3 and improved waterfront public access through modified upland connections, visual corridors, and shore public walkway requirements.

Table A-3: No-Action Condition

Use	*Projected Development Sites*					*Potential Development Sites*	
	Site 1	**Site 2**	**Site 3**	**Site 4**	**Total**	**Site A**	**Site B**
Residential (DUs)	546	399	518	-	**1,463**	-	-
Residential GSF	458,604	398,646	478,571	-	**1,335,821**	-	-
Market Rate	546	399	518	-	**1,463**	-	-
Affordable	-	-	-	-	**-**	-	-
Total Commercial	495,924	405,177	502,378	-	**1,403,479**	107,182	-
Office	180,835	-	124,169	-	**305,004**	15,762	-
Retail	168,989	54,304	80,855	-	**304,148**	9,457	-
Hotel	146,100	350,873	297,354	-	**794,327**	81,963	-
Hotel Rooms	365	877	743	-	**1,985**	205	-
Community Facility	4,300	13,505	2,070	-	**19,875**	-	-
Self-Storage	-	-	-	128,500	**128,500**	-	110,000
Parking Spaces	1,598	582	1,034	54	**3,268**	110	-
Parking SF	290,438	151,635	372,240	21,000	**835,313**	22,000	82,502
Open Space SF	10,024	6,415	9,450	-	**25,889**	-	-
Residents	1,496	1,093	1,419	-	**4,008**	-	-
Workers	1,434	559	1,065	10	**3,068**	170	7

Table A-4: With-Action Condition

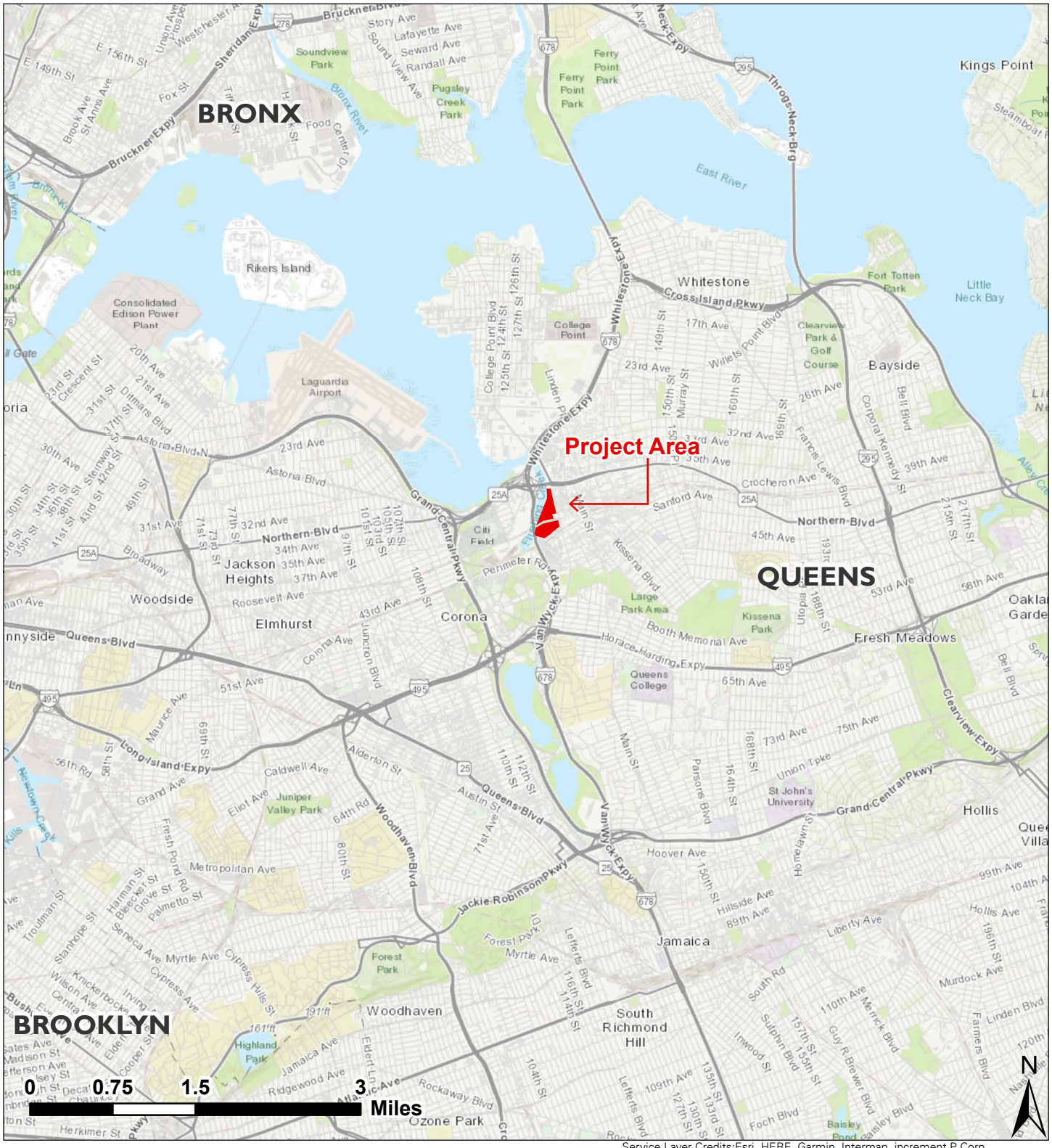
Use	*Projected Development Sites*					*Potential Development Sites*	
	Site 1	**Site 2**	**Site 3**	**Site 4**	**Total**	**Site A**	**Site B**
Residential (DUs)	546	399	507	304	**1,756**	-	-
Residential GSF	458,604	398,646	490,570	226,995	**1,574,815**	-	-
Market Rate	546	399	507	243	**1,695**	-	-
Affordable	-	-	-	61	**61**	-	-
Total Commercial	495,924	405,177	478,804	17,315	**1,397,040**	107,182	177,000
Office	180,835	-	202,806	-	**383,641**	-	177,000
Retail	168,989	54,304	58,383	17,315	**298,811**	18,914	-
Hotel	146,100	350,873	217,615	-	**714,588**	88,268	-
Hotel Rooms	365	877	544	-	**1,786**	221	-
Community Facility	4,300	13,505	1,674	2,434	**21,913**	-	-
Self-Storage	-	-	-	-	**-**	-	110,000
Parking Spaces	510	318	539	166	**1,533**	37	177
Parking SF	92,693	82,852	178,560	28,771	**382,876**	7,400	117,902
Open Space SF	42,869	36,810	41,800	15,440	**136,919**	-	22,918
Residents	1,496	1,093	1,389	833	**4,811**	-	-
Workers	1,412	554	1,226	74	**3,267**	142	719

Table A-5: Increment Between No-Action and With-Action Condition

Use	*Projected Development Sites*					*Potential Development Sites*	
	Site 1	**Site 2**	**Site 3**	**Site 4**	**Total**	**Site A**	**Site B**
Residential (DUs)	0	0	-11	+304	**+293**	-	-
Residential GSF	0	0	+11,999	+226,995	**+238,994**	-	-
Market Rate	0	0	-11	+243	**+232**	-	-
Affordable	-	-	-	+61	**+61**	-	-
Total Commercial	0	0	-23,574	+17,315	**-6,439**	0	+177,000
Office	0	-	+78,637	-	**+78,637**	-15,762	+177,000
Retail	0	0	-22,472	+17,315	**-5,337**	+9,457	-
Hotel	0	0	-79,739	-	**-79,739**	+6,305	-
Hotel Rooms	0	0	-199	-	**-199**	+16	-
Community Facility	0	0	-396	+2,434	**+2,038**	-	-
Self-Storage	-	-	-	-128,500	**-128,500**	-	0
Parking Spaces	-1,088	-264	-495	+112	**-1,735**	-72	+177
Parking SF	-197,745	-68,783	-193,680	+7,771	**-452,437**	-14,600	+35,400
Open Space SF	+32,845	+30,395	+32,350	+15,440	**+111,030**	-	+22,918
Residents[11]	0	0	-30	+833	**+803**	-	-
Workers[12]	-22	-5	+161	+65	**+199**	-29	+712

[11] Residents generated based on average household size (2.74) in Queens Community District 7.
[12] Workers generated based on the following standard employee density factors: One employee per 250 sf of office, 3 employees per 1,000 sf of retail/supermarket/restaurant uses, one employee per 25 dwelling units, one employee per 2.67 hotel rooms (and 400 sf per hotel room), one employee per 1,000 sf of auto-related and industrial uses, one employee per 15,000 sf of warehouse uses, three employees per 1,000 sf of all other community facility uses, and one employee per 50 parking spaces.

FIGURE A-1
REGIONAL LOCATION MAP



Service Layer Credits:Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey

FIGURE A-2

SPECIAL FLUSHING WATERFRONT DISTRICT

PROJECT LOCATION MAP

Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area

FLUSHING, QUEENS, NY

LANGAN

FIGURE A-3

SPECIAL FLUSHING WATERFRONT DISTRICT

TAX MAP

Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area | 400-foot radius | 7 Tax Lot | 4963 Tax Block

FLUSHING, QUEENS, NY

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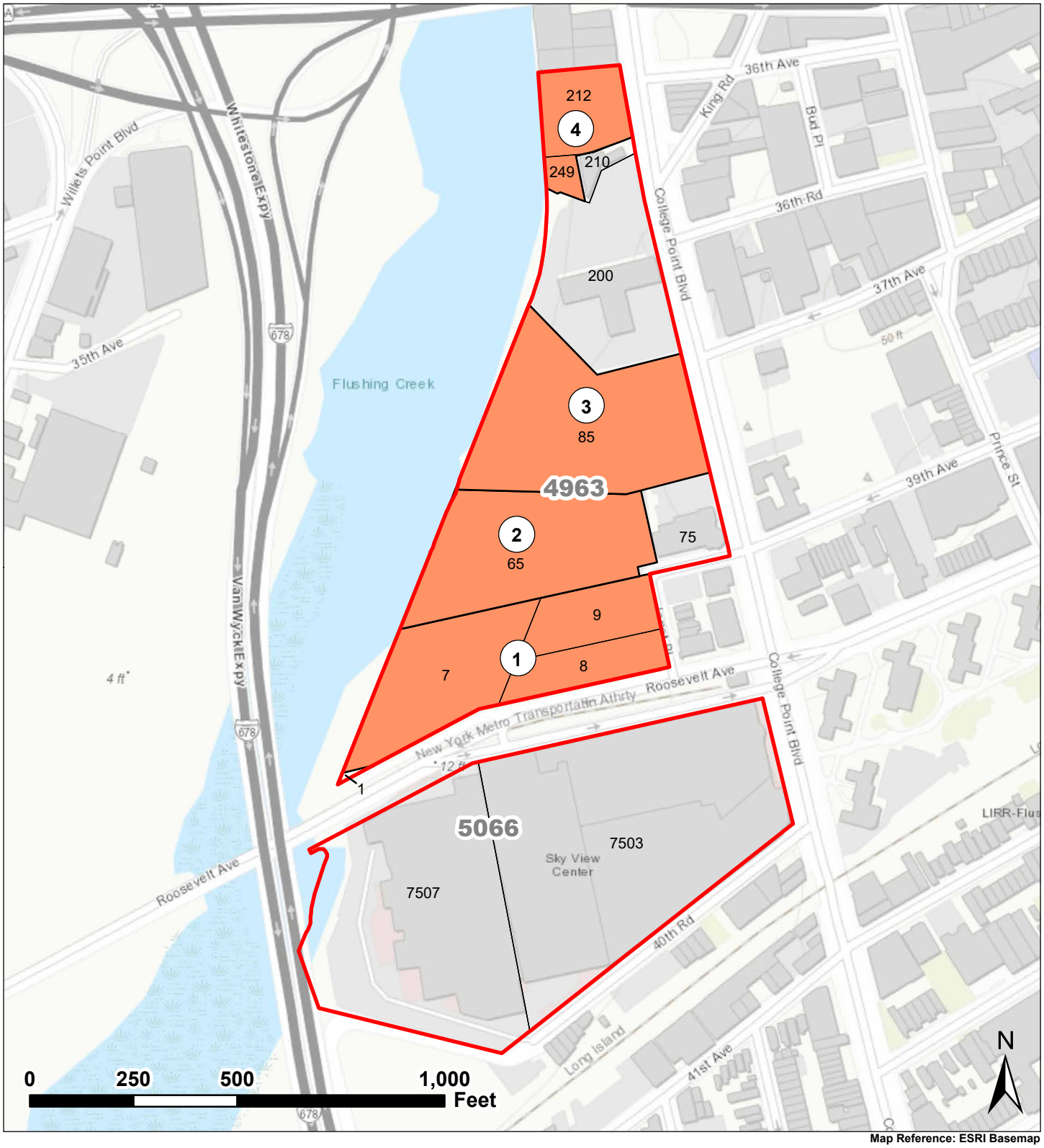
FIGURE A-4

SPECIAL FLUSHING WATERFRONT DISTRICT

APPLICANT-OWNED DEVELOPMENT SITES



Map Reference: ESRI Basemap

Project Area

1 Applicant-Owned Development Sites

4963 Tax Block

7 Tax Lot

FLUSHING, QUEENS, NY

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FIGURE A-5

EXISTING LAND USE MAP

SPECIAL FLUSHING WATERFRONT DISTRICT

Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO18v2.1 and LION Shapefiles.

Project Area

0.25-mile radius

Land Use

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

FLUSHING, QUEENS, NY

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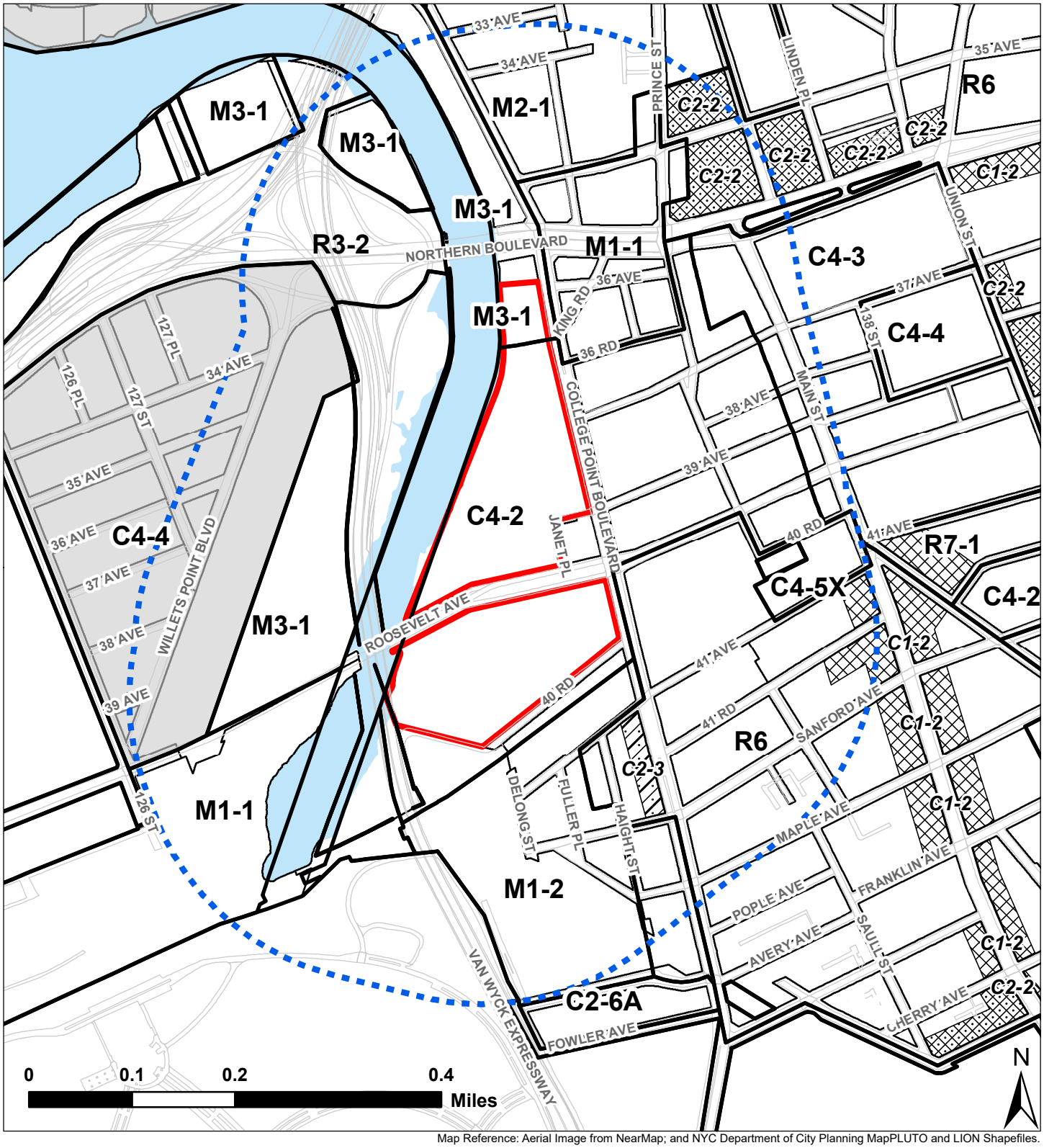
FIGURE A-6

SPECIAL FLUSHING WATERFRONT DISTRICT

EXISTING ZONING MAP



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area

0.25-mile radius

Zoning District

Special Purpose District

Commercial Overlay

C1-2

C2-2

C2-3

FLUSHING, QUEENS, NY

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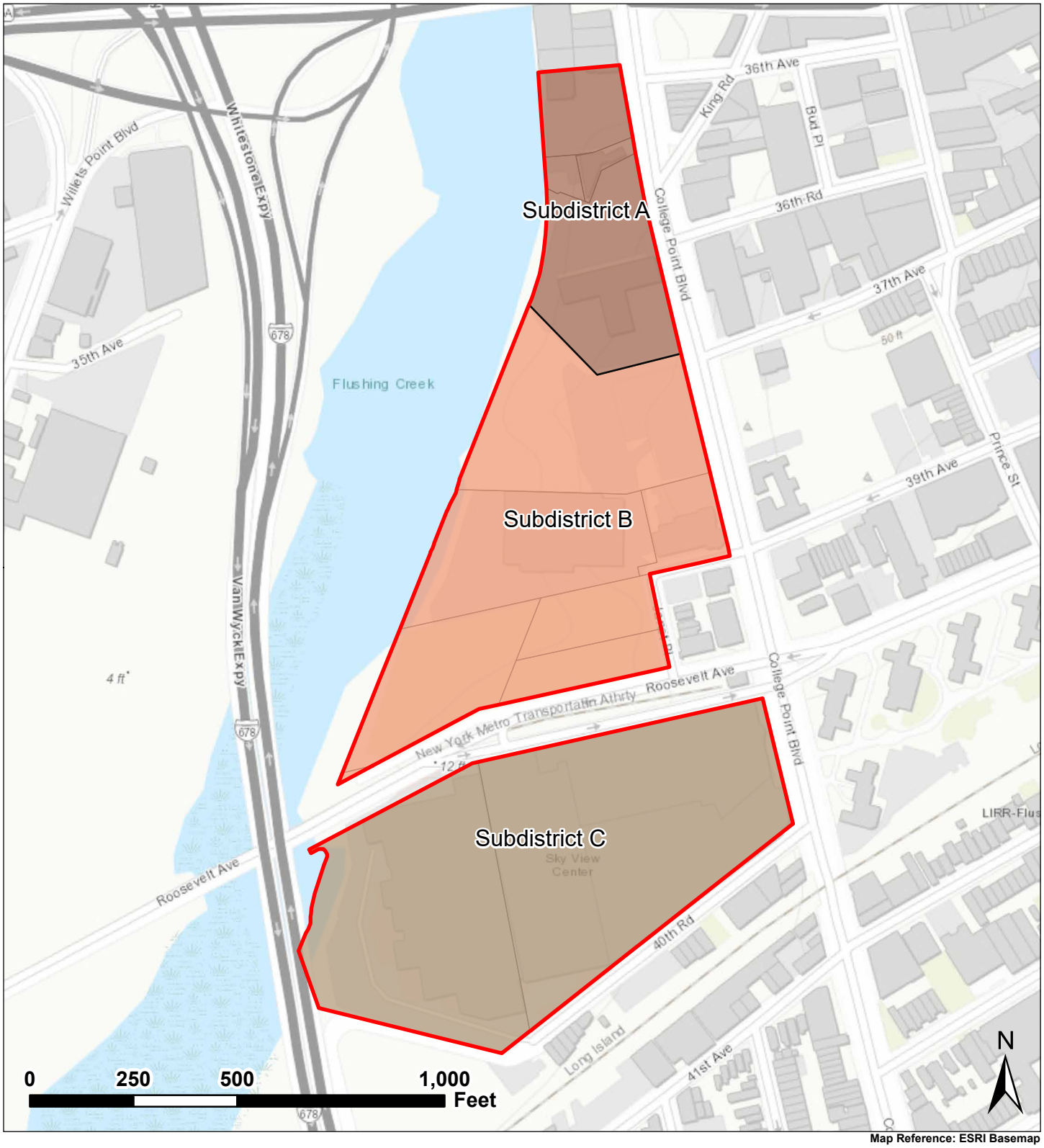
FIGURE A-7

SPECIAL FLUSHING WATERFRONT DISTRICT

PROPOSED SUBDISTRICTS MAP



Map Reference: ESRI Basemap

Special Flushing Waterfront District

Subdistrict A

Subdistrict B

Subdistrict C

FLUSHING, QUEENS, NY

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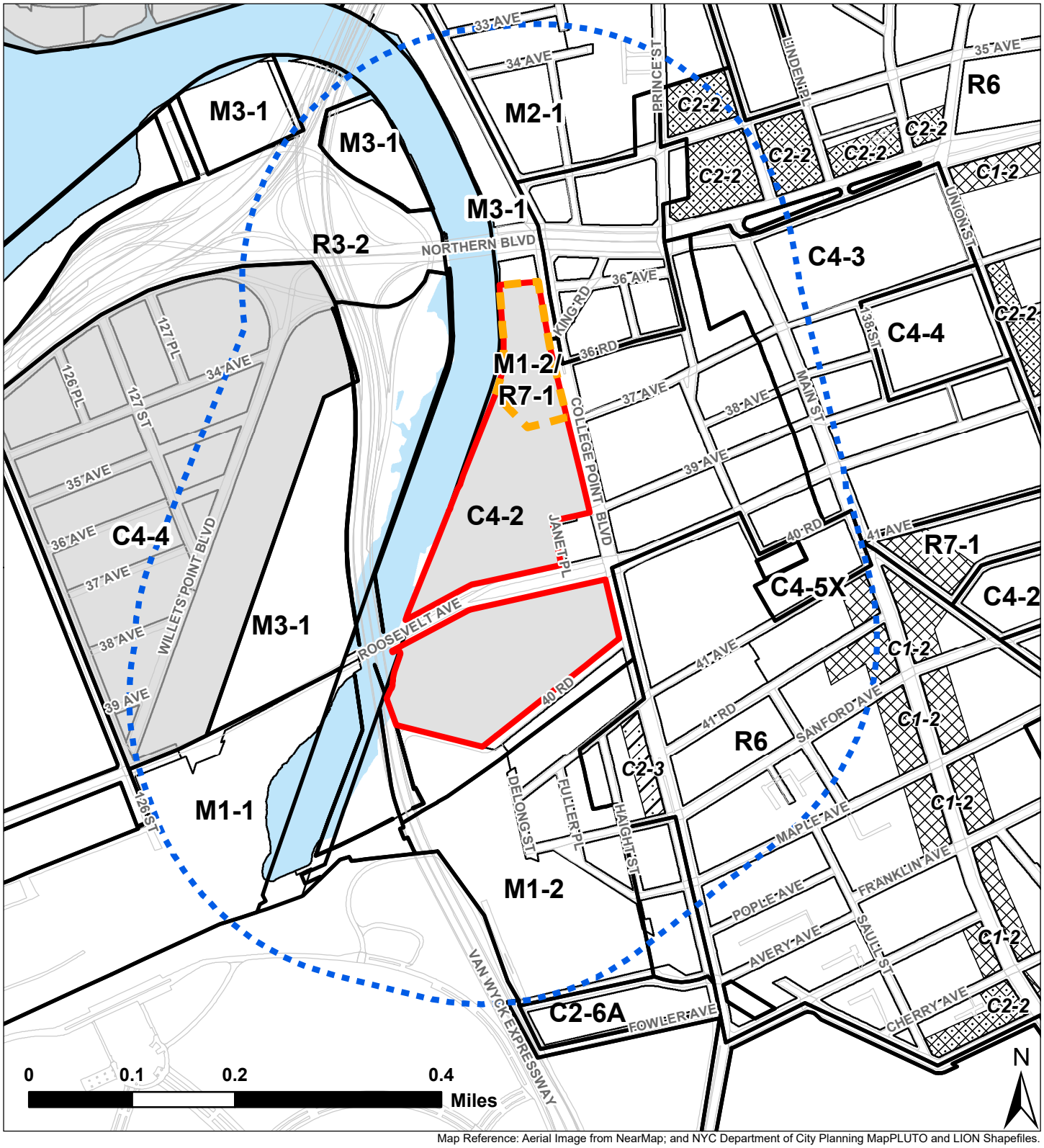
FIGURE A-8

SPECIAL FLUSHING WATERFRONT DISTRICT

PROPOSED ZONING MAP



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area

0.25-mile radius

Proposed Rezoning

Zoning District

Special Purpose District

Commercial Overlay

C1-2

C2-2

C2-3

FLUSHING, QUEENS, NY

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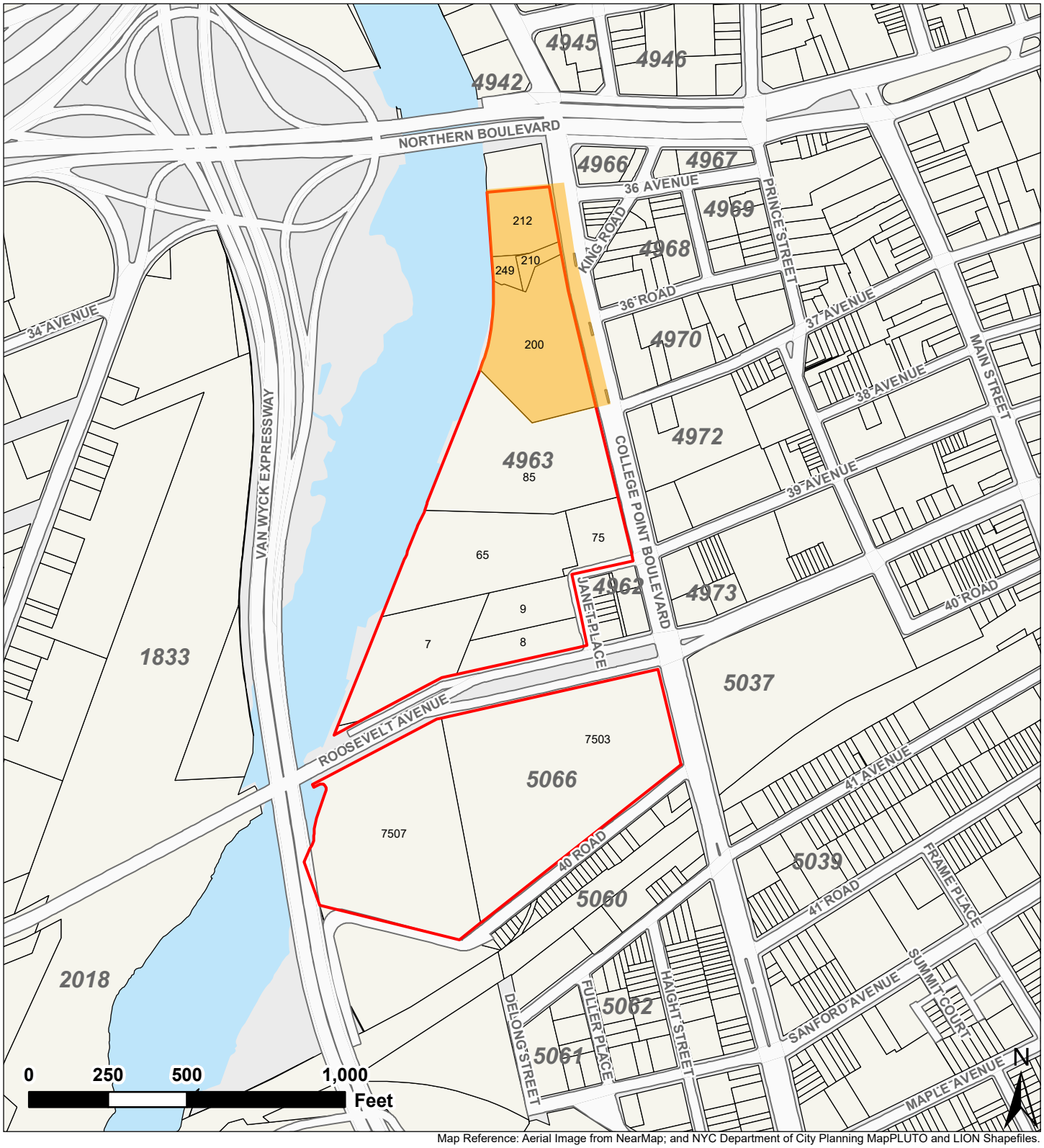
FIGURE A-9

SPECIAL FLUSHING WATERFRONT DISTRICT

MANDATORY INCLUSIONARY HOUSING AREA



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area

MIH Area 1 - mm/dd/yy, MIH Program Option 1 and 2

7 Tax Lot

4963 Tax Block

FLUSHING, QUEENS, NY

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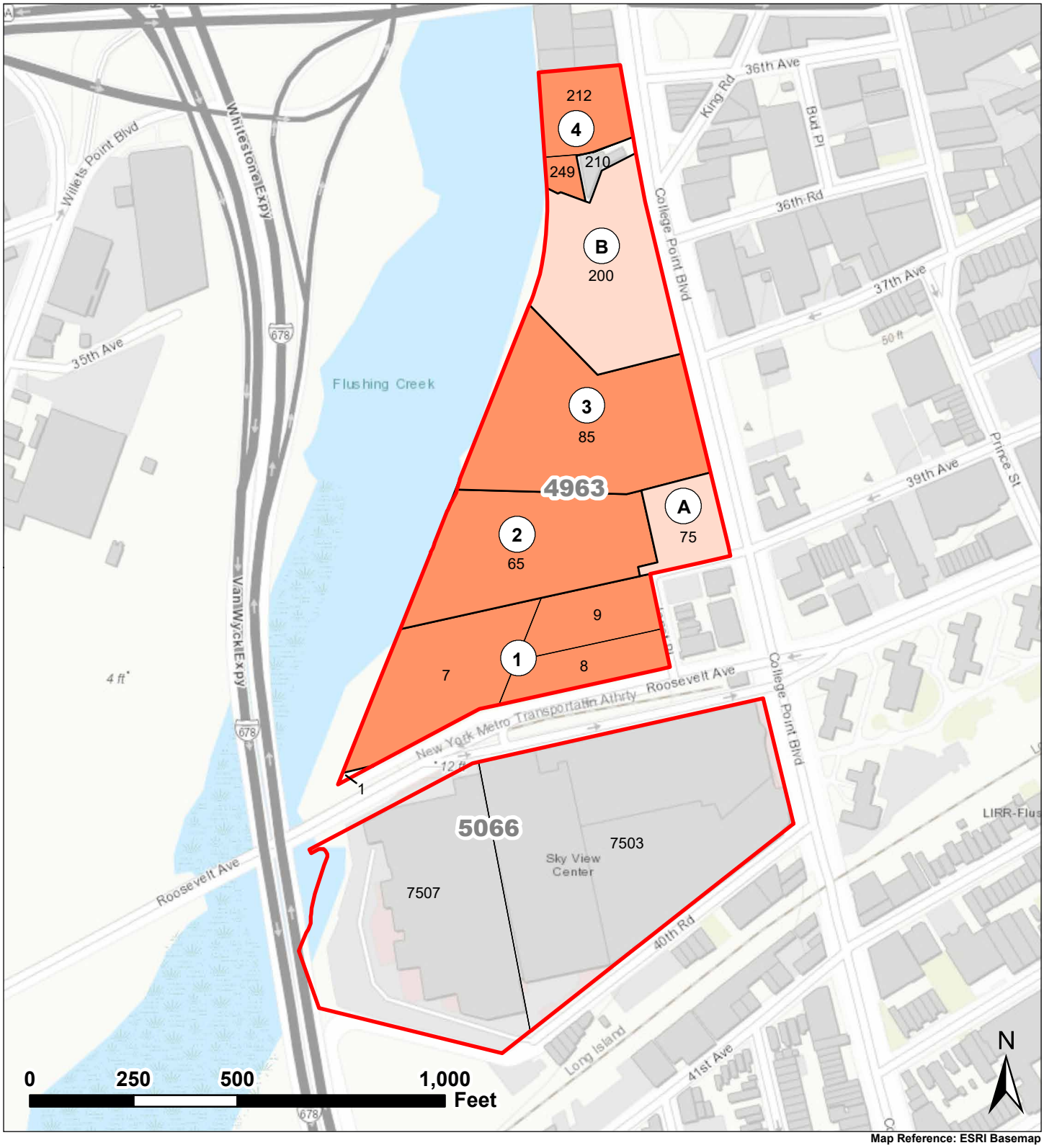
FIGURE A-10

SPECIAL FLUSHING WATERFRONT DISTRICT

PROJECTED AND POTENTIAL DEVELOPMENT SITES



Map Reference: ESRI Basemap

Project Area

4963 Tax Block

1 Projected Development Sites

A Potential Development Sites

7 Tax Lot

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE A-11
NO-ACTION ILLUSTRATIVE SITE PLAN

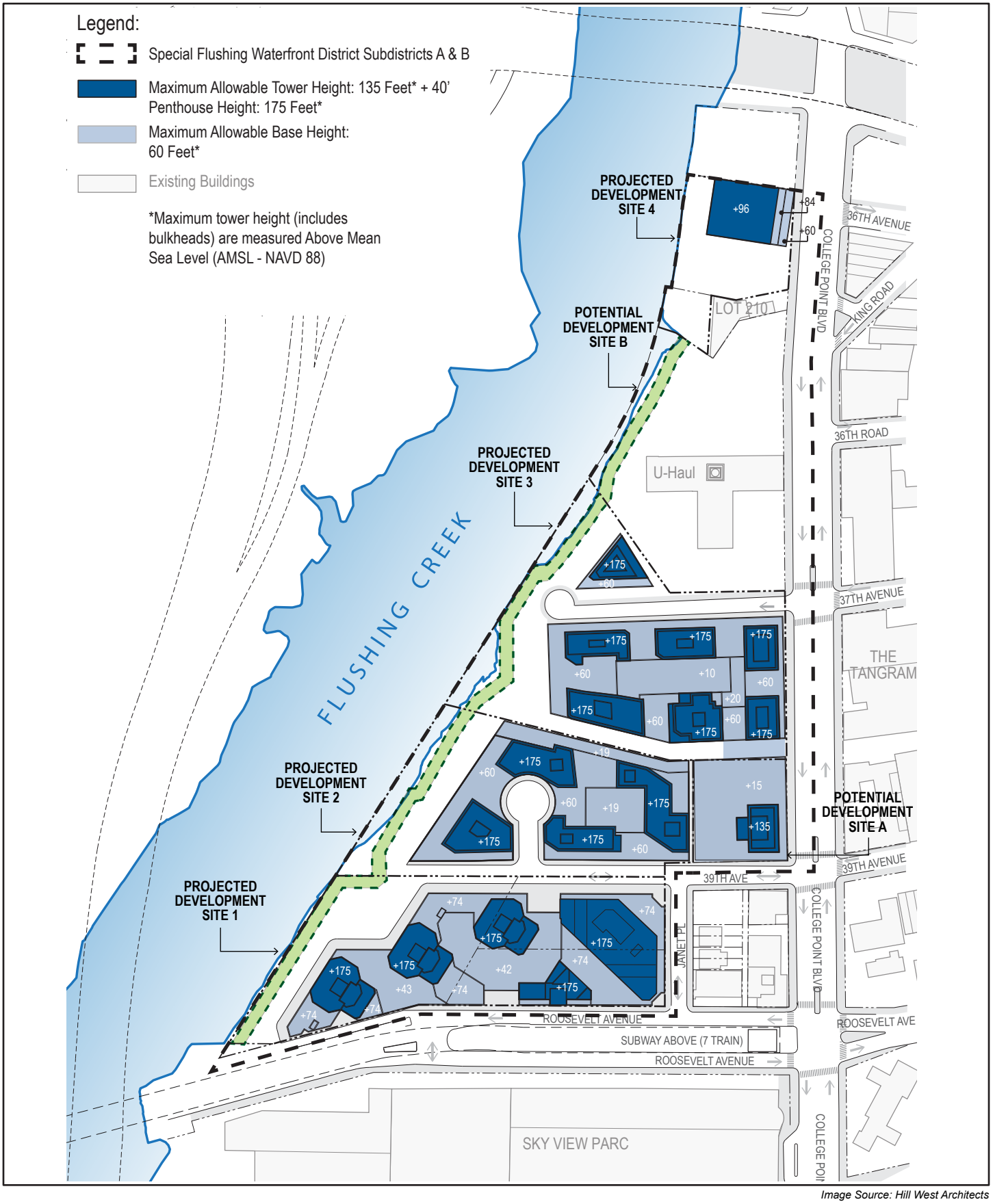

Image Source: Hill West Architects
For Illustrative Purposes Only

FLUSHING, QUEENS, NY

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FIGURE A-12

SPECIAL FLUSHING WATERFRONT DISTRICT

WITH-ACTION ILLUSTRATIVE SITE PLAN

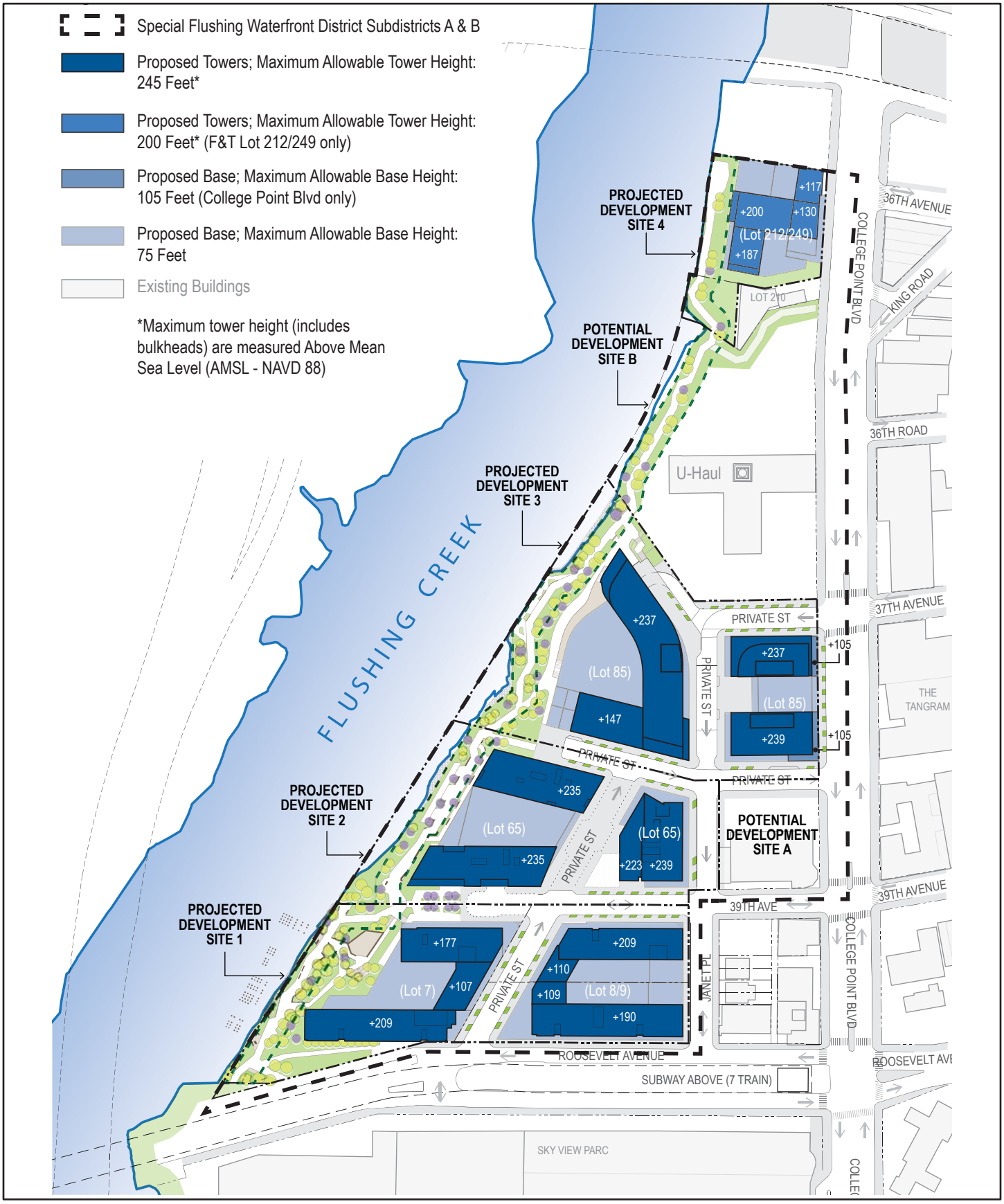

Image Source: Hill West Architects
For Illustrative Purposes Only

FLUSHING, QUEENS, NY

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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.

NOTE: The information in the table below only applies to the Applicant-owned sites.

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
LAND USE				
Residential	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type of residential structures	n/a	Multifamily elevator	Multifamily elevator	Multifamily elevator
No. of dwelling units	0	1,463	1,756	293
No. of low- to moderate-income units	0	0	61	61
Gross floor area (sq. ft.)	0	1,335,821	1,574,815	238,994
Commercial	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
Describe type (retail, office, other)	n/a	Retail, Hotel, Office	Retail, Hotel, Office	
Gross floor area (sq. ft.)	n/a	Retail: 304,148 Hotel: 794,327 Office: 305,004 Total: 1,403,479	Retail: 714,588 Hotel: 298,811 Office: 383,641 Total: 1,397,040	Retail: -5,337 Hotel: -79,739 Office: 78,637 Total: -6,439
Manufacturing/Industrial	☐ YES ☒ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type of use	n/a	Self-storage facility	n/a	
Gross floor area (sq. ft.)	n/a	128,500	n/a	-128,500
Open storage area (sq. ft.)	n/a	n/a	n/a	
If any unenclosed activities, specify:	n/a	n/a	n/a	
Community Facility	☐ YES ☒ NO	☒ YES ☐ NO	☐ YES ☒ NO	
If "yes," specify the following:				
Type	n/a	Unknown	Unknown	
Gross floor area (sq. ft.)	n/a	19,875	22,913	2,038
Vacant Land	☒ YES ☐ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:	Lots 7, 8, 9, 65, 85, 212, 249	n/a	n/a	
Publicly Accessible Open Space	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify type (mapped City, State, or Federal parkland, wetland—mapped or otherwise known, other):	n/a	shore public walkway	shore public walkway, plaza	
Other Land Uses	☐ YES ☒ NO	☐ YES ☒ NO	☐ YES ☒ NO	
If "yes," describe:	n/a	n/a	n/a	
PARKING				
Garages	☐ YES ☒ NO	☒ YES ☐ NO	☒ YES ☐ NO	
If "yes," specify the following:				
No. of public spaces	n/a	0	0	
No. of accessory spaces	n/a	3,214	1,533	-1,681
Operating hours	n/a	24	24	

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
Attended or non-attended	n/a	Unknown	Unknown	

Part II: TECHNICAL ANALYSIS

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

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

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

iv. Indirect Business Displacement		
○ Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	☐	☒
○ Would the project capture retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	☐	☒
v. Effects on Industry		
○ Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area? N/A	☐	☐
○ Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses? N/A	☐	☐
3. *COMMUNITY FACILITIES*: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
○ Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, health care facilities, day care centers, police stations, or fire stations?	☐	☒
(b) Indirect Effects		
i. Child Care Centers		
○ Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project result in a collective utilization rate of the group child care/Head Start centers in the study area that is greater than 100 percent?	☐	☐
○ If "yes," would the project increase the collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☐
ii. Libraries		
○ Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	☐	☒
○ If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	☐	☐
○ If "yes," would the additional population impair the delivery of library services in the study area?	☐	☐
iii. Public Schools		
○ Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	☒	☐
○ If "yes," would the project result in a collective utilization rate of the elementary and/or intermediate schools in the study area that is equal to or greater than 100 percent?	☒	☐
○ If "yes," would the project increase this collective utilization rate by 5 percent or more from the No-Action scenario?	☐	☒
iv. Health Care Facilities		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of health care facilities in the area?	☐	☒
v. Fire and Police Protection		
○ Would the project result in the introduction of a sizeable new neighborhood?	☐	☒
○ If "yes," would the project affect the operation of fire or police protection in the area?	☐	☒
4. *OPEN SPACE*: CEQR Technical Manual Chapter 7		
(a) Would the project change or eliminate existing open space?	☐	☒
(b) Is the project located within an under-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
(c) If "yes," would the project generate more than 50 additional residents or 125 additional employees?	☐	☐
(d) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	☐	☒
(e) If "yes," would the project generate more than 350 additional residents or 750 additional employees?	☐	☐
(f) If the project is located in an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	☒	☐
(g) If "yes" to questions (c), (e), or (f) above, attach supporting information to answer the following:		
○ If in an under-served area, would the project result in a decrease in the open space ratio by more than 1 percent?	☐	☐
○ If in an area that is not under-served, would the project result in a decrease in the open space ratio by more than 5 percent?	☐	☒
○ If "yes," are there qualitative considerations, such as the quality of open space, that need to be considered? Please specify:	☐	☐
5. *SHADOWS*: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	☒	☐

(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	☒	☐
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow would reach any sunlight-sensitive resource at any time of the year. See Attachment F		
6. *HISTORIC AND CULTURAL RESOURCES*: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	☒	☐
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	☒	☐
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Attachment G		
7. *URBAN DESIGN AND VISUAL RESOURCES*: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	☒	☐
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	☒	☐
(c) If "yes" to either of the above, please provide the information requested in Chapter 10.		
8. *NATURAL RESOURCES*: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	☒	☐
○ If "yes," list the resources and attach supporting information on whether the project would affect any of these resources. See Attachment I		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed?	☐	☒
○ If "yes," complete the Jamaica Bay Watershed Form and submit according to its instructions.		
9. *HAZARDOUS MATERIALS*: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	☒	☐
(b) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	☒	☐
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	☒	☐
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	☒	☐
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (*e.g.*, gas stations, oil storage facilities, heating oil storage)?	☒	☐
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	☐	☒
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	☒	☐
(h) Has a Phase I Environmental Site Assessment been performed for the site?	☒	☐
○ If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: See Attachment J	☐	☐
(i) Based on the Phase I Assessment, is a Phase II Investigation needed? See Attachment J	☐	☐
10. *WATER AND SEWER INFRASTRUCTURE*: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	☐	☒
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	☒	☐
(c) If the proposed project located in a separately sewered area, would it result in the same or greater development than that listed in Table 13-1 in Chapter 13?	☐	☐
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	☒	☐

(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	☒	☐
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	☐	☒
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	☐	☒
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	☒	☐
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation. See Attachment K		
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): 213,524		
○ Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	☒	☐
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	☐	☒
○ If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	☐	☐
12. *ENERGY*: CEQR Technical Manual Chapter 15		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs): 507,202,402		
(b) Would the proposed project affect the transmission or generation of energy?	☐	☒
13. *TRANSPORTATION*: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	☒	☐
(b) If "yes," conduct the appropriate screening analyses, attach back up data as needed for each stage, and answer the following questions:		
○ Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	☐	☒
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? ***It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.*	☐	☐
○ Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	☐	☒
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway/rail trips per station or line?	☐	☐
○ Would the proposed project result in more than 200 pedestrian trips per project peak hour?	☐	☒
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	☐	☐
14. *AIR QUALITY*: CEQR Technical Manual Chapter 17		
(a) *Mobile Sources*: Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	☒	☐
(b) *Stationary Sources*: Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	☒	☐
○ If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed) See Attachment N	☐	☐
(c) Does the proposed project involve multiple buildings on the project site?	☒	☐
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	☐	☒
(e) Does the proposed project site have existing institutional controls (*e.g.*, (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	☐	☒
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See Attachment N		
15. *GREENHOUSE GAS EMISSIONS*: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	☐	☒
(b) Would the proposed project fundamentally change the City's solid waste management system?	☐	☒
(c) Would the proposed project result in the development of 350,000 square feet or more?	☒	☐
(d) If "yes" to any of the above, would the project require a GHG emission assessment based on guidance in Chapter 18?	☐	☒
○ If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (See Local Law 22 of 2008; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	☐	☐
16. *NOISE*: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	☒	☐

(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	☒	☐
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	☐	☒
(d) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	☒	☐
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. See Attachment O		
17. *PUBLIC HEALTH*: CEQR Technical Manual Chapter 20		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	☒	☐
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary. No unmitigated significant adverse impacts were identified in the Air Quality, Hazardous Materials, or Noise assessments.		
18. *NEIGHBORHOOD CHARACTER*: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	☒	☐
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. See Attachment Q		
19. *CONSTRUCTION*: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
○ Construction activities lasting longer than two years?	☒	☐
○ Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	☒	☐
○ Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, *etc.*)?	☒	☐
○ Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	☒	☐
○ The operation of several pieces of diesel equipment in a single location at peak construction?	☒	☐
○ Closure of a community facility or disruption in its services?	☐	☒
○ Activities within 400 feet of a historic or cultural resource?	☒	☐
○ Disturbance of a site containing or adjacent to a site containing natural resources?	☒	☐
○ Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	☒	☐
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. See Attachment R		

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
Rachel Belsky		12/11/2019

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

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

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

IMPACT CATEGORY	Potentially Significant Adverse Impact: YES	NO
Land Use, Zoning, and Public Policy	☐	☒
Socioeconomic Conditions	☐	☒
Community Facilities and Services	☐	☒
Open Space	☐	☒
Shadows	☐	☒
Historic and Cultural Resources	☐	☒
Urban Design/Visual Resources	☐	☒
Natural Resources	☐	☒
Hazardous Materials	☐	☒
Water and Sewer Infrastructure	☐	☒
Solid Waste and Sanitation Services	☐	☒
Energy	☐	☒
Transportation	☐	☒
Air Quality	☐	☒
Greenhouse Gas Emissions	☐	☒
Noise	☐	☒
Public Health	☐	☒
Neighborhood Character	☐	☒
Construction	☐	☒

2. Are there any aspects of the project relevant to the determination of whether the project may have a significant impact on the environment, such as combined or cumulative impacts, that were not fully covered by other responses and supporting materials? ☐ YES ☒ NO

If there are such impacts, attach an explanation stating whether, as a result of them, the project may have a significant impact on the environment.

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

☐ **Positive Declaration:** If the lead agency has determined that the project may have a significant impact on the environment, and if a Conditional Negative Declaration is not appropriate, then the lead agency issues a *Positive Declaration* and prepares a draft Scope of Work for the Environmental Impact Statement (EIS).

☐ **Conditional Negative Declaration:** A *Conditional Negative Declaration* (CND) may be appropriate if there is a private applicant for an Unlisted action AND when conditions imposed by the lead agency will modify the proposed project so that no significant adverse environmental impacts would result. The CND is prepared as a separate document and is subject to the requirements of 6 NYCRR Part 617.

☒ **Negative Declaration:** If the lead agency has determined that the project would not result in potentially significant adverse environmental impacts, then the lead agency issues a *Negative Declaration*. The *Negative Declaration* may be prepared as a separate document (see template) or using the embedded Negative Declaration on the next page.

4. ***LEAD AGENCY'S CERTIFICATION***

TITLE	LEAD AGENCY
Acting Director, Environmental Assessment and Review Division	Department of City Planning, acting on behalf of the City Planning Commission
NAME: Olga Abinader	DATE: 12/13/2019
SIGNATURE: Olga Abinader	

NEGATIVE DECLARATION (Use of this form is optional)

Statement of No Significant Effect

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

Reasons Supporting this Determination

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

Air Quality, Noise, and Hazardous Materials

An (E) designation (E-557) for air quality, noise, and hazardous materials has been incorporated into the proposed actions. Refer to "Determination of Significance Appendix: (E) Designation" for a list of the sites affected by the proposed (E) designation and applicable (E) designation requirements. With these measures in place, the proposed actions would not result in significant adverse impacts to air quality, noise, or hazardous materials.

Land Use, Zoning, and Public Policy

The EAS includes a detailed analysis of the proposed actions on Land Use, Zoning, and Public Policy and determined that no significant adverse impacts would occur. The proposed actions, which include a Zoning Text Amendment and Zoning Map Amendment to establish a new Special Purpose District coterminous with the project area, would facilitate the development of nine new mixed-use buildings on four sites along the Flushing waterfront in Queens, Community District 7. The proposed project intends to create opportunities for the creation of affordable housing and encourage walkability and connectivity between Downtown Flushing and the Flushing Creek waterfront. While the proposed actions would result in modest land use changes to the project area when compared to what could be developed in the No-Action Condition, development in the With-Action Condition would be consistent with current development trends in the study area and other planned development projects. The proposed modifications to existing zoning would facilitate the development of the proposed project, which would be consistent with the City's land use, zoning, and public policy objectives for the study area. The proposed actions would therefore not result in a significant adverse impact on land use, zoning, or public policy and no further assessment is warranted.

Shadows

The EAS includes a detailed shadows analysis, which focuses on incremental shadows cast on Flushing Creek. The *CEQR Technical Manual* (CEQR TM) states that a significant adverse shadow impact could occur on a sunlight sensitive resource if that resource would receive less than four to six hours of direct sunlight per day during the growing season. The CEQR TM also states that the features of a natural resource indicate its sensitivity to shadows. The detailed analysis shows that the incremental shadow would increase shadow duration on the high marsh and intertidal marsh areas over the No-Action condition by a few minutes on each analysis day; however, no area of Flushing Creek would be permanently shaded such that it would affect aquatic biota or vegetation. As such, the proposed actions would not result in a significant adverse shadows impact to Flushing Creek, and no further analysis is warranted.

Historic and Cultural Resources

The EAS includes an analysis of historic and cultural resources.

Architectural Resources The proposed actions would not result in any type of visual or contextual impacts to the known historic resource within the study area, which represent the thresholds of impact significance in the CEQR TM. Based on correspondence with NYC Landmarks Preservation Commission (LPC) and NYS Historic Preservation Office (SHPO), there is one S/NR-eligible building within the study area, which contains a U-Haul storage building, that would not be directly affected by the proposed actions. The new commercial building on Potential Development Site B, located north of the existing U-Haul storage building, would not affect the characteristics that make the U-Haul building eligible under S/NR criteria. Based on the assessment presented, the proposed actions do not have the potential to result in significant adverse impacts to architectural resources, and no further assessment is warranted.

Archaeological Resources The CEQR TM states that if any potential significant archaeological resources were identified on the site of the proposed project, and the project may disturb or destroy those resources in any way, a significant adverse impact would occur. LPC has determined that the project area has no archeological sensitivity. As such, no significant adverse impacts related to archaeological resources would occur.

Urban Design and Visual Resources

The EAS includes a detailed urban design and visual resources analysis. The CEQR TM states that determining impact significance requires consideration of the degree to which a project would result in a change to the built environment's arrangement, appearance, or functionality and whether the change would negatively affect a pedestrian's experience of the area. The proposed actions would result in waterfront open space and circulation improvements over the No-Action Condition. The proposed actions would modify permissible building bulk to accommodate these improvements; however, the incremental change between the With-Action and No-Action building form would be minimal, and the public realm – the private street network, open space, the shore public walkway, building articulation requirements, and connections across College Point Boulevard to downtown Flushing – would encourage walkability and connectivity. Accordingly, the proposed actions would not result in a significant adverse urban design and visual resource impact, and no further assessment is warranted.

Water and Sewer Infrastructure

The EAS includes a preliminary assessment of water and sewer infrastructure. The project area is within a direct drainage area, where all stormwater runoff would be discharged directly into Flushing Creek using internal drains and privately-owned outfalls. Compared to existing conditions, it is anticipated that development in the With-Action Condition would generate a net increase in stormwater volumes discharged into Flushing Creek during rainfall events ranging between approximately 0.02 and 0.14 mg. The incorporation of best management practices, enforced through a restrictive declaration, to improve water quality of the stormwater runoff would further limit the impact from the proposed actions. As a result, the proposed actions are not anticipated to result in any potentially significant adverse impacts on New York City's stormwater infrastructure or treatment facilities.

Solid Waste and Sanitation Services

The EAS includes a detailed analysis of solid waste and sanitation services. According to the CEQR TM, a solid waste and sanitation services assessment is intended to determine whether a project has the potential to cause a substantial increase in solid waste production that may overburden available waste management capacity or otherwise be inconsistent with the City's Solid Waste Management Plan (SWMP). Based on the average DSNY truck capacity of approximately 12.5 tons, the proposed actions would produce an increment of less than one DSNY truckload of solid waste per week. The additional solid waste resulting from the proposed actions would represent a 0.005 percent increase of the City's anticipated DSNY-managed waste generation per week in 2025, and a 0.003 percent decrease of the solid waste handled by private commercial carters per week in 2025. As such, the proposed actions would be consistent with the goals of the SWMP, and therefore the proposed actions would not result in a significant adverse impact on solid waste and sanitation services and no further analysis is warranted.

Transportation

The EAS includes a detailed transportation analysis. The proposed actions would implement, through a restrictive declaration, Project Components Related to the Environment (PCREs) in the Future With-Action Condition to accommodate project-generated traffic and pedestrian volumes in the study area. With the PCREs in place, based on the results of detailed traffic, pedestrian, and vehicular and pedestrian safety analyses, the proposed actions would not adversely affect the transportation conditions in the study area. In addition, prior to the implementation of PCREs, a Transportation Monitoring Plan will be completed in consultation with NYCDOT to allow for any potential revisions to the PCREs as well as their implementation schedule.

Construction

The EAS includes a detailed analysis of construction air quality. The CEQR TM states that construction impacts on air quality may result from particulate matter emitted by construction activities, exhaust and emissions from construction equipment, increased truck traffic to and from the construction site, or temporary road closings. The detailed analysis of construction air quality, as well as the construction noise analysis, incorporated use of certain equipment plus a number of best management practices as part of the analyses. The restrictive declaration that

will be imposed upon the applicant will specify these practices as PCREs. In addition, the restrictive declaration will require the appointment of an independent environmental monitor to ensure that these and other construction-related PCREs are implemented during the development of the applicant's proposed project. With the incorporation of these measures, the proposed actions would not result in significant adverse impacts related to construction activities.

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 Diane McCarthy at (212) 720-3417.

TITLE Director, Environmental Assessment and Review Division	**LEAD AGENCY** Department of City Planning, acting on behalf of the City Planning Commission 120 Broadway, 31st Fl. New York, NY 10271 | (212) 720-3493
NAME Olga Abinader	**DATE** December 13, 2019
SIGNATURE Olga Abinader	
TITLE Chair, City Planning Commission	
NAME Marisa Lago	**DATE** December 16, 2019
SIGNATURE	

Project Name: Special Flushing Waterfront District
CEQR #: 20DCP083Q
SEQRA Classification: Type I

Determination of Significance Appendix: (E) Designation (E-557)

Hazardous Materials

To ensure that there would be no significant adverse hazardous materials impacts associated with the proposed project, an E designation (E-557) will be placed on the project site as follows:

Block 4963, Lots 7, 8, 9, 65, 75, 85, 200, 212, 249:
(Projected Development Sites 1, 2, 3, 4 and Potential Development Sites A and B)

Task 1 - Sampling Protocol

The applicant submits to OER, for review and approval, a Phase 1A of the site along with a soil and groundwater testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented. If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of sample sites should be selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2 - Remediation Determination and Protocol

A written report with findings and a summary of the data must be submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER. If remediation is indicated from the test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER. The applicant should then provide proper documentation that the work has been satisfactorily completed. An OER-approved construction-related health and safety plan would be implemented during evacuation and construction and activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This plan would be submitted to OER for review and approval prior to implementation.

Air Quality

To ensure that there would be no significant adverse hazardous materials impacts associated with the proposed project, an E designation (E-557) will be placed on the project site as follows:

Block 4963, Lot 7 (Projected Development Site 1W):
Any new residential and/or commercial development on Block 4963, Site 1, Lot 7 must exclusively use natural gas as the type of fuel and boilers equipped with low NOx burners (30 ppm) for HVAC systems, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 239.2 feet above mean sea level (0.0 NAVD88) and at least 156 feet away from the East line of Lot 7 (measured parallel to the North line of Lot 7) to avoid any potential significant air quality impacts.

Block 4963, Lot 8 (Projected Development Site 1E South):
Any new residential and/or commercial development on Block 4963, Site 1, Lot 8 must exclusively use natural gas as the type of fuel and boilers equipped with low-NOx burners (30 ppm) for HVAC systems, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 210 feet above mean sea level (0.0 NAVD88) to avoid any potential significant air quality impacts.

Block 4963, Lot 9 (Projected Development Site 1E North):
Any new residential and/or commercial development on Block 4963, Site 1, Lot 9 must exclusively use natural gas as the type of fuel and boilers equipped with low-NOx burners (30 ppm) for HVAC systems, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 229.3 feet above mean sea level (0.0 NAVD88), to avoid any potential significant air quality impacts.

Block 4963, Lot 65 (Projected Development Site 2W):
Any new residential and/or commercial development on Block 4963, Site 2W must exclusively use natural gas as the type of fuel and boilers equipped with low-NOx burners (30 ppm) for HVAC systems, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 245 feet above mean sea level (0.0 NAVD88), at least 490 feet away from the East line of Lot 65, at least 276 feet away from the North line of Lot 65 (measured parallel to the West line of Lot 65), to avoid any potential significant air quality impacts. Additionally, Site 2W must have no air intakes in the bulkheads, no air intakes above 235 feet on the north edge of the South Tower, and no air intakes above 234 feet within 30 feet of the stack.

Block 4963, Lot 65 (Projected Development Site 2E):
Any new residential and/or commercial development on Block 4963, Site 2E must exclusively use natural gas as the type of fuel and boilers equipped with low NOx burners (30 ppm) for HVAC systems, have no operable windows and air intakes above 232.5 feet, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 245 feet above mean sea level (0.0 NAVD88), and at most 75 feet away from the East line of Lot 65, to avoid any potential significant air quality impacts.

Block 4963, Lot 85 (Projected Development Site 3W South):
Any new residential and/or commercial development on Block 4963, the 147 foot tier of Site 3W, must exclusively use natural gas as the type of fuel and boilers equipped with low NO_x burners (30 ppm) for HVAC systems, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 162 feet above mean sea level (0.0 NAVD88) and at least 377 feet away from the East line of Lot 85 and 44 feet away from the South line of Lot 85 (measured perpendicular to the line), to avoid any potential significant air quality impacts.

Block 4963, Lot 85 (Projected Development Site 3W North):
Any new residential and/or commercial development on Block 4963, the 237 foot tier of Site 3W, must exclusively use natural gas as the type of fuel and boilers equipped with low NOx burners (30 ppm) for HVAC systems, have no operable windows and air intakes above 235 feet, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located 245 feet above mean sea level (0.0 NAVD88), and at least 271 feet away from the South line of Lot 85, to avoid any potential significant air quality impacts.

Block 4963, Lot 85 (Projected Development Site 3E):
Any new residential and/or commercial development on Block 4963, the 237 foot tier of Site 3E, must exclusively use natural gas as the type of fuel and boilers equipped with low NO_x burners (30 ppm) for HVAC systems, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 245 feet above mean sea level (0.0 NAVD88), and 143' away from the East line of Lot 85 to avoid any potential significant air quality impacts.

Block 4963, Lot 200 (Potential Development Site B):
Any new residential and/or commercial development on Block 4963, Lot 200 must exclusively use natural gas as the type of fuel and ensure that the heating, ventilating and air conditioning stack(s) is located at least 165 feet above mean sea level (0.0 NAVD88) to avoid any potential significant air quality impacts.

Noise

To ensure that there would be no significant adverse hazardous materials impacts associated with the proposed project, an E designation (E-557) will be placed on the project site as follows:

Block 4963, Lots 7/8/9 (Development Site 1W):
To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 40 dBA window/wall attenuation on facades facing Roosevelt Avenue and 38 dBA of attenuation on portions of facades facing the eastern lot line within 50 feet of Roosevelt Avenue and 31 dBA of attenuation on all other facades to maintain an interior noise level not greater than 45 dBA for residential, hotel, and community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lots 7/8/9 (Development Site 1E):
To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 38 dBA window/wall attenuation on all facades facing Roosevelt Avenue or portions of façades facing Janet Place or western lot line within 50 feet of Roosevelt Avenue and 31 dBA of attenuation on all other facades to maintain an interior noise level not greater than 45 dBA for residential, hotel, and community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 65 (Development Site 2W):
To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on all facades facing the eastern lot line or portions of façade facing the northern lot line beyond 180 feet from the northwest corner of the zoning lot and 31 dBA of attenuation on all other facades to maintain an interior noise level not greater than 45 dBA for residential, hotel, and community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 65 (Development Site 2E):
To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 35 dBA of attenuation on facades facing the northern lot line or eastern lot line or western lot line and 31 dBA of attenuation on façade facing the southern lot line to maintain an interior noise level not greater than 45 dBA for residential, hotel, community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 75 (Development Site A):
To ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on all facades to maintain an interior noise level not greater than 45 dBA for residential and hotel uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 85 (Development Site 3W):
To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on all facades facing the eastern lot line or portions of facade facing the northern lot line beyond 145 feet from the northwest corner of the zoning lot or portions of façade facing the southern lot line beyond 180 feet of the southwest corner of the zoning lot and 31 dBA of attenuation on all other facades to maintain an interior noise level not greater than 45 dBA for residential, hotel, community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of

ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 85 (Development Site 3E):
To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on all facades to maintain an interior noise level not greater than 45 dBA for residential, hotel, and community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 200 (Development Site B):
To ensure an acceptable interior noise environment, future commercial office uses must provide a closed-window condition with a minimum of 32 dBA window/wall attenuation on façade facing College Point Boulevard and 30 dBA of attenuation on all other façades to maintain an interior noise level not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lots 212 and 249 (Development Site 4):
To ensure an acceptable interior noise environment, future residential/commercial office/community facility uses must provide a closed-window condition with a minimum of 39 dBA window/wall attenuation on all facades facing College Point Boulevard or portions of façade facing the northern lot line within 100 feet of College Point Boulevard and 35 dBA of attenuation on all façades facing the western lot line or portions of façade facing the northern lot line beyond 100 feet from College Point Boulevard and 33 dBA of attenuation on façade facing the southern lot line to maintain an interior noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial office use. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

PART II: ENVIRONMENTAL (CEQR) ANALYSIS

ATTACHMENT B: LAND USE, ZONING, AND PUBLIC POLICY

INTRODUCTION

A land use analysis assesses a project's compatibility and consistency with the land use patterns and development trends in the area that may be affected by a project and whether it would generate land use changes. Similarly, the analysis considers the project's compliance with, and effect on, the area's zoning and other applicable public policies.

The Applicant, FWRA LLC, seeks approval of the Proposed Actions as described in Attachment A, "Project Description." The Proposed Actions would result in changes to land use and zoning in and surrounding the Project Area; and, affect one or more of the City's public policies including the Waterfront Revitalization Program.

METHODOLOGY

This analysis follows the guidelines set forth in the *CEQR Technical Manual*. According to the *CEQR Technical Manual*, a preliminary assessment includes a basic description of existing and future land uses and zoning. A detailed assessment of land use, zoning, and public policy is appropriate if a project would result in a significant change in land use or would substantially affect regulations or policies governing land use. A detailed analysis is warranted based on the scale of the Proposed Development and the scope of the Proposed Actions.

The study area for the land use, zoning, and public policy assessment is the area in which a project would have the ability to generate land use change. The *CEQR Technical Manual* states that the appropriate study area for land use and zoning is related to the type and size of the project proposed, as well as the location and neighborhood context of the area that could be affected by the project. Suggested study areas range from the area within 400-feet to a 0.5-mile of the project area. This assessment considers the impact of the Proposed Actions within the Project Area and on the area within a 0.25-mile of the Project Area (Figure A-5). A 0.25-mile study area was used to capture the Downtown Flushing area. As described in Attachment A, a goal of the Proposed Project is to serve as an extension of Downtown Flushing and a destination for its residents, workers, and visitors.

The assessment includes a description of the existing land use patterns, development trends, zoning within the study area, and relevant public policies. Based on existing and future conditions, the assessment then concludes whether the Proposed Project is compatible and consistent with these conditions and policies.

Existing land use conditions were identified through field visits (on February 26, 2019; June 3, 2019; and July 9, 2019) resources including New York City Department of City Planning's (DCP) Zoning and Application Portal (ZAP), the Primary Land Use Tax Lot Output (PLUTO) data files, the New York City Mayor's Office of Environmental Coordination's (MOEC) CEQR Access, and the Queens Community District 7 webpage. The Zoning Resolution (ZR) and DCP's web-based Zoning and Land Use Application (ZOLA) were used to identify and describe existing zoning districts in the Study Area. Relevant public policies such as the Mandatory Inclusionary Housing (MIH) program and the

Waterfront Revitalization Program (WRP) were examined to identify the potential for inconsistencies with adopted public policies.

LAND USE

Existing Conditions

Project Area

As discussed in Attachment A, the Project Area has been historically developed with industrial and commercial uses. Projected Development Site 1 was used as a lumber yard and coal company into the 1930s, after which it was a concrete company through 1980 and a mixed industrial/commercial business into the late 1990s. Projected Development 2 has been occupied by commercial and industrial facilities since the 1960s, including an electric instrument company, post office, and supermarket use. Projected Development Site 3 was historically used as a woodworking facility and a petroleum facility, and Projected Development Site 4 was used as a coal yard, masonry yard, asphalt plant, and scrap recycler. Potential Development Site A was historically occupied by an auto sales business, and Potential Development Site B has been occupied by a furniture company and zipper manufacturer.

Currently, the Project Area is developed with mixed-use commercial and residential uses (Sky View Parc), surface parking, light industrial uses, and vacant land (Figure A-5). Sky View Parc is a 14-acre mixed-use development, constructed in phases from 2008 to 2016, which contains approximately one million square feet of residential and commercial uses. Projected Development Site 1 is currently vacant and used for construction staging activities. Projected Development Site 2 is also vacant. Potential Development Site A contains a one-story, 13,440-sf vacant commercial building with an adjacent surface parking lot. Projected Development Site 3 is a surface parking lot and temporary construction staging area. Potential Development Site B contains a surface parking lot and a State and National Register (S/NR) eligible 110,000-square-foot four-story building that houses a U-Haul. The northernmost development site, Projected Development Site 4, is currently vacant and used as a construction storage yard. Lot 210 contains a vacant auto-body shop.

Several factors have influenced the land use patterns of the Project Area. The development sites are surrounded by several highly trafficked roadways (Northern Boulevard to the north and College Point Boulevard to the east), Flushing Creek to the west, and both the MTA Subway's IRT Flushing Line and Long Island Railroad (LIRR) Port Washington Branch to the south which breaks up the street grid that exists to the east of the Project Area and isolates the sites from the Downtown Flushing neighborhood.

Study Area

The Downtown Flushing neighborhood is generally bounded by 36th Avenue to the north, Union Street to the east, Sanford Avenue to the south, and Flushing Creek/Van Wyck Expressway to the west. The neighborhood is characterized by a diverse range of land uses. Historically, Main Street has been the central commercial corridor, bounded by Northern Boulevard to the north and Roosevelt Avenue to the south. This area of Main Street is heavily retail and pedestrian oriented, containing many multi-story retail buildings with large floor plates split among multiple retail tenants, as well

as some office buildings and institutional uses including St. George's Episcopal Church. Roosevelt Avenue is a main east-west corridor that hosts retail uses with large floorplates, particularly between Main Street and Union Street, where there is the New World Mall and a Macy's department store. Both the MTA and the LIRR have stops within Downtown Flushing; the Flushing-Main Street Subway Station is located at Roosevelt Avenue and Main Street, and the LIRR Flushing-Main Street Station is located at 41st Avenue and Main Street. South of 41st Avenue, at which point Kissena Boulevard branches off Main Street, is home to institutional uses including the Queens Library at Flushing. Kissena Boulevard has a more heavily residential character after it departs from Main Street and travels southeast.

The area east of Main Street consists of an established commercial character with multiple office buildings and retail along Roosevelt Avenue. This is also the location of Flushing Commons, a large mixed-use project that is currently being completed in phases and includes a 17-story condominium building and 12-story office building. West of Main Street towards Prince Street, a heavily trafficked secondary corridor, is an area of similar commercial and retail storefronts as well as mixed-use buildings featuring hotel space.

Further west, the area between College Point Boulevard and Prince Street contains a mix of uses, including commercial and industrial low-rise buildings. Mixed-use commercial and residential buildings include the Tangram development, previously known as Two Fulton Square (Block 4972, Lots 65, 66, and 67). Tangram is currently under construction and will feature a four-building, 1.2 million sf mixed residential and commercial (retail and office) development, to be completed in 2020. New mid-rise, mixed-use development is common for this area west of Main Street, due to the proximity to LaGuardia Airport, ease of access to public transportation, and a strong residential market for condominiums.

North of Tangram and 37th Avenue, the area contains manufacturing and industrial uses such as auto businesses and hardware and glass manufacturers. Northern Boulevard is a heavily trafficked roadway that operates as somewhat of a barrier as it lacks sufficient pedestrian and vehicular connections. The roadway is generally bordered by industrial uses on the north and south, although the southern section between Prince and Main Streets contains some retail storefronts. East of Prince Street and north of Northern Boulevard are a mix of uses, including commercial, mixed-use, institutional, and multi-family walk-ups. West of Prince Street is heavily industrial along the waterfront, containing both concrete and asphalt plants.

The lot immediately north of the Project Area is occupied by several one-story industrial and manufacturing warehouses (Block 4963, Lot 221). College Point Boulevard just east of the Project Area is developed with some storefronts and a mix of commercial and industrial uses. Just east of Projected Development Site 1, the small block bounded by 39th Avenue, College Point Boulevard, Roosevelt Avenue, and Janet Place is developed with a 12-story hotel at the intersection of Roosevelt and College Point Boulevard, with warehouse-style commercial and light industrial buildings fronting Roosevelt and 39th Avenues. Two attached one- and two-family residential buildings front Janet Place.

To the east of Sky View Parc along Roosevelt Avenue are a strip of commercial uses ranging from two-story retail buildings to an over 40-unit condominium mixed-use building. Five multi-family

elevator buildings known as the Bland Houses (NYCHA) are on the opposite side of College Point Boulevard across from Sky View Parc, with the Bland Playground directly behind the houses on 40th Road. As Roosevelt Avenue approaches the Main Street Subway Station, larger floorplate mall-style buildings are featured as retail development radiates from the Main Street commercial corridor.

Southeast of the Project Area and west of Main Street are a mix of offices, one- and two-family buildings, in addition to mixed-use development on 41st Avenue and 41st Road. Further south towards Maple Avenue are more residential areas of Flushing, developed with one- and two-family buildings and multi-family walk-ups. The LIRR Port Washington Branch creates a transition in the Flushing neighborhood from the heavily commercialized area north of 41st Avenue to a more mixed-use residential community to the south by breaking the street grid.

A mainly industrial and vacant area is found south of Sky View Parc with some commercial, mixed-use, and one- and two-family residences between 40th Road and Maple Avenue. Some commercial low-rise buildings are found on College Point Boulevard with a Home Depot at the southernmost point of the study area along Avery Avenue. A small portion of the approximately 898-acre Flushing-Meadows Corona Park is in the southwestern-most portion of the Study Area.

West of the Project Area across Flushing Creek is the historically industrial neighborhood of Willets Point, which primarily consists of low-density auto-related uses. Other uses in this area include the NYC Department of Transportation (DOT) Harper Street Asphalt Plant located at the northernmost point of Willets Point, west of the Whitestone Expressway along Marina Road. Willets Point has been the focus of City redevelopment efforts for over a decade, including the approval of the Special Willets Point District in 2008. A more recent redevelopment effort for the first phase of the development of Willets Point has been proposed for the area, with plans for 1,100 units of affordable housing on six acres[13], half of which (550 units) are anticipated to be completed by the project analysis year of 2025.

No-Action Condition

Project Area

The existing land use patterns of the Project Area, in which the development sites are largely vacant and isolated from the rest of the Downtown Flushing neighborhood, would be improved in the No-Action Condition through the mixed-use development of the Project Area. Projected Development Sites 1, 2, and 3 would be developed to the maximum permitted floor area pursuant to the existing C4-2 zoning. New development would consist of high lot coverage buildings with active ground floor uses, and residential towers atop commercial podiums. The development on Projected Development Sites 1, 2, and 3 would create a mixed-use community made up of residential, commercial (hotel, office, and retail), community facility, and accessory parking uses. New access driveways would be established along the prolongations of 39th Avenue and 37th Avenue to provide access to the new development on the sites. The driveways would also serve as upland connections pursuant to the existing Downtown Flushing WAP (Q-2). Approximately 0.6 acres of publicly accessible open space would be provided as part of the shore public walkway. Projected Development Sites 1, 2, and 3

[13] Willets Point Neighborhood Planning (https://www.nycedc.com/project/willets-point-development; accessed November 13, 2019)

would be constructed upon mostly vacant, undeveloped land, and as a result the No-Action Condition would change the current land uses along the Flushing Creek waterfront.

Projected Development Site 4 would be developed with a 128,500-gsf self-storage facility and 21,000-sf surface parking lot. Like the other Projected Development Sites, Site 4 is currently vacant and used as a construction storage yard, so would reflect a change in land use in the No-Action Condition. Potential Development Site A would be redeveloped with a new commercial building, featuring retail, hotel, and office uses. The existing U-Haul building on Potential Development Site B would remain as per existing conditions. Both Potential Development Sites (A and B) would remain consistent with current land uses featuring commercial and industrial uses, respectively.

Study Area

In the No-Action Condition, it is expected that the land use patterns discussed above would largely continue in the Study Area. Existing development trends of new mixed-use residential and commercial development in the Downtown Flushing neighborhood would also continue. This is substantiated by the fact that 19 known or anticipated developments are expected to be operational in the Study Area by the 2025 analysis year. Table 1 in Appendix F summarizes the development details for these projects. Collectively, it is estimated that these developments would add approximately 1,681 dwelling units, 1,416 hotel rooms, 308,228 sf of retail floor area, 79,342 sf of office floor area, and 289,412 sf of community facility floor area to the Study Area by 2025.

All of these developments are found west of Main Street, with a cluster of projects located just south of Roosevelt Avenue. The amount of new housing units shows the growing demand for residential space, which benefits from the easily accessible public transit and strong residential real estate market in the Study Area. Additionally, new development is moving nearer the Flushing Creek waterfront, including the mixed-use developments of Tangram and Flushing Point Plaza (just southwest of Sky View Parc) that feature residential, office, and community facility space. Building on more recent projects such as Sky View Parc, the area west of Main Street is expanding upon the historical commercial center of Flushing and providing new mid-rise mixed-use developments with hotels that benefit from Downtown Flushing's proximity to LaGuardia Airport. Across the Flushing Creek from the Project Area, redevelopment at Willets Point would reshape the industrial neighborhood of Willets Point by adding affordable housing, supporting a new residential population.

The Downtown Flushing neighborhood is expected to continue to experience the development of large mixed-use residential, hotel, and retail buildings in the No-Action Condition. Additionally, stand-alone commercial and office developments are likely to remain constant in the active downtown area, especially to the east of Prince Street. The existing manufacturing districts north of Northern Boulevard are expected to remain and continue to function as major industrial centers with limited new development.

With-Action Condition

Project Area

In the With-Action Condition, the Proposed Actions would be adopted and the Development Sites would be developed as described in Attachment A, "Project Description." The SFWD would create a framework for a new private road network, flexible use regulations, reduced parking requirements, and improve the pedestrian experience and public realm of the Project Area. The street network would consist of new streets and private extensions of existing mapped streets. All streets would be 34 feet wide with 13-foot sidewalks on each side. A new WAP would require a larger minimum 40-foot-wide shore public walkway and four upland connections. The upland connections would be located at the 39th Avenue extension, 38th Avenue extension, and the 37th Avenue extension. Additionally, a "flexible zone" would be established from the 36th Road extension to the 36th Avenue extension, allowing the required upland location to be located within this zone. Modifications related to building bulk would provide additional design flexibility to accommodate the currently permitted maximum FAR and the additional publicly accessible circulation areas and open space. Similar to the No-Action Condition, Projected Development Sites 1, 2, and 3 would be developed with a mix of residential and commercial uses (retail, hotel and office). Approximately 3.14 acres of publicly accessible open space would be provided in the With-Action Condition.

Projected Development Site 4 and Potential Development Site B would be subject to a zoning change from M3-1 and C4-2 districts to an M1-2/R7-1 district. The proposed district would allow for a wider range of uses while allowing existing light industrial businesses to remain. Projected Development Site 4 would be developed with two buildings containing residential and retail uses, including the provision of affordable units through the MIH Program. Potential Development Site B would be developed with a 177,000-sf commercial office building to the north of the U-Haul building. The building would be set back from the northern façade of the U-Haul building to allow the required 50-foot-wide visual corridor at the extension of 36th Road.

The existing land use patterns of the Project Area, in which the development sites are largely vacant and isolated from the rest of the Downtown Flushing neighborhood, would be improved in the With-Action Condition through the creation of the street network and improved upland connections that would connect the Project Area to Downtown Flushing. A shore public walkway would open up the existing inaccessible waterfront along Flushing Creek and facilitate restoration of the shoreline, which is currently degraded, allowing it to be an amenity for visitors and residents. Overall, the Project Area would serve more as an extension of Downtown Flushing.

Study Area

The Study Area in the With-Action Condition would be consistent with the land use trends identified above and the general direction that development is moving in Flushing. Tangram and Flushing Point Plaza are two examples of mid-rise, mixed-use development under construction between College Point Boulevard and Prince Street, following in the lead of Sky View Parc. Development is radiating from the commercial corridor of Main Street, moving farther west toward Flushing Creek.

Land Use Conclusion

Both the No-Action and With-Action conditions would modify the existing isolated land use pattern of the Project Area. In the No-Action Condition, Projected Development Sites 1, 2, and 3, as well as Potential Development Site A, would be developed pursuant to existing zoning, creating mixed-use developments containing residential, retail, hotel, and office space. New access driveways would be established along the prolongations of 39th Avenue and 37th Avenue to provide access to the new development on Sites 1-3, and upland connections would be established along these consistent with the existing WAP. Projected Development Site 4 would be developed pursuant to the existing manufacturing district with a self-storage facility.

In the With-Action Condition, the land uses, with the exception of Projected Development Site 4 and Potential Development Site B, would be largely similar to the No-Action Condition mixed commercial and residential uses. Under the Proposed Actions, modification to height, setbacks, location of uses, parking, and façade would provide flexibility and allow the sites to accommodate the currently permitted FAR, a new street network, and improved circulation through modified upland connection and shore public walkway requirements. The proposed mixed use district affecting Projected Development Site 4 and Potential Development Site B would allow commercial and residential development to occur on these sites, facilitating mixed-use development through the entire Project Area and a fully connected shore public walkway along Flushing Creek.

Development in the With-Action Condition would also be consistent with current development trends in the Study Area and other planned development projects. The Proposed Actions would result in modest land use changes to the Project Area when compared to what could be developed in the No-Action Condition. Additionally, the Proposed Actions would facilitate improved upland connections and the new street network, more cohesively connecting the Project Area to the larger development pattern of Downtown Flushing. The Proposed Actions would not result in a significant adverse land use impact, and no further analysis of land use is warranted.

ZONING

Existing Conditions

Project Area

As shown in Figure A-6, the majority of the Project Area is within a C4-2 zoning district. Projected Development Site 4 is within an M3-1 zoning district, and Potential Development Site B is a split zoning lot with the northern portion in an M3-1 zoning district and the remainder of the lot in a C4-2 district. C4-2 zoning districts are mapped in regional centers located outside of central business districts and permit residential, commercial, community facility, and mixed use development pursuant to height factor and quality housing regulations. Under height factor regulations, a maximum FAR of 2.43 is permitted for residential uses (Use Groups 1-2, R6 equivalent). Commercial uses (Use Groups 5-6, 8-10, 12) are permitted at a maximum FAR of 3.40 and community facility (Use Groups 3-4) uses are permitted at a maximum FAR of 4.80. In C4-2 districts, the maximum height is determined by the sky exposure plane under height factor regulations. In accordance with the sky exposure plane, the maximum height above the street line in a C4-2 zoning district is 60 feet, with an initial setback of 20 feet on a narrow street and 15 feet on a wide street. Under quality housing

regulations, the maximum permitted building height is 75 feet (with a qualifying ground floor). General retail or service uses require one accessory parking space per 300 sf of floor area.

M3-1 zoning districts are designated for areas with heavy industries that generate noise, traffic or pollutants. Typical uses located in M3 districts include power plants, solid waste transfer facilities, recycling plants, and fuel supply depots. M3-1 districts permit development at a maximum FAR of 2.00 for manufacturing uses (Use Groups 16-18) and commercial uses (Use Groups 6-14). In an M3-1 district, residential and community facilities uses are not allowed, however, most retail and commercial uses are permitted as-of-right. Accessory parking for general retail and office uses in M3-1 districts vary by specific use, but generally are required at a rate of one space per 300 sf. When there are manufacturing uses, an M3-1 district requires one accessory parking space for every three employees or every 1,000 sf of floor area, whichever is greater. For self-service storage facilities in an M3-1 district, parking is required for every three employees or every 2,000 sf of floor area, whichever is fewer. In M3-1 districts, the maximum height is determined by adherence to the sky exposure plane, which begins at a height of 60 feet above the base plane with an initial setback of 20 feet on a narrow street, and 15 feet on a wide street.

The Project Area is located within a Transit Zone, an area where parking requirements are lower for income-restricted housing units (IRHU). The Project Area is also governed by Special Regulations Applying Around Major Airports (ZR Article VI, Chapter 1) and Special Regulations Applying in the Waterfront Area (ZR Article VI, Chapter 2). In areas within the vicinity of the NYC's airports and their flight paths, building heights are limited and are only allowed to penetrate the height limit through a Board of Standards and Appeals (BSA) special permit that also involves approval from the Federal Aviation Administration (FAA). Waterfront zoning regulations apply to the blocks adjacent to or intersected by the shoreline, which applies to the entire Project Area. Waterfront Area Regulations address the form, size, and location of new development, as well as the type of waterfront public access the new development provides. Pursuant to Article VI, Chapter 2 (ZR §62-341), the underlying requirements of M3 districts and C4-2 districts are modified, and the maximum building heights in M3 districts in the Waterfront Area are capped at 110 feet, and at 135 feet for C4-2 districts.

The provisions of ZR §62-34 provide strict building bulk, height, and street wall length rules for development sites within the Waterfront Area. Site-specific modification to these regulations can be done through Waterfront Action Plans (WAPs). The existing Downtown Flushing WAP (see ZR §62-952) requires qualifying developments to provide 20-foot shore public walkways and upland connections, which provide direct access to the shore public walkway at regular intervals. The existing WAP has also designated visual corridors that provide an unobstructed view to the shoreline (see ZR §62-952). The WAP was adopted as part of the 1998 Downtown Flushing rezoning, but so far has not facilitated any new development on the waterfront north of Roosevelt Avenue.

Study Area

As shown in Figure A-6 and Table B-1, the predominant zoning districts within the Study Area are commercial and manufacturing zoning districts. The C4-2 district that includes the majority of the Project Area also includes the areas east toward Main Street, encompassing much of the eastern portion of the Study Area. Typical uses found in the C4-2 districts of the Study Area include retail and office, in addition to mixed-use residential developments as discussed in above in "Land Use." Along

Main Street and further east towards Union Street, the Study Area is mapped with a C4-3 district. Main Street is the historic commercial center of Flushing and the C4-3 district reflects the commercial nature of the area with larger stores and office uses that often generate more traffic than neighborhood shopping centers found north of Northern Boulevard. A C4-4 district is mapped along Willets Point Boulevard to the west of the Project Area, which is associated with regional commercial centers. Currently, this C4-4 district consists of mostly vacant land and parking facilities.

An M1-2 district, designated for areas with light industries, as well as wholesale service and storage facilities that serve as a buffer between more intensive industrial uses and residence or commercial districts, is mapped south of the Project Area, and M3-1, M2-1, and M1-1 districts are mapped to the north. Both the M3-1 and M1-1 districts are found along the waterfront (Flushing Creek) north of the Project Area as well as to the west of the Project Area across Flushing Creek in Willets Point. The M2-1 district is mapped only to the north of the Project Area, specifically north of 35th Avenue, and serves as a buffer between light and heavy industrial areas. Generally, these manufacturing districts are located near waterfronts and are buffered from residential areas. An R3-2 district is mapped along the western shore of Flushing Creek within Willets Point; this allows a variety of housing types but is entirely developed with highway interchanges between the Whitestone and Van Wyck Expressway. An R6 medium density non-contextual residential zoning district is mapped in the southeastern portion of the Study Area as well as to the northeast, with C2-2 commercial overlays. C1 commercial overlays (C1-2) are mapped within R6 districts along Main Street south of 41st Avenue, and C2 commercial overlays are mapped north of the intersection of Main Street and Northern Boulevard (C2-2), and along College Point Boulevard between 41st Avenue and Sanford Avenue (C2-3). These commercial overlays serve local retail needs such as grocery stores, dry cleaners, and restaurants for the R6 districts within the Study Area.

M1-1 zoning districts permit development at a maximum FAR of 1.00 for manufacturing and commercial uses. Community facility uses (Use Group 4) are permitted at a maximum FAR of 2.40. M1-2 zoning districts permit development at a maximum FAR of 2.00 for manufacturing and commercial uses. Community facility uses (Use Group 4) are permitted at a maximum FAR of 4.80. M2-1 zoning districts permit development at a maximum FAR of 2.00 for manufacturing and commercial uses. Community facility uses are not permitted in M2 districts. Basic parking requirements in M1 and M2 zoning districts for general retail and office uses are one space per 300 sf. The R6 zoning district and C1-2 commercial overlay mapped in the southeast portion of the Study Area provides a transition between the densely developed commercial and industrial areas of the Study Area and the more low-density residential neighborhoods of Eastern Queens. The R6 district, to the southeast and northeast of Project Area, permits medium-density residential uses not found along the commercial corridors of Downtown Flushing. R6 zoning districts permit residential and community facility uses at a maximum FAR of 2.43 and 4.80, respectively. Within R6 districts, all commercial overlay districts permit a commercial FAR of 2.0. C4-3 zoning districts permit commercial uses at a maximum FAR of 3.40 and a maximum FAR of 2.43 for residential uses (R6 equivalent). Similarly, a C4-4 zoning district permits commercial uses at a maximum FAR of 3.40 and a maximum FAR of 3.44 for residential uses equivalent to an R7-2 district.

Recently, several zoning map amendments have been adopted within or just outside the Study Area. In June 2016, a zoning map amendment (C160138ZMQ) rezoned a C4-2 district to a C4-5X district, facilitating the development of a mixed-use, affordable multi-family housing development called One

Flushing. Two zoning map amendments were adopted in 2010 and 2011 north of Northern Boulevard within the Study Area to rezone an M1-1 district to an R6 district with a C2-2 overlay (C030223ZMQ and C070210ZMQ). Just outside the northern part of the Study Area, zoning map amendments in 2010 and 2011 rezoned an M1-1 district to an R7A district (C170180AZMQ) and a rezoned a portion of a block from an R6/C2-2 district to a C4-3 district (C120403ZMQ). Additionally, Flushing Commons received a zoning map amendment to rezone a C4-3 district to a C4-4 district in conjunction with an approval for building above the maximum height allowable by zoning (C100207ZMQ).

Table B-1: Existing Zoning Districts within the Study Area

Name	Definition/ General Use	Maximum FAR
Residential Districts		
R3-2	R3-2 districts are general residence districts that allow a variety of housing types and the lowest density zoning district in which multiple dwelling are permitted.	R: 0.5[1], C: 0.0, CF: 1.0, M: 0.0
R6	R6 districts are widely mapped in built-up, medium-density areas of the city. Developers can choose between Height Factor and Quality Housing bulk regulations.	R: 0.78-2.43, C: 2.0, CF: 4.8, M: 0.0
Commercial Districts		
C1-2, C2-2, & C2-3 (Overlays)	C1 and C2 mapped commercial overlays are mapped within residential districts to serve local retail needs and are found extensively in lower- and medium-density areas. In mixed buildings, commercials uses are limited to one or two floors and must always be located below the residential use. C2 districts permit a slight wider range of uses than a C1 district.	C: 1.0 (R1-R5), 2.0 (R6-R10),
C4-2	C4 districts are mapped in regional commercial centers that are located outside of the central business districts. Use groups 5, 6, 8, 9, 10, and 12 include most retail establishments and are permitted in C4 districts. C4-2 through C4-5 districts are mapped in more densely built areas. C4-5X is a contextual district in which the commercial and residential bulk and density regulations can differ from corresponding non-contextual districts.	R: 0.78-2.43[2], C: 3.4, CF: 4.8[3], M: 0.0
C4-3		R: 0.78-2.43[2], C: 3.4, CF: 4.8[3], M: 0.0
C4-4		R: 0.87-3.44[4,5], C: 3.4, CF: 6.5, M: 0.0
C4-5X		R: 5.0[2], C: 4.0, CF: 5.0, M: 0.0
Manufacturing Districts		
M1-1	M1 districts are often buffers between M2 or M3 districts and adjacent residential or commercial districts. M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities.	R: 0.0, C: 1.0, CF: 2.4[3,6], M: 1.0
M1-2		R: 0.0, C: 2.0, CF: 4.8[3,6], M: 2.0
M2-1	M2 districts occupy the middle ground between light and heavy industrial areas.	R: 0.0, C: 2.0, CF: 0.0, M: 2.0
M3-1	M3 districts are designated for areas with heavy industries that generate noise, traffic or pollutants. M3 districts are usually located near the waterfront and buffered from residential areas. Typical uses include power plants, solid waste transfer facilities, and recycling plants.	R: 0.0, C: 2.0, CF: 0.0, M: 2.0

Source: *Zoning Resolution of the City of New York*
Notes: *R=Residential; C=Commercial; CF=Community Facility; M=Manufacturing*
[1]*Residential FAR may be increased up to 20 percent for attic allowance*
[2]*Residential Far may be increased to 3.0 on wide streets outside the Manhattan Core under Quality Housing Program regulations*
[3]*Nursing homes and non-profit residential facilities limited to residential FAR, except by special permit*
[4]*FAR may differ in inclusionary Housing designated areas*
[5]*Residential FAR may be increased to 4.0 on wide streets outside the Manhattan Core under Quality Housing Program regulations*
[6]*Only community facilities in Use Groups 3- 4 permitted*

No-Action Condition

In the No-Action Condition, there would be no change to existing zoning in the Project Area. A C4-2 zoning district would continue to be mapped across the majority of the Project Area, with an M3-1 district in the northernmost portion. The provisions of Special Regulations Applying Around Major Airports (ZR Article VI, Chapter 1) and Special Regulations Applying in the Waterfront Area (ZR Article VI, Chapter 2) would continue to apply to the Project Area. Under ZR Article VI, Chapter 1, buildings would not be able to exceed 175 feet above mean sea level (AMSL). The existing Downtown Flushing WAP, which requires a minimum 20-foot-wide shore public walkway for the majority of the Project Area, would generate approximately 0.6 acres of publicly accessible open space within the shore public walkway along Projected Development Sites 1, 2, and 3. Parking would be provided pursuant to existing zoning in the C4-2 district: 70 percent of dwelling units, and for commercial uses, one space per eight hotel rooms and one space per 300 sf of retail and office uses.

With-Action Condition

In the With-Action Condition, the Proposed Actions would establish the SFWD across the entirety of the Project Area. The Proposed Actions would modify the underlying zoning in the portions of the site generally north of 37th Avenue from C4-2 and M3-1 to M1-2/R7-1. This rezoned area would be designated as Subdistrict A of the special district (Figure A-7). Projected Development Site 4 and Potential Development Site B would be located within Subdistrict A. South of Subdistrict A, Projected Development Sites 1, 2, and 3 and Potential Development Site A would be located within Subdistrict B, which is also where the new private road network would be located. South of Roosevelt Avenue and Subdistrict B, Sky View Parc would be located within Subdistrict C.

Modifications to Use Regulations

Dwelling units would be permitted on the same story as commercial uses, provided there is no access between such uses. Physical health or cultural establishments would be permitted as-of-right.

Subdistricts A and B would be subject to the signage provisions of C4 districts. Typically in M1-2/R7-1 districts, the total surface area of all such permitted signs shall not exceed six times the street frontage of the zoning lot, in feet, and the surface area of each sign shall not exceed 750 square feet (sf). Illuminated non-flashing signs that are not advertising cannot exceed 500 sf. Under the C4 signage regulations that would apply in the With-Action Condition, non-illuminated signs can be five times the street frontage of the zoning lot, but in no event can be more than 500 sf for interior or through lots or 500 sf on each frontage for corner lots. Illuminated signs can be five times the street frontage of the zoning lot, but in no event can be more than 500 sf for interior or through lots or 500 sf on each frontage for corner lots. Therefore, the size provisions for non-illuminated signage would be reduced from underlying M1-2/R7-1 district provisions in Subdistrict A to align with the C4 regulations that would apply to Subdistrict B, as part of the Proposed Actions.

Modifications to FAR

Under the Proposed Actions, the zoning floor area of a building would not include floor space used for accessory off-street parking spaces provided in any story located not more than 33 feet above the

height of the base plane. Additionally, in Subdistrict A, the maximum floor area provisions of paragraph (d) of Section 23-154 (Inclusionary Housing) or Section 23-155 (Affordable independent residences for seniors) would apply to all residential uses.

As previously mentioned, a mixed use district would be established to change the underlying M3-1 and C4-2 districts in Subdistrict A to an M1-2/R7-1 district (Figure A-8). Potential Development Site B would no longer be a split zoning lot, and would wholly be within Subdistrict A in the proposed M1-2/R7-1 zoning district, which would permit residential uses at a FAR of 4.6, commercial uses at a FAR of 3.0, community facility uses at a FAR of 4.8, and manufacturing uses at a FAR of 3.0. The entirety of Subdistrict A would be established as an MIH Area (Figure A-9). The rezoning to a mixed use district would allow existing light industrial businesses to remain, while not precluding future redevelopment of the land within the new district with new residential, commercial, community facility, and light industrial uses. Like the No-Action Condition, Subdistrict B would continue to be within a C4-2 zoning district.

Modifications to Height and Setback

With adoption of the Proposed Actions, a building within Subdistrict B would be permitted to reach a maximum height of 245 feet AMSL (including bulkheads) pursuant to a CPC Chairperson Certification that would be created as part of the Proposed Actions. The maximum height for buildings within Subdistrict A would be 200 feet AMSL, including bulkheads, via the CPC Chairperson Certification. Absent the CPC certification, the maximum height of a building would be subject to the existing requirements of ZR Article VI, Chapter 1 (Special Regulations Applying Around Major Airports).

Special Height, setback and articulation regulations would apply in the Proposed Actions. Street frontages would have specific street wall, base height, setback, and streetscape requirements. Additionally, in specific locations, sheer towers would be permitted. Where publicly accessible open spaces are provided, sheer tower frontages may also be permitted, where noted on the Master Plan in Appendix D (see page 11).

The Proposed Actions would also modify underlying tower regulations. Along the shore public walkway, the maximum width of a tower that is located within 110 feet of the pierhead line and facing the shore public walkway shall not exceed 100 feet. In Subdistrict A, where the depth of a zoning lot is less than 190 feet, the maximum width of a tower shall not exceed 130 feet. Along all other streets, the width of the street wall in a tower shall not exceed 250 feet. With the provision of two or more towers on a zoning lot bounded by streets, when portions of the towers exceed 175 feet, the lot coverage of the highest two stories shall not exceed 80 percent of the gross floor area of the story immediately below; as an alternative, a height difference of at least 20 feet or two stories, whichever is less, shall be provided between such towers. When a portion of a zoning lot bounded by streets contains only one tower and the portions of the tower above 175 feet exceeds a total lot coverage of 15,000 sf, the lot coverage of the highest two stories shall not exceed 80 percent of the gross floor area of the story immediately below.

Additionally, the Proposed Actions would add additional articulation requirements over the No-Action Condition. For street walls fronting streets other than the shore public walkway, a minimum

of 15 percent of the entire surface area of each street wall shall either recess or project a minimum of two feet from the street wall, with no individual recess or projection exceeding 50 percent of such street wall width. Along each street wall frontage, at least one-third of the overall 15 percent requirement shall be provided in the form of articulation below the base height of each building, and at least one-third shall be provided above the base height. The remaining one-third may be located anywhere on the street wall. For street walls fronting the shore public walkway, at least five percent of the entire surface area of the street wall below the base height shall either recess of project a minimum of two feet from the street wall, with no individual recess or projection exceeding 50 percent of the street wall width. The proposed zoning text and maps are provided in Appendix C.

Modifications to Parking and Loading

Subdistricts B and C would be subject to the provisions regulating parking and loading in C4-4 districts. Accordingly, the existing requirement to provide parking for 70 percent of non-MIH dwelling units would be modified to 50 percent in the With-Action Condition. The Proposed Actions would also reduce required commercial (retail) parking to 1 space per 1,000 square feet of commercial uses. Subdistrict A would require commercial or manufacturing uses to provide either one parking space for every 1,000 sf of floor area or to provide parking spaces at the rate required per specific use for the M1-2 district, whichever is smaller. Residential and community facility uses in Subdistrict A would be subject to the requirements of R7-1 (60 percent of dwelling units or 50 percent if quality housing).

Streetscape Provisions

The SFWD text identifies primary and secondary street frontages for the purpose of applying streetscape provisions (see Map 4, "Requirements Along Street Frontages," in Appendix C). For developments or ground floor enlargements at the intersection of primary street frontages, uses on the ground floor would be limited to non-residential uses except for lobbies. Group parking facilities on the ground floor would be required to be wrapped by floor area on both primary and secondary street frontages, as well as along the shoreline.

Establishment of Publicly Accessible Private Streets

Within Subdistrict B, the SFWD would provide a framework for a publicly accessible private street network within the Project Area. A map of the proposed publicly accessible private street network is provided in Appendix C, Map 2. All segments of the publicly accessible private streets would be accessible to the public at all times, except when required to be closed for repairs, and for no more than one day each year. All segments would be constructed to the dimensions and grading specified on Map 2 and Map 3 ("Grading Plan for Publicly Accessible Private Street Network") in Appendix C and would comply with DOT standards for public streets, including but not limited to sidewalks, curbs and curb drops, lighting, traffic signage, pavement materials, drainage, and crosswalks. Sidewalks or pedestrian circulation paths for the length of each segment would be provided and have a minimum clear path of eight feet on each side.

WAP Provisions

The Proposed Actions also include a new WAP, which would ensure consistency with the SFWD. The WAP would:

- Update the required minimum width of the shore public walkway along Flushing Creek from 20 feet to 40 feet to comply with current City-wide regulations;
- Establish a modified requirement for upland connections between the shore public walkway and College Point Boulevard;
- Realign the existing Roosevelt Avenue visual corridor so that it extends in a straight line to the waterfront, thereby providing improved lines of sight towards the waterfront and the shore public walkway from areas further upland; and
- Establish an interim phasing plan to ensure adequate access to the sites and ensure some form of public access is provided as different properties are developed over time.

The WAP would require a minimum 40-foot wide shore public walkway, four upland connections, and three visual corridor locations. The upland connections would be located at 39th Avenue extension, 38th Avenue extension, 37th Avenue extension, and at a "flexible zone" that would be established from the 36th Road extension to the 36th Avenue extension. Unlike the existing Downtown Flushing WAP, the location of the upland connections in the proposed WAP would be at zoning lot property lines and split equally into the bounding parcels rather than splitting up zoning lots. Visual corridors would be required on the southern boundary of Lots 7 and 8; at the 39th Avenue extension; and midway through Lot 200, at the 36th Road extension.

Certifications

The SFWD text would create a number of certifications, including the following:

- A certification for the provision of publicly accessible streets, which states that no building permit shall be issued for any development or enlargement on a parcel containing a portion of a required publicly accessible private street (as shown on Map 2 in Appendix C) until the Chairperson of the CPC certifies to the Department of Buildings (DOB), in conjunction with the Waterfront Certification process, that the following have been provided: a site plan demonstrating compliance with street requirements, a maintenance and capital repair plan, and a Restriction Declaration that been recorded against all property within the subject zoning lot with the site plan, grading plan, and maintenance plan included;
- A certification for the provision of interim condition for publicly accessible private streets (where such streets are designated on two zoning lots and a portion may not be complete given different ownerships on the two separate zoning lots);
- A certification for a phasing plan for the provision of waterfront public access areas; and
- A general grading certification for interim conditions (for streets and upland connections).

Zoning Conclusion

The Proposed Actions include the establishment of the SFWD, which would modify the underlying zoning requirements and waterfront zoning regulations related to height, setback, use and parking

within the Project Area. In addition, the Proposed Actions would establish a mixed use district within the northern portion of the SFWD (Subdistrict A) that would also be mapped as an MIH Area.

As described in Attachment A, "Project Description," several unique factors in the Project Area add substantial complexity to development in the Project Area, and as-of-right zoning is fairly restrictive. These include the topography, the large size of the lots, and the constrained location of upland connections and visual corridors that are part of the existing WAP. The Proposed Actions are intended to allow each site to achieve the maximum permitted FAR while also accommodating a new street network and improved access to the Flushing Creek waterfront Further, the M3-1 district mapped in the northern portion of the Project Area is a designation for areas with heavy industries that generate noise, traffic or pollutants; this designation is no longer appropriate for the Project Area. The proposed mixed use district would encourage the redevelopment of vacant or underutilized land with residential and commercial uses, while also not precluding the ability of existing manufacturing uses to remain or develop in the future.

The With-Action zoning would be similar to existing residential and commercial zoning districts within the Study Area (Figure A-6). In terms of use, height, and bulk, the With-Action development would also be similar to other projects under construction in the Downtown Flushing neighborhood. Compared to the No-Action Condition, the new WAP would ensure that greater public waterfront access is provided. Modified upland connections would be located at zoning property lines and would be split equally into the bounding parcels, rather than splitting up the zoning lots as in the existing WAP.

Overall, the proposed modifications to existing zoning would facilitate the development of the Proposed Project, which would be consistent with the City's land use, zoning, and public policy objectives for the Study Area. The Proposed Actions would therefore not result in a significant adverse zoning impact, and no further assessment is warranted.

PUBLIC POLICY

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

Public policies applicable to the Study Area include *OneNYC 2050*, *Housing New York 2.0*, *Vision 2020: New York City Comprehensive Waterfront Plan,* the Waterfront Revitalization Program (WRP), the *Vision Zero Action Plan,* the Downtown Transit Hub Business Improvement District (BID), the New York City Food Retail Expansion to Support Health Program (FRESH), the Downtown Flushing Waterfront Access Plan (WAP), the Downtown Flushing Development Framework, the Flushing Waterfront BOA Master Plan, and the Flushing Creek Plan.

OneNYC 2050

Released in April 2019 by the De Blasio Administration, OneNYC 2050 is a policy document designed to address New York City's long-term challenges, including rising unaffordability, economic insecurity, wealth and health inequities, failing infrastructure and shifting needs, and threats to democracy.[14] OneNYC 2050 builds upon the previous OneNYC strategy from 2015 and focuses on eight goals and 30 initiatives that reflect both the strengths and challenges the city faces.

The Proposed Project supports several of OneNYC 2050's goals, including developing thriving neighborhoods, efficient mobility, and a livable climate.

Thriving Neighborhoods

New York City will foster communities that have safe and affordable housing and are well-served by parks, cultural resources, and shared spaces.

OneNYC 2050 identifies thriving neighborhoods as one of its eight goals. New York City faces a shortage of all types of housing, especially those that are affordable to low- and moderate-income households. However, the plan states that thriving neighborhoods requires more than just affordable housing; access to parks, community services, and diverse cultural resources are also components of a healthy life.

The Proposed Actions would facilitate a net increase of approximately 293 dwelling units over the No-Action Condition, of which approximately 20 percent of the dwelling units on Projected Development Site 4 would be permanently affordable pursuant to the City's MIH program. By facilitating the creation of permanent affordable housing, the Proposed Actions would support a diverse residential population and would create additional housing options close to Downtown Flushing and within commuting distance to Manhattan, which would help strengthen the City's economy.

The Proposed Actions would facilitate the redevelopment of underutilized and vacant land, allowing light industrial uses to remain while also allowing for the development of new residential, commercial, community facility, and light industrial uses. The Proposed Actions would thus enable the creation of a new neighborhood that is well-connected to Downtown Flushing's cultural resources and amenities. Further, the Proposed Actions would also introduce approximately 3.14 acres of new public open space, opening up access to the Flushing Creek waterfront for residents of the Project Area and the larger Downtown Flushing neighborhood to enjoy. Accordingly, the Proposed Actions are consistent with the "Thriving Neighborhoods" goal of OneNYC 2050.

Efficient Mobility

New York City will enable reliable, safe, and sustainable transportation options so that no New Yorker needs to rely on a car.

New York City's vast transit system, coupled with the city's density, has enabled the sustained growth of the city and allowed it to maintain a smaller per capita carbon footprint than any other big city in

[14] *OneNYC 2050* (https://onenyc.cityofnewyork.us/; accessed: November 4, 2019)

the U.S. However, the declining reliability of the subway and bus system poses serious threats to a city reliant on public transit. According to OneNYC 2050, it is urgent that sustainable transportation modes like walking, biking, and mass transit be invested in to meet the demands of the growing population and thriving economy.

The Proposed Actions would facilitate a new street network that would improve vehicular and pedestrian circulation through the Project Area and minimize the effects of project-generated traffic on surrounding streets. Further, new upland connections and a shore public walkway along the eastern shore of Flushing Creek within the Project Area would facilitate pedestrian access to the waterfront. The Proposed Actions would overall encourage walkability by redeveloping underutilized land west of Downtown Flushing to extend the vibrant downtown area to the waterfront. The proposed mix of uses would ensure that the proposed new street network is active at the street level and in the immediate surrounding areas. Additionally, the Proposed Actions would facilitate development in an area well-served by public transportation, with both the Flushing Main Street Subway and LIRR stations located approximately 0.3 miles to the east of the Project Area in Downtown Flushing. Accordingly, the Proposed Actions are consistent with the "Efficient Mobility" goal of OneNYC 2050.

A Livable Climate

<u>New York City will lead a just transition to achieve carbon neutrality and adapt the city to withstand and emerge stronger from the impacts of climate change.</u>

New York City is making changes to its physical environment to promote resiliency and mitigate the most dangerous and destructive climate impacts. This includes hardening stormwater, wastewater, and other critical infrastructure to withstand climate impacts, and advancing nature-based solutions, such as wetland and forest restoration, to stabilize shorelines, reduce erosion, act as carbon sinks, and mitigate urban heat island effects.

Situated along Flushing Creek and with portions of the Project Area within the 100-year flood zone, the Proposed Project would be designed and constructed in the accordance with the relevant flood zone provisions to protect against rising sea levels and climate change. The Proposed Project would be designed pursuant to the New York City Building Code standards for flood resistant construction and comply with New York State Department of Environmental Conservation (NYSDEC) and/or United States Army Corp of Engineers (USACE) permitting requirements (see Appendix G – WRP Consistency Assessment for more information). Shoreline stabilization would minimize the potential for the Project Area and areas farther upland from damage, including during flood events. Stabilization would be strategically implemented through a mix of natural shoreline, rip-rap shoreline, boulders with native plants, and steel bulkhead shoreline. The modified embankment would provide long-term stability and prevent erosion from tidal fluctuations. Additionally, the installation of permeable pavers along the shore public walkway would help to minimize runoff and improve water quality. Given the resiliency measures proposed, the Proposed Project is consistent with the "Livable Climate" goal of OneNYC 2050.

Summary of Consistency with OneNYC

As described above, the Proposed Project would be consistent with the goals of OneNYC 2050, and does not have the potential to conflict with this policy.

Housing New York 2.0

Housing New York 2.0 is an extended plan to the City's comprehensive housing development policy that includes a primary goal of building or preserving 200,000 units of high-quality affordable housing by 2022 and reach 300,000 homes by 2026. *Housing New York 2.0*, builds off the foundation laid through *Housing New York: A Five-Borough, Ten-Year Plan, and* was developed in conjunction with the New York City Department of Housing and Preservation (HPD) to create housing opportunities for New Yorkers with a range of incomes, while fostering vibrant and diverse neighborhoods. Framed by the policy goals and objectives in *Housing New York*, the City Council adopted an amendment to the ZR to establish the MIH program on March 22, 2016 that requires that a percent of new housing be permanently affordable when an increase in residential floor area is requested via discretionary land use action (i.e., an upzoning).

The primary components of *Housing New York 2.0* include:

- Mandatory Inclusionary Housing: areas and buildings rezoned for residential growth must include 20 to 30 percent permanently affordable apartments.

The Proposed Actions would support the policies and goals of *Housing New York 2.0*. Under the No-Action Condition, there would be no requirement for new developments to provide affordable housing units. Under the MIH Program, a share of new housing is required to be permanently affordable when land use actions create significant new housing potential, either as part of a City neighborhood plan or private land use application. Therefore, development in the With-Action Condition on Projected Development Site 4 would provide approximately 304 residential dwelling units, of which 25 to 30 percent would be permanently affordable under the MIH program. All of the permanently affordable units within the Project Area would be found on Projected Development Site 4, as it is the only site that would receive a zoning change as part of the Proposed Actions, and where residential development is anticipated.

The Proposed Actions would therefore provide the Flushing neighborhood with new mixed-income, permanently affordable housing, which would support the City's effort to increase the overall supply of affordable housing. As such, the Proposed Actions would be consistent with the goals and objectives of *Housing New York 2.0*.

Vision 2020: New York City Comprehensive Waterfront Plan

Vision 2020 is a multi-agency comprehensive plan that seeks to create a sustainable shoreline for New York City with recommendations for the waterfront and waterways into the next decade.[15] The comprehensive waterfront plan builds on the 1992 waterfront plan and reestablishes priorities towards public access and restoring ecology, while guiding New York City into the impacts of climate

[15] *Vision2020: New York City Comprehensive Waterfront Plan* (https://www1.nyc.gov/site/planning/plans/vision-2020-cwp/vision-2020-cwp.page; accessed: January 10, 2019)

change and future coastal implications. *Vision 2020* also proposes ways for people to get onto and into the waterways through waterborne transportation and water-related recreational activities.

Vision 2020 offers eight goals in for the city's waterfront and waterways:

1. Expanding public access to the waterfront and waterways
2. Enliven the waterfront with a range of attractive uses
3. Support economic development activity
4. Improve water quality
5. Restore/protect degraded natural waterfront, wetlands, and shorefront habitats
6. Enhance the public experience of the waterways
7. Improve governmental regulation, coordination, and oversight
8. Identify and pursue strategies to increase resilience to climate change and sea level rise

The Project Area falls within Queens Reach 11- Queens Upper East River, a location that has a local neighborhood-specific strategies in Vision 2020 for Flushing. The neighborhood strategy for Flushing includes:

- Support the Flushing Creek Brownfield Opportunity Area (BOA) planning process that will reexamine the Downtown Flushing WAP to foster residential and mixed use redevelopment and new publicly accessible waterfront open space.
- Improve pedestrian and bicycle connections between Flushing and Willets Point on the Northern Boulevard and Roosevelt Avenue bridges and explore options to further enhance access across Flushing Creek.
- Support and maintain active industrial use of Flushing Creek north of Northern Boulevard.

The Proposed Actions would implement the zoning recommendations of the Flushing BOA Master Plan. Additionally, the Proposed Actions would actively support the broader goals of *Vision 2020*, particularly Goals 1 and 2. The Proposed Actions would create a private street network with contiguous publicly accessible streets and sidewalks that provide access to/from the proposed shore public walkway along the Flushing Creek waterfront. The shore public walkway along Flushing Creek would be a continuation of Sky View Parc's shore public walkway farther south along Flushing Creek. The walkway would provide new shore public walkway between the Northern Boulevard and Roosevelt Avenue bridges along the frontage of the site, and would contain seating, trees, and other attractive amenities. The Proposed Actions would create a mixed use district that would permit existing industrial uses to remain and preserve the industrial character along the waterfront. As the Proposed Actions would not affect existing active industrial sites north of Northern Boulevard, the Proposed Actions would be consistent with the goals and objectives of *Vision 2020*.

Waterfront Revitalization Program (WRP)

New York City's Coastal Zone management tool is the Waterfront Revitalization Program (WRP), which was adopted in 1982. Proposed projects that are within the designated boundaries of New York City's Coastal Zone must be assessed with the WRP.[16] The WRP charged the City Planning

[16] New York City Waterfront Revitalization Program (https://www1.nyc.gov/site/planning/planning-level/waterfront/wrp/wrp.page; accessed: January 10, 2019)

Commission, acting as the City Coastal Commission, and the Department of City Planning with responsibility for administering the WRP, and required that local discretionary actions that occur in the Coastal Zone be subject to review. Authorized by New York State's Waterfront Revitalization of Coastal Areas and Inland Waterway Act, the WRP looks to maximize the benefits found with environmental conservation, public use of the waterfront, and economic development while minimizing the conflicts among these goals. The WRP is designed to review activities and decisions affecting development on the coastal zones, which is determined by the consistency with the coastal policies found in the WRP. The framework for evaluating the policies is provided in the WRP, and supporting designation areas such as the Coastal Zone Boundary, Special Natural Waterfront Areas, and Significant Maritime and Industrial Areas were created to provide aid in analysis.

The WRP establishes ten policies for the development and use of the waterfront, and each policy contains a list of related goals. The policies that are pertinent to the Proposed Actions include Policies 1, 4, 5, 6, 7, 8, and 9; and, an assessment of those policies are found in the WRP Consistency Assessment Form (WRP #17-038) provided in Appendix G. That assessment, as determined by DCP, demonstrates that the Proposed Project would be consistent with the goals and objectives of the Waterfront Revitalization Program.

Downtown Flushing Transit Hub Business Improvement District (BID)

Created in 2003 by property owners, businesses, residents, and community leaders, the Downtown Flushing Transit Hub Business Improvement District (BID) or Flushing BID, was formed to explore creative and effective programs for its members.[17] Members rely on the BID to provide efficient and cost-effective services while acting as an advocate, liaison, and problem solver for the community. The Flushing BID provides a link between NYC government and the neighborhood, working with local elected officials and government agencies. The BID also provides sanitation coverage to the Downtown Flushing area along Main Street and Roosevelt Avenue, with a goal to expand into the Project Area and along College Point Boulevard.

The Project Area is along portions of College Point Boulevard and Roosevelt Avenue, which are identified as Proposed Expansion Areas of the Flushing BID. The Proposed Actions support the BID's goals to increase investment into the neighborhood and enhance the quality of life. The Proposed Project would facilitate a variety of retail, office, hotel, and community facility uses which would support the Flushing economy. The Project Area would house a range of new enterprises and support future growth and investment in the area.

Based on this information, the Proposed Actions would align with the goals and objectives of the Flushing BID.

Vision Zero Action Plan

NYC's 2014 *Vision Zero Action Plan* focuses on ending traffic deaths and injuries on New York City streets, focusing on the safety of its residents whenever walking, biking or driving. A collaborative effort between the New York City Department of Transportation (DOT) and the New York City Police

[17] *Downtown Flushing Transit Hub Business Improvement District* (https://www.flushingbid.com; accessed: January 14, 2019)

Department (NYPD) as well as other city agencies such as the Departments of Health and Education, the Vision Zero Initiative addresses specific challenges and provides recommendations towards pedestrian safety in the five boroughs.[18]

The *Vision Zero Action Plan* seeks to improve street safety by:

- Increasing the enforcement of moving violations
- Improving street designs
- Holding public outreach sessions
- Increasing penalties for dangerous drivers
- Reducing speed limits
- Increasing the use of enforcement cameras

The *Vision Zero Queens Pedestrian Safety Action Plan* was released in 2015 and is one of the five borough-level plans created to advance goals laid out in the *Vision Zero Action Plan*. The plan pinpoints the conditions and characteristics of Queens' pedestrian fatalities and severe injuries and recommends a series of actions to alter the physical and behavioral conditions on Queens' streets. The *Vision Zero Queens Pedestrian Safety Action Plan* identified Downtown Flushing among the densest concentration of pedestrian KSI (Killed or Severely Injured) crashes in the borough.[19] The plan provides recommendations and case study analysis on pedestrian safety, community dialogue and input, and DOT safety improvements within the Downtown Flushing Area. The plan identifies the intersection of College Point Boulevard and Roosevelt Avenue as a Priority Intersection. *The Borough Pedestrian Safety Action Plans Update* in 2019 updated the Queens Borough Plan with changes to priority corridors and intersections. NYC DOT delisted 17 corridors, added five, and retained 30, while the agency delisted 42 intersections, added 37, and retained 30. Compared to the pre-Vision Zero average, pedestrian facilities in Queens declined by seven percent in 2018 and have completed 86 percent of safety engineering improvements to Queens Priority Corridors since the start of *Vision Zero*.

The creation of a private street network under the Proposed Actions would improve vehicular and pedestrian circulation through each Development Site, minimize the effects of project-generated traffic on the surrounding streets, and provide contiguous publicly accessible streets and sidewalks between the waterfront and areas east of College Point Boulevard, including Downtown Flushing. Parking would be provided through a series of privately operated publicly accessible parking garages. The design and construction of the street network would be coordinated among the various development sites, and these streets would connect to existing circulation outside of the Project Area. Overall, the Proposed Project would facilitate the development of a connected pedestrian network with safe connections to existing pedestrian routes that would overall improve walkability and pedestrian amenity in the area.

Based on this information, the Proposed Actions would align with the goals and objectives of the *Vision Zero Action Plan*.

[18] *Vision Zero Action Plan* (https://www1.nyc.gov/site/visionzero/index.page; accessed: January 14, 2019)
[19] *Vision Zero Queens Pedestrian Safety Action Plan* (http://www.nyc.gov/html/dot/downloads/pdf/ped-safety-action-plan-queens.pdf; accessed: January 14, 2019)

New York City Food Retail Expansion to Support Health Program (FRESH)

New York City's Food Retail Expansion to Support Health Program, commonly known as FRESH, promotes the establishment of grocery stores in underserved communities by lowering the costs of owning, developing, and renovating retail space.[20] The Project Area is in an area where discretionary tax incentives through the FRESH program are available. FRESH financial incentives are open to grocery store operators renovating existing retail space or developers looking to construct or renovate retail space to be leased to a full-line grocery store operator.

The FRESH program is administered by the New York City Industrial Development Agency (NYCIDA) and the New York City Department of City Planning (DCP) with support from the Department of Mental Health and Hygiene and the Mayor's Office of Food Policy. Stores that benefit from the program must be located in the eligible FRESH area and must provide:

- A minimum of 5,000 square feet of retail space for a general line of food and nonfood grocery products intended for home preparation, consumption, and utilization;
- At least 50% of retail space for a general line of food products intended for home preparation, consumption, and utilization;
- At least 30% of retail space for perishable goods that may include dairy, fresh produce, fresh meats, poultry, fish, and frozen foods; and
- At least 500 square feet of retail space for fresh produce.

The Applicant plans to develop ground floor commercial uses. Commercial uses such as supermarkets, theaters, or restaurants, in addition to community facility uses such as day care centers or medical clinics are potential tenants within the Project Area, and subject to market conditions.

The Proposed Actions would not preclude participation in the FRESH program and would create new commercial spaces that would provide the opportunity for operators to take advantage of these available incentives. Accordingly, the Proposed Project would align with the goals and objectives of the FRESH program.

Downtown Flushing Development Framework

The Downtown Flushing Development Framework was an initiative led by the NYC Economic Development Corporation (NYCEDC) and DCP in 2004. The framework provided land use planning strategies for the future growth and sustainability of three closely connected but distinctive parts of Flushing -- Downtown Flushing, the Flushing Creek waterfront, and Willets Point. The framework sought to provide a vision for Downtown Flushing as a "center of urban activity that retains the feel of a small town – a place where people come to experience the best of Queens." In order to implement this vision, the framework identified the three sub-areas mentioned earlier and set forth goals to reconnect and renew the three distinctive parts of Flushing.

[20] *Food Retail Expansion to Support Health* (https://www.nycedc.com/program/food-retail-expansion-support-health-fresh; accessed: January 14, 2019)

The framework recognized Downtown Flushing as the commercial heart of Flushing and outlined opportunities for downtown to become a more dynamic and diverse mixed use community. The incorporation of urban design and efficiency towards improving transportation and parking were topics emphasized in the vision. The framework identified the area along Flushing Creek as a future development opportunity where a mix of open space and mixed use development can attract residents and visitors to the waterfront. Additionally, in efforts to revitalize the waterfront, recommendations were given in the framework to improve the environmental quality of the river and surrounding wetlands, ultimately serving as a connection to Willets Point. Furthermore, the framework provided rationale for the redevelopment of Willets Point, specifically related to land use, urban design, and economic impacts.

The Proposed Actions would provide a mix of open space and mixed use development along the Flushing Creek waterfront and therefore would align with the goals and objectives of the Downtown Flushing Development Framework.

Downtown Flushing Waterfront Access Plan (WAP)

In connection with the 1998 Downtown Flushing rezoning, DCP established a WAP on properties adjacent to Flushing Creek, including the Project Area. As discussed in the "Zoning" section of this chapter, the WAP modified the underlying public access requirements of ZR Article VI, Chapter 2. The WAP also requires that any new commercial or mixed use development provides publicly accessible waterfront open space, as well as upland connections and visual corridors as specified in the WAP.

The Proposed Actions includes a new WAP in order to make it consistent with the proposed SFWD. The core principles of providing publicly accessible waterfront space, upland connections, and visual corridors would remain a central part of the new WAP, and the minimum width of the shore public walkway would be increased from 20 feet to 40 feet, ensuring greater public amenities and waterfront access along the Flushing Creek frontage of each site where new development occurs in the future. While the Proposed Actions would modify some provisions of the WAP, the Proposed Actions would require additional privately owned space be dedicated to a shore public walkway, and would modify existing visual access corridors to better accommodate new development within the Project Area. Accordingly, the Proposed Actions would align with the overarching goals and objectives of the Downtown Flushing WAP, and does not have the potential to conflict the overarching goals of the WAP.

Flushing Waterfront BOA Study and Master Plan

In 2010, the Flushing Willets Point Corona Local Development Corporation (FWCLDC) received a grant under the New York State Brownfield Opportunity Areas (BOA) Program to produce the Flushing Waterfront BOA Nomination Planning Study (the BOA Study). The BOA Program provides funds to community organizations and municipalities to develop community plans for brownfield areas with vacant or underutilized properties, where contamination or perceived contamination has impeded redevelopment. In 2014, FWCLDC partnered with DCP to prepare report documents for the BOA Study.

The purpose of the BOA Study was to facilitate the development of a vibrant, inclusive mixed-use neighborhood that would serve as an extension of Downtown Flushing and provide a distinct

waterfront destination for residents, workers, and visitors. The BOA Study recommended several land use objectives that are to be implemented through the Proposed Actions described in this document, including the creation of market-rate and affordable housing opportunities, a variety of retail and commercial services, and well-defined waterfront access. To accomplish these goals, the BOA Study also included the BOA Master Plan, which recommended various zoning map and text amendments, including the creation of a special district, and has served as a roadmap for private applicants to use in the redevelopment of the Flushing waterfront.

In 2017, the BOA Study and Master Plan were submitted to the New York Department of State and in 2018, the Flushing waterfront received official BOA designation. The Proposed Actions build on and are consistent with the goals and objectives of the BOA Master Plan.

Flushing Creek Plan

In February 2019, DCP launched the Flushing Creek Plan to explore opportunities to support the ecological health of Flushing Creek. The Flushing Creek Plan began its public outreach efforts in April 2019 and the plan is expected to be released in spring 2020. The plan seeks to identify additional ways to improve water quality and the ecology of Flushing Creek to complement existing efforts to do so and reflect the change in land use of the nearby brownfield sites, including those within the Project Area. One area of opportunity identified by the Flushing Creek Plan, is a federal navigation channel located in Flushing Creek and adjacent to the Project Area, which is no longer used for commercial maritime activity. The Plan suggests repurposing this section of the creek with ecological restoration work.

The Flushing Creek Plan is an ongoing effort and current plans call for the new development in the Project Area to tie into existing water and sewer lines that direct sanitary flows to the Tallman Island WWTP, thereby providing the Special Natural Waterfront Area (SNWA) with protections for wastewater. New development in the Project Area would be designed and constructed so that future activities in the Project Area would not result in significant adverse impacts to existing NYSDEC-designated littoral zone wetlands. During periods of construction, Flushing Creek would be protected from construction activities by measures that follow a Stormwater Pollution Protection Plan (SWPPP). Each development site would be required to develop a SWPPP for construction and post-construction activities. See Appendix G for the WRP Assessment, which presents further detail on how the Proposed Project aligns with policies related to the protection of Flushing Creek. Therefore, the Proposed Actions would align with the goals and objectives of the Flushing Creek Plan.

Public Policy Conclusion

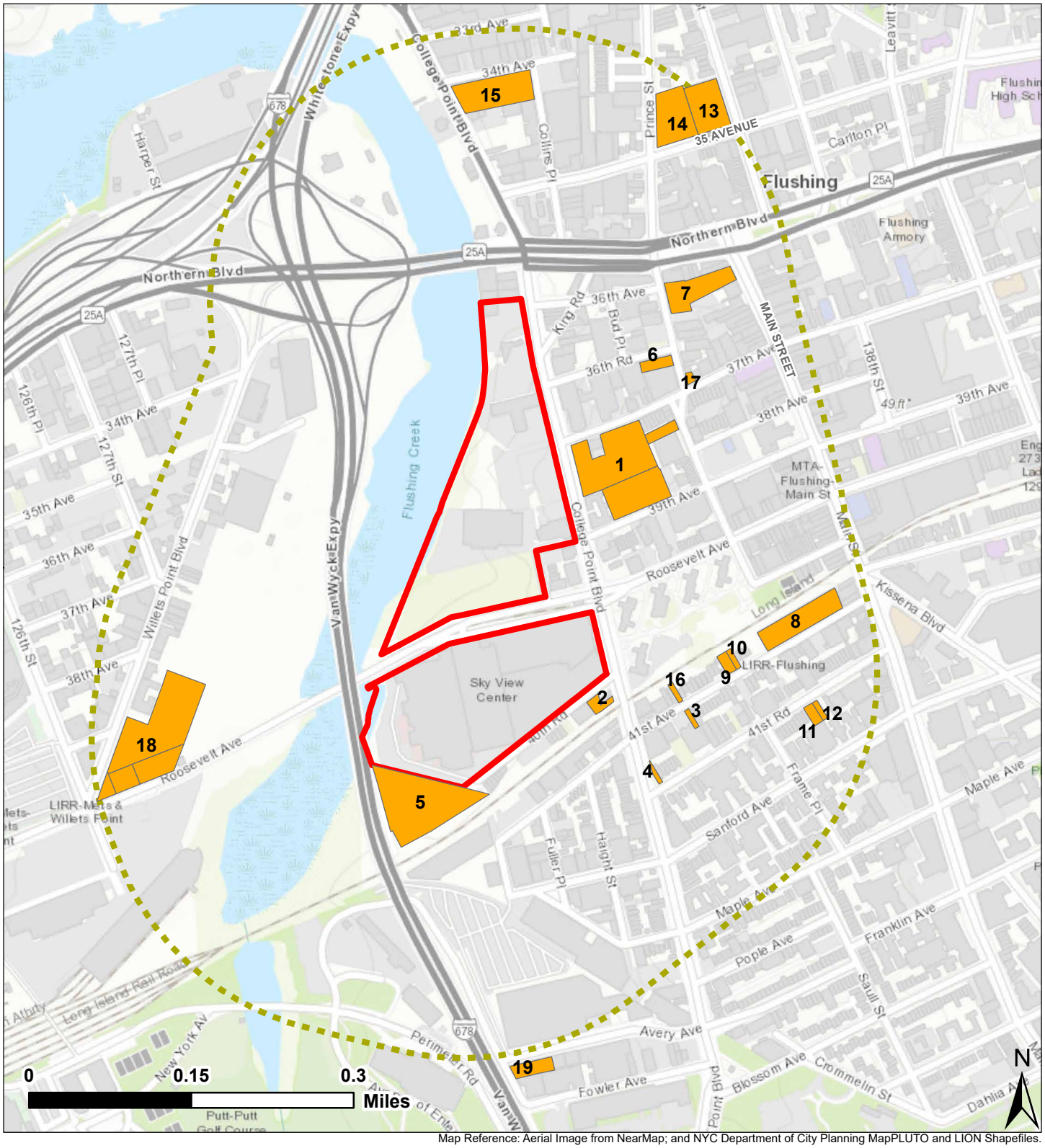
The Proposed Project would facilitate the development of a mixed use waterfront community in the Flushing neighborhood of Queens, which would promote many of the initiatives and goals of the public policies mentioned above. The Proposed Actions would change zoning designations within the Project Area, which is intended to create opportunities for the creation of affordable housing and encourage walkability and connectivity between Downtown Flushing and the Flushing Creek waterfront. The Proposed Project would support the Flushing economy through a mixture of new residential, commercial, and community facility uses. Therefore, the Proposed Project would align

with the applicable public policies and would not result in a significant adverse public policy impact, and no further analysis is warranted.

FIGURE B-1

DEVELOPMENT PROJECTS

SPECIAL FLUSHING WATERFRONT DISTRICT



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area

Study Area (0.25-mile radius)

Development Project

FLUSHING, QUEENS, NY

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ATTACHMENT C: SOCIOECONOMIC CONDITIONS

INTRODUCTION

According to the 2014 *CEQR Technical Manual (CEQR Technical Manual),* the socioeconomic character of an area includes its population, housing, and economic activity. Even when socioeconomic change may not result in environmental impacts under CEQR, they are disclosed if they would affect land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. According to the *CEQR Technical Manual*, a socioeconomic assessment considers whether development resulting from a proposed project could result in significant adverse impacts on the socioeconomic character of an area due to the direct displacement of the residential population on a project site, indirect displacement of the residential population within a study area, direct displacement of existing businesses on a project site, indirect displacement of existing businesses within a study area, or adverse effects on specific industries.

As described in Attachment A, "Project Description," the Proposed Actions would result in an increase over the No-Action Condition of approximately 2,038 gsf of community facility space and 293 dwelling units, of which, it is assumed for the purpose of conservative analysis, 20 percent (61 dwelling units)[21] would be reserved as affordable to households with incomes at or below 80 percent of the Area Median Income (AMI). The Proposed Actions would also result in a decrease of 6,439 gsf of commercial space and a decrease of 128,500 gsf of manufacturing space.

METHODOLOGY

According to the *CEQR Technical Manual*, an assessment of socioeconomic conditions typically separates the socioeconomic conditions of area residents from those of area businesses although a proposed project may affect them in similar ways. The *CEQR Technical Manual* defines direct displacement as the involuntary displacement of residents or businesses from a site(s) directly affected by a proposed project. Indirect displacement is the involuntary displacement of residents, businesses, or employees that results from a change in socioeconomic conditions in a particular study area as a result of the proposed project.

Direct Residential Displacement

The Proposed Actions would not result in the direct displacement of any existing residential population. None of the projected or potential development sites contain existing residential units. Therefore, the Proposed Actions would not result in significant adverse impacts related to direct residential displacement and further assessment is not warranted.

Indirect Residential Displacement

The Proposed Actions, would result in an increase of approximately 293 dwelling units over the No-Action Condition. According to the *CEQR Technical Manual*, projects that would result in more than 200 new residential units have the potential to result in significant adverse impacts related to

[21] A minimum of 20 percent of the proposed 293 units would be affordable at or below 80 percent of the Area Median Income (AMI) pursuant to the Mandatory Inclusionary Housing (MIH) program.

indirect residential displacement; therefore, a preliminary assessment of potential indirect residential displacement is provided below.

Direct Business Displacement

The Proposed Actions would not result in the direct displacement of existing businesses and, therefore, would not have the potential to result in significant adverse impacts related to direct business displacement and further assessment is not warranted. Additionally, the only existing business (U-Haul) within the Project Area operates on Potential Development Site B and would remain operational in the With-Action Condition. Potential Development Site A would be redeveloped with a commercial building in both the No-Action and With-Action conditions; therefore the existing business would not be displaced as a result of the Proposed Actions.

Indirect Business Displacement

According to the *CEQR Technical Manual*, projects resulting in an increase of more than 200,000 square feet (sf) of commercial space have the potential to result in indirect business displacements due to increased rents. Further, an assessment of indirect business displacement due to retail market saturation is warranted if a project would result in an increase in 200,000 sf or more of retail use on a single site, or 200,000 sf or more of regional-serving retail use across multiple sites.

In the With-Action Condition, the Projected Development Sites would be developed with approximately 1,397,040 gsf of commercial uses (retail, office, and hotel), which represents a decrease of approximately 6,439 gsf of commercial use compared to the development in the No-Action Condition. Based on the thresholds described above, the development in the With-Action Condition would not add to or create a retail concentration that draws a substantial amount of sales from existing businesses, to the extent that the businesses would close, and vacancies would increase around Downtown Flushing. Therefore, further assessment of indirect business displacement is not warranted, and the Proposed Actions would not result in significant adverse impacts related to indirect business displacement due to increased rents or retail market saturation.

Adverse Effects on Specific Industries

The Proposed Actions would not result in a change that would prohibit uses permitted by the existing zoning and would not indirectly substantially affect any one specific industry or category of business. The development facilitated by the Proposed Actions would not significantly affect business conditions for any vulnerable industry within or outside the surrounding area. The products and services offered by businesses in the surrounding area are not uniquely dependent on their location and are not the subject of other regulations or publicly adopted plans aimed at their preservation. Further, the products and services do not serve a population uniquely dependent on their services in their present location. Therefore, the Proposed Actions would not have the potential to adversely affect specific industries, and a preliminary assessment of potential effects on specific industries is not warranted.

STUDY AREA

The study area for socioeconomic conditions should reflect the scale of change anticipated to result from the Proposed Actions. The *CEQR Technical Manual* states that for actions that would increase the population within a 0.25-mile study area by more than five percent compared to the No-Action Condition, a 0.5-mile study area is more appropriate for the assessment of socioeconomic conditions.

The development in the No-Action Condition would comprise approximately 1,463 dwelling units, which is anticipated to generate approximately 4,009 residents. Accordingly, the residential population in the No-Action Condition would be approximately 20,164, which accounts for the 4,009 residents generated by the development in the No-Action Condition and the 4,606 residents generated by the approximately 1,681 dwelling units anticipated to be developed within 0.25-miles of the Project Area by the 2025 build year. The Proposed Actions would facilitate the development of an additional 293 dwelling units compared to the development in the No-Action Condition, which is anticipated to generate approximately 803 additional residents.[22] Accordingly, when accounting for the same anticipated development within 0.25-miles of the Project Area, the With-Action residential population would be approximately 20,966 residents.

Based on the anticipated population in the No-Action Condition, the addition of 803 residents would increase the population of the 0.25-mile study area by less than five percent (approximately 3.98 percent). Therefore, pursuant to *CEQR Technical Manual* guidance, the socioeconomic assessment utilizes a 0.25-mile study area. The Study Area consists of census tracts with 50 percent or more of their area within a 0.25-mile of the Project Area and includes Tracts 849, 869, and 871 (Figure C-1). Census Tract 383.01 located to the west of Flushing Creek in Willets Point was excluded from the Study Area because it contains no residential population.

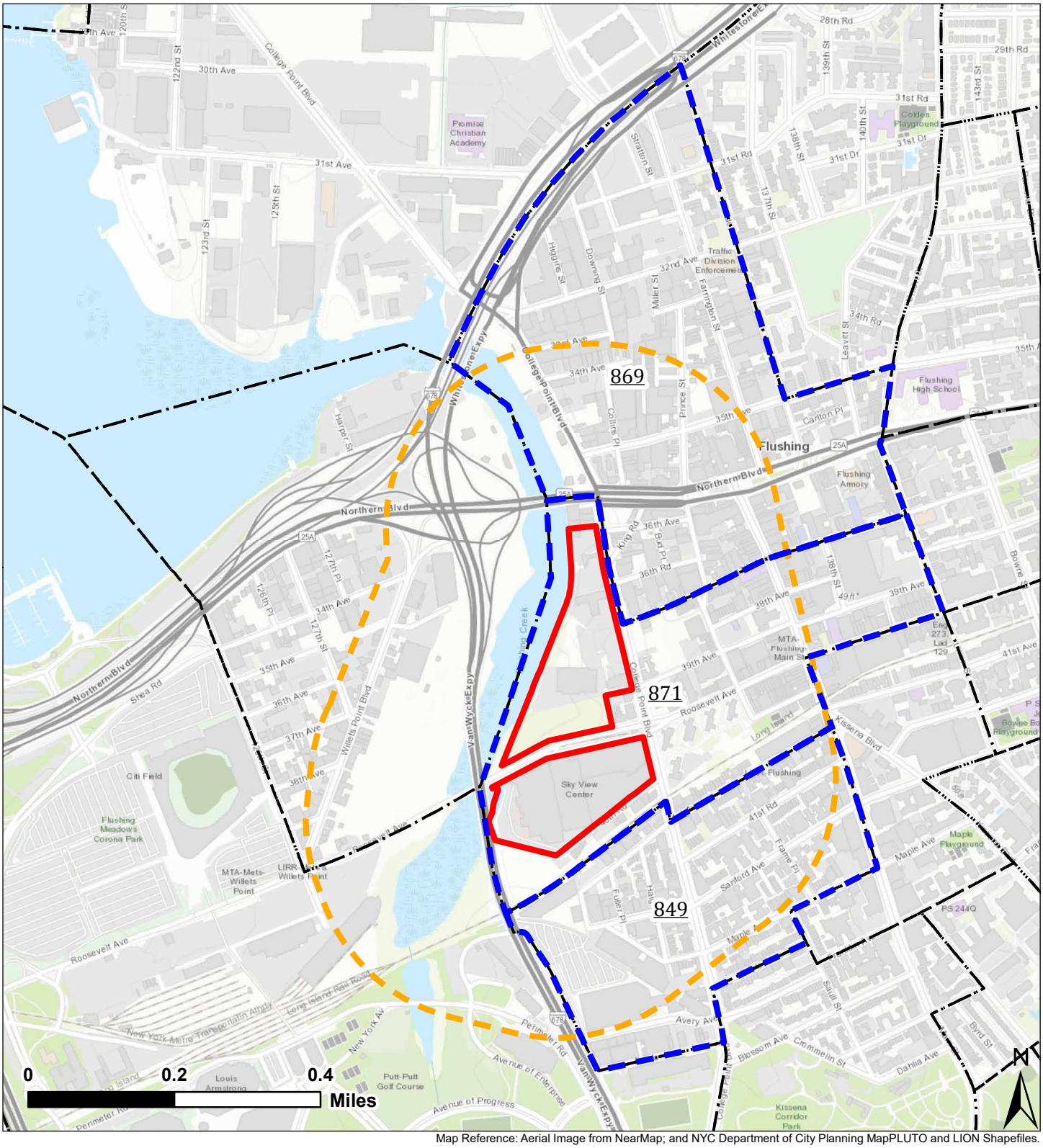
DATA SOURCES

This socioeconomic conditions assessment draws upon data from the U.S. Census Bureau's 2010 Census, as well as the five-year American Community Surveys (ACS) from 2006-2010 and 2013-2017. The assessment also uses data from the New York City Department of City Planning's Primary Land Use Tax Lot Output (PLUTO) and the real estate website StreetEasy. Known developments ("No-Build projects") found within the study area were included in this assessment based on the Department of Building's (DOB) Building on My Block website, new building permits found on DOB's Building Information Search that would be completed by 2025, and capital planning projections provided by the NYC Department of City Planning (DCP).

[22] Based on average household size (2.74) in Queens Community District 7 (2010 Census, Demographic Profile – New York City Community Districts).

FIGURE C-1

SPECIAL FLUSHING WATERFRONT DISTRICT
SOCIOECONOMIC STUDY AREA



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Study Area

0.25-mile Radius

Project Area

871 Census Tract

FLUSHING, QUEENS, NY

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PRELIMINARY ASSESSMENT

Indirect Residential Displacement

The goal of the indirect residential displacement assessment is to determine whether the proposed project may either introduce or accelerate a trend of changing socioeconomic conditions that could displace a vulnerable population to the extent that the socioeconomic character of the affected neighborhood would change. According to the *CEQR Technical Manual,* a preliminary assessment of a particular project's potential to result in indirect residential displacement first considers the following question:

Step 1: Will the Proposed Actions add a new population with higher average incomes compared to the average incomes of the existing population and any new population expected to reside in the study area?

As depicted in Figure C-1, the Study Area includes three census tracts, each of which with 50 percent or more of their area within a 0.25-mile radius of the Project Area. As shown in Table C-1, based on 2013-2017 ACS five-year estimates, the median household income in the Study Area is approximately $28,988, as compared to the median household income of $62,436 in the borough of Queens. Both mean and median household income within the Study Area have been decreasing, which is consistent with the directionality of the median household income of the borough of Queens as a whole. Conversely, the mean and median household incomes within New York City have been increasing. Additionally, the mean household incomes for the Study Area, borough of Queens, and New York City are higher than the median household incomes, indicating small portions of each population earn significantly more than the typical household.

Table C-1: Household Income Characteristics (2006-2010, 2013-2017 ACS)

	Mean Household Income			Median Household Income		
	2006-2010	2013-2017	Market Directionality	2006-2010	2013-2017	Market Directionality
Study Area	$59,412	$45,512	Decreasing	$44,367	$28,988	Decreasing[1]
Queens	$79,095	$81,335	Increasing[2]	$62,881	$62,436	N/A[3]
New York City	$87,757	$93,196	6.2%[4]	$56,724	$58,144	Increasing[5]

***Source**: U.S. Census Bureau, 2013-2017 ACS 5-Year Estimates (NYC Planning Population FactFinder).*
***Notes:** [1, 2, 5] The margin of error (MOE) of the difference is greater than one third of the difference, but less than the difference itself between the 2006-2010 and 2013-2017 five-year ACS Estimates. Therefore, a percentage change cannot be estimated with confidence.*
[3] The MOE of the difference is greater than the difference between the 2006-2010 and 2013-2017 Five-Year ACS Estimates; therefore, a change cannot be reported with confidence.
[4] The MOE of the difference between the 2006-2010 and 2013-2017 Five-Year ACS Estimates is less than one third of the difference itself; therefore, a percentage change can be estimated.

Table C-2: Income in the Past 12 Months Below the Poverty Level

	2006-2010	2013-2017	Direction of Change
Study Area	18.4%	31.6%	Increasing[1]
Queens	10.6%	11.1%	Increasing[2]
New York City	16.2%	16.2%	N/A[3]

***Source**: U.S. Census Bureau, 2006-2010 and 2013-2017 ACS 5-Year Estimates (NYC Planning Population FactFinder).*
***Notes:** [1, 2] The MOE of the difference is greater than one third of the difference, but less than the difference itself between the 2006-2010 and 2013-2017 five-year ACS Estimates. Therefore, a percentage change cannot be estimated with confidence.*
[3] The MOE of the difference is greater than the difference between the 2006-2010 and 2013-2017 Five-Year ACS Estimates; therefore, a change cannot be reported with confidence.

As shown in Table C-2, poverty levels in both the Study Area and the borough of Queens are increasing. Based on the 2013-2017 ACS five-year estimates, poverty levels are much higher in the Study Area than in the borough of Queens and NYC. Between 2006-2010 and 2013-2017, the percentage of persons living below the poverty level increased in the Study Area and in Queens.

In the No-Action Condition, it is anticipated that current land use trends and general development patterns would continue. Table C-3 identifies 13 developments anticipated to occur within 0.25-miles of the Project Area by 2025 that would introduce residential uses. Of the dwelling units anticipated to be brought to market within 0.25-miles of the Project Area by 2025, approximately 1,181 would be market rate and 500 would be permanently affordable.

Table D-3: No-Build Residential Development within 0.25-mile Study Area

Block	Lot	Residential Dwelling Units	Residents Generated
4972	65-67	375	1,027
5039	18	8	22
5039	1	8	22
5066	150	278	762
4970	25	26	71
5037	64	232	636
5037	89	14	38
5037	88	7	19
4949	31	89	244
4949	46	130	356
5037	101	8	22
4971	1	6	16
1833	117,120	500	1370
	Totals	**1,681**	**4,606**

***Source**: New building permits via DOB's Building Information Search and capital planning projections provided by DCP. See Appendix F, "No-Build Developments." Residents generated based on average household size (2.74) in Queens Community District 7.*

In addition to the approximately 1,681 residential dwelling units anticipated to be developed within the 0.25-mile Study Area, an additional 297,945 gsf of commercial retail space, 79,342 gsf of commercial office space, 248,742 gsf of community facility space, 1,416 hotel rooms, and 105,377 gsf of storage space are anticipated to be developed by 2025.

As part of the Proposed Actions, an MIH area would be mapped on a portion of the Project Area that would require new residential development within that area to include permanently affordable housing. For the purposes of a conservative assessment, 20 percent of the dwelling units introduced by the Proposed Actions in the MIH area would be designated as permanently affordable to households with incomes at or below 80 percent of the AMI, and the remainder would be market-rate. The majority of dwelling units developed in both the No-Action and With-Action conditions would not be rent-regulated. However, because the Proposed Actions would result in the establishment of a new MIH area, the development in the With-Action Condition would create and preserve affordable housing in the Project Area.

Table C-4: 2019 New York City Area Median Income (AMI)

Family Size	30% of AMI	40% of AMI	50% of AMI	60% of AMI	80% of AMI	100% of AMI	130% of AMI
1	$22,410	$29,880	$37,350	$44,820	$59,760	$74,700	$97,110
2	$25,620	$34,160	$42,700	$51,240	$68,320	$85,400	$111,020
3	$28,830	$38,440	$48,050	$57,660	$76,880	$96,100	$124,930
4	$32,010	$42,680	$53,350	$64,020	$85,360	$106,700	$138,710

Source: *NYC Department of Housing Preservation and Development (https://www1.nyc.gov/site/hpd/renters/area-median-income.page, accessed July 2019).*

Compared to the No-Action Condition, the development in With-Action Condition would result in an increase of approximately 293 dwelling units, of which approximately 61 would be designated as permanently affordable.

Pursuant to the MIH program, and for the purposes of a conservative assessment, the development in the With-Action Condition is anticipated to contain approximately 61 dwelling units, designated as permanently affordable for households earning up to 80 percent AMI. Based on the affordability levels defined in Table C-4, the average incomes anticipated for the new residential population that would qualify for affordable housing in the With-Action Condition is expected to be approximately $68,320 for a household of two, which is higher than both the existing median household income ($28,988) and existing mean household income ($45,512).

The remaining 232 incremental dwelling units in the With-Action Condition are anticipated to be market rate. Table C-5 summarizes the average asking rents for studios, one-bedroom, two-bedroom, three-bedroom, and four or more bedroom apartments in the Study Area. As indicated, the average asking rents range from approximately $2,000 a month for a studio to approximately $4,750 for a three-bedroom. As shown in Table C-6, based on the assumption that households would be anticipated to spend approximately 30 percent of their income on housing costs, households would need to earn approximately $80,000 annually to afford a studio, $94,320 annually to afford a one-bedroom, $127,880 annually to afford a two-bedroom, and $190,000 annually to afford a three-bedroom apartment. Information about four (or more) bedroom apartments for rent in the Study Area was not available.

Table C-5: 2019 Average Asking Rents in the Study Area

	Studio	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom
Study Area (Portions of Flushing)	$2,000	$2,358	$3,197	$4,750	N/A

Source: *StreetEasy (http://streeteasy.com, accessed July 2019).*

Table C-6: Household Income by Unit Type

Apartment Type	Monthly Rent ($)[1]	Monthly Income ($)[2]	Annual Income ($)[3]
Studio	2,000	7,000	80,000
One-Bedroom	2,358	8,000	94,000
Two-Bedroom	3,197	11,000	128,000
Three-Bedroom	4,750	16,000	190,000

Source: *StreetEasy (http://streeteasy.com, accessed July 2019), used for rental research*
Notes: *[1] Represents the average market-rent based on July 2019 market listings*
[2, 3] Household incomes were imputed using HUD 30 percent guideline described above and rounded to nearest thousand dollar.

The exact level of affordability has not yet been determined for the permanently affordable dwelling units anticipated to be developed in the With-Action Condition. However, as mentioned previously, for the purposes of this assessment it is assumed households would be earning 80 percent of AMI. Accordingly, based on the anticipated annual income of market-rate renters and the anticipated affordability levels, the residential population introduced as a result of the Proposed Actions would be anticipated to have a higher average and median income than the existing Study Area population. Therefore, based on guidance in the CEQR Technical manual, Step 2 of the preliminary assessment is warranted.

Step 2: How large is the expected increase in population due to the Proposed Actions compared to the population of the Study Area under the No-Action Condition?

As shown in Table C-7, based on the 2013-2017 ACS data, the Study Area has a population of approximately 11,549. Since 2006-2010, the Study Area population has increased by approximately 17 percent. Additionally, both the populations of Queens and New York City have increased by 6 percent between 2006-2010 and 2013-2017.

Table C-7: Residential Population – (2006-2010, 2013-2017 ACS)

	Total Population		
	2006-2010	2013-2017	Percent Change 2006-2010 to 2013-2017
Study Area	9,834	11,549	**17%[1]**
Queens	2,199,169	2,339,280	**6%**
New York City	8,078,471	8,560,120	**6%**

Source*: U.S. Census Bureau, 2006-2010 and 2013-2017 ACS 5-Year Estimates.*
[1]Based on the MOE for total population within the study area (according to the 2013-2017 Five-Year ACS, MOE of 1,013 persons), there is 90 percent probability that the total population of the study area is between 10,536 and 12,562.

As stated previously, absent the approval of the Proposed Actions, the development in the No-Action Condition would comprise approximately 1,463 dwelling units, and approximately 1,681 dwelling units are anticipated to be developed within 0.25-miles of the Project Area by 2025. At an average household size of approximately 2.74, the residential population in the No-Action Condition is approximately 20,164.

Table C-8: 2025 No-Action and With-Action Populations

	2013-2017	2025 No-Action	2025 With-Action	Percent Change Over No-Action
Project Area	-	4,009	4,811	3.98%
Study Area	11,549	16,155	16,155	
Total	11,549	20,164	20,966	

***Source**: U.S. Census Bureau, 2013-2017 ACS 5-Year Estimates. No-Build population based on Table 1 in Appendix F, "No-Build Developments."*

As discussed, the Proposed Actions would result in an incremental increase of approximately 293 dwelling units. Accordingly, the development in the With-Action Condition would result in a total Study Area population of approximately 20,966. This increase in residents represents an approximately 3.98 percent increase in Study Area population compared to the development in the No-Action Condition. Based on guidance in the *CEQR Technical Manual*, a population increase of less than five percent is typically not large enough to affect real estate market conditions, and Step 3 of the preliminary assessment is not warranted. The new population introduced by the development in the With-Action Condition would neither significantly alter the Study Area's demographics, nor alter market conditions in a manner that could lead to indirect residential displacement. Based on this information, the Proposed Actions would not have the potential to result in significant adverse impacts due to indirect displacement and further assessment is not warranted.

CONCLUSION

Based on the previous information, although the development in the With-Action Condition is anticipated to have the potential to result in a population with a higher median income than the median income within the Study Area, the population is only anticipated to increase by 3.98 percent compared to the development in the No-Action Condition. Accordingly, because the increase in population would be less than five percent, the development in the With-Action Condition is not anticipated to be large enough to cause indirect displacement of residents, or broadly affect real estate market conditions, and no further analysis is necessary.

ATTACHMENT D: COMMUNITY FACILITIES AND SERVICES

INTRODUCTION

The *CEQR Technical Manual* defines community facilities as public or publicly funded schools, hospitals, libraries, child care centers, health care facilities, and fire and police protection services. A proposed project may affect community facility services directly when it physically displaces or alters a community facility, or indirectly when it results in a change in population that would affect the delivery of services provided by a community facility. According to the *CEQR Technical Manual*, a project may have the potential for an indirect impact on community facilities and services if it would result in an increase in population that would subsequently increase demand for existing services provided beyond the capacity of the facilities to serve the needs of the community.

The Proposed Actions would result in incremental residential development of 293 dwelling units. As part of the Proposed Actions, Projected Development Site 4 and Potential Development Site B would be mapped as a Mandatory Inclusionary Housing (MIH) Area. For the purposes of a conservative analysis of the impact of the Proposed Actions on publicly-funded child care, it is assumed that 30 percent of the dwelling units developed pursuant to the MIH program would be permanently affordable for households with incomes at or below 80 percent of the Area Median Income (AMI). The Proposed Actions would facilitate approximately 304 incremental dwelling units within the MIH Area, of which approximately 30 percent (91 dwelling units) would be anticipated to be permanently affordable for households with incomes at or below 80 percent of the AMI, therefore generating children eligible for publicly-funded child care services.

METHODOLOGY

This analysis of community facilities and services was conducted in accordance with *CEQR Technical Manual* guidelines and was based on the latest data and guidance provided by city agencies, including the New York City Department of Education (DOE), the New York City Administration for Children's Services (ACS), the New York City School Construction Authority (SCA), and the New York City Department of City Planning (DCP). The potential for both direct and indirect impacts are analyzed.

Shortly before the publication of this Environmental Assessment Statement (EAS) in December of 2019, new Projected Public School Ratios (housing multipliers) data was released by the SCA. The data is available on SCA's website (Capital Plan Reports & Data). Projected Public School Ratios for grades PreK-5 (Elementary Schools) and 6-8 (Intermediate Schools) were calculated at the Community School District (CSD) level. Projected Public School Ratios for grades 9-12 (High School) were calculated at the borough level. Since the newly released data indicates a decrease in the number of pupils generated by new housing in Community School District 25, the Community School district in which this project is situated, the conclusions presented in this EAS, using last year's data, are conservative in that they overestimate the number of pupils anticipated to be generated by the Proposed Project. The analysis conclusions presented in this EAS, indicating that no significant adverse impacts related to public schools would result from the proposed project, remain unchanged.

Direct Impacts

According to the *CEQR Technical Manual*, if a proposed project would physically alter a community facility, whether by displacement of the facility or other physical alteration, this "direct" effect triggers the need to assess service delivery of the facility and the potential effect that physical alteration may have on that service delivery.

The Project Area is not developed with and the Proposed Project would not physically alter any publicly-funded community facility. Therefore, the Proposed Actions would not result in significant adverse direct impacts on community facilities and services and further analysis of direct impacts is not warranted.

Indirect Impacts

According to the *CEQR Technical Manual*, an increase in population resulting from a proposed project could result in an increase in the demand for, or an "indirect" effect on, publicly-funded community facilities and services. The analysis of community facilities and services considers indirect effects on public schools, libraries, and child care centers, resulting from additional demand for services generated by population introduced by a project. The demand for publicly-funded community facilities and services depending on the size, income characteristics, and age distribution of the population a project would introduce.

Libraries

According to the *CEQR Technical Manual*, if a proposed project would result in a five percent or more increase in the ratio of residential units to library branches, then a library impact assessment is required. In Queens, an assessment of libraries is warranted for projects which would introduce 622 or more dwelling units. The Proposed Actions would result in an increment of 293 dwelling units. Therefore, the Proposed Actions would not result in significant adverse indirect impacts to service delivery by area libraries and further assessment is not warranted.

Fire and Police Services/Health Care Facilities

According to the *CEQR Technical Manual*, if a proposed project would introduce a sizable new neighborhood, then an assessment of potential indirect impacts related to fire and police services and health care facilities is required. The Proposed Actions would not result in the introduction of a sizable new neighborhood where none existed before, as the Project Area is part of Downtown Flushing and because the Proposed Actions would not facilitate a substantial increase in density over the No-Action Condition. Therefore, the Proposed Actions would not result in significant adverse indirect impacts to fire and police services and health care facilities and further analysis is not warranted.

Publicly-Funded Child Care

An analysis of publicly-funded child care and head start facilities is warranted if an action would result in the introduction of 20 or more children under the age of six eligible for publicly-funded child care services. According to the *CEQR Technical Manual,* low-income units must be affordable to

households at or below 80 percent AMI. Since family incomes at or below 200 percent the Federal Poverty Level (FPL) fall under 80 percent AMI, for the purposes of CEQR analysis, the number of housing units expected to be subsidized and targeted for incomes of 80 percent AMI or below should be used as a proxy for eligibility. As indicated on Table D-1, assuming 30 percent of dwelling units within the MIH Area would be affordable to households with incomes at or below 80 percent of the AMI, the Proposed Actions would introduce 13 children under the age of six eligible for publicly-funded child care services. Therefore, the Proposed Project would not result in significant adverse indirect impacts to publicly-funded child care services and further analysis is not warranted.

Table D-1: Estimated Number of Children Eligible for Publicly Funded Child Care and Head Start

	Children under 6 years old per unit (Queens)	Number of Low-to Moderate-Income Units	Total Children under 6 years old	Triggers Further Analysis
Proposed Project	0.14	91	**13**	**NO**
***Source**: Table 6-1 Community Facilities Threshold for Detailed Analyses, CEQR Technical Manual.*				

Public Schools

The SCA provides the projected number of public school students associated with a new dwelling unit at the CSD level. The Project Area is in CSD 25, Sub-district 2. The estimated public school students which would be generated by the incremental 293 dwelling units introduced by the Proposed Actions is shown in Table D-2. In Queens, the threshold for analysis of an action's indirect impacts on elementary and intermediate public schools is the introduction of 124 dwelling units (50 elementary and intermediate school students) and the threshold for analysis of high schools is the introduction of 1,068 dwelling units (150 high school students). The Proposed Actions would result in the incremental development of 293 dwelling units (92 elementary and intermediate school students and 39 high school students), therefore, an analysis of potential impacts on public elementary and intermediate schools is provided below, and an analysis of potential impacts on high schools is not warranted.

Table D-2: Projected Pupils Generated from New Housing per Unit (CSD 25, Sub-district 2)

	Units for Analysis	Public School Students Per Unit	Est. # of Students from Analysis		Threshold for Triggering Analysis	Triggers Further Analysis
Elementary School	293	0.23	68	92	50	**YES**
Intermediate School		0.08	24			
High School		0.13	39		150	**NO**
***Source**: School Construction Authority Projected Public School Ratio [2018].*						

The study area for the assessment of impacts on elementary and intermediate schools is CSD 25, Sub-district 2, the sub-district in which the Project Area is located. Only public schools operated by the New York City Department of Education (DOE) are included in the quantitative analysis of public

schools. In addition to permanent school structures, the DOE utilizes temporary buildings, mini-schools, and annexes to meet its capacity needs; however, because these structures are not permanent, their enrollment is included but capacity excluded from the utilization analysis. For the below analysis, temporary school buildings located at the same address as a host school are accounted for as a single school.

Per *CEQR Technical Manual* guidelines, the effect of an action may be considered a significant adverse impact if it would result in:

(1) A collective utilization rate of elementary or intermediate schools equal to or greater than 100 percent in the With-Action Condition; and

(2) An increase of the collective utilization rate between the No-Action and With-Action Conditions of five percent or more.

PRELIMINARY ASSESSMENT

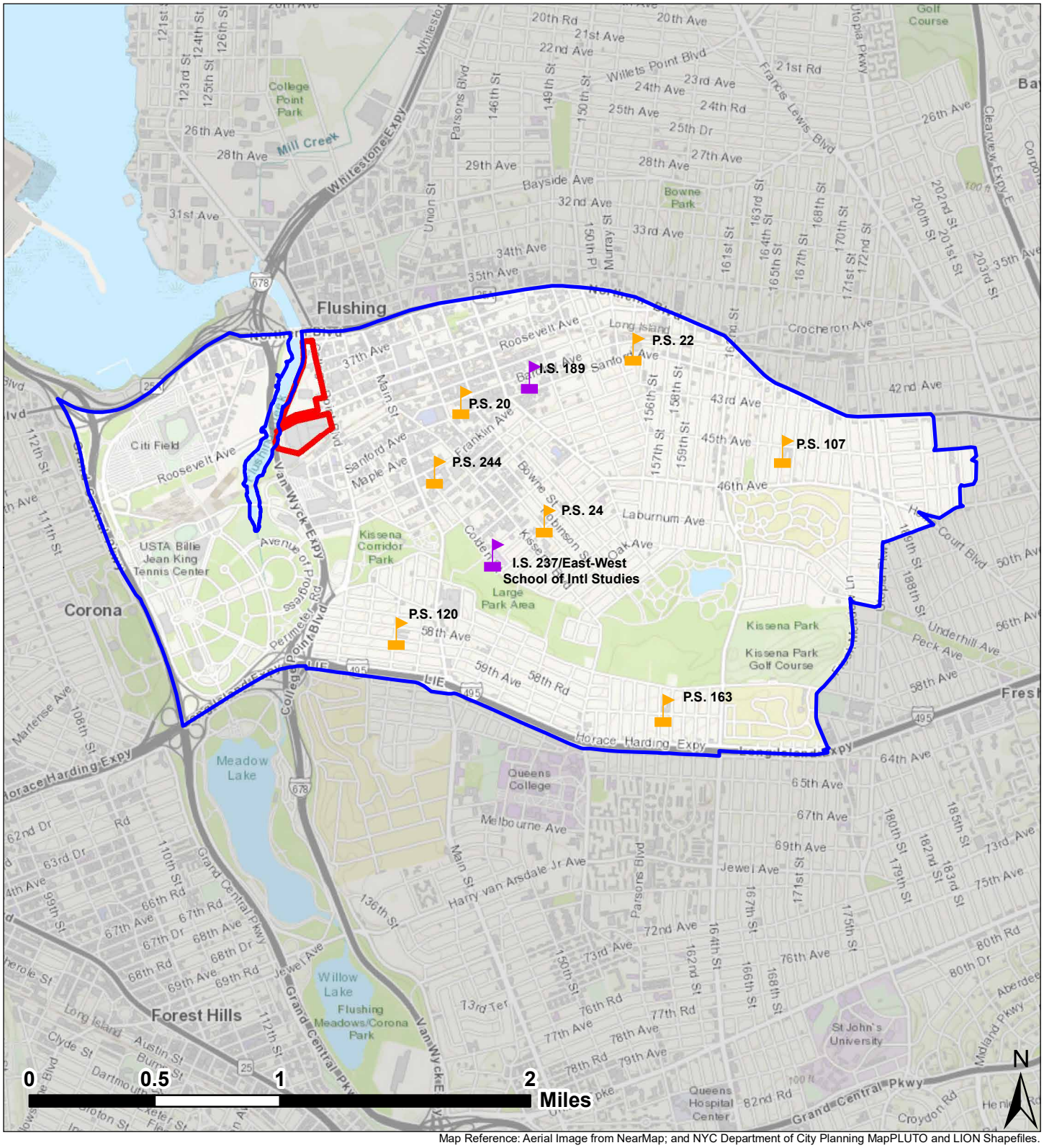
Existing Conditions

Elementary and intermediate schools within CSD 25, Sub-district 2 can generally be defined as elementary (PS), intermediate (IS), or combined intermediate/high schools (ISHS). Elementary schools (PS) serve pre-kindergarten (Pre-K) or kindergarten through grade 5; intermediate schools (IS) serve grades 6 through 8; and intermediate/high schools (ISHS) serve grades 6 through 12. Elementary and intermediate school students in CSD 25, Sub-district 2 are served by ten schools: seven elementary schools, two intermediate schools, and one intermediate/high school (Figure D-1).

FIGURE D-1

SPECIAL FLUSHING WATERFRONT DISTRICT

PUBLIC SCHOOLS (CSD 25, SD2)



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

- Project Area
- School District 25, Subdistrict 2
- Other Subdistricts
- Intermediate School
- Elementary School

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Elementary Schools

Table D-3 lists the enrollment, capacity, and utilization rate for elementary schools during school year 2017-2018 in the study area.

Table D-3: Existing Public Elementary School (P.S.) Enrollment, Capacity, and Utilization: 2017-2018 School Year (CSD 25, Sub-district 2)

Bldg. ID	School Name	Address	Grades Served	P.S. Enrollment[1]	P.S. Target Capacity[2]	P.S. Seats Available	P.S. Percent Utilization
Q020	P.S. 20	142-30 Barclay Ave	Pre K-5	1314	1245	-69	106%
Q022	P.S. 22	153-33 Sanford Ave	Pre K-5	885	621	-264	143%
Q959	P.S. 22 (Transportable)			36	N/A	-36	N/A
Q024	P.S. 24	45-57 Union St	Pre K-5	867	525	-342	165%
Q107	P.S. 24	167-02 45 Ave	Pre K-5	125	70	-55	179%
	P.S. 107			970	895	-75	108%
Q120	P.S. 120	58-01 136 St	Pre K-5	1034	761	-273	136%
Q160	P.S. 163	159-01 59 Ave	Pre K-5	804	602	-202	134%
Q244	P.S. 244 (P.S. 244 ECC @ Franklin Ave)	137-20 Franklin Ave	Pre K-5	456	252	-204	181%
Total Capacity for Elementary Schools				**6,491**	**4,971**	**-1,520**	**131%**

***Source**: SCA Enrollment, Capacity, and Utilization (Blue Book), 2017-2018*
[1] Includes enrollment of temporary facilities, annexes, and mini-schools.
[2] Excludes capacity of temporary facilities, annexes, and mini-schools.

The seven elementary schools in the Study Area have an existing collective utilization rate of approximately 131 percent. All seven schools serve grades Pre-K through 5. There is one temporary building within P.S. 22 (Q959) serving Pre-K through grade 5. Additionally, due to construction at P.S. 24, Table D-3 reflects that 125 elementary students from P.S. 124 were temporarily located at P.S. 107 in Building Q107 (discussed further below under "No-Action Condition"). However, the capacity indicated (70 seats) is permanent capacity within Building Q107 and has thus been included in the total existing capacity.

The existing elementary school enrollment is approximately 6,491 students. With a target capacity of 4,971 students for Pre-K through grade 5, the elementary schools in the Study Area operate at a deficit of approximately 1,520 seats and at 131 percent utilization.

Intermediate Schools

As shown in Table D-4, the three intermediate schools within the Study Area have an existing collective utilization rate of approximately 108 percent. Two schools serve grades 6 through 8 and one school serves grades 6 through 12. There are no temporary buildings within the three intermediate schools within the Study Area. With an existing enrollment of approximately 2,439

students and a target capacity of 2,255 students for grades 6 through 8, the intermediate schools in the Study Area have a deficit of 184 seats and operates at 108 percent utilization.

Table D-4: Existing Public Intermediate School (I.S) Enrollment, Capacity, and Utilization: 2017-2018 School Year (CSD 25, Sub-district 2)

Bldg. ID	School Name	Address	Grades Served	I.S. Enrollment[1]	I.S. Target Capacity[2]	I.S. Seats Available	I.S. Percent Utilization
Q189	J.H.S. 189	144-80 Barclay Ave	6-8	771	857	86	90%
Q237	J.H.S. 237	46-21 Colden St	6-8	1368	1124	-244	122%
Q237	East-West School of International Studies	46-21 Colden St	6-12[3]	300	274	-26	110%
Total Capacity for Intermediate Schools				**2,439**	**2,255**	**-184**	**108%**

***Source**: SCA Enrollment, Capacity, and Utilization (Blue Book), 2017-2018*
***Notes**:*
[1] Includes enrollments for temporary buildings.
[2] Excludes capacities of temporary buildings.
[3] Data for the East-West School of International Studies only reflects intermediate enrollment and capacity.

No-Action Condition

The SCA provides public school student enrollment projections by district through 2027. These enrollment projections are based on demographic trends and do not account for students generated by planned new residential development activity (Known Developments or "No-Build" projects). Demographic projections are supplemented by SCA's housing pipeline data, provided as the number of students generated by new housing by sub-district, to accurately capture overall projected enrollment.

As shown in Table D-5, the anticipated number of students enrolled in elementary and intermediate schools in the Study Area by 2025 in the No-Action Condition is based on the SCA enrollment projections, new housing based on capital planning projections, and development of the Project Area under the No-Action Condition. Under the No-Action condition the Project Area would be developed with 1,422 units, which would introduce 573 new elementary and 200 intermediate school students.

As shown in Table D-5, in the No-Action condition, elementary schools would experience a deficit of approximately 2,969 seats (154 percent utilization) and intermediate schools would have a deficit of approximately 597 seats (126 percent utilization).

The No-Action analysis also includes additional capacity from the planned expansion of P.S. 24 which began during the 2015-2016 school year. The addition is anticipated to have a capacity of approximately 500 seats, which would substantially increase the capacity of the Q024 building. Construction of the addition to P.S. 24 was completed during the 2018-2019 school year. During

construction, the temporary partial re-siting of 125 kindergarten students was needed, and students were sent to P.S. 107, returning to P.S. 24 once construction of the addition was completed.[23]

Table D-5: 2025 Estimated No-Action Public Elementary and Intermediate School: Enrollment, Capacity, and Utilization in the Study Area

	Projected 2025 Enrollment[1]	No-Action Residential Development Students[2]	Total No-Action Enrollment	Capacity	Available Seats	Utilization (%)
Elementary Schools						
CSD 25, Sub-District 2	7,867	573	8,440	5,471	-2,969	154%
Intermediate Schools						
CSD 25, Sub-District 2	2,652	200	2,852	2,255	-597	126%

Notes:
[1] The projected enrollment in the Study Area in 2025 is based on SCA's *Enrollment Projections by Statistical Forecasting (Projected 2018-2027).*
[2] The number of students expected to be introduced by No-Action residential development is based on SCA's *Projected New Housing Starts as used in 2018-2027 Enrollment Projection* and additional new housing based on capital planning projections.

With-Action Condition

The Proposed Actions would result in an increment of approximately 293 residential dwelling units. Based on public school student multipliers provided in the *CEQR Technical Manual*, 293 residential dwelling units would introduce approximately 68 elementary school students and approximately 24 intermediate school students to the study area.

Table D-6: Estimated Public Elementary and Intermediate School Enrollment, Capacity, and Utilization in the Study Area (2025 With-Action Condition)

	No-Action Projected Enrollment[1]	Students Generated by Project	Total Projected With-Action Enrollment	Projected Capacity	Available Seats	With-Action Utilization (%)	Change in Utilization (%) from No-Action to With-Action conditions
Elementary Schools							
CSD 25, Sub-District 2	8,440	68	8,508	5,471	-3,037	156%	1.24%
Intermediate Schools							
CSD 25, Sub-District 2	2,852	24	2,876	2,255	-621	128%	1.07%

Notes:
[1] The projected enrollment in the Study Area in 2025 is based on SCA's *Projected New Housing Starts as used in 2018-2027 Enrollment Projection* and additional new housing based on capital planning projections.

[23] Educational Impact Statement: The Proposed Temporary Partial Re-siting and Co-location of P.S. 24 Andrew Jackson (25Q024) with P.S. 107 Thomas A. Dooley (25Q107) in Building Q107 for Three Years Beginning in the 2015-2016 School Year, Release Date: February 5, 2015.

According to the *CEQR Technical Manual*, an action has the potential to result in a significant adverse impact if it would result in an elementary or intermediate school sub-district utilization rate that is equal to or greater than 100 percent in the With-Action Condition and in an increase of five percent or more in the collective utilization rate between the No-Action and With-Action conditions.

As shown in Table D-6, elementary schools in the Study Area, CSD 25, Sub-district 2, would operate over capacity in the 2025 With-Action Condition, with a deficit of approximately 3,037 seats (156 percent utilization). Intermediate schools would operate over capacity, with a deficit of approximately 621 seats (128 percent utilization). In the With-Action Condition, there would be an increase in the elementary school utilization rate of approximately 1.24 percent and an increase in the intermediate school utilization rate of approximately 1.07 percent as compared to the No-Action Condition, the baseline for comparison.

While it is anticipated that both elementary and intermediate schools in Sub-district 2 would operate at a utilization rate of greater than 100 percent in the With-Action Condition, the Proposed Actions would not result in an increase in the utilization rate from the No-Action Condition for either elementary or intermediate schools within this sub-district of five percent or more. Therefore, the Proposed Actions would not result in a significant adverse impact to public schools and further analysis is not warranted.

CONCLUSION

Preliminary analysis of publicly-funded child care, libraries, and health care and fire/police protection was not warranted for the Proposed Actions and based upon a preliminary analysis it was concluded that a detailed analysis for the Proposed Actions impact on public schools was not warranted. Based upon the screening and preliminary analyses conducted pursuant to *CEQR Technical Manual* methodologies, the Proposed Actions would not result in significant adverse impacts on community facilities and services and further analysis is not warranted.

ATTACHMENT E: OPEN SPACE

INTRODUCTION

This chapter assesses the potential for the Proposed Actions to result in a significant adverse environmental impact on open space resources. According to the *CEQR Technical Manual*, an open space assessment is conducted to determine whether a proposed project would have a direct impact resulting from the elimination or alteration of open space and/or an indirect impact resulting from burdening available open space by the introduction of a new residential or worker population. The *CEQR Technical Manual* defines open space as publicly or privately owned land that is publicly accessible and available for leisure, play, or sport, or is set aside for the protection or enhancement of the natural environment. An open space analysis focuses on all existing or planned publicly accessible open space.

In addition to the analysis provided in this section, Attachment F, "Shadows," provides an assessment of the potential shadow effects of the Proposed Actions on open space resources.

METHODOLOGY

Direct Effects

According to the *CEQR Technical Manual*, a proposed project would directly affect open space resources if it would encroach upon, limit public access to, or cause a loss of public open space. Direct effects may also occur if the resource would be so changed that the open space no longer serves the same user population, or if the proposed project would result in increased noise or air pollutant emissions, odor, or shadows that would temporarily or permanently affect the usefulness of a public open space. The development facilitated by the Proposed Actions would not directly displace any open space; therefore, information from the shadows, air quality, and noise assessments would be used to determine the potential for a direct effect on open space resources.

Indirect Effects

According to the *CEQR Technical Manual*, open space can be indirectly affected by a proposed action if the project would add sufficient population, either residential or non-residential, to noticeably diminish the capacity of open space in the area to serve the future population. Typically, an assessment is conducted if a proposed project would generate more than 200 residents or 500 employees; however, the need for an open space assessment may vary in certain areas of the City that are considered either underserved or well-served by open space.

According to the *CEQR Technical Manual*, the Project Area is within an area that is neither well-served nor underserved by open space within Queens Community District 7; therefore, the threshold that would warrant an open space assessment is 200 residents or 500 employees.

Pursuant to *CEQR Technical Manual* guidelines, the open space analysis is based on the projected increment between the No-Action Condition and the With-Action Condition. Based on the Reasonable Worst Case Development Scenario (RWCDS) prepared for this project, the Projected Development

Sites would result in a net *increase* of 803 residents and a net *increase of* 199 workers compared to the No-Action Condition, and therefore an open space analysis is warranted for potential indirect effects related to an increase in residential population.

Study Area

An open space study area is generally defined by a reasonable walking distance that users would travel to reach local open space and recreation areas—typically a 0.50-mile radius for residential projects. The Study Area shown in Figure E-1 is based on a 0.50-mile distance from the Project Area boundary. All census tracts with at least 50 percent of their areas within the 0.50-mile boundary were included in the assessment of open space and user population, and used to define the boundaries of the Study Area. Additionally, Census Tract 383.02, which has less than 50 percent of its area within the 0.50-mile residential boundary, was partially included in the assessment of open space because this tract contains Flushing Meadows Corona Park, a large regional park that serves, and is accessible from, the Project Area. Only the portions of Flushing Meadows Corona Park that are free to the public and within the 0.50-mile boundary were included in the Study Area's quantitative analysis. The Open Space Study Area includes Queens Census Tracts 383.01, 383.02, 797.02, 849, 853, 869, and 871.

Open Space Ratio (OSR)

The Open Space Ratio (OSR) is the amount of open space acreage per 1,000 residents. Because local OSRs vary widely in New York City, as a planning goal, an OSR of 2.5 acres per 1,000 residents represents an area well-served by open space. This ratio is consequently used as an optimal benchmark for residential populations in large-scale plans and proposals. The City's planning goal is based, in part, on the National Recreation and Park Association guidelines of 1.25 to 2.5 acres per 1,000 residents of neighborhood parks within one-half mile.

If the OSR would increase or remain substantially the same in the With-Action Condition compared to the No-Action Condition, no further analysis of open space is warranted. If there is a decrease in the OSR that approaches or exceeds five percent, it is generally considered to be a substantial change that warrants more detailed analysis. However, a greater percentage of change may be tolerated if open space in the area exceeds the City's open space planning goals.

Impact Criteria

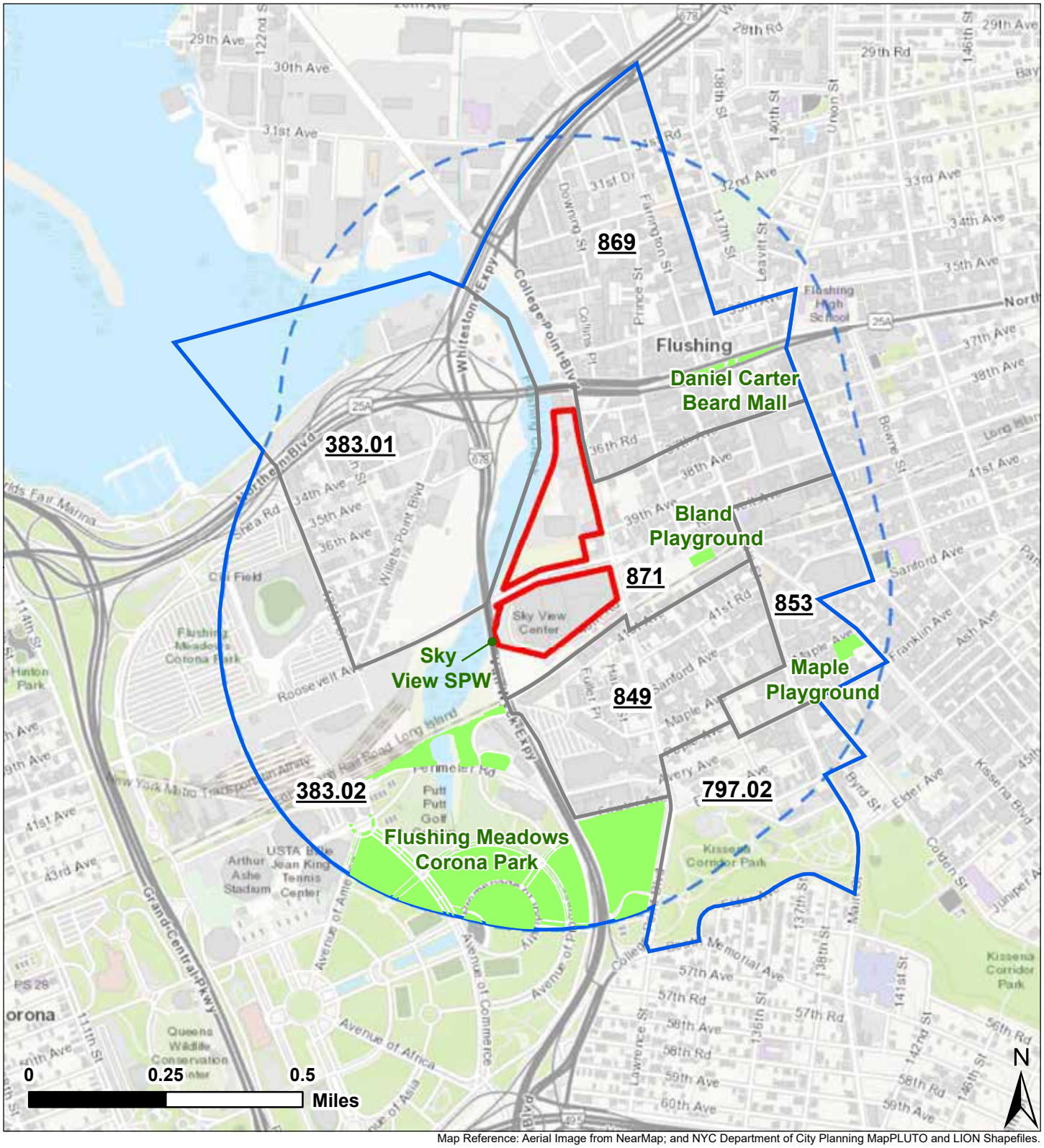
Indirect open space impacts are based in part on how a project would change open space ratios in the Study Area. If the decrease in the open space ratio exceeds five percent, it is generally considered to be a substantial change that warrants a more detailed analysis. If a study area exhibits a low open space ratio (e.g., below 1.50 acres per 1,000 residents), indicating a shortfall of open space, then smaller decreases in that ratio as a result of a proposed action may constitute a detailed analysis.

The planning goals set by the City provide a guide to measure quantitative effects, however, the planning goal is often not feasible for many areas of the City, and the City does not consider these ratios as its open space policy for every neighborhood. Pursuant to CEQR guidelines, the ratios do not constitute an absolute impact threshold, but rather benchmarks that represent how well an area is served by its open space.

FIGURE E-1

SPECIAL FLUSHING WATERFRONT DISTRICT

RESIDENTIAL OPEN SPACE MAP



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area

Study Area (0.50-mile radius)

0.50-mile Radius

Open Space Resources

871 Census Tracts Within the Study Area

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ASSESSMENT

Existing Conditions

Inventory of Publicly-Accessible Open Space

Publicly accessible open space is defined as recreational facilities, public or private, that are open to the public at designated hours on a regular basis. Publicly accessible open space can be assessed for impacts using both a quantitative and a qualitative analysis. Private open space not accessible to the general public on a regular basis is considered qualitatively.

The Study Area contains approximately 48.12 acres of publicly accessible open space. Figure E-1 shows publicly accessible open space and recreational resources located within the Residential Study Area, and Table E-1 describes these resources.[24] All open space resources within the Study Area were determined to be in acceptable condition.[25]

Table E-1: Open Space Resources within the Study Area

Map ID	Resource	Location	Owner/ Agency	Amenities	Total Acres	Passive		Active	
						Acres	%	Acres	%
1	Bland Playground	40th Road between Prince St. and Main St.	NYC Parks	Basketball courts, playgrounds, handball courts, and spray showers	0.55	-	-	0.55	100%
2	Maple Playground	Maple Avenue between Main St. and Kissena Blvd.	NYC Parks	Basketball courts, handball courts, playgrounds, fitness equipment, spray showers, and bathrooms	0.98	0.10	10%	0.88	90%
3	Daniel Carter Beard Mall/ Flushing Greens	Bisects Northern Blvd. between Main St. and Union St.	NYC Parks	Benches, lawns, trees, and paved surfaces	0.66	0.66	100%	-	-
4	Flushing Meadows Corona Park	Generally bound by Grand Central Pkwy and Whitestone Expy between 111th St. and College Point Blvd. and Park Dr. E	NYC Parks	Tennis courts, golf courses, soccer fields, playgrounds, bathrooms, bicycling and greenways, and an indoor pool	45.26	9.05	20%	36.21	80%
5	Sky View Parc SPW[1]	Behind the mixed-use residential and retail development between Roosevelt Ave. and 40th Rd., and College Point Blvd. and Flushing Creek	BRE SkyView Retail Owner, LLC	Benches, lighting, landscaped vegetation, and upland connections	0.67	0.34	50%	0.34	50%
				Total	**48.12**	**10.15**	**21%**	**37.98**	**79%**

Notes:

[1]*Sky View Parc SPW is assumed to be 50 percent passive open space pursuant to the Downtown Flushing Rezoning and Waterfront Access Plan (1998).*

[24] Northwest of the Project Area within the 0.50-mile Study Area boundary is Leavitts Park, not included in the quantitative assessment as it is not listed as a publicly accessible resource by the NYC Parks Department. Leavitts Park serves as the athletic fields for nearby Flushing High School and is not generally open to the public.

[25] Condition of Park derived from inspection summary performed by New York City Department of Parks & Recreation (https://www.nycgovparks.org/parks; Date Accessed: February 20, 2019)

1. Bland Playground is a 0.55-acre neighborhood park located on 40th Road between Prince Street and Main Street. The park contains basketball courts, playgrounds, handball courts, and spray showers.[26]

2. Maple Playground is a 0.98-acre playground located along Maple Avenue between Main Street and Kissena Boulevard. The park contains basketball courts, handball courts, playgrounds, fitness equipment, spray showers, and bathrooms.[27]

3. Daniel Carter Beard Mall/ Flushing Greens is a 0.66-acre green urban area (plaza) that bisects Northern Boulevard between Main Street and Union Street. The plaza contains benches, lawns, trees, and paved surfaces.[28]

4. Flushing Meadows Corona Park is an 897.69-acre flagship park generally bounded by Grand Central Parkway, Whitestone Expressway between 111th Street and College Point Boulevard, and Park Drive East, with the closest entrance from the Project Area under the Van Wyck Expressway along 131st Street. Flushing Meadows Corona Park is the largest park in Queens, and the 45 acres within the Study Area contains a variety of amenities including tennis courts, golf courses, soccer fields, playgrounds, bathrooms, bicycling and greenways, and an indoor pool.

5. Sky View Parc SPW (shore public walkway) is a 0.67-acre walkway adjacent to Flushing Creek and located behind a mixed-use residential and retail development that is bounded by 40th Road to the south, College Point Boulevard to the east, Roosevelt Avenue to the north, and Flushing Creek to the west. The shore public walkway is accessible by 40th Road and contains benches, lighting, and landscaped vegetation.[29]

The Project Area is close in proximity to two existing large parks, one of which is a flagship park and the other of which is a community park. Flushing Meadows Corona Park has nearly 900 acres, with approximately 45 acres (five percent) within the Study Area. Additional amenities found throughout the rest of the flagship park (outside of the Study Area) include: barbecuing areas, baseball fields, basketball courts, dog-friendly areas, eateries, fitness equipment, football fields, handball courts, an ice skating rink, kayak/canoe launch sites, volleyball courts, Wi-Fi hot spots, and a zoo and aquarium.[30] Kissena Corridor Park is a 100.87-acre park consisting of two separate corridors that link together to provide parkland in eastern Queens.[31] Kissena Corridor Park provides surrounding neighborhoods with both passive and active open space amenities such as soccer and baseball fields and trails/walkways. With 45 acres of Flushing Meadows Corona Park within the Study Area, and the remainder of the flagship park along with Kissena Corridor Park just beyond the Study Area boundaries, residents in the Project Area, as well as in the surrounding community, have several substantial nearby open space resources with a variety of amenities. Note that the part of Kissena

[26] NYC Parks https://www.nycgovparks.org/parks/bland-playground (Date Accessed: February 20, 2019)
[27] NYC Parks https://www.nycgovparks.org/parks/maple-playground/map (Date Accessed: February 20, 2019)
[28] NYC Parks https://www.nycgovparks.org/parks/daniel-carter-beard-mall/ (Date Accessed: February 20, 2019)
[29] NYC Waterfront Access Map https://waterfrontaccess.planning.nyc.gov/profiles/4070005#15.9/40.75703/-73.836023 (Date Accessed: April 24, 2019)
[30] NYC Parks https://www.nycgovparks.org/parks/flushing-meadows-corona-park (Date Accessed: February 20, 2019)
[31] NYC Parks *https://www.nycgovparks.org/parks/Q300* (Date Accessed: February 28, 2019)

Corridor Park within the Study Area contains the Queens Botanical Garden, which is gated and charges admission and thus was excluded from the quantitative assessment.

OSR in the Study Area

Data derived from the 2013-2017 American Community Survey (ACS) indicates the Study Area has a residential population of 21,496 people. Table E-2 shows there are 48.12 acres of open space within the Study Area, of which 10.15 acres are for passive use and 37.98 acres are for active use. The residential population is 21,496, which results in an open space ratio of 2.24 acres per 1,000 residents. The Study Area's passive and active open space ratios are 0.47 acres and 1.77 acres per 1,000 residents, respectively.

Table E-2: Adequacy of Open Space Resources: Existing Conditions

	Population	Open Space Acreage			Open Space Ratios per 1,000 Residents			*CEQR Technical Manual* Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Residential Study Area (0.50-Mile)										
Residents	21,496	48.12	10.15	37.98	2.24	0.47	1.77	2.50	0.50	2.00
Notes: *[1] Existing Population Sources: 2013-2017 ACS 5-Year Estimates, Total Population, Queens Census Tracts 383.01, 383.02, 797.02, 849, 853, 869, and 871*										

The Proposed Actions would be anticipated to facilitate a net increase of approximately 199 employees, which would not warrant a non-residential open space analysis pursuant to *CEQR Technical Manual* guidance. However, the area is characterized by a substantial existing non-residential population of approximately 18,491 workers[32] and thus the non-residential OSR is calculated here for the purposes of this assessment. The existing non-residential OSR is approximately 0.29 acres per 1,000 workers. Of the approximately 5.33 acres of open space within 0.25 miles of the Project Area (the study area for non-residential populations, pursuant to the *CEQR Technical Manual*), approximately 4.73 acres are classified as passive open space. Based on this information, the existing passive open space ratio is 0.26 acres per 1,000 workers, which is above the City's optimal ratio of 0.15 acres of passive open space per 1,000 non-residential users.

No-Action Condition

Project Area

The four Projected Development Sites would be developed in the No-Action Condition and would generate a total residential population of 4,009 residents. The No-Action development in the Project Area would also facilitate 0.60 acres of waterfront open space in the form of a shore public walkway, spilt evenly between passive and active uses (0.30 acres each). The walkway would include passive recreational elements such as seating and landscaping, and active recreational features such as walking and running paths.

[32] The non-residential population is based on the Study Area of Queens Census Tracts 383.01, 383.02, 849, 869, and 871, which fall at least 50 percent within 0.25 miles of the Project Area. The total worker population of the corresponding census tracts is based off of data from ESRI Business Locator for 2018 (Copyright 2018 Infogroup, Inc.).

Study Area

The Land Use, Zoning, and Public Policy assessment in Attachment B identified 18 development projects within a 0.25-mile radius from the Project Area that would be completed and fully operational by the 2025 analysis year ("No-Build" Developments, see Appendix F). Additionally, there are two developments identified just beyond 0.25 miles, including the proposed Mets-Willets Point Air Train to LaGuardia Airport and a commercial/community facility building at 131-10 Avery Avenue. The 13 identified No-Action projects with residential components are anticipated to collectively generate 4,606 residents. Including the Project Area's No-Action Condition development, the total No-Action residential population in the Study Area would be 30,111 residents (see Table E-3).

Table E-3: No-Action – Residential Open Space Study Area Population

	Existing Population	Residential Population in Study Area (No-Build Projects)[1]	No-Action Residential Population on Projected Development Sites[2]	TOTAL No-Action Population (2025)
Residential Study Area (0.50-Mile)				
Residents	21,496	4,606	4,009	**30,111**
Notes: [1, 2] The residential population was determined using a multiplier of 2.74 per dwelling unit, which is the Average Household Size in Queens Community District 7 according to the 2010 Census.				

There would be a total of 48.72 acres of open space in the No-Action Condition, including 0.60 acres of waterfront open space along Flushing Creek in the Project Area. The 30,111 total residents in the No-Action Condition would result in an OSR of approximately 1.62 acres per 1,000 residents. The passive open space ratio would be approximately 0.35 acres per 1,000 residents, while the active open space ratio would be approximately 1.27 acres per 1,000 residents (see Table E-4).

Table E-4: Adequacy of Open Space Resources: No-Action Condition

	Population	Open Space Acreage			Open Space Ratios per 1,000 Residents			*CEQR Technical Manual* Open Space Guidelines		
		Total	Passive	Active	Total	Passive	Active	Total	Passive	Active
Residential Study Area (0.50-Mile)										
Residents	30,111	48.72	10.45	38.28	1.62	0.35	1.27	2.50	0.50	2.00

With-Action Condition

Project Area

The With-Action Condition would result in 293 additional dwelling units compared to the No-Action Condition in the Project Area. Based on an average household size of 2.74 residents per dwelling unit in Queens Community District 7, the additional 293 dwelling units would generate 803 additional residents over the No-Action Condition in the With-Action Condition.[33]

[33] The Project Area is in Queens Community District 7, which has an average household size of 2.74, based on 2010 Census Data.

In the With-Action Condition, an approximately 3.09-acre shore public walkway would be constructed on the frontage of the Projected Development Sites along Flushing Creek. The project-generated open space would contain passive and active open space that would provide views of the west bank of Flushing Creek and farther beyond to Citi Field. Additional amenities as part of the newly created walkway would include passive recreational elements, such as benches, seating, and landscaped vegetation, and active elements such as walking and running paths. The walkway would be spilt evenly among passive and active uses, with each providing 1.55 acres along Flushing Creek.

In the event Potential Development Site B is redeveloped, the proposed Waterfront Action Plan would require that there would be an additional 0.53 acres of publicly accessible open space on Potential Development Site B, which would create a continuous shore public walkway along the entirety of the Project Area's frontage along Flushing Creek.

Study Area

The addition of the 3.09-acre shore public walkway in the Project Area would result in a total of 51.21 acres of open space within the Study Area. Based on the With-Action Condition residential population of 30,913 (30,111 plus the 803 With-Action Condition increment), the OSR in the With-Action Condition would be 1.66 acres per 1,000 residents, which is an increase of 2.47 percent from the OSR in the No-Action Condition (Table E-5). The passive open space ratio would increase from 0.35 to 0.38 acres per 1,000 residents, while the active open space ratio would increase slightly to 1.28 acres per 1,000 residents.

Table E-5: Percent Change in Open Space Ratio

Residential Population	Open Space Type	Acreage	Ratio	Residential OSR Planning Goal
No-Action Condition				
30,111	Active	38.28	1.27	2.0
	Passive	10.45	0.35	0.5
	Total	**48.72**	**1.62**	**2.5**
With-Action Condition				
30,913	Active	39.52	1.28	2.0
	Passive	11.69	0.38	0.5
	Total	**51.21**	**1.66**	**2.5**
Increment				
803	Active	1.25		
	Passive	1.25		
	Total	**2.49**		
Percent Change				
	Active (%)	3.25	0.79	
	Passive (%)	11.92	8.57	
	Total (%)	**5.11**	**2.47**	

Notes:
*[1] With Action Open Space Ratio = Acres of Open Space/ residential population * 1000.*

The Study Area in the With-Action Condition would contain a mix of active and passive open space resources, with 23 percent of the open space acreage dedicated to passive uses and 77 percent dedicated to active uses. Similar to the No-Action Condition, in the With-Action Condition, the active and passive use open space ratios for the Study Area would remain below the planning goal of 2.5 acres of open space per 1,000 residents (see Table E-5). While below the planning goal, the 1.66 acres of open space per 1,000 residents in the With-Action Condition would increase the amount of open space per 1,000 residents over the No-Action Condition by 2.47 percent, and the open space ratio in the Study Area would continue to exceed the City's median community district open space ratio of 1.5 acres per 1,000 residents.

CONCLUSION

The Proposed Actions would not result in direct open space impacts, and a preliminary indirect residential open space analysis was warranted. The Projected Development Sites would generate 803 incremental residents in the Study Area over the No-Action Condition. The With-Action Condition would result in an approximately 2.47 percent increase in the OSR in the Study Area compared to the No-Action Condition. In the With-Action condition, the Study Area would have a passive OSR of 0.38 acres per 1,000 residents and an active OSR of 1.28 acres per 1,000 residents. The overall OSR in the With-Action Condition would be 1.66 acres per 1,000 residents, which is above the City's median community district OSR of 1.5 acres per 1,000 residents, but below the City's open space planning goal of 2.5 acres per 1,000 residents. Portions of Flushing Meadows Park (a flagship park) and Kissena Corridor Park are just outside the Study Area, and would continue to be accessible to users of the Project Area. The preliminary indirect residential open space assessment demonstrates the Proposed Actions would not result in significant adverse impacts to open space, and no further analysis is warranted.

ATTACHMENT F: SHADOWS

INTRODUCTION

A CEQR shadow assessment is warranted when a proposed action would result in a new structure(s) or addition to an existing structure(s) that are greater than 50 feet in height and/or are adjacent to a sunlight-sensitive resource. Incremental shadows occur when a shadow from a proposed project is cast on a publicly accessible open space, historic landscape, or other historic resource that relies sunlight for its enjoyment by the public, or its architectural and historic integrity (*e.g.*, stained glass windows), or if the shadow falls on a natural feature and adversely affects its use or landscaping and vegetation. Shadows on features such as city streets, sidewalks, buildings, and privately-owned open space, or within 1.5 hours of sunrise or sunset, generally are not considered significant by CEQR.

In the No-Action Condition, development on Projected Development Sites 1-3 and Potential Development Sites A and B would be built up to a roof height of approximately 175 feet, which is the maximum building height permitted as-of-right pursuant to the underlying zoning. In the No-Action Condition, development on Projected Development Site 4 would be built to a roof height of approximately 110 feet, which is the maximum building height permitted as-of-right.

The Proposed Actions would permit development up to a maximum roof height of approximately 245 feet above mean sea level (MSL) on Projected Development Sites 1-3 and Potential Development Site A, and 200 feet above MSL on Projected Development Site 4 and Potential Development Site B.

METHODOLOGY

The analysis methodology follows the guidelines of the *CEQR Technical Manual*, which includes a preliminary assessment to determine whether shadows resulting from a proposed project could reach any sunlight-sensitive resource at any time of year. The Tier 1 screening assessment identifies a study area based on the height of structures in the future with the proposed action and the longest shadow a structure could cast, which in New York City is 4.3 times its height. If there is a sunlight-sensitive resource within the shadow study area, a Tier 2 screening assessment is warranted. Because of the path the sun travels across the sky in the northern hemisphere, no shadow can be cast south of a proposed project site in New York City within a triangular area that is between -108 and +108 degrees from true north. If the area outside this triangular area contains a sunlight-sensitive resource, a Tier 3 screening assessment further refines the analysis by depicting the With-Action Condition shadows on four representative days of the year and shadows durations, absent intervening buildings. The four representative days of the year include December 21, the winter solstice and shortest day of the year, March 21, the vernal equinox (which is the solar-equivalent to September 21, the autumnal equinox), May 6, the midpoint between the vernal equinox and summer solstice (solar-equivalent to August 6, the midpoint between the summer solstice and autumnal equinox), and June 21, the summer solstice and longest day of sunlight in the year.[34]

[34] Pursuant to *CEQR Technical Manual* guidelines, all times reported are Eastern Standard Time and do not reflect adjustments for daylight savings time that is in effect from mid-March to early November.

If the Tier 3 screening analysis does not rule out the possibility that project-generated shadows could result in significant adverse shadows impacts, a detailed shadow analysis is warranted. For this project, a detailed analysis is warranted.

CEQR guidelines indicate that significant adverse shadows impacts cannot occur to project-generated open space; however, a qualitative description of the shadows conditions is appropriate. The Proposed Actions would facilitate the development of a shore public walkway and a private open space on Projected Development Site 2 that would be accessible to the public; therefore, a qualitative description of the shadows conditions on this project-generated open space resource is provided.

To present a conservative shadows assessment, the buildings on each of the Projected and Potential Development Sites are anticipated to be built to the maximum roof height that would be permitted in the With-Action Condition (245 feet above MSL on Projected Development Sites 1-3 and Potential Development Site A, and 200 feet above MSL on Projected Development Site 4 and Potential Development Site B).

Study Area

The Proposed Actions would facilitate the development of buildings up to 245 feet above MSL; therefore, a Study Area of approximately 1,054 feet was established. The Study Area is generally bound by Willets Point Boulevard to the west, 34th Avenue to the north, Main Street to the east, and 41st Avenue to the south.

PRELIMINARY SCREENING ASSESSMENT

Tier 1 and Tier 2 Screening Assessment

The Study Area includes eight resources of concern, including two open space resources, five historic resources, and one natural resource described in Table F-1 and Figure F-1. Four of these resources have sunlight-sensitive elements.

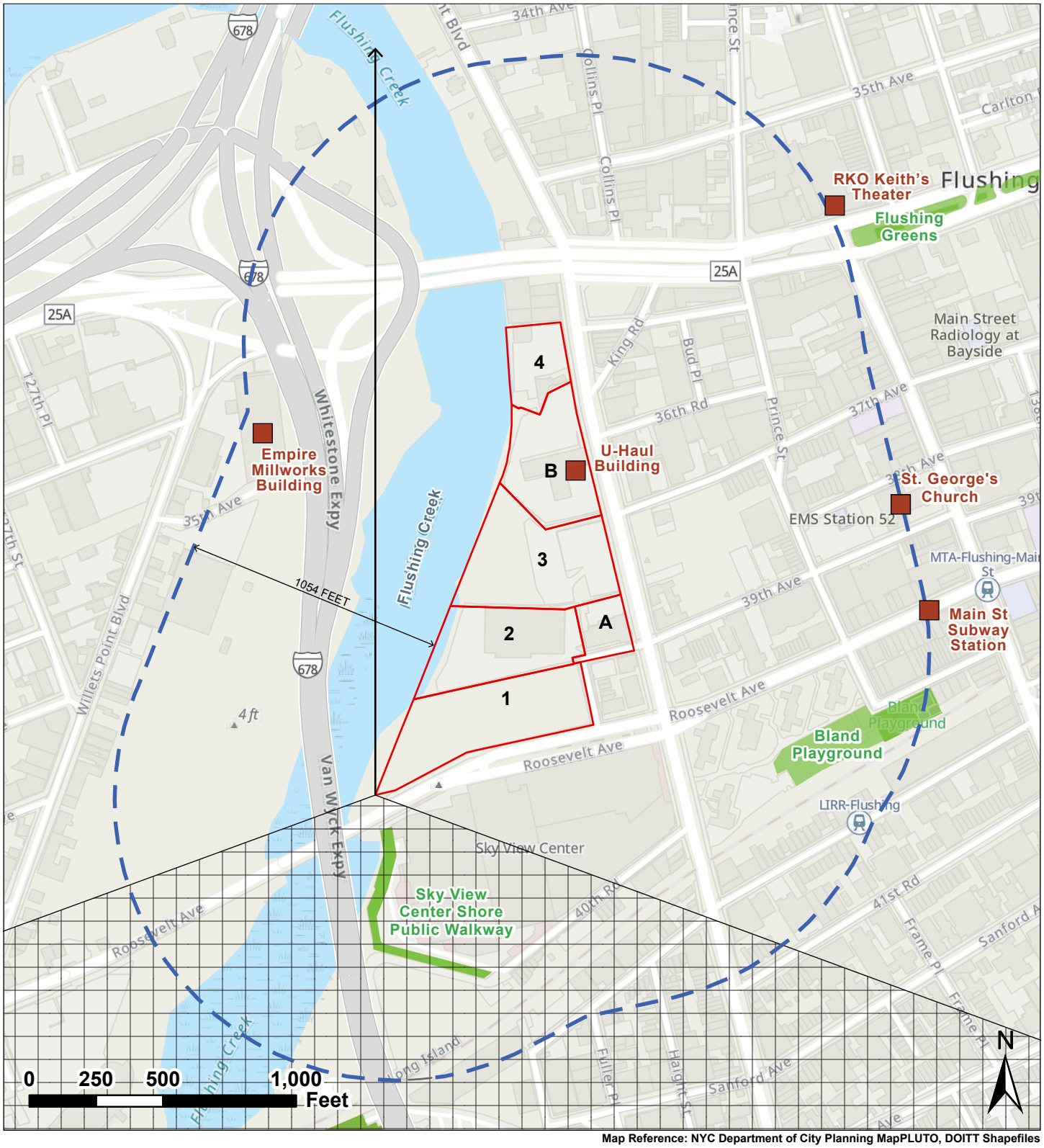
Table F-1: Sunlight-Sensitive Resources – Tier 1 Screening

Resource of Concern	Sunlight-Sensitive Elements
Open Space Resources	
Bland Playground	Benches, paved courts, playground, vegetation, walking paths
Sky View Center Shore Public Walkway	Benches, landscaping, walking paths
Historic Resources	
U-Haul Building	None
Empire Millworks Building	None
St. George's Church	Stained glass windows
RKO Keith's Theater	None
MTA Main Street Subway Station	None
Natural Resources	
Flushing Creek	Natural waterbody

The U-Haul Building, RKO Keith's Theater, MTA Main Street Subway Station, and Empire Millworks Building do not contain sunlight-sensitive elements; therefore, these resources are not considered for further assessment.

FIGURE F-1

SPECIAL FLUSHING WATERFRONT DISTRICT TIER 1 & 2 SHADOWS SCREENING



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Development Site

Study Area (1054 feet)

Area That Cannot be Shaded by Project

Sunlight Sensitive Resources

Open Space

Natural Waterbody

Historic Resource

FLUSHING, QUEENS, NY

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There are four resources of concern that have sunlight-sensitive elements. Bland Playground is on the south side of 40th Road and is a 0.55-acre park with basketball courts, playground equipment, spray showers, and handball courts. The Tier 2 assessment demonstrates the Sky View Center shore public walkway is in an area that cannot be shaded by the development in the With-Action Condition, and therefore is not considered for further analysis. St. George's Church is a house of worship complex at the northwest corner of Main Street and 39th Avenue. The main house of worship building has stained glass elements.

Flushing Creek is a one-mile-long, 45.7-acre natural tidal waterbody adjacent to the Project Area that flows north to Flushing Bay, which discharges to the East River. As discussed in Attachment J, "Natural Resources," the water quality of the creek has been strongly affected by human activity and the densely populated and developed land uses that surround it. Although water quality has improved in recent decades, diversity and abundance of aquatic resources remains low. The benthic communities present in Flushing Bay and Creek are species that are tolerant to organic-rich sediments and low concentrations of dissolved oxygen; this habitat is considered degraded and not supportive of species found in local healthy estuaries.[35] The area of the creek proximate to the Project Area is a designated Essential Fish Habitat for 12 fish species, although the diversity and abundance of fish species varies based on seasonal temperature changes and pollutant loads. According to NOAA NMFS records, adult Atlantic Sturgeon and Shortnose Sturgeon could be present in the waters of the East River and its adjacent bays and tributaries (the saline conditions are not suitable for the early life stages of these fish, so no eggs, larvae, or juvenile Atlantic Sturgeon or Shortnose Sturgeon would be expected in Flushing Creek). The creek is classified by New York State as a Class I waterbody, appropriate for secondary contact recreation, such as boating and fishing.

Tier 3 Screening Assessment

The results of the Tier 3 are provided in Table F-2 and with the Tier 3 screening assessment provided in Figure F-2 through Figure F-5.

Table F-2: Incremental Shadow Duration on Sunlight-Sensitive Resources

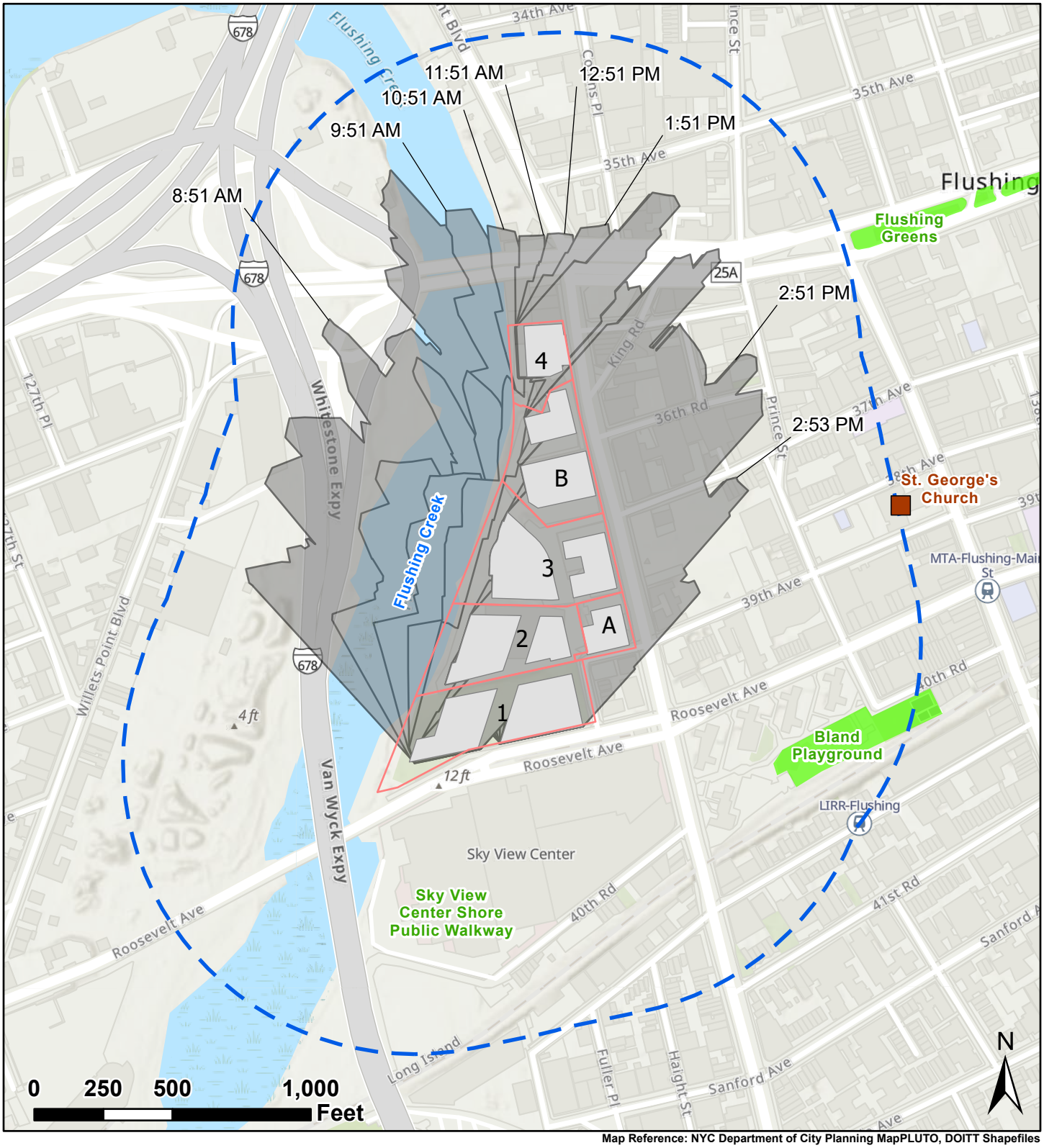
Sunlight-sensitive Resource	Shadow Enter-Exit/ Duration	Analysis Days			
		December 21	March 21	May 6	June 21
		8:51 AM – 2:53 PM	7:36 AM – 4:29 PM	6:27 AM – 5:18 PM	5:57 AM – 6:01 PM
Flushing Creek	Enter/Exit time	8:51 AM – 1:00 PM	7:36 AM – 12:18 PM	6:27 AM – 11:42 AM	5:57 AM – 11:25 AM
	Duration	4h, 9m	4h, 42m	5h, 15m	5h, 28m
St. George's Church	Enter/Exit time	-	-	-	-
	Duration	-	-	-	-
Bland Playground	Enter/Exit time	-	-	-	-
	Duration	-	-	-	-
All times are Eastern Standard Time (EST); Daylight Savings Time was not accounted for per CEQR Technical Manual guidelines.					

[35] U.S. Army Corps of Engineers (USACE). 2017. Draft Integrated Feasibility Report & Environmental Assessment.

SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-2

TIER 3 DECEMBER 21 SCREENING ASSESSMENT



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Development Site

Project-Generated Shadow

Historic Resource

Study Area (1054 feet)

Open Space

Natural Waterbody

FLUSHING, QUEENS, NY

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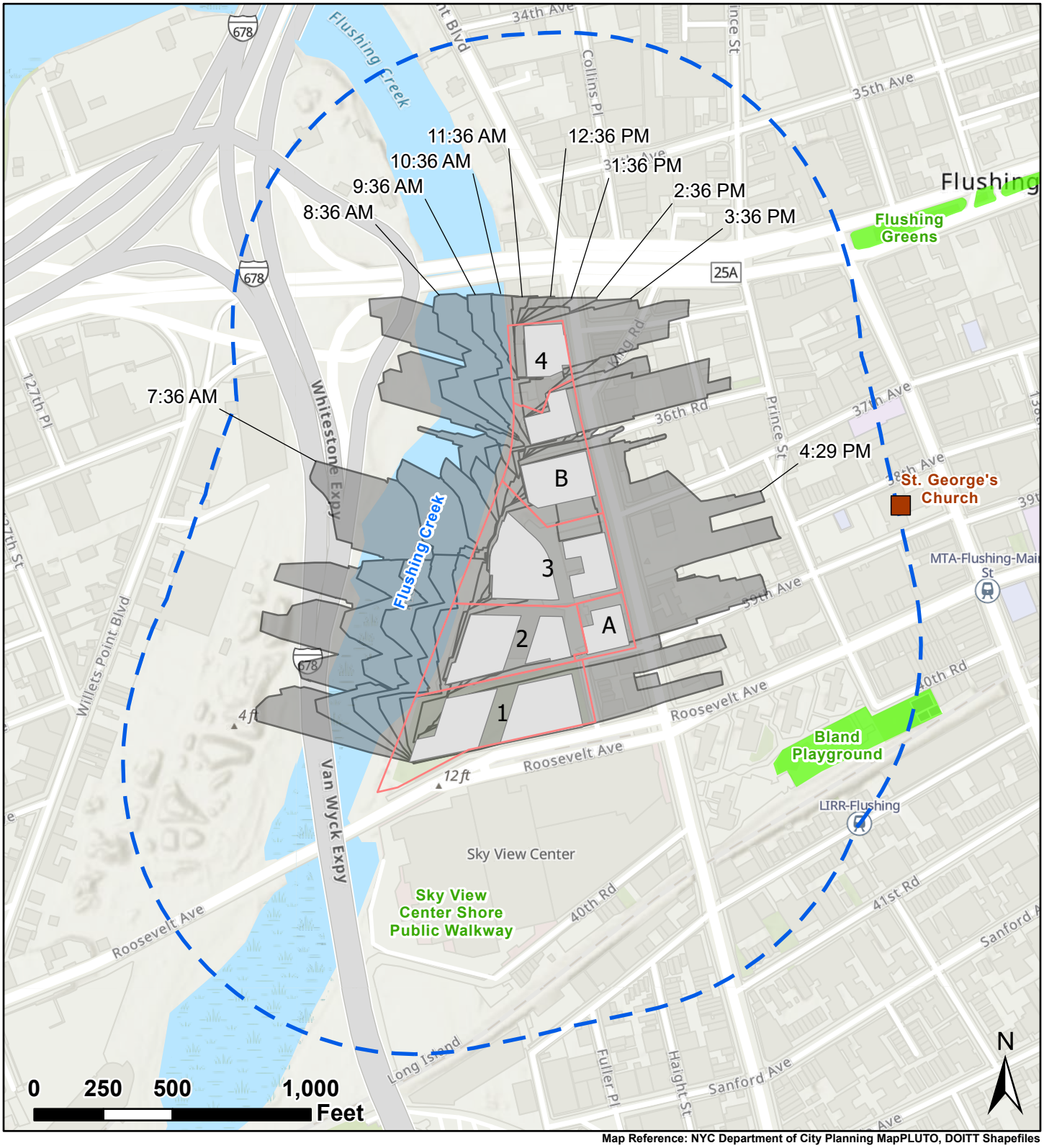
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-3

TIER 3 MARCH 21 SCREENING ASSESSMENT



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Development Site

Project-Generated Shadow

Historic Resource

Study Area (1054 feet)

Open Space

Natural Waterbody

FLUSHING, QUEENS, NY

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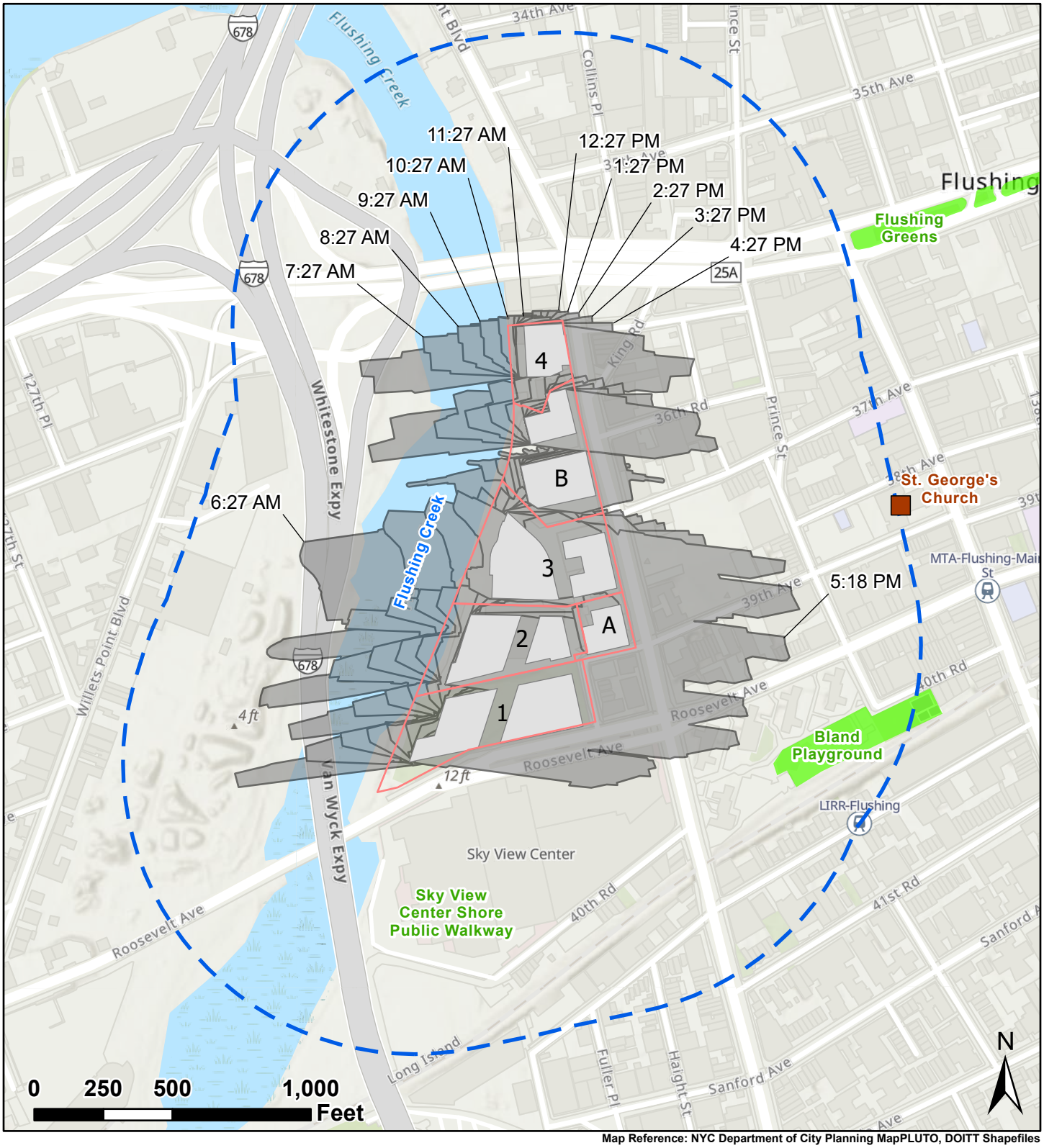
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-4

TIER 3 MAY 6 SCREENING ASSESSMENT



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Development Site

Project-Generated Shadow

Historic Resource

Study Area (1054 feet)

Open Space

Natural Waterbody

FLUSHING, QUEENS, NY

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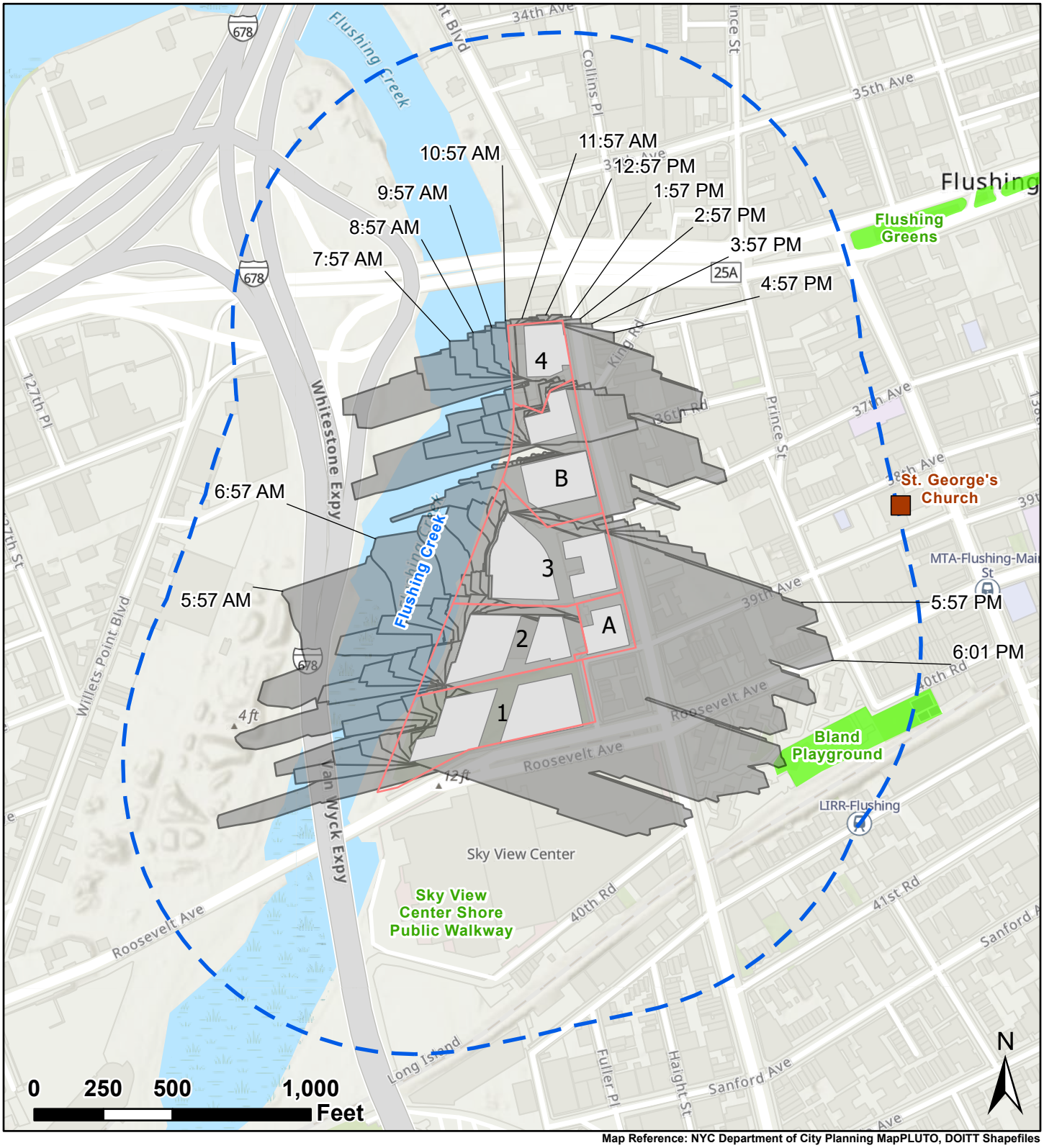
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-5

TIER 3 JUNE 21 SCREENING ASSESSMENT



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

Development Site

Project-Generated Shadow

Historic Resource

Study Area (1054 feet)

Open Space

Natural Waterbody

FLUSHING, QUEENS, NY

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Bland Playground and St. George's Church

The Tier 3 shadows assessment demonstrates that Proposed Actions do not have the potential to result in incremental shadows on either Bland Playground or St. George's Church on any of the analysis days. Therefore, the Proposed Actions would not result in significant adverse shadows impacts to these resources, and a detailed analysis is not warranted for these resources.

Flushing Creek

Project-generated shadows have the potential to be cast on portions of Flushing Creek on all four CEQR shadow analysis days. The Tier 3 assessment demonstrates that project-generated shadows would be cast on the creek generally between Van Wyck Expressway and Whitestone Expressway (see Figures G-2 through G-5) primarily in the morning hours. The Tier 3 assessment indicates the Proposed Actions have the potential to result in incremental shadows on Flushing Creek lasting for more than four hours on each analysis day, and therefore a detailed analysis was warranted for this resource.

DETAILED ANALYSIS – FLUSHING CREEK

Flushing Creek is a tidal waterbody that has been highly affected by past human activity, and the creek's habitat is degraded to a point where it is not supportive of species found in local healthy estuaries. Much of the high marsh vegetation and vegetated areas along the creek adjacent to the Project Area is comprised of invasive species.

On all four CEQR analysis days, incremental shadows would be cast on Flushing Creek from the start of the analysis day. Throughout each analysis day, incremental shadows would move east across Flushing Creek. With low-rise development on the west shore, Flushing Creek would receive direct sunlight through most of the afternoon on all analysis days. Table F-3 shows the times of incremental shadow and durations.

Table F-3: Incremental Shadow Coverage Times and Durations

Sunlight-Sensitive Resource	Incremental Shadow by Analysis Day			
	21-Dec	**March 21/Sept. 21**	**May 6/August 6**	**21-Jun**
	8:51 AM – 2:53 PM	**7:36 AM – 4:29 PM**	**6:27 AM – 5:18 PM**	**5:57 AM – 6:01 PM**
Flushing Creek	8:51 AM – 1:00 PM	7:36 AM – 12:18 PM	6:27 AM – 11:42 AM	5:57 AM – 11:25 AM
	4 Hour, 9 Minutes	4 Hour, 42 Minutes	5 Hour, 15 Minutes	5 Hour, 28 Minutes
Note: All times are Eastern Standard Time (EST); Daylight Savings Time was not accounted for per *CEQR Technical Manual* guidelines.				

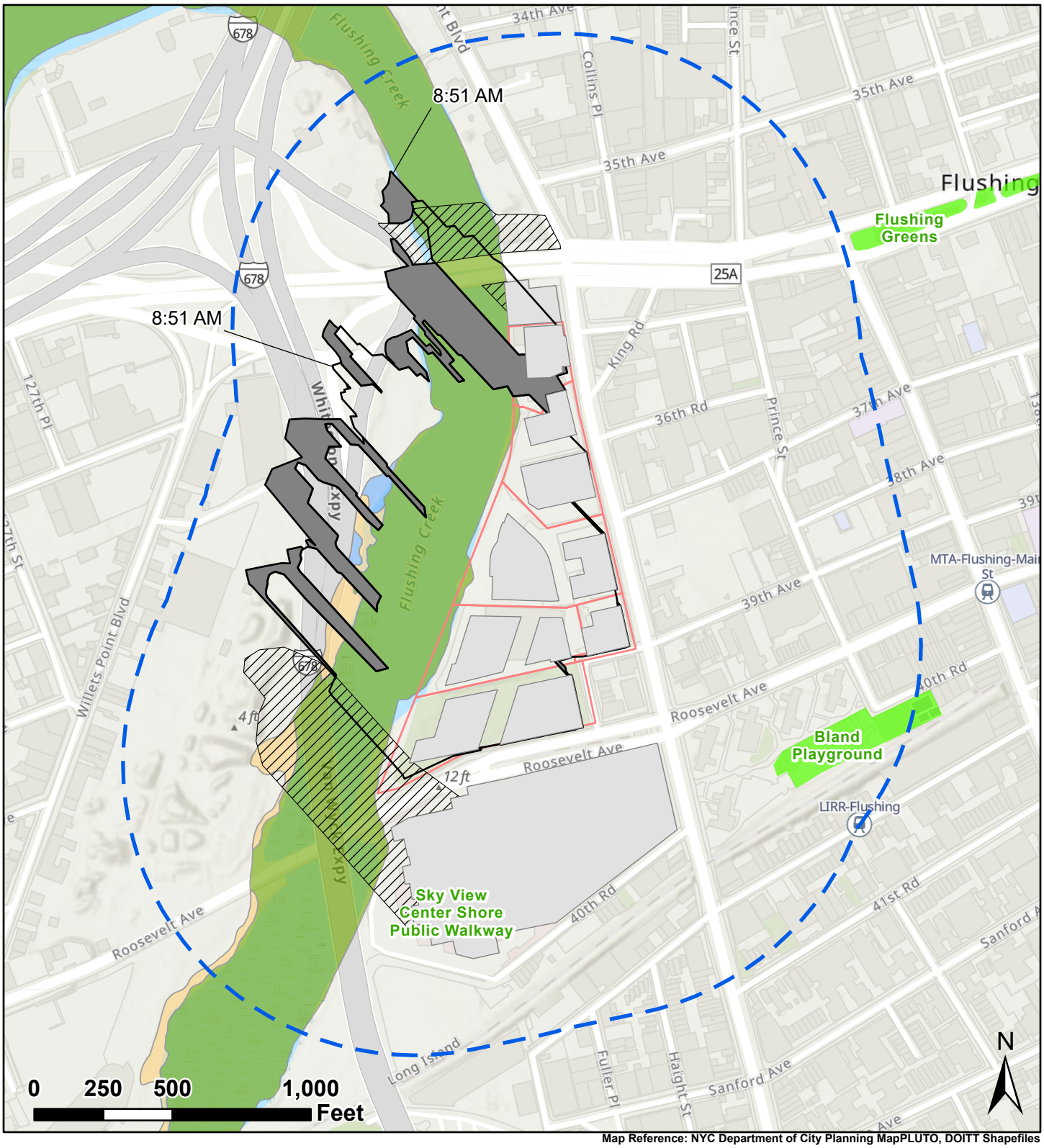
December 21st Analysis Day

Figure F-6 through Figure F-11 show the results of the detailed shadows analysis on the December 21st analysis day, the analysis day when the sun is lowest in the sky.

SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-6

DECEMBER 21 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-7

DECEMBER 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands

- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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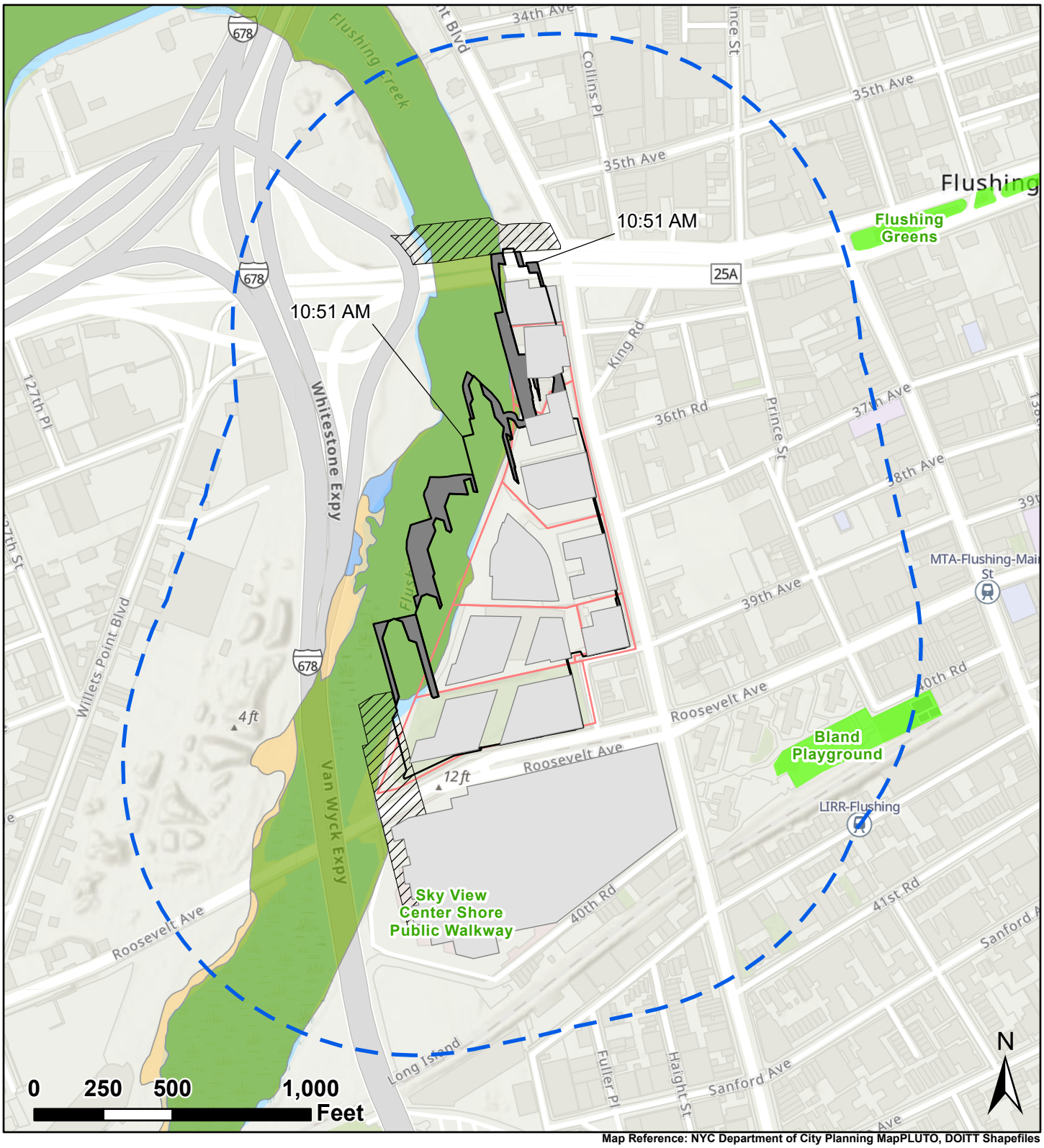
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-8

DECEMBER 21 DETAILED SHADOW ANALYSIS



Development Site

Study Area (1054 feet)

No-Action Condition Shadow

Incremental Shadow

Intervening Building Shadow

Open Space

NYSDEC Tidal Wetlands

HM - High Marsh

IM - Intertidal Marsh

LZ - Littoral Zone

FLUSHING, QUEENS, NY

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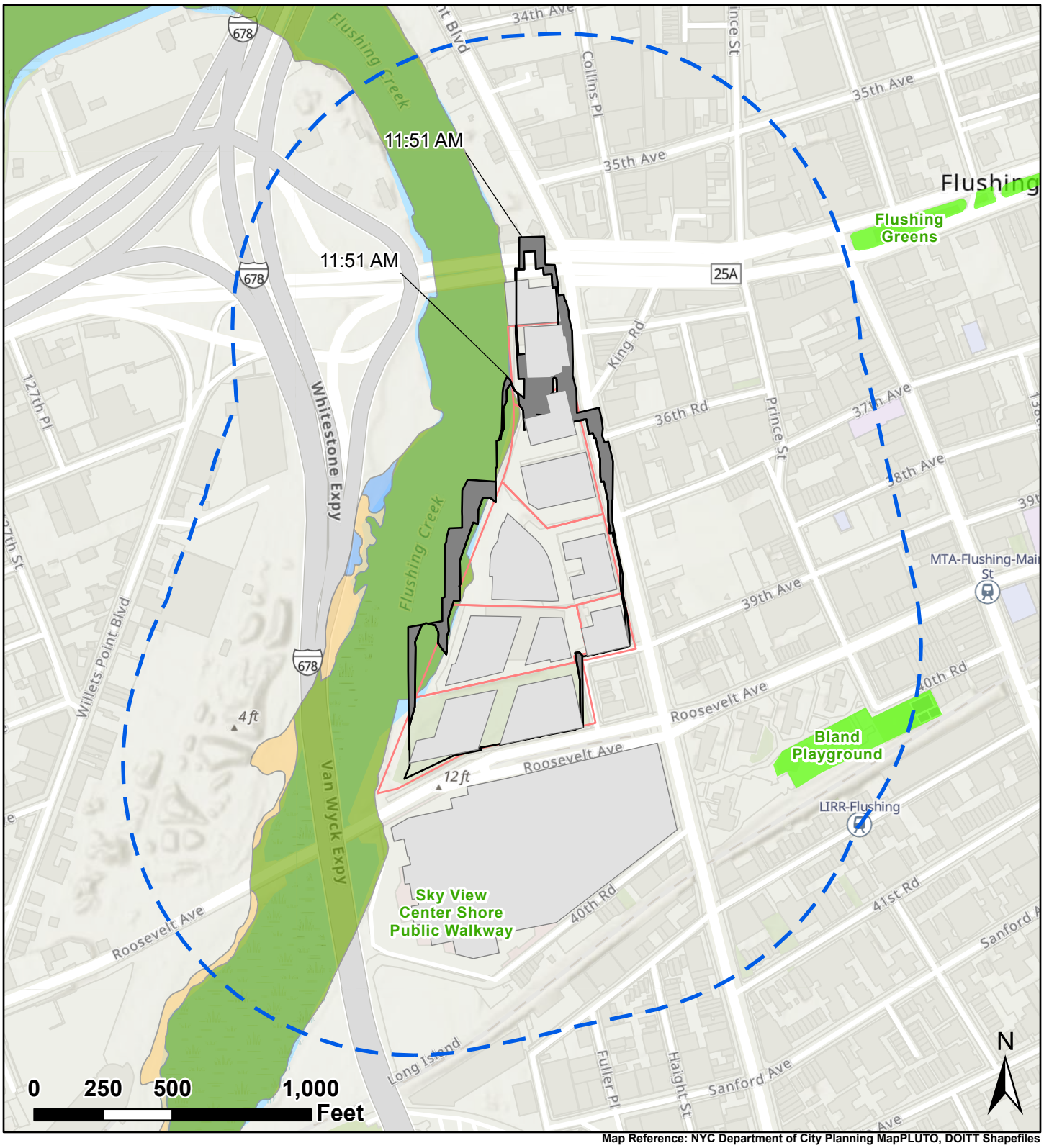
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-9

DECEMBER 21 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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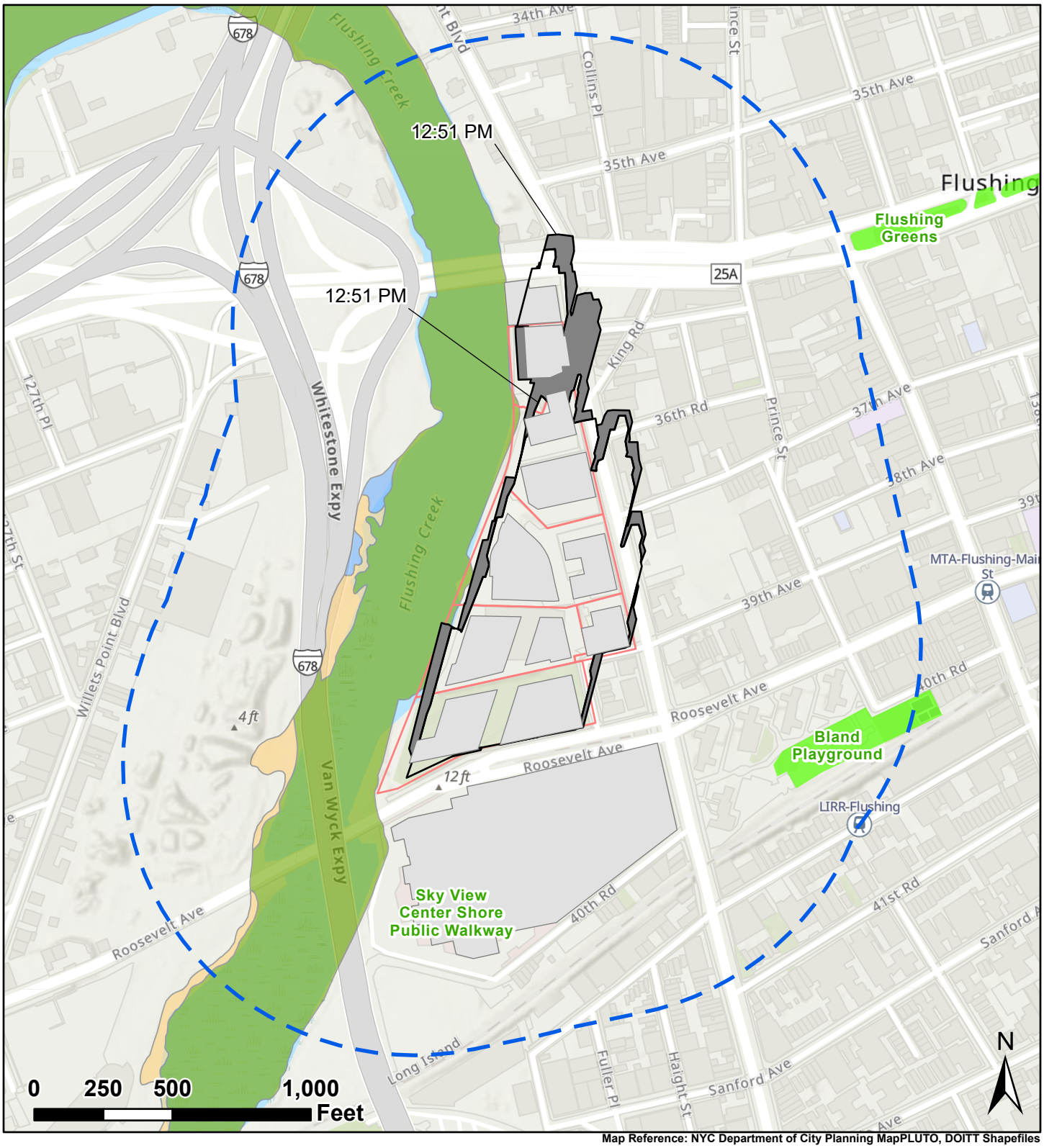
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-10

DECEMBER 21 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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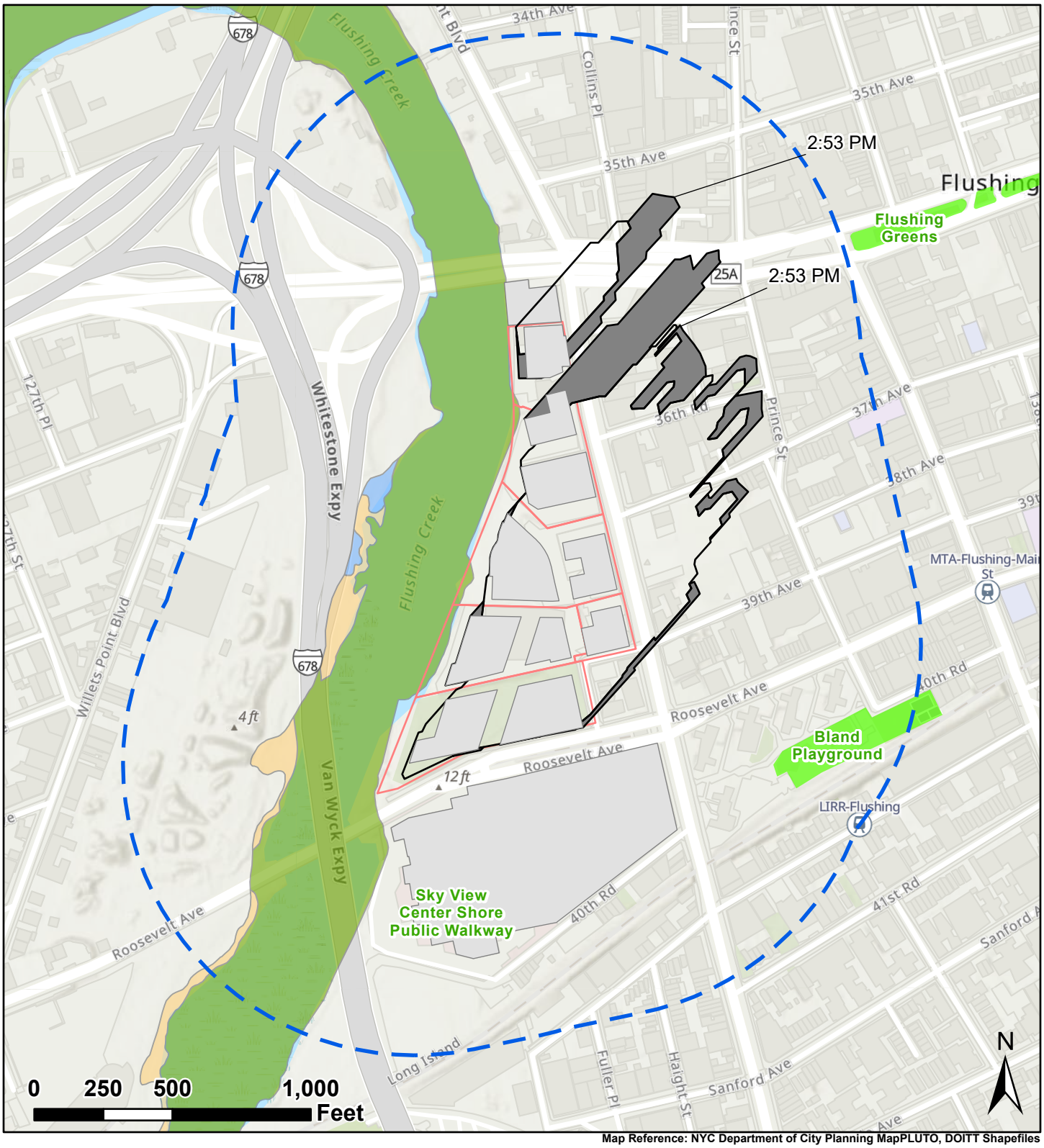
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-11

DECEMBER 21 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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At 8:51 AM, the start of the analysis day, most of Flushing Creek in the Study Area would be shaded, including the shadow cast by the Sky View Center development south of Roosevelt Avenue. Figure F-6 shows incremental shadows would occur in discrete areas near the western shoreline of the creek. The incremental shadow on Flushing Creek generated by the development sites would extend from the eastern shoreline across in a northwesterly direction beyond the western shoreline of the creek. The incremental shadow would cover a total of 2.05 acres of the creek.

By 9:51 AM, one hour into the December 21st analysis period, Flushing Creek would continue to be predominately shaded adjacent to the Project Area. Figure F-7 shows portions of the western shoreline would be in direct sunlight, including some areas of high marsh. Incremental shadows would occur in discrete locations along Flushing Creek, including areas of high and intertidal marsh, and shade 2.45 acres of the creek. All incremental and No-Action shadows would move off the creek's western shoreline shortly after 10:00 AM, approximately one hour and ten minutes into the December analysis period. Incremental and No-Action shadows would move off the high marsh and intertidal marsh areas along the western shoreline shortly after, and incremental shadow would only occur in the littoral zone of Flushing Creek after this time.

By 10:51 AM, two hours into the December 21st analysis period, most of the western portion of Flushing Creek adjacent to the Project Area would be in direct sunlight, while the eastern portions would continue to be shaded, including some areas where incremental shadows would occur in the littoral zone of the creek. Figure F-8 shows incremental shadows would be limited to segmented locations on the eastern portions of the creek. Incremental shadow would occur on 1.67 acres of the creek. The incremental shadow from Projected Development Site 4 and Potential Development Site B would move completely off Flushing Creek shortly after this time.

By 11:51 AM, three hours into the analysis period, No-Action and incremental shadows would be limited to the eastern-most portions of Flushing Creek adjacent to the Project Area (see Figure F-9), of which 1.02 acres would be incremental shadow. By 12:51 PM, Figure F-10 shows 0.1 acres of incremental shadow would be cast and would be limited to the area on the eastern shoreline of Flushing Creek adjacent to Projected Development Site 2. No-Action and incremental shadows would move completely off Flushing Creek by 1:00 PM on the December 21st analysis day and the entirety of the creek within the Study Area would remain in direct sunlight for the remainder of the analysis period.

Overall, the December 21st analysis day is representative of conditions during the coldest months, when vegetation is dormant. Incremental shadows would be cast on high marsh and intertidal marsh areas from the start of the analysis period and for a duration of approximately 1.5 hours. Intertidal marsh areas are predominately mudflats with little to no aquatic vegetation. The saline conditions are not suitable for the early life stages of these fish, so no eggs, larvae, or juvenile Atlantic Sturgeon or Shortnose Sturgeon would be expected in the marsh areas. The vegetative species observed in the high marsh areas are invasive species; therefore, the incremental shadow generated by the Proposed Actions would not significantly adversely affect aquatic life or vegetation in these areas on the December 21st analysis day.

March 21st Analysis Day

Figure F-12 through Figure F-19 show the detailed analysis for the March 21st analysis day. Figure F-12 shows that at 7:36 AM, the start of the analysis period, No-Action and incremental shadows would be cast from the Project Area west beyond the western shoreline of Flushing Creek. Incremental shadows would be cast on portions of high marsh, intertidal marsh, and the littoral zone and cover 2.67 acres of the creek.

By 8:36 AM, one hour into the analysis period, the incremental shadow shown in Figure F-13 would occur on the eastern fringes of the high marsh and intertidal marshes, and incremental shadow would cover 3.26 acres of the creek. Shortly after this time, incremental shadows would move completely off all high marsh and intertidal marsh areas, and these marsh areas would remain in direct sunlight for the remainder of the analysis day.

By 9:36 AM, two hours into the analysis period, Figure F-14 shows No-Action and incremental shadows would be cast predominately on the eastern portions of Flushing Creek and wholly in the creek's littoral zone. A total of 1.93 acres of shadow coverage would be attributable to incremental shadow. The areas of incremental shadows would be discrete, non-contiguous areas, and the western portions of the creek will be in direct sunlight.

By 10:36 AM, three hours into the analysis period, Figure F-15 shows that No-Action and incremental shadow would cover portions near the creek's eastern shoreline. A total of 1.04 acres of shadow coverage would be attributable to incremental shadow. Incremental shadows would occur in discrete non-contiguous areas. By 11:36 AM, incremental shadows would shade 1.04 acres of Flushing Creek. Incremental shadows would move entirely off the creek by 12:18 PM, and the creek would remain in direct sunlight for the next four hours and 11 minutes until 4:29 PM, the end of the analysis period.

Like the December 21st analysis day, No-Action and incremental shadows would fall on high and intertidal marsh areas at the start of the analysis day and move entirely off these areas within 1.5 hours from the start of the analysis period. Because Flushing Creek has been highly affected by human activity, the vegetation observed consists of invasive species, and much of the littoral zone would remain in direct sunlight for the majority of the analysis day, there would be no significant adverse shadow impacts on the March 21st analysis day.

SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-12

MARCH 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-13

MARCH 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-14

MARCH 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-15

MARCH 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-16

MARCH 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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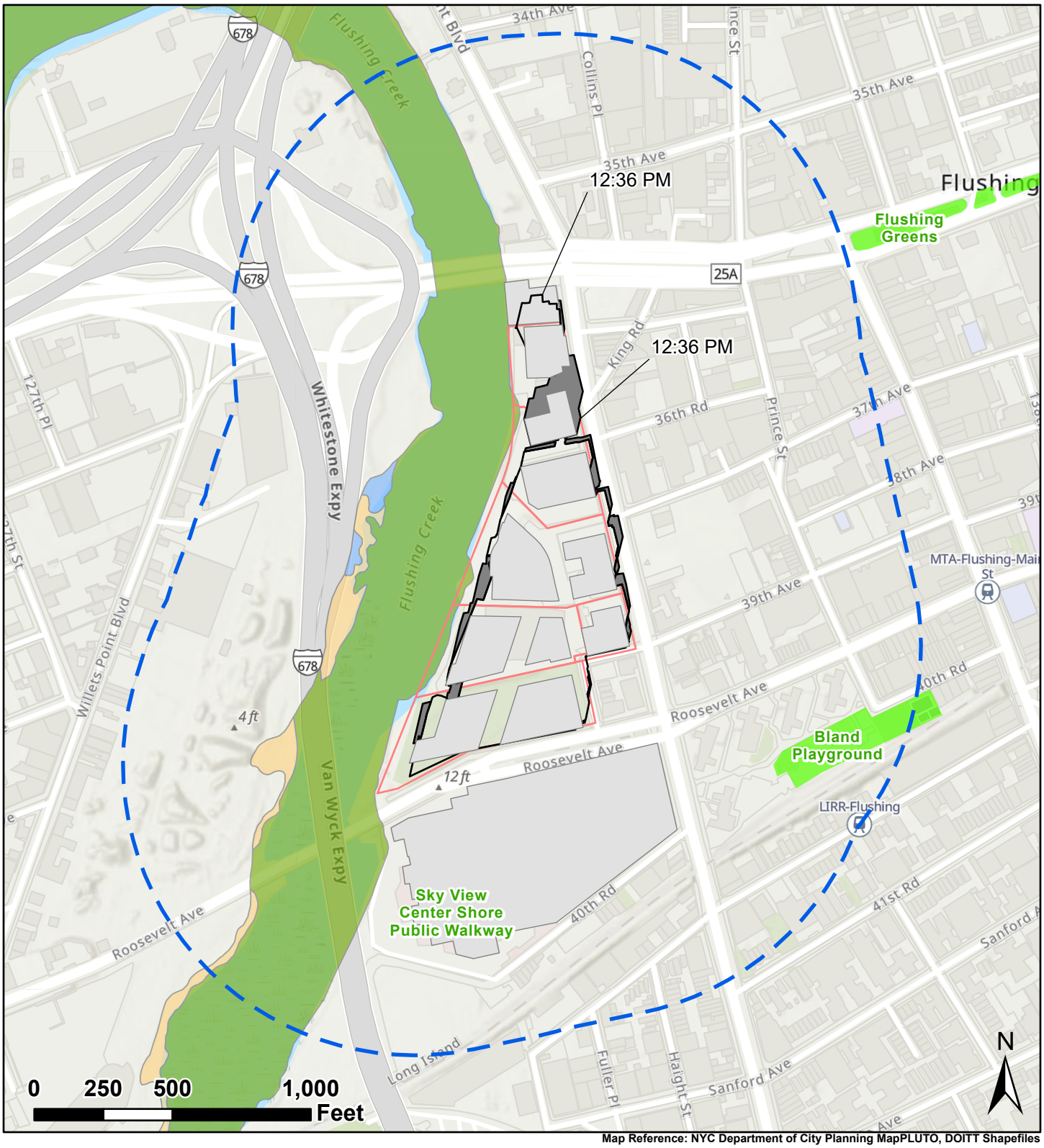
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-17

MARCH 21 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-18

MARCH 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-19

MARCH 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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May 6th Analysis Day

Figure F-20 through Figure F-28 show the detailed analysis for the May 6th analysis day, the mid-point between the equinox and summer solstice.

Figure F-20 shows No-Action and incremental shadows would extend west across the width of Flushing Creek at 6:27 AM, the start of the analysis period. Incremental shadows would occur on portions of high marsh, intertidal marsh, and littoral zones of Flushing Creek, and would account for 2.85 acres of coverage. Some portions of these marsh areas would remain in direct sunlight at the start of the analysis period. Incremental shadows would occur in discrete, non-contiguous locations.

By 7:27 AM, one hour into the analysis period, Figure F-21 shows No-Action shadows would move almost entirely off the western shoreline of the creek. Incremental shadows would occur on the fringe of intertidal marsh and on the littoral zone, and account for 3.01 acres of shadow coverage on the creek. Incremental shadow would move off of the western shoreline and intertidal marsh areas shortly after 7:30 AM. There would be discrete areas where direct sunlight would be available between the shadows cast by the Proposed Actions.

By 8:27 AM, two hours into the analysis period, Figure F-22 shows no No-Action or incremental shadows would be cast on high or intertidal marsh areas, and incremental shadows would only occur in the littoral zone of Flushing Creek. No-Action and incremental shadows would be cast only on the eastern portions of Flushing Creek at this time. 2.14 acres of coverage would be attributable to incremental shadow.

By 9:27 AM, three hours into the analysis period, Figure F-23 shows that No-Action and incremental shadows would be cast only on the eastern portions of Flushing Creek. The incremental shadow on the creek would cover 1.21 acres. Portions of the eastern shoreline adjacent to Projected Development Sites 1, 3, and 4 would be in direct sunlight.

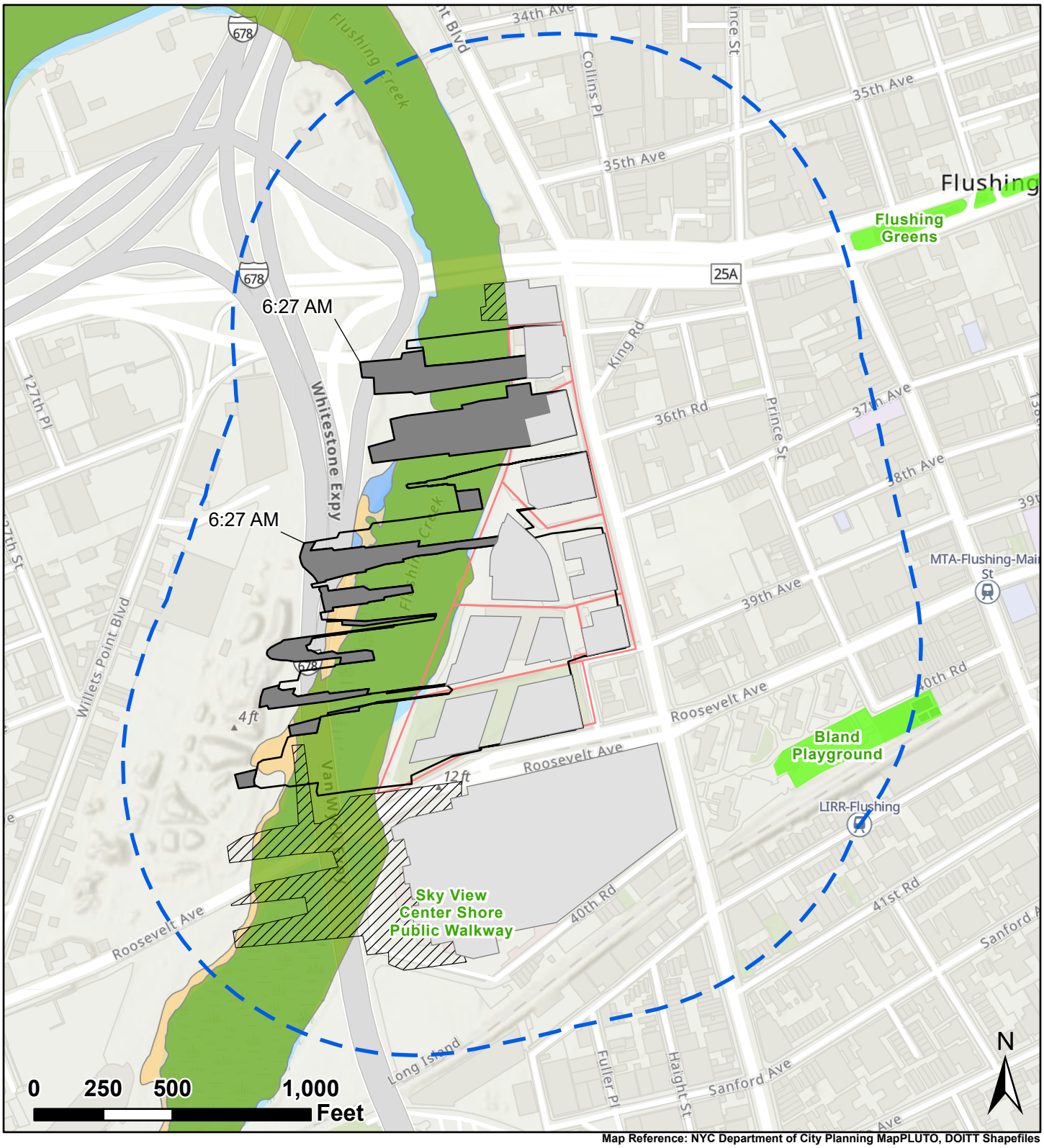
By 10:27 AM, Figure F-24 shows incremental shadows would cover 0.54 acres of Flushing Creek. Direct sunlight would be available on the creek's eastern shoreline adjacent to all waterfront development sites.

By 11:27 AM, Figure F-25 shows incremental shadows would shade less than 0.1 acres of the creek in discrete areas adjacent to Projected Development Sites 2 and 3. Incremental shadows would move wholly off the creek by 11:42 AM and the portions of the creek adjacent to the Project Area would remain in direct sunlight for the remainder of the analysis day (see Figure F-26 through Figure F-28).

SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-20

MAY 6 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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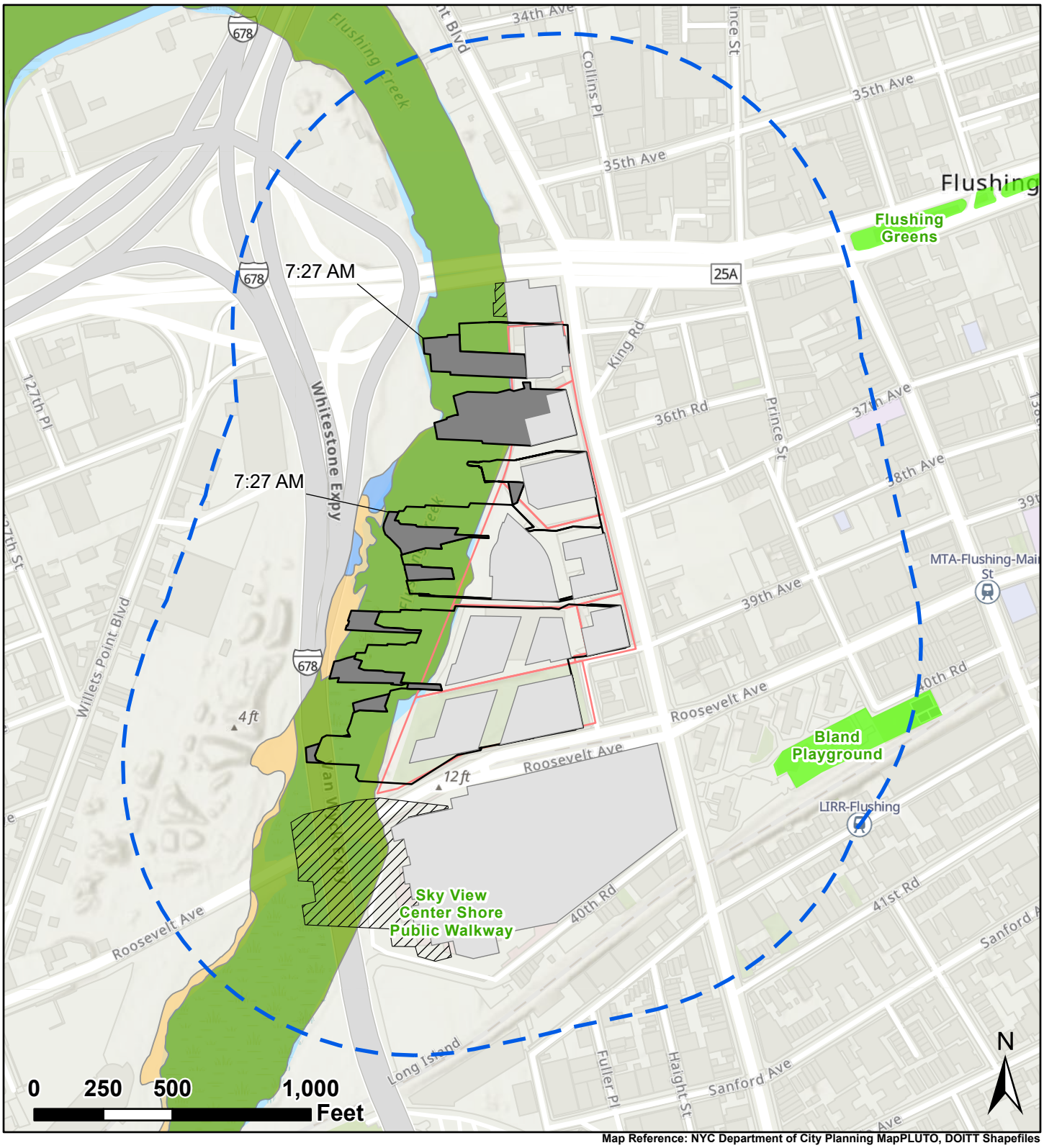
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-21

MAY 6 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-22

MAY 6 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-23

MAY 6 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-24

MAY 6 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-25

MAY 6 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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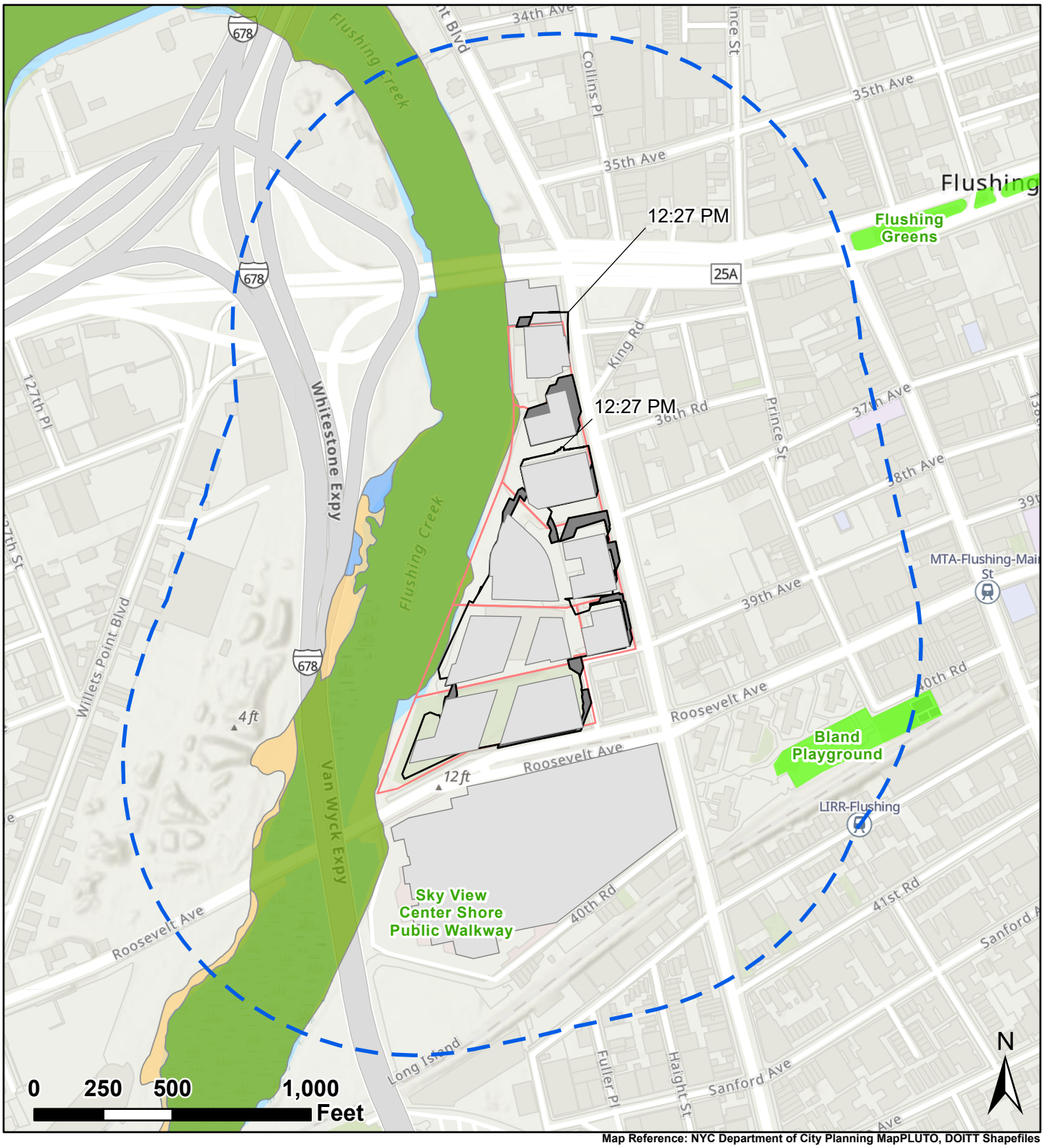
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-26

MAY 6 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-27

MAY 6 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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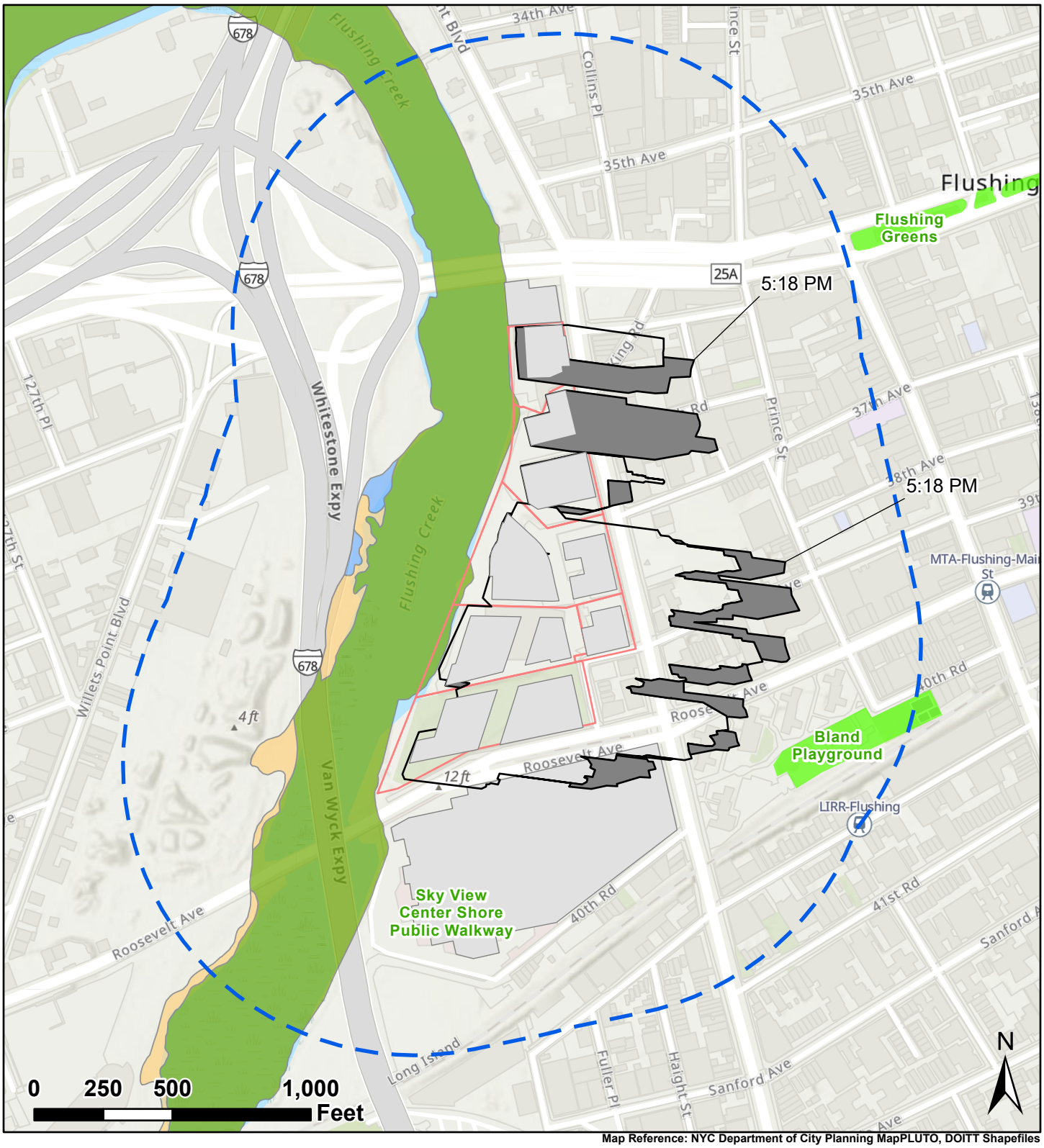
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-28

MAY 6 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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In summary, No-Action and incremental shadows would be cast on high marsh areas for less than one hour at the very beginning of the May 6th analysis period. Incremental shadows would move off intertidal areas shortly after 7:30 AM, and both the high marsh and intertidal marsh areas would remain in direct sunlight for the remainder of the analysis day. The creek's littoral zone would receive shadows until 11:42 AM, when the No-Action and incremental shadow would move wholly off of Flushing Creek. Because the vegetative species observed in the high marsh area are invasive and incremental shadows would occur in this area for less than one hour at the start of the analysis period, there would be no significant adverse shadows impact to the high marsh areas of Flushing Creek. Direct sunlight would be available on some intertidal marsh areas in the Study Area from the start of the analysis period, and portions of intertidal areas would continue to receive direct sunlight throughout the analysis period. Accordingly, the Proposed Actions would not result in a significant adverse shadows impact on the May 6th analysis day.

June 21st Analysis Day

Figure F-29 through Figure F-38 show the results of the detailed analysis on the June 21st analysis day, the summer solstice. Both No-Action and incremental shadows would be cast on Flushing Creek at 5:57 AM, the start of the analysis day, across the width of the creek. Figure F-29 shows No-Action and incremental shadows would be cast on high marsh, intertidal, and littoral zone areas of the creek, and portions of all three of aquatic habitats within the Study Area would receive direct sunlight in some areas at this time. Incremental shadow coverage on the creek would total 2.71 acres. Discrete, non-contiguous areas of direct sunlight would be available near the Roosevelt Avenue, 39th Avenue, and 36th Road prolongations.

By 6:57 AM, one hour into the analysis period, Figure F-30 shows only the eastern fringes of the Study Area's intertidal marsh areas would be within incremental shadows, and no areas of high marsh would be shaded. Incremental shadows would be cast on 3.33 acres of the creek. Soon after 7:00 AM, incremental shadows would be wholly off of all intertidal areas and No-Action and incremental shadows would only be cast on littoral zones of the creek.

Before 7:57 AM, two hours into the analysis period, Figure F-31 shows contiguous areas of the littoral zone would be wholly in direct sunlight. No-Action and incremental shadows would be the eastern portions of the Flushing Creek, and only within the littoral zone. Incremental shadow would be cast on 2.06 acres of the creek.

By 8:57 AM, three hours into the analysis period, Figure F-32 shows that portions of the eastern foreshore adjacent to Projected Development Sites 1 through 3 would begin to receive direct sunlight. At this time there would be no No-Action shadows cast on the creek from development within the Project Area, and incremental shadows would shade 1.26 acres of Flushing Creek.

By 9:57 AM, Figure F-33 shows incremental shadows would cover only the eastern portions of the creek adjacent to the Project Area and a total of 0.64 acres of the creek would be shaded by incremental shadow. By 10:57 AM, Figure F-34 shows incremental shadows would cover just 0.14 acres of Flushing Creek, and most of the eastern shoreline adjacent to the Project Area would be in direct sunlight. Incremental shadows would move completely off of Flushing Creek by 11:25 AM, and

the creek would be in direct sunlight for five hours and 32 minutes until 5:57 PM, the end of the analysis period.

SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-29

JUNE 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-30

JUNE 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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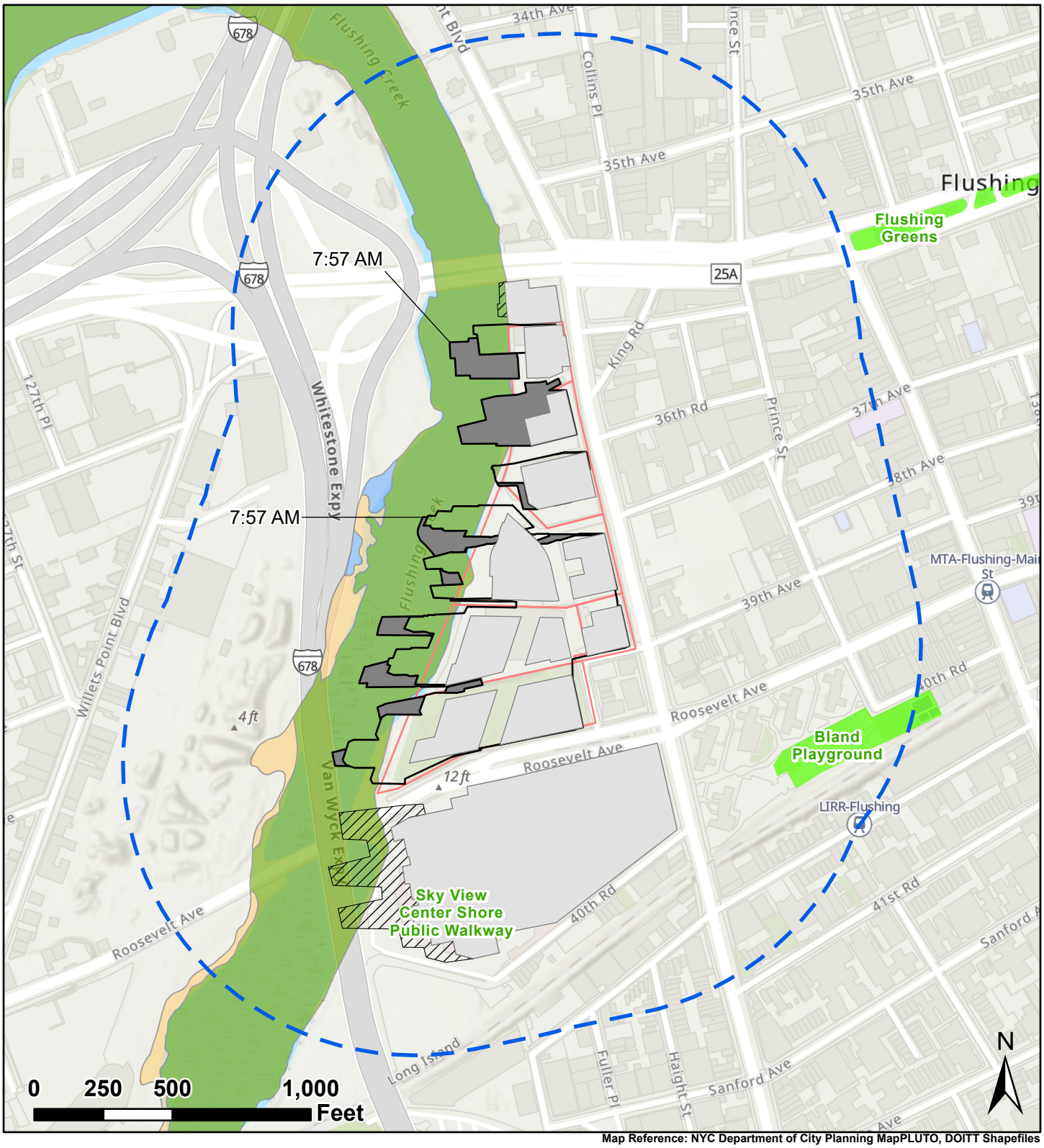
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-31

JUNE 21 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-32

JUNE 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-33

JUNE 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Intervening Building Shadow
- Open Space

NYSDEC Tidal Wetlands
- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-34

JUNE 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-35

JUNE 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-36

JUNE 21 DETAILED SHADOW ANALYSIS

Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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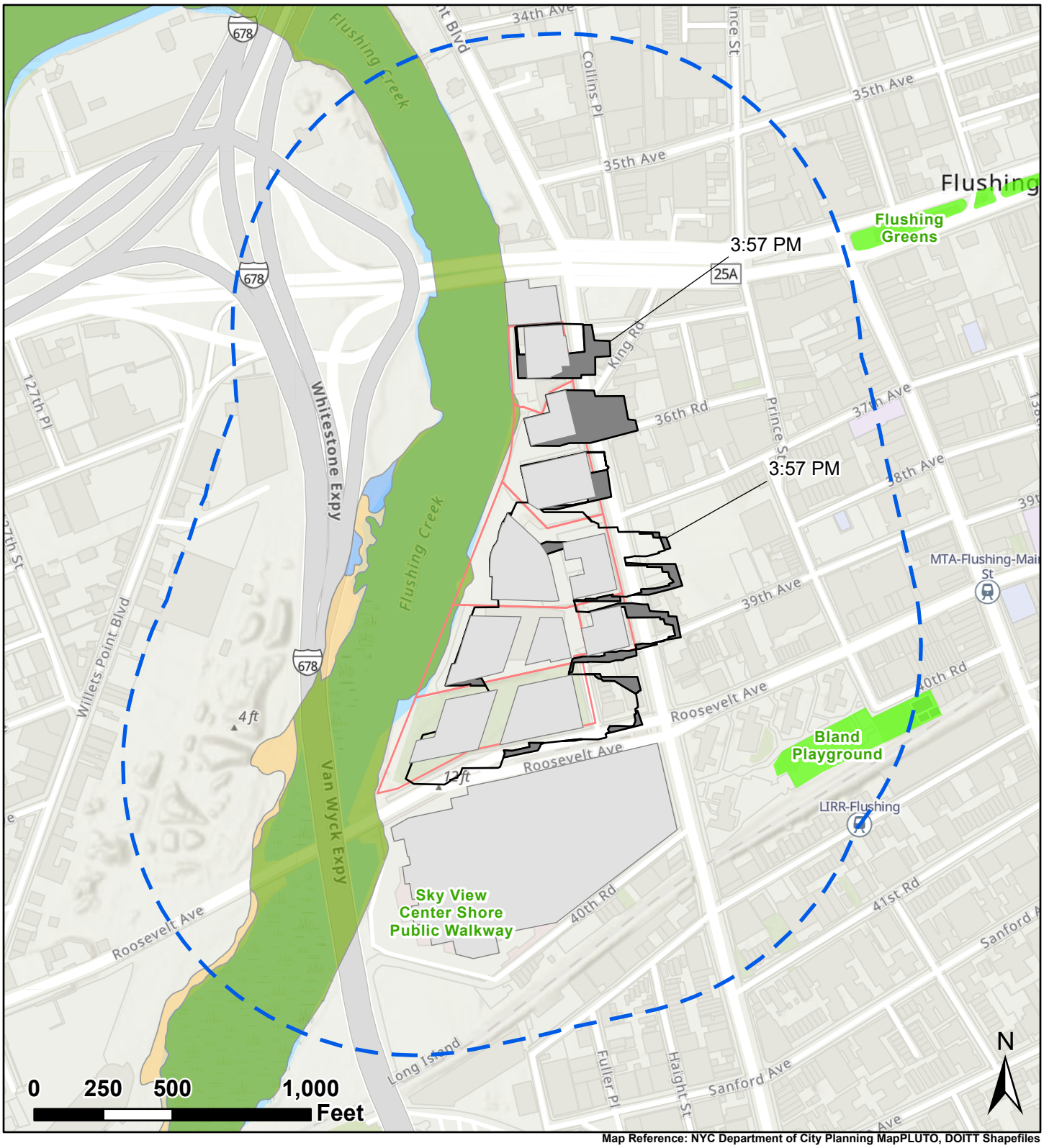
SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-37

JUNE 21 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

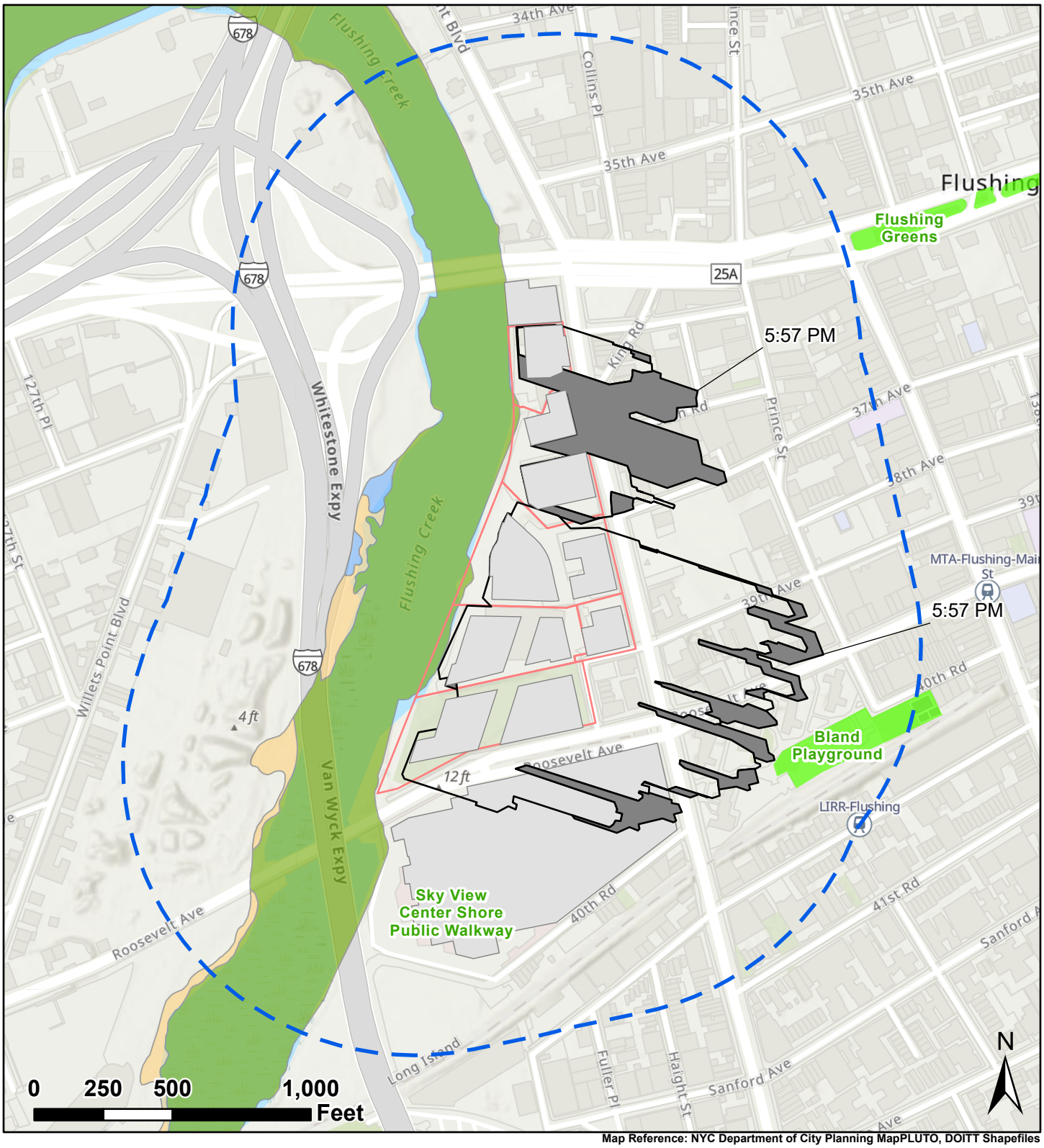
FLUSHING, QUEENS, NY

LANGAN

SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE F-38

JUNE 21 DETAILED SHADOW ANALYSIS



Map Reference: NYC Department of City Planning MapPLUTO, DOITT Shapefiles

- Development Site
- Study Area (1054 feet)
- No-Action Condition Shadow
- Incremental Shadow
- Open Space
- NYSDEC Tidal Wetlands
  - HM - High Marsh
  - IM - Intertidal Marsh
  - LZ - Littoral Zone

FLUSHING, QUEENS, NY

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In summary, portions of high and tidal marsh would be in direct sunlight from the start of the analysis period from both No-Action and incremental shadow, and portions of these areas would continue to be partially shaded for approximately one hour and 15 minutes on the June 21st analysis day. After this time, these areas would receive direct sunlight throughout the remainder of the analysis period. No-Action and incremental shadows would be cast on the littoral zone of the creek until 11:25 AM, a duration of five hours and 28 minutes. Like the other analysis days, because the creek has been highly affected by human activity and the creek's habitat is degraded to a point where it is not supportive of species found in local healthy estuaries, the Proposed Actions would not result in a significant adverse shadows impact on the June 21st analysis day.

Flushing Creek Detailed Analysis Conclusion

Flushing Creek has been highly affected by human activity and the creek's habitat is degraded to a point where it is not supportive of species found in local healthy estuaries. The aquatic vegetation in the Study Area, including areas of high marsh, is comprised of invasive species.

Both No-Action and increment shadows would be cast across Flushing Creek from the start of each analysis day. Within one hour on each analysis day, the western shoreline would be in direct sunlight, and both No-Action and incremental shadows would only be cast on the eastern fringes of high and intertidal marsh areas, and across portions of the littoral zone. Development to the west of the creek comprises generally of one or two story developments sited more than 400-feet from the creek, none of which cast shadows on the creek on any analysis day. The massing of the proposed buildings would allow for discrete, non-contiguous pockets of direct sunlight to reach the creek through times of incremental shadow. Three hours into each of the analysis days, the No-Action and incremental shadow coverage would collectively cover less than five acres in area, and continue to decrease in area until the incremental shadows completely moves off of Flushing Creek. Incremental shadows on the creek would decrease in area throughout the analysis day until incremental shadows complete move off the creek.

The incremental shadows would not significantly affect habitat conditions because the creek has been affected by human activity and the shadows are temporary. The incremental shadow would increase shadow duration on the high marsh and intertidal marsh areas over the No-Action condition by a few minutes on each analysis day. No area of Flushing Creek would be permanently shaded such that it would affect aquatic biota or vegetation. Phytoplankton – which perform photosynthesis with limited direct sunlight and whose movements are largely governed by prevailing tides and currents – would move through the areas of shade and into areas of direct sunlight to perform photosynthesis. Additionally, the incremental shadows would encompass only a portion of Flushing Creek's total surface area; the majority of the 43-acre waterbody would not be affected by incremental shadow. The Proposed Actions would include removing invasive vegetative species along the shoreline within the Project Area and would introduce native species in the Project Area that are tolerant of the With-Action shadow conditions. Thus, the Proposed Actions would not result in a significant adverse shadows impact to Flushing Creek, and no further analysis is warranted.

Project-Generated Open Space

CEQR guidelines indicate a proposed project could not result in a significant adverse impact on project-generated open space. The Proposed Actions would create two new publicly accessible open spaces. New waterfront developments in the Project Area would be required to provide a shore public walkway along Flushing Creek when new development occurs. Additionally, a new approximately 1,300 sf open plaza would be developed on Projected Development Site 2 at the northeast corner of Transverse Road and 39th Avenue.

The shore public walkway would receive project-generated shadow on all four CEQR analysis days (see Figure F-6 through Figure F-38). Project-generated shadows on this new open space would generally occur at the start of each analysis day and continue until the early afternoon. Development west of Flushing Creek is generally one or two stories in height and set back more than 400 feet from Flushing Creek. The development to the west of the creek would not cast shadows on the proposed shore public walkway in the afternoon periods, and the shore public walkway would receive direct sunlight throughout most of the afternoon period on all analysis days.

The Proposed Actions would also facilitate the development of a new open space on Projected Development Site 2. The open space on Projected Development Site 2 would be adjacent to a building up to 245 feet in height and between several of the proposed buildings of similar height. The proposed open space would be primarily shaded throughout the analysis days and would receive little direct sunlight. Accordingly, the design and programming of this open space, including vegetation, would be selected to respond to the shaded conditions of planned open space.

CONCLUSION

The Proposed Actions would permit development up to 245 feet in height. The Tier 3 assessment demonstrates incremental shadows have the potential to reach Flushing Creek. The detailed shadow analysis shows the both No-Action and incremental shadows on Flushing Creek would occur from the start of each analysis day and continue to move in a clockwise direction, exiting the creek entirely by midday on the March 21st and May 6th analysis days. Incremental shadows would move entirely off Flushing Creek by 11:25 PM on the June 21st analysis day, and by 1:00 PM on the December 21st analysis day. Both No-Action and incremental shadows would be cast on Flushing Creek primarily in the morning periods, and incremental shadow would increase shadow durations on the high marsh and intertidal marsh areas of the creek by a few minutes on each analysis day. The low-rise buildings west of Flushing Creek ensure that the creek would continue to receive direct sunlight throughout most of the afternoon analysis periods in the With-Action Condition.

Within the creek, high and intertidal marsh areas would receive both No-Action and incremental shadows from the start of each analysis period. Shadows would be cast on these areas of the creek for approximately one hour and 15 minutes or less on each analysis day, and would remain in direct sunlight for the remainder of the analysis period. After this time, incremental shadow would occur only in the creek's littoral zone. Further, aquatic vegetation in the Study Area consists of invasive species, and both No-Action and incremental shadows on areas of high marsh would not last more than one hour and 15 minutes on any CEQR analysis day. The Proposed Actions would facilitate the removal of invasive aquatic vegetation along the Project Area's shoreline and introduce native

species that are tolerant of the With-Action shade conditions. The creek's habitat conditions has been affected by human activity to a point where it is not supportive of species found in local healthy estuaries. Overall, incremental shadows would not have the potential to significantly affect the public's use or enjoyment of the sunlight-sensitive resources in the Study Area, and does not have the potential to adversely affect aquatic vegetation or biota. Accordingly, the Proposed Actions would not result in significant adverse shadows impacts, and no further analysis is warranted.

ATTACHMENT G: HISTORIC AND CULTURAL RESOURCES

INTRODUCTION

The *CEQR Technical Manual* identifies architectural resources as historically important buildings, structures, objects, sites, and districts. These resources include buildings and properties designated as a New York City Landmark (NYCL) by the New York City Landmarks Preservation Commission (LPC), properties listed on the State/National Register of Historic Places (S/NR) or contained within a district listed on or formally determined eligible for S/NR listing, properties recommended by the New York State Board for listing on the S/NR, National Historic Landmarks (NHL) designated by the U.S. Secretary of the Interior, and properties not identified by one of the programs listed above, but that meet their eligibility requirements by the New York State Historic Preservation Office (SHPO).

According to the *CEQR Technical Manual,* architectural resources generally include historically important buildings, structures, objects, sites, and districts. Archaeological resources are defined in the *CEQR Technical Manual* as physical remains, usually subsurface, such as burials, foundations, artifacts, wells, and privies of the prehistoric, Native American, and historic periods.

METHODOLOGY

Based on *CEQR Technical Manual* guidelines, the first step to evaluate whether a proposed project may affect historic resources is to consider what area the project might affect and then identify historic resources within that area. To assess the potential impacts of the Proposed Actions on historic resources, an inventory of historic resources within a 400-foot radius of the Project Area (the "Study Area") was compiled using the SHPO Cultural Resource Information System (CRIS) database and LPC's Discover NYC Landmarks online map. The inventory was supported through consultation with LPC and SHPO in the form of an environmental review request for comment on the architectural and archaeological significance of the Project Area and the potential historic resources located in the Study Area. All correspondence with LPC and SHPO is included in Appendix H, "Historic Resources - Agency Correspondence."

Correspondence with LPC and SHPO indicates that the sites within the Project Area do not have archaeological significance and, therefore, no further assessment is warranted. A brief summary of prior archaeological assessments conducted in the Project Area is provided below. According to LPC and SHPO, the Study Area contains one building that is eligible for listing on the S/NR.

This chapter draws from the research conducted for the Flushing Waterfront Brownfield Opportunity Area (BOA) Environmental Assessment Report (EAR) (the "BOA Report") dated September 2017, as well as the March 2016 Phase IA Archaeological Assessment prepared for the NYC Department of City Planning (DCP) as part of the Flushing West Rezoning Proposal (CEQR No. 16DCP045Q).

EXISTING CONDITIONS

The Project Area is bound by a westward extension of 36th Avenue to the north, College Point Boulevard to the east, 40th Road to the south, and Flushing Creek to the west (see Figure A-2 in

Attachment A, "Project Description"). The Project Area is comprised of Queens Block 4963, Lots 1, 7, 8, 9, 65, 75, 85, 200, 210, 212, and 249, and Block 5066, Lots 7503 and 7507 (Figure A-3). The developable portion of the Project Area has been divided into two categories: "Projected Development Sites" and "Potential Development Sites." The Projected Development Sites are under control of the Applicant. The Potential Development Sites are not controlled by the Applicant and do not have any known redevelopment plans.

Projected Development Sites include Block 4963, Lots 7, 8, and 9 ("Projected Development Site 1"); Block 4963, Lot 65 ("Projected Development Site 2"); Block 4963, Lot 85 ("Projected Development Site 3"); and Block 4963, Lots 212 and 249 ("Projected Development Site 4"). Potential Development Sites include Block 4963, Lot 75 ("Potential Development Site A") and Block 4963, Lot 200 ("Potential Development Site B") (Figure A-10).

Archaeological Resources

As part of the Flushing West Rezoning Proposal, LPC was consulted in 2015 about the potential effects of the actions on archaeological resources. LPC requested that a Phase IA archaeological documentary study be conducted, specifically on Block 4963, Lots 65, 75, 85, and 200, and Block 5066, Lot 7501. LPC noted that there were no archaeological concerns for the remaining blocks and lots in the Project Area. In March 2016, a Phase IA Archaeological Assessment was completed; it concluded that further archaeological testing in the Project Area was not required because the existence of prehistoric archaeological resources is extremely unlikely. This Phase IA drew heavily from the 1996 Phase IA Archaeological Assessment that was conducted for the Downtown Flushing Rezoning (CEQR No. DCP-052Q), also known as the Geismar study. The Geismar study included a similar study area as the 2016 Phase IA Archeological Assessment.

As stated previously, LPC and SHPO were consulted about the Proposed Project. LPC's response, dated June 14, 2019, and SHPO's response, dated May 31, 2019, confirmed that the Project Area has no archaeological sensitivity (see Appendix H).

Architectural Resources

Based on consultation with SHPO and LPC, one S/NR-eligible resource exists in the Study Area (Figure G-1). The U-Haul building (Image G-1, G-2), formerly known as the Serval Slide Fasteners Factory, is located at 36-30 College Point Boulevard on Potential Development Site B (Block 4963, Lot 200). This building was surveyed by the National Park Service (NPS) for the New York State Division for Historic Preservation in 1974.[36] The five-story, T-shaped building is built of reinforced concrete with brick facing, comprising about 108,000 square feet.[37] The NPS survey notes that the clock tower is a "local landmark visible from a considerable distance."

According to SHPO, although most of the building's window and door openings have been sealed, the original fenestration pattern of the building has been retained.[38] Character-defining features include

[36] New York State Cultural Resource Information System- Building Structure Inventory Form. 081-01-0044. Serval Slidefasteners Factory. February 1, 1974. Accessed May 20, 2019.
[37] Ibid.
[38] SHPO Eligibility Evaluation for USN 08101.000044. 30 May 2019. Accessed 21 June 2019.

the T-shaped plan; reinforced concrete construction expressed as a grid on the exterior; brick cladding; fenestration and window openings; and the clock tower with copper-domed cupola.[39] The building was constructed in 1925 and designed by Lockwood, Green and Company to house offices and a factory for the W. & J. Sloane Furniture Company, which had a national reputation for creating Colonial Revival furniture.[40] The clock was made by the Seth Thomas Clock Company of Connecticut.[41] The building was later occupied by the Kollsman Instrument Company, a manufacturer of lenses, and in 1942 was purchased by Serval Slide Fasteners, Inc., a manufacturer of zippers.[42] Since 1979, the building has housed a U-Haul moving and storage business. With its central clock tower and cupola it remains a prominent visual marker in the neighborhood (see Attachment H, "Urban Design and Visual Resources").

According to SHPO, the building is eligible for the S/NR under Criteria A and C in the areas of industry and architecture. NR criterion (A) is "Associated with events that have made a significant contribution to the broad patterns of history" and (C) is "Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose component may lack individual distinction."[43]

Image G-1: Facing southwest toward the U-Haul building from College Point Boulevard north of 36th Road, just east of the Project Area.

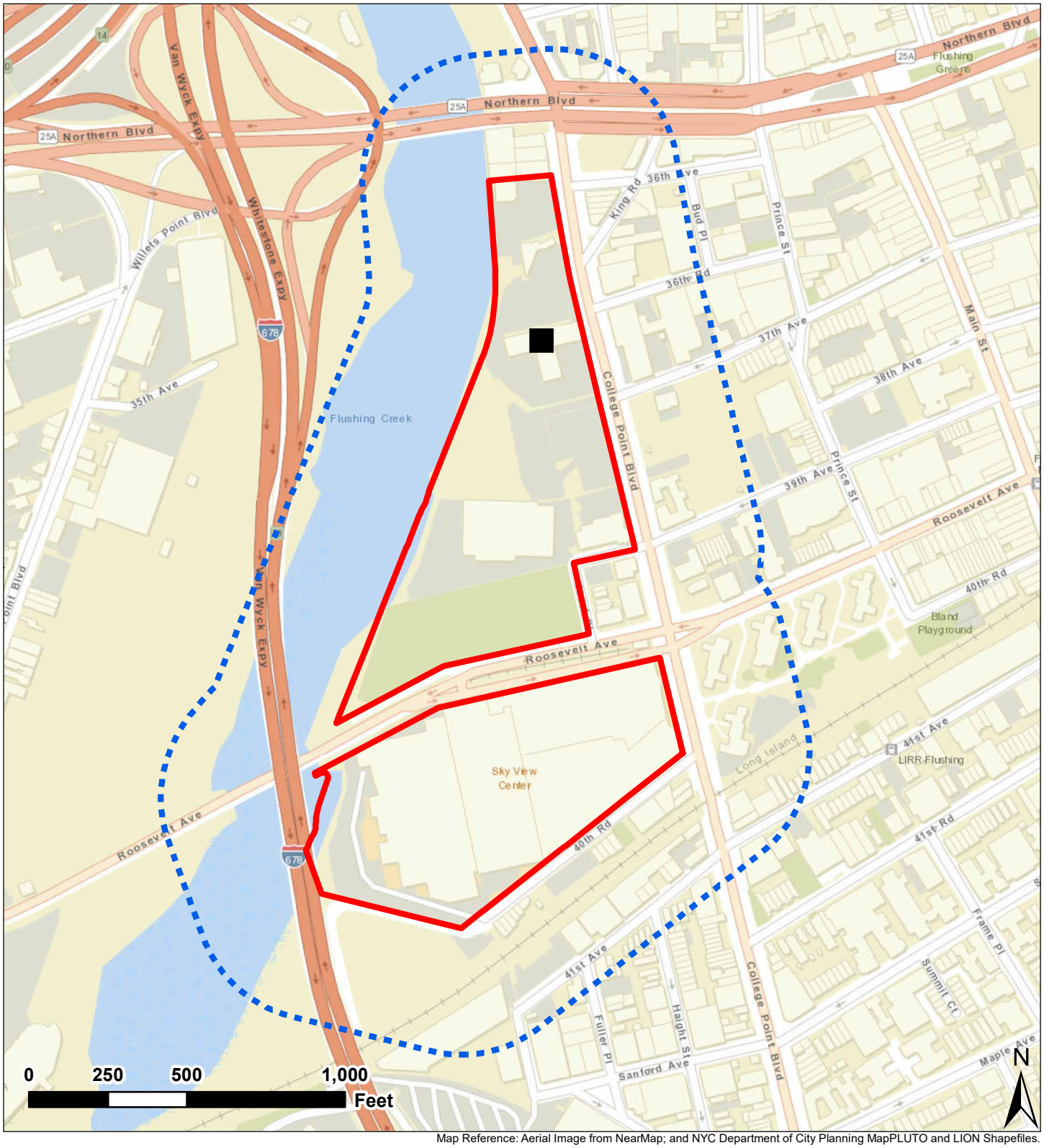
[39] SHPO Memorandum to LPC: 36-30 College Point Boulevard, Queens. 25 September 2019. See Appendix H.
[40] SHPO Eligibility Evaluation for USN 08101.000044. 30 May 2019. Accessed 21 June 2019.
[41] Ibid.
[42] New York State Cultural Resource Information System- Building Structure Inventory Form. 081-01-0044. Serval Slidefasteners Factory. February 1, 1974. Accessed May 20, 2019.
[43] SHPO Eligibility Evaluation for USN 08101.000044. 30 May 2019. Accessed 21 June 2019.

Image G-2: Facing northwest toward the U-Haul building from College Point Boulevard at 37th Avenue, just east of the Project Area.

FIGURE G-1

SPECIAL FLUSHING WATERFRONT DISTRICT

HISTORIC AND CULTURAL RESOURCES MAP



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area

S/NR Eligible

Study Area (400-foot radius)

FLUSHING, QUEENS, NY

LANGAN

ASSESSMENT

No-Action Condition

In the No-Action Condition, sites within the Project Area (Projected Development Sites 1, 2, and 3) would be developed with mixed use, multi-story buildings, as described in Attachment A, "Project Description." The sites are currently vacant, and new development would maximize the currently permissible FAR and zoning square feet (zsf) with high lot coverage buildings, active ground floor uses, and residential towers atop podiums. Projected Development Site 4 would remain in the M3-1 district; the existing one-story industrial building on that site would be demolished and replaced with a new building that would comply with existing zoning.

The Potential Development Sites are not controlled by the Applicant and do not have any known redevelopment plans. In the event that Potential Development Site A would be redeveloped in the No-Action Condition, the existing building on this site would be demolished and the site would be redeveloped with a mixed use development (see Attachment A, "Project Description"). It is assumed that the existing S/NR-eligible historic resource on Potential Development Site B (the U-Haul building) would remain in the No-Action Condition, however, development on the Projected Development Sites would alter the existing viewing context of this resource and could obstruct some long-range views of the building.

With-Action Condition

As discussed in Attachment A, "Project Description," the Proposed Actions would modify either general zoning requirements or waterfront zoning regulations related to height, setback, use and parking. With the exception of Projected Development Site 4, there are only modest increases in density within the proposed special district, and the No-Action and With-Action conditions are largely similar in terms of land use. Development in the With-Action Condition would facilitate a wider shore public walkway, enhanced waterfront view corridor requirements, the establishment of pedestrian and vehicular street networks, reduced parking requirements, and refined building massing requirements.

In the With-Action Condition, vacant sites (Projected Development Sites 1, 2, and 3) would be developed with mixed use, multi-story buildings, and the existing building on Projected Development Site 4 would be demolished to facilitate construction of a new mixed use, multi-story building. The With-Action Condition assumes that existing development on Potential Development Site A would be demolished to facilitate construction of a mixed use, multi-story building.

As discussed in Attachment A, "Project Description," the U-Haul self-storage and truck rental operation has been located on this site since 1979 and is part of a well-known self-storage and truck rental chain. The iconic cupola and clock tower and prominent business signage make this building an important visual neighborhood marker. For these reasons, it is unlikely that the owner of the U-Haul building would choose to demolish the structure and relocate the business in the With-Action Condition. Additionally, a recent city-wide zoning text amendment that limits new self-storage facilities in certain manufacturing districts could serve as an impetus for the retention of existing

self-storage facilities.[44] However, due to the reduction in parking requirements in the With-Action Condition, the Proposed Actions could create opportunity for additional commercial development on this site. Although there are no known development plans for the U-Haul building, the analysis framework anticipates that the Proposed Actions could facilitate a 177,000-gross-square-foot (gsf) structure with a maximum height of 200 feet that would contain commercial office space, to be located north of the existing U-Haul building. The building would be set back from the northern façade of the U-Haul building to allow the required 50-foot-wide visual corridor and upland connection at the extension of 36th Road. Figure G-2 provides a massing of the With-Action Condition buildings including the new development on Potential Development Site B (labeled "Bb" in the figure).

Direct Impacts

According to the *CEQR Technical Manual*, direct impacts on architectural resources may occur when a project results in new construction, demolition, or significant physical alteration to any landmarked or landmark eligible historic building, structure, or object.

The U-Haul building has been determined eligible for the State and National Registers of Historic Places (S/NR) and as such has some degree 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 consultation process. However, private owners of properties eligible for or listed on the S/NR using private funds are able to alter or demolish eligible resources without such a review process.

In the With-Action Condition, the U-Haul building would be not altered. New development on the site would be physically separated from the existing building by a 50-foot-wide upland connection and visual corridor. The existing and new building would be two distinct structures. With the new building separate, the U-Haul building's distinguishing characteristics -- the T-shaped plan, fenestration pattern, cupola, and clock tower -- would remain intact. The Proposed Actions would not significantly adversely affect the U-Haul building's important architectural features and would therefore not result in significant direct adverse impacts to historic resources.

Indirect Impacts

According to the *CEQR Technical Manual*, a project may result in adverse indirect impacts on historic resources when it affects its context or visual prominence and if the change is likely to alter or eliminate significant characteristics that make it an important resource. Indirect impacts could result from construction, or when the project is complete, from action-generated shadows.

As described above, the new commercial office structure on Potential Development Site B would be sited north of the U-Haul building. Its location would accommodate the required 36th Road visual corridor and upland connection and would not affect views to Flushing Creek from this corridor. The building would have a podium and tower form, with the podium approximately the same height as

[44] NYC Department of City Planning. Self-storage Text Amendment. https://www1.nyc.gov/site/planning/plans/self-storage-special-permit-ibz/self-storage-special-permit-ibz.page. Accessed 15 August 2019.

the U-Haul building, visually aligning the two building forms. With the tower component, views of the U-Haul building may be partially obstructed; however, when viewed from locations such as the intersection of College Point Boulevard and 36th Road (short-range), the U-Haul building's setting and visual relationship to the streetscape would not be altered.

Similar to the No-Action Condition, in the With-Action Condition new development on Projected Development Sites 3 and 4 would obstruct views of this S/NR eligible resource from some long-range viewing locations. The obstruction of long-range views is typical of new development in urban areas such as Flushing, and views of the U-Haul building, including its cupola and clock tower elements, would continue to be available for public enjoyment from certain publicly-accessible locations along 36th Road and College Point Boulevard, and from the shore public walkway. As discussed in Attachment H, "Urban Design," the increased width of the shore public walkway would provide additional open space over the No-Action Condition that would allow the public to enjoy views of the U-Haul building's cupola and clock tower.

In regards to NR Criteria (A), "Associated with events that have made a significant contribution to the broad patterns of history", the U-Haul building in the With-Action Condition would remain operational and be a reminder of the historic industrial nature of the Flushing waterfront. U-Haul's corporate website states the dedication of the business to adaptive reuse goals for this particular building, citing the building's prior industrial uses and the company's plan to restore the machinery of the historic clock.[45] In the With-Action Condition, the building would not be altered and would retain the components that reflect its past industrial use.

In relation to NR Criteria (C), "Embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possess high artistic values; or represents a significant and distinguishable entity whose component may lack individual distinction," the clock tower and cupola of the U-Haul building would not be modified, and would remain the highest points on the building in the With-Action Condition. Overall, the visual prominence and context of the U-Haul building would be maintained. The new adjacent building on the site would be separated by a 50-foot-wide upland connection, and would enable the U-Haul building's distinguishing architectural features to remain intact and ensure its continued prominence along the Flushing waterfront.

Thus, the Proposed Actions would not adversely affect the characteristics that make this resource eligible for S/NR listing or alter its visual prominence in the Flushing neighborhood. The implementation of the Special Flushing Waterfront District would not result in indirect significant adverse impacts to historic resources.

Shadow Impacts

As discussed in Attachment F, "Shadows," the Proposed Actions would not result in significant adverse shadow impacts to historic architectural resources within the Study Area, as the U-Haul building does not contain sunlight-sensitive elements.

[45] U-Haul. Flushing Building History. https://www.uhaul.com/Locations/History/802082/. Accessed 15 August 2019.

Construction Impacts

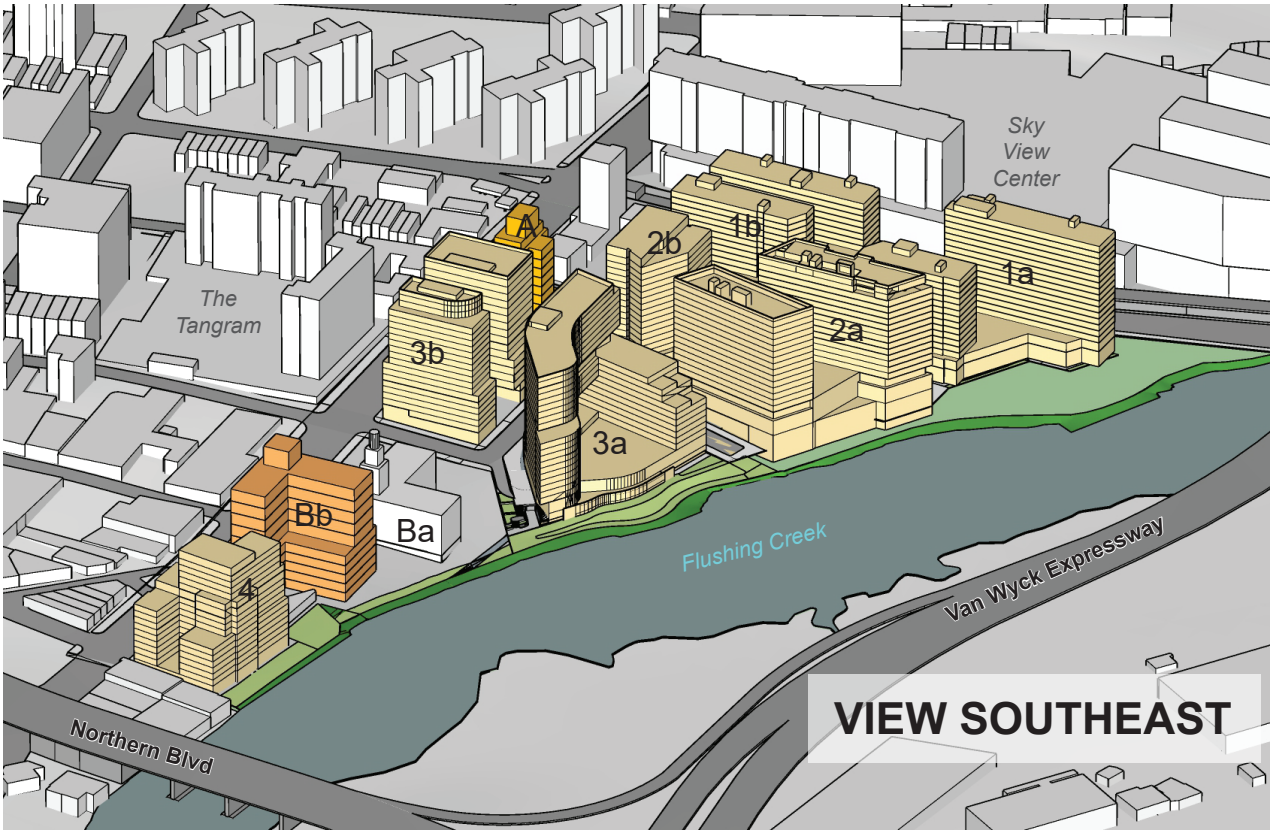
Regulations for the protection of historic structures are found under the NYC Department of Building's (DOB) TPPN #10/88, which protects LPC-designated and S/NR-listed resources within 90 feet of a lot undergoing development or alteration. TPPN #10/88 would not apply to the U-Haul building as it is only considered an S/NR-eligible resource. However, the building would be afforded limited protection under the DOB regulations applicable to all buildings located next to construction sites.

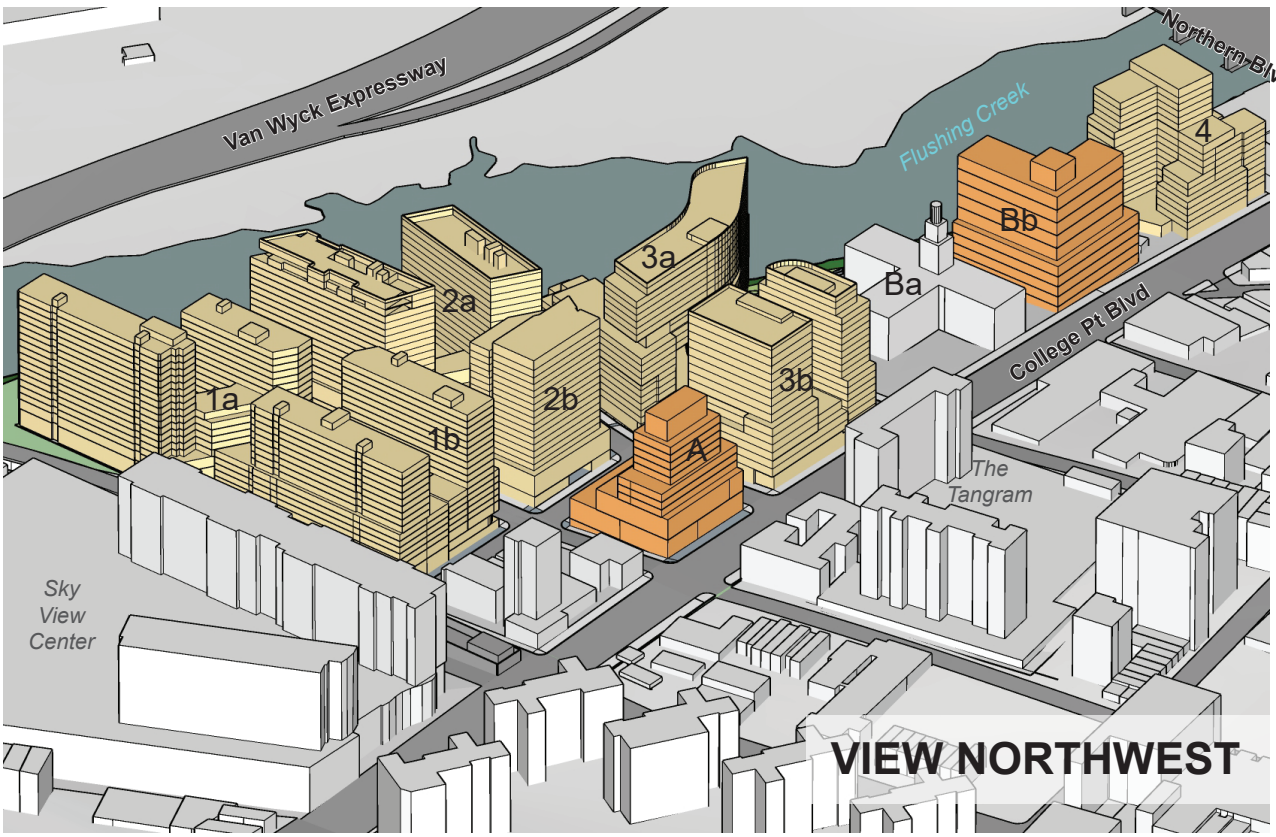
CONCLUSION

There are no LPC-designed landmarks or S/NR-listed resources in the Study Area, and LPC has determined the Project Area has no archeological sensitivity. Based on correspondence with LPC and SHPO, there is one S/NR-eligible building within the Study Area. The U-Haul building would not be directly affected by the Proposed Actions, and the new commercial building on Potential Development Site B, located north of the existing building, would not affect the characteristics that make the U-Haul building eligible for S/NR listing. Based on the assessment presented above, the Proposed Actions do not have the potential to result in significant adverse impacts to historic and cultural resources, and no further assessment is warranted.

FIGURE G-2

WITH-ACTION CONDITION MASSINGS





With-Action Projected Development

With-Action Potential Development

ATTACHMENT H: URBAN DESIGN AND VISUAL RESOURCES

INTRODUCTION

This section assesses the potential for the Proposed Actions to result in a significant adverse urban design and visual resources impact. According to the *CEQR Technical Manual*, a urban design and visual resources assessment is appropriate when a proposed project would result in substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning.

METHODOLOGY

Based on the guidelines and definitions in the *CEQR Technical Manual*, this assessment of urban design and visual resources considers the potential effects of the Proposed Actions on streets, buildings, visual resources, open space, natural features, and wind:

1. Streets refers to the arrangement and orientation of streets (the "street grid") that defines the location and flow of activity in an area, sets street views, and creates the blocks on which buildings and open spaces are organized. Streetscape elements are physical features that make up a streetscape, such as building street walls, building entrances, building fenestrations, sidewalks, street trees, street furniture, and other permanent fixtures, including plantings, street lights, fire hydrants, curb cuts, or newsstands that are critical to making a successful streetscape.

2. Buildings support the street grid and the streetscape by conveying a sense of the overall form and design of a block or a larger area. A building's street wall forms the most common backdrop for public space and includes a building's size, shape, setbacks, lot coverage, and placement on the zoning lot and block. Active uses and pedestrian and vehicular entrances all play major roles in the vitality of the streetscape.

3. Visual Resources are the connections from the public realm to significant natural or built features, including views of the waterfront, public parks, landmark structures or districts, otherwise distinct buildings or groups of buildings, or natural resources.

4. Open Space includes public and private areas such as parks, yards, parking lots, and privately-owned public spaces.

5. Natural Features includes vegetation, geologic, topographic, and aquatic features that may help define the overall visual character of the area.

6. Wind may affect pedestrian comfort and safety due to channelized pressure from between tall buildings and downwashed wind pressure from parallel tall buildings.

This urban design and visual resources analysis follows the guidelines set forth in the *CEQR Technical Manual*. For this project, a detailed urban design and visual resources analysis is warranted. The Project Area is not in an area particularly prone to wind, and therefore a CEQR wind analysis is not warranted.

All heights referenced in this urban design and visual resources assessment are heights above average mean sea level (AMSL), as measured in the North American Vertical Datum of 1988 (NAVD).

Study Area

According to the *CEQR Technical Manual*, the study area for an urban design analysis is defined as the area where the project may influence land use patterns and the built environment, and is generally consistent with that used for the land use analysis. Therefore, consistent with the Land Use Study Area, this urban design and visual resources analysis focuses on a quarter-mile study area around the Project Area ("Study Area"). However, this analysis focuses predominately on the areas within 400-feet of the Project Area and provides a qualitative discussion of areas within a quarter-mile but beyond 400 feet of the project area. Figure H-1 shows the Study Area and provides a key map of photographs representative of the urban design conditions in the Study Area.

EXISTING CONDITIONS

Project Area

The Project Area consists of the entirety of the proposed special district, including Projected Development Sites 1 through 4, Potential Development Sites A and B, and the Sky View Parc development (Figure A-4). The Project Area generally slopes gradually from higher elevations in the eastern portion near College Point Boulevard to lower elevations in the western portion near Flushing Creek. The Sky View Park development is a recently completed mixed use residential and commercial development, and is not a Development Site. The Development Sites are largely vacant and isolated from the rest of the Downtown Flushing neighborhood, and do not provide public access to the Flushing Creek waterfront.

Projected Development Site 1 is a 162,595-square-foot (sf), irregular vacant zoning lot bound by Roosevelt Avenue, Flushing Creek, the prolongation of 39th Avenue, and Janet Place. The site has 702 linear feet (lf) of frontage along Roosevelt Avenue and 229 lf of frontage along Janet Place. There are two site access and egress locations. The eastern access and egress point is along Janet Place approximately 100 feet from Roosevelt Avenue, while the southern access point is along Roosevelt Avenue approximately 400 feet from Janet Place.

The site's highest elevation is along the Janet Place frontage, where the elevation is approximately 26 feet. The site slopes to the west to its low point of approximately 8 feet near Flushing Creek.

Wooden construction fencing is present along the Janet Place frontage, and chain link fencing is present along the Roosevelt Avenue frontage of the site (see Photographs 1 and 2, with a photograph key map on Figure H-1). The site is currently used for temporary construction staging.

Photograph 1

3 June 2019 - View north along Janet Place adjacent to Projected Development Site 1. Temporary construction fencing is present on this frontage.

Photograph 2

3 June 2019 - View east along north side of Roosevelt Avenue adjacent to Projected Development Site 1. Chain link fencing is present along this frontage. The Tangram and be seen under construction left of center in the photograph.

Projected Development 2 is a 138,309-sf irregular, vacant zoning lot with corner and interior lot portions. The site has 50 lf of frontage along 39th Avenue and 25 lf of frontage along Janet Place. Photograph 3 shows the existing vehicular access to the site from the intersection of 39th Avenue and Janet Place. Photograph 4 shows the site predominately covered with gravel after demolition was completed of a former commercial (wholesale foods) building, Assi Plaza.

Photograph 3

26 Feb 2019 - View west along 39th Avenue to vehicular access point to Projected Development Site 2.

Photograph 4

26 Feb 2019 - View west across Projected Development Site 2 from existing vehicular access point to 39th Avenue.

Projected Development Site 3 is a 174,500-sf irregular interior zoning lot with 298 lf of frontage along College Point Boulevard. The site operates as a surface parking lot and temporary construction staging area (see Photograph 5). Access and egress is provided to and from the intersection of College Point Boulevard and 37th Avenue. There are no buildings on this site, and chain link fencing is present along the College Point Boulevard frontage (see Photograph 6). Views along 37th Road towards Flushing Creek terminate at this development site.

Photograph 5

03 June 2019 - View north across existing parking facility on Projected Development Site 3 towards Potential Development Site B, a visual resource with a clock tower and cupola above a three-story industrial use.

Photograph 6

03 June 2019 - View south along College Point Boulevard. The parking facility on Projected Development Site 3 is shown on the right.

Projected Development Site 4 is a 47,031-sf irregular, vacant, interior zoning lot with 176 lf of frontage along College Point Boulevard. The site contained a scrap metal yard (see Photographs 7 and 8). Fencing is along the site's College Point Boulevard frontage. Vehicular access is provided in two locations along College Point Boulevard. The northern vehicular access point is provided at the intersection of College Point Boulevard and 36th Avenue. The southern vehicular access point is near the intersection of College Point Boulevard and King Road.

Photograph 7

26 Feb 2019 – View southwest of Projected Development Site 4's College Point Boulevard frontage.

Photograph 8

26 Feb 2019 – View southwest across College Point Boulevard from 36th Avenue towards Projected Development Site 4 and Potential Development Site B, which contains the U Haul building.

Potential Development Site A is a vacant 30,023-sf irregular corner zoning lot with 180 lf of frontage along College Point Boulevard and 169 lf of frontage along 39th Avenue. The site is occupied by a 13,344-gross-square-foot (gsf) (0.45 FAR) one-story construction supply store with accessory parking enclosed in fencing within the northern side yard (see Photograph 9). Vehicular access and egress is available between the accessory parking area and College Point Boulevard, near the entrance of Projected Development Site 2. There is one curb cut to a loading area at the ground level along College Point Boulevard. A second curb cut is provided to a loading bay at the cellar level along

39th Avenue near its intersection with Janet Place. The site's highest point is near the intersection of College Point Boulevard and 39th Avenue. The site slopes from its high point of 41 feet above AMSL towards its lowest point of 24 feet along near its western lot line.

Potential Development Site B is a 126,942-sf irregular interior lot with 497 lf of frontage along College Point Boulevard. The site is occupied by a four-story 110,000-gsf T-shaped former factory and warehouse building (the U-Haul building). The site slopes down from its highest elevation of 33 feet at College Point Blvd to the water

The T-shaped building has been determined eligible for listing on the State and National Register of Historic Places. Surface parking surrounds the building to the north, south, and west. The building is the sole historic visual resource in the Project Area and has a prominent cupola and clock tower above the fourth story. The part of the building's façade facing north is approximately 240 feet wide (see Photograph 10).

Potential Development Site B is across College Point Boulevard from 36th Road and King Road, both of which terminate at College Point Boulevard. The site is a visual termination along these streets.

Photograph 9

03 June 2019 - View north along west side of College Point Boulevard adjacent to Potential Development Site A. The Tangram, shown right, is a 13-story residential development under construction outside of the Project Area on the east side of College Point Boulevard.

Photograph 10

03 June 2019 – View west along 36th Road towards Potential Development Site B. 36th Road terminates at College Point Boulevard. The U-Haul building features a prominent cupola and clock tower.

Sky View Parc is the only site in the Project Area south of Roosevelt Avenue. The site is improved with a recently-completed mixed use development with more than one million sf of floor area comprising residential and commercial spaces. Retail uses are present along College Point Boulevard within the podium. The uses in the podium along the 40th Road frontage include retail near College Point Boulevard, and accessory parking and loading areas. Sky View Parc comprises multiple residential towers atop a retail and parking podium. There are three residential towers near the Flushing Creek frontage, and two additional residential towers near the College Point Boulevard frontage to the east. The two towers near the College Point Boulevard frontage are approximately 70-foot-wide to College Point Boulevard, and over 450 feet in depth. Both of these towers have 11 stories of residential above the three story podium. The northeastern tower is set back approximately 10 feet from College Point Boulevard and approximately 20 feet from Roosevelt Avenue. The southeastern tower is also set back approximately 15 feet from College Point Boulevard frontage of the podium and approximately 25 feet from 40th Road to the south.

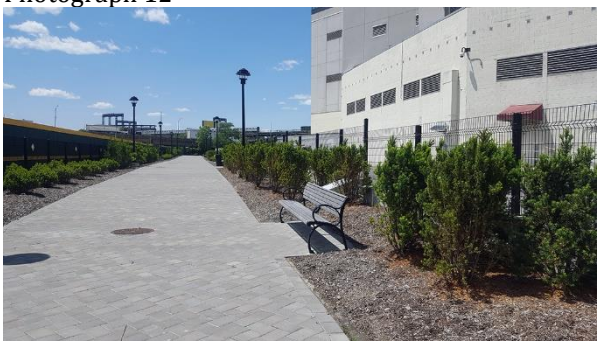
The three residential towers near the Flushing Creek frontage exceed 200 feet in height and have 17 stories comprising of 14 residential stories above the three-story podium. Vehicular access and egress between Sky View Parc and the local street network occurs along both Roosevelt Avenue and 40th Road. A shore public walkway is also developed along Flushing Creek.

There are no street trees within the area bound by Roosevelt Avenue, 40th Road, College Point Boulevard, and Flushing Creek. At the street-level, Sky View Parc's frontage along Roosevelt Avenue is mostly blank walls finished in brick, emergency exit doors, and parking garage access points; other than one pedestrian entrance along the midblock, there is very little glazing or sightlines available between the inside of the building and the street at the Roosevelt Avenue level. There are no street trees within Roosevelt Avenue between College Point Boulevard and Flushing Creek. At the street-level, Sky View Parc's frontage along Roosevelt Avenue is mostly blank walls finished in brick, emergency exit doors, and parking garage access points; other than one pedestrian entrance along the midblock, there is very little glazing or sightlines available between the inside of the building and the street at the Roosevelt Avenue level.

Photograph 11

03 June 2019 - View west across College Point Boulevard to Sky View Parc.

Photograph 12



03 June 2019 – View northwest along the shore public walkway upland connection at Sky View Parc.

The Project Area includes portions of Roosevelt Avenue, College Point Boulevard, 39th Avenue, and Janet Place. Roosevelt Avenue is to the south of the Development Sites and in the southern portion of the Project Area. The part of Roosevelt Avenue between Janet Place and Flushing Creek serves as the approach to the bridge across the creek. The No. 7 subway line runs along Roosevelt Avenue; to the west of its intersection with College Point Boulevard, the subway transitions between an elevated line and a below ground line within Roosevelt Avenue. West of this transition point the subway is elevated and runs above vehicular traffic on Roosevelt Avenue. This transition between an elevated and underground subway track provides limited opportunities for pedestrian crossings across Roosevelt Avenue between College Point Boulevard and Flushing Creek; the only crossing occurs more than 650 feet from College Point Boulevard, near the entry and exit point to the Sky View Center parking garage. Being one of the few connections across Flushing Creek, Roosevelt Avenue is an important east and west connector.

College Point Boulevard is along the eastern edge of the Project Area and separates the Project Area from downtown Flushing. The streetscape along this street consists of two vehicular travel lanes in each direction and parallel parking on both sides of the street. Including planting pits, the sidewalk

is approximately 10 feet wide. Adjacent to the Project Area, crosswalks are provided only across College Point Boulevard at its intersections with 40th Road, Roosevelt Avenue, 39th Avenue, and 37th Avenue. There are no pedestrian crosswalks for approximately 1,000 feet between 37th Avenue and Northern Boulevard. Along College Point Boulevard in the Study Area, planters are present on the street's raised median strips.

39th Avenue is the sole east-west oriented street in the Project Area that continues west of College Point Boulevard and therefore serves as an important pedestrian route between the Project Area (and waterfront) and downtown Flushing. West of College Point Boulevard, 39th Avenue connects Janet Place and College Point Boulevard and allows for two-way traffic. The street is built to a width of 50 feet. From College Point Boulevard, the street slopes down towards Flushing Creek to the west. Street trees are present only on the south side of 39th Avenue, and the sidewalks on either side are approximately five feet wide.

Janet Place connects Roosevelt Avenue and 39th Avenue and accommodates two-way traffic. The northern sidewalk is built to a width of approximately five feet and contains no street trees or street lighting. The southern sidewalk is deteriorated and in poor condition with crumbled pavement, no street trees, lighting, or other streetscape features.

Study Area

Overall, the Study Area is principally defined by a mix of residential, commercial, and manufacturing/industrial land uses and building types. Flushing Creek bisects the Study Area. Upland areas on either side of Flushing Creek are largely industrial or formerly industrial uses. These sites are vacant, used as open parking facilities, or developed with manufacturing and transportation/utility buildings generally up to two stories in height. Industrial uses are principally to the north and west of the Project Area, with some industrial uses around the Long Island Railroad to the south. Commercial, residential, and mixed use areas are to the south and east, an area that includes Downtown Flushing. Downtown Flushing is heavily trafficked by pedestrians. The smaller blocks, signalized pedestrian crossings, and active street frontages built up to the street contribute to the high pedestrian activity in the area.

Because the Project Area is in an urban area with few opportunities for long distance views, this assessment focuses predominately in the area within 400 feet of the Project Area. Existing conditions of the Study Area are shown in Photographs 13 through 30 (with a key map provided at Figure H-1).

Photograph 13

03 June 2019 - View north along Flushing Creek from Roosevelt Avenue. The Project Area is on the right, and Van Wyck Expressway is on the left.

Photograph 14

03 June 2019 – View northwest from Northern Boulevard and College Point Boulevard towards a concrete batching plant. Industrial buildings are present north of Northern Boulevard in the Study Area.

Photograph 15

26 Feb 2019 - View of NYC Department of Transportation Harper Street Yard on Marina Road. In the Study Area, industrial buildings are prominent west of the Van Wyck Expressway.

Photograph 16

03 June 2019 – View west to Northern Boulevard bridge landing at its intersection with Prince Street.

Photograph 17

03 June 2019 - View west along Roosevelt Avenue from Prince Street towards NYCHA Bland Houses and Sky View Parc beyond.

Photograph 18

03 June 2019 – View west along 39th Street mid-block between Prince Street and College Point Boulevard towards Project Area.

Photograph 19

03 June 2019 - View west along 37th Avenue towards College Point Boulevard. The view terminates at Projected Development Site 3 where vegetation and a parking facility currently obstruct views towards Flushing Creek.

Photograph 20

03 June 2019 – View north along College Point Boulevard from Roosevelt Avenue. The U-Haul building cupola and clock tower can be seen in the distance. A recently developed 12-story hotel at 39-16 College Point Boulevard is shown on the left. The Tangram can be seen to the far right.

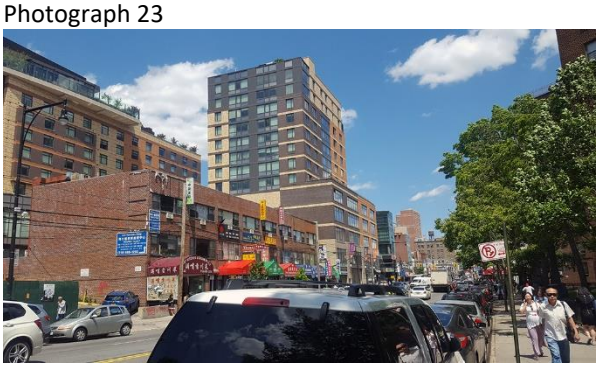
Photograph 21

03 June 2019 - View west along King Road and 36th Avenue towards College Point Boulevard. Potential Development Site B is at the termination of King Road, and Projected Development Site 4 is at the termination of 36th Avenue.

Photograph 22

03 June 2019 – View north along College Point Boulevard from 40th Road. The Bland NYCHA Houses are on the right with the Tangram shown further norther along College Point Boulevard. Other mid-rise developments can be seen beyond.

Photograph 23



03 June 2019 - View east along Roosevelt Avenue from between College Point Boulevard and Prince Street. 39-16 Prince Street is a mixed use residential and commercial building shown in the foreground, which is a recently constructed (2014) 14-story 155-foot building.

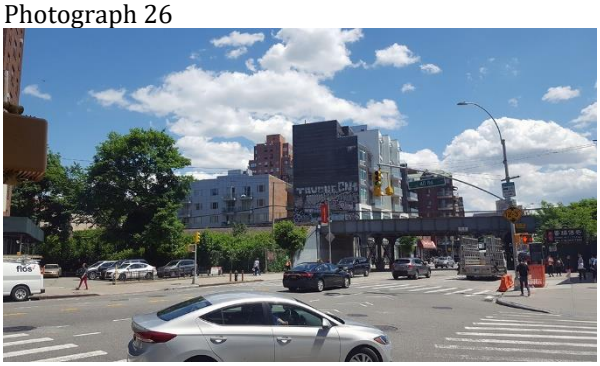
Photograph 24

03 June 2019 – View east along 36th Ave towards Prince Street. 36-18 Main Street, a recently constructed (2019) 14-story 190-foot-tall hotel with retail and community facility spaces is shown center left.

Photograph 25

03 June 2019 - View north along Prince Street from near Roosevelt Avenue. The tall brick building shown center-right is a recently constructed (2017) 14-story, 177-foot transient hotel building at 135-20 39th Avenue.

Photograph 26



03 June 2019 – View south along College Point Boulevard from 40th Road towards the LIRR overpass and residential areas in the southern portion of the Study Area.

Photograph 27

03 June 2019 - View west along 36th Avenue from Prince Street towards College Point Boulevard.

Photograph 28

03 June 2019 – The NYCHA Bland Houses is the only "tower in a park" development in the Study Area. The Bland Houses consist of five 10-story residential buildings with building entries set back from the street.

Photograph 29

03 June 2019 – Bland Playground has basketball and handball courts, playground equipment, and spray showers.

Photograph 30

03 June 2019 – The shore public walkway along the Flushing Creek frontage of Sky View Parc. The shore public walkway was not accessible during site reconnaissance conducted on 3 June 2019.

Photograph 31

03 June 2019 – View west along 39th Avenue from College Point Boulevard towards Projected Development Site 2. Potential Development Site A is shown on the right.

Photograph 32

03 June 2019 – View west along Roosevelt Avenue from College Point Boulevard towards Flushing Creek. The bend in the street at the approach to the Roosevelt Avenue Bridge allows Citi Field to be seen beyond.

Photograph 33

14 Nov 2018 – Shoreline condition along Projected Development Site 3's Flushing Creek frontage. Northward view towards the U-Haul building (Potential Development Site B) and Projected Development Site 4.

Photograph 34

14 Nov 2018 – Shoreline condition along Projected Development Site 3's Flushing Creek frontage. The U-Haul building is shown left and Sky View Parc can be seen beyond.

Streets and Streetscape

Streets in the Study Area are generally arranged in a grid pattern with Main Street, Prince Street, and College Point Boulevard serving as the primary north-south oriented local streets, and Northern Boulevard (Photograph 16) and Roosevelt Avenue (Photograph 17) serving as the primary east-west local streets. The grid street pattern forms rectangular blocks with the longer side of the blocks oriented along the east-west local streets. Other than two-way traffic along 36th Avenue, the east-west local streets between Northern Boulevard, Main Street, Roosevelt Avenue, and College Point Boulevard are one-way local streets with on-street parking available on both sides of the street. These streets have the potential to provide connections between the Project Area and downtown Flushing.

The principal vehicular route through the Study Area is the Van Wyck Expressway, which intersects the Whitestone Expressway at the northwest corner of the Study Area. Both of these expressways are limited access and provide regional connections. The Van Wyck Expressway generally runs north south. The expressway connects Whitestone Expressway with other expressways further south such as the Long Island Expressway, Grand Central Parkway, and the Belt Parkway. The Van Wyck is

elevated to the east of Flushing Creek within the Study Area. The expressway briefly transitions to grade west of the creek before becoming an elevated expressway on its approach to the Whitestone Expressway interchange. The Van Wyck Expressway has three travel lanes in each direction.

The Whitestone Expressway is a 2.7-mile highway that provides connections between Grand Central Parkway to the south, and the Cross Island Parkway and the Whitestone Bridge to the north. The Whitestone Expressway has three lanes of traffic in both directions.

There are two public transit corridors through the Study Area, including the elevated LIRR Port Washington line right-of-way in the southern portion of the Study Area, and the 7 subway line, which is elevated in the western portions of the Study Area before transitioning underground west of the intersection of Roosevelt Avenue and College Point Boulevard.

The Study Area streetscape varies by location. The widest local streets in the area include Northern Boulevard and Roosevelt Avenue. These streets have bi-directional traffic with multiple through-lanes in each direction providing connections across Flushing Creek on elevated bridges. These elevated bridges are the locations in the Study Area where the local street is not at-grade.

College Point Boulevard is at the eastern edge of the Project Area and is built to width of 100 feet. It is the widest north-south oriented local street in the Study Area. The nearly 1,000 feet between 37th Avenue and Northern Boulevard contains no pedestrian crosswalks or signalized crossings across College Point Boulevard, and this lack of crossings makes pedestrian access difficult between the Project Area and downtown Flushing to the east.

West of Prince Street, Northern Boulevard is built to an irregular width of over 160 feet. This wider portion of the street allows for bridge traffic across Flushing Creek and to College Point Boulevard below the bridge. Like Roosevelt Avenue, the elevated bridge across Flushing Creek along Northern Boulevard causes a disruption to the urban design pattern typical of downtown Flushing; there are no controlled crossings that allow pedestrians to cross Northern Boulevard between College Point Boulevard and Prince Street, a distance of nearly 600 feet.

The urban design in downtown Flushing, where the streetscape consists of elements typical of a downtown environment such as paved streets and sidewalks, continuous street walls with active frontages, street lighting, utility poles, and regulation signage (Photographs 18 through 25). South of the LIRR right-of-way, residential buildings are more prominent. East-west streets are typically lined with street trees and, other than two-way traffic on Sanford Avenue, are one-way streets with on-street parking available on both sides (Photograph 26).

In the north of the Study Area, the industrial/manufacturing areas have two-way paved streets with on-street parallel parking on both sides and buildings up to two stories in height. In the far west of the Study Area and west of Flushing Creek, the industrial streetscape along Willets Point Boulevard is different in character and consists of paved and unpaved street portions, discontinuous sidewalks, and a lack of planted vegetation. Willets Point Boulevard is predominantly surrounded on both sides by auto-body shops up to two stories in height. Farther west and beyond Willets Point Boulevard is Citi Field, the stadium of the New York Mets baseball team. Views are available of Citi Field from the Project Area along Roosevelt Avenue.

Buildings

Buildings in the Study Area widely vary between residential, commercial, mixed use, and industrial and manufacturing buildings. Throughout the Study Area, buildings are generally built at or close to the street line with high lot coverage typical of a downtown urban environment. Accessory parking at non-industrial and non-manufacturing buildings, where present, is typically within buildings. Manufacturing and industrial buildings that are present in the west and north of the Study Area are generally high lot coverage buildings up to two stories tall with large building footprints. Recent construction in the Study Area includes taller mixed- use buildings, comprising one or more of residential, office, retail, and hotel uses.

In the area bound by Main Street, the LIRR Port Washington right-of-way, College Point Boulevard, and Northern Boulevard, buildings are generally taller than other portions of the Study Area. This area has more than ten buildings that exceed 12 stories in height. The tallest buildings in the Study Area are a 14-story, 190-foot transient hotel currently under construction at 36-18 Main Street (Block 4971, Lot 16, Photograph 24), the 177-foot, 14-story building at 135-20 39th Avenue (Block 4976, Lot 15, Photograph 25), and the 158-foot, 13-story residential building at 133-53 37th Avenue (Block 4970, Lot 7501). The Tangram, a 13-story residential development with two tower components is currently under construction immediately across College Point Boulevard from the Project Area at 37-09 College Point Boulevard (Block 4972, Lot 65, visible in Photographs 2, 6, 9, 18-20 and 22).

Development between Prince Street, College Point Boulevard, Northern Boulevard, and Roosevelt Avenue includes a mix of former one- to two-story industrial buildings and more recent developments that exceed 10 stories in height. The buildings in this area are built generally up to the street except to allow accessory parking and loading areas.

Residential, commercial, and mixed use buildings in the Study Area are also typically high lot coverage. An exception to this is the New York City Housing Authority's (NYCHA) Bland Houses that comprise five 10-story residential towers in a tower-in-a-park setting between Roosevelt Avenue and the LIRR Port Washington branch right-of-way (Photograph 28).

Immediately to the north of Projected Development Site 4 are two buildings that contain home improvement retailers. Both buildings have active ground floor frontage and awnings with business signage. The building adjacent to Projected Development Site 4 is a two story building, while the northern of these two buildings is a one story building.

Visual Resources and Open Spaces

Other than the U-Haul building (shown in Photographs 5, 8, and 10) on Potential Development Site B, there are no historic visual resources within 400 feet of the Project Area. Beyond 400 feet, there are five historic visual resources in the Study Area:

- Saint George's Church at 38-02 Main Street is a house of worship in the Gothic Revival style with a towered entrance porch listed on the State/National Register (S/NR) and is an LPC-designated landmark;

- Flushing – Main Street subway station is an S/NR-listed underground subway station;
- Flushing Bankers Trust Company is a S/NR-eligible one-story art deco building with a limestone façade at the north corner of the intersection between Main Street and 37th Avenue;
- RKO Keith's Theater is an S/NR-listed three-story former movie theater that is currently under expansion and conversion into a mixed use development. It's interior is an LPC-designated interior landmark; and
- Empire Millworks is an active industrial building west of Flushing Creek.

Because the Flushing Main Street subway station is underground, the Proposed Actions would not affect views of this historic architectural resource, and this resource was not considered further for potential project-generated effects. Similarly, there are no publicly-available visual connections between the Project Area and Flushing Bankers Trust Company Building and RKO Keith's Theater, and therefore these resources are not considered for further analysis.

The sole natural visual resources within the Study Area is Flushing Creek (see Photograph 13), which is a natural waterbody visual resource adjacent to the Project Area. The open space visual resources in the Study Area are Bland Playground, Flushing Meadows-Corona Park, and the existing shore public walkway along the Flushing Creek frontage of Sky View Parc. Views are available to the copula of the U-Haul building from along College Point Boulevard, along 36th Road, the Roosevelt Avenue and Northern Boulevard bridges and along the approach these bridges, and along the Van Wyck Expressway. Views from the Van Wyck Expressway are not significant because there is no pedestrian access on this expressway.

NO-ACTION CONDITION

Project Area

In the No-Action Condition, the zoning regulations would remain as existing conditions and the projected development sites would be developed pursuant to existing zoning. Potential Development Site A could be developed. The No-Action Condition site plan is provided in Figure A-11.

Streets

In the No-Action Condition, there would be no change to the streets in the Project Area. Each development site has frontage to the local street network and would have access from and egress to the local streets from their respective frontages. Except for Projected Development Sites 1 and 2, where the two development sites would share an access driveway along a view corridor and upland connection, there would be no internal vehicular circulation between the development sites. The circulation pattern would result in the first upland street being more than 400 feet from the shore public walkway on Projected Development Sites 1–3.

Buildings

Absent the Proposed Actions, as-of-right development would occur on Projected Development Sites 1 through 4 at the maximum permitted FAR. New development would consist of high lot coverage buildings with active ground floor uses and residential towers atop podiums at Projected Development Sites 1-3. New upland connections would be established along private driveways along the prolongations of 39th Avenue and 37th Avenue. These upland connections would also serve as visual corridors and pedestrian routes to a shore public walkway that would be developed to a width of 20 feet along Flushing Creek. The primary function of the upland connections would function more like driveways and would not provide an internal pedestrian circulation path between the development sites. The upland connections and visual corridors required by the current Waterfront Access Plan (WAP) are shown in Appendix B. For development sites within the existing C4-2 zoning district and within WAP Q-2 (Projected Development Sites 1-3 and Potential Development Sites A and B), the No-Action development would be constructed as-of-right and meet the existing zoning urban design requirements, including those shown in Table H-1.

Table H-1: No-Action Development Urban Design Requirements

Design Element	ZR Section	Existing Requirements
Shore Public Walkway Width	62-952(b)	Minimum 20-foot width
Base/ Street Wall	62-341	Maximum 60-foot height
Building Height	62-341(c)	Maximum 135-foot height, or 175-foot height including penthouse* (and excluding bulkhead)
Tower Footprints	62-341(d)	Sites not less than 1.5 acres in area: 8,100 sf Sites less than 1.5 acres in area: 7,000 sf
Width of Tower Stories Facing Waterfront	62-341(c)(5)	Maximum of 100-foot width

*ZR 62-341(a) permits penthouse portions up to 40 feet above the maximum height specified in Table A of ZR-341(c). The penthouse must be set back at least 4 feet from the faces of the highest tower floor entirely below a height of 135 feet.

No-Action development within the existing M3-1 district (Projected Development Site 4) would be developed pursuant to underlying zoning, which permits an FAR of up to 2.0 with building heights governed by the sky exposure plane.

The No-Action Condition would adhere to the visual corridor and upland connection requirements of the WAP. The current provisions allow little building envelope flexibility needed to provide articulation and circulation improvements in the Project Area. To accommodate the permitted FAR within the permitted envelopes, development in the No-Action Condition would have:

- Very high lot coverage buildings in areas outside of the required visual corridors and upland connections;
- No coordinated private street network and provide little opportunity for circulation between the development sites;
- Floor-to-floor heights less than 10 feet on some floors (including floor-to-floor heights of 9 feet in some locations) to allow additional floors (and floor area) within the maximum building height; and

- On Projected Development Sites 1-3, there would collectively be 16 towers with no variation in building height (175 feet).

Development that would occur in the No-Action Condition is shown on Figure H-2, and the No-Action development at each development site is summarized in Table H-2.

Table H-2: No-Action Urban Design Components by Development Site

Site	GSF	ZSF	Built FAR	Bldg Ht (Inc. bulkhead, ft)	Street Wall Ht (ft)	Tower Footprint (sf)	Tower Coverage (%)
1	958,828	780,363	4.8	175 (+10ft bulkhead)	60	Res Towers 1-3 (each): 8,000 Commercial Tower: 18,150 Hotel Tower: 5,350	(each) 5 11.2 3.3
2	817,328	663,883	4.8	175 (+30ft bulkhead)	60	Western: 8,060 Northern: 8,070 Eastern: 6,450 Hotel Tower: 10,280	5.0 5.0 4.0 6.3
3	983,019	837,600	4.8	175 (+30ft bulkhead)	60	Western: 5,690 Southern: 8,090 Eastern: 5,800 Northern: 4,190 Northern Hotel: 4,800 Eastern Hotel: 4,610 Western Hotel: 8,400	3.3 4.6 3.3 2.4 2.8 2.6 4.8
4	128,500	94,062	2.0	96 (+30ft bulkhead)	60	N/A	N/A
A	107,182	102,078	4.8	135 (+30ft bulkhead)	15	6,984	23.3
B	110,000	104,500	0.83	65	65	N/A	N/A

Projected Development Site 1

Projected Development Site 1 would be developed with one building with a 60-foot high podium. Above the podium level, there would be three 185-foot residential towers (135 feet plus 40-foot penthouse and 10-foot bulkhead) in the western portions of the site that would be set back from the podium. Each of these residential towers would have a maximum wall width of 95 feet where walls face the waterfront. The three residential towers would have an aggregate lot coverage of approximately 15 percent (approximately 5 percent lot coverage for each tower). The ground floor would contain active uses such as retail and residential lobbies. The building would have 780,363 zoning square feet (zsf), or an FAR of 4.8.

Two commercial towers – one for office use and one for hotel use – would be developed in the eastern portion of the site. The commercial office tower would have frontage along Roosevelt Avenue, Janet Place, and 39th Avenue. The commercial hotel tower along Roosevelt Avenue would be set back a minimum of 10 feet from Roosevelt Avenue at a height above four stories. Both the office and hotel towers would rise to a height of 175 feet, or 185 feet including the 10-foot-tall bulkhead. The commercial office tower would cover 11.2 percent of the zoning lot, and the three other towers would each have a lot coverage of 5 percent or less.

The No-Action development on Projected Development Site 1 would be developed as one continuous base spanning nearly 650 feet along Roosevelt Avenue and 400 feet along the 39th Avenue upland

connection. The base height would be 43 feet, and as tall as 78 feet (with permitted dormers) within 150 feet of Janet Place.

In the No-Action Condition, vehicular access and egress would occur between Projected Development Site 1 and the surrounding street network along both Roosevelt Avenue and from Janet Place. The Janet Place access driveway would be 25-feet-wide and serve as the visual corridor and upland connection required by the current WAP and would be sited along Projected Development Site 1's northern boundary. Loading would occur from both Roosevelt Avenue and Janet Place.

Pursuant to ZR 62-952(b)(4), a shore public walkway with a minimum width of 40 feet would be developed within 50 feet north of Roosevelt Avenue, as measured along the shoreline, shown on the No-Action site plan in Figure A-11. This shore public walkway would have a 20-foot width beyond 50 feet from Roosevelt Avenue. An upland connection along the prolongation of 39th Avenue would be developed along the northern boundary adjacent to Projected Development Site 2. This upland connection would also serve as a view corridor through Projected Development Site 1 between College Point Boulevard and Flushing Creek (in accordance with the provisions of the WAP), and would be set back 25 feet from the site's northern boundary to Projected Development Site 2. The development on Projected Development Site 2 would also be set back 25-feet from its southern boundary to Projected Development Site 1 to allow for the required 50-foot-wide upland connection and visual corridor. The No-Action view corridors along Roosevelt Avenue, Janet Place, and 39th Avenue are compared to the With-Action condition view corridors within the With-Action assessment.

Projected Development Site 2

Projected Development Site 2 would be developed with one mixed use building with 663,883 zsf (4.8 FAR). At the ground level, a cul-de-sac and would be provided off this access driveway approximately 210 feet from Janet Place. Except for lobbies and vertical circulation areas for residential uses and accessory parking, the entirety of the ground (first) and second floors would contain commercial and/or community facility uses in the building podium. At the northern edge of Projected Development Site 2, the building would be developed up to the lot line up to a height of 19 feet along the building's entire northern façade.

Above the building's 46-foot-tall podium, four residential towers would be developed up to a height of 175 feet, with penthouse portions above a height of 135 feet (as permitted by ZR 62-341) plus a 30-foot mechanical bulkhead that would be set back from each tower's outer edge. Each tower would be sited to allow for at least 60 feet between legally required windows on the same zoning lot, the minimum required distance. To accommodate the permissible FAR within the No-Action zoning envelope, tower floor plates would be inefficient and provide little building articulation.

In addition to the 20-foot-wide shore public walkway along Flushing Creek, an upland connection would be provided to a depth of 25 feet along the southern lot boundary to Projected Development Site 1, along the prolongation of 39th Avenue. This upland connection would also serve as a private driveway and a visual corridor.

Vehicular access would be provided along the access driveway from Janet Place that would run along Projected Development Site 2's boundary with Projected Development Site 1. This 25-feet-wide

access driveway and required upland connection would be sited adjacent to the 25-feet-wide required visual corridor and upland connection on Projected Development Site 1; together, these two adjacent upland connections would provide a 50-feet-wide visual corridor along the 39th Avenue prolongation. This visual corridor would contain vehicular circulation areas and 13-feet-wide pedestrian paths either side of the driveway as part of the required of the upland connection.

Projected Development Site 3

Projected Development Site 3 would be developed with 837,600 (4.8 FAR). The site would be developed with two mixed use buildings separated by a 50-feet-wide view corridor along the prolongation of 37th Avenue that would function primarily as a private driveway. Both the southern and northern building would have a six-story podium with active commercial uses and a street wall height of 60 feet.

In the southern building, three residential towers and three hotel towers would be developed above the building podium. Two residential towers would be set back from the podium along the 39th Avenue. The third residential tower would be sited near the shore public walkway near the southwest corner of the site. The three hotel towers would be sited near the College Point Boulevard frontage, with two hotel towers set back 10 feet from College Point Boulevard. The third tower would be set back approximately 110 feet from College Point Boulevard and set back 30 feet from the southern lot line. All towers would have 19 stories and rise to a height of 175 feet plus a 30-foot bulkhead.

The northern building would be sited in the northwestern part of the site, north of the 37th Avenue prolongation. The building would be triangularly-shaped and rise to a base height of 60 feet before a minimum 15-foot set back from the 37th Avenue view corridor. The building would rise to a height of 175 feet plus a 30-foot bulkhead.

A required upland connection would be provided between College Point Boulevard and the shore public walkway along a driveway on the prolongation of 37th Avenue, which would also serve as a visual corridor. A 20-foot-wide shore public walkway would be developed along Flushing Creek. The view corridor along 37th Avenue would contain a private driveway and 13-feet-wide pedestrian walkways required for the upland connection. Vehicular access would occur along this driveway, which would be accessed from College Point Boulevard at 37th Avenue.

Projected Development Site 4

Projected Development Site 4 would be developed to the maximum 2.0 FAR permitted by the underlying M3-1 zoning district. The building would include a self-storage facility and would rise to a height of 96 feet plus a 30-foot bulkhead. The building would have a podium height of 60 feet before a setback of 15 feet. The building would then rise two stories to a height of 84 feet before another setback at the top floor.

Open accessory parking would be provided at the ground level, including some parking underneath the building. All vehicular access and egress would occur from and to College Point Boulevard.

Because Projected Development Site 4 is wholly outside of the WAP, no shore public walkway would be required to be developed along Flushing Creek, and would not be developed (underlying waterfront zoning does not require shore public walkways for Use Group 16 developments).

Potential Development Sites

Under the No-Action RWCDS, Potential Development Site A would be developed as a commercial building containing retail, office, and hotel uses. The No-Action development on Potential Development Site A would have frontage along College Point Boulevard and 39th Avenue. The commercial building would be permitted to cover 100 percent of the lot area at the ground floor. The building would be 150 feet (or 180 feet including a bulkhead), with penthouse portions above a height of 135 feet. The ground floor would have a floor-to-floor height of 15 feet. The second through eighth floors would be set back 10 feet from both College Point Boulevard and 39th Avenue and have a street wall of 85 feet along College Point Boulevard and 55 feet along 39th Avenue. The top floor would be set back an additional 7 feet from both College Point Boulevard and 39th Avenue.

Because 39th Avenue slopes down from College Point Boulevard towards the west, the building would be one story at College Point. The building would be two stories at the building's western façade at the lot line. In addition to access from College Point Boulevard, pedestrian access would also be available from 39th Avenue. All vehicular access would occur from 39th Avenue to the cellar of the building.

On Potential Development Site B, no new development would occur and the existing four-story, 65-foot-tall U-Haul building with visually prominent clock tower and cupola would remain as urban design existing conditions.

Visual Resources

The U-Haul building is the sole historic visual resource within the Project Area. In the No-Action Condition, the U-Haul building on Potential Site B would remain as existing conditions. Typical of new development in urban areas, development within the Project Area would have the potential to obstruct some long-distance views of the building due to the introduction of new buildings on nearby sites, however, views would continue to be available from publicly-accessible locations. Views would be available from the shore public walkway and sidewalks along College Point Boulevard and 36th Road in discrete areas.

Absent the Proposed Actions, the Flushing Creek shoreline would be stabilized to accommodate the 20-foot-wide shore public walkway along the Flushing Creek frontage of Projected Sites 1-3. Pursuant to the WAP provisions, view corridors and upland connections between College Point Boulevard and the Flushing Creek waterfront would be developed.

Long distance views of Flushing Creek would be altered in the No-Action Condition because new development would be introduced in the Project Area. Because the development sites are vacant and blighted, views of the creek from College Point Boulevard would be most affected by development in the No-Action Condition, where the new development would be sited between College Point Boulevard and the creek. Views from midblock locations along College Point Boulevard across the vacant sites would no longer be available with the No-Action development.

The 39th Avenue westward prolongation would be developed with a private driveway and upland connection between the shore public walkway and Janet Place (see Photograph 3 and Photograph 31). This private driveway upland connection would provide a new view corridor to Flushing Creek.

A long distance view of Flushing Creek would also be introduced along the 37th Avenue westward prolongation and across Projected Development Site 3 (see Photograph 19). Like the visual corridor that would be introduced along the 39th Avenue prolongation, the 37th Avenue view corridor would serve as a private driveway and an upland connection to the shore public walkway.

At Projected Development Site 1, the bend in Roosevelt Avenue at the eastern approach to the Roosevelt Avenue Bridge over Flushing Creek allow for views of Citi Field across Flushing Creek (see Photograph 32). In the No-Action Condition, development would wrap around this bend in Roosevelt Avenue and impede this view across Flushing Creek towards Citi Field.

Views in the No-Action Condition along 39th Avenue, 37th Avenue, and Roosevelt Avenue are compared in the With-Action Condition assessment.

Study Area

Absent the Proposed Actions, there would be no modifications to the existing open spaces in the Study Area. The NYC Department of Transportation is rehabilitating the Roosevelt Avenue Bridge over the Van Wyck Expressway. The scope of the capital improvements include replacement of the bridge deck and stringers, as well as restoration of abutments and piers. The sidewalks for pedestrians and bicyclists are being widened from 7.9 feet to 10 feet. The bridge will also be painted and new fencing will be installed. The capital improvements are expected to be completed by the end of 2019.[46]

In the No-Action Condition, view corridors would be developed in the Project Area along the prolongations of 37th Avenue and 39th Avenue that would allow for new views of Flushing Creek from within the Study Area.

The nineteen known or anticipated "No-Build" developments described in Attachment B, "Land Use, Zoning, and Public Policy" that are expected to be fully operational by the 2025 analysis year will introduce new buildings in to the Study Area. These No-Build developments in the Study Area will generally be high lot coverage buildings built up to or close to the street with active ground flood uses and building heights that exceed 150 feet and maximize (or nearly maximize) the permissible FAR. Some examples of such No-Build projects include Tangram, Flushing Point Plaza, 36-18 Main Street, One Flushing, and The Farrington.

- The Tangram development is across College Point Boulevard from Projected Development 3, and will comprise four buildings including two 13-story, 171-foot buildings and an underground parking garage (see Photograph 2 and Photograph 9). One of these 13-story buildings, 133-27 39th Avenue, will be a residential building set back approximately 15 feet from 39th Avenue, while the other 13-story building on this zoning lot would be a mixed use building. The final Tangram building at 37-12 Prince Street will be a 14-story commercial

[46] https://flushingchamber.nyc/wp-content/uploads/2017/04/Roosevelt-Avenue-Bridge-Spring-2017-Newsletter.pdf

and community facility building (retail at the ground floor, community facility space at the second floor, and office space above) along Prince Street. The Tangram will be a high lot coverage mixed use development with three buildings taller than 150 feet, and will have an FAR of up to 4.8. The Tangram will have an access driveway from College Point Boulevard that will be developed midblock between 37th Avenue and 39th Avenue. The Tangram is outside the waterfront area and the area governed by the Downtown Flushing WAP; the building façades facing Flushing Creek will be wider than 100 feet. The development will have curb cuts for vehicular access and egress along College Point Boulevard, 39th Avenue, and 37th Avenue.

- Flushing Point Plaza, across 40th Road from Sky View Parc at 131-02 40th Road in the southern portion of the Study Area, will be a 4.8 FAR mixed use development comprising three attached buildings up to 17 stories in height. The eastern-most tower will be a 16-story hotel that will have a maximum height (including bulkhead) of 163 feet. The northern residential building would have 19 stories (17 residential floors above two parking levels) and a maximum building height up to 212 feet, while the southern residential tower will have 17 stories (15 levels of residential over two stories of parking) and have a building height of 170 feet (including bulkhead). Flushing Point Plaza is outside the area governed by the Downtown Flushing WAP and not subject to the provisions of the WAP.

- 36-18 Main Street, located in the northeast portion of the Study Area between Main Street and Prince Street, will be a 190-foot 12-story hotel, medical, and retail complex. The 4.8 FAR building will be built to both the Main Street and Prince Street frontages.

- One Flushing, located in the east of the Study Area and immediately south of the LIRR right-of-way at 133-45 41st Avenue, will be a 4.9 FAR nine-story mixed use development with accessory parking, commercial, and community facility spaces at the lowest two floors and cellar. The building would be set back from the street between five and nine feet, and the building would rise without a setback to its roof height of 91 feet, and maximum height (including bulkhead) of 101 feet.

- The Farrington, located in the northeast of the Study Area at 134-37 35th Avenue, will be a 15-story, 154-foot tall mixed use development with an FAR of 4.8. This building will be built to the street line and have a variety of setbacks that will provide building articulation.

- 134-03 35th Avenue, located in the northeast of the Study Area adjacent to The Farrington, will be a 16-story, 162-foot mixed use building with hotel uses up to the fifth floor fronting 35th Avenue, and residential uses above.

WITH-ACTION CONDITION

Project Area

In the With-Action Condition, the Special Flushing Waterfront District would be established and form Subdistricts A, B and C. Subdistrict C would include Sky View Parc, and no changes in the urban design conditions of this site are anticipated as a result of the Proposed Actions.

The Proposed Actions will modify underlying bulk requirements of the development sites and allow for a new private road network, improved pedestrian circulation, and a public realm that is activated by non-residential ground floor uses. Bulk requirements will be modified to increase the permissible building heights. This additional height will allow for improved ground-level circulation throughout the Project Area via the proposed private street network. Moreover, articulation requirements, private streets, street wall locations, sheer tower locations, and plaza allowances break down the permissible envelope to a pedestrian-friendly scale. For street walls facing streets (excluding the shore public walkway), a minimum of 15 percent of the surface area of each wall would require a recess of project a minimum of two feet from the street wall line; to ensure a variety of articulation and visual interest, no individual recess or projection would be able to exceed 50 percent of the street wall width. These modifications to the bulk requirements and the establishment of the private road network would result in substantial urban design improvement over the No-Action Condition. The With-Action site plan provided in Figure A-12 show the proposed buildings and private street network.

Streets

In the With-Action Condition, the private street network shown in Map 2 of the proposed Special Flushing Waterfront District zoning text would be created to tie into the existing street network:

- Janet Place would be extended northerly to terminate at the U-Haul site;
- 37th Avenue would extend across College Point Blvd. and intersect with the extension of Janet Place;
- 39th Avenue would extend westward from between Janet Place and College Point Blvd., towards Flushing Creek;
- 38th Avenue would be a newly established private street extending from College Point Blvd. to Flushing Creek. The centerline of 38th Avenue would be split 30 feet between property lines to provide an overall 60 feet wide street dimension; and
- Transverse Road would be a newly established private street extending north easterly from Roosevelt Avenue to intersect at 38th Avenue.

The portion of Transverse Road between 38th Avenue and 39th Avenue would be developed as a shared street on Projected Development Site 2. Private driveways along the upland connections between Transverse Road and the shore public walkway on Projected Development Sites 1, 2, and 3 would function as shared driveways and allow for pedestrian movements between the shore public walkway and the private street network.

The proposed private street network shown in Map 2 of the proposed zoning text would allow the sites in Subdistrict B (Projected Development Sites 1-3) to be split into two development pads, breaking potentially massive structures that would create long street walls. The private street network would provide more pedestrian friendly development and extend the vibrant pedestrian realm of Downtown Flushing.

The With-Action street network circulation pattern has been designed to integrate into the surrounding street network and would result in several new intersections along Roosevelt Avenue and College Point Boulevard. Vehicular movements along Transverse Road would only be permitted northbound. Janet Place would permit two-way traffic between 39th Avenue and Roosevelt Avenue. 39th Avenue would permit both eastbound and westbound vehicular movements within the Project Area. Except for locations west of Transverse Road where two-way traffic would be permitted, only eastbound traffic would be permitted along 38th Avenue in the Project Area. Only westbound movements would be permitted along 37th Avenue between College Point Boulevard and Janet Place.

At Projected Development Site 1, Roosevelt Avenue would intersect Transverse Road, and only right turns would be permitted for vehicles at this intersection. A pedestrian crosswalk would be provided along Roosevelt Avenue across Transverse Road. A pedestrian bulb-out would be provided at the northwest corner of the intersection to reduce pedestrian crossing distance and to prevent vehicular access to Transverse Road from the Sky View Parc parking garage. This crosswalk would allow pedestrians to access an existing crosswalk across Roosevelt Avenue to the west of the Sky View Parc parking garage entry and exit. At the western termination of 37th Avenue at Janet Place, a raised crosswalk would provide safer pedestrian access across the access driveway to Projected Development Site 3.

The intersection of 37th Avenue and College Point Boulevard would be redesigned compared to the No-Action and existing conditions to provide a northbound left turning lane off College Point Boulevard into 37th Avenue. A minimum 10-foot-wide striped crosswalk would also be provided across 37th Avenue on the west side of College Point Boulevard.

38th Avenue would intersect College Point Boulevard across from a vehicular access and egress point for the Tangram. Over the No-Action Condition, the With-Action Condition would introduce a new traffic signal at this intersection, and a pedestrian crosswalk across College Point Boulevard on the south side of 38th Avenue; a second crosswalk would be introduced on the west side of College Point Boulevard across 38th Avenue. The With-Action signal would increase the safety at this intersection. A crosswalk across College Point Boulevard is not proposed on the north side of 38th Avenue because the sightlines upon egress of the Tangram access driveway are not sufficient.

At the Roosevelt Avenue and Janet Place intersection, the sidewalk would be set back 10 feet into Projected Development 1 and would be rebuilt to current design standards. The existing unmarked crosswalk provided across Janet Place along the north side of Roosevelt Avenue would be striped in the With-Action Condition and improve pedestrian safety.

The intersection of Transverse Road and 39th Avenue would be controlled by an all-way stop-control, and pedestrian crosswalks would be provided across all four sides of the intersection. At the intersection of 39th Avenue and Janet Place, a traffic signal would be provided; crosswalks would be provided on all four sides of the intersection.

The intersection of 38th Avenue and Janet Place would also be an all-way stop-controlled intersection with pedestrian crossings on all four sides of the intersection. Farther west, the intersection of 38th Avenue, Transverse Road and the private driveway between Projected Development Site 2 and Projected Development Site 3 would be a T-intersection. A stop sign would be provided only on the

Transverse Road approach. Crosswalks would be provided across 38th Avenue to both the east side and west side of Transverse Road.

The intersection of Janet Place, 37th Avenue, and the access driveway to the western building on Projected Development Site 3 (3a) would be controlled by a stop sign on the driveway approach to the intersection. A crosswalk would be provided across Janet Place on the southern side of 37th Avenue and across the access driveway from the north side of 37th Avenue.

Improvements would be made to facilitate movement across College Point Boulevard. At the proposed intersection of College Point Boulevard and 38th Avenue, a new traffic signal would be installed, along with a signalized pedestrian crosswalk on the south side of 38th Avenue across College Point Boulevard. The signal would also provide a left turning lane for southbound traffic to turn into the Tangram, and a left turning lane for northbound traffic to turn into the Project Area. The modifications to the street network adjacent to the Project Area would substantially improve the flow of pedestrians and vehicles across College Point Boulevard over the No-Action Condition.

In the With-Action Condition, the private street network would be required pursuant to Map 2 of the proposed Special Flushing Waterfront District zoning text. The private street network would substantially improve pedestrian and vehicular circulation by providing new opportunities to move between the development sites. The street network would also provide for additional areas of active ground floor street frontages in the form of commercial, community facility, and residential lobby spaces, and would contribute to an active waterfront neighborhood character. Additionally, while the No-Action Condition's upland connections would function as private driveways, the connections in the With-Action Condition would function as a publicly accessible street network.

Buildings

The proposed zoning text would establish "primary" and "secondary" street frontages (see Map 3 in proposed Special Flushing Waterfront District zoning text provided in Appendix C). The designed primary street frontages would be the development sites' frontages to College Point Boulevard, Roosevelt Avenue, 39th Avenue, 38th Avenue, 37th Avenue, and Transverse Road. The secondary street frontages would include those along Janet Place and the street frontages along Sky View Parc. Along primary street frontages, at least 60 percent of the street wall length would be within eight feet of the street line and rise to at least 25 feet, the minimum required base height. Along secondary street frontages, street walls would be permitted at any distance from the street line. Recesses would be permitted along all street frontages within the project area.

The zoning text would further classify primary street frontages as "Type 1" and "Type 2". Along Type 1 primary street frontages, a minimum 10-foot setback would be required above the building base; this minimum required setback could be reduced to five feet if certain conditions are met, such as where street widening is required. Along Type 2 primary frontages, buildings would be permitted to rise without any setback above the building base and form sheer towers.

Special tower top regulations would require articulation at the tops of the towers through required setbacks, or, alternatively, when two or more towers are provided on the same development pad, a height difference of 20 feet (or two stories, whichever is less), would be required.

In the With-Action Condition, new buildings in the Project Area would be required to meet the proposed modified bulk provisions for base heights, building heights, setbacks, towers, and parking, as described in Table H-3.

Table H-3: With-Action Urban Design Requirements

Design Element	No-Action Condition	With-Action Condition
Shore Public Walkway Width	Minimum 20-foot width	Minimum 40-foot width
Base/ Street Wall Height	Maximum 60-foot height	Minimum 25 feet, maximum 105 feet along College Pt Blvd, and maximum 75 feet in other locations
Building Height*	Maximum 135-feet height, or 175-foot height including penthouse (and excluding bulkhead, assumed 185-feet with bulkhead)	Subdistrict A: Up to 200 feet Subdistrict B: Up to 245 feet
Required Setbacks	Pursuant to underlying zoning	10 feet or where modified in the special district text. (see proposed zoning text in Appendix C and Master Plan drawings in Appendix D).
Tower Footprints	Sites not less than 1.5 acres in area: 8,100 sf Sites less than 1.5 acres in area: 7,000 sf	Towers cannot exceed 250 feet in length Required tower top articulation
Width of Walls Above the Base Height Facing Waterfront	Maximum of 100-foot width	Subdistrict A: Maximum of 130-foot width within 110 feet of the pierhead line; Subdistrict B: 100 feet within 150 feet of the pierhead line

* Assumes each development site would receive the proposed ZR 127-24 CPC certification to modify maximum height

A 10-foot at-grade setback from the proposed shore public walkway would be provided on all towers. The Proposed Actions would also allow for sheer walls and for a 10-foot minimum setback above the base in the locations noted in the proposed sheer and setback controls plan (see page 11 of Appendix D). Additional controls apply where sidewalk widening is provided (see Map 3 in Appendix C).

The proposed bulk provisions would tailor urban design controls to the Project Area and allow for new buildings along College Point Boulevard to be built up to the street. The bulk provisions would provide additional design flexibility to accommodate currently permitted FAR and additional publicly-accessible circulation areas and open space. The design flexibility would accommodate the minimum required width of the shore public walkway expanded from its current minimum of 20 feet to the 40 feet city-wide standard. The Proposed Actions would also introduce street wall location and building articulation requirements that would add visual variety to the streetscape. Table H-4 provides a summary of the With-Action Condition by development site.

Table H-4: With-Action Urban Design Conditions by Development Site

Site	GSF	ZSF	FAR	Bldg Ht (ft, inc. bulkhead)	Steetwall Height*	Bldg Footprint	Lot Coverage (%)	Tower Footprint (sf)	Tower Coverage (%)
1	**958,828**	**780,363**	**4.80**	**231**	**88**			**45,191**	
1a				231	*90-209*	48,764		N: 10,313 S: 13,177	
1b				231	*40 - 209*	42,221		N: 9,128 S: 12,573	
2	**817,328**	**663,883**	**4.80**	**245**	**45-50**	76,175		**39,461**	
2a				245	*50*	16,615		N: 12,399 S: 14,215	
2b				243	*45*	59,560		12,847	
3	**971,048**	**837,359**	**4.80**	**245**	**30-200**			**40,782**	
3a				245	*50-180*	31,072		20,761	
3b				245	*30-200*	56,327		N: 7,507 S: 12,514	
4	**246,564**	**225,749**	**4.80**	**200**	**55**	27,167	50.1%	19,602	
A	**107,182**	**102,078**	**4.80**	**177**	**60**	18,945		10,415	
B	**287,000**	**272,650**	**2.15**	**200**	**75**			**13,650**	**10.8%**
Ba	110,000	104,500	0.83	65	65	27,500	21.6%	N/A	N/A
Bb	177,000	168,150	1.32	200	75	21,810	17.2%	13,650	10.8%

* Includes street wall height with permitted dormers and sheer wall towers.

The With-Action Condition setback provisions are shown on page 11 of Appendix D and the With-Action building massings are shown in Figure H-3.

Projected Development Site 1

In the With-Action Condition, Projected Development Site 1 would be bisected by a new private street (Transverse Road, which from Roosevelt Avenue would continue in a north easterly direction to the proposed new 38th Avenue) to form the western (1a) and eastern (1b) development pads. Janet Place would be widened to 60 feet. The site would be improved with a minimum 40-foot-wide shore public walkway along the Flushing Creek waterfront, and would be developed with two buildings, each with two towers (four total towers). Buildings would be sited outside of the required view corridors along the prolongation of 39th Avenue and along the prolongation of Roosevelt Avenue. The view corridor along the 39th Avenue prolongation would establish a continuous 60-foot-wide view corridor between College Point Boulevard the shore public walkway. The view corridor along Roosevelt Avenue will, like the existing condition and unlike the No-Action Condition, allow for views across Flushing Creek to Willets Point and Citi Field. Like the No-Action Condition, Projected Development Site 1 in the With-Action Condition would be developed with up to 4.8 FAR.

On the western building pad (pad 1a), a sheer tower with a height of 209 feet would be developed along the Roosevelt Avenue frontage of the site. A required 10-foot maximum tower setback would be developed along the site's Transverse Road and along 39th Avenue. At the ground level, the building would be built up to the Transverse Road and 39th Avenue frontages; the Roosevelt Avenue

frontage would be built to the street within approximately 45 feet of Transverse Road before Roosevelt Avenue curves near the Roosevelt Avenue Bridge.

On the eastern building pad (1b), the building would be set back ten feet from Janet Place to facilitate sidewalk widening along Roosevelt Ave and Janet Place. At the ground level, the building would be built up to Roosevelt Avenue, Transverse Road, and 39th Avenue. A five-foot tower setback would be developed along the Roosevelt Avenue frontage. Towers with a ten-foot setback above the building base would be developed along the Traverse Road and 39th Avenue; with the ten-foot setback from Janet Place at the ground level, the Janet Place frontage would appear to be a sheer tower, but would be set back ten feet from Janet Place like the base.

Vehicular access and egress would occur from and to building 1b solely from Janet Place. For the building that would be developed on pad 1a, all vehicular access and egress would occur from and to Transverse Road.

Over the No-Action Condition, the With-Action Condition on Projected Development Site 1 would establish a new private street (Transverse Road), which would be provided through the site between Roosevelt Avenue and the proposed prolongation of 39th Avenue. The improved street network would improve publicly-accessible circulation throughout the site, including to the shore public walkway. Articulation in the street wall would be required and would provide visual interest along the view corridors. The No-Action and With-Action conditions at Projected Development Site 1 are shown in Figure H-4 through Figure H-6.

Projected Development Site 2

In the With-Action Condition, Projected Development Site 2 would be bisected by Transverse Road with a development pad on either side, upon which buildings up to 245 feet in height would be located. At the eastern edge of the site, Janet Place would be prolonged across the eastern-most 50 feet of the site. Janet Place would be prolonged north of 39th Avenue through Projected Development Site 2 to the proposed prolongation of 37th Avenue on Projected Development Site 3. With the proposed private street network, Projected Development Site 2 would have frontage along Transverse Road, 39th Avenue, Janet Place, and 38th Avenue.

On the western development pad (2a), the building would be built to the surrounding street lines. Sheer towers would be developed along 38th Avenue and 39th Avenue frontages. Sheer towers would also be developed along Transverse Road within 70 feet of both 38th Avenue and 39th Avenue, which would be permitted through open plaza requirements. A 10-foot setback above the base would be provided on the Transverse Road frontage beyond 70 feet of both 38th Avenue and 39th Avenue. The tower would be set back 10 feet at grade, rising as a sheer wall along the shore public walkway frontage.

The building on the eastern development pad (2b) would be set back at the intersection of 39th Avenue and the Transverse Road to allow for a new approximately 2,000 sf publicly accessible open space at the intersection. A required 10-foot maximum tower setback would be provided above the 50-foot-tall base.

Vehicular access and egress would occur on development pad 2b from and to Janet Place. For development pad 2a, vehicular access and egress would be provided near the western terminus of 39th Avenue.

Over the No-Action Condition, the additional height permitted in the With-Action Condition would allow for additional publicly-accessible circulation and open space on this site, including a minimum 40-foot wide shore public walkway, upland connections along the prolongations of 38th and 39th avenues, and an open space approximately 2,000 sf in area. No additional FAR would be permitted. The No-Action and With-Action conditions at Projected Development Site 2 are shown in Figure H-5 and Figure H-7.

Projected Development Site 3

Projected Development Site 3 would also be bisected by a private street to form west (pad 3a) and east (pad 3b) development pads.

Pad 3a would be developed with a large building with that would wrap around 38th Avenue, Janet Place, and 37th Avenue. The building's wrap around between Janet Place and 37th Avenue would be articulated with curved façade rising to a height of 237 feet.

Pad 3a would be developed with a building that has frontages on 38th Avenue, Janet Place and 37th Avenue. The tallest portion of the building would be located along Janet Place and 37th Avenue at 237 feet. This 237-foot portion would contain a curved façade that has a 10 foot setback at grade along Janet Place and rises sheer along 37th Avenue. The facades facing each street will be providing articulation that complies with the articulation regulations of the special district that help break down the overall scale of the building.

On development pad 3a, sheer towers would be developed along 37th Avenue and 38th Avenue frontages. The tower portions would be set back 10 feet above the base along the Janet Place frontage. Above the second floor, a courtyard would open to the Janet Place frontage. This open courtyard would extend westward towards Flushing Creek and would allow for visual connections to Flushing Creek and the shore public walkway to the west, and the private street network to the east.

Pad 3b would have one 237-foot-tall tower and one 239-foot-tall tower. The northern tower's top two floors would be setback from the floors below and incorporate a curved façade that would mimic the curved façade proposed on pad 3a. The northern tower would have a sheer tower along 37th Avenue; 10-foot setbacks above the base would be provided on all other frontages of pad 3b. The curves and variety of setbacks would provide visual interest to the development site's buildings.

Transverse Road's north easterly termination would occur at 38th Avenue in front of 3a. The tower on pad 3a would therefore serve as a visual termination point. At the northern terminus of Transverse Road, the tower on pad 3a would rise to a height of approximately 120 feet. Building articulation would be provided with a two-foot setback at the ground through seventh floors; floors 8 through 11 would be built up to the street. Site 3 would function as a visual terminal point.

Vehicular access and egress would occur to pad 3b from 38th Avenue, and two curb cuts along Janet Place would provide a drop off and pick up area. For pad 3a, vehicular access and egress would occur

from both 37th Avenue and 38th Avenue. The access driveway to the access and egress point on 37th Avenue would be developed along the required upland connection and would slope down to the cellar level; this change in grade would allow for pedestrians to cross above the driveway and avoid an at-grade crossing when circulating between the shore public walkway and the street network. Farther west of the elevated crossing above the access driveway at the terminus of 37th Avenue, a staircase and public elevator would be available to circulate pedestrians between the street level and the shore public walkway.

There would be no increase in permissible FAR over the No-Action Condition. The WAP currently requires a view corridor along the prolongation of 37th Avenue, and the With-Action Condition would modify this required view corridor to be oriented parallel to the northern boundary of Projected Development Site 3, thereby forming a bend in the upland connection. The No-Action and With-Action conditions at Projected Development Site 3 are shown in Figure H-7 through Figure H-9.

Projected Development Site 4

Like the No-Action Condition, a new building would be constructed in the northern portion of the site of Projected Development Site 4. Unlike the No-Action Condition, the With-Action building rises to a height of 200 feet and would incorporate a variety of setbacks. At the ground level, the building would be set back 10 feet along the northern-most 40 feet of frontage along College Point Boulevard. The southern-most 30 feet along College Point Boulevard would be open to the sky and provide a 20-foot wide upland connection and visual corridor between College Point Boulevard and the shore public walkway.

The building would have a retail, community facility, and residential lobby space at the ground floor. At the College Point Boulevard frontage between the 20-foot wide upland connection and 40 feet from the northern lot line, the building would front on College Point Boulevard for approximately 112 linear feet and rise to a street wall height of approximately 55 feet before a 10-foot setback. Above the ground floor, the building floor plates would be H-shaped with open courtyards on the south and north sides of the building. On the eastern wing of the H-shaped building, setbacks would be incorporated at the sixth (10-foot setback from the College Point Boulevard and southern façades), eighth (28-foot setback on the southern facade), eleventh (47-foot setback from the College Point Boulevard façade), and twelfth (10-foot setback from the southern façade) floors. On the western wing, setbacks would be incorporated at the seventh, twelfth, and sixteenth floors. A shore public walkway would be developed along the Flushing Creek frontage of the site and would be accessed by a 20-foot-wide Type 1 (a single pedestrian walkway) upland connection from College Point Boulevard.

Over the No-Action Condition, Projected Development Site 4 would have an additional 118,064 gsf (131,687 zsf, 2.8 FAR) and an additional 104 feet of building height. The No-Action and With-Action conditions at Projected Development Site 4 are shown in Figure H-8.

Potential Development Site A

Under the With-Action RWCDS, Potential Development Site A - could be developed with a new building that would be set back 30 feet from the northern lot line to facilitate the full 60-feet width

of 38th Avenue between College Point and Transverse Road. The street wall would also be set back 30 feet from Janet Place's centerline to facilitate a 60-foot right of way along Janet Place.

The building could have a two story, 60-foot base before a 10-foot setback from the College Point Boulevard frontage. The tower would be massed near the College Point Boulevard frontage and rise to a height of 180 feet. The tallest portions would be set back from the base at least 20 feet from the 38th Avenue and 39th Avenue frontage.

Like the No-Action Condition, the With-Action condition would have 107,182 gsf (102,078 zsf, 3.4 FAR) of floor area; there would be no increase in permissible FAR over the No-Action Condition. Over the No-Action Condition, the massing's overall building height would be 15 feet taller to accommodate street widening along 38th Avenue and Janet Place.

Potential Development Site B

At Potential Development Site B in the With-Action Condition, the U-Haul building (on pad Ba) would remain as existing conditions. The building's distinguishing architectural features -- the T-shaped plan, fenestration pattern, cupola and clock tower -- would not be modified (see Figure H-3).

A new building (on pad Bb) would be developed in the area north of the prolongation of 36th Road. The building would function as a commercial office building and would be set apart from the northern façade of the U-Haul building to allow a 50-foot-wide required visual corridor (and potentially an upland connection depending on development sequencing, see proposed ZR 127-532) along this prolongation. The new building would have a podium and tower form, with a base height of 75 feet, a maximum building height of 200 feet, and a street wall of 165 feet along College Point Boulevard. A 50-foot wide visual corridor (and potentially an upland connection) would be required along the westward prolongation of 36th Road. A shore public walkway would also be required along Potential Development Site B's frontage along Flushing Creek that would connect into the shore public walkway at Projected Development Site 3 and Projected Development Site 4.

Visual Resources

The sole architectural historic resource in the Project Area is the U-Haul building on Potential Development Site B. In the With-Action Condition, this building would remain as existing conditions and its architectural features would be preserved.

The 40- foot-wide shore public walkway that would be developed along the Flushing Creek frontage of the development sites in the With-Action Condition would provide additional opportunities for views of Flushing Creek over the No-Action's 20-foot-wide shore public walkway. The increased width of the shore public walkway would provide additional passive recreational features over the No-Action Condition -- such as benches and lawns -- that would allow for views of both Flushing Creek and the U-Haul building, including the prominent cupola and clock tower. The shore public walkway would also be accessed by upland connections on the projected development sites; a "flexible zone" would be established on portions of Projected Development Site 4 and Potential Development Site B where the location of a required upland connection would be dependent on development sequencing (refer to proposed ZR 127-532(a) in the Proposed Zoning Text provided at Appendix C). In the RWCDS established for this project, the required upland connection would be

provided along the southern edge of Projected Development Site 4 and would be a 20-foot-wide "Type 1" (a single pedestrian walkway) upland connection between the shore public walkway and College Point Boulevard.

Visual corridors would be established along the westward prolongations of 36th Road, 39th Avenue, and Roosevelt Avenue. These view corridors would improve views towards Flushing Creek and the shore public walkway.

The proposed private street network would establish view corridors generally along the prolongations of existing streets that would provide views of Flushing Creek and views towards the U-Haul building (see Figure H-4 through Figure H-9). Views are available along Roosevelt Avenue, 36th Avenue, 37th Avenue, and 39th Avenue towards Flushing Creek, but views of the creek are limited due to intervening vegetation, existing structures, or topography. Figure H-4 shows that over the No-Action Condition, the With-Action Condition would improve the view along Roosevelt Avenue from near College Point Boulevard; where the No-Action Condition would impede views toward Flushing Creek and Citi Field, the With-Action Condition would provide an unimpeded westward view where Roosevelt Avenue bends on its approach to the Roosevelt Avenue Bridge.

Along Janet Place, views would be improved north towards the U-Haul building. Figure H-5 shows that in the No-Action, views to the U-Haul building would not be available along Janet Place, whereas the With-Action private street network would allow for long distance views of the U-Haul building.

From the intersection of College Point Boulevard and 39th Avenue, Figure H-6 shows views of Flushing Creek are obstructed by signage and vegetation. In the No-Action Condition, the 39th Avenue view corridor would allow for views of the shore public walkway and Flushing Creek. These views would be retained in the With-Action Condition, and would be enhanced by higher quality architectural design of the buildings along the view corridor.

Along the prolongation of 37th Avenue shown in Figure H-7, the With-Action Condition would modify the orientation of the view corridor to follow the northern boundary of Projected Development Site 3. In lieu of a straight view corridor between College Point Boulevard and the shore public walkway, the view corridor would taper to the northwest from the intersection of 37th Avenue and Janet Place. While the With-Action Condition would modify the view corridor, the reorientation would be expressed through Projected Development Site 3's architectural design, which would include a curved tower structure designed to guide users towards the shore public walkway. When viewed from the intersection of College Point Boulevard and 37th Avenue, glimpses of open sky to the right of building 3b would draw users to the shore public walkway. The Janet Place extension would also increase view of the Creek.

Some long distance views of the cupola and clock tower would be obstructed by the introduction of new buildings in the Project Area. Such obstruction of long views is typical of new development in urban areas like downtown Flushing. However, publicly accessible views from locations near the U-Haul building show the building in its original context with the defining features intact (see Figures H-7 and H-9). Such views of the building would continue to be available for the public's enjoyment. Figure H-9 also shows views of Flushing Creek along the westward prolongation of 36th Road. This view corridor would be retained in both the No-Action and With-Action conditions.

Open Space

The With-Action Condition would require the City-wide standard minimum shore public walkway width of 40 feet along the Flushing Creek shoreline at development sites, which would be double the minimum required width in the No-Action Condition, providing additional recreational opportunities. The shore public walkway would help facilitate the intent of the Special District to facilitate a continuous waterfront esplanade experience along Flushing Creek; the new shore public walkway that would be facilitated by the Proposed Actions would also further the intent to provide a continuous waterfront esplanade experience from Skyview Parc to Projected Development Site 4.

Additionally, a new 2,000 sf open space resource would be developed on Projected Development Site 2 at the northeast corner of 39th Avenue and Transverse Road. The open space would have passive recreational opportunities including paved plaza space and landscaping. The proposed publicly-accessible private street network would improve circulation through the Project Area and facilitate improved connections between Downtown Flushing and the Flushing Creek waterfront.

Study Area

Streets

In the With-Action Condition, the Proposed Actions would improve the urban design street conditions of the streets in the Study Area over the existing and No-Action conditions. Streets in the Study Area that terminate at College Point Boulevard across the Project Area, such as 39th Avenue and 37th Avenue, would be prolonged through the Project Area. The urban design conditions of local streets and streetscapes would be improved by the Proposed Actions and provide improved access to the Flushing Creek waterfront. Pedestrian access across College Point Boulevard would be modified with a new signalized pedestrian crossing at 38th Avenue. This improved access would better integrate the Project Area with Downtown Flushing and facilitate movement between areas such as Main Street and the shore public walkway. The street improvements would therefore serve the project goal of expanding Downtown Flushing to the Flushing Creek waterfront.

Buildings

It is expected that the No-Build projects in the Study Area identified in Appendix F would be completed and fully occupied by the 2025 analysis year. The tallest building in the Study Area would be Flushing Point Plaza, which would be more than 200 feet tall. Several other No-Build projects in the Study Area would also be high lot coverage buildings built up to or near the street edge and exceeding 150 feet in height. The With-Action development in the Project Area would be similar to other planning projects in the Study Area, and generally consistent with the urban design of recent and under construction buildings.

Visual Resources

The Proposed Actions would modify views and view corridors from some locations within the Study Area towards Flushing Creek and the U-Haul building. Figure H-4 through Figure H-9 provide representative examples of how the Proposed Actions would affect views within the Study Area. Overall, views of Flushing Creek would continue to be available or be improved along the view

corridors formed by the Study Area's street network. Views would be enhanced over the No-Action Condition with the introduction of high quality architectural design. The proposed private street network would provide more locations with the potential for views towards Flushing Creek, Citi Field, and the U-Haul building's prominent cupola.

Saint George's Church would continue to be two blocks from the Project Area and project-generated effects on contextual views of this visual resource would be negligible due to the distance and presence of other tall buildings between this resource and the Project Area.

Open Spaces

Like the No-Action Condition, the shore public walkway in the Project Area would terminate in the south near the existing shore public walkway at Sky View Parc; however by having a wider shore public walkway along the developments sites (and a publicly accessible shore public walkway and an upland connection on Projected Development Site 4) would improve pedestrian opportunities along the length of Flushing Creek within the Project Area. The proposed private streets would improve access to the waterfront, and would provide opportunities for additional views to Flushing Creek.

CONCLUSION

The Project Area comprises vacant and underutilized waterfront sites between Downtown Flushing and Flushing Creek. There are currently four buildings in the Project Area, two of which are on Lot 210 (not part of a development site) and one building each on Potential Development Sites A and B. The remainder of the Project Area is vacant and a blight.

In the No-Action Condition, new development would be introduced into the Project Area. The No-Action developments would have base heights up to 60 feet and building heights up to 205 feet (175 feet plus a mechanical bulkhead). The configuration of the development sites within the Project Area would facilitate street walls in excess of 400 feet in length with no requirements for street wall articulation. New buildings in the No-Action Condition would be built at or close to the street line and have high lot coverage. Additionally, street walls exceeding 400 feet in length could be achieved, which would create substandard view corridors and upland connections. Where new development would occur in the No-Action Condition, a 20-foot-wide shore public walkway would be developed along the Flushing Creek waterfront that would consistent of landscape and hardscape features. The No-Action development would eliminate views of Flushing Creek from midblock locations on College Point Boulevard.

In the With-Action Condition, the street network in Map 2 of the proposed Special Flushing Waterfront District zoning text would be constructed. 37th Avenue and 39th Avenue would be prolonged into the Project Area similar to the No-Action Condition. The westward prolongation of 37th Avenue would terminate at Janet Place, and 39th Avenue would terminate at Transverse Road. Janet Place would be prolonged north where it would terminate at its intersection with 37th Avenue. 38th Avenue would be established west of College Point Boulevard and terminate at its intersection with Transverse Road. Transverse Road would be established that would run generally parallel to the Flushing Creek waterfront and north easterly between Roosevelt Avenue and 38th Avenue. The

proposed private street network would provide additional publicly-accessible circulation space for both vehicular and pedestrian traffic within the Project Area and would form two development pads on each of the three southern-most projected development sites. The minimum required shore public walkway width would be align with City-wide standard going from 20 to 40 feet and provide additional landscape and hardscape areas with new opportunities for views to Flushing Creek over the No-Action Condition.

The With-Action Condition would introduce zoning provisions that would require base heights between 25 feet and 75 feet, and buildings with a permitted height of 245 feet above mean sea level (including bulkhead). Setback (including sheer tower) provisions would also apply in targeted locations that, along with new street wall articulation requirements, would require new buildings to provide articulation and visual interest to the streetscape and breaks down the large volume scale of the building to allow for a pedestrian friendly environment.

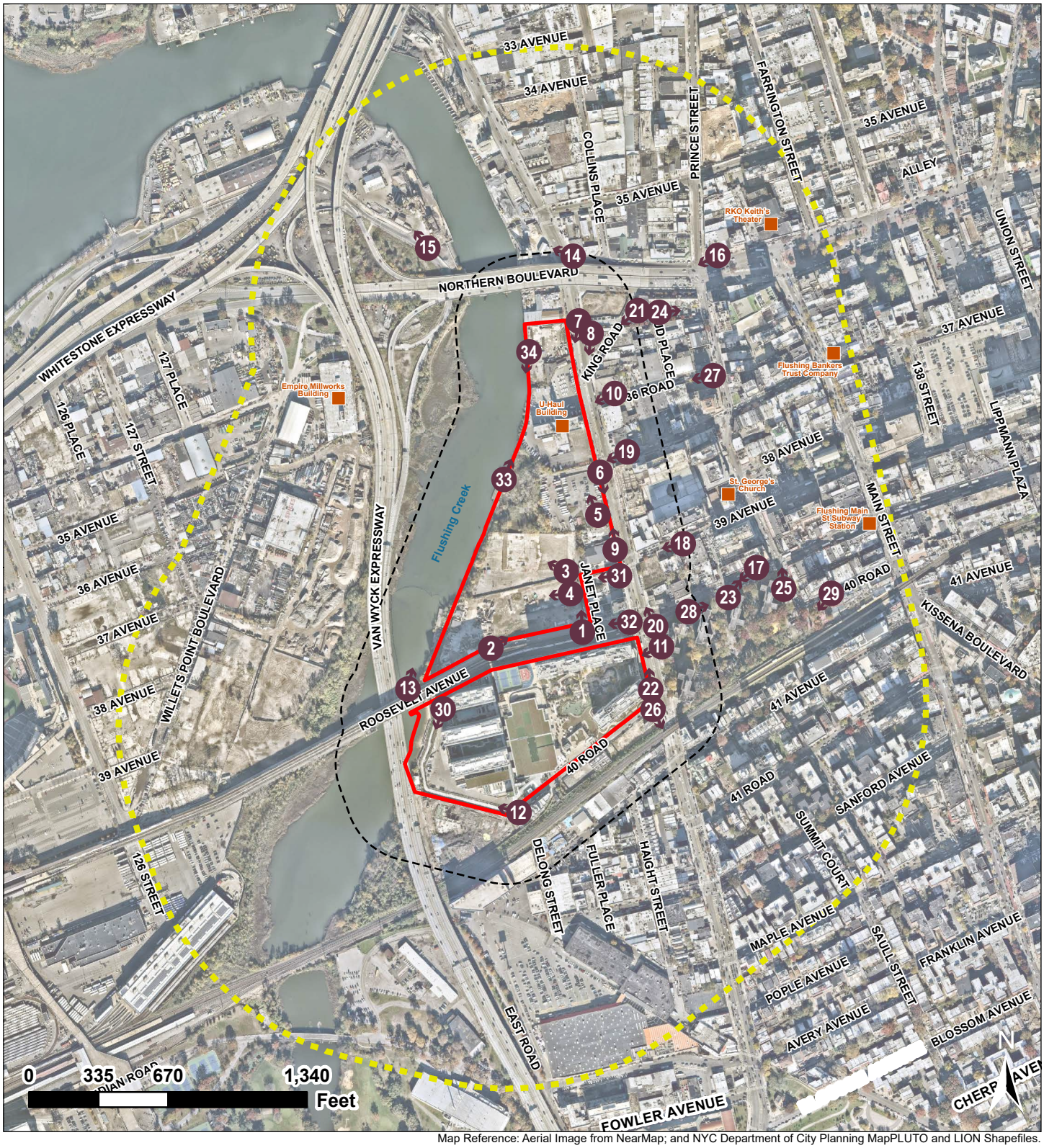
Typical of new development in urban areas, views of the U-Haul building would be impeded from some viewing locations due to infill development, but views would continue to be available for public enjoyment from publicly accessible areas along College Point Boulevard, 36th Road, and the shore public walkway. The U-Haul building would remain as existing conditions; however, a new detached building could be introduced on the portion of the U-Haul site north of the 36th Road prolongation. This building could have a base height of 75 feet and a maximum height of 200 feet. The building's defining architectural features, including its T-shape, fenestration pattern, cupola and clock tower would not be modified and would remain visually prominent. Figure H-5, Figure H-7, and Figure H-9 show that views of the U-Haul building would continue to be available from a variety of locations in the With-Action Condition. Figure H-8 shows that long distance views of the clock tower and copula could be obstructed, which is typical of new development in urban areas such as downtown Flushing.

Overall, the Proposed Actions would result in open space and circulation improvements over the existing and No-Action Conditions. Although there would be modifications to permissible building bulk to accommodate these improvements, the maximum permissible FAR at Projected Development Sites 1-3 and Potential Development Site A would not change. With the project, additional commercial and residential FAR would be developed on Projected Development Site 4 and Potential Development Site B. The incremental change between the With-Action and No-Action urban design building conditions would be minimal but the public realm – the private street network, open space, the shore public walkway, building articulation requirements, and connections across College Point Boulevard to downtown Flushing - would be significantly improved in the With-Action and result in a better urban design. Accordingly, the Proposed Actions would not result in a significant adverse urban design and visual resource impact, and no further assessment is warranted.

FIGURE H-1

SPECIAL FLUSHING WATERFRONT DISTRICT

URBAN DESIGN AND VISUAL RESOURCES MAP



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area

Study Area (Quarter-mile radius)

Photograph Location

Visual Resource

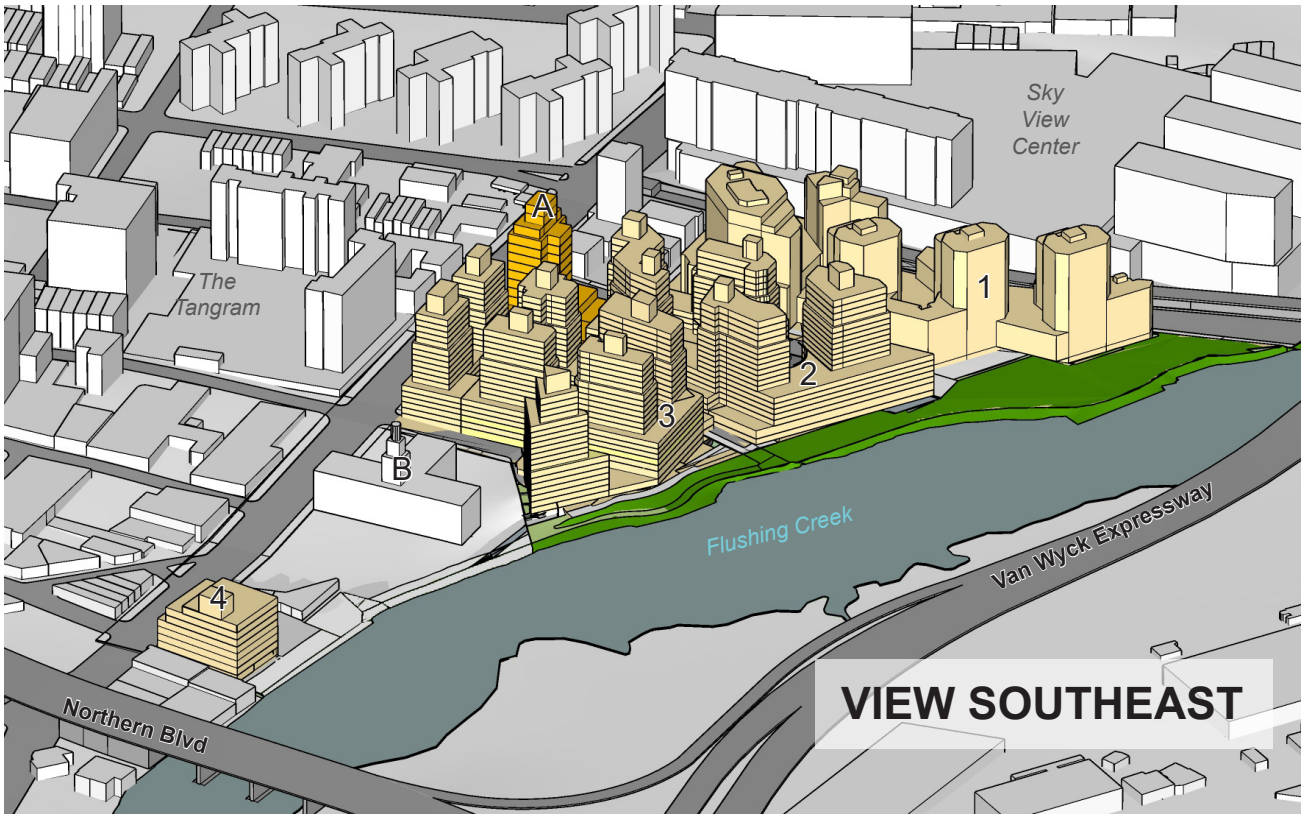
400-foot radius

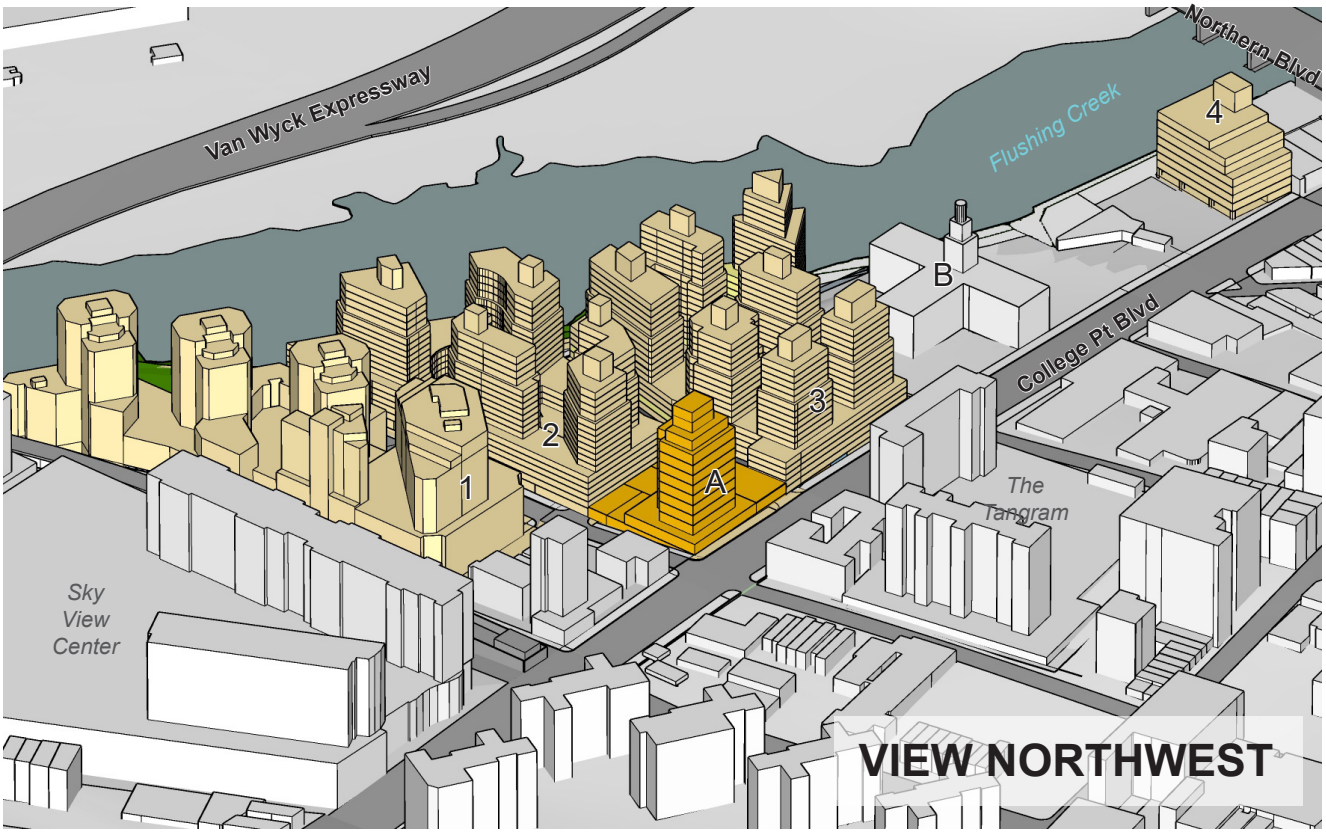
FLUSHING, QUEENS, NY

LANGAN

FIGURE H-2

NO-ACTION CONDITION MASSINGS



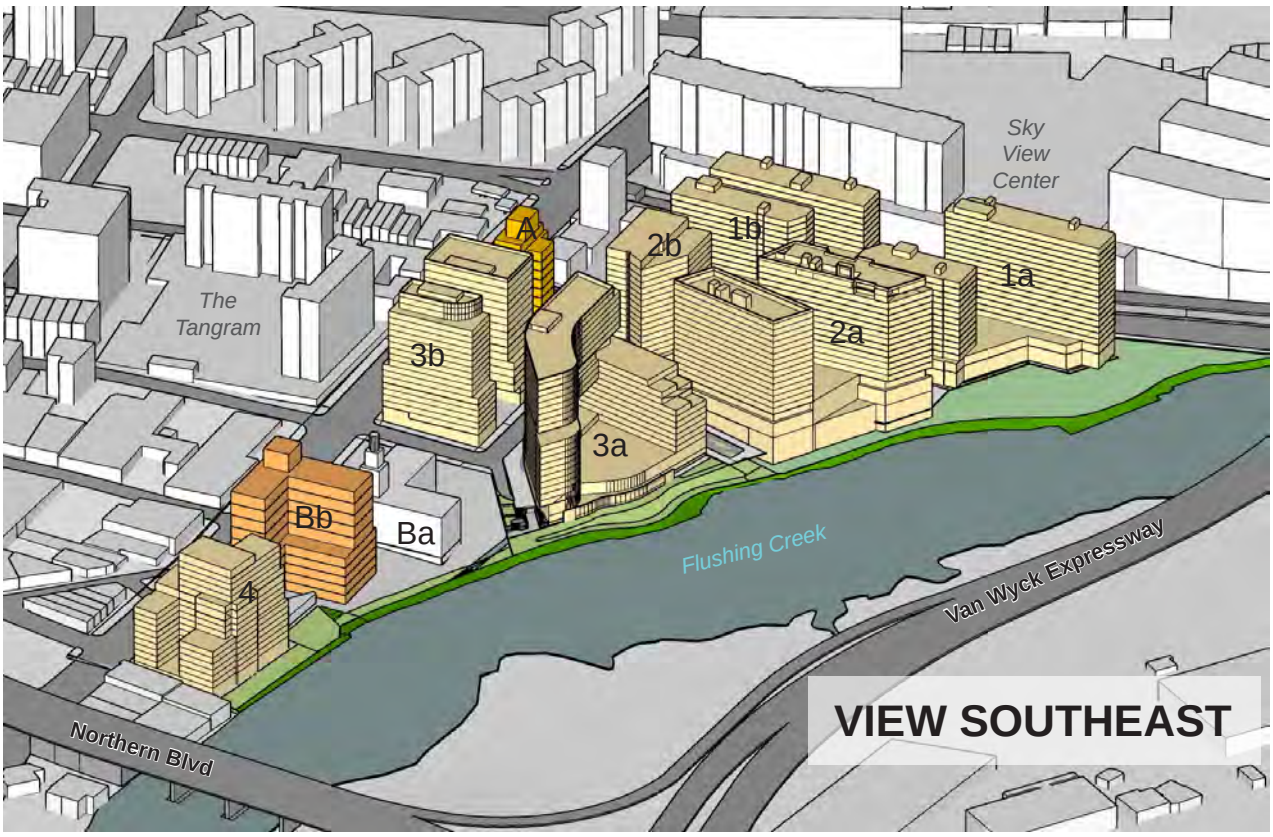


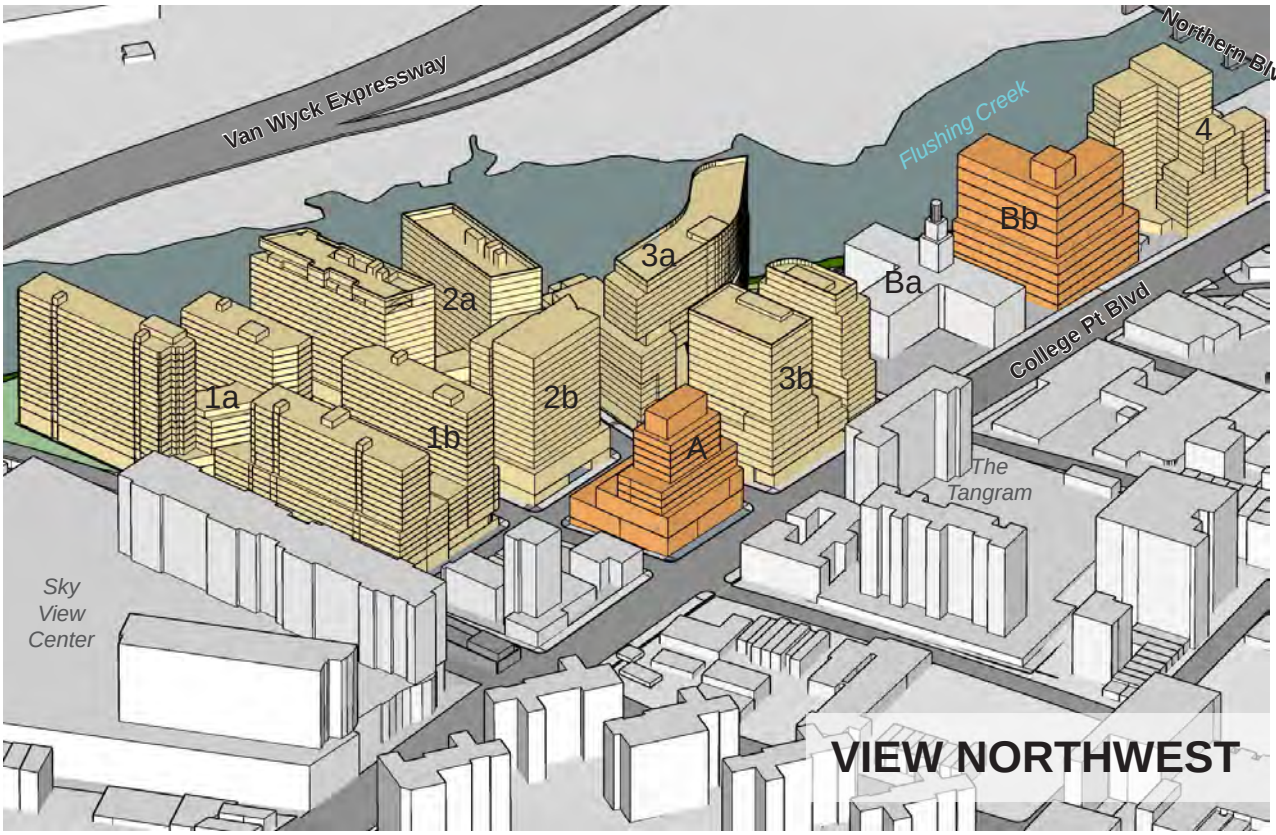
No-Action Projected Development

No-Action Potential Development

FIGURE H-3

WITH-ACTION CONDITION MASSINGS





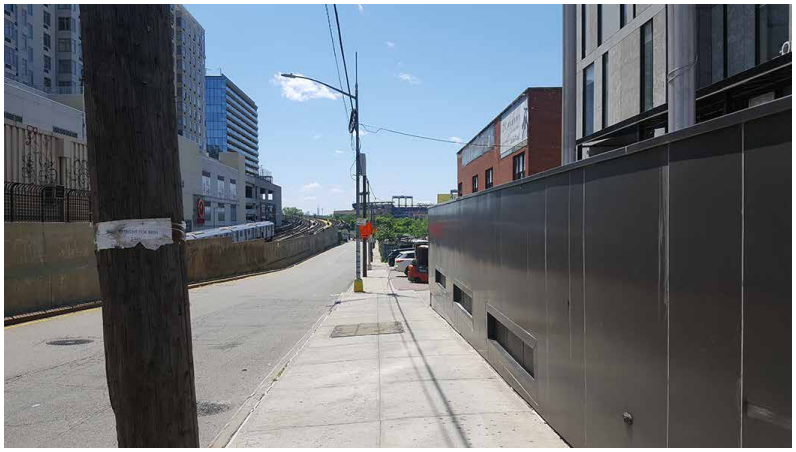
With-Action Projected Development **With-Action Potential Development**

FIGURE H-4

SPECIAL FLUSHING WATERFRONT DISTRICT

ROOSEVELT AVENUE VIEW

Existing Condition



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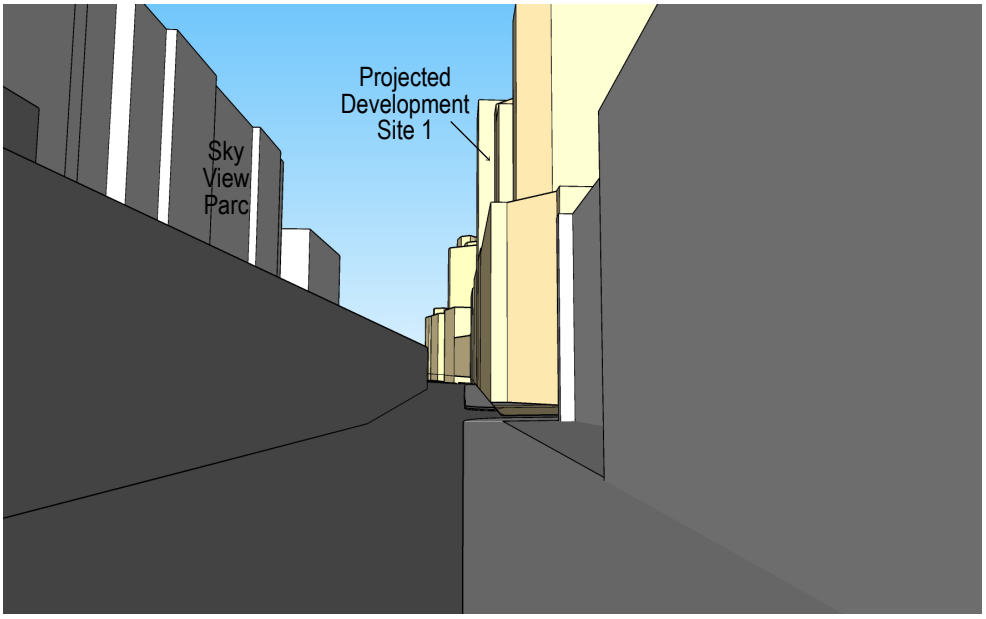
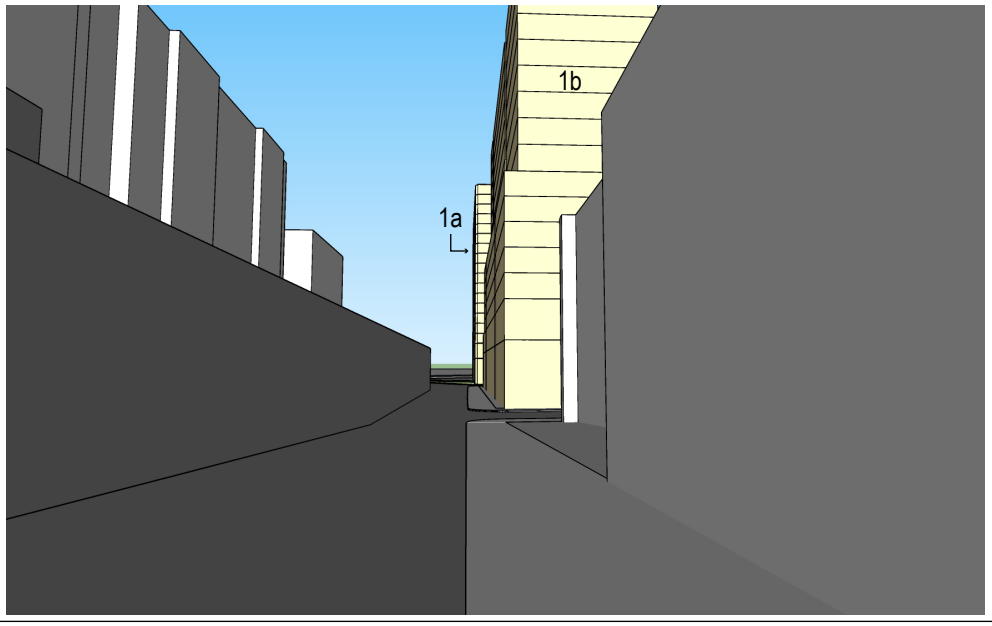


With-Action Condition



Projected Development Sites

Potential Development Sites

Existing/No-Build Developments

FLUSHING, QUEENS, NY

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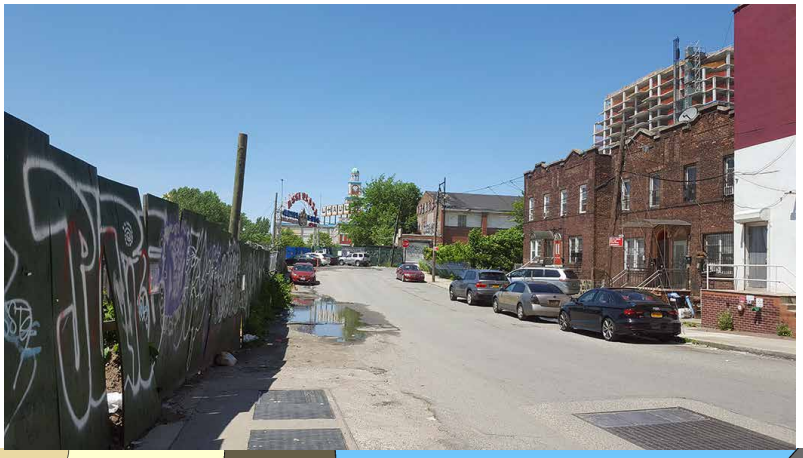
SPECIAL FLUSHING WATERFRONT DISTRICT

JANET PLACE VIEW

Existing Condition



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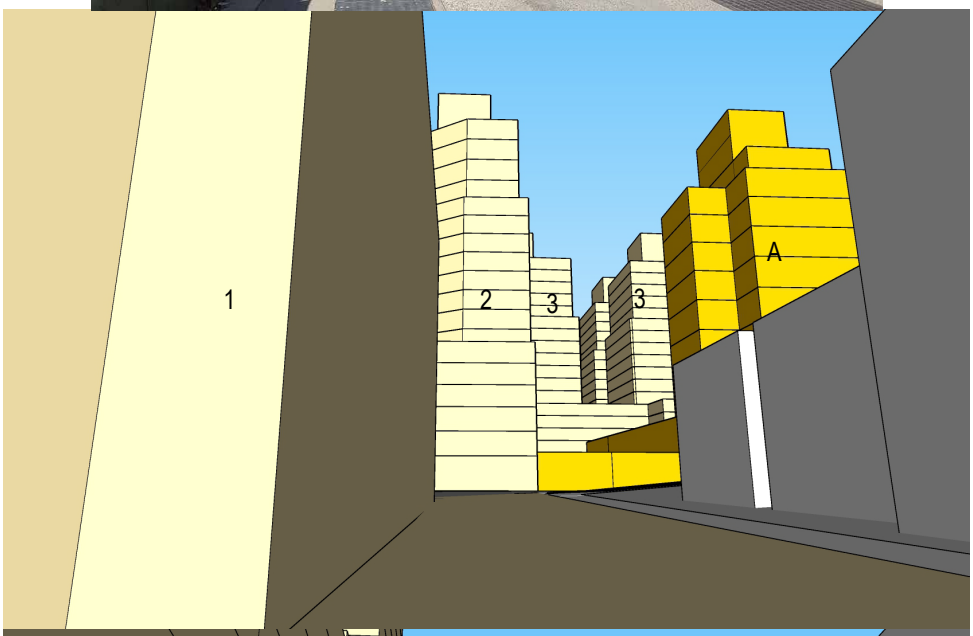
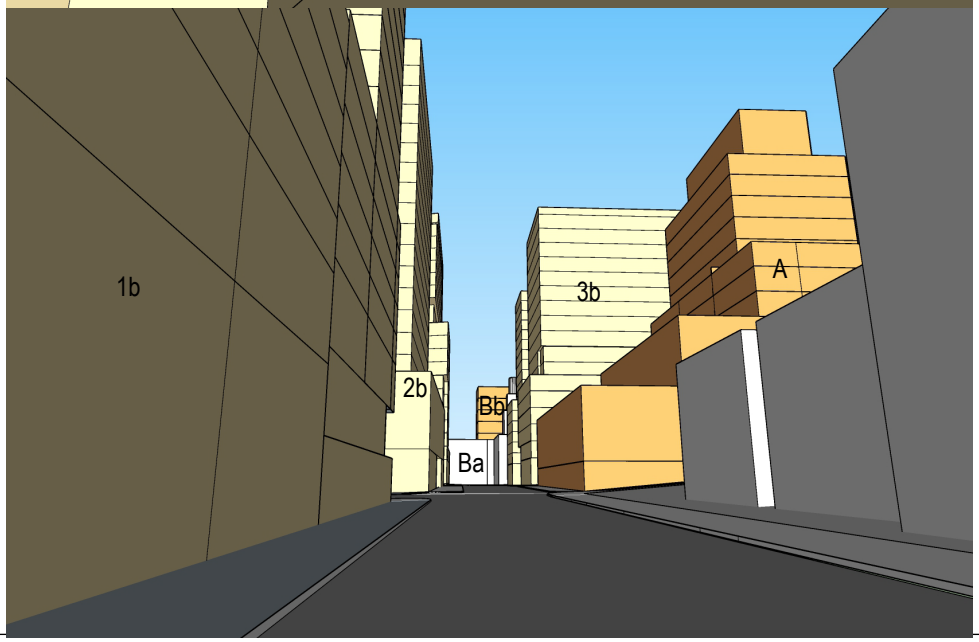


With-Action Condition



Projected Development Sites | Potential Development Sites | Existing/No-Build Developments

FLUSHING, QUEENS, NY

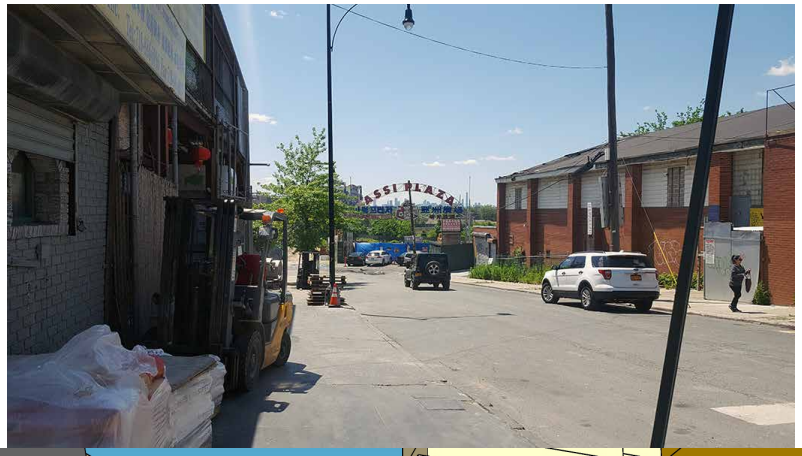
LANGAN

FIGURE H-6

SPECIAL FLUSHING WATERFRONT DISTRICT

39TH AVENUE VIEW

Existing Condition



No-Action Condition

With-Action Condition

Projected Development Sites | Potential Development Sites | Existing/No-Build Developments

FLUSHING, QUEENS, NY

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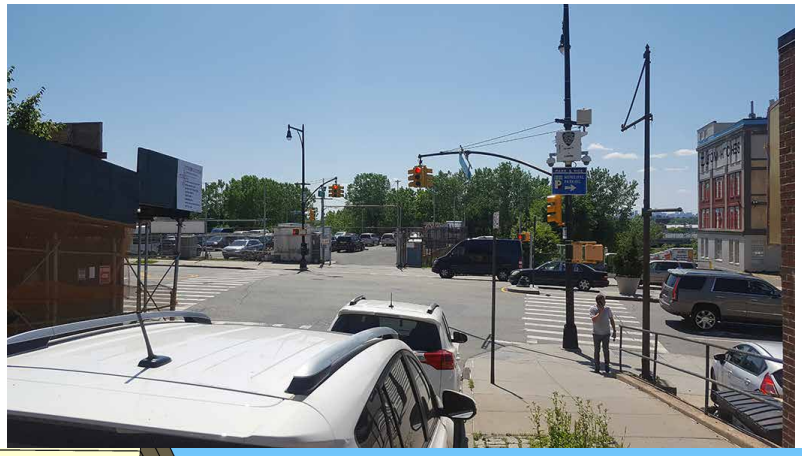
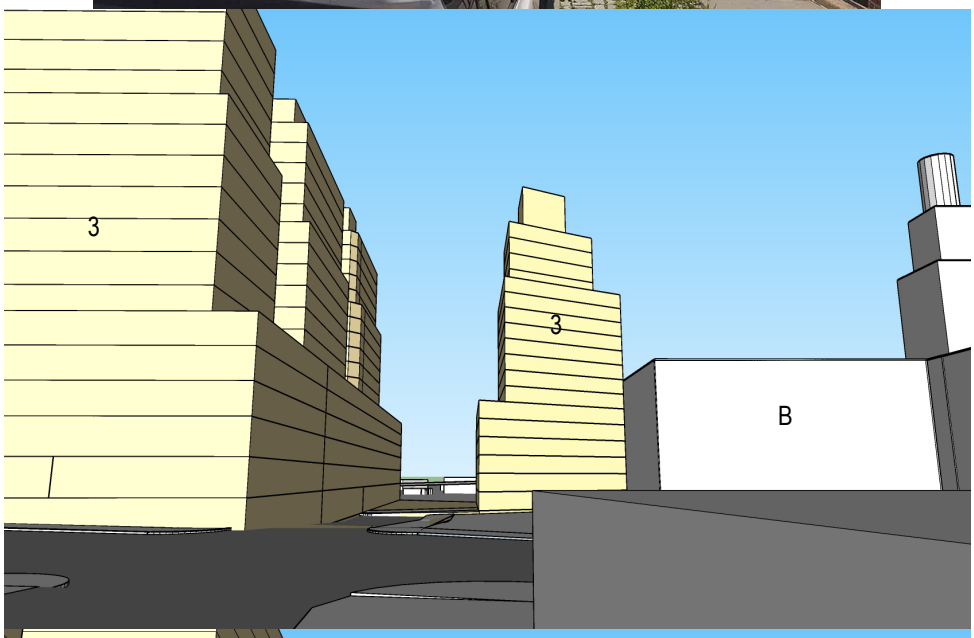
SPECIAL FLUSHING WATERFRONT DISTRICT

37TH AVENUE VIEW

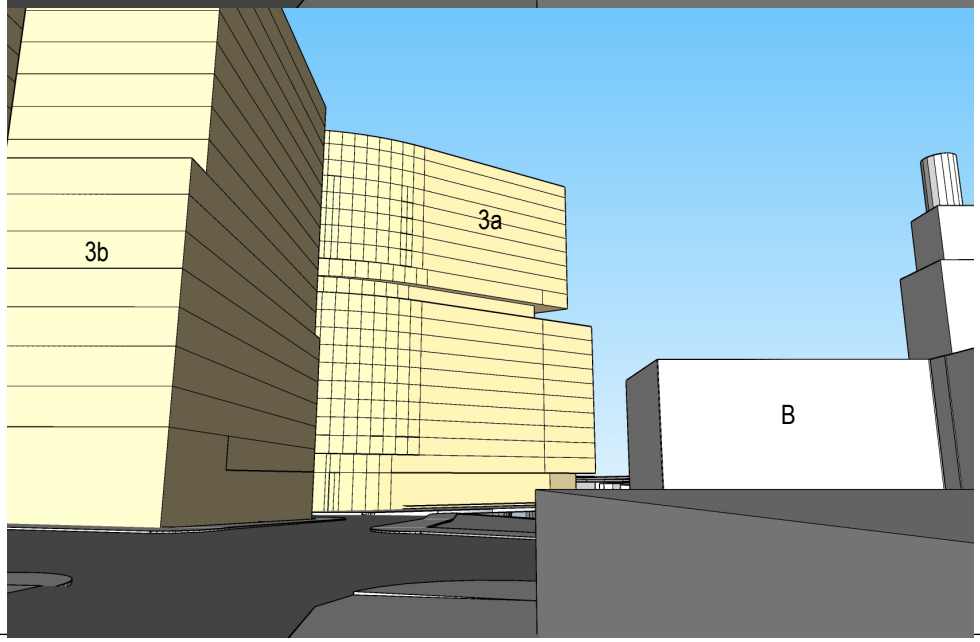
Existing Condition



No-Action Condition



With-Action Condition



Projected Development Sites | Potential Development Sites | Existing/No-Build Developments

FLUSHING, QUEENS, NY

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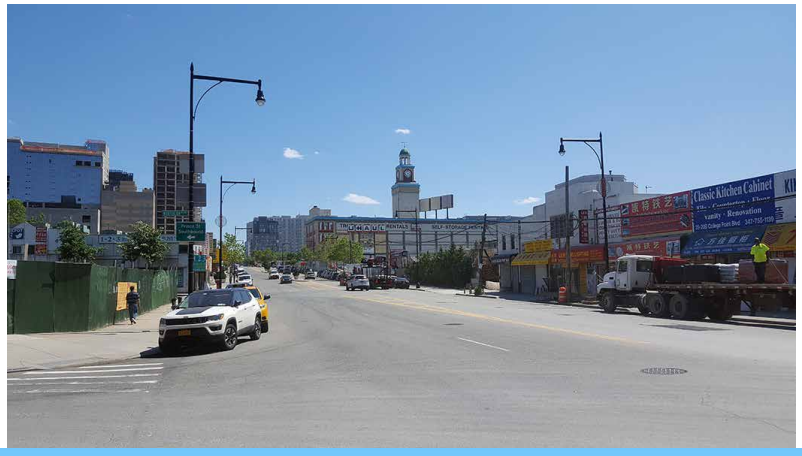
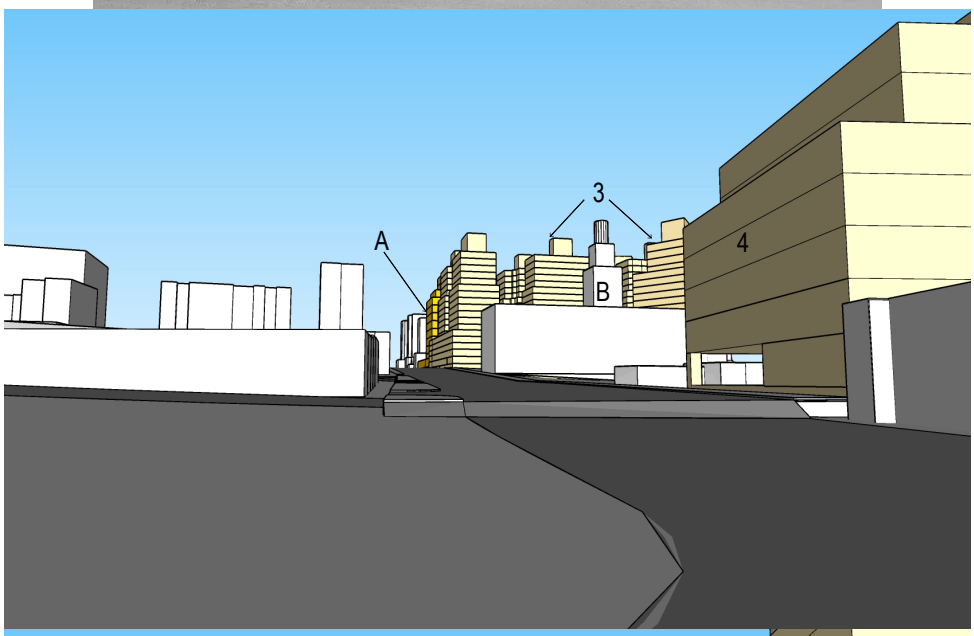
SPECIAL FLUSHING WATERFRONT DISTRICT

COLLEGE POINT BLVD VIEW

Existing Condition



No-Action Condition



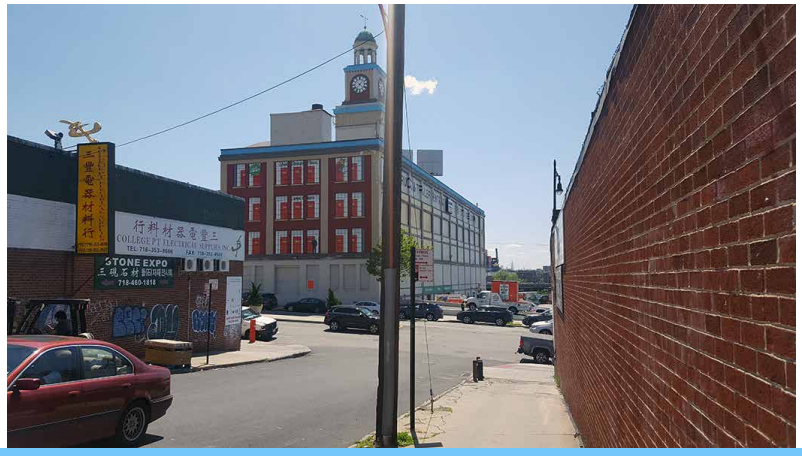
With-Action Condition

Projected Development Sites | Potential Development Sites | Existing/No-Build Developments

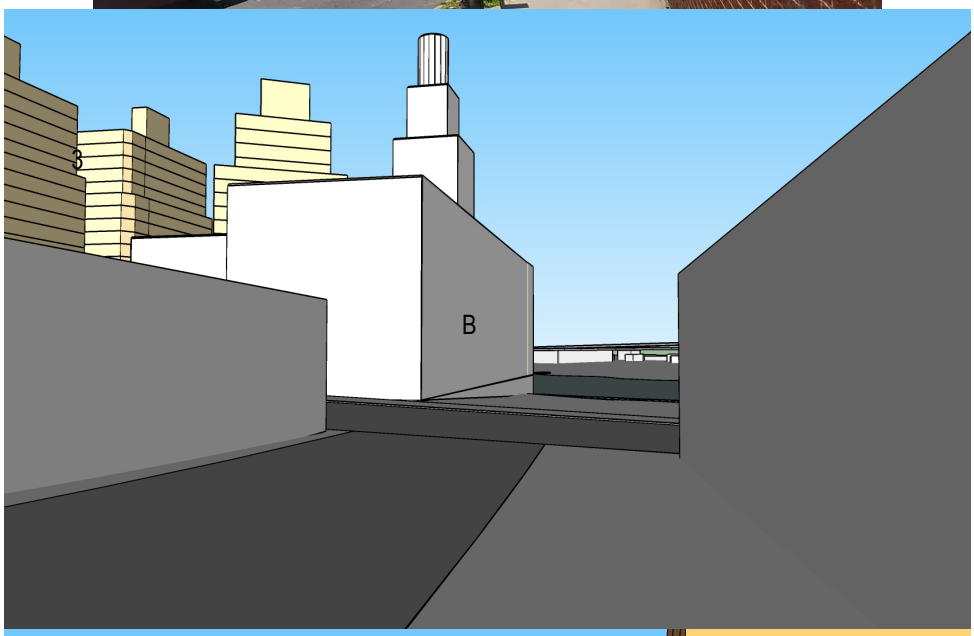
FIGURE H-9

36TH AVENUE VIEW

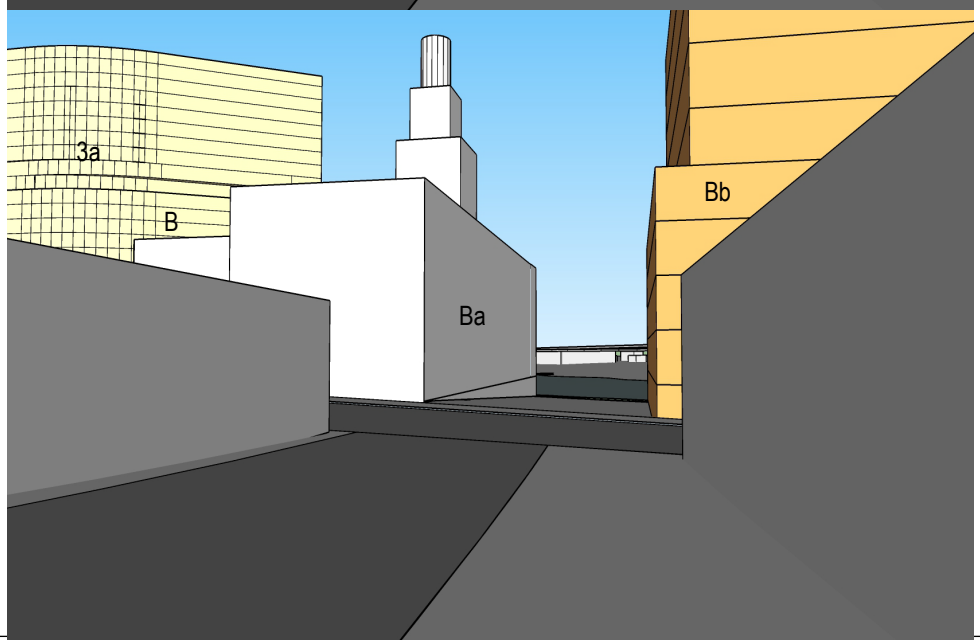
Existing Condition



No-Action Condition



With-Action Condition



Projected Development Sites | Potential Development Sites | Existing/No-Build Developments

ATTACHMENT I: NATURAL RESOURCES

INTRODUCTION

This chapter examines the potential impacts of the Proposed Actions on terrestrial and aquatic natural resources and floodplains. The *CEQR Technical Manual* defines a natural resource as "(1) the City's biodiversity (plants, wildlife and other organisms); (2) any aquatic or terrestrial areas capable of providing suitable habitat to sustain the life processes of plants, wildlife, and other organisms; and (3) any areas capable of functioning in support of the ecological systems that maintain the City's environmental stability." Such resources include groundwater, soils, and geologic features; numerous types of natural and human-created aquatic and terrestrial habitats (including wetlands, dunes, beaches, grasslands, woodlands, landscaped areas, gardens, parks, and built structures); as well as any areas used by wildlife. In accordance with the *CEQR Technical Manual*, this chapter describes:

- Regulatory programs that encompass groundwater, floodplains, wildlife, threatened or endangered species, aquatic resources and/or other natural resources within the Project Area;
- Existing groundwater, floodplains and natural resources within the Project Area, as well as water quality, aquatic and terrestrial biota, and threatened or endangered species and species of special concern;
- Conditions of the groundwater, floodplains, water quality and natural resources under the Future Without the Proposed Actions (the No-Action Condition); and
- Potential effects of the Proposed Actions on the groundwater, floodplains, water quality, and natural resources (the With-Action Condition).

A natural resources assessment may be appropriate if a natural resource is present on or near the project site and the project would directly or indirectly cause a disturbance of that resource. The Project Area is located along Flushing Creek and Bay, a natural resource as defined in Chapter 11, Section 100 of the *CEQR Technical Manual*. Further analysis is warranted since the Proposed Actions have the potential to create a significant adverse impact on natural resources.

METHODOLOGY

The natural resources analysis was conducted in accordance with *CEQR Technical Manual* guidelines and is based on the latest data and guidance provided by city agencies, including the New York City Department of Environmental Protection (NYCDEP) and the New York City Department of City Planning (DCP). Existing information was identified in literature and obtained from governmental and nongovernmental sources, such as the NYCDEP Harbor Water Quality Survey data; New York Department of Environmental Conservation (NYS DEC) Environmental Resource Mapper (ERM); NYS DEC Water Quality Classifications Data; NYS DEC New York State Regulatory Freshwater Wetlands Data; U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps; Information, Planning, and Conservation System (IPaC) list of federal threatened and endangered species for New

York, Queens, Bronx, and Kings counties; Federal Emergency Management Agency (FEMA) Revised Preliminary Flood Insurance Rate Maps (FIRMs); consultation with the National Marine Fisheries Service (NMFS) and New York Natural Heritage Program (NYNHP) for information on rare, threatened, or endangered species in the Project Area; and observations made during field visits conducted on November 14, 2018 in the Project Area.

A Brownfield Opportunity Area (BOA) Environmental Assessment Report was submitted to the New York State Department of State (DOS) in 2017 for the same Project Area. The project activities have changed; however, this application uses the same assumptions as indicated in the BOA Environmental Assessment Report (the "BOA Report").

Additionally, the Proposed Project is the result of over a decade of coordination with NYS DEC, due to a succession of prior development proposals in the Project Area. This is further discussed under the Existing Conditions "Wetlands" section of this assessment. Prior coordination can be found in Appendix I, "Natural Resources - Agency Correspondence and Related Materials."

REGULATORY CONTEXT

Federal

Clean Water Act (33 USC §§ 1251 - 1387)

The objective of the Clean Water Act, also known as the Federal Water Pollution Control Act, is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States. It regulates point sources of water pollution, such as discharges of municipal sewage, industrial wastewater, and stormwater runoff; the discharge of dredged or fill material into navigable waters and other waters; and non-point source pollution (*e.g.,* runoff from streets, construction sites, etc.) that enter water bodies from sources other than the end of a pipe. Applicants for discharges to navigable waters in New York State must obtain a Water Quality Certificate from the NYS DEC. The act also requires a Water Quality Certificate to be issued for discharge projects. In addition, any project within the coastal area that receives a federal permit must also obtain a Coastal Zone Consistency Determination.

Rivers and Harbors Act of 1899

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the U.S. Army Corps of Engineers (USACE), for the construction of any structure in or over any navigable water of the United States, the excavation from or deposition of material in these waters or any obstruction or alteration in navigable waters of the United States. The purpose of this Act is to protect navigation and navigable channels. Any structures placed in or over navigable waters, such as pilings, piers, or bridge abutments up to the mean high water line, are regulated pursuant to this Act.

Magnuson-Stevens Act (16 USC §§ 1801 TO 1883)

Section 305(b)(2)-(4) of the Magnuson-Stevens Act outlines the process for the National Marine Fisheries Service (NMFS) and the Regional Fishery Management Councils (in this case, the Mid-Atlantic Fishery Management Council) to comment on activities proposed by federal agencies

(issuing permits or funding projects) that may adversely impact areas designated as Essential Fish Habitats (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.[47] Adverse impacts on EFHs, as defined in 50 CFR 600.910(A), include any impact that reduces EFH quality and/or quantity. Adverse impacts may include:

- Direct impacts, such as physical disruption or the release of contaminants;
- Indirect impacts, such as the loss of prey or reduction in the fecundity (number of offspring produced) of a managed species; and
- Site-specific or habitat-wide impacts that may include individual, cumulative, or synergetic consequences of a federal action.

Endangered Species Act of 1973 (16 USC §§ 1531 TO 1544)

The Endangered Species Act of 1973 recognizes that endangered species of wildlife and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the nation and its people. The Act provides for the protection of critical habitats on which endangered or threatened species depend for survival. The Act also prohibits the importation, exportation, taking, possession, and other activities involving illegally taken species covered under the Act, and interstate or foreign commercial activities. Species protected under the Act have the potential to occur in the Project Area.

State

Tidal Wetlands Act (Environmental Conservation Law, Article 25)

Tidal wetlands regulations apply anywhere tidal inundation occurs on a daily, monthly, or intermittent basis. In New York State, tidal wetlands occur along the tidal waters of the Hudson River up to the salt line and along the saltwater shore, bays, inlets, canals, and estuaries of Long Island, New York City, and Westchester County. NYS DEC administers the tidal wetlands regulatory program and mapping the state's tidal wetlands. A permit is required for activities that would alter NYS DEC mapped wetlands or tidal wetland adjacent area. NYS DEC regulated wetlands are mapped along the shoreline in the vicinity of the Project Area.

Freshwater Wetlands Act (Environmental Conservation Law, Article 24)

Freshwater wetlands regulations apply to NYS DEC mapped freshwater wetlands greater than 12.4 acres. Each mapped wetland has a 100 foot adjacent buffer to protect the wetlands. Wetlands are broken down into 4 classes (I through IV). Permits are required if proposed activities conducted within the regulated wetland or adjacent area.

Water Resources Law (Environmental Conservation Law Article 1; Title 5, Protection of Waters)

NYS DEC administers the Protection of Waters Act and regulations to govern activities on surface waters (*i.e.,* rivers, streams, lakes, and ponds). The Protection of Waters Permit Program regulates

[47] (16 USC §1802(10))

five different activity categories: (i) disturbance of stream beds or banks of a protected stream or other watercourse; (ii) construction, reconstruction, or repair of dams and other impoundment structures; (iii) construction, reconstruction, or expansion of docking and mooring facilities; (iv) excavation or placement of fill in navigable waters and their adjacent and contiguous wetlands; and (v) Water Quality Certification for placing fill or other activities that result in a discharge to waters of the United States in accordance with Section 401 of the Clean Water Act.

State Pollution Discharge Elimination System (SPDES) (Environmental Conservation Law, Articles 3, 15, 17, 21, 70, 71)

The NYS DEC regulates the discharges to state waters. SPDES permits are required for the following activities: point source discharge of wastewater to surface or ground water, construction of a disposal system, discharge of stormwater, and the construction activities that disturb one acre or more.

Waterfront Revitalization of Coastal Areas and Inland Waterways Act (Environmental Conservation Law, Articles 3, 15, 17, 21, 70, 71)

The waterfront revitalization of coastal areas and inland waterways act implements the Coastal Management Program (CMP) and authorizes the state to encourage local governments to adopt local waterfront revitalization programs.

Flood Hazard Areas (Environmental Conservation Law Article 36)

Work within any federally designated flood hazard area requires a permit from the NYS DEC.

Local

New York City Waterfront Revitalization Program (NYC WRP)

The NYC WRP is the City's coastal zone management tool to make land use decision and was approved by the DOS to be included in the New York State CMP. The NYC WRP was updated in 2013 to prioritize climate resilience planning, promote ecological objectives and strategies, and allow for interagency review of permitting.

Flood Resilience Zoning Text Amendment

The Flood Resilience Zoning Amendment was adopted by the New York City Council in 2013 to encourage flood resilient building construction within designated flood zones. New existing buildings would comply with new, higher flood elevations issued by FEMA and New York City Building Code. The resiliency requirements are intended to lower flood vulnerability and potentially reduce flood insurance premiums.

EXISTING CONDITIONS

For this natural resources assessment, the Study Area is defined as the Project Area. The Project Area is bound by a westward extension of 36th Avenue to the north, College Point Boulevard to the east,

40th Road to the south, and Flushing Creek to the west (see Figure A-2 in Attachment A, "Project Description").

The Project Area is characterized by industrial/manufacturing uses, commercial uses, surface parking, and vacant land (Figure A-5). From south to north, Projected Development Sites 1 and 2 are vacant. Potential Development Site A contains a one-story, 13,440 sf commercial building (Home Construction Supply Inc). Projected Development Site 3 is a surface parking lot and temporary construction staging area. Potential Development Site B contains a surface parking lot and a four-story, 110,000 sf building that houses U-Haul Moving & Storage. The northernmost development site, Projected Development Site 4, contains a former scrap metal yard (Scrap King Flushing Inc.) that has closed.

Vegetation

Field investigations conducted during the November 2018 field visit at a portion of the Project Area[48] indicate that it is located in an urbanized area where the vegetation and wildlife are limited and the biodiversity is low. Developed areas have sporadic landscaping of foundation plantings and shade trees. Shade trees include: London planetree, sweetgum, and red oak. Along the waterfront, vegetation consists of disturbed tolerant species that are fast growing, pioneer, and invasive such as tree-of-heaven, poplar, black cherry, and black locust. Shrubs include multiflora rose and blackberry and herbaceous species include common reed, mugwort, asters, goldenrods, common mullein, mouse-eared chickweed, and plantain. There are also some locations of early successional fields with all herbaceous vegetation.

No freshwater wetlands/vegetation were mapped or found during the field site visit. Tidal wetland vegetation was not mapped within the Project Area. During field visits in November 2018 and June 2019, wetland vegetation typically associated with tidal wetlands was encountered in several areas landward of the mudflats and debris strewn shoreline of the creek. This vegetation consisted of occasional small stands of Phragmites australis (Common Reed). Several slightly more robust stands of Spartina alternaflora (Salt marsh cordgrass) were observed growing in the intertidal zone, landward of the mudflat (see "Wetlands" section below for more information).

Wildlife

Most of the Project Area is developed, limiting the type/amount of wildlife present. The Project Area landscaping does provide a small amount of supportive habitat for species; however, wildlife documented or assumed to be onsite are species that can adapt to urbanized environment with fragmented habitat, small vegetative communities, and limited resources. These species are mainly avian species such as Canada Goose, Rock Pigeon, Mourning Dove, American Robin, House Sparrow and so on.

The waterfront area can provide habitat for species due to food availability and the habitat corridor the creek provides. Species such as gulls, egrets and waterfowl can be found.

[48] Field investigators were able to access the waterfront at Projected Development Sites 1, 3, and 4. Site 2 was not able to be accessed because of a fence and due to the water being too low for kayak or boat access.

Geology and Soils

Flushing, Queens is on the western portion of Long Island, which was formed from glacial till and outwash of the Pleistocene Epoch above layers of deposits from the Cretaceous Period. Cretaceous and Pelistocene deposits of sand and gravel often provide groundwater in aquifers.

Surficial geology consists of the loose sedimentary materials that overlie bedrock, which is found near the Earth's surface. The northeastern portion of Long Island is located in the Atlantic Coastal Plain.

The Queens County Soil Survey maps several urban land soil types within the Project Area (Figure I-1). The soil types found are the following:

- Secaucus artifactual fine sandy loam, 0 to 3 percent slopes (SeA), which is a co-dominant soil type at Projected Development Site 3.
- Urban land, tidal marsh substratum, 0 to 3 percent slopes (UmA), which is a dominant soil type at Projected Development Site 1.
- Urban land, tidal marsh substratum, 3 to 8 percent slopes (UmB), is a present soil type at Projected Development Site 1.
- Urban land, outwash substratum, 0 to 3 percent slopes (UoA), which is a dominant soil type at Projected Development Site 4.
- Urban land, outwash substratum, 3 to 8 percent slopes (UoB), which is a dominant soil type at Projected Development Site 3 and Potential Development Site B.
- Urban land, outwash substratum, 8 to 15 percent slopes (UoC), which is a dominant soil type at Potential Development Site A.

Groundwater

Groundwater is water contained beneath the surface in various types of soils, fill, and rock. Groundwater systems are referred to as aquifers, which provide a number of benefits including (i) as a source of potable drinking water; (ii) a source of water re-charge for freshwater streams and rivers, sustaining the hydrology of many wetlands; (iii) to serve critical geotechnical functions related to structural load bearing capacity (lowering the water table may cause subsidence); and (iv) as a barrier to salt water intrusion.

All five boroughs contain groundwater; however, the major resources in the City lie beneath Brooklyn, Queens and Staten Island. The major aquifers in the City include the Raritan formation beneath Staten Island, southeastern Brooklyn, and the eastern half of Queens; the Lloyd and Magothy aquifers beneath southern and central Brooklyn, eastern Queens, and Staten Island; and the Jameco aquifer beneath limited areas of Brooklyn and southern Queens.

According to the USGS Queens County Soil Survey, groundwater in the vicinity of the Project Area would generally be expected to occur greater than 200 centimeters (6.6 feet) below ground surface;

however some areas within the Project Area could have groundwater as low as 51 centimeters (1.7 feet). Groundwater in Queens is not used as a source of potable water (the municipal water supply relies on upstate reservoirs).

Surface Water

The nearest open waterbody in proximity to the Project Area is Flushing Creek (Figure I-2). Flushing Creek is a one-mile-long, natural tidal waterbody adjacent to the Project Area that flows north to Flushing Bay, which discharges to the East River. Flushing Creek is a tidal creek with a mean range of tide of 6.75 feet based on data collected at the World's Fair Marina (Station ID: 8517251). Flushing Creek is constantly saltwater as the East River is a tidal strait connecting two saltwater bodies. As shown in Figure I-2, no other surface waters have been mapped on site.

Water Quality

The water quality of Flushing Creek is strongly affected by human activity and the densely populated and developed land uses that surround it. The upper portion of Flushing Creek, which includes the Project Area, is classified as Class I – Saline surface water, of which primary uses include secondary contact recreation (boating and fishing). The lower portion below the Tide Gate Bridge south of the Project Area is a Class B water for primary and secondary contact recreation and fishing. Historically, water quality problems included fecal coliform and enterococcus due to the combined sewer outfalls in the area. In addition, the water quality generally has low levels of dissolved oxygen and high levels of bio-chemical oxygen demand.

The results of Harbor Surveys conducted by NYCDEP show that the water quality of the Upper East River – Western Long Island Sound Water Quality, including Flushing Creek, has improved significantly since the 1970s due to measures undertaken by the City, including infrastructure improvements such as major improvements to wastewater treatment plants (WWTPs) and increased capture of stormwater runoff.[49] Additionally, as discussed in Attachment B, "Land Use, Zoning, and Public Policy," in February 2019 DCP launched the Flushing Creek Plan to explore opportunities to support the ecological health of Flushing Creek. The plan seeks to identify additional ways to improve water quality and the ecology of Flushing Creek to complement existing efforts to do so and reflect the change in land use of the nearby brownfield sites, including those within the Project Area. One area of opportunity identified by the Flushing Creek Plan is a federal navigation channel located in Flushing Creek and adjacent to the Project Area, which is no longer used for commercial maritime activity. The Plan suggests repurposing this section of the creek with ecological restoration work. The Flushing Creek Plan began its public outreach efforts in April 2019 and the plan is expected to be released in spring 2020.

Sediment Quality

Sediment quality is an important component of aquatic ecosystems; it can influence the quality of overlying waters and also supports the benthic community. Historically, Flushing Bay and Creek have had poor sediment quality due to nearby combined sewer overflow and historic pollution.

[49] New York City Department of Environmental Protection (NYCDEP). 2017. New York Harbor Water Quality Report for 2017. https://www1.nyc.gov/html/dep/pdf/hwqs2017.pdf (accessed May 08, 2019).

Contamination of Flushing Creek has a substantial impact on aquatic resources. Sediments in Flushing Creek generally are organic-rich and contaminants can include polychlorinated biphenyl (PCB). Contaminants have been reduced due to sediment excavation and combined sewer outfalls; however, contaminants continue to impact sediment quality.[50]

Aquatic Resources

Flushing Bay supports several aquatic species. However, due to the degraded quality of the waterway, diversity and abundance is low. According to a Draft Integrated Feasibility Report and Environmental Assessment in 2017 from the USACE, benthic communities present are species that are tolerant to organic-rich sediments and low concentrations of dissolved oxygen such as nematode and annelida oligochaete and do not typically support species found in local healthy estuaries.[51] Aquatic communities include over 100 species of finfish and invertebrate species and a variety of phytoplankton and zooplankton.

Fish

New York City, including Flushing Bay, is at the convergence of the East River and Long Island Sound. Table J-1 lists fish species that can be found in Flushing Creek.

Essential Fish Habitat (EFH)

Essential fish habitats (EFHs) are waters and substrates necessary to fish species for spawning, breeding, feeding or growing to maturity. Based on data provided from the NMFS EFH Mapper program, there are several fish species with EFHs located in proximity to the Project Area. Table J-1 lists the species and life stages of fish identified as having EFHs in the portion of Flushing Creek near the Project Area.

Table I-1: Essential Fish Habitat for Flushing Creek

Species	Eggs	Larvae	Juveniles	Adults
Black Sea Bass	X	X	X	X
Scup	X	X		
Bluefish			X	X
Atlantic Butterfish			X	X
Summer Flounder			X	X
Winter Flounder	X	X	X	X
Little Skate			X	X
Atlantic Herring			X	X
Pollock			X	X
Red Hake	X	X	X	X
Windowpane Flounder	X	X	X	X
Winter Skate			X	X

[50] U.S. Army Corps of Engineers (USACE) and Port Authority of New York and New Jersey (PANYNJ). 2017. Hudson-Raritan Estuary Ecosystem Restoration Feasibility Study. February 2017.
[51] U.S. Army Corps of Engineers (USACE). 2017. Draft Integrated Feasibility Report & Environmental Assessment.

Coastal Resources

The DOS Division of Coastal Resources delineates the State's coastal zone boundary and identifies Significant Coastal Fish and Wildlife Habitats, Scenic Areas of Statewide Significance, Federally owned lands and Native American owned lands. New York State's Coastal Area has been divided into four geographic regions: Long Island, New York City, Hudson Valley and Great Lakes. Given that the Project Area is within New York City's designated Coastal Zone, it is subject to a consistency review with the New York City Waterfront Revitalization Program (WRP) (see Chapter 2, "Land Use, Zoning and Public Policy" and Appendix G – WRP Consistency Assessment Form). The Project Area is also located within a Special Natural Waterfront Area as identified in the NYC Comprehensive Waterfront Plan. The Flushing Creek waters within the Project Area are not designated as a Significant Coastal Fish and Wildlife Habitat. According to the NYS DEC Costal Erosion Hazard Area Map for Queens, the Project Area is neither located in nor does it border the Coastal Erosion Hazard Area.

Floodplains

Floodplains occur along streams, rivers and coastal zones. Officially-designated floodplains and floodways, established and delineated by FEMA, are areas where substantial flooding may result in property damage and/or threaten public safety. A FEMA-designated floodplain is an area that would be inundated by a 100-year flood (a flood that has the probability of occurring once every 100 years); this is referred to as Zone A. Zone B is the area that would be inundated by a flood that has the probability of occurring once every 500 years.

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 designate coastal high hazard areas and floodways and make Federal flood insurance available to buildings and structures within these areas that are constructed so as to minimize danger to human lives. FEMA regulates only the 100-year floodplain for channels that have a watershed (area that drains to them) greater than one square mile. Properties located in smaller watersheds are not part of the FEMA mapping program.

The NYC WRP flood hazard policy is aimed to reduce flooding and erosion hazards to protect life, structures, infrastructure and natural resources. In addition, the policy includes adaptive measures to manage increased risks due to climate change.

The FEMA Preliminary Flood Insurance Rate Map for Queens County indicates that portions of the Project Area are located within the 100-year floodplain. The majority of the Project Area is located within the 100-year floodplain (Zone AE), and portions of the Project Area are located within the 500-year floodplain (Zone X) (See Images C-1 and C-2 in Appendix G – WRP Consistency Assessment Form).

Wetlands

The USFWS National Wetlands Inventory (NWI) mapping indicates Flushing Creek as an estuarine subtidal unconsolidated bottom subtidal (E1UBL) wetland, which abuts the Project Area (Figure I-3). According to the NYS DEC Freshwater Wetlands Mapping, there are no freshwater wetlands

located on the Project Area. NYS DEC Tidal Wetland Mapping shows that small portions of the littoral zone are located at the Project Area.

A preliminary wetland assessment was performed during a November 2018 field visit to verify the presence or absence of tidal and freshwater wetlands and adjacent areas in the Project Area. The USFWS NWI mapping, NYS DEC Freshwater Wetland mapping, NYS DEC Tidal Wetland mapping, Soil Survey Geographic Database (SSURGO) soils mapping, and aerial mapping were reviewed prior to conducting a field investigation. Another site visit was conducted in June 2019 in advance of the Joint Permit Application (JPA) submission for Projected Development Site 2.

Based on the November 2018 and June 2019 field visits, no freshwater wetlands were identified within the boundaries of the Project Area. The open waters of Flushing Creek within the Project Area are tidally influenced and are mapped by NYS DEC as Tidal Wetlands (Littoral Zone) (Figure I-4). During the field visits, wetland vegetation typically associated with tidal wetlands was encountered in several areas landward of the mudflats and debris strewn shoreline of the creek. On Projected Development Site 1, there is an existing concrete platform supported by timber piles that is generally in poor condition. No wetland vegetation was observed growing at this site. Projected Development Site 2 is developed up to mean high water (MHW) with a bulkhead and tidal wetland vegetation, including Spartina alternaflora (Salt marsh cordgrass) and Phragmites australis (Common reed). This vegetation was found growing in scattered patches waterward of the site's bulkheaded waterfront, and landward of the narrow, debris-strewn mudflat. Approximately five to ten percent of the intertidal zone was occupied by this vegetation.

On Projected Development Site 3, wetland vegetation was observed on the southern end of the site. Strands of Spartina alternaflora were found occurring in the upper limits of the intertidal zone, and strands of Phragmites australis were generally found along the extreme upper limit of the intertidal zone, at approximately the MHW elevation. Approximately ten percent of the intertidal zone was comprised of this vegetation. No wetland vegetation was observed on Projected Development Site 4. There is a low-level concrete platform that is present along the majority of this site's waterfront, leaving little to no area for wetland or upland vegetation to grow.

Along the unvegetated sections of the waterfront, such as along the existing dilapidated bulkheads, the mean high water elevation represents the landward extent of the Tidal Wetland - Littoral Zone. In those areas where wetland vegetation is growing, the wetland boundary would be either the landward extent of the wetland vegetation as delineated in the field or the mean high water elevation, whichever is higher.

NYS DEC has jurisdiction over construction and dredge and fill activity in tidal wetlands and Tidal Wetland Adjacent Areas, which may extend landward of the tidal wetlands boundary. USACE has Jurisdiction of Waters of the United States, including navigable waters such as Flushing Creek. Due to the site location, prior authorization from USACE for work within the water and the adjacent area is required. As part of the Proposed Project, a Joint Permit Application will be submitted for all Projected Development Sites and approved by NYS DEC and USACE prior to construction. The Proposed Project will comply with all conditions of the Joint Permit Application and any applicable rules and regulations along the waterfront.

Rare, Threatened, and Endangered Species

Federally Listed Species

The Endangered Species Act of 1973 attempts to protect certain plants, animals, and habitat from extinction. Determining the presence/absence of these species on a site relies upon correspondence agencies to obtain NOAA National Marine Fisheries Service (NMFS) records, New York State Natural Heritage Program (NHP) records, USFWS Information Planning and Consultation System (IPaC).

The NYS NHP and IPaC records were obtained on March 11, 2016 as part of the BOA Report preparation. The IPaC report indicated there are potentially four species in the Project Area. Three threated species: piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufus*), and seabeach amaranth (*Amaranthus pumilus*) and one endangered species, roseate tern (*Sterna dougallii dougallii*).

These species typically require beach habitat on flat land. Based on visits to Development Sites 1, 3, B, and 4, the existing site conditions consist of bulkheads, debris, rubble and steep slopes to the bank, which are unsuitable habitats for the species listed above. Access was not granted to inspect Projected Development Site 2. Upon review of aerial photographs and viewing Projected Development Site 2 from across the creek, it is unlikely that suitable habitat is present on that site.

Because the site conditions have not changed from when the records were obtained in March 2016 for the BOA Report, no additional records are needed. However, due to increased water quality from better sewer management, an updated NOAA NMFS was required according to NYCDEP guidance. As such, a NOAA NMFS records response was received on May 6, 2019 (see Appendix I). The response indicates that adult Atlantic Sturgeon and Shortnose Sturgeon could be present in the waters of the East River and its adjacent bays and tributaries. However, as the saline conditions are not suitable for the early life stages of these fish, no eggs, larvae, or juvenile Atlantic Sturgeon or Shortnose Sturgeon would occur within the East River and its adjacent bays and tributaries. This response states there may be potential timing restrictions for in-water work, as well as the need to consider soil erosion best management practices.

State-Listed Species

In 2016, a records request was made to the NYSDEC Natural Heritage Program for rare or state-listed animals and plants, significant communities or other significant habitats. No records were found for the area. A more recent search on the NYSDEC Environmental Resource Mapper conducted on May 8, 2019 confirmed that nothing is mapped on or in the immediate vicinity of the Project Area. Due to the unchanged site conditions and site inspections, no rare plants or animals are expected to be found in the Project Area.

NO-ACTION CONDITION

The No-Action Condition assumes that the current zoning would remain and that as-of-right development would occur in the Project Area. Therefore, the area would continue to be developed in the No-Action Condition. The land cover type and human activity would differ significantly from existing conditions. In the No-Action Condition, the Project Area could be altered, changing the

existing buildings, roads, parking lots and limited vegetated communities. Natural resources within the Project Area would most likely change depending on the intensity of development. Since land cover type and the patterns and levels of human activity within the Project Area are expected to change in the future without the Proposed Actions, wildlife in the Project Area could change. The limited vegetated areas, street trees and patches of landscaped areas within the Project Area could be removed depending on the future development.

WITH-ACTION CONDITION

In the With-Action Condition, the Proposed Actions would modify either general zoning requirements or waterfront zoning regulations related to height, setback, use and parking. With the exception of Projected Development Site 4, there are only modest increases in density within the proposed special district. With the exception of building height and parking requirements, the No-Action and With-Action conditions are largely similar. The Proposed Actions would also require a larger shore public walkway (40 feet wide at minimum) with improved waterfront public access areas.

Groundwater

Construction activities would cause short-term disturbance to subsurface materials during excavation and installation of building foundations. This impact would be temporary, and exposed soils would be stabilized in accordance with the New York guidelines for Urban Erosion and Sediment Control. Since groundwater is not used as a potable water supply in Queens, any future development would not have the potential to affect drinking water supplies.

Water Quality

The Proposed Actions would temporarily affect water quality due to temporary erosion and sedimentation as a consequence of disturbing soil materials during construction. The Proposed Project would comply with the New York guidelines for Urban Erosion and Sediment Control. Additionally, Flushing Creek would be protected from construction activities by protection measures that follow a Stormwater Pollution Protection Plan (SWPPP). The SWPPP would address erosion control measures during construction, as well as post-development water quality treatment in accordance with NYS DEC regulations. Anticipated erosion control measures include stabilized construction entrances, a silt fence, inlet protection, and turbidity curtains. Post-development water quality treatment is expected to consist of a combination of hydrodynamic separators, green roofs, or stormwater infiltration practices. In addition, the Applicant would be required to incorporate Best Management Practices (BMPs) to treat and improve the water quality of the stormwater runoff leaving the site. Stormwater would be treated in accordance with the NYS DEC SPDES General Permit Regulations. The treatment practices would include a combination of hydrodynamic separators, green roofs or stormwater infiltration. These treatment practices would be designed to remove or reduce suspended solids and nitrogen from the stormwater runoff prior to being discharged to Flushing Creek.

Coastal Resources

The Project Area is in the New York City Coastal Zone; therefore, the Proposed Actions are subject to a New York City WRP consistency assessment. The Proposed Actions are also within a Special Natural Waterfront Area. As discussed in Appendix G, the Proposed Actions are consistent with the policies of the WRP, which also determines Special Natural Waterfront Area consistency. The Proposed Actions are not located within a designated Priority Marine Activity Zone or Significant Maritime and Industrial Area.

The Proposed Actions do not involve construction in the waters of the Flushing Creek. Implementation of the Proposed Actions is not expected to result in substantial changes to the water quality of the Flushing Creek, and it would not introduce substantial new elements within the creek waters. Future development associated with the Proposed Actions is expected to increase the amount of sanitary sewage generated; however, any increases would be relatively minor and would be directed to the sewer network (see Attachment L, "Water and Sewer Infrastructure," for more information).

Wetlands

The design of the Proposed Project is the result of considerable engagement between the Applicant team and DCP to create a master plan for the Proposed Project, beginning in August 2018. Each development site had unique shoreline and topographic characteristics that were considered individually and together. Particularly, as shown on the NYSDEC Jurisdiction map in Appendix I, each development site's Tidal Wetlands Adjacent Area (TWAA) had a set boundary and maximum impervious coverage requirement, which influenced the design and location of the shore public walkway and the development of the associated waterfront zoning text. Overall, the master planning process sought to protect the waterfront's natural features while enhancing the area as an amenity for the public.

The Proposed Project is also the result of several years of coordination by the Applicant with NYS DEC beginning in 2008, for a succession of prior development proposals (see Appendix I for previous agency correspondence). Most recently, in February 2018, NYS DEC confirmed that the impervious coverage within the TWAA on Projected Development Site 1 may be more than 20 percent, but would not exceed 53.33 percent, as agreed upon during a prior application review in 2018. The existing waterfront edge conditions at Site 1 contain a pier that is supported on timber piles and has a combination timber and concrete deck, which is in poor condition.

In February 2016, DEC confirmed that Projected Development Site 2 is not within the jurisdiction of the NYS DEC under the NYS DEC Tidal Wetlands Act. Therefore, the impervious coverage of Site 2 was assumed to be the typical percentage permitted by DEC – approximately 20 percent, which would be formally determined during the permitting process.

In 2016, according to correspondence with NYS DEC, the TWAA for Projected Development Site 3 was limited to the portion of the site located on or seaward of the ten-foot contour line reflected on the 2016 survey. The impervious coverage of Site 3 was assumed to be the typical percentage permitted by NYS DEC – approximately 20 percent, which would be formally determined during the

permitting process prior to construction. Site 3 contains a functional bulkhead at the middle of the site.

In 2016, according to correspondence with DEC, the TWAA on Projected Development Site 4 was anticipated to extend 150 feet from the edge of tidal wetland vegetation. The impervious coverage of Site 4 was assumed to be the typical percentage permitted by DEC – approximately 20 percent, which would be formally determined during the permitting process prior to construction. The waterfront is a functional seawall for the majority of the site, with the exception of the southern edge which contains a natural shoreline.

There are no freshwater wetlands onsite. The Project Area is adjacent to Flushing Creek, which is comprised of tidal wetlands that are regulated by the NYS DEC and USACE. For all development sites, a Joint Permit Application would be submitted to NYS DEC and USACE in advance of construction activities. Protection of wetlands would be accomplished through NYS DEC and/or USACE permitting requirements, as well as the SWPPP that would be designed to limit the potential for adverse effects to water quality during and after the construction period. Each development site would also be required to develop a SWPPP for construction and post-construction activities. Due to the shallow nature of Flushing Creek, there will be no in-water construction or construction barges, thus most of the waterfront construction will be performed from land. The SWPPP would address erosion control measures during construction, as well as post-development water quality treatment in accordance with NYS DEC regulations. Erosion control measures implemented are anticipated to include stabilized construction entrances, silt fence, inlet protection, and turbidity curtains. Post-development water quality treatment is anticipated to include a combination of hydrodynamic separators, green roofs, or stormwater infiltration practices. Additionally, a silt boom would be installed within the waterway and water treatment units would be installed upstream of the outfalls during construction in accordance with the SWPPP.

The existing shoreline is in a dilapidated condition. The Proposed Project would remove trash and debris along the shoreline and would restore wetland habitats with native planting areas. The restoration strategies would be developed with sensitivity to site location and in order to benefit existing ecological components. As part of the Proposed Project, the existing tidal wetland adjacent areas would be stabilized to prevent further deterioration by installing an engineered toe stabilization along the existing slope, introducing native plantings and habitat-enhancing materials, and replacing or removing deteriorated or broken timber elements. Shoreline stabilization would be implemented through a mix of natural shoreline, rip-rap shoreline, boulders with native plants, and steel bulkhead shoreline. The Proposed Project would incorporate a gradual slope down to the waterline from the upland area that would limit the need for bulkheads and rip-rap. The modified embankment would provide long-term stability and prevent erosion from tidal fluctuations.

On Projected Development Site 1, the Proposed Project plans to remove the pier elements that are not beneficial to the proposed use and eco-system. The pier is impervious, while the proposed condition includes previous rip rap inboard of the existing pier – therefore giving back shaded land under water to the creek. In past discussions with NYS DEC, NYS DEC suggested that the existing timber pile that supports the pier be retained for bird perching. The current Proposed Project includes this suggestion.

On Projected Development Site 2, the development proposes to keep the bulkhead in place and install rip rap within the limits allowed by the NYS DEC at the remainder of the site. In June 2019, the Applicant submitted a JPA to NYS DEC for review. In response, NYS DEC had comments on the placement of the proposed rip rap and requested that a field wetland delineation be undertaken. The wetland delineation is scheduled for October 31, 2019. The design team is moving forward with NYS DEC's recommendations at this site.

As discussed under "Existing Conditions," Projected Development Site 3 contains a functional bulkhead at the middle of the site. The Proposed Project proposes to keep the bulkhead in place and install rip rap within the limits allowed by the NYS DEC at the remainder of the site. On Projected Development Site 4, the proposed plan includes keeping the natural shoreline intact and enhancing it with wetland vegetation. The portion of the site that contains a functional seawall will be repaired and kept in place, subject to review and approval by NYS DEC as part of the permitting process prior to construction start.

Installation of permeable pavers along the shore public walkway would help to minimize runoff and improve water quality. The alignment of the shore public walkway would stay outside of all potential vegetated wetland areas. New stormwater outfalls would help reduce water-induced soil erosion. Each outfall would connect to a water treatment unit to clean the water prior to discharge into the creek. The value of the tidal wetland areas would be enhanced by improving the water quality of stormwater discharged into the creek. All waterfront activities would be finalized through the Joint Permit Application process and in coordination with the applicable agencies.

The potential for vegetated wetlands is indicated at Projected Development Sites 2 and 3. As such, a more formal wetland delineation may be required and regulatory action (*i.e.,* permits) or agency involvement from the USACE or NYS DEC is most likely required for work within the tidal area.

As discussed in Attachment G, "Shadows," during the November 2018 and June 2019 field visits, the wetland vegetation observed was growing in the existing shade of the bulkhead structure along Projected Development Sites 2 and 3. The incremental shadow from the Proposed Project would not significantly affect the condition or microclimate of the vegetation observed, as the shadow would be constantly moving across the vegetation patch. Additionally, during the majority of the day, the vegetation would still receive adequate sunlight; additional shadow from the Proposed Project would not adversely affect the growth of this vegetation.

Overall, each development site would be subject to the SWPPP and JPA, which collectively would protect the wetland resources within the Project Area.

Floodplains

Portions of the Project Area are located within floodplain Zone AE. As previously stated, the FEMA-designated floodplain boundaries are approximations. The elevation used to determine 100-year floodplain boundaries is 13 feet.[52] It is anticipated that the future development would have finished floor elevations above the applicable flood hazard area elevation in order to meet insurance requirements. New development in the Project Area would include resilient elements within

[52] NAVD88.

buildings built within the flood zone, in accordance with the Building Code Appendix G- Flood Resistant Construction. Open space features such as street benches and other furniture would be designed and constructed to withstand flood water impact loads, thereby minimizing the potential for losses from flooding along the shore public walkway (see Appendix G – WRP Consistency Assessment Form). Therefore, the Proposed Actions would not impede flood waters or raise the elevation level of flood waters.

Geology and Soils

Future development associated with the Proposed Actions would involve some excavation for building foundations and basements. No significant natural resources are contained within the geology underlying the Project Area, and excavation is not expected to result in any significant adverse impacts to geological resources. Contaminated soil that might be encountered would be handled in compliance with applicable laws and regulations.[53]

Wildlife and Vegetation

At present, only highly urban-adapted, synanthropic wildlife species (*i.e.,* those that benefit from an association with humans) are found within the Project Area. The increased human activity that would result from future development associated with the Proposed Actions would not adversely affect these disturbance-tolerant species, and for some, numbers could possibly increase. During the majority of the year, wildlife that would be expected to occur in these areas would remain limited to non-native, invasive birds such as the house sparrow. During spring and fall, common migratory songbirds would have the potential to occasionally and briefly locate in the trees present within the Project Area, and would benefit from the landscaping improvements and additional trees that would be planted with the future development of the Proposed Action. Therefore, the Proposed Actions would not result in any significant adverse impacts to wildlife. Additionally, existing timber piles would be left on Projected Development Site 1 in order to provide habitat for the Cormorant bird population that exists along Flushing Creek.

The shore public walkway developed in accordance with the Proposed Actions would enhance a degraded natural area and include new landscaped vegetation. Wetland restoration would be undertaken with native plants and the use of habitat enhancing materials. Therefore, the Proposed Actions would not result in any significant adverse impacts to wildlife or vegetation.

Aquatic Resources

As stated above, the Proposed Actions would have the potential to temporarily affect water activity due to construction activities. However, construction activities would comply with the New York

[53] Specifically, the following:
6 NYCRR Part 371 - Identification and Listing of Hazardous Waste
6 NYCRR Part 375 - Environmental Remediation
6 NYCRR Part 364 - Waste Transporter Permits
6 NYCRR Part 360 - Solid Waste Management Facilities
6 NYCRR Part 613 - Petroleum Bulk Storage Regulations

guidelines for Urban Erosion and Sediment Control and would follow a SWPPP that would protect the creek from construction activities. Therefore, the Proposed Actions would not result in any significant adverse impacts to aquatic resources. Thus, the Proposed Actions would not result in a significant adverse shadows impact to Flushing Creek, and no further analysis is warranted.

Rare, Threatened and Endangered Species

As discussed above, the Project Area lacks suitable habitat for piping plover, roseate terns, red knot, and seabeach amaranth and does not contain any NYS DEC significant natural communities. Therefore, the Proposed Actions would not result in any significant adverse impacts to these resources.

In addition, although adult Atlantic Sturgeon and Shortnose Sturgeon could be present in the waters of the East River and its adjacent bays and tributaries, the Proposed Actions do not involve construction in the waters of Flushing Creek that would affect the habitat of these species.

CONCLUSION

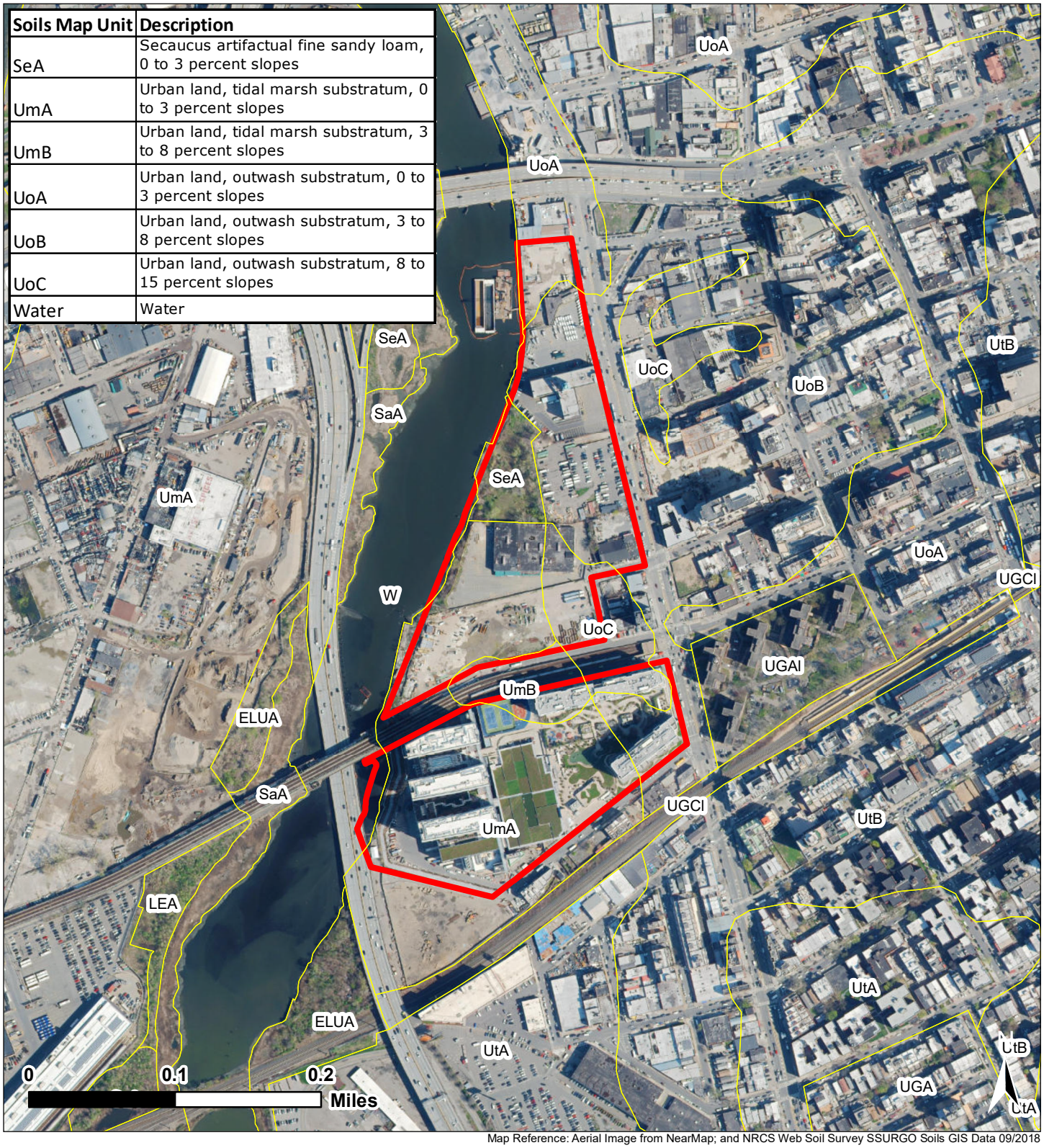
The adoption of the Proposed Actions would not result in significant adverse impacts on terrestrial and aquatic resources, wetlands, or threatened and endangered species. The Project Area is in a highly urbanized area where the vegetation and wildlife are limited and the biodiversity is low. The Proposed Actions would facilitate the revitalization of a formerly industrial area and the creation of open space along the Flushing Creek waterfront, which would provide the opportunity to enhance biodiversity in the Project Area. New development facilitated by the Proposed Actions would be designed and constructed to minimize damage to natural resources, natural features, and the Project Area from flooding and erosion. Flushing Creek would be protected during and after construction by protection measures within the SWPPP, and would be subject to the requirements of the NYS DEC and/or USACE permitting processes, if applicable. Although the specific conditions that would be imposed by NYS DEC and USACE are not yet finalized at the time of this assessment, they would be sufficiently protective to ensure no significant adverse impacts to the existing wetlands and/or Flushing Creek.

FIGURE I -1

SPECIAL FLUSHING WATERFRONT DISTRICT

NRCS SOILS MAP

Soils Map Unit	Description
SeA	Secaucus artifactual fine sandy loam, 0 to 3 percent slopes
UmA	Urban land, tidal marsh substratum, 0 to 3 percent slopes
UmB	Urban land, tidal marsh substratum, 3 to 8 percent slopes
UoA	Urban land, outwash substratum, 0 to 3 percent slopes
UoB	Urban land, outwash substratum, 3 to 8 percent slopes
UoC	Urban land, outwash substratum, 8 to 15 percent slopes
Water	Water



Map Reference: Aerial Image from NearMap; and NRCS Web Soil Survey SSURGO Soils GIS Data 09/2018

Project Area

NRCS Soils

FLUSHING, QUEENS, NY

LANGAN

FIGURE I -2

SPECIAL FLUSHING WATERFRONT DISTRICT

NYSDEC SURFACE WATERS MAP

Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles; NYSDEC Water Quality Classifications - NYS 2010.

Project Area

NYSDEC Surface Waters

FLUSHING, QUEENS, NY

LANGAN

FIGURE I -3

SPECIAL FLUSHING WATERFRONT DISTRICT

USFWS NWI MAP

Map Reference: ESRI World Imagery 2018; USFWS National Wetlands Inventory Map 2009, source imagery 2004

Project Area

NWI Wetland Type

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

FLUSHING, QUEENS, NY

LANGAN

FIGURE I -4

SPECIAL FLUSHING WATERFRONT DISTRICT

NYSDEC TIDAL WETLANDS MAP

Map Reference: NYSDEC Tidal Wetlands Map, 1974, Map 598-512; NYSDEC Tidal Wetlands GIS Data 2005

Project Area

NYSDEC Tidal Wetlands

- HM - High Marsh
- IM - Intertidal Marsh
- LZ - Littoral Zone

FLUSHING, QUEENS, NY

LANGAN

ATTACHMENT J: HAZARDOUS MATERIALS

INTRODUCTION

The *CEQR Technical Manual* defines hazardous materials as substances that pose a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi volatile organic compounds (VOCs, including petroleum constituents and chlorinated solvents, and SVOCs), methane, polychlorinated biphenyls (PCBs), and hazardous wastes (defined as substances that are chemically active, ignitable, corrosive, or toxic).

Significant impacts from hazardous materials occurs when hazardous materials exist on a site and an action would increase pathways to their exposure to humans and the environment, or an action would introduce new activities or processes using hazardous materials. Potential routes of exposure to hazardous materials can include: direct contact, such as contact between contaminated soil and skin (dermal contact), breathing of VOCs or chemicals associated with suspended soil particles (inhalation), and/or swallowing contaminated soil or water (ingestion). Public health may also be threatened when soil vapors migrate through the subsurface and/or along preferential pathways (*e.g.,* building foundations, utility conduits, or duct work) and accumulate beneath a concrete slab or inside a basement, resulting in an explosive, oxygen-deficient, or hazardous atmosphere.[54]

METHODOLOGY

The *CEQR Technical Manual* guidelines stipulate the first step to evaluate the potential presence of hazardous materials in the Project Area is typically to conduct a Phase I Environmental Site Assessment (ESA), or in cases where sufficient site history is known, a Phase I ESA may not be required.

The objective of a Phase I ESA is to identify the presence or likely presence, use, or release of hazardous substances or petroleum products, as defined in ASTM E1527-13 as a Recognized Environmental Condition (REC). A Phase I ESA also identifies any historical recognized environmental concerns (HREC). An HREC is defined by ASTM E1527-13 as a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. Typically, a Phase I ESA is conducted to provide a qualitative evaluation of environmental conditions within a particular project area.

Several environmental investigations have been performed within the Project Area. For Projected Development Site 1 (Block 4963, Lots 7, 8, and 9) (see Figure A-4 in Attachment A, "Project Description") Phase I ESAs were prepared in April 1994 and December 2001, while Phase II ESAs were prepared in February 2002, December 2008, and November 2016. For Projected Development Site 2 (Block 4963, Lot 65), a Phase I ESA was prepared in May 2013. For Projected Development Site 4 (Block 4963, Lots 212 and 249), a Phase I ESA was prepared in July 2019. In addition to the Phase

[54] *CEQR Technical Manual* (2014).

I and II ESAs, groundwater sampling, remedial investigation reports, and geotechnical reports have been conducted for the sites.

On November 17, 1998, Block 4963, Lots 7, 65, 75, and 85 were assigned (E) Designations for hazardous materials as part of the Downtown Flushing Rezoning (CEQR No. 95DCP052Q). The (E) Designations assigned as a part of the Downtown Flushing Rezoning remain on Projected Development Sites 1, 2, and 3 and Potential Development Site A. The existing (E) Designations within the Project Area precludes the potential for significant adverse impacts due to hazardous materials on these development sites. (E) Designations are institutional controls that provide a mechanism to ensure that testing for and mitigation/remediation of hazardous materials, if necessary, are completed prior to or as a part of future development of an affected site, thereby eliminating the potential for a hazardous materials impact. Therefore, this assessment evaluates the potential for Projected Development Site 4 and Potential Development Site B to result in a significant adverse hazardous materials impact.

In September 2017, the Flushing Brownfield Opportunity Area (BOA) Nomination Study (the "BOA Report") was submitted to the New York Department of State (DOS). The BOA Report included an Environmental Assessment Report (EAR) of the recommended master plan, that EAR found that there is a potential for hazardous materials on sites within the Project Area based upon the historic and current uses of the site, as well as past recorded spills. Four development sites (Projected Development Sites 1-3 and Potential Development Site A) were found to have previously assigned (E) Designations under the Downtown Flushing Rezoning for both hazardous materials and noise. Lots 212 and 249 (Projected Development Site 4) and Lot 200 (Potential Development Site B) were determined to have a potential future (E) Designation based on these site's historic uses. There are no known Phase I ESAs that have been prepared for Potential Development Site B, however the BOA Report outlines the history and documented historic spills and was adopted by the DOS as part of the BOA nomination process.

As of October 15, 2019, Projected Development Site 2 was accepted to the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) (Site No. C241232), and a Brownfield Cleanup Agreement (BCA) has been executed. The BCA will require that remedial actions performed in conjunction with the Proposed Project would be subject to approval and oversight by NYSDEC and compliance with the requirements of the BCP. For Projected Development Sites 3 and 4, a remedial action plan (RAP) is currently being developed and would be approved through the State or City BCP Program.

EXISTING CONDITIONS/BOA REPORT ENVIRONMENTAL FINDINGS (SEPTEMBER 2017)

Projected Development Site 4

Projected Development Site 4 consists of Block 4963, Lots 212 and 249. According to the BOA Report, Lot 212 is currently vacant and historically operated as a scrap yard and a coal and asphalt yard. Lot 212 had contaminated soil excavated in 2011 as part of a Closed Case Spill (No. 7900995), which indicated the presence of groundwater contamination.[55] Additionally, there are listings for

[55] Flushing BOA Nomination Study's Environmental Assessment Report (September 2017), Chapter 10: Hazardous Materials,

underground storage tanks (USTs) and leaking tanks. Lot 249 is currently vacant and a former scrap yard, and was historically occupied by an asphalt plant.

Potential Development Site B

Potential Development Site B consists of Block 4963, Lot 200, which is currently occupied by a four-story self-service storage and shipping facility (U-Haul). According to the BOA Report, the lot has historically been occupied by a woodworking facility and petroleum storage yard. The Closed Case Spill on Projected Development Site 4 found a plume of contaminated groundwater was present beneath this property.[56] The status of this plume of contaminated groundwater is unknown at this time.

PHASE I ESA (JULY 23, 2019) – PROJECTED DEVELOPMENT SITE 4[57]

The 2019 Phase I ESA for Projected Development Site 4 was conducted in accordance with the ASTM Practice E1527-13 (Standard Practice for ESA: Phase I ESA Process) and the U.S. Environmental Protection Agency (USEPA) All Appropriate Inquiry (AAI) Rule. The Phase I ESA identified two possible RECs, one HREC, and one Business Environmental Risk (BER). Specifically, the following RECs were identified at this development site:

REC 1: Historical Subject Property Usage

The development site was historically utilized as a coal yard, masonry yard, asphalt plant, scrap recycler, and for construction storage. Historically, impacts to the soil and groundwater were identified near underground storage tanks (USTs).

REC 2: Off-site Sources of Groundwater Contamination

According to review of previous investigation reports, several upgradient off-site groundwater monitoring wells have been impacted and therefore, groundwater beneath the development site may also be impacted as a result. Environmental uses of concern have been situated hydraulically upgradient and include multiple auto repair shops, multiple unspecified junkyards, electric substations, machine shops and parking/storage lots.

HREC 1: Presence of Closed NYSDEC Spills

Upon review of historical documents and environmental database listings, the development site and adjoining properties are associated with multiple closed LTANK and NY Spill listings. Upon review, all the NYSDEC spills have been closed to the satisfaction of the NYSDEC and are considered closed. As such, the presence of closed NY Spills and LTANK listings for the development site and surrounding area should be considered a HRECs.

[56] Ibid
[57] Phase I Environmental Site Assessment for 35-32 College Point Boulevard, prepared by Roux Environmental Engineering and Geology, D.P.C., July 23, 2019.

BER 1: Presence of Urban Fill Material

Based upon historical information reviewed and the proximity of the development site to Flushing Creek, it is likely the development site is underlain by historic fill material.

NO-ACTION CONDITION

Absent the Proposed Actions, Projected Development Sites 1-3 and Potential Development Site A would remain subject to the existing (E) Designation and new development on these sites would be required to satisfy the requirements of that (E) Designation. The development on the Projected Development Sites and Potential Development Site A would maximize the existing permissible FAR and result in ground disturbance.

Proposed Development Site 4, which does not have an existing (E) Designation, would be developed with an as-of-right building (a self-storage facility). This new development would maximize the existing permissible FAR and would result in ground disturbance.

Potential Development Site B also does not have an existing (E) Designation. The Analysis Framework established for the Proposed Actions assumed that the existing use on this site would continue and thus there would be no potential for ground disturbance

WITH-ACTION CONDITION

In the With-Action Condition, the Proposed Actions would be adopted and Projected Development Sites 1-3 would be developed by the Applicant as described in this EAS. Although it would not be redeveloped by the Applicant, the Proposed Actions would facilitate new development on Potential Development Site A. The existing (E) Designations (E-74) on Projected Development Sites 1-3 and Potential Development Site A would preclude the potential for significant adverse hazardous materials impacts.

Projected Development Site 4 would be redeveloped by the Applicant as a mixed-use building and would result in new ground disturbance. The area north of the U-Haul building on Potential Development Site B could be developed under the Proposed Actions with a commercial office building. This addition would result in additional ground disturbance. The historic uses on Projected Development Site 4 and Potential Development Site B noted in the BOA Report and in the Phase I ESA (Projected Development Site 4) indicate the potential presence of hazardous materials on these sites. Additionally, there have been recorded spills on nearby sites. Therefore, to preclude the potential for significant adverse hazardous materials impacts, (E) Designations are proposed for these development sites.

PROPOSED E-DESIGNATION (E-557)

Based on the findings presented above, including the former industrial and commercial history of the Project Area and the previously assigned (E) Designations (E-74) under the Downtown Flushing Rezoning (CEQR No. 95DCP052Q) for hazardous materials, an (E) Designation (E-557) for hazardous materials would be incorporated into the Proposed Actions. The new (E) Designation (E-557) would apply not only to Projected Development Site 4 and Potential Development Site B, but also to Projected Development Sites 1-3 and Potential Development Site A. The new E Designation (E-557)

would supersede the existing E Designation (E-74). The specific requirements of the **(E)-Designation (E-557)** would be as follows:

Task 1 – Sampling Protocol:

The applicant submits to the NYC Mayor's Office of Environmental and Remediation (OER), for review and approval, a Phase I of the site along with a soil, groundwater and soil vapor testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented. If site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of samples should be selected to adequately characterize the site, specific sources of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine what remediation strategy (if any) is necessary after review of sampling data. Guidelines and criteria for selecting sampling locations and collecting samples are provided by OER upon request.

Task 2 – Remediation Determination and Protocol:

A written report with findings and a summary of the data must he submitted to OER after completion of the testing phase and laboratory analysis for review and approval. After receiving such results, a determination is made by OER if the results indicate that remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER.

If remediation is indicated from test results, a proposed remediation plan must be submitted to OER for review and approval. The applicant must complete such remediation as determined necessary by OER. The applicant should then provide proper documentation that the work has been satisfactorily completed.

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

With this (E) designation in place, no significant adverse impacts related to hazardous materials are expected, and no further analysis is warranted.

CONCLUSION

In November 1998, (E) Designations were placed on Projected Development Sites 1-3 and Potential Development Site A as part of the Downtown Flushing Rezoning (CEQR No. 95DCP052Q). The (E) Designations were placed in response to the potential for significant adverse hazardous materials impacts on these development sites.

Projected Development Site 4 and Potential Development Site B are both within the Project Area and do not currently have (E) Designations. An (E) Designation for hazardous materials is therefore proposed to be placed on Projected Development Site 4 and Potential Development Site B. This (E) Designation (E-557) would also supersede the existing (E) Designation (E-74) on Projected Development Sites 1-3 and Potential Development Site A, and thus would apply to all of the development sites within the Project Area.

The (E) Designation would require new development on development sites to satisfy the requirements of the (E) Designation program. With the proposed (E) Designation (E-557) in place, the Proposed Actions would not result in significant adverse hazardous materials impacts and no further analysis is necessary.

ATTACHMENT K: WATER AND SEWER INFRASTRUCTURE

INTRODUCTION

New York City's water and sewer network is fundamental to the operation, health, safety, and quality of life of the City and its surrounding environment, and it must be sized to fit the users and surface conditions in order to function adequately. Ensuring these systems have adequate capacity to accommodate land use or density changes and new development is critical to avoid environmental and health problems, such as sewer back-ups, street flooding, or pressure reductions.[58]

The purpose of a water and sewer infrastructure analysis is to assess whether a proposed project may adversely affect the City's water distribution or sewer system and, if so, assess the effects of such a project to determine whether its impact will be significant.[59] The 29-acre Project Area is comprised of four separate Projected Development Sites (under control of the Applicant) and two Potential Development Sites (not controlled by the Applicant and less likely to be redeveloped in the future). The Potential Development Sites are excluded from the water and sewer infrastructure analysis because according to the *CEQR Technical Manual*, only projected sites are analyzed for density-related impacts, which includes water and sewer infrastructure.

As described in Attachment A, "Project Description," the four Projected Development Sites would facilitate a net increase of approximately 293 dwelling units and 2,038 gross square feet (gsf) of community facility use as compared to the No-Action Condition in the Reasonable Worst Case Development Scenario (RWCDS). The With-Action Condition would result in a net decrease of commercial and industrial uses by approximately 6,439 gsf and 128,500 gsf, respectively.

This chapter assesses the potential effects of the Proposed Actions on the City's water supply, wastewater treatment, and stormwater management in accordance with the 2014 *CEQR Technical Manual* guidelines.

METHODOLOGY

A preliminary water infrastructure analysis is needed if the proposed project would result in an exceptionally large demand for water (*e.g.,* those that are projected to use more than one million gallons per day [mgd]) or is in an area that experiences low water pressure (*e.g.,* areas at the end of the water supply distribution system).[60] Because the Project Area is not within an area that experiences low water pressure and would not incrementally require one mgd of water more, a preliminary water infrastructure analysis is not necessary. However, the total water demand that could result from the Proposed Actions is calculated for the purposes of determining the sewage that could potentially be generated as a result of the Proposed Actions.

A preliminary sewer infrastructure analysis is needed if the proposed project involves development on a site that is one acre or larger where the amount of impervious surface would increase, within

[58] *CEQR Technical Manual* (2014), Chapter 13, "Water and Sewer Infrastructure."
[59] Ibid.
[60] Ibid.

certain drainage areas including Flushing Bay and Creek.[61] The Projected Development Sites comprise approximately 12.2 acres within the Flushing Bay and Creek drainage area and the Proposed Actions would increase the amount of impervious surface; therefore, a preliminary sewer infrastructure analysis is necessary.

A preliminary sewer infrastructure analysis of City wastewater treatment plants (WWTPs) and sewer capacity is performed by using rates defined in Table 13-2 of the *CEQR Technical Manual* to determine the existing sanitary flows or treated wastewater flows resulting from the area of the proposed project. Using Table 13-2 in the *CEQR Technical Manual*,[62] the anticipated sanitary flows or treated wastewater flows should be determined for the No-Action and With-Action conditions. The effect of the incremental sanitary flows or treated wastewater flows should be considered regarding the capacity of the applicable WWTP.

A preliminary sewer infrastructure analysis of combined sanitary and storm drainage is performed using the NYC Department of Environmental Protection (DEP) Flow Calculation Matrix to determine the changes to surfaces and drainage patterns between the existing conditions and the With-Action Condition for stormwater drainage, and between the No-Action and With-Action conditions for sanitary drainage. The Flow Calculation Matrix is used to determine the volume and peak discharge rates of stormwater expected from the sites in the With-Action Condition for a variety of rainfall events. If the matrix analysis shows either (i) an increase of two percent or more over existing conditions for dry and wet weather flows from the proposed site for any rainfall event that would discharge to a drainage area of concern; or (ii) an increase of five percent or more over existing conditions for dry and wet weather flows from the proposed project site for any rainfall event in all other drainage areas, then the matrix should be reviewed by DEP. If the matrix indicates the increase in dry and wet weather flows would not surpass these thresholds, no further analysis is needed.[63]

The preliminary sewer infrastructure analysis in this chapter describes:

- Existing water and sewer infrastructure serving the Project Area;
- Existing water demand and wastewater generation, as well as existing volume and peak stormwater discharge rates;
- Anticipated water demand and wastewater generation in the No-Action Condition; and
- Anticipated water demand and wastewater generation in the With-Action Condition, as well as the anticipated volume and peak stormwater discharge rates.

EXISTING CONDITIONS

Water Supply

Most of New York City obtains water from three surface water supply systems operated by DEP that form a network of reservoirs, aqueducts, and tunnels extending as far as 125 miles north of the City.

[61] Ibid.
[62] CEQR Technical Manual (2014), Chapter 13, "Water and Sewer Infrastructure."
[63] Ibid.

The watersheds of the three systems cover almost 2,000 square miles, with 19 reservoirs and three controlled lakes, which have a storage capacity of approximately 550 billion gallons. Two of the three surface water systems, the Delaware and Catskill systems, collect water from watershed areas in the Catskill Mountains and deliver it to the Hillview Reservoir in Yonkers. The third surface water system, the Croton system, collects water from watershed areas in Dutchess, Putnam, and Westchester counties and delivers it to the Jerome Park Reservoir in the Bronx. The water flows to the City through aqueducts, reaching most consumers by gravity alone; only some four percent of the City's water must be pumped to its final destination.

Within the City, a grid of underground distribution mains brings water to consumers. Large mains—up to 96 inches in diameter—feed smaller mains (such as 20, 12 and 8 inch mains) that distribute water to individual locations. These mains also provide water to fire hydrants along many of the City's streets. Water pressure throughout the City water supply system is controlled by pressure regulators.[64]

As described in Attachment A, "Project Description," a RWCDS was prepared for the Proposed Actions. Currently, all Projected Development Sites are vacant with the exception of Projected Development Site 3, which contains a surface parking lot. Therefore, due to the majority of the Project Area being undeveloped, the existing uses do not have any demand for water.

Wastewater Treatment

Sewers beneath the City's streets collect sewage from buildings as well as stormwater from buildings and catch basins in streets. Collection sewers can be smaller in diameter on side streets, and larger in diameter under other roadways. They connect to trunk sewers, generally 5 to 7 feet in diameter, which bring the sewage to interceptor sewers. These large interceptor sewers (often 11 or 12 feet in diameter) bring the wastewater collected from the various smaller mains to the WWTPs for treatment.[65]

While the majority of New York City is managed by combined sewers and treated by WWTPs, portions of Brooklyn, Queens, and Staten Island are managed by separate storm sewers or unsewered. The entire Project Area is located in a direct drainage area where stormwater is discharged to Flushing Creek. The sanitary sewers in the Project Area are treated downstream by the Tallman Island WWTP. The plant has been operating since 1939 and has a design capacity to treat 80 mgd of wastewater.[66] In 2018, Tallman Island received an average flow of 57 mgd as shown in Table K-1. As a result, the WWTP maintains an excess capacity of approximately 23 mgd (30 percent of its total capacity).

[64] *CEQR Technical Manual* (2014), Chapter 13, "Water and Sewer Infrastructure."
[65] *CEQR Technical Manual* (2014), Chapter 13, "Water and Sewer Infrastructure."
[66] NYC DEP. "New York City's Wastewater Treatment System Report." Accessed 6 May 2019.

Table K-1: 2018 Monthly Average Dry Weather Flows to Tallman Island WWTP

Month	Tallman Island WPCP (mgd)
January	51
February	59
March	58
April	55
May	56
June	55
July	57
August	59
September	59
October	56
November	62
December	60
Average	**57**

Source: *New York City Department of Environmental Protection (DEP).*
Notes:
[1] mgd = million gallons per day.

According to DEP Sewer Mapping,[67] an existing 12–inch sanitary sewer is located in College Point Boulevard, which connects to an intercepting sewer downstream. The intercepting sewer flows north along College Point Boulevard. The sanitary discharge for the Project Area will connect into this system, specifically as part of Subcatchment Area TI-011. Due to the Project Area consisting of mostly vacant or undeveloped land there is currently no wastewater generated on the Projected Development Sites.

Stormwater and Drainage Management

Stormwater runoff is generated by rainwater collecting across a variety of surfaces and built structures. The volume of runoff generated varies depending on the type of land cover, which can either be pervious or impervious. DEP defines runoff coefficients to correlate with the pervious or impervious qualities of the land cover. Grass and softscape have a runoff coefficient of 0.20 because of their ability to absorb a portion of the rainfall, whereas roof area and pavement have much higher runoff coefficients of 1.00 and 0.85 respectively, due to their inability to absorb or sequester rainfall.[68]

The majority of the Project Area is currently paved impervious surfaces. The Projected Development Sites comprise approximately 2,800 square feet (sf) (1 percent) of roof and approximately 414,019 sf (79 percent) of pavement and walkways. The remaining 106,638 sf (20 percent) is comprised of grass and softscape land cover.

As shown in Table K-2, under existing conditions the weighted runoff coefficient is 0.72.

[67] NYC DEP Sewer Mapping (Print Date 9/26/17).
[68] *CEQR Technical Manual* (2014), Chapter 13, "Water and Sewer Infrastructure."

Table K-2: Existing Project Surface Areas and Runoff Coefficients

Subcatchment Area	Surface Type	Roof	Pavement and Walks	Grass and Softscape	Total
Direct Drainage	Area (%)	1	79	20	100
	Surface Area (sf)	2,800	414,019	106,638	523,457
	Runoff Coefficient[1]	1.00	0.85	0.20	**0.72**

Source: *Department City Planning (DCP) Footprint and PLUTO data; aerial photographs.*
Notes:
[1] Runoff coefficients for each surface type per Department of Environmental Protection (DEP).

As shown in Table K-3, standard DEP runoff coefficients were used to determine the approximate amount of stormwater runoff generated during a variety of rainfall events over specified periods of time ranging from 3.8 to 19.5 hours. Depending on intensity and continuity during storm events with up to 2.5 inches of rainfall, the Projected Development Sites may discharge up to 0.59 million gallons (mg) of stormwater to Flushing Creek. There is no sanitary flow discharged into Tallman Island WWTP area TI-011 due to the undeveloped nature of the site.

Table K-3: Existing Combined Stormwater Runoff and Wastewater Generation from the Project Area

Subcatchment Area	Rainfall (in)	Duration (hours)	Total Area (acres)	Weighted Runoff Coefficient[1]	Stormwater Runoff (mg)	Sanitary to CSS[2] (mg)[3]	Total Volume to CSS[2] (mg)[3]
Direct Drainage	0.00	3.80	12	0.72	0.00	0.000	0.000
	0.40	3.80			0.09	0.000	0.000
	1.20	11.30			0.28	0.000	0.000
	2.50	19.50			0.59	0.000	0.000

Source: *Calculated using DEP runoff coefficients.*
Notes:
[1] Refer to Table K-2.
[2] Combined sewer system (CSS).
[3] Million gallons (mg).

NO-ACTION CONDITION

As described in Attachment A, "Project Description," the No-Action Condition is expected to result in development on all Projected Development Sites. The No-Action development would result in 1,463 dwelling units, 1,403,479 gsf of commercial uses (office/retail/hotel), 19,875 gsf of community facility uses, and 128,500 gsf of manufacturing uses on the Projected Development Sites.

Water Supply

As shown in Table K-4, development under the No-Action Condition would generate a water demand of approximately 1,223,630 gpd over existing conditions.

Table K-4: No-Action Water Consumption

Land Use	Water Consumption & Wastewater Generation Rates	Area/ Dwelling Units	Domestic Water/Wastewater Generation (gpd)[1]	Air Conditioning (gpd)[1]
Residential[2]	274 gpd/ DU[2]	1,463	400,862	0
Retail[3]	Domestic .24 gpd/sf A/C .17gpd/sf	304,148	72,996	51,705
Commercial/Office[4]	Domestic .10 gpd/sf A/C .17gpd/sf	305,004	30,500	51,851
Community Facility[5]	Domestic .10 gpd/sf A/C .17gpd/sf	19,875	1.988	3,379
Industrial/Warehouse /Auto-Related Garage	Domestic 10,000 gpd/sf A/C .17gpd/sf	128,500	29,500	21,845
Hotel[6]	Domestic 120gpd/rm/occupant; A/C 0.17gpd/sf	794,327	476,596	135,036
Total Water Demand (gpd)			**1,276,256**	
Total Wastewater Generation (gpd)			**1,012,441**	

Source: *Consumption rates obtained from the 2014 CEQR Technical Manual Table 13-2, "Water Usage and Sewage Generation Rates for Use in Impact Assessment," unless otherwise noted.*
Notes:
[1] Gallons per day (gpd).
[2] Approximately 2.74 residents per dwelling unit (DU) for residential development within Queens Community District 7 (100 gpd per resident).
[3] Use group comprises retail, supermarket, and restaurant.
[4] Comprises commercial office and other commercial.
[5] Same rate as commercial/ office. Includes house of worship, day care, medical office, adult learning center, and community center uses.
[6] Assumes 2 occupants per hotel room and 400 sf per hotel room.

Wastewater Treatment

In the No-Action Condition, wastewater generated on the four Projected Development Sites would total approximately 1,012,441 gpd. The Tallman Island WWTP currently operates with an excess capacity of approximately 23 mgd; therefore, this increase of 1.01 mg of wastewater would not overburden the Tallman Island WWTP.

Table K-5: No-Action Wastewater Generation in the Project Area

Subcatchment Area	Wastewater Generated (gpd)[1]
TI-011	1,012,441
Total	1,012,441

Source: *Consumption rates obtained from the CEQR Technical Manual* (2014*), Chapter 13, Table 13-2.*
Notes:
[1] Gallons per day (gpd).

Stormwater and Drainage Management

In the No-Action Condition, stormwater runoff would continue to discharge directly to Flushing Creek. As a result, there would not be any impact to the Tallman Island WWTP. The impervious cover

would increase under the No-Action Condition as development would occur on all Projected Development Sites.

WITH-ACTION CONDITION

Because the City's sewers are sized and designed based on the designated zoning of an area, and related population density, the Proposed Actions may result in development that is inconsistent with the design of the existing built sewer system. Accordingly, based on coordination between the Applicant and DEP, an Amended Drainage Plan (ADP) would be prepared for the sanitary and storm drainage of Projected Development Sites 1 and 2 as part of the Proposed Project. Additionally, for Projected Development Sites 3 and 4, a hydraulic analysis of the existing sewer system and coordination with the Bureau of Wastewater Treatment would be required prior to site connection to determine whether the existing sewer system is capable of supporting the higher density development and related increase in wastewater, or whether an upgrade to the existing sewer system would be needed. A separate ADP for these sites would also be required as a result of the Proposed Actions. As incorporation of these measures are material to the analysis herein, they are considered Project Components Related to the Environment (PCREs) and will be required to be conducted by the applicant pursuant to the terms in a restrictive declaration.

As described in Attachment A, "Project Description," the development in the With-Action Condition on the Projected Development Sites would result in approximately 1,756 dwelling units; 1,397,040 gsf of commercial uses, including 298,811 gsf of retail, 714,588 gsf of hotel, and 383,641 gsf of office; and 21,913 gsf of community facility use. The Proposed Actions would facilitate a net increase of approximately 293 dwelling units and 2,038 gsf of community facility use compared to the No-Action Condition on the four Projected Development Sites. The With-Action Condition would result in a net decrease of commercial uses by 6,439 gsf (which comprises a net decrease of 79,739 gsf of hotel space and 5,337 gsf of retail space, and a net increase of 78,637 gsf of office space) and a net decrease of industrial uses by approximately 128,500 gsf.

Water Supply

Future development in the With-Action Condition is anticipated to consume approximately 1,263,389 gpd of water, which is an approximately 12,867 gpd decrease over the No-Action Condition. The incremental demand is less than the one million gallons per day that necessitates further analysis of water supply, and would not occur in an area that experiences low water pressure. Based on this information, further assessment of the Proposed Actions' potential effects on water supply is not necessary; as a result, the Proposed Actions are not anticipated to result in any potentially significant adverse impacts to New York City's water supply or water distribution infrastructure.

Table K-6: With-Action Water Consumption

Land Use	Water Consumption & Wastewater Generation Rates	Area/ Dwelling Units	Domestic Water/Wastewater Generation (gpd)[1]	Air Conditioning (gpd)[1]
Residential[2]	274 gpd/ DU[2]	1,756	481,144	0
Retail[3]	Domestic .24 gpd/sf A/C .17gpd/sf	298,811	71,715	50,798
Commercial/Office[4]	Domestic .10 gpd/sf A/C .17gpd/sf	383,641	38,364	65,219
Community Facility[5]	Domestic .10 gpd/sf A/C .17gpd/sf	21,913	2,191	3,725
Industrial/Warehouse /Auto-Related Garage	Domestic 10,000 gpd/sf A/C .17gpd/sf	0	0	0
Hotel[6]	Domestic 120gpd/rm/occupant; A/C 0.17gpd/sf	714,588	428,753	121,480
Total Water Demand (gpd)			**1,263,389**	
Total Wastewater Generation (gpd)			**1,022,167**	

Source: *Consumption rates obtained from the 2014 CEQR Technical Manual Table 13-2, "Water Usage and Sewage Generation Rates for Use in Impact Assessment," unless otherwise noted.*
Notes:
[1] Gallons per day (gpd).
[2] Approximately 2.74 residents per dwelling unit (DU) for residential development within Queens Community District 7 (100 gpd per resident).
[3] Use group comprises retail, supermarket, and restaurant.
[4] Comprises commercial office and other commercial.
[5] Same rate as commercial/ office. Includes house of worship, day care, medical office, adult learning center, and community center uses.
[6] Assumes 2 occupants per hotel room and 400 sf per hotel room.

Wastewater Treatment

The wastewater generated from the development in the With-Action Condition would continue to be treated by the Tallman Island WWTP, which has an operating capacity of approximately 80 mgd.

Future development in the With-Action Condition on the Projected Development Sites is expected to generate approximately 1,022,167 gpd of wastewater, which is an increase of approximately 9,726 gpd of wastewater over the No-Action Condition.

Table K-7: With-Action Wastewater Generation on the Project Area

Subcatchment Area	Wastewater Generated (gpd)[1]
TI-011	1,022,167
Total	1,022,167

Source: *Consumption rates obtained from the CEQR Technical Manual* (2014*), Chapter 13, Table 13-2.*
Notes:
[1] Gallons per day (gpd).

The Tallman Island WWTP has an operational capacity of approximately 80 mgd and currently operates with an average dry weather flow of approximately 57 mgd, maintaining an excess capacity of approximately 23 mgd. The incremental 9,726 gpd (0.01 mgd) of wastewater generated by the

development in the With-Action Condition would represent less than one percent of Tallman Island WWTP's total capacity. The development in the With-Action condition would result in an increased flow of approximately 0.01 mgd; therefore, it is anticipated Tallman Island WWTP would process approximately 57.01 mgd of wastewater with an excess capacity of approximately 22.99 mgd.

The wastewater generated by the development in the With-Action Condition would not cause the Tallman Island WWTP to operate over capacity; therefore, the Proposed Actions are not anticipated to result in any potentially significant adverse impacts to the City's wastewater treatment infrastructure.

Stormwater and Drainage Management

Future development in the With-Action Condition is expected to result in an increase in impervious cover compared to existing conditions. Future development is anticipated on all Projected Development Sites including those undeveloped lots in the existing condition. As shown in Table K-8, roof area would comprise 64 percent of the surface area under the RWCDS and the weighted runoff coefficient would be 0.89.

Table K-8: With-Action Project Surface Areas and Runoff Coefficients

Subcatchment Area	Surface Type	Roof	Pavement and Walks	Grass and Softscape	Total
Direct Drainage	Area (%)	64%	27%	9%	100%
	Surface Area (sf)	333,782	143,123	46,533	523,458
	Runoff Coefficient[1]	1.00	0.85	0.20	**0.89**

Source: *Department City Planning (DCP) Footprint and PLUTO data; aerial photographs.*
Notes:
[1] Runoff coefficients for each surface type as per Department of Environmental Protection (DEP).

Table K-9 shows the estimated stormwater runoff to Flushing Creek and the sanitary flows to the combined sewer system upstream of Tallman Island WWTP. Stormwater from the Projected Development Sites would be discharged directly into Flushing Creek using internal drains and privately owned outfalls. Depending on intensity and continuity during storm events with up to 2.5 inches of rainfall, direct discharge volumes to Flushing Creek would range between 0.00 and 0.72 mg. Sanitary flow from the Projected Development Sites would contribute between 0.16 to 0.83 mg to Tallman Island WWTP.

Table K-9: With-Action Combined Stormwater Runoff and Wastewater Generation from the Projected Development Sites

Subcatchment Area	Rainfall (in)	Duration (hours)	Total Area (acres)	Weighted Runoff Coefficient[1]	Stormwater Runoff (mg)	Sanitary to CSS[2] (mg)[3]	Total Volume to CSS[2] (mg)[3]
Direct Drainage	0.00	3.80	12	0.89	0.00	0.16	0.16
	0.40	3.80			0.12	0.16	0.16
	1.20	11.30			0.35	0.48	0.48
	2.50	19.50			0.72	0.83	0.83

Source: *Calculated using DEP runoff coefficients*
Notes:
[1] Refer to Table K-8.
[2] Combined sewer system (CSS).
[3] Million gallons (mg).

The increased flow to the combined sewer system would be a direct result of the increased sanitary flows associated with the development in the With-Action Condition. The implementation of low-flow fixtures, per the New York City Plumbing Code, Local Law 33 of 2007, and the U.S. Environmental Protection Agency's WaterSense Program, would help to potentially reduce sanitary flows. Because the Tallman Island WWTP operates with a 23-mgd excess capacity, the anticipated flow increases into the combined sewer system is not anticipated to adversely affect water quality.

The Proposed Actions would generate a net increase in stormwater discharged into Flushing Creek of between 0.02 and 0.14 mg compared to existing conditions (see Table K-3). The increased stormwater flows would continue to be conveyed to Flushing Creek by direct discharge. Additionally, the stormwater will be treated in accordance with the New York State Department of Environmental Conservation's (NYSDEC) Special Pollutant Discharge Elimination System (SPDES) General Permit Regulations. The treatment practices will include a combination of hydrodynamic separators or green roofs or storm water infiltration. These treatment practices will be designed to remove or reduce suspended solids and nitrogen from the storm water runoff prior to being discharged to Flushing Creek. Furthermore, applicants would be required to incorporate Best Management Practices (BMPs) to treat and improve water quality of the runoff leaving the site. With these measures in place, the Proposed Actions are not expected to result in any potentially significant adverse impacts to stormwater infrastructure.

CONCLUSION

The Proposed Actions, with the incorporation of the identified PCREs, are not anticipated to result in any potentially significant adverse impacts on the City's wastewater infrastructure or treatment facilities. In the With-Action Condition, wastewater from the Projected Development Sites would continue to be treated by the Tallman Island WWTP. Based on water usage and sewage generation rates in Table 13-2 of the *CEQR Technical Manual*, the development in the With-Action Condition would generate approximately 1,022,167 gpd of wastewater, which is a net increase of approximately 9,726 gpd (0.01 mgd) over the development in the No-Action Condition. This incremental generation of 9,726 gpd of wastewater represents approximately 0.01 percent of the

Tallman Island WWTP wastewater capacity. Because the incremental wastewater generated by the Proposed Actions would not cause the Tallman Island WWTP to exceed its operational capacity, it is anticipated that the Proposed Actions would not result in significant adverse impacts to New York City's wastewater infrastructure or treatment facilities.

The Project Area is within a direct drainage area, where all stormwater runoff would be discharged directly into Flushing Creek using internal drains and privately owned outfalls. Compared to existing conditions, it is anticipated that development in the With-Action Condition would generate a net increase in stormwater volumes discharged into Flushing Creek during rainfall events ranging between approximately 0.02 and 0.14 mg. The incorporation of BMPs to improve water quality of the stormwater runoff would further limit the impact from the Proposed Actions. As a result, the Proposed Actions are not anticipated to result in any potentially significant adverse impacts on New York City's stormwater infrastructure or treatment facilities.

ATTACHMENT L: SOLID WASTE AND SANITATION SERVICES

INTRODUCTION

This chapter assesses the potential for the Proposed Actions to result in a significant adverse impact on New York City's solid waste and sanitation services. According to the *CEQR Technical Manual,* a solid waste and sanitation services assessment is intended to determine whether a project has the potential to cause a substantial increase in solid waste production. Such an increase may overburden available waste management capacity or otherwise be inconsistent with the City's Solid Waste Management Plan (SWMP) or with state policy related to the City's integrated solid waste management system.

This assessment estimates the amount of existing solid waste generated in the Project Area as well as solid waste that would be generated in the No-Action Condition. The analysis then estimates waste generation in the No-Action Condition and describes the incremental solid waste projected in the With-Action Condition. In addition, this chapter assesses the consistency of the Proposed Actions to the City's SWMP.

METHODOLOGY

According to the *CEQR Technical Manual*, projects resulting in a generation rate of less than 50 tons (100,000 pounds) of solid waste per week would not result in a significant adverse impact to the City's waste management capacity and, therefore, do not warrant a detailed analysis. Because the Proposed Actions are anticipated to generate an increase of approximately 101.81 tons of solid waste per week, a solid waste and sanitation services analysis is warranted.

Solid waste generation rates provided in the *CEQR Technical Manual* were used to assess the effects of any incremental demand on municipal and private sanitation services. In both the No-Action Condition and the With-Action Condition, users would be required to participate in the City's recycling program for paper, metals, and certain types of plastics and glass.

EXISTING CONDITIONS

Description of Current Solid Waste Sanitation Services Operations

The New York City Department of Sanitation (DSNY) is responsible for the collection and disposal of residential and institutional solid waste in the City, which constitutes roughly 25 percent of the City's daily total waste. Private carters are responsible for the remaining 75 percent and manage solid waste from commercial and manufacturing uses.[69] The system necessary to handle this volume of waste is vast and complex, involving a network of City employees, garages and specialized vehicles, as well as an array of private haulers, transfer stations, and disposal companies.[70]

DSNY, in addition to the collection of municipal solid waste, refuse, and designated recyclable materials generated by residential and institutional uses, also collects waste from City trash bins,

[69] DSNY Comprehensive Solid Waste Management Plan, 2006. (Accessed April 15, 2019).
[70] DSNY Comprehensive Solid Waste Management Plan, 2006.

street cleaning operations, and lot cleaning activities. DSNY is one of the world's largest municipal sanitation departments, relying on its fleet of over 2,000 waste collection trucks to collect more than 10,500 tons of residential and institutional garbage and 1,760 tons of recyclables in the City every day.[71]

Private carting companies collect garbage generated by the City's commercial, manufacturing, and construction activities.[72] The City's Business Integrity Commission licenses over 4,000 private carting trucks to collect the City's commercial Municipal Solid Waste (MSW) and recyclables, and registers over 4,000 more trucks to haul private sector construction and demolition debris in the City.[73] Private commercial carters typically carry between 12 and 15 tons of waste material per truck.[74,75]

The 2006 SWMP estimates that 74,000 tons of commercial solid waste per week will be generated in New York City by 2025. DSNY is projected to process approximately 115,830 tons of waste per week by 2025.[76] Under the SWMP, residential solid waste generated within the Project Area is currently processed by a converted marine transfer station (MTS) in Queens, Community District 7.[77] This converted MTS is one of two DSNY-operated transfer stations in Queens for residential municipal solid waste. Accordingly, the transfer station is anticipated to be operational until at least 2025 and will continue to serve all eight community districts in eastern Queens.

Existing Solid Waste Generation

The Projected Development Sites are currently all vacant lots, with the exception of a surface parking lot on Projected Development Site 3. Due to the vacant nature of the Project Area, there are no existing sources (residential, institutional, commercial, or industrial) of solid waste generation.

NO-ACTION CONDITION

In the No-Action Condition, according to Attachment A, "Project Description," the Projected Development Sites would comprise 1,463 dwelling units (DUs), 912 retail employees, 1,220 office employees, 743 hotel employees, 60 community facility employees, and 9 industrial/manufacturing employees.

As shown in Table L-2, based on the Citywide solid waste generation rates in Table 14-1 of the *CEQR Technical Manual,* solid waste generation is expected to increase over existing conditions in the No-Action Condition, with the majority of the additional solid waste processed by various private carters. The No-Action Condition would result in a generation of 102.15 tons of solid waste per week. Approximately 30.26 tons of solid waste per week would be processed by DSNY, and the remaining 71.89 tons of solid waste per week would be processed by private carters.

[71] Ibid.
[72] About DSNY, https://www1.nyc.gov/assets/dsny/site/about
[73] CEQR Technical Manual, 2014.
[74] Ibid.
[75] For the purposes of this assessment, it is assumed a DSNY truckload handles 12.5 tons per truck, and a private carter truckload handles 13.5 tons per truck.
[76] Table II 2-6.
[77] Table 3.3-1.

Table L-2: No-Action Solid Waste Generation

Use	Population	Generation Rate (lbs/week)[1]	Solid Waste Generation (lbs/week)	Solid Waste Generation (tons/week)
Residential	1,463 DUs	41 per household	59,983	29.99
Retail	912 employees	79 per employee	72,083	36.04
Office	1,220 employees	13 per employee	15,860	7.93
Hotel	743 employees	75 per employee	55,758	27.88
Community Facility	60 employees	9 per employee	537	0.27
Industrial	9 employees	9 per employee	77	0.04
Total Solid Waste Generation			**204,298**	**102.15**
Solid Waste Handled by DSNY			*60,520*	*30.26*
Solid Waste Handled by Private Carters			*143,779*	*71.89*

***Notes**:*
[1] Solid Waste Generation Rate is listed in Table 14-1 of the CEQR Technical Manual, 2014. Estimates of solid waste by use per unit are listed below:
Residential: 41 lb/week per dwelling unit.
Community Facility: Rate is the same as Commercial-Single Office, 9 lb/week per square foot.
Retail: 79 lb/week per employee; assume 3 employees per 1,000 sf of retail space.
Office: 13 lb/week per employee; assume 1 employee per 250 sf of office space.
Hotel: 75 lb/week per employee; assume 1 employee per 2.67 hotel rooms (and 400sf per hotel room).
Storage (warehouse): 9 lb/week per employee; assume 1 employee per 15,000 sf of storage space.

The estimated solid waste generated by the development in the No-Action Condition represents an incremental increase of approximately 102.15 tons of solid waste per week over existing conditions; it is anticipated DSNY would process an additional 20.26 tons of solid waste per week and private carters would process an additional 71.89 tons of solid waste per week.

WITH-ACTION CONDITION

The With-Action Condition would comprise 1,756 DUs, 896 retail employees, 1,535 office employees, 669 hotel employees, and 66 community facility employees.

Over the No-Action Condition, the With-Action Condition (see Attachment A, "Project Description") would facilitate an increase in residential units (293 additional DUs), a decrease of 16 retail employees, 315 additional office employees, a decrease of 75 hotel employees, 6 additional community facility employees, and a decrease of 9 industrial/manufacturing employees.

As shown in Table L-3, based on the Citywide solid waste generation rates in Table 14-1 of the *CEQR Technical Manual,* the Proposed Actions would generate approximately 106.76 tons of solid waste per week.

Table L-3: With-Action Solid Waste Generation

Use	Population	Solid Waste Generation Rate (lbs/week)[1]	Solid Waste Generation (lbs/week)	Solid Waste Generation (tons/week)
Residential	1,756 DUs	41 per household	71,996	36.00
Retail	896 employees	79 per employee	70,818	35.41
Office	1,535 employees	13 per employee	19,949	9.97
Hotel	669 employees	75 per employee	50,169	25.08
Community Facility	66 employees	9 per employee	592	0.30
Total Solid Waste Generation			**213,524**	**106.76**
Solid Waste Handled by DSNY [1]			*72,588*	*36.29*
Solid Waste Handled by Private Carters			*140,936*	*70.47*

***Notes**:*
[1] Solid Waste Generation Rate is listed in Table 14-1 of the CEQR Technical Manual, 2014. Estimates of solid waste by use per unit are listed below:
Residential: 41 lb/week per dwelling unit.
Community Facility: Rate is the same as Commercial-Single Office, 9 lb/week per square foot.
Retail: 79 lb/week per employee; assumes 3 employees per 1,000 sf of retail space.
Office: 13 lb/week per employee; assumes 1 employee per 250 sf of office space.
Hotel: 75 lb/week per employee; assumes 1 employee per 2.67 hotel rooms (and 400 sf per hotel room).

Table L-4 shows that DSNY would process approximately 36.29 tons of solid waste per week, and the remaining 70.47 tons of solid waste per week would be processed by private carters. The solid waste generated by the Proposed Actions represents an incremental increase of approximately 4.61 tons of solid waste per week over the No-Action Condition. Compared to the No-Action Condition, an additional 6.03 tons per week of the solid waste generated by the proposed residential and institutional uses would be handled by DSNY, and a decrease of 1.42 tons per would be handled by private carters.

Table L-4: Weekly Solid Waste Generation - No-Action, and With-Action Conditions

Solid Waste (Tons/Week)	No-Action Condition	With-Action Condition	Increment
Total Generation	**102.15**	**106.76**	**4.61**
Handled by DSNY	*30.26*	*36.29*	*6.03*
Handled by Private Carters	*71.89*	*70.47*	*-1.42*

The 6.03 ton increase in solid waste per week that DSNY would collect and process in the With-Action Condition represents approximately 0.005 percent of the anticipated waste handled per week by DSNY by the year 2025, and approximately 0.003 percent of the anticipated waste handled per week by both DSNY and private carters within the City by the year 2025.

Based on the average DSNY truck capacity of approximately 12.5 tons, the Proposed Actions would facilitate an increase of less than one DSNY truckload of solid waste per week. In addition, the SWMP

projected an increase in Queens' population of 21.12 percent by the year 2025.[78] The Proposed Actions would be aligned with the projected growth within Queens and DSNY would be able to accommodate the increase in solid waste resulting from the Proposed Actions.

Private carters would be responsible for the handling of commercial and industrial uses, which would be subject to mandatory recycling requirements for paper, metals, construction waste, aluminum foil, and metal, glass, and plastic containers. The 66.36 tons of commercial solid waste per week represents an incremental decrease of approximately 2.32 tons of solid waste per week compared to the No-Action Condition. Based on the average private carter truck capacity of approximately 13.5 tons, the Proposed Actions would warrant less than one private carter truckload less of solid waste per week. The anticipated decrease of 2.32 tons of solid waste per week handled by private carters in the With-Action Condition represents a decrease of approximately 0.003 percent of the anticipated commercial waste handled per week by private carters by the year 2025, and a decrease of approximately 0.001 percent of the anticipated waste handled by DSNY and private carters, respectively, within the City by the year 2025 compared to the No-Action Condition.

The total incremental solid waste generated by the development in the With-Action Condition would represent an increase of approximately 0.002 percent of solid waste generated per week in New York City in 2025. Due to the size of the City's public and private refuse and recyclables collection fleets, as well as the existing capacity of the local and regional transfer stations and related access to materials recovery facilities and disposal facilities, the incremental solid waste generated by the Proposed Actions would be minimal and the Proposed Actions would not adversely impact DSNY or the City's solid waste management capacity. The Proposed Actions would not conflict with the SWMP or have a direct effect on a solid waste management facility.

CONCLUSION

The Proposed Actions would not result in significant adverse impacts on solid waste and sanitation services. A preliminary assessment determined the Proposed Actions would generate more than 50 tons of solid waste per week and a detailed analysis of the potential effects of the Proposed Actions on solid waste and sanitation services was conducted. In comparison with the No-Action Condition, a relatively minor increase in solid waste would be generated in the With-Action Condition, equating to an increase of approximately 3.72 tons of solid waste per week. This overall increase is made up of an additional 6.04 tons per week of solid waste generated by the proposed residential and institutional uses (which would be handled by DSNY), and a decrease of 2.32 tons per week of solid waste that would be generated by the commercial uses (which would be handled by private carters). Based on the average DSNY truck capacity of approximately 12.5 tons, the Proposed Actions would produce less than one DSNY truckload of solid waste per week.

The additional solid waste resulting from the Proposed Actions would represent a 0.005 percent increase of New York City's anticipated DSNY-managed waste generation per week in 2025, and a 0.003 percent decrease of the solid waste handled by private commercial carters per week in 2025.[79] Additionally, the Proposed Actions would comply with the New York City's Administrative Code on

[78] Table II 2-1, *DSNY Comprehensive Solid Waste Management Plan, 2006.*

[79] This Draft Environmental Assessment Statement considers an analysis year of 2025; the *DSNY SWMP* (adopted September 2006) established a framework for waste management in New York City through approximately 2025.

Organic Waste generated by Commercial Establishments in regards to the hotel use planned for the Projected Development Sites. The Projected Development Sites that contain hotel use would align with the City's commercial organic source separation rules, which address designated covered establishments, source separation requirements, and storage and set-out requirements. The Proposed Actions would be consistent with the goals of the SWMP, and therefore the Proposed Actions would not result in significant adverse impacts on solid waste and sanitation services and no further analysis is warranted.

ATTACHMENT M: TRANSPORTATION

INTRODUCTION

The objective of a transportation analysis is to determine whether a proposed action may have a potentially significant adverse impact on traffic operations and mobility, public transportation facilities and services; pedestrian elements and flow; safety of roadway users (pedestrians, bicyclists, and vehicles); and parking. The *2014 CEQR Technical Manual* identifies minimum development densities that potentially require a transportation analysis. Development at less than the development densities shown in Table 16-1 of the *CEQR Technical Manual* generally result in fewer than 50 peak-hour vehicle trips, 200 peak-hour subway/rail or bus transit riders, or 200 peak-hour pedestrian trips, where significant adverse impacts are considered unlikely. Since the development facilitated by the Special Flushing Waterfront District ("Proposed Actions") exceeds the minimum development densities, a Transportation Screening Assessment was conducted pursuant to the *CEQR Technical Manual* guidelines.

METHODOLOGY

To assess the potential effects of the Proposed Actions, it is necessary to determine the incremental development that could occur in the Project Area (Queens Block 4963, Lots 1, 7, 8, 9, 65, 75, 85, 200, 210, 212, and 249; and Block 5066, Lot 7501). Development sites within the Project Area have been divided into two categories: Projected Development Sites and Potential Development Sites.

Projected Development Sites as part of the Special Flushing Waterfront District ("SFWD") include Block 4963, Lots 7, 8, and 9 ("Projected Development Site 1"), Block 4963, Lot 65 ("Projected Development Site 2"), Block 4963, Lot 85 ("Projected Development Site 3"), and Block 4963, Lots 212, and 249 ("Projected Development Site 4"). Potential Development Sites include Block 4963, Lot 75 ("Potential Development Site A"), and Block 4963, Lot 200 ("Potential Development Site B").

Per *CEQR Technical Manual* guidelines, only the Projected Development Sites are considered as part of the Transportation Analysis. A Reasonable Worse Case Development Scenario (RWCDS) for both the "Future Without the Proposed Actions," also referred to as the Future No-Action Condition and "Future With the Proposed Actions," also referred to as the Future With-Action Condition, was developed for Build Year 2025. The development programs by sites in the Future No-Action Condition and Future With-Action Condition are shown in Tables M-1 and M-2, respectively. The incremental difference between the development programs of the Projected Development sites in the Future No-Action and With-Action Conditions used for the transportation analyses is shown in Table M-3.

Table M-1. Future No-Action Condition Development Program

Site	Residential DUs	Local Retail gsf	Destination Retail gsf	Office gsf	Hotel rooms	Community Facility gsf	Light Industrial gsf	Passive Park Space acres	Active Park Space acres	Parking spaces
1	546	135,191	33,798	180,835	365	4,300	0	0.115	0.115	1,598
2	399	54,304	0	0	877	13,505	0	0.075	0.075	582
3	518	80,855	0	124,169	743	2,070	0	0.110	0.110	1,034
4	0	0	0	0	0	0	128,500	0.000	0.000	54
Total	1,463	270,350	33,798	305,004	1,985	19,875	128,500	0.300	0.300	3,268

Table M-2. Future With-Action Condition Development Program

Site	Residential DUs	Local Retail gsf	Destination Retail gsf	Office gsf	Hotel rooms	Community Facility gsf	Light Industrial gsf	Passive Park Space acres	Active Park Space acres	Parking spaces
1	546	135,191	33,798	180,835	365	4,300	0	0.490	0.490	510
2	399	54,304	0	0	877	13,505	0	0.395	0.395	318
3	507	58,383	0	202,806	544	1,674	0	0.480	0.480	539
4	304	17,135	0	0	0	2,434	0	0.178	0.178	166
Total	1,756	265,013	33,798	383,641	1,786	21,913	0	1.543	1.543	1,533

Table M-3. Incremental Difference between Future No-Action and With-Action Conditions

Site	Residential DUs	Local Retail gsf	Destination Retail gsf	Office gsf	Hotel rooms	Community Facility gsf	Light Industrial gsf	Passive Park Space acres	Active Park Space acres	Parking spaces
1	0	0	0	0	0	0	0	0.38	0.38	-1,088
2	0	0	0	0	0	0	0	0.32	0.32	-264
3	-11	-22,472	0	78,637	-199	-396	0	0.37	0.37	-495
4	304	17,135	0	0	0	2,434	-128,500	0.18	0.18	112
Total	293	-5,337	0	78,637	-199	2,038	-128,500	1.24	1.24	-1,735

TRANSPORTATION SCREENING ASSESSMENT

The *2014 City Environmental Quality Review Technical Manual* ("*CEQR Technical Manual*") describes a two-tier screening process to determine if quantified analyses of transportation conditions are warranted. The preliminary assessment begins with a trip generation analysis (Level 1) to estimate person and vehicle trips that would result from the Proposed Actions. According to the *CEQR Technical Manual*, a project that is expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips does not warrant further quantified analyses. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the Proposed Actions could 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 pedestrian element, then further quantified analyses of transportation conditions may be warranted to assess transportation conditions in the Study Area.

Level 1 (Trip Generation) Screening Assessment

A Level 1 screening assessment was conducted in accordance with CEQR guidelines to determine if the increment in the Future With-Action Condition as compared to the Future No-Action Condition

would exceed CEQR thresholds for conducting quantified transportation analyses. To undertake this assessment, a trip generation analysis was conducted for the weekday AM, midday, PM, and Saturday midday peak hours. Trip estimates were developed for the residential, local retail, destination retail, office, hotel, community facility, light industrial, passive park space and active park space components for the Future No-Action and With-Action Conditions.

Trip Generation Analysis

Travel Demand Factors used in developing trip generation are summarized in Table M-4. These factors are primarily based on information provided in the *CEQR Technical Manual*, *2013–2017 U.S. Census Bureau's American Community Survey (ACS) Journey to Work* database, *2006–2010 U.S. Census Bureau's American Community Survey (ACS) Reverse-Journey to Work* database, *ITE Trip Generation Manual, 10th Edition, NYCDOT Local Retail Mode Choice Survey for Queens – Transit Zone, NYCDOT Hotel Mode Choice Survey for Queens – Transit Zone, NYCDOT Medical Office Mode Choice Survey for Queens - Transit Zone* and other approved transportation studies including *2010 Flushing Commons FEIS* (CEQR No. 06DME010Q), *2016 East New York Rezoning Proposal FEIS* (CEQR No. 15DCP102K), *2007 Downtown Jamaica Redevelopment Plan FEIS* (CEQR No. 05DCP081Q) and *2005 Brooklyn Bridge Park FEIS*.

The original sources of the factors used by the *Flushing Commons FEIS* include the *1975 Urban Space for Pedestrians (Pushkarev & Zupan), 1973 Transportation and Economic Opportunity (Regional Plan Authority), 1997 Coliseum Redevelopment FSEIS*, *ITE Trip Generation Manual – 7th Edition*, *2003 Pier 94 Unconvention Center, EAS*, *2004 Destination Retail Survey at Queens Place and 1997 PHA Survey at Atlantic Center (Brooklyn), 1981 FHWA Curbside Pickup and Delivery and Arterial Traffic Impacts, 2003 Renaissance Plaza Expansion EAS* and *1999 Marriot Hotel Transportation Survey (Brooklyn)*.

The original sources of the factors used by the *East New York Rezoning Proposal FEIS* and *Downtown Jamaica Redevelopment Plan FEIS* include the *NYCDOT ECO Survey for Downtown Brooklyn* and the *1981 FHWA Curbside Pickup and Delivery and Arterial Traffic Impacts*.

The original sources of the factors used by the *Brooklyn Bridge Park FEIS* include the *1998 Hudson River Park FEIS*, the *2003 PHA Brooklyn Heights Promenade Park User Survey* and the *1981 FHWA Curbside Pickup and Delivery and Arterial Traffic Impacts.*

Residential

Daily person trip generation rates of 8.075 person trips per dwelling unit for weekday and 9.6 person trips per dwelling unit for Saturday were obtained from the *CEQR Technical Manual*. Temporal distributions of 10 percent for the weekday AM peak hour, 5 percent for the weekday midday peak hour, 11 percent for the weekday PM peak hour, and 8 percent for the Saturday midday peak hour were also obtained from the *CEQR Technical Manual*. Directional distributions for the weekday AM, midday, PM and Saturday midday peak hours were obtained from the *Flushing Commons FEIS*. Modal splits of 26.1 percent by auto, 0.3 percent by taxi, 33.6 percent by subway, 15.1 percent by bus, 0.4 percent by railroad and 24.6 percent by walk were obtained from the *U.S. Census Bureau's Journey to Work, 2013-2017 American Community Survey*. Vehicle occupancies of 1.75 per auto and 1.75 per taxi

were also obtained from the *U.S. Census Bureau's Journey to Work, 2013-2017 American Community Survey*.

For truck deliveries, daily trip generation rates of 0.06 trips per dwelling unit for weekday and 0.02 trips per dwelling unit for Saturday were obtained from the *CEQR Technical Manual*. Temporal and directional distribution factors for truck deliveries were also obtained from the *CEQR Technical Manual*.

Office

Daily person trip generation rates of 18 person trips per 1,000 gsf for weekday and 3.9 person trips per 1,000 gsf for Saturday were obtained from the *CEQR Technical Manual*. Temporal distributions of 12 percent for the weekday AM peak hour, 15 percent for the weekday midday peak hour, 14 percent for the weekday PM peak hour, and 17 percent for the Saturday midday peak hour were also obtained from the *CEQR Technical Manual*. Directional distributions for the weekday AM, midday, PM and Saturday midday peak hours were obtained from the *Flushing Commons FEIS*. Modal splits of 42.1 percent by auto, 0 percent by taxi, 18.6 percent by subway, 21.5 percent by bus, 1.8 percent by railroad and 15.9 percent by walk for the weekday AM, PM and Saturday midday peak hours were obtained from the *U.S. Census Bureau's Reverse Journey to Work, 2006-2010 American Community Survey*; and 2 percent by auto, 1 percent by taxi, 7 percent by subway, 7 percent by bus and 83 percent by walk for the weekday midday peak hour were obtained from the *Downtown Jamaica Redevelopment Plan FEIS*. Vehicle occupancies of 1.13 per auto and 1.13 per taxi were obtained from the *U.S. Census Bureau's Reverse Journey to Work, 2006-2010 American Community Survey*.

For truck deliveries, daily trip generation rates of 0.32 trips per 1,000 gsf for weekday and 0.01 trips per 1,000 gsf for Saturday were obtained from the *CEQR Technical Manual*. Temporal and directional distribution factors for truck deliveries were also obtained from the *CEQR Technical Manual*.

Local Retail

Daily person trip generation rates of 205 person trips per 1,000 square feet for weekday and 240 person trips per 1,000 square feet for Saturday were obtained from the *CEQR Technical Manual*. In line with the accepted guidelines, a 15-percent linked trip credit was applied to the local retail trip generation estimates. Temporal distributions of 3 percent for the weekday AM peak hour, 19 percent for the weekday midday peak hour, 10 percent for the weekday PM peak hour, and 10 percent for the Saturday peak hour were also obtained from the *CEQR Technical Manual*. Directional distributions for the weekday AM, midday, PM, and Saturday midday peak hours were obtained from the *Flushing Commons FEIS*. Modal splits of 11 percent by auto, 0 percent by taxi, 4 percent by subway, 3 percent by bus, and 82 percent by walk for weekday; and 8 percent by auto, 0 percent by taxi, 7 percent by subway, 4 percent by bus, and 81 percent by walk for Saturday were obtained from the *NYCDOT Local Retail Mode Choice Study for Queens – Transit Zone*. Vehicle occupancies of 1.50 per auto and 1.50 per taxi for weekday; and 1.60 per auto and 1.60 per taxi for Saturday were also obtained from the *NYCDOT Local Retail Mode Choice Study for Queens – Transit Zone*.

For truck deliveries, daily trip generation rates of 0.35 trips per 1,000 square feet for weekday and 0.04 trips per 1,000 square feet for Saturday were obtained from the *CEQR Technical Manual*.

Temporal and directional distribution factors for truck deliveries were also obtained from the *CEQR Technical Manual*.

Destination Retail

Daily person trip generation rates of 78.2 person trips per 1,000 square feet for weekday and 92.5 person trips per 1,000 square feet for Saturday were obtained from the *CEQR Technical Manual*. Temporal distributions of 3 percent for the weekday AM peak hour, 9 percent for the weekday midday peak hour, 9 percent for the weekday PM peak hour, and 11 percent for the Saturday peak hour were also obtained from the *CEQR Technical Manual*. Directional distributions for the weekday AM, midday, PM, and Saturday midday peak hours were obtained from the *Flushing Commons FEIS*. Modal splits of 59 percent by auto, 3 percent by taxi, 15 percent by subway, 18 percent by bus, and 5 percent by walk; and vehicle occupancies of 2.05 per auto and 2.05 per taxi were also obtained from the *Flushing Commons FEIS*.

For truck deliveries, daily trip generation rates of 0.70 trips per 1,000 square feet for weekday and 0.04 trips per 1,000 square feet for Saturday were obtained from the *Flushing Commons FEIS*. Temporal and directional distribution factors for truck deliveries were also obtained from the *Flushing Commons FEIS*.

Hotel

Daily person trip generation rates of 9.4 person trips per room for weekday and 9.4 person trips per room for Saturday were obtained from the *CEQR Technical Manual*. Temporal distributions of 8 percent for the weekday AM peak hour, 14 percent for the weekday midday peak hour, 13 percent for the weekday PM peak hour, and 9 percent for the Saturday midday peak hour were also obtained from the *CEQR Technical Manual*. Directional distributions were obtained from the *Flushing Commons FEIS*. Modal splits of 18 percent by auto, 30 percent by taxi, 40 percent by subway, 2 percent by bus, 1 percent by railroad and 9 percent by walk for weekday; and 14 percent by auto, 28 percent by taxi, 38 percent by subway, 2 percent by bus, 1 percent by railroad and 17 percent by walk for Saturday were obtained from the *NYCDOT Hotel Mode Choice Survey, Queens - Transit Zone*. Vehicle occupancies of 2.00 per auto and 2.20 per taxi for weekday; and 2.20 per auto and 2.70 per taxi for Saturday were also obtained from the *NYCDOT Hotel Mode Choice Study for Queens – Transit Zone*.

For truck deliveries, daily trip generation rates of 0.06 trips per room for weekday and 0.01 trips per room for Saturday were obtained from the *East New York Rezoning Proposal FEIS*. Temporal and directional distribution factors for truck deliveries were also obtained from *East New York Rezoning Proposal FEIS*.

Community Facility (Medical Office)

Daily person trip generation rates of 76 person trips per 1,000 gsf for weekday and 76 person trips per 1,000 gsf for Saturday were obtained from the *NYCDOT Medical Office Mode Choice Survey, Queens - Transit Zone*. Temporal distributions of 11 percent for the weekday AM peak hour, 13 percent for the weekday midday peak hour, 9 percent for the weekday PM peak hour and 17 percent for the Saturday midday peak hour were also obtained from the *NYCDOT Medical Office Mode Choice Survey,*

Queens - Transit Zone. Directional distributions for the weekday AM, midday and PM peak hours and Saturday midday were obtained from the *NYCDOT Medical Office Mode Choice Survey, Queens - Transit Zone*. Modal splits of 23 percent by auto, 7 percent by taxi, 14 percent by subway, 26 percent by bus and 30 percent by walk; and vehicle occupancies of 1.58 per auto and 1.58 per taxi were also obtained from the *NYCDOT Medical Office Mode Choice Survey, Queens - Transit Zone*.

For truck deliveries, daily trip generation rates of 0.29 trips per 1,000 gsf for weekday and 0.29 trips per 1,000 gsf for Saturday were obtained from the *East New York Rezoning Proposal FEIS*. Temporal and directional distribution factors for truck deliveries for were also obtained from the *East New York Rezoning Proposal FEIS*, with the exception of the weekday AM peak hour which was obtained from the *Downtown Jamaica Redevelopment Plan FEIS*.

Light Industrial

Daily person trip generation rates of 10.44 person trips per 1,000 gsf for weekday and 4.19 person trips per 1,000 gsf for Saturday were based on the *ITE Trip Generation Manual, 10th Edition - Land Use 110: General Light Industrial*. Temporal distributions of 18.6 percent for the weekday AM peak hour, 8.3 percent for the weekday midday peak hour, 16.7 percent for the weekday PM peak hour, and 20.6 percent for the Saturday midday peak hour were also obtained from the *ITE Trip Generation Manual, 10th Edition*. Directional distributions for the weekday AM, midday, PM and Saturday midday peak hours were also obtained from the *ITE Trip Generation Manual, 10th Edition*. Modal splits of 42.1 percent by auto, 0 percent by taxi, 18.6 percent by subway, 21.5 percent by bus, 1.8 percent by railroad and 15.9 percent by walk for weekday AM, PM and Saturday midday peak hours were obtained from the *U.S. Census Bureau's Reverse Journey to Work, 2006-2010 American Community Survey*; and 2 percent by auto, 1 percent by taxi, 7 percent by subway, 7 percent by bus and 83 percent by walk for weekday midday peak hour were obtained from the *Downtown Jamaica Redevelopment Plan FEIS*. Vehicle occupancies of 1.13 per auto and 1.13 per taxi were also obtained from the *U.S. Census Bureau's Reverse Journey to Work, 2006-2010 American Community Survey*.

For truck deliveries, daily trip generation rates of 0.67 trips per 1,000 gsf for weekday and 0.67 trips per 1,000 gsf for Saturday were obtained from the *East New York Rezoning Proposal FEIS*. Temporal and directional distribution factors for truck deliveries for were also obtained from the *East New York Rezoning Proposal FEIS*.

Passive/Active Park Space

Daily person trip generation rates of 44 person trips per acre for weekday and 62 person trips per acre for Saturday for Passive Park Space; and 139 person trips per acre for weekday and 196 person trips per acre for Saturday for Active Park Space were obtained from the *CEQR Technical Manual*. Temporal distributions of 3 percent for the weekday AM peak hour, 5 percent for the weekday midday peak hour, 6 percent for the weekday PM peak hour, and 6 percent for the Saturday midday peak hour were also obtained from the *CEQR Technical Manual*. Directional distributions for the weekday AM, midday, PM and Saturday midday peak hours were obtained from the *Brooklyn Bridge Park FEIS*. Modal splits of 20 percent by auto, 1 percent by taxi, 12 percent by subway, 11 percent by bus and 56 percent by walk; and vehicle occupancies of 2.90 per auto and 3.00 per taxi were also obtained from the *Brooklyn Bridge Park FEIS*.

For truck deliveries, daily trip generation rates of 0.01 trips per 1,000 gsf for weekday and 0 trips per 1,000 gsf for Saturday were obtained from the *Brooklyn Bridge Park FEIS*. Temporal and directional distribution factors for truck deliveries for were also obtained from the *Brooklyn Bridge Park FEIS*.

Net Incremental Trips

Trip generation estimates for the Future No-Action Condition, Future With-Action Condition, and the resulting Net Incremental trips are shown in Tables M-5 through M-7, respectively. As summarized in Table M-7, the Future With-Action Condition is expected to generate approximately 3, -188, -74 and -65 net incremental person trips; and -54, -85, -61 and -32 net incremental vehicle trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively.

Table M-4. Transportation Planning Assumptions

Use	Residential				Office				Local Retail				Destination Retail				Hotel			
	(1)				(1)				(1)				(1)				(1)			
Total Daily Person Trip	**Weekday**		**SAT**		**Weekday**		**SAT**		**Weekday**		**SAT**		**Weekday**		**SAT**		**Weekday**		**SAT**	
	8.075		9.6		18		3.9		205		240		78.2		92.5		9.4		9.4	
	Trips/DU				Trips/KSF				Trips/KSF				Trips/KSF				Trips/room			
Trip Linkage	0%				0%				15%				0%				0%			
Net Daily Person Trip	**Weekday**		**SAT**		**Weekday**		**SAT**		**Weekday**		**SAT**		**Weekday**		**SAT**		**Weekday**		**SAT**	
	8.075		9.6		18		3.9		174.3		204.0		78.2		92.5		9.4		9.4	
	Trips/DU				Trips/KSF				Trips/KSF				Trips/KSF				Trips/room			
	(1)				(1)				(1)				(1)				(1)			
Temporal	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
	10%	5%	11%	8%	12%	15%	14%	17%	3%	19%	10%	10%	3%	9%	9%	11%	8%	14%	13%	9%
Direction	(2)				(2)				(6)				(8)				(11)			
In	20%	51%	65%	57%	96%	48%	5%	60%	50%	50%	50%	50%	61%	55%	47%	51%	41%	68%	59%	56%
Out	80%	49%	35%	43%	4%	52%	95%	40%	50%	50%	50%	50%	39%	45%	53%	49%	59%	32%	41%	44%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(3)				(4)(5)				(7)				(9)				(12)			
	AM	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
Auto	26.1%	26.1%	26.1%	26.1%	42.1%	2%	42.1%	42.1%	11%	11%	11%	8%	59%	59%	59%	59%	18%	18%	18%	14%
Taxi	0.3%	0.3%	0.3%	0.3%	0%	1%	0%	0%	0%	0%	0%	0%	3%	3%	3%	3%	30%	30%	30%	28%
Subway	33.6%	33.6%	33.6%	33.6%	18.6%	7%	18.6%	18.6%	4%	4%	4%	7%	15%	15%	15%	15%	40%	40%	40%	38%
Bus	15.1%	15.1%	15.1%	15.1%	21.5%	7%	21.5%	21.5%	3%	3%	3%	4%	18%	18%	18%	18%	2%	2%	2%	2%
Railroad	0.4%	0.4%	0.4%	0.4%	1.8%	0%	1.8%	1.8%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%
Walk/Other	24.6%	24.6%	24.6%	24.6%	15.9%	83%	15.9%	15.9%	82%	82%	82%	81%	5%	5%	5%	5%	9%	9%	9%	17%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(3)				(5)				(7)				(9)				(12)			
	AM	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
Auto	1.75	1.75	1.75	1.75	1.13	1.13	1.13	1.13	1.50	1.50	1.50	1.60	2.05	2.05	2.05	2.05	2.00	2.00	2.00	2.20
Taxi	1.75	1.75	1.75	1.75	1.13	1.13	1.13	1.13	1.50	1.50	1.50	1.60	2.05	2.05	2.05	2.05	2.20	2.20	2.20	2.70
	(1)				(1)				(1)				(6)(10)				(13)			
Daily Delivery Trip Generation Rate	Weekday		SAT		Weekday		SAT		Weekday		SAT		Weekday		SAT		Weekday		SAT	
	0.06		0.02		0.32		0.01		0.35		0.04		0.70		0.04		0.06		0.01	
	Delivery Trips/DU				Delivery Trips/KSF				Delivery Trips/KSF				Delivery Trips/KSF				Delivery Trips/room			
	(1)				(1)				(1)				(6)(10)				(13)			
Delivery Temporal	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
	12%	9%	2%	9%	10%	11%	2%	11%	8%	11%	2%	11%	7.7%	11.0%	1.0%	11.0%	12%	9%	2%	9%
Delivery Direction	(1)				(1)				(1)				(10)				(13)			
In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Notes

(1) 2014 CEQR Technical Manual
(2) Flushing Commons FEIS, 2010 [Original Sources: Pushkarev & Zupan, "Urban Space for Pedestrians," 1975 and Regional Plan Authority, "Transportation and Economic Opportunity", 1973]
(3) U.S. Census Bureau 2013-2017 American Community Survey 5-Year Journey to Work Data (weighted average of Census Tracts 853, 855, 865 and 871 of Queens County, NY)
(4) U.S. Census Bureau 2006-2010 American Community Survey 5-Year Reverse Journey to Work Data (weighted average of Census Tracts 853, 855, 865 and 871 of Queens County, NY)
(5) Downtown Jamaica Redevelopment Plan FEIS, 2007 FEIS, 2016 for weekday midday [Original Source: NYCDOT ECO Survey data in Downtown Brooklyn]
(6) Flushing Commons FEIS, 2010 [Original Source: Coliseum Redevelopment FSEIS, 1997]
(7) NYCDOT Local Retail Mode Choice Study, Queens - Transit Zone
(8) Flushing Commons FEIS, 2010 [Original Sources: ITE Trip Generation Manual, 7th Edition and Pier 94, Unconvention Center, Inc EAS, 2003]
(9) Flushing Commons FEIS, 2010 [Original Sources: Destination Retail Survey at Queens Place (May 2004) and PHA Survey at Atlantic Center, Brooklyn, 1997]
(10) Flushing Commons FEIS, 2010 [Original Source: FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981]
(11) Flushing Commons FEIS, 2010 [Original Sources: Renaissance Plaza Expansion EAS (2003) and Marriot Hotel Transportation Survey, Brooklyn, 1999]
(12) NYCDOT Hotel Mode Choice Survey, Queens - Transit Zone
(13) East New York Rezoning Proposal FEIS, 2016 [Original Sources: FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981 and Coliseum Redevelopment FSEIS, 1997]
(14) NYCDOT Medical Office Mode Choice Survey, Queens - Transit Zone
(15) East New York Rezoning Proposal FEIS, 2016 [Original Source: FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981]
(16) Downtown Jamaica Redevelopment Plan FEIS, 2007 [Original Source: FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981]
(17) ITE Trip Generation Manual, 10th Edition - Land Use 110: General Light Industrial
(18) Brooklyn Bridge Park FEIS, 2010 [Original Source: Hudson River Park FEIS, 1998]
(19) Brooklyn Bridge Park FEIS, 2010 [Original Source: Brooklyn Heights Promenade, Park User Survey, PHA 2003]
(20) Brooklyn Bridge Park FEIS, 2010 [Original Source: FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981]

Table M-4. Transportation Planning Assumptions (cont.)

Use	Community Facility (Medical Office)				Light Industrial				Passive Park Space				Active Park Space			
	(14)				(17)				(1)				(1)			
Total Daily Person Trip	**Weekday**		**SAT**		**Weekday**		**SAT**		**Weekday**		**SAT**		**Weekday**		**SAT**	
	76		76		10.44		4.19		44		62		139		196	
	Trips/KSF				Trips/KSF				Trips/acre				Trips/acre			
Trip Linkage	0%				0%				0%				0%			
Net Daily Person Trip	**Weekday**		**SAT**		**Weekday**		**SAT**		**Weekday**		**SAT**		**Weekday**		**SAT**	
	76		76		10.44		4.19		44		62		139		196	
	Trips/KSF				Trips/KSF				Trips/acre				Trips/acre			
	(14)				(17)				(1)				(1)			
Temporal	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
	11%	13%	9%	17%	18.6%	8.3%	16.7%	20.6%	3%	5%	6%	6%	3%	5%	6%	6%
Direction	(14)				(17)				(18)				(18)			
In	62%	47%	35%	49%	87%	47%	18%	47%	55%	50%	45%	55%	55%	50%	45%	55%
Out	38%	53%	65%	51%	13%	53%	82%	53%	45%	50%	55%	45%	45%	50%	55%	45%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(14)				(4)(5)				(19)				(19)			
	AM	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
Auto	23%	23%	23%	23%	42.1%	2%	42.1%	42.1%	20%	20%	20%	20%	20%	20%	20%	20%
Taxi	7%	7%	7%	7%	0%	1%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%
Subway	14%	14%	14%	14%	18.6%	7%	18.6%	18.6%	12%	12%	12%	12%	12%	12%	12%	12%
Bus	26%	26%	26%	26%	21.5%	7%	21.5%	21.5%	11%	11%	11%	11%	11%	11%	11%	11%
Railroad	0%	0%	0%	0%	1.8%	0%	1.8%	1.8%	0%	0%	0%	0%	0%	0%	0%	0%
Walk/Other	30%	30%	30%	30%	15.9%	83%	15.9%	15.9%	56%	56%	56%	56%	56%	56%	56%	56%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(14)				(5)				(19)				(19)			
	AM	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
Auto	1.58	1.58	1.58	1.58	1.13	1.13	1.13	1.13	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90
Taxi	1.58	1.58	1.58	1.58	1.13	1.13	1.13	1.13	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
	(15)				(15)				(20)				(20)			
Daily Delivery Trip Generation Rate	Weekday		SAT		Weekday		SAT		Weekday		SAT		Weekday		SAT	
	0.29		0.29		0.67		0.67		0.01		0		0.01		0	
	Delivery Trips/KSF				Delivery Trips/KSF				Delivery Trips/KSF				Delivery Trips/KSF			
	(15)(16)				(15)				(20)				(20)			
Delivery Temporal	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**	**AM**	**MD**	**PM**	**SAT**
	9.6%	11%	1%	0%	14%	9%	1%	1%	6%	6%	1%	0%	6%	6%	1%	0%
Delivery Direction	(15)				(15)				(20)				(20)			
In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Notes

(1) 2014 CEQR Technical Manual
(2) Flushing Commons FEIS, 2010 [Original Sources: Pushkarev & Zupan, "Urban Space for Pedestrians," 1975 and Regional Plan Authority, "Transportation and Economic Opportunity", 1973]
(3) U.S. Census Bureau 2013-2017 American Community Survey 5-Year Journey to Work Data (weighted average of Census Tracts 853, 855, 865 and 871 of Queens County, NY)
(4) U.S. Census Bureau 2006-2010 American Community Survey 5-Year Reverse Journey to Work Data (weighted average of Census Tracts 853, 855, 865 and 871 of Queens County, NY)
(5) Downtown Jamaica Redevelopment Plan FEIS, 2007 FEIS, 2016 for weekday midday [Original Source: NYCDOT ECO Survey data in Downtown Brooklyn]
(6) Flushing Commons FEIS, 2010 [Original Source: Coliseum Redevelopment FSEIS, 1997]
(7) NYCDOT Local Retail Mode Choice Study, Queens - Transit Zone
(8) Flushing Commons FEIS, 2010 [Original Sources: ITE Trip Generation Manual, 7th Edition and Pier 94, Unconvention Center, Inc EAS, 2003]
(9) Flushing Commons FEIS, 2010 [Original Sources: Destination Retail Survey at Queens Place (May 2004) and PHA Survey at Atlantic Center, Brooklyn, 1997]
(10) Flushing Commons FEIS, 2010 [Original Source: FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981]
(11) Flushing Commons FEIS, 2010 [Original Sources: Renaissance Plaza Expansion EAS (2003) and Marriot Hotel Transportation Survey, Brooklyn, 1999]
(12) NYCDOT Hotel Mode Choice Survey, Queens - Transit Zone
(13) East New York Rezoning Proposal FEIS, 2016 [Original Sources: FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981 and Coliseum Redevelopment FSEIS, 1997]
(14) NYCDOT Medical Office Mode Choice Survey, Queens - Transit Zone
(15) East New York Rezoning Proposal FEIS, 2016 [Original Source: FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981]
(16) Downtown Jamaica Redevelopment Plan FEIS, 2007 [Original Source: FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981]
(17) ITE Trip Generation Manual, 10th Edition - Land Use 110: General Light Industrial
(18) Brooklyn Bridge Park FEIS, 2010 [Original Source: Hudson River Park FEIS, 1998]
(19) Brooklyn Bridge Park FEIS, 2010 [Original Source: Brooklyn Heights Promenade, Park User Survey, PHA 2003]
(20) Brooklyn Bridge Park FEIS, 2010 [Original Source: FHWA, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981]

Table M-5. Transportation Demand Forecast, Future No-Action Condition

Use	Peak Hour	In/Out	Person Trips							Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Walk	Total	Auto	Taxi	Delivery	Total
Residential	Weekday AM	In	62	1	79	36	1	58	236	35	2	5	42
		Out	246	3	318	143	4	232	945	141	2	5	148
		Total	308	3	397	178	4	290	1,181	176	4	11	190
	Weekday Midday	In	79	1	101	45	1	74	301	45	1	4	50
		Out	75	1	97	44	1	71	289	43	1	4	48
		Total	154	2	198	89	2	145	591	88	2	8	98
	Weekday PM	In	220	2	284	127	3	208	845	126	2	1	129
		Out	119	1	153	69	2	112	455	68	2	1	71
		Total	339	4	437	196	5	319	1,300	194	4	2	200
	Saturday	In	167	2	215	97	2	157	640	95	2	1	99
		Out	126	1	162	73	2	119	483	72	2	1	75
		Total	293	3	378	170	4	276	1,124	167	4	3	174
Office	Weekday AM	In	267	0	117	136	12	101	632	235	0	5	240
		Out	11	0	5	6	0	4	26	10	0	5	15
		Total	278	0	122	142	12	105	659	245	0	10	255
	Weekday Midday	In	8	4	28	28	0	328	395	7	7	5	20
		Out	9	4	30	30	0	355	428	8	7	5	20
		Total	16	8	58	58	0	684	824	15	15	11	40
	Weekday PM	In	16	0	7	8	1	6	38	14	0	1	15
		Out	308	0	136	157	13	116	730	271	0	1	272
		Total	324	0	143	165	14	122	769	286	0	2	288
	Saturday	In	51	0	23	26	2	19	121	45	0	0	45
		Out	34	0	15	17	1	13	81	30	0	0	30
		Total	85	0	38	44	4	32	202	75	0	0	75
Local Retail	Weekday AM	In	78	0	28	21	0	579	707	52	0	4	56
		Out	78	0	28	21	0	579	707	52	0	4	56
		Total	155	0	57	42	0	1,159	1,413	104	0	8	111
	Weekday Midday	In	492	0	179	134	0	3,670	4,475	328	0	5	333
		Out	492	0	179	134	0	3,670	4,475	328	0	5	333
		Total	985	0	358	269	0	7,340	8,951	656	0	10	667
	Weekday PM	In	259	0	94	71	0	1,931	2,355	173	0	1	174
		Out	259	0	94	71	0	1,931	2,355	173	0	1	174
		Total	518	0	188	141	0	3,863	4,711	345	0	2	347
	Saturday	In	221	0	193	110	0	2,234	2,758	138	0	1	138
		Out	221	0	193	110	0	2,234	2,758	138	0	1	138
		Total	441	0	386	221	0	4,467	5,515	276	0	1	277
Destination Retail	Weekday AM	In	29	1	7	9	0	2	48	14	1	1	16
		Out	18	1	5	6	0	2	31	9	1	1	11
		Total	47	2	12	14	0	4	79	23	2	2	27
	Weekday Midday	In	77	4	20	24	0	7	131	38	3	1	42
		Out	63	3	16	19	0	5	107	31	3	1	36
		Total	140	7	36	43	0	12	238	68	7	3	78
	Weekday PM	In	66	3	17	20	0	6	112	32	3	0	36
		Out	74	4	19	23	0	6	126	36	3	0	40
		Total	140	7	36	43	0	12	238	68	7	0	76
	Saturday	In	103	5	26	32	0	9	175	50	5	0	56
		Out	99	5	25	30	0	8	169	48	5	0	54
		Total	203	10	52	62	0	17	344	99	10	0	109
Hotel	Weekday AM	In	110	184	245	12	6	55	612	55	204	7	266
		Out	159	264	352	18	9	79	881	79	204	7	290
		Total	269	448	597	30	15	134	1,493	134	407	14	556
	Weekday Midday	In	320	533	711	36	18	160	1,776	160	356	5	521
		Out	150	251	334	17	8	75	836	75	356	5	437
		Total	470	784	1,045	52	26	235	2,612	235	712	11	958
	Weekday PM	In	258	429	572	29	14	129	1,431	129	331	1	461
		Out	179	298	398	20	10	90	995	90	331	1	421
		Total	437	728	970	49	24	218	2,426	218	662	2	882
	Saturday	In	132	263	357	19	9	160	940	60	174	1	235
		Out	103	207	281	15	7	126	739	47	174	1	222
		Total	235	470	638	34	17	285	1,679	107	348	2	457

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table M-5. Transportation Demand Forecast, Future No-Action Condition (cont.)

Use	Peak Hour	In/Out	Person Trips							Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Walk	Total	Auto	Taxi	Delivery	Total
Community Facility (Medical Office)	Weekday AM	In	24	7	14	27	0	31	103	15	7	0	23
		Out	15	4	9	16	0	19	63	9	7	0	17
		Total	38	12	23	43	0	50	166	24	15	1	39
	Weekday Midday	In	21	6	13	24	0	28	92	13	9	0	22
		Out	24	7	15	27	0	31	104	15	9	0	24
		Total	45	14	27	51	0	59	196	29	17	1	47
	Weekday PM	In	11	3	7	12	0	14	48	7	6	0	13
		Out	20	6	12	23	0	27	88	13	6	0	19
		Total	31	10	19	35	0	41	136	20	12	0	32
	Saturday	In	29	9	18	33	0	38	126	18	11	0	30
		Out	30	9	18	34	0	39	131	19	11	0	30
		Total	59	18	36	67	0	77	257	37	23	0	60
Light Industrial	Weekday AM	In	91	0	40	47	4	35	217	81	0	6	87
		Out	14	0	6	7	1	5	32	12	0	6	18
		Total	105	0	46	54	5	40	250	93	0	12	105
	Weekday Midday	In	1	1	4	4	0	43	52	1	1	4	6
		Out	1	1	4	4	0	49	59	1	1	4	6
		Total	2	1	8	8	0	92	111	2	2	8	12
	Weekday PM	In	17	0	7	9	1	6	40	15	0	0	15
		Out	77	0	34	40	3	29	184	68	0	0	69
		Total	94	0	42	48	4	36	224	83	0	1	84
	Saturday	In	22	0	10	11	1	8	52	19	0	0	20
		Out	25	0	11	13	1	9	59	22	0	0	22
		Total	47	0	21	24	2	18	111	41	0	1	42
Passive Park Space	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	1	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	1	0	0	0	0
	Saturday	In	0	0	0	0	0	0	1	0	0	0	0
		Out	0	0	0	0	0	0	1	0	0	0	0
		Total	0	0	0	0	0	1	1	0	0	0	0
Active Park Space	Weekday AM	In	0	0	0	0	0	0	1	0	0	0	0
		Out	0	0	0	0	0	0	1	0	0	0	0
		Total	0	0	0	0	0	1	1	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	1	1	0	0	0	0
		Total	0	0	0	0	0	1	2	0	0	0	0
	Weekday PM	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	1	1	0	0	0	0
		Total	1	0	0	0	0	1	3	0	0	0	0
	Saturday	In	0	0	0	0	0	1	2	0	0	0	0
		Out	0	0	0	0	0	1	2	0	0	0	0
		Total	1	0	0	0	0	2	4	0	0	0	0
Total	Weekday AM	In	660	193	532	288	23	862	2,557	487	214	28	729
		Out	540	272	723	216	13	921	2,686	312	214	28	554
		Total	1,200	465	1,255	504	36	1,783	5,243	799	428	57	1,283
	Weekday Midday	In	998	549	1,055	294	19	4,310	7,225	592	378	25	995
		Out	815	267	676	275	9	4,258	6,300	501	378	25	904
		Total	1,814	816	1,730	570	28	8,568	13,525	1,093	755	51	1,899
	Weekday PM	In	847	438	989	276	19	2,301	4,871	496	342	5	843
		Out	1,037	310	846	402	28	2,312	4,935	719	342	5	1,066
		Total	1,884	748	1,835	678	47	4,613	9,806	1,215	685	9	1,909
	Saturday	In	725	279	842	328	15	2,626	4,816	427	192	3	622
		Out	639	222	706	293	12	2,549	4,421	376	192	3	572
		Total	1,364	502	1,548	620	27	5,176	9,236	803	385	7	1,195

Table M-6. Transportation Demand Forecast, Future With-Action Condition

Use	Peak Hour	In/Out	Person Trips							Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Walk	Total	Auto	Taxi	Delivery	Total
Residential	Weekday AM	In	74	1	95	43	1	70	284	42	2	6	51
		Out	296	3	381	171	4	279	1,134	169	2	6	178
		Total	370	4	476	214	5	348	1,418	211	5	13	228
	Weekday Midday	In	94	1	122	55	1	89	362	54	1	5	60
		Out	91	1	117	52	1	85	347	52	1	5	58
		Total	185	2	238	107	3	174	709	106	2	9	117
	Weekday PM	In	264	3	341	153	4	249	1,014	151	3	1	155
		Out	142	2	183	82	2	134	546	81	3	1	85
		Total	407	4	524	235	6	383	1,560	232	5	2	239
	Saturday	In	200	2	258	116	3	189	769	115	2	2	118
		Out	151	2	195	88	2	143	580	86	2	2	90
		Total	352	4	453	204	5	331	1,349	201	4	3	208
Office	Weekday AM	In	335	0	148	171	15	127	796	296	0	6	302
		Out	14	0	6	7	1	5	33	12	0	6	18
		Total	349	0	154	178	15	132	829	308	0	12	320
	Weekday Midday	In	10	5	35	35	0	413	497	9	9	7	25
		Out	11	5	38	38	0	447	539	10	9	7	25
		Total	21	10	73	73	0	860	1,036	18	18	14	50
	Weekday PM	In	20	0	9	10	1	8	48	18	0	1	19
		Out	387	0	170	198	17	146	918	341	0	1	343
		Total	407	0	179	208	18	154	967	359	0	2	362
	Saturday	In	64	0	28	33	3	24	153	57	0	0	57
		Out	43	0	19	22	2	16	102	38	0	0	38
		Total	107	0	47	55	5	41	254	95	0	0	95
Local Retail	Weekday AM	In	76	0	28	21	0	568	693	51	0	4	55
		Out	76	0	28	21	0	568	693	51	0	4	55
		Total	152	0	55	42	0	1,136	1,385	102	0	7	109
	Weekday Midday	In	483	0	175	132	0	3,597	4,387	322	0	5	327
		Out	483	0	175	132	0	3,597	4,387	322	0	5	327
		Total	965	0	351	263	0	7,195	8,774	643	0	10	654
	Weekday PM	In	254	0	92	69	0	1,893	2,309	169	0	1	170
		Out	254	0	92	69	0	1,893	2,309	169	0	1	170
		Total	508	0	185	139	0	3,787	4,618	339	0	2	340
	Saturday	In	216	0	189	108	0	2,190	2,703	135	0	1	136
		Out	216	0	189	108	0	2,190	2,703	135	0	1	136
		Total	433	0	378	216	0	4,379	5,406	270	0	1	271
Destination Retail	Weekday AM	In	29	1	7	9	0	2	48	14	1	1	16
		Out	18	1	5	6	0	2	31	9	1	1	11
		Total	47	2	12	14	0	4	79	23	2	2	27
	Weekday Midday	In	77	4	20	24	0	7	131	38	3	1	42
		Out	63	3	16	19	0	5	107	31	3	1	36
		Total	140	7	36	43	0	12	238	68	7	3	78
	Weekday PM	In	66	3	17	20	0	6	112	32	3	0	36
		Out	74	4	19	23	0	6	126	36	3	0	40
		Total	140	7	36	43	0	12	238	68	7	0	76
	Saturday	In	103	5	26	32	0	9	175	50	5	0	56
		Out	99	5	25	30	0	8	169	48	5	0	54
		Total	203	10	52	62	0	17	344	99	10	0	109
Hotel	Weekday AM	In	99	165	220	11	6	50	551	50	183	6	239
		Out	143	238	317	16	8	71	792	71	183	6	261
		Total	242	403	537	27	13	121	1,343	121	366	13	500
	Weekday Midday	In	288	479	639	32	16	144	1,598	144	321	5	469
		Out	135	226	301	15	8	68	752	68	321	5	393
		Total	423	705	940	47	24	212	2,350	212	641	10	862
	Weekday PM	In	232	386	515	26	13	116	1,288	116	298	1	415
		Out	161	268	358	18	9	81	895	81	298	1	379
		Total	393	655	873	44	22	196	2,182	196	595	2	794
	Saturday	In	118	237	322	17	8	144	846	54	157	1	211
		Out	93	186	253	13	7	113	665	42	157	1	200
		Total	212	423	574	30	15	257	1,511	96	313	2	411

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table M-6. Transportation Demand Forecast, Future With-Action Condition (cont.)

Use	Peak Hour	In/Out	Person Trips							Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Walk	Total	Auto	Taxi	Delivery	Total
Community Facility (Medical Office)	Weekday AM	In	26	8	16	30	0	34	114	17	8	0	25
		Out	16	5	10	18	0	21	70	10	8	0	19
		Total	42	13	26	48	0	55	183	27	16	1	44
	Weekday Midday	In	23	7	14	26	0	31	102	15	10	0	25
		Out	26	8	16	30	0	34	115	17	10	0	27
		Total	50	15	30	56	0	65	217	32	19	1	51
	Weekday PM	In	12	4	7	14	0	16	52	8	7	0	14
		Out	22	7	14	25	0	29	97	14	7	0	21
		Total	34	10	21	39	0	45	150	22	13	0	35
	Saturday	In	32	10	19	36	0	42	139	20	13	0	33
		Out	33	10	20	38	0	43	144	21	13	0	34
		Total	65	20	40	74	0	85	283	41	25	0	66
Light Industrial	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Saturday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
Passive Park Space	Weekday AM	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	1	1	0	0	0	0
		Total	0	0	0	0	0	1	2	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	1	2	0	0	0	0
		Out	0	0	0	0	0	1	2	0	0	0	0
		Total	1	0	0	0	0	2	3	0	0	0	0
	Weekday PM	In	0	0	0	0	0	1	2	0	0	0	0
		Out	0	0	0	0	0	1	2	0	0	0	0
		Total	1	0	0	0	0	2	4	0	0	0	0
	Saturday	In	1	0	0	0	0	2	3	0	0	0	0
		Out	1	0	0	0	0	1	3	0	0	0	0
		Total	1	0	1	1	0	3	6	0	0	0	0
Active Park Space	Weekday AM	In	1	0	0	0	0	2	4	0	0	0	0
		Out	1	0	0	0	0	2	3	0	0	0	0
		Total	1	0	1	1	0	4	6	0	0	0	1
	Weekday Midday	In	1	0	1	1	0	3	5	0	0	0	0
		Out	1	0	1	1	0	3	5	0	0	0	0
		Total	2	0	1	1	0	6	11	1	0	0	1
	Weekday PM	In	1	0	1	1	0	3	6	0	0	0	0
		Out	1	0	1	1	0	4	7	0	0	0	1
		Total	3	0	2	1	0	7	13	1	0	0	1
	Saturday	In	2	0	1	1	0	6	10	1	0	0	1
		Out	2	0	1	1	0	5	8	1	0	0	1
		Total	4	0	2	2	0	10	18	1	0	0	1
Total	Weekday AM	In	640	175	515	285	21	853	2,489	469	195	24	688
		Out	564	247	747	239	13	948	2,757	323	195	24	541
		Total	1,204	422	1,262	524	34	1,801	5,246	792	389	48	1,229
	Weekday Midday	In	976	497	1,006	304	17	4,284	7,084	581	344	23	948
		Out	810	243	664	287	9	4,241	6,254	499	344	23	866
		Total	1,787	740	1,670	590	26	8,525	13,338	1,080	688	46	1,814
	Weekday PM	In	850	396	982	293	18	2,292	4,831	495	310	4	809
		Out	1,043	281	838	416	28	2,295	4,901	724	310	4	1,038
		Total	1,893	677	1,820	709	45	4,587	9,732	1,218	621	9	1,848
	Saturday	In	737	254	845	343	14	2,604	4,798	432	177	3	612
		Out	638	203	702	300	11	2,519	4,373	372	177	3	552
		Total	1,376	457	1,547	643	25	5,123	9,171	804	353	7	1,163

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table M-7. Transportation Demand Forecast, Net Incremental Trips

Use	Peak Hour	In/Out	Person Trips							Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Walk	Total	Auto	Taxi	Delivery	Total
Residential	Weekday AM	In	12	0	16	7	0	12	47	7	0	1	8
		Out	49	1	64	29	1	47	189	28	0	1	30
		Total	62	1	80	36	1	58	237	35	1	2	38
	Weekday Midday	In	16	0	20	9	0	15	60	9	0	1	10
		Out	15	0	19	9	0	14	58	9	0	1	10
		Total	31	0	40	18	0	29	118	18	0	2	20
	Weekday PM	In	44	0	57	26	1	42	169	25	0	0	26
		Out	24	0	31	14	0	22	91	14	0	0	14
		Total	68	1	87	39	1	64	260	39	1	0	40
	Saturday	In	33	0	43	19	0	32	128	19	0	0	20
		Out	25	0	33	15	0	24	97	14	0	0	15
		Total	59	1	76	34	1	55	225	34	1	1	35
Office	Weekday AM	In	69	0	30	35	3	26	163	61	0	1	62
		Out	3	0	1	1	0	1	7	3	0	1	4
		Total	72	0	32	37	3	27	170	63	0	3	66
	Weekday Midday	In	2	1	7	7	0	85	102	2	2	1	5
		Out	2	1	8	8	0	92	110	2	2	1	5
		Total	4	2	15	15	0	176	212	4	4	3	10
	Weekday PM	In	4	0	2	2	0	2	10	4	0	0	4
		Out	79	0	35	41	3	30	188	70	0	0	70
		Total	84	0	37	43	4	32	198	74	0	1	74
	Saturday	In	13	0	6	7	1	5	31	12	0	0	12
		Out	9	0	4	4	0	3	21	8	0	0	8
		Total	22	0	10	11	1	8	52	19	0	0	19
Local Retail	Weekday AM	In	-2	0	-1	0	0	-11	-14	-1	0	0	-1
		Out	-2	0	-1	0	0	-11	-14	-1	0	0	-1
		Total	-3	0	-1	-1	0	-23	-28	-2	0	0	-2
	Weekday Midday	In	-10	0	-4	-3	0	-72	-88	-6	0	0	-7
		Out	-10	0	-4	-3	0	-72	-88	-6	0	0	-7
		Total	-19	0	-7	-5	0	-145	-177	-13	0	0	-13
	Weekday PM	In	-5	0	-2	-1	0	-38	-46	-3	0	0	-3
		Out	-5	0	-2	-1	0	-38	-46	-3	0	0	-3
		Total	-10	0	-4	-3	0	-76	-93	-7	0	0	-7
	Saturday	In	-4	0	-4	-2	0	-44	-54	-3	0	0	-3
		Out	-4	0	-4	-2	0	-44	-54	-3	0	0	-3
		Total	-9	0	-8	-4	0	-88	-109	-5	0	0	-5
Destination Retail	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Saturday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
Hotel	Weekday AM	In	-11	-18	-25	-1	-1	-6	-61	-6	-20	-1	-27
		Out	-16	-26	-35	-2	-1	-8	-88	-8	-20	-1	-29
		Total	-27	-45	-60	-3	-1	-13	-150	-13	-41	-1	-56
	Weekday Midday	In	-32	-53	-71	-4	-2	-16	-178	-16	-36	-1	-52
		Out	-15	-25	-34	-2	-1	-8	-84	-8	-36	-1	-44
		Total	-47	-79	-105	-5	-3	-24	-262	-24	-71	-1	-96
	Weekday PM	In	-26	-43	-57	-3	-1	-13	-143	-13	-33	0	-46
		Out	-18	-30	-40	-2	-1	-9	-100	-9	-33	0	-42
		Total	-44	-73	-97	-5	-2	-22	-243	-22	-66	0	-88
	Saturday	In	-13	-26	-36	-2	-1	-16	-94	-6	-17	0	-24
		Out	-10	-21	-28	-1	-1	-13	-74	-5	-17	0	-22
		Total	-24	-47	-64	-3	-2	-29	-168	-11	-35	0	-46

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table M-7. Transportation Demand Forecast, Net Incremental Trips (cont.)

Use	Peak Hour	In/Out	Person Trips							Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Walk	Total	Auto	Taxi	Delivery	Total
Community Facility (Medical Office)	Weekday AM	In	2	1	1	3	0	3	11	2	1	0	2
		Out	1	0	1	2	0	2	6	1	1	0	2
		Total	4	1	2	4	0	5	17	2	2	0	4
	Weekday Midday	In	2	1	1	2	0	3	9	1	1	0	2
		Out	2	1	1	3	0	3	11	2	1	0	2
		Total	5	1	3	5	0	6	20	3	2	0	5
	Weekday PM	In	1	0	1	1	0	1	5	1	1	0	1
		Out	2	1	1	2	0	3	9	1	1	0	2
		Total	3	1	2	4	0	4	14	2	1	0	3
	Saturday	In	3	1	2	3	0	4	13	2	1	0	3
		Out	3	1	2	3	0	4	13	2	1	0	3
		Total	6	2	4	7	0	8	26	4	2	0	6
Light Industrial	Weekday AM	In	-91	0	-40	-47	-4	-35	-217	-81	0	-6	-87
		Out	-14	0	-6	-7	-1	-5	-32	-12	0	-6	-18
		Total	-105	0	-46	-54	-5	-40	-250	-93	0	-12	-105
	Weekday Midday	In	-1	-1	-4	-4	0	-43	-52	-1	-1	-4	-6
		Out	-1	-1	-4	-4	0	-49	-59	-1	-1	-4	-6
		Total	-2	-1	-8	-8	0	-92	-111	-2	-2	-8	-12
	Weekday PM	In	-17	0	-7	-9	-1	-6	-40	-15	0	0	-15
		Out	-77	0	-34	-40	-3	-29	-184	-68	0	0	-69
		Total	-94	0	-42	-48	-4	-36	-224	-83	0	-1	-84
	Saturday	In	-22	0	-10	-11	-1	-8	-52	-19	0	0	-20
		Out	-25	0	-11	-13	-1	-9	-59	-22	0	0	-22
		Total	-47	0	-21	-24	-2	-18	-111	-41	0	-1	-42
Passive Park Space	Weekday AM	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	0	1	0	0	0	0
		Total	0	0	0	0	0	1	2	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	1	1	0	0	0	0
		Total	1	0	0	0	0	2	3	0	0	0	0
	Weekday PM	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	1	2	0	0	0	0
		Total	1	0	0	0	0	2	3	0	0	0	0
	Saturday	In	1	0	0	0	0	1	3	0	0	0	0
		Out	0	0	0	0	0	1	2	0	0	0	0
		Total	1	0	1	1	0	3	5	0	0	0	0
Active Park Space	Weekday AM	In	1	0	0	0	0	2	3	0	0	0	0
		Out	0	0	0	0	0	1	2	0	0	0	0
		Total	1	0	1	1	0	3	5	0	0	0	0
	Weekday Midday	In	1	0	1	0	0	2	4	0	0	0	0
		Out	1	0	1	0	0	2	4	0	0	0	0
		Total	2	0	1	1	0	5	9	1	0	0	1
	Weekday PM	In	1	0	1	1	0	3	5	0	0	0	0
		Out	1	0	1	1	0	3	6	0	0	0	0
		Total	2	0	1	1	0	6	10	1	0	0	1
	Saturday	In	2	0	1	1	0	5	8	1	0	0	1
		Out	1	0	1	1	0	4	7	0	0	0	1
		Total	3	0	2	2	0	8	15	1	0	0	1
Total	Weekday AM	In	-20	-17	-17	-3	-1	-9	-68	-18	-19	-4	-41
		Out	23	-25	24	23	-1	27	71	11	-19	-4	-13
		Total	3	-43	7	20	-2	18	3	-7	-38	-9	-54
	Weekday Midday	In	-22	-52	-49	9	-2	-26	-141	-11	-34	-2	-47
		Out	-5	-24	-12	11	-1	-17	-46	-3	-34	-2	-39
		Total	-27	-76	-61	21	-2	-43	-188	-13	-67	-5	-85
	Weekday PM	In	3	-42	-7	17	-1	-9	-40	-1	-32	0	-34
		Out	6	-29	-8	15	-1	-17	-34	5	-32	0	-27
		Total	9	-71	-15	31	-2	-26	-74	3	-64	0	-61
	Saturday	In	12	-25	3	15	-1	-22	-18	5	-16	0	-11
		Out	-1	-19	-4	7	-1	-30	-48	-5	-16	0	-21
		Total	12	-44	-1	23	-2	-52	-65	1	-32	0	-32

Note: In and Out volumes may not sum to Total volumes due to rounding.

Traffic

As presented in Table M-7, the Proposed Actions would result in approximately -54, -85, -61 and -32 net incremental vehicle trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. This level of vehicle trip activity is below the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-ends) during the four analysis peak hours. Therefore, no further traffic analyses are warranted as per the CEQR Level 1 criteria.

However in the Future Conditions, the existing traffic circulation patterns would be modified by the construction of new roadways to accommodate access to the Project Area. To assess the effect of the potential changes in the traffic circulation patterns, a detailed traffic analysis was conducted at key intersections during the weekday AM, midday, PM and Saturday midday peak hours. The traffic analysis locations consist of a combination of key existing intersections along College Point Boulevard and Roosevelt Avenue as well as the newly created and/or modified intersections in the study area as shown in Figure M-1 and listed below:

1. College Point Boulevard and 36th Avenue;
2. College Point Boulevard and 37th Avenue;
3. College Point Boulevard and 39th Avenue;
4. College Point Boulevard and Roosevelt Avenue;
5. Roosevelt Avenue and Janet Place;
6. Roosevelt Avenue and Skyview Mall Driveway;
7. College Point Boulevard and 38th Avenue Extension/ Tangram Plaza Driveway;
8. 39th Avenue and Janet Place;
9. 38th Avenue Extension and Janet Place Extension;
10. 38th Avenue Extension and Transverse Road; and
11. 39th Avenue Extension and Transverse Road.

Transit

As shown in Figure M-2, the Project Area is well-served by 20 New York City Transit (NYCT)/MTA bus lines and a Nassau Inter-County Express (NICE) bus line. These include the Q12, Q13, Q15, Q15A, Q16, Q17, Q19, Q20A, Q20B, Q25, Q26, Q27, Q28, Q34, Q44-SBS, Q48, Q50, Q58, Q65, Q66, and N20G bus lines. The Project Area is also served by the Flushing-Main Street Station of the No. 7 subway line, located approximately 0.3 miles to the east on Roosevelt Avenue at Main Street. In addition, the Flushing Main Street LIRR Station is located approximately 0.3 miles east of the Project Area on 40th Road at Main Street.

As shown in Table M-7, the Proposed Actions would result in approximately 7, -61, -15 and -1 incremental subway trips; 20, 21, 31 and 23 incremental bus trips; and -2, -2, -2 and -2 incremental railroad trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. Combined the subway, bus and railroad trips would result in a total of 25, -42, 14 and 20 incremental transit trips during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. This level of transit trip activity is below the CEQR Level 1 threshold (200 peak hour transit trip-ends) to undertake detailed analyses. Therefore, no additional analysis was conducted, and the Proposed Actions are not anticipated to adversely affect the transit conditions in the study area.

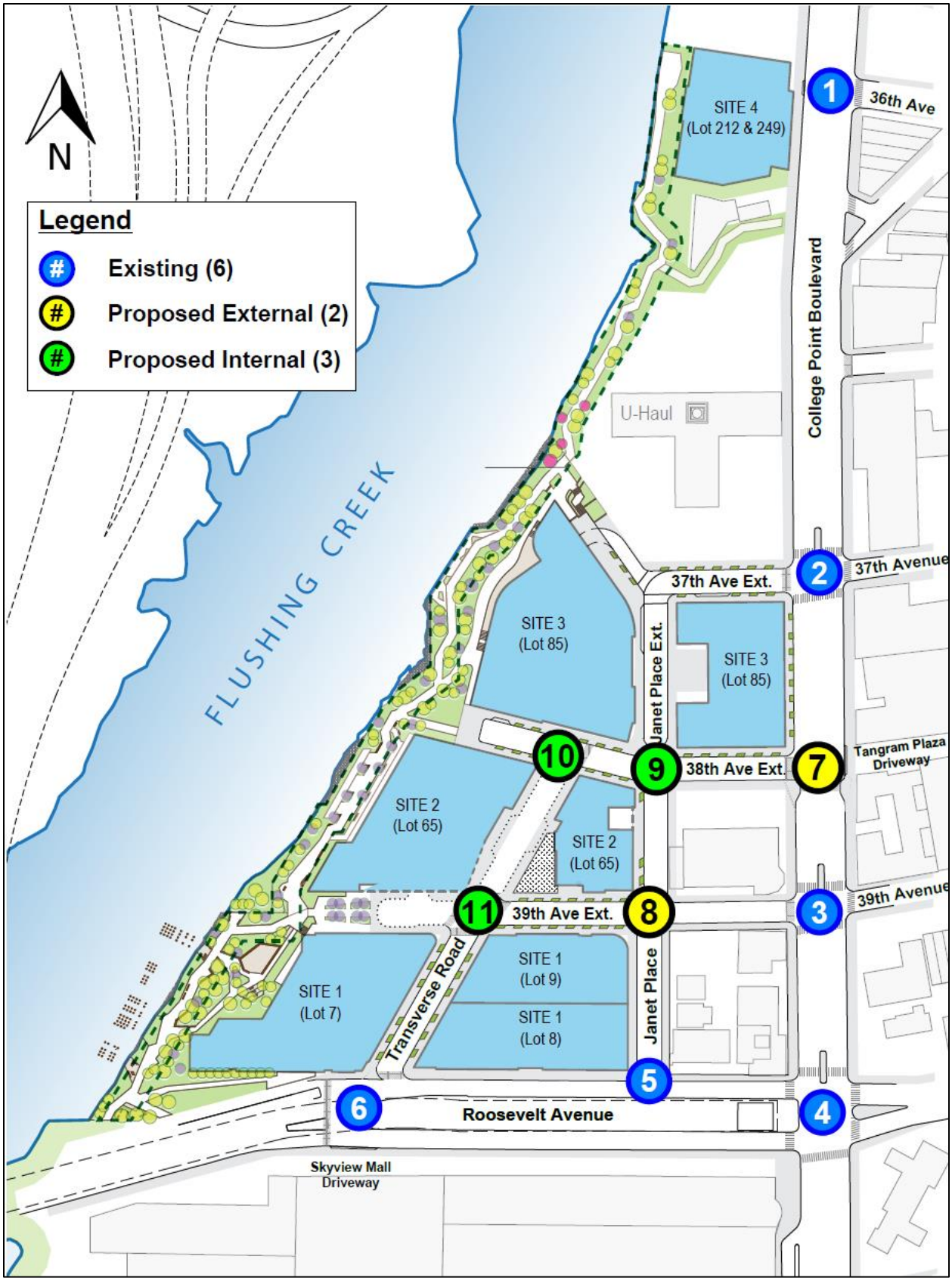


Figure M-1: Traffic Study Area

SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE M-2
TRANSIT MAP

Map Reference: NYC Department of City Planning MapPLUTO and LION Shapefiles, NYC Mass Transit Spatial Layers (Newman Library of Baurch College, CUNY), and MTA Subway Lines.

Project Area

FLUSHING, QUEENS, NY

LANGAN

Pedestrians

As shown in Table M-7, the Proposed Actions would result in approximately 3, -188, -74 and -65 net incremental person trips in the weekday AM, midday, PM, and Saturday midday peak hours, respectively. This level of pedestrian trip activity is below the CEQR Level 1 trip generation threshold (200 peak hour pedestrian trip-ends), and would not warrant detailed analyses.

However, in the Future Conditions, there will be additional pedestrian elements at the newly created intersections connecting to the existing pedestrian network within the Project Area in both the Future No-Action and Future With-Action conditions. To assess the effect of project-generated pedestrian trips, a detailed pedestrian analysis was conducted at existing key intersections and at newly created intersections during the weekday AM, midday, PM and Saturday midday peak hours. The elements selected for detailed analysis are shown in Figures M-3 through M-5.

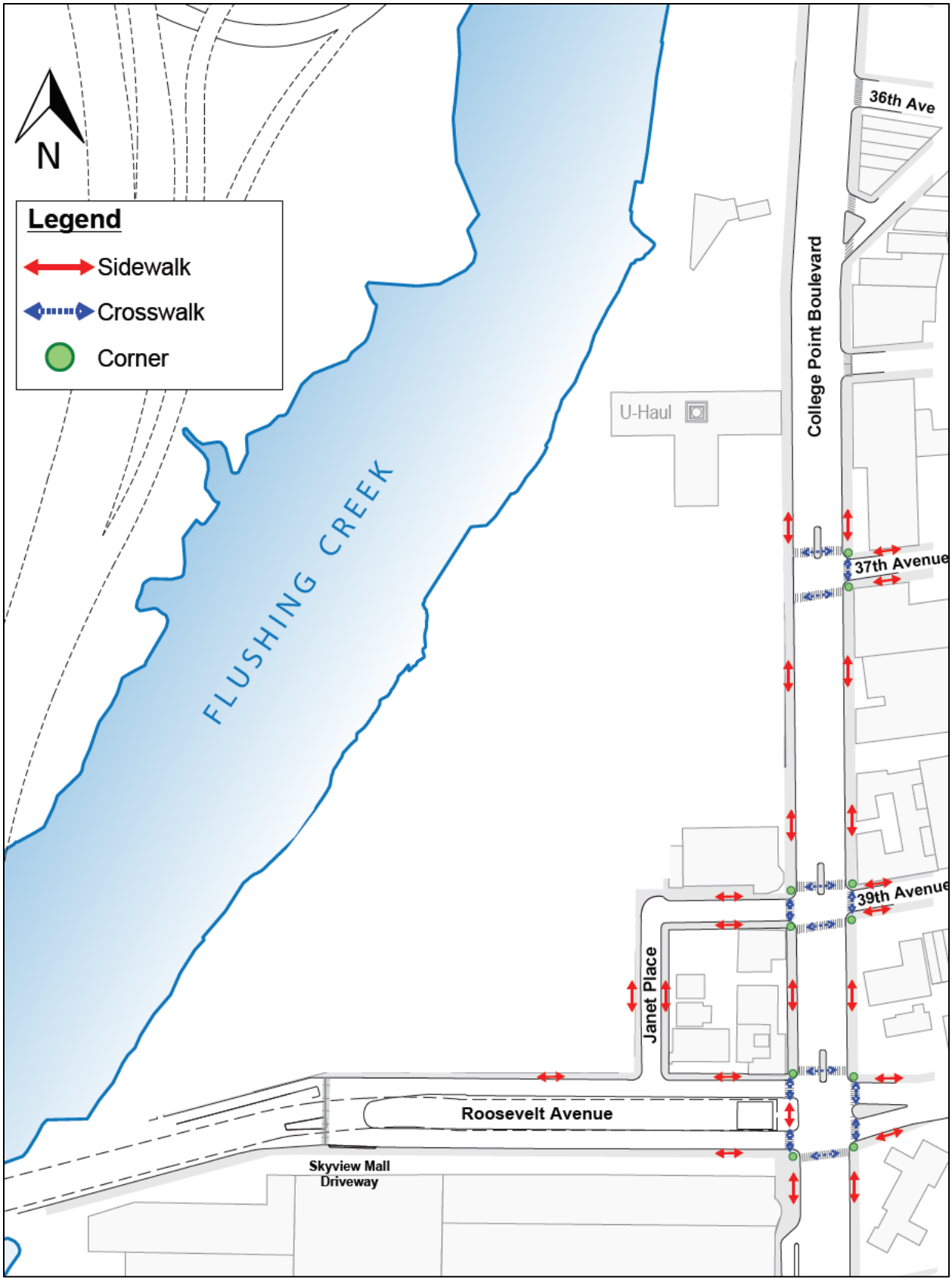


Figure M-3: Pedestrian Study Area – Existing Conditions

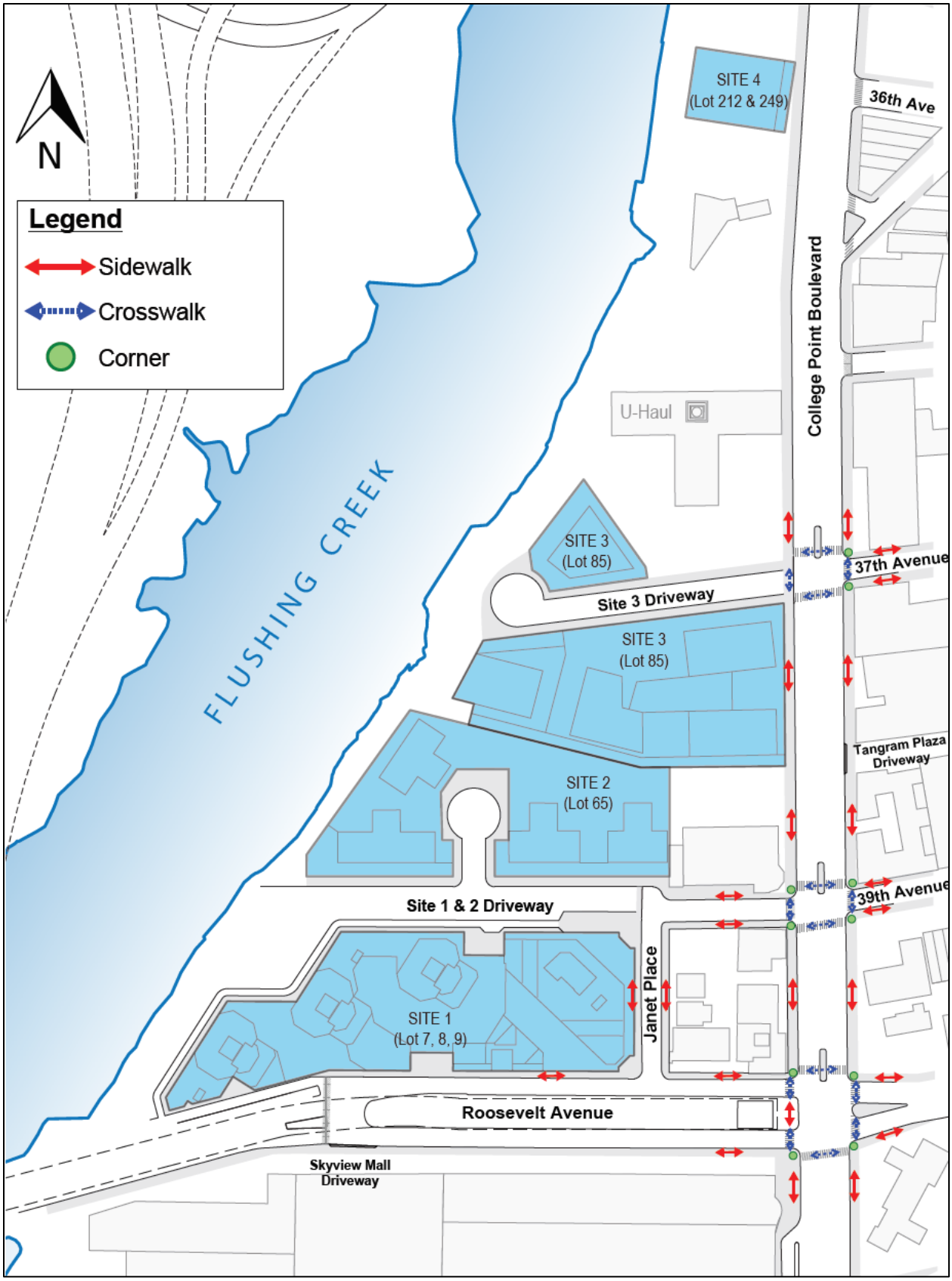


Figure M-4: Pedestrian Study Area – Future No-Action Condition

Figure M-5: Pedestrian Study Area – Future With-Action Condition

TRANSPORTATION ANALYSES METHODOLOGIES

Traffic

The traffic capacity analyses are based on methodologies presented in the 2000 *Highway Capacity Manual (HCM)* using the Highway Capacity Software (HCS+) 5.5 model. The HCM methodology produces 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 to the approach's carrying capacity. A v/c ratio of less than 0.90 is generally considered indicative of non-congested conditions in dense urban areas; 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 delay that a driver typically experiences at an intersection. The LOS scale ranges from A, representing minimal delay (10 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 the major street is not affected by traffic flows on the minor street. 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. LOS 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 (10 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 M-8 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.

Table M-8. Intersection LOS Criteria based on HCM Methodology

LOS	Average Control Delay (seconds/vehicle)	
	Signalized Intersection	Unsignalized Intersection
A	Less than or equal to 10.0	Less than or equal to 10.0
B	10.0 to 20.0	10.0 to 15.0
C	20.0 to 35.0	15.0 to 25.0
D	35.0 to 55.0	25.0 to 35.0
E	55.0 to 80.0	35.0 to 50.0
F	Greater than 80.0	Greater than 50.0

Significant Impact Criteria

The *CEQR Technical Manual* identifies mid-level LOS D or better as an acceptable LOS for signalized and unsignalized intersections. The *CEQR Technical Manual* also indicates that potential significant adverse traffic impacts could occur at signalized and unsignalized intersections if the Proposed Actions result in any of the following:

- A lane group that operates at LOS A through C in the Future No-Action Condition and deteriorates under the Future With-Action condition to worse than mid-LOS D (greater than 45.0 and 30.0 seconds/vehicle of delay for signalized and unsignalized intersections, respectively);
- A lane group that operates at LOS D in the Future No-Action Condition and is projected to have a delay increase of 5.0 seconds/vehicle or more if the Future With-Action delay exceeds mid-LOS D;
- For a lane group that operates at LOS E in the Future No-Action Condition, a delay increase of 4.0 seconds or more; and
- For a lane group that operates at LOS F in the Future No-Action Condition, a delay increase of 3.0 seconds or more.

Pedestrians

The adequacy of a study area's crosswalks, corners, sidewalk capacities in relation to the projected demand is evaluated based on the methodologies presented in the 2010 HCM, pursuant to procedures detailed in the *CEQR Technical Manual*.

Sidewalks are analyzed in terms of pedestrian space, expressed as square feet per pedestrian (ft^2/p). The determination of walkway LOS is dependent on whether the pedestrian flow being analyzed is best described as "non-platoon" or "platoon." Non-platoon flow occurs when pedestrian volume within the peak 15-minute period is relatively uniform, whereas, platoon flow occurs when pedestrian volumes vary significantly with the peak 15-minute period. Such variation typically occurs near bus stops, subway stations, and/or where adjacent crosswalks account for much of the walkway's pedestrian volume. The LOS standards for sidewalks are summarized in Table M-9 based on HCM methodology.

Table M-9. Sidewalk/Walkway LOS for Non-Platoon and Platoon Conditions

LOS	Non-Platoon Flow	Platoon Flow
A	>60 ft^2/p	>530 ft^2/p
B	>40-60 ft^2/p	>90-530 ft^2/p
C	>24-40 ft^2/p	>40-90 ft^2/p
D	>15-24 ft^2/p	>23-40 ft^2/p
E	>8-15 ft^2/p	>11-23 ft^2/p
F	≤8 ft^2/p	≤11 ft^2/p

Crosswalks and street corners are not easily measured in terms of free pedestrian flow, as they are influenced by the effects of traffic signals. Street corners must be able to provide sufficient space for a mix of standing pedestrians (queued to cross a street) and circulating pedestrians (crossing the street or moving around the corner). The HCM methodologies apply a measure of time and space availability based on the area of the corner, the timing of the intersection signal, and the estimated space used by circulating pedestrians.

The total "time-space" available for these activities, expressed in square feet-second, is calculated by multiplying the net area of the corner (in square feet) by the signal's cycle length. The analysis then determines the total circulation time for all pedestrian movements at the corner per signal cycle (expressed as pedestrians per second). The ratio of net time-space divided by the total pedestrian circulation volume per signal cycle provides the LOS measurement of square feet per pedestrian (ft^2/p).

Crosswalk LOS is also a function of time and space. Similar to the street corner analysis, crosswalk conditions are first expressed as a measurement of the available area (the crosswalk width multiplied by the width of the street) and the permitted crossing time. This measure is expressed in square feet-second. The average time required for a pedestrian to cross the street is calculated based on the width of the street and an assumed walking speed. The ratio of time-space available in the crosswalk to the total crosswalk pedestrian occupancy time is the LOS measurement of available square feet per pedestrian. The LOS analysis also accounts for vehicular turning movements that traverse the crosswalk. The *CEQR Technical Manual* specifies acceptable LOS in Central Business District (CBD) areas is mid-LOS D or better.

Table M-10 defines the LOS criteria for pedestrian crosswalk/corner areas based on HCM methodology.

Table M-10. Corner/Crosswalk LOS Pedestrian Space

LOS	Average Pedestrian Space
A	>60 ft^2/p
B	>40-60 ft^2/p
C	>24-40 ft^2/p
D	>15-24 ft^2/p
E	>8-15 ft^2/p
F	≤8 ft^2/p

Significant Impact Criteria

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

Sidewalks

The criterion for determination of significant impacts of sidewalks varies by type of pedestrian flow (*i.e.*, non-platoon or platoon) and the type of area (CBD or non-CBD).

For analysis purposes, the CBD and platoon flow criteria have been used. Under these conditions, average pedestrian space under the Future With-Action Condition deteriorating within acceptable LOS (mid-LOS D or better) should generally not be considered a significant impact. If the pedestrian space available under the Future With-Action Condition deteriorates to mid-LOS D or worse, then the determination whether the impact is significant or not is based on a sliding scale. The sliding scale varies within the range of average pedestrian space available under the Future No-Action Condition. Determination of significant impacts for sidewalks with platoon flow in a CBD area is summarized as follows:

If the average pedestrian space under the Future No-Action Condition is greater than 39.2 ft^2/p, then a decrease in pedestrian space under the Future With-Action Condition to less than 31.5 ft^2/p (worse than mid-LOS D) should be considered a significant impact. If the average pedestrian space under the Future With-Action Condition is equal to or greater than 31.5 ft^2/p (mid-LOS D or better), the impact should not be considered significant.

If the average pedestrian space under the Future No-Action Condition is equal to or less than 39.2 ft^2/p, a decrease in pedestrian space under the Future With-Action Condition should be considered significant using the sliding scale formula in the equation below or using Table M-11:

$Y \geq X / (9.5 - 0.321)$

Where:

Y = decrease in pedestrian space in ft^2/p to be considered a potential significant impact

X = Future No-Action Condition pedestrian space in ft^2/p

Table M-11. Significant Impact Guidance for Sidewalks Platooned flow, CBD Location

Future No-Action Condition Pedestrian Space (ft^2/p)	Future With-Action Condition Pedestrian Space Reduction to be considered a significant impact (ft^2/p)
> 39.2	Future With-Action Condition < 31.5
38.7 to 39.2	Reduction ≥ 3.8
37.8 to 38.6	Reduction ≥ 3.7
36.8 to 37.7	Reduction ≥ 3.6
35.9 to 36.7	Reduction ≥ 3.5
34.9 to 35.8	Reduction ≥ 3.4
34.0 to 34.8	Reduction ≥ 3.3
33.0 to 33.9	Reduction ≥ 3.2
32.1 to 32.9	Reduction ≥ 3.1
31.1 to 32.0	Reduction ≥ 3.0
30.2 to 31.0	Reduction ≥ 2.9
29.2 to 30.1	Reduction ≥ 2.8
28.3 to 29.1	Reduction ≥ 2.7
27.3 to 28.2	Reduction ≥ 2.6
26.4 to 27.2	Reduction ≥ 2.5
25.4 to 26.3	Reduction ≥ 2.4
24.5 to 25.3	Reduction ≥ 2.3
23.5 to 24.4	Reduction ≥ 2.2
22.6 to 23.4	Reduction ≥ 2.1
21.6 to 22.5	Reduction ≥ 2.0
20.7 to 21.5	Reduction ≥ 1.9
19.7 to 20.6	Reduction ≥ 1.8
18.8 to 19.6	Reduction ≥ 1.7
17.8 to 18.7	Reduction ≥ 1.6
16.9 to 17.7	Reduction ≥ 1.5
15.9 to 16.8	Reduction ≥ 1.4
15.0 to 15.8	Reduction ≥ 1.3
14.0 to 14.9	Reduction ≥ 1.2
13.1 to 13.9	Reduction ≥ 1.1
12.1 to 13.0	Reduction ≥ 1.0
11.2 to 12.0	Reduction ≥ 0.9
10.2 to 11.1	Reduction ≥ 0.8
9.3 to 10.1	Reduction ≥ 0.7
8.3 to 9.2	Reduction ≥ 0.6
7.4 to 8.2	Reduction ≥ 0.5
6.4 to 7.3	Reduction ≥ 0.4
< 6.4	Reduction ≥ 0.3

Corners and Crosswalks

The criterion for determination of significant corner and crosswalk impacts is also based on a sliding scale using the following formula: $Y \geq X/9.0 - 0.31$, where Y is the decrease in pedestrian space in ft^2/p and X is the Future No-Action Condition pedestrian space in ft^2/p. Since a decrease in pedestrian space within acceptable levels would not constitute a significant impact, this formula would apply only if the Future With-Action Condition pedestrian space falls short of LOS C in non-CBD areas or mid-LOS D in CBD areas. Determination of significant impacts for corners and crosswalks in a CBD area is summarized as follows:

If the average pedestrian space under the Future No-Action Condition is greater than 21.5 ft^2/p, then a decrease in pedestrian space under the Future With-Action Condition to less than 19.5 ft^2/p (worse than mid-LOS D) should be considered a significant impact. If the pedestrian space under the Future With-Action Condition is greater than or equal to 19.5 ft^2/p (mid-LOS D or better), the impact should not be considered significant.

If the average pedestrian space under the Future No-Action Condition is equal to or less than 21.5 ft^2/p, a decrease in pedestrian space under the Future With-Action Condition should be considered significant according to the sliding scale formula in Equation discussed above or using Table M-12.

Table M-12. Significant Impact Guidance for Corners and Crosswalks, CBD Location

Future No-Action Condition Pedestrian Space (ft^2/p)	**Future With-Action Condition Pedestrian Space Reduction to be considered a significant impact (ft^2/p)**
> 21.5	Future With-Action Condition < 19.5
21.3 to 21.5	Reduction ≥ 2.1
20.4 to 21.2	Reduction ≥ 2.0
19.5 to 20.3	Reduction ≥ 1.9
18.6 to 19.4	Reduction ≥ 1.8
17.7 to 18.5	Reduction ≥ 1.7
16.8 to 17.6	Reduction ≥ 1.6
15.9 to 16.7	Reduction ≥ 1.5
15.0 to 15.8	Reduction ≥ 1.4
14.1 to 14.9	Reduction ≥ 1.3
13.2 to 14	Reduction ≥ 1.2
12.3 to 13.1	Reduction ≥ 1.1
11.4 to 12.2	Reduction ≥ 1.0
10.5 to 11.3	Reduction ≥ 0.9
9.6 to 10.4	Reduction ≥ 0.8
8.7 to 9.5	Reduction ≥ 0.7
7.8 to 8.6	Reduction ≥ 0.6
6.9 to 7.7	Reduction ≥ 0.5
6 to 6.8	Reduction ≥ 0.4
5.1 to 5.9	Reduction ≥ 0.3
< 5.1	Reduction ≥ 0.2

Parking

Parking demand estimates for the Project Area's development program components should be prepared to determine whether project-generated demand could be accommodated by the supply of the future on-site parking facilities. If the Proposed Actions generate the need for more parking than the supply, then a detailed parking analysis of the area's parking facilities within a convenient walking distance (approximately ¼-mile) should be conducted.

The parking analysis identifies the supply of public parking (on-street or off-street) in the project area and determines the extent to which the supply is utilized in existing conditions and in the future without and with the Proposed Actions. The analysis considers anticipated changes in the study area's parking supply and demand, and compares project-generated parking demand with future parking availability to determine if a parking shortfall in the area public parking facilities is likely to occur.

Vehicular and Pedestrian Safety Evaluation

Given that the Proposed Actions would exhibit CBD-area characteristics and would feature a Shorefront Public Walkway, an assessment of vehicular and pedestrian safety is considered to be appropriate, in conjunction with a Detailed Traffic and Pedestrian Analysis. The key element for vehicular and pedestrian safety analyses is the extent to which vehicular and pedestrian exposure to crashes may reasonably be expected to increase with the Proposed Actions in place. Under *CEQR Technical Manual* guidelines, 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 (involving fatality, injury, or more than $1,000 in property damage) 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, crash trends would be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips. The determination of potential significant safety impacts depends on the type of area where the project is located, traffic and pedestrian volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety should be identified and coordinated with NYCDOT.

TRAFFIC ANALYSES

Existing Conditions (2019)

Study Area Street Network

The traffic study area is bordered by 36th Avenue to the north, Roosevelt Avenue to the south, College Point Boulevard to the east and Skyview Mall Driveway to the west. Major arterials/highways providing access to the study area are Long Island Expressway (I-495), Northern Boulevard (NY-25A) and Roosevelt Avenue from the east and west, and Grand Central Parkway (NY-907M), Van Wyck/ Whitestone Expressway (I-678) and College Point Boulevard from the north and south. Truck access in the study area is provided via Long Island Expressway, Northern Boulevard, Roosevelt Avenue, Van Wyck/ Whitestone Expressway and College Point Boulevard, which are official NYCDOT designated truck routes.

The key roadways in the study area include College Point Boulevard, Roosevelt Avenue, 36th Avenue, 37th Avenue, 39th Avenue and Janet Place. The physical and operational characteristics of the study area roadways are described below:

- **College Point Boulevard** is a major two-way northbound-southbound roadway with a median (either striped-only or with pedestrian safety islands) to separate the bi-directional traffic and provide storage for pedestrians. College Point Boulevard operates with two moving lanes (with a shared bike lane) in each direction with partial curbside parking available on both sides of the street. It has a curb-to-curb width of approximately 70 feet.
- **Roosevelt Avenue** is a major two-way eastbound-westbound roadway that features a bridge crossing over Flushing Creek. Approaching College Point Boulevard from the west, the eastbound and westbound roadways separate to accommodate the NYCT/MTA No. 7 subway line entering a tunnel (approx. 50-foot-wide separation). Roosevelt Avenue generally operates with two moving lanes in each direction and curbside parking is generally not available. West of College Point Boulevard, the eastbound and westbound approaches each have curb-to-curb widths of approximately 24 feet, respectively; and east of College Point Boulevard, the combined curb-to-curb width is approximately 56 feet. At the time of the data collection, there was ongoing construction at the Roosevelt Avenue Bridge (west of Skyview Mall Driveway) as part of the *NYCDOT Roosevelt Avenue Rehabilitation Project*, resulting in closures of one eastbound and one westbound lane on the bridge road deck.
- **36th Avenue** is a local two-way eastbound-westbound roadway that runs from Prince Street to College Point Boulevard. 36th Avenue operates with one moving lane in each direction with curbside parking on both sides of the street. It has a curb-to-curb width of approximately 40 feet.
- **37th Avenue** is a local one-way westbound roadway that runs from Bowne Street to College Point Boulevard. 37th Avenue operates with one moving lane with curbside parking on both sides of the street. It has a curb-to-curb width of approximately 27 feet. At the time of the data collection, there was ongoing construction at the southern segment of the roadway as part of the Tangram Plaza development between Prince Street and College Point Boulevard.
- **39th Avenue** is a local eastbound-westbound roadway that runs from Union Street to Janet Place. Between Union Street and Main Street, 39th Avenue is one-way eastbound and operates

with one moving lane with curbside parking available on both sides of the street. Between Main Street and Prince Street, 39th Avenue is two-way eastbound-westbound and operates with one moving lane in each direction with no curbside parking allowed on either side of the street. Between Prince Street and College Point Boulevard, 39th Avenue is one-way westbound and operates with one moving lane with curbside parking on both sides of the street. Between College Point Boulevard and Janet Place, 39th Avenue is two-way eastbound-westbound and operates with one moving lane in each direction with no curbside parking allowed on either side of the street. 39th Avenue generally has a curb-to-curb width of approximately 30 feet. At the time of the data collection, there was ongoing construction at the northern segment of the roadway as part of the Tangram Plaza development between Prince Street and College Point Boulevard.

- **Janet Place** is a local two-way northbound-southbound roadway that currently exists for one block between Roosevelt Avenue and 39th Avenue. Janet Place operates with one moving lane in each direction with partial parking allowed on the east side of the street. It has a curb-to-curb width of 28 feet.

Traffic Volumes

Existing traffic volumes for the study area intersections were collected in June 2019. The data collection included Turning Movement Counts (TMC), Automatic Traffic Recorder (ATR) counts, vehicle classification counts (VCC), and field observations. In addition to the traffic counts, physical inventories—including the number of traffic lanes, pavement markings, lane widths, turn prohibitions, bus stops, and typical parking regulations—were conducted for the study area intersections and pedestrian elements. Official signal timing plans were obtained from NYCDOT for operational analysis of the study area intersections. Based on the data collected, the peak hours for traffic analysis are 8:00 to 9:00 AM, 12:45 to 1:45 PM, 5:00 to 6:00 PM and 3:15 to 4:15 PM for the weekday AM, midday, PM and Saturday midday, respectively. The Existing Conditions traffic volumes for the weekday AM, midday, PM and Saturday midday peak hours are shown in Appendix K, Figures K-1 through K-4.

Traffic Conditions

The intersection capacity analysis results for the Existing Conditions including v/c ratios, delays and LOS for the study area intersections are shown in Table M-13. Of the 27 intersection approaches/ lane groups in the study area, 3 operate below mid-LOS D in at least one peak hour and include:

- Southbound approach at the College Point Boulevard and WB Roosevelt Avenue intersection (LOS D with average delay of 46.6 seconds during the weekday AM peak hour, and LOS D with average delay of 45.2 seconds during the weekday PM peak hour).
- Westbound left-turn at the Roosevelt Avenue and Skyview Mall Driveway intersection (LOS E with average delay of 55.3 seconds during the weekday AM peak hour, LOS D with average delay of 55.0 seconds during the weekday PM peak hour, and LOS E with average delay of 65.2 seconds during the Saturday midday peak hour).
- Northbound left-turn at the Roosevelt Avenue and Skyview Mall Driveway intersection (LOS D with average delay of 48.1 seconds during the weekday AM peak hour).

Table M-13. Existing Conditions - LOS Summary

Intersection ID	Intersection name	Control	Street name	Direction	Lane group	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
						Existing Conditions			Existing Conditions			Existing Conditions			Existing Conditions		
						v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	College Point Boulevard & 36th Avenue	TWSC[1]	36th Avenue	WB	LTR	0.15	15.8	C	0.10	17.0	C	0.15	18.4	C	0.07	15.5	C
			College Point Boulevard	NB	TR	-	0.0	A	-	0.0	A	-	0.0	A	-	0.0	A
				SB	L	0.05	9.2	A	0.07	9.7	A	0.04	10.0	B	0.04	10.1	B
			Overall Intersection			-	Note 2	Note 2	-	Note 2	Note 2	-	Note 2	Note 2	-	Note 2	Note 2
2	College Point Boulevard & 37th Avenue	Signal	Parking Lot Driveway	EB	LR	0.03	23.2	C	0.03	19.6	B	0.05	25.4	C	0.01	19.5	B
			37th Avenue	WB	LTR	0.27	26.8	C	0.47	26.7	C	0.35	30.5	C	0.47	26.7	C
			College Point Boulevard	NB	LT	0.37	17.0	B	0.46	13.4	B	0.63	19.9	B	0.59	15.2	B
				SB	TR	0.60	21.1	C	0.40	12.8	B	0.41	15.9	B	0.39	12.5	B
			Overall Intersection			-	20.2	C	-	15.0	B	-	19.5	B	-	15.6	B
3	College Point Boulevard & 39th Avenue	Signal	39th Avenue	EB	LR	0.05	27.3	C	0.05	17.3	B	0.09	27.9	C	0.08	17.6	B
				WB	LTR	0.22	29.9	C	0.34	21.2	C	0.47	35.2	D	0.40	22.2	C
			College Point Boulevard	NB	L	0.06	11.3	B	0.06	12.1	B	0.05	11.0	B	0.06	12.1	B
					T	0.30	13.1	B	0.45	15.5	B	0.48	15.4	B	0.55	16.9	B
				SB	TR	0.60	17.4	B	0.54	16.9	B	0.49	15.5	B	0.52	16.5	B
			Overall Intersection			-	16.9	B	-	16.7	B	-	17.9	B	-	17.3	B
4A	College Point Boulevard & WB Roosevelt Avenue	Signal	Roosevelt Avenue	WB	LTR	0.33	32.4	C	0.36	24.5	C	0.36	33.5	C	0.40	25.2	C
			College Point Boulevard	NB	L	0.47	34.2	C	0.31	18.3	B	0.36	26.4	C	0.38	21.7	C
					T	0.21	9.1	A	0.29	8.1	A	0.35	9.9	A	0.34	8.5	A
				SB	TR	0.89	46.6	D	0.75	33.9	C	0.81	45.2	D	0.84	38.2	D
			Overall Intersection			-	33.5	C	-	21.4	C	-	27.6	C	-	23.1	C
4B	College Point Boulevard & EB Roosevelt Avenue	Signal	Roosevelt Avenue	EB	LT	0.42	27.1	C	0.45	18.3	B	0.71	29.1	C	0.65	21.9	C
					R	0.42	28.0	C	0.51	20.9	C	0.72	35.3	D	0.55	21.6	C
			College Point Boulevard	NB	TR	0.38	18.5	B	0.55	20.4	C	0.50	21.5	C	0.63	21.7	C
				SB	T	0.44	19.0	B	0.45	18.6	B	0.44	20.3	C	0.47	18.7	B
			Overall Intersection			-	20.8	C	-	19.5	B	-	24.4	C	-	20.9	C
5	Roosevelt Avenue & Janet Place	TWSC[1]	Roosevelt Avenue	WB	TR	-	0.0	A	-	0.0	A	-	0.0	A	-	0.0	A
			Janet Place	SB	R	0.40	16.5	C	0.28	12.5	B	0.33	13.3	B	0.29	13.8	B
			Overall Intersection			-	Note 2	Note 2	-	Note 2	Note 2	-	Note 2	Note 2	-	Note 2	Note 2
6	Roosevelt Avenue & Skyview Mall Driveway	Signal	Roosevelt Avenue	EB	TR	0.44	11.6	B	0.77	31.0	C	0.84	34.1	C	0.88	40.5	D
				WB	L	0.40	55.3	E	0.44	40.8	D	0.36	55.0	D	0.56	65.2	E
					T	0.62	14.4	B	0.53	22.7	C	0.52	20.6	C	0.66	25.5	C
			Skyview Mall Driveway	NB	L	0.04	48.1	D	0.11	25.2	C	0.14	36.9	D	0.24	26.6	C
					R	0.05	33.7	C	0.18	14.6	B	0.29	27.0	C	0.34	16.5	B
			Overall Intersection			-	16.2	B	-	27.2	C	-	30.3	C	-	33.0	C

Note:
1. Two-Way Stop-Controlled
2. Intersection delay and LOS information for TWSC intersections are not provided by HCS.

Future No-Action Condition (2025)

Changes to the Study Area Street Network

As part of the As-Of-Right development ("AOR Project") in the Project Area, five new driveways would be provided to connect to the existing roadways in the study area (see Figure M-6). More specifically, the following traffic circulation changes would be introduced in the Future No-Action Condition under the AOR project:

- Site 1 Garage Entrance (one-way inbound) would be located on the north side of Roosevelt Avenue between Janet Place and Skyview Mall Driveway;
- Site 2 Garage Entrance/Exit (two-way) would be added as a north leg to the intersection of 39th Avenue and Janet Place ;
- Site 1 & 2 Driveway (two-way) would be added as a west leg to the intersection of 39th Avenue and Janet Place;

- Site 3 Driveway (two-way) would be added as a west leg to the intersection of College Point Boulevard and 37th Avenue, in place of the existing surface parking lot driveway;
- Site 4 Driveway (two-way) would be added as a west leg to the intersection of College Point Boulevard and 36th Avenue, in place of the existing industrial facility driveway.

As part of *Tangram Plaza*, a future No-Build development project in the study area, a new garage driveway (two-way) would be added on the east side of College Point Boulevard between 37th and 39th avenues, creating a new Two-Way STOP-Controlled intersection.

In addition to the circulation changes noted above, the NYCDOT Division of Bridges is currently undertaking the *Roosevelt Avenue Bridge Rehabilitation Project*. According to NYCDOT, the bridge's road deck would be replaced featuring two eastbound and two westbound travel lanes, and the sidewalks are being widened from 7.9 feet to 10 feet.

Traffic Volumes

The Future No-Action Condition traffic volumes were determined for the 2025 analysis year (the estimated time of completion for the Proposed Actions). Per the *CEQR Technical Manual*, a compounded annual background growth rate of 0.50 percent for *Other Queens* was applied to the existing traffic volumes for the first five years (2019 through 2024) and then 0.25 percent was applied for the sixth year (2024 through 2025). In addition to the background growth, a total of 19 No-Build Development Projects were identified as being planned for the study area in the Future No-Action Condition. Some of these planned projects are modest in size and would not be significant traffic generators. After reviewing the development program for each of the planned projects, it was determined that the background growth would encompass the increase in traffic and pedestrian levels for 8 of the small- to moderate-sized projects in the study area. For the remaining 11 future No-Build Development Projects, trip generation profiles and assignments were conducted for incorporation in the Future No-Action Condition traffic volumes. Table M-14 and Figure M-7 summarize the projects that were accounted for in the Future No-Action Condition, including the ones considered as part of the study area background growth as well as the ones for which separate trip generation profiles and assignments were created.

The RWCDS assumes that the AOR Project would take place in the Project Area in the Future No-Action Condition absent the Proposed Actions. As discussed in the preceding sections, the Proposed Actions would result in negative net incremental trips in comparison to the AOR Project. To normalize the traffic volumes in the Future With-Action conditions, per NYCDOT directive, the trips generated by the AOR Project were adjusted to eliminate negative net incremental trips. Specifically, if a land use in the Future No-Action Condition would generate more trips as compared to the Future With-Action Condition, the Future No-Action Condition volumes were reduced by a factor of:

$$\frac{\text{AOR Project Trips} - \text{Proposed Project Trips}}{\text{AOR Project Trips}}$$

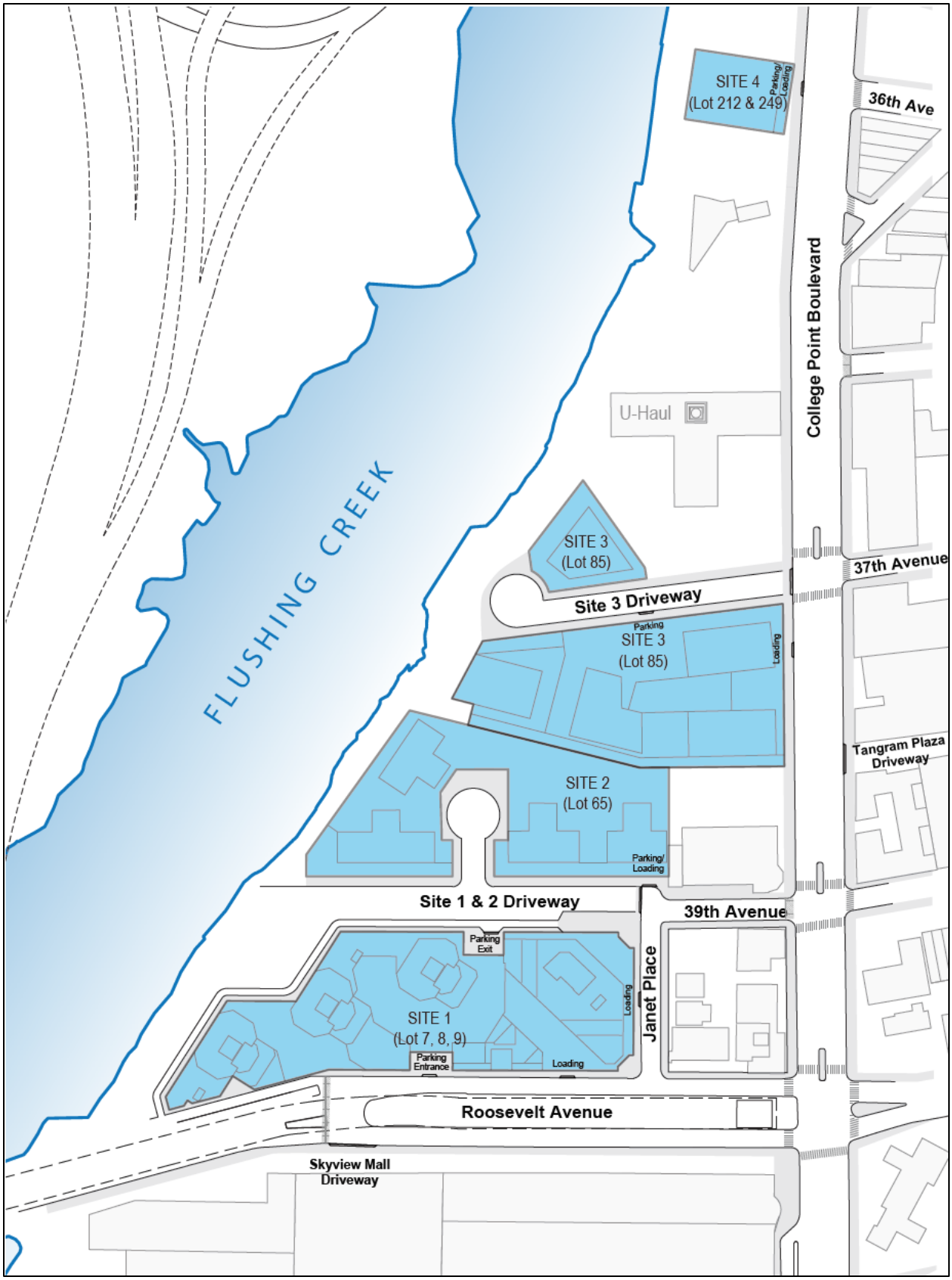


Figure M-6. Future No-Action Condition Street Network

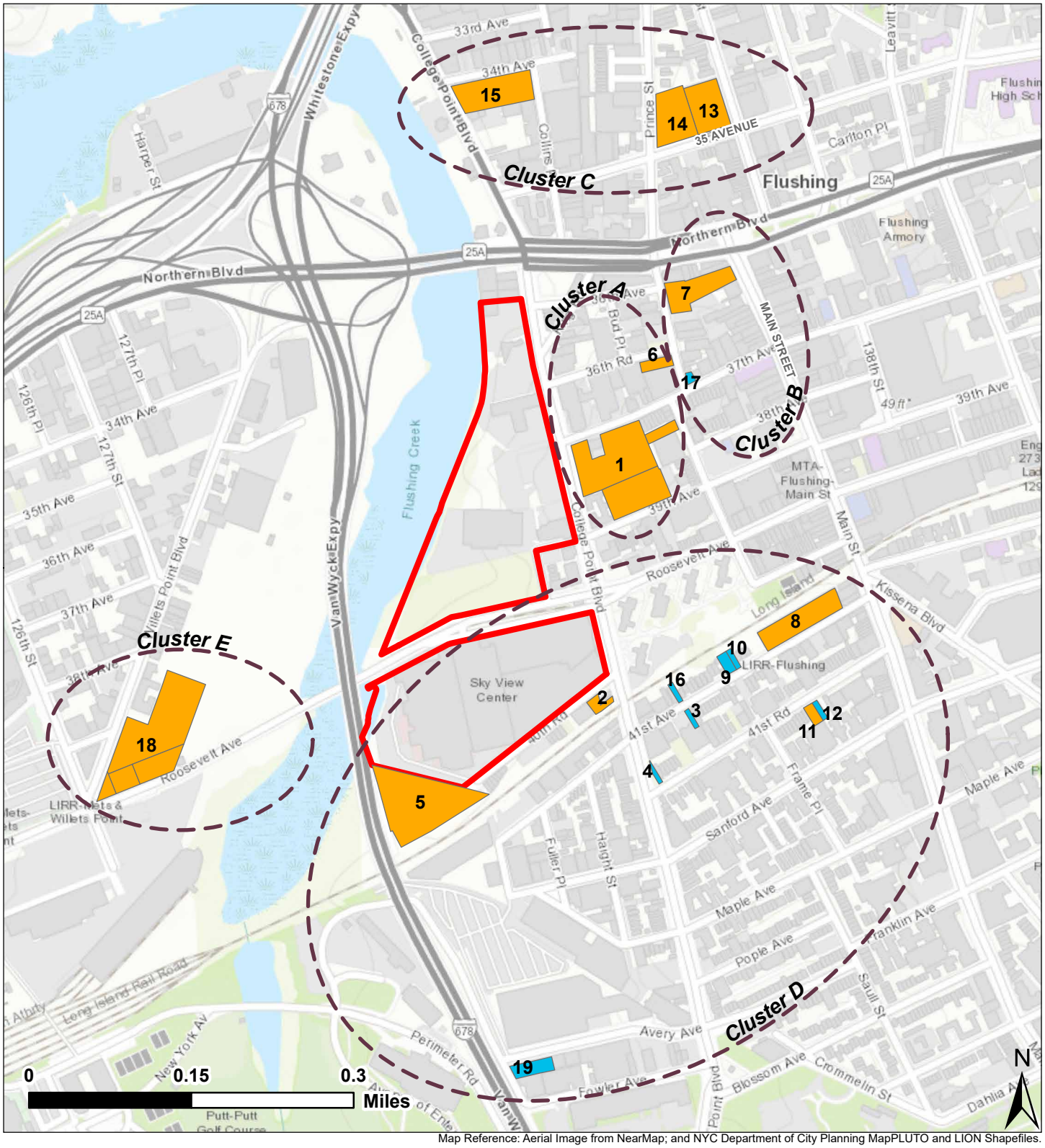
Table M-14. No-Build Development Projects Expected to be Complete by 2025

Site No.	Project Name/Address (Block/Lot)	Proposed No-Build Development Program	Cluster
1	Tangram 133-31 39th Avenue and 133-12 37th Avenue (Block 4972/Lots 65, 66, and 67)	A four-building mixed-use development. Tangram would include a total of 375 residential units, 75,764 sf of office space, 224,985 sf of retail space, 1,434 sf of community facility space, 378 hotel rooms, and 1,147 parking spaces.	A
2	131-72 40th Road (Block 5060/ Lot 37)	Six-story ambulatory diagnostic and treatment health care facility. 59,502 sf of community facility use.	D
3	132-32 41st Avenue (Block 5039/ Lot 18)	Five-story 7,465 sf mixed-use building with 5,495 sf of residential (8 DUs) and 1,970 sf of community facility use. [Included in background growth]	N/A
4	132-03 41st Road (Block 5039/ Lot 1)	Six-story 9,212 sf mixed-use building with 6,923 sf of residential (8 DUs) and 2,289 sf community facility uses. [Included in background growth]	N/A
5	Flushing Point Plaza 131-02 40th Road (Block 5066/ Lot 150)	550,465 sf three 19-story building development including approximately, 275,600 sf of residential space (278 Dus), 259,479 sf of hotel space (472 rooms), and 1,497 sf of community facility use as well as 507 parking spaces.	D
6	134-16 36th Road (Block 4970/ Lot 25)	Six-story 35,762 sf mixed-use building with 16,972 sf residential (26 DUs), 5,304 sf of local retail, 12,779 sf of hotel (32 rooms), 706 sf of community facility, and 40 parking spaces.	A
7	36-18 Main Street (Block 4971/ Lot 16)	12-story hotel-medical-retail complex that includes 14,327 sf retail, 150 hotel rooms, 50,444 sf of medical space, and parking for 346 vehicles.	B
8	One Flushing 133-45 41st Avenue (Block 5037/ Lot 64)	10-story mixed-use 286,193 sf all-affordable residential and commercial building. Ground floor commercial retail and community facility space will total 28,864 sf and 13,872 sf, respectively. The building offers 232 all-affordable apartments and a 156-space public parking lot	D
9	132-53 41st Avenue (Block 5037/ Lot 89)	Six-story 14,282 sf residential (14 DUs) and community facility building with 10,907 sf of residential and 3,375 sf of community facility space. [Included in background growth]	N/A
10	132-55 41st Avenue (Block 5037/ Lot 88)	Five-story 6,831 sf residential and community facility building with 5,384 sf of residential (7 DUs) and 1,447 sf of community facility space. [Included in background growth]	N/A
11	133-20 41st Road (Block 5042/ Lot 19)	10-story 31,075 sf medical facility with 23,619 sf of community facility use and 30 parking spaces.	D
12	133-24 41st Road (Block 5042/ Lot 22)	Nine-story 14,399 sf medical building with 11,996 sf of medical offices (community facility use). [Included in background growth]	N/A
13	The Farrington 134-37 35th Avenue (Block 4949/ Lot 31)	201,840 sf mixed-use development, including approximately 83,982 sf of hotel space (176 rooms); 16,774 sf of community facility space and 101,084 sf of residential space (89 condos), as well as 186 parking spaces.	C
14	134-03 35th Avenue (Block 4949/ Lot 46)	16-story mixed-use building including approximately 130 dwelling units, 14,182 sf of retail, 208 hotel rooms, 17,388 sf of community facility space, and 196 parking spaces.	C
15	34-09 College Point Boulevard (Block 4945/ Lot 34)	Three-story commercial storage building, including 105,377 sf of industrial space.	C
16	132-25 41st Avenue (Block 5037/ Lot 101)	Five-story eight-family (8 DUs) mixed-use residential and community facility building with 1,644 sf of community facility space. [Included in background growth]	N/A
17	36-45 Prince Street (Block 4971/Lot 1)	Five-story 8,151 sf mixed-use building with 4,125 sf residential (6 DUs), 3,578 sf commercial (office), and 448 sf of community facility space. [Included in background growth]	N/A
18	Willets Point Development (Block 1833, Lots 103, 111, 117, and part of 120)	Redevelopment of the Willets Point/Citi Field area with a mix of uses encompassing 108.9 acres. The Project is to be completed in three phases. 500 DUs of affordable housing is expected to be completed by 2025.	E
19	131-10 Avery Avenue (Block 5076/ Lot 61)	A proposed 50,621 sf seven-story commercial and community facility building. The building would contain 40,338 sf of community facility space and 10,283 sf of commercial space (retail). [Included in background growth]	N/A
20	Mets-Willets Point AirTrain	Construction to begin in mid-2020 for an AirTrain at a revamped Mets-Willets Point Station which will provide a connection to LaGuardia Airport and transfers to the 7 train and the Long Island Railroad. The AirTrain will also offer a 30-minute ride to Midtown Manhattan, a 16-minute ride from Manhattan to Willets Point, and a six-minute ride from Willets Point to LaGuardia	N/A

SPECIAL FLUSHING WATERFRONT DISTRICT

FIGURE M-7

DEVELOPMENT PROJECTS USED IN TRANSPORTATION ANALYSIS



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area

Cluster Designation

Development Projects with Trip Generation Profile

Development Projects included in Background Growth

FLUSHING, QUEENS, NY

LANGAN

However, if a land use in the Future No-Action Condition would generate less trips as compared to the Future With-Action Condition, then no factor was applied for that particular land use. The trip estimates for the Adjusted Future No-Action Condition and the resulting Net Incremental volumes (Future With-Action minus Adjusted Future No-Action) are shown in Tables M-15 and M-16, respectively.

For the Future No-Action Condition, project-generated vehicle trips from the AOR Project (see Table M-15) were assigned through various intersections in the study area based on the *CEQR Technical Manual* guidelines, *U.S. Census Bureau's* Origin/Destination data, prevailing travel patterns and existing roadway configuration. Traffic assignments for autos, taxis, and deliveries for individual development program components are discussed as follows:

Autos

Residential: Vehicular trips for the residential component were assigned to study area roadways based on Origin/Destination (O/D) patterns derived from the U.S. Census Bureau's *Journey to Work, 2015 Longitudinal Employer-Household Dynamics* database. More specifically, 11 percent would approach the study area from the east via Northern Boulevard, 5 from the east via Roosevelt Avenue, 17 percent from the west via Northern Boulevard, 20 percent from the west via Roosevelt Avenue, 29 percent from the north via College Point Boulevard and 18 percent from the south via College Point Boulevard.

Office/Light Industrial: Vehicular trips for the office and light industrial components were assigned to study area roadways based on Origin/Destination (O/D) patterns derived from the U.S. Census Bureau's *Reverse Journey to Work, 2015 Longitudinal Employer-Household Dynamics* database. More specifically, 17 percent would approach the study area from the east via Northern Boulevard, 9 percent from the east via Roosevelt Avenue, 17 percent from the west via Northern Boulevard, 15 percent from the west via Roosevelt Avenue, 19 percent from the north via College Point Boulevard and 23 percent from the south via College Point Boulevard.

Destination Retail: Vehicular trips for the destination retail component were assigned to study area roadways based on direct regional routes to/from the Project Area. More specifically, 15 percent would approach the study area from the east via Northern Boulevard, 10 percent from the east via Roosevelt Avenue, 10 percent from the west via Northern Boulevard, 20 percent from the west via Roosevelt Avenue, 20 percent from the north via College Point Boulevard and 25 percent from the south via College Point Boulevard.

Local Retail/Community Facility/Park Space: Vehicular trips for the local retail, community facility and park space components were assigned to study area roadways based on direct local routes to/from the Project Area and prevailing travel patterns. More specifically, 15 percent would approach the study area from the east via Northern Boulevard, 25 percent from the east via Roosevelt Avenue, 10 percent from the west via Northern Boulevard, 10 percent from the west via Roosevelt Avenue, 15 percent from the north via College Point Boulevard and 25 percent from the south via College Point Boulevard.

Table M-15. Transportation Demand Forecast, Adjusted Future No-Action Condition

Use	Peak Hour	In/Out	Person Trips							Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Walk	Total	Auto	Taxi	Delivery	Total
Residential	Weekday AM	In	62	1	79	36	1	58	236	35	2	5	42
		Out	246	3	318	143	4	232	945	141	2	5	148
		Total	308	3	397	178	4	290	1,181	176	4	11	190
	Weekday Midday	In	79	1	101	45	1	74	301	45	1	4	50
		Out	75	1	97	44	1	71	289	43	1	4	48
		Total	154	2	198	89	2	145	591	88	2	8	98
	Weekday PM	In	220	2	284	127	3	208	845	126	2	1	129
		Out	119	1	153	69	2	112	455	68	2	1	71
		Total	339	4	437	196	5	319	1,300	194	4	2	200
	Saturday	In	167	2	215	97	2	157	640	95	2	1	99
		Out	126	1	162	73	2	119	483	72	2	1	75
		Total	293	3	378	170	4	276	1,124	167	4	3	174
Office	Weekday AM	In	267	0	117	136	12	101	632	235	0	5	240
		Out	11	0	5	6	0	4	26	10	0	5	15
		Total	278	0	122	142	12	105	659	245	0	10	255
	Weekday Midday	In	8	4	28	28	0	328	395	7	7	5	20
		Out	9	4	30	30	0	355	428	8	7	5	20
		Total	16	8	58	58	0	684	824	15	15	11	40
	Weekday PM	In	16	0	7	8	1	6	38	14	0	1	15
		Out	308	0	136	157	13	116	730	271	0	1	272
		Total	324	0	143	165	14	122	769	286	0	2	288
	Saturday	In	51	0	23	26	2	19	121	45	0	0	45
		Out	34	0	15	17	1	13	81	30	0	0	30
		Total	85	0	38	44	4	32	202	75	0	0	75
Local Retail	Weekday AM	In	76	0	28	21	0	568	693	51	0	4	55
		Out	76	0	28	21	0	568	693	51	0	4	55
		Total	152	0	55	42	0	1,136	1,385	102	0	7	109
	Weekday Midday	In	483	0	175	132	0	3,597	4,387	322	0	5	327
		Out	483	0	175	132	0	3,597	4,387	322	0	5	327
		Total	965	0	351	263	0	7,195	8,774	643	0	10	654
	Weekday PM	In	254	0	92	69	0	1,893	2,309	169	0	1	170
		Out	254	0	92	69	0	1,893	2,309	169	0	1	170
		Total	508	0	185	139	0	3,787	4,618	339	0	2	340
	Saturday	In	216	0	189	108	0	2,190	2,703	135	0	1	136
		Out	216	0	189	108	0	2,190	2,703	135	0	1	136
		Total	433	0	378	216	0	4,379	5,406	270	0	1	271
Destination Retail	Weekday AM	In	29	1	7	9	0	2	48	14	1	1	16
		Out	18	1	5	6	0	2	31	9	1	1	11
		Total	47	2	12	14	0	4	79	23	2	2	27
	Weekday Midday	In	77	4	20	24	0	7	131	38	3	1	42
		Out	63	3	16	19	0	5	107	31	3	1	36
		Total	140	7	36	43	0	12	238	68	7	3	78
	Weekday PM	In	66	3	17	20	0	6	112	32	3	0	36
		Out	74	4	19	23	0	6	126	36	3	0	40
		Total	140	7	36	43	0	12	238	68	7	0	76
	Saturday	In	103	5	26	32	0	9	175	50	5	0	56
		Out	99	5	25	30	0	8	169	48	5	0	54
		Total	203	10	52	62	0	17	344	99	10	0	109
Hotel	Weekday AM	In	99	165	220	11	6	50	551	50	183	6	239
		Out	143	238	317	16	8	71	792	71	183	6	261
		Total	242	403	537	27	13	121	1,343	121	366	13	500
	Weekday Midday	In	288	479	639	32	16	144	1,598	144	321	5	469
		Out	135	226	301	15	8	68	752	68	321	5	393
		Total	423	705	940	47	24	212	2,350	212	641	10	862
	Weekday PM	In	232	386	515	26	13	116	1,288	116	298	1	415
		Out	161	268	358	18	9	81	895	81	298	1	379
		Total	393	655	873	44	22	196	2,182	196	595	2	794
	Saturday	In	118	237	322	17	8	144	846	54	157	1	211
		Out	93	186	253	13	7	113	665	42	157	1	200
		Total	212	423	574	30	15	257	1,511	96	313	2	411

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table M-15. Transportation Demand Forecast, Adjusted Future No-Action Condition (cont.)

Use	Peak Hour	In/Out	Person Trips							Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Walk	Total	Auto	Taxi	Delivery	Total
Community Facility (Medical Office)	Weekday AM	In	24	7	14	27	0	31	103	15	7	0	23
		Out	15	4	9	16	0	19	63	9	7	0	17
		Total	38	12	23	43	0	50	166	24	15	1	39
	Weekday Midday	In	21	6	13	24	0	28	92	13	9	0	22
		Out	24	7	15	27	0	31	104	15	9	0	24
		Total	45	14	27	51	0	59	196	29	17	1	47
	Weekday PM	In	11	3	7	12	0	14	48	7	6	0	13
		Out	20	6	12	23	0	27	88	13	6	0	19
		Total	31	10	19	35	0	41	136	20	12	0	32
	Saturday	In	29	9	18	33	0	38	126	18	11	0	30
		Out	30	9	18	34	0	39	131	19	11	0	30
		Total	59	18	36	67	0	77	257	37	23	0	60
Light Industrial	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Saturday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
Passive Park Space	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	1	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	1	0	0	0	0
	Saturday	In	0	0	0	0	0	0	1	0	0	0	0
		Out	0	0	0	0	0	0	1	0	0	0	0
		Total	0	0	0	0	0	1	1	0	0	0	0
Active Park Space	Weekday AM	In	0	0	0	0	0	0	1	0	0	0	0
		Out	0	0	0	0	0	0	1	0	0	0	0
		Total	0	0	0	0	0	1	1	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	1	1	0	0	0	0
		Total	0	0	0	0	0	1	2	0	0	0	0
	Weekday PM	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	1	1	0	0	0	0
		Total	1	0	0	0	0	1	3	0	0	0	0
	Saturday	In	0	0	0	0	0	1	2	0	0	0	0
		Out	0	0	0	0	0	1	2	0	0	0	0
		Total	1	0	0	0	0	2	4	0	0	0	0
Total	Weekday AM	In	556	175	467	239	18	810	2,264	400	194	21	615
		Out	509	246	681	207	12	897	2,551	291	194	21	506
		Total	1,065	420	1,147	446	30	1,707	4,816	690	387	43	1,121
	Weekday Midday	In	955	495	976	284	17	4,178	6,906	569	341	21	930
		Out	789	241	634	267	9	4,129	6,069	486	341	21	848
		Total	1,745	736	1,611	551	26	8,307	12,975	1,055	682	42	1,778
	Weekday PM	In	799	395	922	263	17	2,244	4,641	465	309	4	778
		Out	936	280	770	359	24	2,236	4,605	638	309	4	951
		Total	1,736	675	1,692	622	41	4,479	9,246	1,103	618	8	1,729
	Saturday	In	686	253	793	312	13	2,558	4,615	398	175	3	576
		Out	599	202	663	276	10	2,483	4,234	347	175	3	525
		Total	1,285	455	1,456	589	23	5,041	8,848	746	350	6	1,101

Table M-16. Transportation Demand Forecast, Net Incremental Trips (Future With-Action minus Adjusted Future No-Action)

Use	Peak Hour	In/Out	Person Trips							Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Walk	Total	Auto	Taxi	Delivery	Total
Residential	Weekday AM	In	12	0	16	7	0	12	47	7	0	1	8
		Out	49	1	64	29	1	47	189	28	0	1	30
		Total	62	1	80	36	1	58	237	35	1	2	38
	Weekday Midday	In	16	0	20	9	0	15	60	9	0	1	10
		Out	15	0	19	9	0	14	58	9	0	1	10
		Total	31	0	40	18	0	29	118	18	0	2	20
	Weekday PM	In	44	0	57	26	1	42	169	25	0	0	26
		Out	24	0	31	14	0	22	91	14	0	0	14
		Total	68	1	87	39	1	64	260	39	1	0	40
	Saturday	In	33	0	43	19	0	32	128	19	0	0	20
		Out	25	0	33	15	0	24	97	14	0	0	15
		Total	59	1	76	34	1	55	225	34	1	1	35
Office	Weekday AM	In	69	0	30	35	3	26	163	61	0	1	62
		Out	3	0	1	1	0	1	7	3	0	1	4
		Total	72	0	32	37	3	27	170	63	0	3	66
	Weekday Midday	In	2	1	7	7	0	85	102	2	2	1	5
		Out	2	1	8	8	0	92	110	2	2	1	5
		Total	4	2	15	15	0	176	212	4	4	3	10
	Weekday PM	In	4	0	2	2	0	2	10	4	0	0	4
		Out	79	0	35	41	3	30	188	70	0	0	70
		Total	84	0	37	43	4	32	198	74	0	1	74
	Saturday	In	13	0	6	7	1	5	31	12	0	0	12
		Out	9	0	4	4	0	3	21	8	0	0	8
		Total	22	0	10	11	1	8	52	19	0	0	19
Local Retail	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Saturday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
Destination Retail	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Saturday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
Hotel	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Saturday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0

Note: In and Out volumes may not sum to Total volumes due to rounding.

Table M-16. Transportation Demand Forecast, Net Incremental Trips (Future With-Action minus Adjusted Future No-Action) (cont.)

Use	Peak Hour	In/Out	Person Trips							Vehicle Trips			
			Auto	Taxi	Subway	Bus	Railroad	Walk	Total	Auto	Taxi	Delivery	Total
Community Facility (Medical Office)	Weekday AM	In	2	1	1	3	0	3	11	2	1	0	2
		Out	1	0	1	2	0	2	6	1	1	0	2
		Total	4	1	2	4	0	5	17	2	2	0	4
	Weekday Midday	In	2	1	1	2	0	3	9	1	1	0	2
		Out	2	1	1	3	0	3	11	2	1	0	2
		Total	5	1	3	5	0	6	20	3	2	0	5
	Weekday PM	In	1	0	1	1	0	1	5	1	1	0	1
		Out	2	1	1	2	0	3	9	1	1	0	2
		Total	3	1	2	4	0	4	14	2	1	0	3
	Saturday	In	3	1	2	3	0	4	13	2	1	0	3
		Out	3	1	2	3	0	4	13	2	1	0	3
		Total	6	2	4	7	0	8	26	4	2	0	6
Light Industrial	Weekday AM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Weekday PM	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
	Saturday	In	0	0	0	0	0	0	0	0	0	0	0
		Out	0	0	0	0	0	0	0	0	0	0	0
		Total	0	0	0	0	0	0	0	0	0	0	0
Passive Park Space	Weekday AM	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	0	1	0	0	0	0
		Total	0	0	0	0	0	1	2	0	0	0	0
	Weekday Midday	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	1	1	0	0	0	0
		Total	1	0	0	0	0	2	3	0	0	0	0
	Weekday PM	In	0	0	0	0	0	1	1	0	0	0	0
		Out	0	0	0	0	0	1	2	0	0	0	0
		Total	1	0	0	0	0	2	3	0	0	0	0
	Saturday	In	1	0	0	0	0	1	3	0	0	0	0
		Out	0	0	0	0	0	1	2	0	0	0	0
		Total	1	0	1	1	0	3	5	0	0	0	0
Active Park Space	Weekday AM	In	1	0	0	0	0	2	3	0	0	0	0
		Out	0	0	0	0	0	1	2	0	0	0	0
		Total	1	0	1	1	0	3	5	0	0	0	0
	Weekday Midday	In	1	0	1	0	0	2	4	0	0	0	0
		Out	1	0	1	0	0	2	4	0	0	0	0
		Total	2	0	1	1	0	5	9	1	0	0	1
	Weekday PM	In	1	0	1	1	0	3	5	0	0	0	0
		Out	1	0	1	1	0	3	6	0	0	0	0
		Total	2	0	1	1	0	6	10	1	0	0	1
	Saturday	In	2	0	1	1	0	5	8	1	0	0	1
		Out	1	0	1	1	0	4	7	0	0	0	1
		Total	3	0	2	2	0	8	15	1	0	0	1
Total	Weekday AM	In	84	1	48	45	3	43	225	69	1	2	73
		Out	54	1	66	32	1	51	206	32	1	2	35
		Total	139	2	114	77	4	94	430	101	2	5	108
	Weekday Midday	In	21	2	29	19	0	105	177	13	3	2	18
		Out	21	2	29	20	0	112	185	13	3	2	18
		Total	42	4	59	39	0	218	362	25	6	4	36
	Weekday PM	In	51	1	60	30	1	48	190	30	1	0	32
		Out	107	1	68	57	4	59	296	85	1	0	87
		Total	157	2	128	87	5	107	486	115	2	1	118
	Saturday	In	52	1	52	31	1	46	183	33	2	0	35
		Out	39	1	39	24	1	36	140	25	2	0	27
		Total	91	3	91	54	2	82	323	58	3	1	62

Note: In and Out volumes may not sum to Total volumes due to rounding.

Hotel: Vehicular trips for the hotel component were assigned to study area roadways based on prevailing travel patterns and routes to/from major New York City airports, including John F. Kennedy International Airport and LaGuardia Airport. More specifically, 25 percent would approach the study area from the west via Northern Boulevard, 25 percent from the west via Roosevelt Avenue, 25 percent from the north via College Point Boulevard and 25 percent from the south via College Point Boulevard.

Taxis

Overall, the taxi trips were distributed to the study area streets/roadways following the same distribution patterns as the auto trips.

Deliveries

Delivery vehicle trips for all land uses were assigned to NYCDOT-designated truck routes in the study area. Delivery vehicles were assigned to the study area from regional origins via Van Wyck/ Whitestone Expressway (I-678), Long Island Expressway (I-495), Northern Boulevard, Roosevelt Avenue, College Point Boulevard, Main Street and Kissena Boulevard. More specifically, 15 percent would approach the study area from the east via Northern Boulevard, 10 percent from the east via Roosevelt Avenue, 10 percent from the west via Northern Boulevard, 20 percent from the west via Roosevelt Avenue, 20 percent from the north via College Point Boulevard and 25 percent from the south via College Point Boulevard.

Access to Projected Development Sites within the Project Area (Future No-Action Condition)

Site 1: Auto trips were assigned to access the on-site parking garage via the entrance located on Roosevelt Avenue west of Janet Place. Auto trips would egress the garage via the exit located on the Site 1 & 2 Driveway west of Janet Place. Taxi trips were assigned to pick-up/drop-off at the Site 1 building frontage on the Site 1 & 2 Driveway. Delivery trips were assigned to access/egress the two loading dock entrances; one of which is located on Roosevelt Avenue west of Janet Place, and the other on Janet Place between Roosevelt Avenue and 39th Avenue.

Site 2: Auto trips were assigned to access/egress the on-site parking garage entrance/exit via the intersection of Janet Place and 39th Avenue. Taxi trips were assigned to pick-up/drop-off at the Site 2 cul-de-sac located at the Site 1 & 2 Driveway west of Janet Place. Delivery trips were assigned to access/egress the loading dock via the intersection of Janet Place and 39th Avenue.

Site 3: Auto trips were assigned to access/egress the on-site parking garage entrance/exit located on the Site 3 Driveway west of College Point Boulevard. Taxi trips were assigned to pick-up/drop-off at the Site 3 cul-de-sac located at the Site 3 Driveway west of College Point Boulevard. Delivery trips were assigned to access/egress the loading dock located on College Point Boulevard south of 37th Avenue.

Site 4: Auto trips were assigned to access/egress the on-site surface parking lot entrance/exit located at the intersection of College Point Boulevard and 36th Avenue. Taxi trips were assigned to pick-up/drop-off on College Point Boulevard between 36th Avenue and King Road. Delivery trips were

assigned to access/egress the loading dock via the intersection of College Point Boulevard and 36th Avenue.

Future No-Action Condition Traffic Volumes

The Future No-Action Condition traffic volumes were projected by layering on top of the existing balanced traffic volumes the following: (i) background growth, (ii) trips generated by the No-Build Development Sites and (iii) trips generated by the AOR Project.

Vehicle trip assignments for the AOR Project are shown in Appendix K, Figures K-5 through K-8. The Future No-Action Condition traffic volumes during the weekday AM, midday, PM and Saturday midday are shown in Appendix K, Figures K-9 through K-12.

Traffic Conditions

The intersection capacity analysis results for the Future No-Action Condition including v/c ratios, delays and LOS for the study area intersections are shown in Table M-17. In summary, of the 36 intersection approaches/ lane groups in the study area, 22 would operate below mid-LOS D in at least one peak hour, including:

- Westbound approach at the College Point Boulevard and 36th Avenue intersection (LOS F with average delay of 114.3 seconds during the weekday AM peak hour, LOS F with average delay of 1,666 seconds during the weekday midday, LOS F with average delay of 1,509 seconds during the weekday PM peak hour, and LOS F with average delay of 308.8 seconds during the Saturday midday peak hour).
- Eastbound approach at the College Point Boulevard and 37th Avenue intersection (LOS F with average delay of 131.8 seconds during the weekday midday peak hour, and LOS F with average delay of 186.9 seconds during the weekday PM peak hour).
- Westbound approach at the College Point Boulevard and 37th Avenue intersection (LOS F with average delay of 138.5 seconds during the weekday midday peak hour, LOS D with average delay of 54.7 seconds during the weekday PM peak hour, and LOS E with average delay of 56.6 seconds during the Saturday midday peak hour).
- Northbound approach at the College Point Boulevard and 37th Avenue intersection (LOS F with average delay of 142.3 seconds during the weekday AM peak hour, LOS F with average delay of 331.0 seconds during the weekday midday peak hour, LOS F with average delay of 462.7 seconds during the weekday PM peak hour, and LOS F with average delay of 219.2 seconds during the Saturday midday peak hour).
- Eastbound approach at the College Point Boulevard and 39th Avenue intersection (LOS F with average delay of 164.1 seconds during the weekday AM peak hour, LOS F with average delay of 533.3 seconds during the weekday midday peak hour, LOS F with average delay of 841.2 seconds during the weekday PM peak hour, and LOS F with average delay of 223.3 seconds during the Saturday midday peak hour).
- Westbound approach at the College Point Boulevard and 39th Avenue intersection (LOS E with average delay of 77.0 seconds during the weekday midday peak hour).
- Northbound left-turn at the College Point Boulevard and 39th Avenue intersection (LOS F with average delay of 113.5 seconds during the weekday AM peak hour, LOS F with

average delay of 776.7 seconds during the weekday midday peak hour, LOS F with average delay of 729.9 seconds during the weekday PM peak hour, and LOS F with average delay of 293.8 seconds during the Saturday midday peak hour).

- Northbound through movement at the College Point Boulevard and 39th Avenue intersection (LOS E with average delay of 69.6 seconds during the weekday midday peak hour, LOS D with average delay of 45.6 seconds during the weekday PM peak hour, and LOS F with average delay of 107.8 seconds during the Saturday midday peak hour).
- Southbound approach at the College Point Boulevard and 39th Avenue intersection (LOS F with average delay of 150.3 seconds during the weekday midday peak hour, and LOS E with average delay of 57.0 seconds during the weekday PM peak hour).
- Northbound left-turn at the College Point Boulevard and WB Roosevelt Avenue intersection (LOS D with average delay of 49.7 seconds during the weekday AM peak hour).
- Southbound approach at the College Point Boulevard and WB Roosevelt Avenue intersection (LOS F with average delay of 291.0 seconds during the weekday AM peak hour, LOS F with average delay of 447.9 seconds during the weekday midday peak hour, LOS F with average delay of 463.0 seconds during the weekday PM peak hour, and LOS F with average delay of 375.1 seconds during the Saturday midday peak hour).
- Eastbound left-through movement at the College Point Boulevard and EB Roosevelt Avenue intersection (LOS F with average delay of 103.8 seconds during the weekday PM peak hour, and LOS E with average delay of 63.1 seconds during the Saturday midday peak hour).
- Southbound right-turn at the Roosevelt Avenue and Janet Place intersection (LOS F with average delay of 6,928 seconds during the weekday AM peak hour, LOS F with undefined delay during the weekday midday peak hour, LOS F with undefined delay during the weekday PM peak hour, and LOS F with undefined delay during the Saturday midday peak hour).
- Westbound left-turn at the Roosevelt Avenue and Skyview Mall Driveway intersection (LOS D with average delay of 50.6 seconds during the weekday AM peak hour, LOS D with average delay of 50.3 seconds during the weekday PM peak hour, and LOS E with average delay of 58.6 seconds during the Saturday midday peak hour).
- Northbound left-turn at the Roosevelt Avenue and Skyview Mall Driveway intersection (LOS D with average delay of 48.1 seconds during the weekday AM peak hour).
- Westbound left-turn at the College Point Boulevard and Tangram Plaza Driveway intersection (LOS F with average delay of 972.1 seconds during the weekday AM peak hour, LOS F with undefined delay during the weekday midday peak hour, LOS F with undefined delay during the weekday PM peak hour, and LOS F with undefined delay during the Saturday midday peak hour).
- Westbound right-turn at the College Point Boulevard and Tangram Plaza Driveway intersection (LOS F with average delay of 293.3 seconds during the weekday midday peak hour, LOS F with average delay of 361.7 seconds during the weekday PM peak hour, and LOS F with average delay of 303.1 seconds during the Saturday midday peak hour).
- Southbound left-turn at the College Point Boulevard and Tangram Plaza Driveway intersection (LOS F with average delay of 377.4 seconds during the weekday midday peak hour, LOS F with average delay of 222.7 seconds during the weekday PM peak hour, and LOS F with average delay of 333.4 seconds during the Saturday midday peak hour).
- Eastbound left-turn at the 39th Avenue and Janet Place intersection (LOS D with average delay of 33.3 seconds during the weekday AM peak hour, LOS F with undefined delay during the

weekday midday peak hour, LOS F with undefined delay during the weekday PM peak hour, and LOS F with undefined delay during the Saturday midday peak hour).

- Westbound left-turn at the 39th Avenue and Janet Place intersection (LOS F with undefined delay during the weekday AM peak hour, LOS F with undefined delay during the weekday midday peak hour, LOS F with undefined delay during the weekday PM peak hour, and LOS F with undefined delay during the Saturday midday peak hour).
- Northbound approach at the 39th Avenue and Janet Place intersection (LOS F with undefined delay during the weekday AM peak hour, LOS F with undefined delay during the weekday midday peak hour, LOS F with undefined delay during the weekday PM peak hour, and LOS F with undefined delay during the Saturday midday peak hour).
- Southbound approach at the 39th Avenue and Janet Place intersection (LOS F with undefined delay during the weekday AM peak hour, LOS F with undefined delay during the weekday midday peak hour, LOS F with undefined delay during the weekday PM peak hour, and LOS F with undefined delay during the Saturday midday peak hour).

Table M-17. Future No-Action Condition - LOS Summary

Intersection ID	Intersection name	Control	Street name	Direction	Lane group	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
						Future No-Action Condition			Future No-Action Condition			Future No-Action Condition			Future No-Action Condition		
						v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	College Point Boulevard & 36th Avenue	TWSC[1]	Site 4 Driveway	EB	LTR	0.00	N/A	N/A	0.00	N/A	N/A	0.00	N/A	N/A	0.00	N/A	N/A
			36th Avenue	WB	LTR	0.71	114.3	F	Note 2	Note 2	F	Note 2	Note 2	F	0.83	308.8	F
			College Point Boulevard	NB	L	0.00	14.2	B	0.00	16.8	C	0.00	14.8	B	0.00	14.5	B
				SB	L	0.10	13.3	B	0.28	29.4	D	0.17	28.2	D	0.13	22.4	C
			Overall Intersection			-	Note 4	Note 4	-	Note 4	Note 4	-	Note 4	Note 4	-	Note 4	Note 4
2	College Point Boulevard & 37th Avenue	Signal	Site 3 Driveway	EB	LR	0.53	33.8	C	1.16	131.8	F	1.28	186.9	F	0.61	33.1	C
			37th Avenue	WB	LTR	0.51	33.6	C	1.17	138.5	F	0.80	54.7	D	0.88	56.6	E
			College Point Boulevard	NB	LT	1.24	142.3	F	1.69	331.0	F	1.97	462.7	F	1.44	219.2	F
				SB	TR	0.96	43.1	D	0.95	34.0	C	0.83	27.2	C	0.76	19.6	B
			Overall Intersection			-	76.7	E	-	174.8	F	-	255.7	F	-	118.6	F
3	College Point Boulevard & 39th Avenue	Signal	39th Avenue	EB	LR	1.21	164.1	F	2.10	533.3	F	2.75	841.2	F	1.39	223.3	F
				WB	LTR	0.50	37.8	D	0.69	35.2	D	0.93	77.0	E	0.73	37.5	D
			College Point Boulevard	NB	L	1.01	113.5	F	2.61	776.7	F	2.49	729.9	F	1.50	293.8	F
					T	0.66	19.8	B	1.07	69.6	E	0.99	45.6	D	1.17	107.8	F
				SB	TR	0.92	26.5	C	1.28	150.3	F	1.06	57.0	E	1.01	42.9	D
			Overall Intersection			-	46.1	D	-	221.6	F	-	221.5	F	-	98.6	F
4A	College Point Boulevard & WB Roosevelt Avenue	Signal	Roosevelt Avenue	WB	LTR	0.50	35.5	D	0.70	32.2	C	0.60	39.0	D	0.66	30.8	C
			College Point Boulevard	NB	L	0.76	49.7	D	0.68	30.5	C	0.64	36.8	D	0.60	28.4	C
					T	0.35	10.3	B	0.53	9.9	A	0.54	11.8	B	0.52	9.8	A
				SB	TR	1.56	291.0	F	1.92	447.9	F	1.94	463.0	F	1.76	375.1	F
			Overall Intersection			-	154.6	F	-	198.9	F	-	216.1	F	-	164.5	F
4B	College Point Boulevard & EB Roosevelt Avenue	Signal	Roosevelt Avenue	EB	LT	0.78	39.8	D	0.94	41.5	D	1.13	103.8	F	1.03	63.1	E
					R	0.43	28.6	C	0.53	21.4	C	0.74	38.4	D	0.57	22.6	C
			College Point Boulevard	NB	TR	0.52	20.6	C	0.80	26.3	C	0.66	24.9	C	0.80	26.6	C
				SB	T	0.60	21.1	C	0.80	22.6	C	0.76	25.1	C	0.74	21.5	C
			Overall Intersection			-	154.6	F	-	27.8	C	-	44.3	D	-	32.9	C
5	Roosevelt Avenue & Janet Place	TWSC[1]	Roosevelt Avenue	WB	TR	-	0.0	A	-	0.0	A	-	0.0	A	-	0.0	A
			Janet Place	SB	R	Note 2	Note 2	F	Note 3	Note 3	F	Note 3	Note 3	F	Note 3	Note 3	F
			Overall Intersection			-	Note 4	Note 4	-	Note 4	Note 4	-	Note 4	Note 4	-	Note 4	Note 4
6	Roosevelt Avenue & Skyview Mall Driveway	Signal	Roosevelt Avenue	EB	TR	0.35	10.0	A	0.67	24.6	C	0.63	22.2	C	0.68	24.8	C
				WB	L	0.41	50.6	D	0.46	35.9	D	0.37	50.3	D	0.57	58.6	E
					T	0.80	15.9	B	0.93	28.0	C	0.92	28.1	C	1.00	37.4	D
			Skyview Mall Driveway	NB	L	0.04	48.1	D	0.12	25.3	C	0.15	37.0	D	0.25	26.7	C
					R	0.05	33.7	C	0.19	14.6	B	0.30	27.2	C	0.35	16.7	B
			Overall Intersection			-	15.3	B	-	25.8	C	-	26.3	C	-	30.3	C
7	College Point Boulevard & Tangram Plaza Driveway	TWSC[1]	Tangram Plaza Driveway	WB	L	2.35	972.1	F	Note 3	Note 3	F	Note 3	Note 3	F	Note 3	Note 3	F
					R	0.17	18.2	C	1.38	293.3	F	1.59	361.7	F	1.47	303.1	F
			College Point Boulevard	NB	TR	-	0.0	A	-	0.0	A	-	0.0	A	-	0.0	A
				SB	L	0.28	18.0	C	1.61	377.4	F	1.23	222.7	F	1.55	333.4	F
			Overall Intersection			-	Note 4	Note 4	-	Note 4	Note 4	-	Note 4	Note 4	-	Note 4	Note 4
8	39th Avenue & Janet Place	TWSC[1]	Site 1 & 2 Driveway	EB	L	0.00	33.3	D	Note 3	Note 3	F	Note 3	Note 3	F	Note 3	Note 3	F
			39th Avenue	WB	L	Note 3	Note 3	F	Note 3	Note 3	F	Note 3	Note 3	F	Note 3	Note 3	F
			Janet Place	NB	LTR	Note 3	Note 3	F	Note 3	Note 3	F	Note 3	Note 3	F	Note 3	Note 3	F
			Site 2 Driveway	SB	LTR	Note 3	Note 3	F	Note 3	Note 3	F	Note 3	Note 3	F	Note 3	Note 3	F
			Overall Intersection			-	Note 4	Note 4	-	Note 4	Note 4	-	Note 4	Note 4	-	Note 4	Note 4

Note:
1. Two-Way Stop-Controlled
2. V/c ratio > 3.00 and Delay > 1,000 seconds.
3. Lane group delay and v/c ratio information are not provided by HCS.
4. Intersection delay and LOS information for TWSC intersections are not provided by HCS.

Future With-Action Condition (2025)

Changes to the Study Area Street Network

As part of the Proposed Actions, five new private streets would be created connecting to existing roadway network in the study area (see Figure M-8). More specifically the following circulation changes would be introduced in the Future With-Action Condition:

- 37th Avenue Extension (one-way westbound) would be added as a west leg to the intersection of College Point Boulevard and 37th Avenue, in place of the existing surface parking lot driveway;
- 38th Avenue Extension (one-way eastbound) would be added as a west leg to the intersection of College Point Boulevard and Tangram Plaza Driveway;
- 39th Avenue Extension (two-way eastbound-westbound) would be added as a west leg to the intersection of 39th Avenue and Janet Place;
- Janet Place Extension (one-way southbound) would be added as a north leg to the intersection of 39th Avenue and Janet Place; and,
- Transverse Road (one-way northbound) would be added on the north side of Roosevelt Avenue just east of the intersection with Skyview Mall Driveway, creating a "right-in-only" intersection with no vehicular conflicts with movements along Roosevelt Avenue.

Three new internal intersections would be created by the Proposed Street Network within the Project Area in the Future With-Action Condition. These include:

- 38th Avenue Extension and Janet Place Extension;
- 38th Avenue Extension and Transverse Road; and,
- 39th Avenue Extension and Transverse Road.

Project Components Related to the Environment (PCRE)

As part of the Future With-Action Condition, Project Components Related to the Environment (PCRE) were incorporated in the analysis. The PCRE include modifications to the type of intersection control (Two-Way STOP-Control [TWSC], All-Way STOP-Control [AWSC], and Signal Control), signal timing revisions, modifications to existing intersection geometry (including lane restriping and curb extensions) and changes to parking regulations. Specifically, the following intersections would require the PCREs in the Future With-Action Condition:

College Point Boulevard and 37th Avenue

- Striping of new Left-Turn bay within the existing 10-foot wide median on the northbound approach.
- Signal timing modifications including:
    a. During the weekday AM peak hour, shift 2 seconds of green time from the eastbound/ westbound phase to the northbound/ southbound phase.
    b. During the weekday midday peak hour, shift 1 second of green time from the northbound/ southbound phase to the eastbound/ westbound phase.
    c. During the Saturday midday peak hour, shift 1 second of green time from the northbound/ southbound phase to the eastbound/ westbound phase.

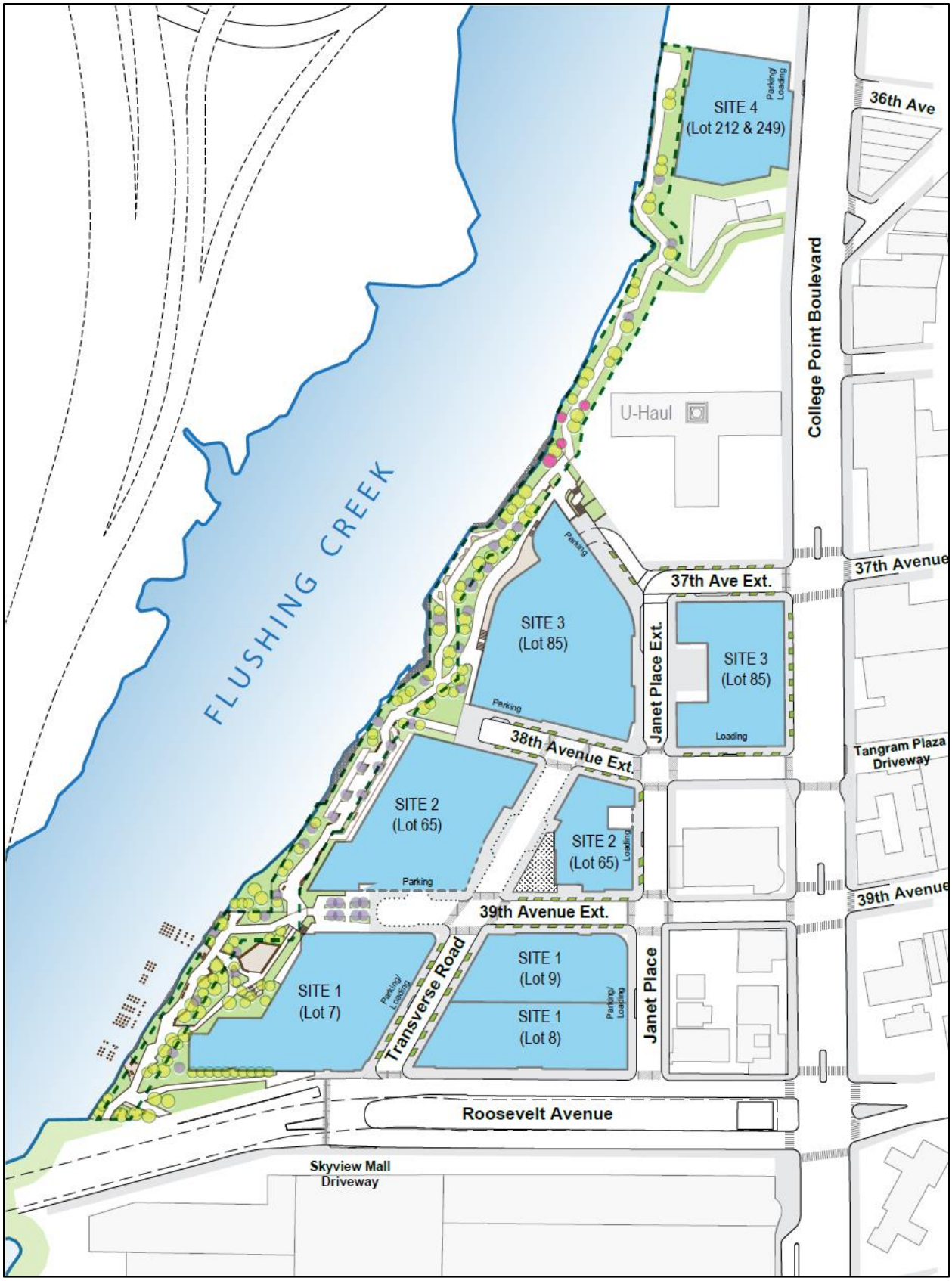


Figure M-8. Future With-Action Condition Street Network

College Point Boulevard and 39th Avenue

- Elimination of the parking lane on the east side of College Point Boulevard (northbound approach) between Roosevelt Avenue and 39th Avenue.
- Restriping of the Northbound approach as follows:
    a. 12-foot wide Northbound Left-Turn lane (2-foot widening);
    b. 11-foot wide Northbound Through lane (same as existing);
    c. 12-foot wide Northbound Through lane (same as existing); and,
    d. 5-foot wide "Class 2" bike lane with 1-foot wide buffer.
- Restriping of the parking lane on the receiving end of the northbound approach with striped hatching for a 40-foot length from the intersection, eliminating parking for this segment.
- Conversion of the parking lane on the west side of College Point Boulevard between 38th Avenue Extension and 39th Avenue (southbound approach) to "No Parking Anytime."
- Restriping of 39th Avenue west of College Point Boulevard as follows:
    a. 10-foot wide Eastbound Right-Turn lane;
    b. 9-foot wide Eastbound Left-Turn lane; and,
    c. 11-foot wide Westbound receiving lane.
- Conversion of the "2-Hour Metered Parking" regulation on the south side 39th Avenue east of College Point Boulevard to "No Standing Anytime" for approximately 125 feet upstream the intersection.
- Restriping of 39th Avenue east of College Point Boulevard as follows:
    a. 11-foot wide Westbound Left-Turn lane;
    b. 11-foot wide Westbound Through/ Shared Right-turn lane; and,
    c. 8-foot wide parking lane on the north side of 39th Avenue.
- Addition of an exclusive Northbound leading left-turn phase (paired with northbound through and eastbound lagging right-turn movements). Signal timing modifications to be implemented as follows:
    a. During the weekday AM peak hour, shift 9 seconds of green time from the eastbound/ westbound phase and 6 seconds of green time from the northbound/ southbound phase to the new exclusive northbound left-turn phase (10, 3 and 2 seconds of green, amber and all-red, respectively).
    b. During the weekday midday peak hour, shift 10 seconds of green time from the eastbound/ westbound phase and 1 seconds of green time from the northbound/ southbound phase to the new exclusive northbound left-turn phase (6, 3 and 2 seconds of green, amber and all-red, respectively).
    c. During the weekday PM peak hour, shift 10 seconds of green time from the eastbound/ westbound phase and 1 seconds of green time from the northbound/ southbound phase to the new exclusive northbound left-turn phase (6, 3 and 2 seconds of green, amber and all-red, respectively).
    d. During the Saturday midday peak hour, shift 10 seconds of green time from the eastbound/ westbound phase and 1 seconds of green time from the northbound/ southbound phase to the new exclusive northbound left-turn phase (6, 3 and 2 seconds of green, amber and all-red, respectively).

Roosevelt Avenue and Janet Place

- Restriping of Janet Place north of Roosevelt Avenue as follows:
  - 11-foot wide Southbound Right-Turn lane; and,
  - 19-foot wide Northbound receiving lane.
- Conversion of the east and west curbsides of Janet Place to "No Standing Anytime", eliminating parking to accommodate 30-foot box truck (SU-30) westbound right-turn maneuverability.

College Point Boulevard and 38th Avenue Extension/ Tangram Plaza Driveway

- Installation of a new traffic signal.
- Striping of a new Left-Turn bay within the existing 10-foot wide median on the southbound approach.
- Striping of 38th Avenue Extension west of College Point Boulevard as follows:
  - 17-foot wide Eastbound Left-Turn lane; and,
  - 17-foot wide Eastbound Through/ Shared Right-Turn lane.
- Conversion of the parking lane on the east side of College Point Boulevard between 38th Avenue Extension and 39th Avenue (northbound approach) to "No Parking Anytime."
- Striping of a 20-foot wide south crosswalk.
- Installation of curb extensions along the east and west sides of the south crosswalk.

39th Avenue and Janet Place

- Installation of a new traffic signal.
- Striping of 39th Avenue east of Janet Place as follows:
  - 15-foot wide Westbound lane; and,
  - 15-foot wide Eastbound receiving lane.
- Striping of Janet Place south of 39th Avenue as follows:
  - 15-foot wide Northbound lane; and,
  - 15-foot wide Southbound receiving lane.

38th Avenue Extension and Janet Place Extension

- Installation of All-Way STOP-Control.

39th Avenue Extension and Transverse Road

- Installation of All-Way STOP-Control.

Traffic Volumes

In the Future With-Action Condition, trips generated by the Proposed Actions (see Table M-6) were assigned to study area intersections based on the *CEQR Technical Manual* guidelines, *U.S. Census Bureau's* Origin/Destination data, prevailing travel patterns and existing roadway configuration.

Traffic assignments for autos, taxis, and deliveries approaching/departing the study area for individual development program components followed the same patterns developed for the Future No-Action Condition. Traffic assignments for each of the Projected Development Sites are described as follows.

Access to Projected Development Sites within the Project Area

Site 1: Auto trips were assigned to the on-site parking garage via the two entrance/exits including the one on Janet Place between Roosevelt and 39th avenues and the other on Transverse Road between Roosevelt Avenue and 39th Avenue Extension. Taxi trips were assigned to pick-up/drop-off at the Site 1 frontages on Transverse Road, Janet Place and 39th Avenue Extension. Delivery trips were assigned to the two loading dock entrances which are adjacent to the parking garage entrances.

Site 2: Auto trips were assigned to the on-site parking garage via the entrance/exit located on 39th Avenue Extension west of Transverse Road. Taxi trips were assigned to pick-up/drop-off at the Site 2 building frontages along Transverse Road between 38th Avenue Extension and 39th Avenue Extension. Delivery trips were assigned to the loading dock entrance/exit on Janet Place Extension between 38th and 39th avenues.

Site 3: Auto trips were assigned to the on-site parking garage via the two entrance/exits including the one located at the intersection of Janet Place Extension and 37th Avenue Extension and the other on 38th Avenue Extension west of Transverse Road. Taxi trips were assigned to pick-up/drop-off at the Site 3 building frontages on Janet Place Extension between 37th Avenue Extension and 38th Avenue Extension. Delivery trips were assigned to the loading dock on 38th Avenue Extension between College Point Boulevard and Janet Place Extension.

Site 4: Auto trips were assigned to the on-site parking garage entrance/exit at the intersection of College Point Boulevard and 36th Avenue. Taxi trips were assigned to pick-up/drop-off on College Point Boulevard between 36th Avenue and King Road. Delivery trips were assigned to access/egress the loading dock via the intersection of College Point Boulevard and 36th Avenue.

Future With-Action Condition Traffic Volumes

The assignments of vehicle trips generated by the Proposed Actions are shown in Appendix K, Figures K-13 through K-16. The Future With-Action Condition traffic volumes during the weekday AM, midday, PM and Saturday midday are shown in Appendix K, Figures K-17 through K-20.

Traffic Conditions

The intersection capacity analysis results for the Future With-Action Condition with PCRE including v/c ratios, delays and LOS are shown in Table M-18. With the PCREs in place, the intersection approaches would operate with service conditions similar to the Future No-Action Condition without any significant increase in delays. Therefore, as per CEQR criteria, the Proposed Actions with the PCREs would not adversely affect the future traffic operating conditions in the study area.

In summary, the following intersection approaches/ lane groups in the study area would operate below mid-LOS D in at least one peak hour:

- The eastbound approach of Site 4 Driveway at College Point Boulevard, which would:
    - Operate at LOS F with an average delay of 682.1 seconds during the weekday AM peak hour, relative to no delay in the Future No-Action Condition.
    - Operate at LOS F with an average delay of 3,655 seconds during the weekday midday peak hour, relative to no delay in the Future No-Action Condition.
    - Operate at LOS F with an average delay of 3,202 seconds during the weekday PM peak hour, relative to no delay in the Future No-Action Condition.
    - Operate at LOS F with an average delay of 1,734 seconds during the Saturday midday peak hour, relative to no delay in the Future No-Action Condition.
    - Note that the eastbound approach of this unsignalized intersection is a minor approach and would have less than 90 Passenger Car Equivalents (PCEs) in the Future With-Action Condition during all peak hours.
- The westbound approach of 36th Avenue at College Point Boulevard, which would:
    - Continue to operate at LOS F with an average delay of 693.0 seconds during the weekday AM peak hour, an increase of 578.7 seconds relative to the Future No-Action Condition.
    - Continue to operate at LOS F with undefined delay during the weekday midday peak hour, a change from 1,666 seconds in the Future No-Action Condition.
    - Continue to operate at LOS F with undefined delay during the weekday PM peak hour, a change from 1,509 seconds in the Future No-Action Condition.
    - Continue to operate at LOS F with undefined delay during the Saturday midday peak hour, a change from 308.8 seconds in the Future No-Action Condition.
    - Note that the eastbound approach of this unsignalized intersection is a minor approach and would have less than 90 Passenger Car Equivalents (PCEs) in the Future With-Action Condition during all peak hours.
- The westbound approach of 37th Avenue at College Point Boulevard, which would:
    - Continue to operate at LOS F with an average delay of 123.0 seconds during the weekday midday peak hour, a decrease of 15.5 seconds relative to the Future No-Action Condition.
    - Drop to LOS E with an average delay of 56.1 seconds during the weekday PM peak hour from LOS D in the Future No-Action Condition, resulting in an increase in delay of 1.4 seconds.
    - Rise to LOS D with an average delay of 51.6 seconds during the Saturday midday peak hour from LOS E in the Future No-Action Condition, resulting in a decrease in delay of 5.0 seconds.
- The northbound through movement of College Point Boulevard at 37th Avenue, which would:
    - Continue to operate at LOS F with an average delay of 121.8 seconds during the weekday PM peak hour, a decrease of 340.9 seconds relative to the Future No-Action Condition.
- The eastbound left-turn of 39th Avenue at College Point Boulevard, which would:
    - Continue to operate at LOS F with an average delay of 113.2 seconds during the weekday AM peak hour, a decrease of 50.9 seconds relative to the Future No-Action Condition.

  - Continue to operate at LOS F with an average delay of 356.7 seconds during the weekday midday peak hour, a decrease of 176.6 seconds relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average delay of 748.2 seconds during the weekday PM peak hour, a decrease of 93.0 seconds relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average delay of 201.0 seconds during the Saturday midday peak hour, a decrease of 22.3 seconds relative to the Future No-Action Condition.
- The eastbound right-turn of 39th Avenue at College Point Boulevard, which would:
  - Continue to operate at LOS F with an average delay of 110.0 seconds during the weekday midday peak hour, a decrease of 423.3 seconds relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average delay of 178.6 seconds during the weekday PM peak hour, a decrease of 662.6 seconds relative to the Future No-Action Condition.
- The westbound left-turn of 39th Avenue at College Point Boulevard, which would:
  - Rise to LOS D with an average delay of 54.6 seconds during the weekday PM peak hour from LOS E in the Future No-Action Condition, resulting in a decrease in delay of 22.4 seconds.
- The westbound through/ shared-right of 39th Avenue at College Point Boulevard which would:
  - Continue to operate at LOS E with an average delay of 75.3 seconds during the weekday PM peak hour, a decrease of 1.7 seconds relative to the Future No-Action Condition.
- The northbound left-turn of College Point Boulevard at 39th Avenue, which would:
  - Continue to operate at LOS F with an average delay of 104.1 seconds during the weekday AM peak hour, a decrease of 9.4 seconds relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average delay of 352.2 seconds during the weekday midday peak hour, a decrease of 424.5 seconds relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average delay of 422.2 seconds during the weekday PM peak hour, a decrease of 307.7 seconds relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average delay of 103.6 seconds during the Saturday midday peak hour, a decrease of 190.2 seconds relative to the Future No-Action Condition.
- The southbound approach of College Point Boulevard at 39th Avenue, which would:
  - Continue to operate at LOS F with an average delay of 147.2 seconds during the weekday midday peak hour, a decrease of 3.1 seconds relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average delay of 51.4 seconds during the weekday PM peak hour, a decrease of 5.6 seconds relative to the Future No-Action Condition.

- The northbound left-turn of College Point Boulevard at Roosevelt Avenue, which would:
    - Continue to operate at LOS D with an average delay of 47.7 seconds during the weekday AM peak hour, a decrease of 2.0 seconds relative to the Future No-Action Condition.
- The southbound approach of College Point Boulevard at Roosevelt Avenue, which would:
    - Continue to operate at LOS F with an average delay of 216.6 seconds during the weekday AM peak hour, a decrease of 74.4 seconds relative to the Future No-Action Condition.
    - Continue to operate at LOS F with an average delay of 389.0 seconds during the weekday midday peak hour, a decrease of 58.9 seconds relative to the Future No-Action Condition.
    - Continue to operate at LOS F with an average delay of 409.7 seconds during the weekday PM peak hour, a decrease of 53.3 seconds relative to the Future No-Action Condition.
    - Continue to operate at LOS F with an average delay of 319.8 seconds during the Saturday midday peak hour, a decrease of 55.3 seconds relative to the Future No-Action Condition.
- The eastbound left/ shared-through movement of Roosevelt Avenue at College Point Boulevard, which would:
    - Continue to operate at LOS F with an average delay of 106.7 seconds during the weekday PM peak hour, an increase of 2.9 seconds relative to the Future No-Action Condition.
    - Continue to operate at LOS E with an average delay of 66.2 seconds during the Saturday midday peak hour, an increase of 3.1 seconds relative to the Future No-Action Condition.
- The southbound approach of Janet Place at Roosevelt Avenue, which would:
    - Continue to operate at LOS F with an average delay of 2,689 seconds during the weekday AM peak hour, a decrease of 4,239 seconds relative to the Future No-Action Condition.
    - Continue to operate at LOS F with undefined delay during the weekday midday peak hour, a result similar to the undefined delay in the Future No-Action Condition.
    - Continue to operate at LOS F with undefined delay during the weekday PM peak hour, a result similar to the undefined delay in the Future No-Action Condition.
    - Continue to operate at LOS F with undefined delay during the Saturday midday peak hour, a result similar to the undefined delay in the Future No-Action Condition.
- The westbound left-turn of Roosevelt Avenue at Skyview Mall Driveway, which would:
    - Continue to operate at LOS D with an average delay of 51.7 seconds during the weekday AM peak hour, an increase of 1.1 seconds relative to the Future No-Action Condition.
    - Continue to operate at LOS D with an average delay of 50.3 seconds during the weekday PM peak hour, with no change in seconds of delay relative to the Future No-Action Condition.
    - Continue to operate at LOS E with an average delay of 58.6 seconds during the Saturday midday peak hour, with no change in seconds of delay relative to the Future No-Action Condition.

- The northbound left-turn of Skyview Mall Driveway at Roosevelt Avenue, which would:
    - Continue to operate at LOS D with an average delay of 48.1 seconds during the weekday AM peak hour, with no change in seconds of delay relative to the Future No-Action Condition.
- The eastbound left-turn of 38th Avenue Extension at College Point Boulevard, which would:
    - Operate at LOS D with an average delay of 46.4 seconds during the weekday PM peak hour.
    - Note that the eastbound left-turn would be a newly created movement as part of the Future With-Action Condition.
- The eastbound through/ shared-right of 38th Avenue Extension at College Point Boulevard, which would:
    - Operate at LOS D with an average delay of 53.6 seconds during the weekday PM peak hour.
    - Note that the eastbound through/ shared-right would be a newly created movement as part of the Future With-Action Condition.
- The westbound left-turn of Tangram Plaza Driveway at College Point Boulevard, which would:
    - Rise to LOS F with an average delay of 117.5 seconds during the weekday PM peak hour from LOS F in the Future No-Action Condition with undefined delay.
    - Rise to LOS E with an average delay of 63.8 seconds during the Saturday midday peak hour from LOS F in the Future No-Action Condition with undefined delay.
- The southbound left-turn of College Point Boulevard at Tangram Plaza Driveway, which would:
    - Continue to operate at LOS F with an average delay of 103.1 seconds during the weekday PM peak hour, a decrease of 119.6 seconds relative to the Future No-Action Condition.
    - Continue to operate at LOS F with an average delay of 160.4 seconds during the Saturday midday peak hour, a decrease of 173.0 seconds relative to the Future No-Action Condition.
- The northbound approach of Janet Place at 39th Avenue, which would:
    - Rise to LOS E with an average delay of 77.0 seconds during the weekday midday peak hour from LOS F in the Future No-Action Condition with undefined delay.
- The northbound approach of Transverse Road at 38th Avenue Extension, which would:
    - Operate at LOS D with an average delay of 33.3 seconds during the weekday midday peak hour.
    - Note that the eastbound left-turn would be a newly created movement as part of the Future With-Action Condition.

Table M-18. Future With-Action Condition - LOS Summary

Intersection ID	Intersection name	Control	Street name	Direction	Lane group	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
						Future With-Action Condition			Future With-Action Condition			Future With-Action Condition			Future With-Action Condition		
						v/c ratio	Delay (sec)	LOS	v/c ratio	DelaM (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	College Point Boulevard & 36th Avenue	TWSC[1]	Site 4 Driveway	EB	LTR	1.72	682.1	F	Note 3	Note 3	F	Note 3	Note 3	F	Note 3	Note 3	F
			36th Avenue	WB	LTR	1.91	693.0	F	Note 4	Note 4	F	Note 4	Note 4	F	Note 4	Note 4	F
			College Point Boulevard	NB	L	0.02	15.1	C	0.08	18.5	C	0.06	16.1	C	0.05	15.6	C
				SB	L	0.10	13.1	B	0.26	27.8	D	0.17	28.6	D	0.13	21.7	C
			Overall Intersection			-	Note 5	Note 5	-	Note 5	Note 5	-	Note 5	Note 5	-	Note 5	Note 5
2	College Point Boulevard & 37th Avenue	Signal	37th Avenue Ext.	EB	LR	N/A			N/A			N/A			N/A		
			37th Avenue	WB	LTR	0.55	36.8	D	1.13	123.0	F	0.81	56.1	E	0.85	51.6	D
			College Point Boulevard	NB	L	0.58	38.3	D	0.80	44.2	D	0.50	23.4	C	0.26	14.0	B
					T	0.63	20.0	C	0.97	31.4	C	1.20	121.8	F	0.93	26.1	C
				SB	TR	0.98	44.6	D	0.97	38.4	D	0.83	27.2	C	0.79	21.2	C
			Overall Intersection			-	35.1	D	-	44.0	D	-	80.3	F	-	26.2	C
3	College Point Boulevard & 39th Avenue	Signal	39th Avenue	EB	L	1.01	113.2	F	1.66	356.7	F	2.54	748.2	F	1.29	201.0	F
					R	0.43	32.3	C	1.08	110.0	F	1.26	178.6	F	0.72	40.0	D
				WB	L	0.31	39.7	D	0.53	38.8	D	0.59	54.6	D	0.57	40.3	D
					TR	0.36	40.6	D	0.52	35.5	D	0.83	75.3	E	0.62	41.8	D
			College Point Boulevard	NB	L	1.05	104.1	F	1.69	352.2	F	1.83	422.2	F	1.08	103.6	F
					T	0.50	11.7	B	0.76	16.2	B	0.77	17.0	B	0.86	20.8	C
				SB	TR	0.99	40.3	D	1.27	147.2	F	1.04	51.4	D	1.01	41.1	D
			Overall Intersection			-	42.5	D	-	135.3	F	-	137.1	F	-	47.7	D
4A	College Point Boulevard & WB Roosevelt Avenue	Signal	Roosevelt Avenue	WB	LTR	0.51	35.9	D	0.70	32.4	C	0.61	39.2	D	0.67	31.0	C
			College Point Boulevard	NB	L	0.76	47.7	D	0.69	30.9	C	0.65	37.0	D	0.61	28.4	C
					T	0.36	10.4	B	0.53	9.9	A	0.55	11.8	B	0.53	9.9	A
				SB	TR	1.39	216.6	F	1.79	389.0	F	1.82	409.7	F	1.64	319.8	F
			Overall Intersection			-	113.1	F	-	169.8	F	-	188.6	F	-	137.8	F
4B	College Point Boulevard & EB Roosevelt Avenue	Signal	Roosevelt Avenue	EB	LT	0.81	41.4	D	0.94	42.0	D	1.14	106.7	F	1.05	66.2	E
					R	0.43	28.6	C	0.53	21.4	C	0.74	37.3	D	0.57	22.5	C
			College Point Boulevard	NB	TR	0.53	20.8	C	0.80	26.4	C	0.74	37.3	D	0.57	22.5	C
				SB	T	0.61	21.2	C	0.81	22.7	C	0.67	25.0	C	0.81	26.7	C
			Overall Intersection			-	25.3	C	-	28.0	C	-	45.0	D	-	33.7	C
5	Roosevelt Avenue & Janet Place	TWSC[1]	Roosevelt Avenue	WB	TR	-	0.0	A	-	0.0	A	-	0.0	A	-	0.0	A
			Janet Place	SB	R	Note 3	Note 3	F	Note 4	Note 4	F	Note 4	Note 4	F	Note 4	Note 4	F
			Overall Intersection			-	Note 5	Note 5	-	Note 5	Note 5	-	Note 5	Note 5	-	Note 5	Note 5
6	Roosevelt Avenue & Skyview Mall Driveway	Signal	Roosevelt Avenue	EB	TR	0.35	10.0	B	0.68	24.6	C	0.64	22.3	C	0.69	24.9	C
				WB	L	0.41	51.7	D	0.46	35.9	D	0.37	50.3	D	0.57	58.6	E
					T	0.80	17.0	B	0.93	28.1	C	0.94	29.1	C	1.01	39.7	D
			Skyview Mall Driveway	NB	L	0.04	48.1	D	0.12	25.3	C	0.15	37.0	D	0.25	26.7	C
					R	0.05	33.7	C	0.19	14.6	B	0.30	27.2	C	0.35	16.7	B
			Overall Intersection			-	15.9	B	-	25.8	C	-	26.8	C	-	31.2	C
7	College Point Boulevard & 38th Avenue/ Tangram Plaza Driveway	Signal	38th Avenue Ext.	EB	L	0.23	25.8	C	0.44	28.8	C	0.66	46.4	D	0.30	28.7	C
					TR	0.19	25.5	C	0.55	35.0	D	0.70	53.6	D	0.33	30.6	C
			Tangram Plaza Driveway	WB	L	0.14	25.0	C	0.60	37.7	D	1.04	117.5	F	0.87	63.8	E
					R	0.08	17.4	B	0.24	17.7	B	0.38	30.1	C	0.39	22.4	C
			College Point Boulevard	NB	TR	0.78	32.2	C	1.02	43.4	D	0.98	30.2	C	0.99	34.2	C
				SB	L	0.59	21.0	C	0.98	42.2	D	1.06	103.1	F	1.25	160.4	F
					T	0.96	31.5	C	0.89	16.6	B	0.92	24.8	C	0.86	17.4	B
			Overall Intersection			-	30.4	C	-	31.3	C	-	38.6	D	-	38.0	D
8	39th Avenue & Janet Place	Signal	39th Avenue Ext.	EB	TR	0.44	25.4	C	0.80	41.1	D	0.78	44.4	D	0.35	17.9	B
			39th Avenue	WB	LT	0.75	10.2	B	1.03	35.5	D	1.04	42.4	D	0.83	16.2	B
			Janet Place	NB	LR	0.38	35.2	D	0.90	77.0	E	0.78	43.1	D	0.62	39.1	D
			Janet Place Ext.	SB	LTR	0.19	30.3	C	0.22	26.7	C	0.21	22.9	C	0.11	23.2	C
			Overall Intersection			-	17.3	B	-	41.2	D	-	41.2		-	20.5	C
9	38th Avenue Ext. & Janet Place Ext.	AWSC[2]	38th Avenue Ext.	EB	TR	0.19	8.1	A	0.33	9.5	A	0.43	10.9	B	0.18	8.0	A
			Janet Place Ext.	SB	LT	0.18	8.5	A	0.27	9.5	A	0.39	11.1	B	0.15	8.2	A
			Overall Intersection			-	8.3	A	-	9.5	A	-	11.0	B	-	8.1	A
10	38th Avenue Ext. & Transverse Road	TWSC[1]	38th Avenue Ext.	EB	T	-	0.0	A	-	0.0	A	-	0.0	A	-	0.0	A
			Transverse Road	NB	LR	0.31	12.1	B	0.72	33.3	D	0.55	21.5	C	0.40	16.3	C
			Overall Intersection			-	Note 5	Note 5	-	Note 5	Note 5	-	Note 5	Note 5	-	Note 5	Note 5
11	39th Avenue Ext. & Transverse Road	AWSC[2]	39th Avenue Ext.	EB	LT	0.14	8.3	A	0.21	9.5	A	0.17	8.9	A	0.13	8.2	A
				WB	TR	0.33	8.8	A	0.58	13.5	B	0.48	11.1	B	0.32	8.9	A
			Transverse Road	NB	LTR	0.15	8.0	A	0.32	10.0	B	0.24	9.0	A	0.17	8.0	A
			Overall Intersection			-	8.5	A	-	11.8	B	-	10.2	B	-	8.5	A

Notes:
1. Two-Way Stop-Controlled.
2. All-Way Stop-Controlled
3. V/c ratio > 3.00 and Delay > 1,000 seconds.
4. Lane group delay and v/c ratio information are not provided by HCS.
5. Intersection delay and LOS information for TWSC intersections are not provided by HCS.
6. Blue shading denotes approaches/intersections that would not exist in the Future No-Action Condition.

PEDESTRIAN ANALYSES

Existing Conditions (2019)

Pedestrian Volumes

The study area is generally characterized by relatively light pedestrian flows during peak periods, with the exception of the intersection of College Point Boulevard and Roosevelt Avenue, which experiences high pedestrian volumes at the southern pedestrian elements including corners, crosswalks and sidewalks. Given its location on Roosevelt Avenue, this intersection provides a pedestrian connection between Skyview Mall and the Downtown Flushing area. Based on the data collected, the peak hours for pedestrian analysis are 8:00 to 9:00 AM, 1:00 to 2:00 PM, 5:00 to 6:00 PM and 1:45 to 2:45 PM for the weekday AM, midday, PM and Saturday midday, respectively. Existing pedestrian volumes for the weekday AM, midday, PM and Saturday midday peak hours in the study area were determined based on pedestrian counts conducted in June 2019 (see Appendix K, Figures K-21 through K-24).

Pedestrian Conditions

The Existing Conditions pedestrian analysis results for the study area corner elements in terms of average pedestrian space and LOS are shown in Table M-19A. Of the 10 corner elements in the study area, 2 operate below mid-LOS D (19.5 ft^2/p) in at least one peak hour and include:

- Southeast corner of College Point Boulevard and Roosevelt Avenue (LOS D with average space of 16.2 ft^2/p during the Saturday midday peak hour).
- Southwest corner of College Point Boulevard and Roosevelt Avenue (LOS D with average space of 16.0 ft^2/p during the Saturday midday peak hour).

Table M-19A: Existing Conditions Corner Analysis

Intersection ID	Location	Corner	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
			Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
2	College Point Boulevard & 37th Avenue	North-East	21	936.2	A	11	1,213.4	A	35	643.9	A	12	379.3	A
		South-East	6	1,311.7	A	23	985.9	A	22	1,077.8	A	24	441.9	A
3	College Point Boulevard & 39th Avenue	North-East	19	669.0	A	10	517.4	A	13	562.9	A	11	297.8	A
		South-East	29	613.5	A	79	311.7	A	68	351.2	A	146	164.9	A
		South-West	3	2,255.8	A	1	1,064.9	A	11	867.3	A	8	634.8	A
		North-West	3	6,214.3	A	0	3,363.6	A	4	2,012.3	A	1	1,962.7	A
4A	College Point Boulevard & WB Roosevelt Avenue	North-East	15	488.1	A	8	139.8	A	16	116.8	A	25	69.1	A
		North-West	4	295.2	A	7	133.2	A	4	118.3	A	3	61.7	A
4B	College Point Boulevard & EB Roosevelt Avenue	South-East	51	197.0	A	73	39.2	C	99	30.6	C	78	16.2	D
		South-West	8	157.6	A	20	36.2	C	15	25.4	C	39	16.0	D

The Existing Conditions pedestrian analysis results for the study area crosswalk elements in terms of average pedestrian space and LOS are shown in Table M-19B. Of the 12 crosswalk elements in the study area, 2 operate below mid-LOS D (19.5 ft^2/p) in at least one peak hour and include:

- West crosswalk of College Point Boulevard and WB Roosevelt Avenue (LOS D with average space of 18.1 ft^2/p during the Saturday midday peak hour).
- South crosswalk at College Point Boulevard and EB Roosevelt Avenue (LOS E with average space of 14.6 ft^2/p during the weekday AM peak hour, LOS F with average space of 4.3 ft^2/p during the weekday midday peak hour, LOS F with average space of 2.4 ft^2/p during the weekday PM peak hour, and LOS F with average space of 2.3 ft^2/p during the Saturday midday peak hour).

Table M-19B: Existing Conditions Crosswalk Analysis

Intersection ID	Location	Crosswalk	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
			Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
2	College Point Boulevard & 37th Avenue	North	6	1,621.4	A	7	1,078.8	A	20	548.5	A	11	877.0	A
		East	32	658.3	A	37	824.1	A	54	693.4	A	108	184.5	A
		South	10	1,627.8	A	19	584.1	A	9	1,434.2	A	15	769.6	A
3	College Point Boulevard & 39th Avenue	North	4	1,642.1	A	15	687.5	A	25	624.0	A	22	611.1	A
		East	59	695.3	A	83	425.2	A	92	554.4	A	145	193.1	A
		South	13	780.1	A	38	269.4	A	32	444.7	A	74	215.2	A
		West	19	2,319.8	A	38	983.8	A	85	582.7	A	75	469.7	A
4A	College Point Boulevard & WB Roosevelt Avenue	North	86	79.2	A	209	39.6	C	253	32.0	C	423	20.5	D
		West	88	133.0	A	257	46.1	B	320	59.5	B	508	18.1	D
4B	College Point Boulevard & EB Roosevelt Avenue	East	83	440.2	A	455	55.0	B	518	59.0	B	758	31.4	C
		South	471	14.6	E	2,194	4.3	F	2,310	2.4	F	3,581	2.3	F
		West	88	266.8	A	257	80.1	A	320	90.2	A	508	40.7	B

The Existing Conditions pedestrian analysis results for the study area sidewalk elements in terms of average pedestrian space and LOS are shown in Table M-19C. Of the 28 sidewalk elements in the study area, one operates below mid-LOS D (31.5 ft^2/p) in at least one peak hour and includes:

- South sidewalk of EB Roosevelt Avenue between College Point Boulevard and Prince Street (LOS E with average space of 22.7 ft^2/p during the weekday midday peak hour, LOS E with average space of 17.2 ft^2/p during the weekday PM peak hour, and LOS E with average space of 13.9 ft^2/p during the Saturday midday peak hour).

Table M-19C: Existing Conditions Sidewalk Analysis

Intersection ID	Location	Sidewalk Movement	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
			Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS
2	East Sidewalk of College Point Boulevard betw. 36th Road & 37th Avenue	North-South	55	1,720.8	A	47	1,935.9	A	86	999.2	A	75	1,068.1	A
	East Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	44	2,250.0	A	50	1,968.7	A	75	1,500.0	A	125	533.8	A
	West Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	24	2,770.8	A	17	3,562.5	A	54	1,312.5	A	36	1,918.3	A
	West Sidewalk of College Point Boulevard betw. 36th Road & 37th Avenue	North-South	24	3,675.0	A	17	4,725.0	A	54	1,740.8	A	36	2,544.2	A
	North Sidewalk of 37th Avenue between College Point Boulevard & Prince Street	East-West	30	933.3	A	21	1,050.0	A	57	335.9	B	71	215.2	B
	South Sidewalk of 37th Avenue between College Point Boulevard & Prince Street	East-West	12	3,727.5	A	36	1,331.2	A	27	1,694.3	A	34	1,863.7	A
3	East Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	80	341.1	B	86	365.5	B	102	341.1	B	148	162.3	B
	East Sidewalk of College Point Boulevard betw. 39th Avenue & Roosevelt Avenue	North-South	64	801.3	A	128	447.7	B	147	323.8	B	265	208.4	B
	West Sidewalk of College Point Boulevard betw. 39th Avenue & Roosevelt Avenue	North-South	37	2,362.5	A	79	990.7	A	112	853.1	A	126	877.5	A
	West Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	20	4,425.0	A	33	3,097.5	A	90	999.2	A	57	1,822.0	A
	North Sidewalk of 39th Avenue between College Point Boulevard & Prince Street	East-West	20	692.0	A	12	951.5	A	26	585.5	A	13	1,087.5	A
	South Sidewalk of 39th Avenue between College Point Boulevard & Prince Street	East-West	86	309.5	B	136	280.7	B	110	335.3	B	243	156.6	B
	South Sidewalk of 39th Avenue between Janet Place & College Point Boulevard	East-West	16	1,391.2	A	3	6,956.2	A	25	1,159.3	A	20	1,739.0	A
	North Sidewalk of 39th Avenue between Janet Place & College Point Boulevard	East-West	9	3,412.5	A	3	5,118.7	A	14	1,462.5	A	6	2,559.4	A
4A	East Sidewalk of College Point Boulevard betw. 39th Avenue & WB Roosevelt Avenue	North-South	66	870.4	A	131	375.8	B	136	403.3	B	268	204.0	B
	West Sidewalk of College Point Boulevard betw. WB Roosevelt Avenue & EB Roosevelt Avenue	North-South	88	1,211.5	A	257	590.6	A	320	508.0	B	508	319.1	B
	West Sidewalk of College Point Boulevard betw. 39th Avenue & WB Roosevelt Avenue	North-South	57	1,161.0	A	104	887.8	A	117	914.7	A	165	511.6	B
	North Sidewalk of WB Roosevelt Avenue betw. College Point Boulevard & Prince Street	East-West	115	802.9	A	563	154.0	B	630	150.6	B	916	109.8	B
	North Sidewalk of WB Roosevelt Avenue betw. Janet Place & College Point Boulevard	East-West	48	831.2	A	58	787.5	A	93	467.5	B	104	282.2	B
4B	East Sidewalk of College Point Boulevard betw. EB Roosevelt Avenue & 40th Road	North-South	90	577.4	A	247	297.1	B	361	198.0	B	415	175.6	B
	West Sidewalk of College Point Boulevard betw. EB Roosevelt Avenue & 40th Road	North-South	379	191.9	B	2,008	53.1	C	2,234	48.9	C	1,904	50.8	C
	West Sidewalk of College Point Boulevard betw. WB Roosevelt Avenue & EB Roosevelt Avenue	North-South	88	1,211.5	A	257	590.6	A	320	508.0	B	508	319.1	B
	South Sidewalk of EB Roosevelt Avenue betw. College Point Boulevard & Prince Street	East-West	420	77.9	C	1,749	22.7	E	2,227	17.2	E	2,667	13.9	E
	South Sidewalk of EB Roosevelt Avenue betw. Skyview Mall Drive & College Point Boulevard	East-West	46	787.5	A	59	663.1	A	53	629.9	A	104	419.9	B
5	East Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	10	4,265.6	A	17	2,843.7	A	26	2,132.8	A	21	2,132.8	A
	West Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	2	17,850.0	A	3	8,925.0	A	6	5,950.0	A	2	8,925.0	A
	North Sidewalk of Roosevelt Avenue betw. Janet Place & College Point Boulevard	East-West	32	1,496.2	A	42	1,068.7	A	67	831.2	A	98	293.3	B
	North Sidewalk of Roosevelt Avenue betw. the Skyview Mall Driveway & Janet Place	East-West	26	612.4	A	29	493.7	B	47	374.9	B	75	127.9	B

Future No-Action Condition (2025)

Changes to the Study Area Pedestrian Network

As part of the AOR Project, two sidewalks fronting Projected Development Site 1 would be reconstructed. More specifically, the changes relative to the Existing Conditions are as follows:

West Sidewalk of Janet Place between Roosevelt Avenue and 39th Avenue

- In Existing Conditions, the west side of Janet Place consists of a mixed area of dirt, asphalt and broken concrete.
- In the Future No-Action Condition, the sidewalk would be reconstructed, providing a total width of 9.3 feet.

North Sidewalk of Roosevelt Avenue between Janet Place and Skyview Mall Driveway

- In Existing Conditions, the north side of Roosevelt Avenue has a total width of 6.9 feet.
- In the Future No-Action Condition, the sidewalk would be reconstructed, providing a total width of 10.7 feet.

Pedestrian Volumes

The Future No-Action Condition pedestrian volumes were determined for the 2025 analysis year (the estimated time of completion for the Proposed Actions). Per the *CEQR Technical Manual*, a compounded annual background growth rate of 0.50 percent for *Other Queens* was applied to the existing traffic volumes for the first five years (2019 through 2024) and then 0.25 percent for the sixth year (2024 through 2025). In addition, trips expected to be generated by the background No-Build Development Projects (see Table M-14 and Figure M-7) were incorporated in the Future No-Action Condition pedestrian volumes.

In line with the traffic analysis, project-generated pedestrian trips from the AOR Project were adjusted per NYCDOT directive for the Future No-Action Condition (see Table M-15). These trips were assigned through various pedestrian elements in the study area based on the *CEQR Technical Manual* guidelines, prevailing travel patterns and location of key transportation elements near the project site, including subway, bus and railroad stations/stops. As shown in Figure M-2, vast majority of transit facilities, including NYCT/MTA and NICE bus lines, the NYCT No. 7 subway line (at Main Street – Flushing Station) and the MTA LIRR (at Flushing Main Street Station), have stops located east of the Project Area in Downtown Flushing; therefore, given the density of development and transit in the area, 80 percent of pedestrian trips were assigned from the east. Locations south of the Project Area feature the Skyview Mall as well as other modestly-sized residential and commercial developments; therefore, 15 percent of pedestrian trips were assigned from the south. Locations north of the Project Area feature 1- to 2- story industrial developments; therefore, 5 percent of pedestrian trips were assigned from the north.

The Future No-Action Condition pedestrian volumes were projected by layering on top of the existing pedestrian volumes the following: (i) background growth, (ii) trips generated by the No-Build Development Sites and (iii) trips generated by the AOR Project. The assignments of pedestrian trips generated by the AOR Project are shown in Appendix K, Figures K-25 through K-28. The Future No-Action Condition pedestrian volumes during the weekday AM, midday, PM and Saturday midday peak hours are shown in Appendix K, Figures K-29 through K-32.

Pedestrian Conditions

The Future No-Action Condition pedestrian analysis results for the study area corner elements in terms of average pedestrian space and LOS are shown in Table M-20A. Of the 10 corner elements in the study area, 7 would operate below mid-LOS D in at least one peak hour and include:

- Northeast corner of College Point Boulevard and 39th Avenue (LOS F with average space of 5.8 ft^2/p during the weekday midday peak hour, LOS E with average space of 9.3 ft^2/p during the weekday PM peak hour, and LOS E with average space of 8.8 ft^2/p during the Saturday midday peak hour).
- Southeast corner of College Point Boulevard and 39th Avenue (LOS E with average space of 8.5 ft^2/p during the weekday midday peak hour, LOS E with average space of 14.4 ft^2/p during the weekday PM peak hour, and LOS E with average space of 14.4 ft^2/p during the Saturday midday peak hour).
- Southwest corner of College Point Boulevard and 39th Avenue (LOS D with average space of 15.5 ft^2/p during the weekday midday peak hour).
- Northeast corner of College Point Boulevard and WB Roosevelt Avenue (LOS F with average space of 4.8 ft^2/p during the weekday midday peak hour, LOS E with average space of 14.3 ft^2/p during the weekday PM peak hour, and LOS E with average space of 10.3 ft^2/p during the Saturday midday peak hour).
- Northwest corner of College Point Boulevard and WB Roosevelt Avenue (LOS F with average space of -1.2 ft^2/p during the weekday midday peak hour, LOS F with average space of 4.7 ft^2/p during the weekday PM peak hour, and LOS F with average space of 2.4 ft^2/p during the Saturday midday peak hour).
- Southeast corner of College Point Boulevard and EB Roosevelt Avenue (LOS D with average space of 18.7 ft^2/p during the weekday PM peak hour and LOS E with average space of 10.2 ft^2/p during the Saturday midday peak hour).
- Southwest corner of College Point Boulevard and EB Roosevelt Avenue (LOS E with average space of 14.9 ft^2/p during the weekday PM peak hour and LOS E with average space of 10.1 ft^2/p during the Saturday midday peak hour).

Table M-20A: Future No-Action Condition Corner Analysis

Intersection ID	Location	Corner	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
			Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
2	College Point Boulevard & 37th Avenue	North-East	22	107.9	A	11	40.1	B	36	54.7	B	12	48.9	B
		South-East	42	102.6	A	92	31.4	C	89	41.5	B	96	33.1	C
3	College Point Boulevard & 39th Avenue	North-East	56	41.7	B	78	5.8	F	80	9.3	E	83	8.8	E
		South-East	30	48.8	B	81	8.5	E	70	14.4	E	150	14.4	E
		South-West	57	81.4	A	182	15.5	D	126	36.3	C	130	37.9	C
		North-West	24	176.7	A	59	49.1	B	45	67.0	A	44	72.5	A
4A	College Point Boulevard & WB Roosevelt Avenue	North-East	15	52.1	B	8	4.8	F	16	14.3	E	26	10.3	E
		North-West	21	25.3	C	68	-1.2	F	42	4.7	F	43	2.4	F
4B	College Point Boulevard & EB Roosevelt Avenue	South-East	87	109.1	A	133	22.0	D	148	18.7	D	135	10.2	E
		South-West	8	82.5	A	21	19.7	D	15	14.9	E	40	10.1	E

The Future No-Action Condition pedestrian analysis results for the study area crosswalk elements in terms of average pedestrian space and LOS are shown in Table M-20B. Of the 13 crosswalk elements in the study area, 9 would operate below mid-LOS D in at least one peak hour and include:

- North crosswalk of College Point Boulevard and 37th Avenue (LOS E with average space of 12.2 ft^2/p during the weekday midday peak hour).
- South crosswalk of College Point Boulevard and 37th Avenue (LOS F with average space of 6.5 ft^2/p during the weekday midday peak hour, LOS E with average space of 12.6 ft^2/p during the weekday PM peak hour, and LOS E with average space of 8.9 ft^2/p during the Saturday midday peak hour).
- North crosswalk of College Point Boulevard and 39th Avenue (LOS D with average space of 15.6 ft^2/p during the weekday AM peak hour, LOS F with average space of 4.0 ft^2/p during the weekday midday peak hour, LOS F with average space of 4.5 ft^2/p during the weekday PM peak hour, and LOS F with average space of 5.9 ft^2/p during the Saturday midday peak hour).
- South crosswalk of College Point Boulevard and 39th Avenue (LOS D with average space of 15.2 ft^2/p during the weekday AM peak hour, LOS F with average space of 3.6 ft^2/p during the weekday midday peak hour, LOS F with average space of 6.3 ft^2/p during the weekday PM peak hour, and LOS F with average space of 7.6 ft^2/p during the Saturday midday peak hour).
- North crosswalk of College Point Boulevard and WB Roosevelt Avenue (LOS F with average space of 7.4 ft^2/p during the weekday AM peak hour, LOS F with average space of 2.1 ft^2/p during the weekday midday peak hour, LOS F with average space of 3.5 ft^2/p during the weekday PM peak hour, and LOS F with average space of 3.2 ft^2/p during the Saturday midday peak hour).
- West crosswalk of College Point Boulevard and WB Roosevelt Avenue (LOS E with average space of 9.2 ft^2/p during the weekday AM peak hour, LOS F with average space of -1.5 ft^2/p during the weekday midday peak hour, LOS F with average space of 5.5 ft^2/p during the weekday PM peak hour, and LOS F with average space of -1.9 ft^2/p during the Saturday midday peak hour).
- East crosswalk of College Point Boulevard and EB Roosevelt Avenue (LOS D with average space of 16.5 ft^2/p during the weekday midday peak hour and LOS D with average space of 15.4 ft^2/p during the Saturday midday peak hour).
- South crosswalk of College Point Boulevard and EB Roosevelt Avenue (LOS E with average space of 13.1 ft^2/p during the weekday AM peak hour, LOS F with average space of 4.0 ft^2/p during the weekday midday peak hour, LOS F with average space of 2.2 ft^2/p during the weekday PM peak hour, and LOS F with average space of 2.2 ft^2/p during the Saturday midday peak hour).
- West crosswalk of College Point Boulevard and EB Roosevelt Avenue (LOS D with average space of 15.9 ft^2/p during the weekday midday peak hour and LOS D with average space of 16.5 ft^2/p during the Saturday midday peak hour).

Table M-20B: Future No-Action Condition Crosswalk Analysis

Intersection ID	Location	Crosswalk	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
			Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
2	College Point Boulevard & 37th Avenue	North	338	64.0	A	993	12.2	E	676	21.3	D	664	19.9	D
		East	188	97.7	A	452	59.6	B	352	95.4	A	424	43.7	B
		South	499	42.6	B	1,471	6.5	F	974	12.6	E	977	8.9	E
		West	144	293.9	A	364	104.0	A	286	148.5	A	279	151.5	A
3	College Point Boulevard & 39th Avenue	North	929	15.6	D	2,647	4.0	F	1,832	4.5	F	1,904	5.9	F
		East	294	133.1	A	726	42.5	B	545	85.7	A	620	42.3	B
		South	657	15.2	D	2,216	3.6	F	1,409	6.3	F	1,539	7.6	F
		West	217	168.2	A	612	39.6	C	472	78.1	A	477	58.4	B
4A	College Point Boulevard & WB Roosevelt Avenue	North	731	7.4	F	2,472	2.1	F	1,655	3.5	F	1,929	3.2	F
		West	392	9.2	E	1,138	-1.5	F	911	5.5	F	1,138	-1.9	F
4B	College Point Boulevard & EB Roosevelt Avenue	East	423	82.4	A	1,410	16.5	D	1,181	24.4	C	1,467	15.4	D
		South	519	13.1	E	2,313	4.0	F	2,420	2.2	F	3,736	2.2	F
		West	392	53.0	B	1,138	15.9	D	911	28.1	C	1,138	16.5	D

The Future No-Action Condition pedestrian analysis results for the study area sidewalk elements in terms of average pedestrian space and LOS are shown in Table M-20C. Of the 28 sidewalk elements in the study area, 8 operate below mid-LOS D in at least one peak hour and include:

- North sidewalk of 37th Avenue between College Point Boulevard and Prince Street (LOS D with average space of 23.1 ft^2/p during the weekday midday peak hour, LOS D with average space of 28.7 ft^2/p during the weekday PM peak hour, and LOS E with average space of 21.9 ft^2/p during the Saturday midday peak hour).
- North sidewalk of 39th Avenue between College Point Boulevard and Prince Street (LOS D with average space of 24.9 ft^2/p during the weekday AM peak hour, LOS F with average space of 5.9 ft^2/p during the weekday midday peak hour, LOS F with average space of 5.3 ft^2/p during the weekday PM peak hour, and LOS F with average space of 10.5 ft^2/p during the Saturday midday peak hour).
- South sidewalk of 39th Avenue between College Point Boulevard and Prince Street (LOS E with average space of 16.5 ft^2/p during the weekday midday peak hour, LOS D with average space of 26.4 ft^2/p during the weekday PM peak hour, and LOS D with average space of 23.2 ft^2/p during the Saturday midday peak hour).
- South sidewalk of 39th Avenue between Janet Place and College Point Boulevard (LOS E with average space of 15.2 ft^2/p during the weekday midday peak hour, LOS E with average space of 16.8 ft^2/p during the weekday PM peak hour, and LOS E with average space of 19.5 ft^2/p during the Saturday midday peak hour).
- North sidewalk of 39th Avenue between Janet Place and College Point Boulevard (LOS F with average space of 10.4 ft^2/p during the weekday midday peak hour, LOS F with average space of 9.8 ft^2/p during the weekday PM peak hour, and LOS E with average space of 16.0 ft^2/p during the Saturday midday peak hour).
- North sidewalk of WB Roosevelt Avenue between Janet Place and College Point Boulevard (LOS E with average space of 16.4 ft^2/p during the weekday midday peak hour, LOS D with average space of 26.0 ft^2/p during the weekday PM peak hour, and LOS D with average space of 25.0 ft^2/p during the Saturday midday peak hour).
- South sidewalk of EB Roosevelt Avenue between College Point Boulevard and Prince Street (LOS E with average space of 20.5 ft^2/p during the weekday midday peak hour, LOS E with average space of 15.9 ft^2/p during the weekday PM peak hour, and LOS E with average space of 12.8 ft^2/p during the Saturday midday peak hour).

- North sidewalk of Roosevelt Avenue between Janet Place and College Point Boulevard (LOS E with average space of 16.3 ft^2/p during the weekday midday peak hour and LOS D with average space of 25.4 ft^2/p during the Saturday midday peak hour).

Table M-20C: Future No-Action Condition Sidewalk Analysis

Intersection ID	Location	Sidewalk Movement	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
			Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS
2	East Sidewalk of College Point Boulevard betw. 36th Road & 37th Avenue	North-South	193	489.4	B	408	223.1	B	349	246.3	B	354	226.2	B
	East Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	251	394.5	B	574	171.3	B	467	240.6	B	540	123.3	B
	West Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	239	277.8	B	675	89.3	C	487	145.3	B	484	142.4	B
	West Sidewalk of College Point Boulevard betw. 36th Road & 37th Avenue	North-South	125	704.2	A	309	260.0	B	249	376.7	B	242	377.9	B
	North Sidewalk of 37th Avenue between College Point Boulevard & Prince Street	East-West	326	85.6	C	898	23.1	D	641	28.7	D	653	21.9	E
	South Sidewalk of 37th Avenue between College Point Boulevard & Prince Street	East-West	491	90.7	B	1,420	32.7	D	968	46.5	C	977	64.3	C
3	East Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	288	94.5	B	611	50.8	C	495	69.8	C	564	41.9	C
	East Sidewalk of College Point Boulevard betw. 39th Avenue & Roosevelt Avenue	North-South	335	152.7	B	893	63.6	C	678	69.7	C	825	66.5	C
	West Sidewalk of College Point Boulevard betw. 39th Avenue & Roosevelt Avenue	North-South	271	322.1	B	775	100.6	B	576	165.7	B	610	181.0	B
	West Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	352	251.6	B	1,010	100.9	B	742	121.0	B	717	144.6	B
	North Sidewalk of 39th Avenue between College Point Boulevard & Prince Street	East-West	871	24.9	D	2,395	5.9	F	1,682	5.3	F	1,741	10.5	F
	South Sidewalk of 39th Avenue between College Point Boulevard & Prince Street	East-West	661	39.5	D	2,075	16.5	E	1,337	26.4	D	1,551	23.2	D
	South Sidewalk of 39th Avenue between Janet Place & College Point Boulevard	East-West	732	56.4	C	2,422	15.2	E	1,555	16.8	E	1,647	19.5	E
	North Sidewalk of 39th Avenue between Janet Place & College Point Boulevard	East-West	843	35.5	D	2,349	10.4	F	1,637	9.8	F	1,714	16.0	E
4A	East Sidewalk of College Point Boulevard betw. 39th Avenue & WB Roosevelt Avenue	North-South	337	170.1	B	897	54.3	C	667	81.8	C	828	65.6	C
	West Sidewalk of College Point Boulevard betw. WB Roosevelt Avenue & EB Roosevelt Avenue	North-South	392	271.8	B	1,138	133.1	B	911	178.3	B	1,138	142.3	B
	West Sidewalk of College Point Boulevard betw. 39th Avenue & WB Roosevelt Avenue	North-South	292	226.6	B	801	115.0	B	581	184.0	B	650	129.5	B
	North Sidewalk of WB Roosevelt Avenue betw. College Point Boulevard & Prince Street	East-West	728	126.6	B	2,649	31.7	D	1,939	48.3	C	2,331	42.5	C
	North Sidewalk of WB Roosevelt Avenue betw. Janet Place & College Point Boulevard	East-West	725	54.4	C	2,503	16.4	E	1,594	26.0	D	1,706	25.0	D
4B	East Sidewalk of College Point Boulevard betw. EB Roosevelt Avenue & 40th Road	North-South	465	111.5	B	1,254	58.0	C	1,065	66.6	C	1,169	61.8	C
	West Sidewalk of College Point Boulevard betw. EB Roosevelt Avenue & 40th Road	North-South	726	99.9	B	2,996	35.1	D	2,924	37.0	D	2,628	36.4	D
	West Sidewalk of College Point Boulevard betw. WB Roosevelt Avenue & EB Roosevelt Avenue	North-South	392	271.8	B	1,138	133.1	B	911	178.3	B	1,138	142.3	B
	South Sidewalk of EB Roosevelt Avenue betw. College Point Boulevard & Prince Street	East-West	501	65.2	C	1,913	20.5	E	2,381	15.9	E	2,852	12.8	E
	South Sidewalk of EB Roosevelt Avenue betw. Skyview Mall Drive & College Point Boulevard	East-West	47	766.1	A	61	645.2	A	54	612.9	A	107	408.5	B
5	East Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	10	4,150.2	A	17	2,766.8	A	27	2,075.1	A	22	2,075.1	A
	West Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	227	143.0	B	818	59.1	C	506	63.8	C	535	90.9	B
	North Sidewalk of Roosevelt Avenue betw. Janet Place & College Point Boulevard	East-West	701	67.8	C	2,473	16.3	E	1,549	35.0	D	1,680	25.4	D
	North Sidewalk of Roosevelt Avenue betw. the Skyview Mall Driveway & Janet Place	East-West	477	125.1	B	1,659	35.1	D	1,047	56.6	C	1,143	51.7	C

Future With-Action Condition (2025)

Changes to the Study Area Pedestrian Network

As part of the Proposed Project, two sidewalks fronting Projected Development Site 1 would be reconstructed. More specifically, the changes relative to the Existing Conditions are as follows:

West Sidewalk of Janet Place between Roosevelt Avenue and 39th Avenue

- In Existing Conditions, the west side of Janet Place consists of a mixed area of dirt, asphalt and broken concrete.
- In the Future With-Action Condition, the sidewalk would be reconstructed, providing a total width of 19.3 feet.

North Sidewalk of Roosevelt Avenue between Janet Place and Transverse Road

- In Existing Conditions, the north side of Roosevelt Avenue has a total width of 6.9 feet.
- In the Future With-Action Condition, the sidewalk would be reconstructed, providing a total width of 14.9 feet.

In addition, as part of the Proposed Actions, five new private streets would be created connecting to existing roadway network in the study area (see Figure M-8). These private streets would include new sidewalk elements that were incorporated in the Future With-Action analysis.

Project Components Related to the Environment (PCRE)

As part of the Future With-Action Condition, Project Components Related to the Environment (PCRE) were incorporated in the analysis. The PCRE relevant to the pedestrian analysis include modifications to the type of intersection control (Unsignalized vs. Signalized), signal timing at existing intersections and intersection pedestrian element geometry (including crosswalk striping, curb extensions, corner curb radius reconstruction and obstruction reduction/relocation/removal). With the PCREs in place, the following intersections would be modified:

College Point Boulevard and 37th Avenue

- Signal modifications as part of the traffic PCREs.
- Reduction of obstructions along the east-west sidewalk at the southeast corner by 1.1 feet (5.8-foot obstruction width).

College Point Boulevard and 39th Avenue

- Signal modifications as part of the traffic PCREs.
- Widening of the north crosswalk by 6 feet (18-foot width).
- Widening of the south crosswalk by 7 feet (17-foot width).
- Reduction of the southeast corner curb radius by 1.2 feet (12-foot radius).
- Reduction of the southwest corner curb radius by 0.6 feet (13-foot radius).
- Reduction of the southwest corner obstructions by 4.00 ft^2 (0 ft^2 obstruction area) by relocating signal pole out of the corner reservoir zone.

- Reduction of obstructions along the north-south sidewalk at the northeast corner by installing 0.7-foot wide Belgian blocks along the edge of the two sidewalk tree pits that are currently missing them (5.6-foot obstruction width).

College Point Boulevard and Roosevelt Avenue

- Pedestrian signal timing modifications on the north and south crosswalks:
    a. During the weekday midday peak hour, allocate 1 second of Steady Don't Walk (DW) time to Walk time.
    b. During the weekday PM peak hour, allocate 2 seconds of DW time to Walk time.
    c. During the Saturday midday peak hour, allocate 1 second of DW time to Walk time.

College Point Boulevard and 38th Avenue Extension/ Tangram Plaza Driveway

- New signal installation as part of the traffic PCREs.
- Installation of a 5-foot wide corner curb extension of the north-south sidewalk at the southwest corner.
- Installation of a 6-foot wide mid-block curb extension of the north-south sidewalk on the east side of College Point Boulevard, just south of the Tangram Plaza Driveway.
- Striping of a 20-foot wide south crosswalk, connecting the two curb extensions.

39th Avenue and Janet Place

- New signal installation as part of the traffic PCREs.
- Striping of a 19-foot wide south crosswalk.

Pedestrian Volumes

Project-generated pedestrian trips by the Proposed Actions (see Table M-6) were assigned through various intersections in the study area based on the *CEQR Technical Manual* guidelines, prevailing travel patterns and locations of key transportation elements near the project site, including subway, bus and railroad stations/stops. Pedestrian assignments approaching/departing the study area for individual development program components followed the same patterns developed for the Future No-Action Condition. Key differences are the circulation and access/egress patterns as a result of the new pedestrian elements in the Future With-Action Condition.

The assignments of pedestrian trips generated by the Proposed Action are shown in Appendix K, Figures K-33 through K-36. The Future With-Action Condition pedestrian volumes during the weekday AM, midday, PM and Saturday midday peak hours are shown in Appendix K, Figures K-37 through K-40.

Pedestrian Conditions

As shown in Tables M-21A, M-21B and M-21C, with the PCRE in place, all pedestrian elements would operate with service conditions similar to the Future No-Action Condition without any significant

decreases in average pedestrian space. Therefore, as per CEQR criteria, the Proposed Actions with the PCREs would not adversely affect the future pedestrian operating conditions in the study area.

In summary, as shown in shown in Table M-21A, the following corner elements in the study area would operate below mid-LOS D in at least one peak hour:

- Northeast corner of College Point Boulevard and 39th Avenue, which would:
  - Continue to operate at LOS F with an average space of 6.1 ft^2/p during the weekday midday peak hour, an increase of 0.3 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 11.1 ft^2/p during the weekday PM peak hour, an increase of 1.8 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 9.6 ft^2/p during the Saturday midday peak hour, an increase of 0.8 ft^2/p relative to the Future No-Action Condition.
- Southeast corner of College Point Boulevard and 39th Avenue, which would:
  - Continue to operate at LOS E with an average space of 8.3 ft^2/p during the weekday midday peak hour, a decrease of 0.2 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 14.8 ft^2/p during the weekday PM peak hour, an increase of 0.4 ft^2/p relative to the Future No-Action Condition.
  - Rise to LOS D with an average space of 15.2 ft^2/p during the Saturday midday peak hour from LOS E in the Future No-Action Condition, resulting in an increase in average space of 0.9 ft^2/p.
- Southwest corner of College Point Boulevard and 39th Avenue, which would:
  - Drop to LOS E with an average space of 14.3 ft^2/p during the weekday midday peak hour from LOS D in the Future No-Action Condition, resulting in a decrease in average space of 1.2 ft^2/p.
- Northeast corner of College Point Boulevard and WB Roosevelt Avenue, which would:
  - Continue to operate at LOS F with an average space of 4.8 ft^2/p during the weekday midday peak hour, a decrease of 0.1 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 14.1 ft^2/p during the weekday PM peak hour, a decrease of 0.2 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 10.2 ft^2/p during the Saturday midday peak hour, a decrease of 0.1 ft^2/p relative to the Future No-Action Condition.
- Northwest corner of College Point Boulevard and WB Roosevelt Avenue, which would:
  - Continue to operate at LOS F with an average space of -1.1 ft^2/p during the weekday midday peak hour, with no change in pedestrian space relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 4.7 ft^2/p during the weekday PM peak hour, an increase of 0.1 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 2.4 ft^2/p during the Saturday midday peak hour, with no change in pedestrian space relative to the Future No-Action Condition.
- Southeast corner of College Point Boulevard and EB Roosevelt Avenue, which would:
  - Continue to operate at LOS D with an average space of 19.1 ft^2/p during the weekday PM peak hour, an increase of 0.4 ft^2/p relative to the Future No-Action Condition.

- Continue to operate at LOS E with an average space of 10.5 ft^2/p during the Saturday midday peak hour, an increase of 0.3 ft^2/p relative to the Future No-Action Condition.

- Southwest corner of College Point Boulevard and EB Roosevelt Avenue, which would:
  - Rise to LOS D with an average space of 15.5 ft^2/p during the weekday PM peak hour from LOS E in the Future No-Action Condition, resulting in an increase in average space of 0.5 ft^2/p.
  - Continue to operate at LOS E with an average space of 10.3 ft^2/p during the Saturday midday peak hour, an increase of 0.3 ft^2/p relative to the Future No-Action Condition.

Table M-21A: Future With-Action Condition Corner Analysis

Intersection ID	Location	Corner	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
			Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
2	College Point Boulevard & 37th Avenue	North-East	22	98.7	A	11	44.4	B	36	52.8	B	12	47.7	B
		South-East	181	74.2	A	460	24.6	C	344	33.3	C	344	30.3	C
		South-West	35	117.5	A	94	31.5	C	64	47.6	B	59	44.1	B
		North-West	4	171.4	A	10	66.4	A	7	80.3	A	7	91.6	A
3	College Point Boulevard & 39th Avenue	North-East	195	40.9	B	446	6.1	F	335	11.1	E	331	9.6	E
		South-East	30	52.2	B	81	8.3	E	70	14.8	E	150	15.2	D
		South-West	54	81.9	A	172	14.3	E	120	37.6	C	123	38.8	C
		North-West	19	209.0	A	48	58.1	B	37	80.8	A	35	86.6	A
4A	College Point Boulevard & WB Roosevelt Avenue	North-East	15	47.9	B	8	4.8	F	16	14.1	E	26	10.2	E
		North-West	21	23.4	D	70	-1.1	F	42	4.7	F	44	2.4	F
4B	College Point Boulevard & EB Roosevelt Avenue	South-East	87	106.5	A	133	22.1	D	148	19.1	D	135	10.5	E
		South-West	8	79.9	A	21	19.8	D	15	15.5	D	40	10.3	E
7	College Point Boulevard & 38th Avenue	South-West	66	140.1	A	174	48.3	B	123	68.9	A	126	74.3	A
		North-West	61	163.0	A	162	60.6	A	112	84.5	A	108	90.3	A
8	39th Avenue & Janet Place	North-East	0	74.3	A	0	19.7	D	0	32.5	C	0	30.8	C
		South-East	0	84.8	A	0	20.2	D	0	34.9	C	0	32.7	C
		South-West	0	150.3	A	0	41.1	B	0	66.4	A	0	62.9	A
		North-West	0	219.1	A	0	75.7	A	0	110.4	A	0	105.3	A

In summary, as shown in shown in Table M-21B, the following crosswalk elements in the study area would operate below mid-LOS D in at least one peak hour:

- North crosswalk of College Point Boulevard and 37th Avenue, which would:
  - Rise to LOS D with an average space of 17.3 ft^2/p during the weekday midday peak hour from LOS E in the Future No-Action Condition, resulting in an increase in average space of 5.1 ft^2/p.
- South crosswalk of College Point Boulevard and 37th Avenue, which would:
  - Rise to LOS E with an average space of 8.1 ft^2/p during the weekday midday peak hour from LOS F in the Future No-Action Condition, resulting in an increase of in average space of 1.6 ft^2/p.
  - Continue to operate at LOS E with an average space of 13.7 ft^2/p during the weekday PM peak hour, an increase of 1.0 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 10.7 ft^2/p during the Saturday midday peak hour, an increase of 1.8 ft^2/p relative to the Future No-Action Condition.

- North crosswalk of College Point Boulevard and 39th Avenue, which would:
  - Continue to operate at LOS F with an average space of 3.9 ft^2/p during the weekday midday peak hour, with no change in pedestrian space relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 5.2 ft^2/p during the weekday PM peak hour, an increase of 0.7 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 5.8 ft^2/p during the Saturday midday peak hour, a decrease of 0.1 ft^2/p relative to the Future No-Action Condition.
- South crosswalk of College Point Boulevard and 39th Avenue, which would:
  - Continue to operate at LOS F with an average space of 3.7 ft^2/p during the weekday midday peak hour, with no change in pedestrian space relative to the Future No-Action Condition relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 7.6 ft^2/p during the weekday PM peak hour, an increase of 1.3 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 7.4 ft^2/p during the Saturday midday peak hour, a decrease of 0.2 ft^2/p relative to the Future No-Action Condition.
- North crosswalk of College Point Boulevard and WB Roosevelt Avenue, which would:
  - Continue to operate at LOS F with an average space of 7.2 ft^2/p during the weekday AM peak hour, a decrease of 0.2 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 2.3 ft^2/p during the weekday midday peak hour, an increase of 0.2 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 4.2 ft^2/p during the weekday PM peak hour, an increase of 0.7 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 3.5 ft^2/p during the Saturday midday peak hour, an increase of 0.3 ft^2/p relative to the Future No-Action Condition.
- West crosswalk of College Point Boulevard and WB Roosevelt Avenue which would:
  - Continue to operate at LOS E with an average space of 14.6 ft^2/p during the weekday AM peak hour, an increase of 5.4 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 0.2 ft^2/p during the weekday midday peak hour, an increase of 1.6 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 7.9 ft^2/p during the weekday PM peak hour, an increase of 2.4 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 0.0 ft^2/p during the Saturday midday peak hour, an increase of 1.9 ft^2/p relative to the Future No-Action Condition.
- East crosswalk of College Point Boulevard and EB Roosevelt Avenue, which would:
  - Continue to operate at LOS D with an average space of 16.2 ft^2/p during the weekday midday peak hour, a decrease of 0.3 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS D with an average space of 15.2 ft^2/p during the Saturday midday peak hour, a decrease of 0.2 ft^2/p relative to the Future No-Action Condition.
- South crosswalk of College Point Boulevard and EB Roosevelt Avenue, which would:
  - Continue to operate at LOS E with an average space of 13.1 ft^2/p during the weekday AM peak hour, with no change in pedestrian space relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 4.5 ft^2/p during the weekday midday peak hour, an increase of 0.4 ft^2/p relative to the Future No-Action Condition.

- Continue to operate at LOS F with an average space of 2.8 ft^2/p during the weekday PM peak hour, an increase of 0.6 ft^2/p relative to the Future No-Action Condition.
- Continue to operate at LOS F with an average space of 2.5 ft^2/p during the Saturday midday peak hour, an increase of 0.3 ft^2/p relative to the Future No-Action Condition.

- West crosswalk of College Point Boulevard and EB Roosevelt Avenue, which would:
  - Continue to operate at LOS D with an average space of 15.5 ft^2/p during the weekday midday peak hour, a decrease of 0.4 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS D with an average space of 16.2 ft^2/p during the Saturday midday peak hour, a decrease of 0.3 ft^2/p relative to the Future No-Action Condition.

Table M-21B: Future With-Action Condition Crosswalk Analysis

Intersection ID	Location	Crosswalk	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
			Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	LOS
2	College Point Boulevard & 37th Avenue	North	389	56.2	B	921	17.3	D	694	24.3	C	700	23.2	D
		East	199	103.4	A	457	65.0	A	362	100.8	A	433	47.3	B
		South	592	36.1	C	1,563	8.1	E	1,062	13.7	E	1,002	10.7	E
		West	154	212.6	A	368	82.3	A	296	110.9	A	287	112.4	A
3	College Point Boulevard & 39th Avenue	North	731	20.4	D	2,100	3.9	F	1,448	5.2	F	1,496	5.8	F
		East	317	140.7	A	754	51.6	B	572	95.0	A	640	51.7	B
		South	622	19.5	D	2,091	3.7	F	1,334	7.6	F	1,457	7.4	F
		West	240	116.3	A	640	33.1	C	499	67.1	A	497	49.9	B
4A	College Point Boulevard & WB Roosevelt Avenue	North	744	7.2	F	2,519	2.3	F	1,685	4.2	F	1,962	3.5	F
		East	445	83.0	A	1,433	18.5	D	1,205	26.4	C	1,484	17.6	D
		West	414	14.6	E	1,162	0.2	F	935	7.9	F	1,155	0.0	F
4B	College Point Boulevard & EB Roosevelt Avenue	East	445	78.2	A	1,433	16.2	D	1,205	23.8	D	1,484	15.2	D
		South	519	13.1	E	2,313	4.5	F	2,420	2.8	F	3,736	2.5	F
		West	414	49.9	B	1,162	15.5	D	935	27.3	C	1,155	16.2	D
7	College Point Boulevard & 38th Avenue/ Tangram Plaza Drwy	West	558	58.5	B	1,465	23.1	D	1,075	35.4	C	1,017	37.5	C
		South	330	125.8	A	874	20.4	D	606	28.2	C	589	22.5	D
8	39th Avenue & Janet Place	North	516	84.8	A	1,426	24.9	C	997	33.5	C	1,043	33.3	C
		East	137	78.3	A	481	24.5	C	299	45.2	B	318	46.4	B
		South	813	82.3	A	2,761	19.5	D	1,745	28.8	C	1,853	29.1	C
		West	129	100.3	A	357	44.5	B	249	80.6	A	261	71.0	A

In summary, as shown in shown in Table M-21C, the following sidewalk elements in the study area would operate below mid-LOS D in at least one peak hour:

- North sidewalk of 37th Avenue between College Point Boulevard and Prince Street which would:
  - Continue to operate at LOS D with an average space of 24.7 ft^2/p during the weekday midday peak hour, an increase of 1.6 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS D with an average space of 27.5 ft^2/p during the weekday PM peak hour, a decrease of 1.2 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 20.4 ft^2/p during the Saturday midday peak hour, a decrease of 1.6 ft^2/p relative to the Future No-Action Condition.
- South sidewalk of 37th Avenue between College Point Boulevard and Prince Street which would:
  - Continue to operate at LOS D with an average space of 29.7 ft^2/p during the weekday midday peak hour, a decrease of 3.1 ft^2/p relative to the Future No-Action Condition.

- North sidewalk of 39th Avenue between College Point Boulevard and Prince Street which would:

  - Continue to operate at LOS D with an average space of 25.4 ft^2/p during the weekday AM peak hour, an increase of 0.4 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 6.2 ft^2/p during the weekday midday peak hour, an increase of 0.3 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS F with an average space of 5.6 ft^2/p during the weekday PM peak hour, an increase of 0.3 ft^2/p relative to the Future No-Action Condition.
  - Rise to LOS E with an average space of 11.2 ft^2/p during the Saturday midday peak hour from LOS F in the Future No-Action Condition, resulting in an increase in average space of 0.7 ft^2/p.
- South sidewalk of 39th Avenue between College Point Boulevard and Prince Street which would:
  - Continue to operate at LOS E with an average space of 17.7 ft^2/p during the weekday midday peak hour, an increase of 1.1 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS D with an average space of 27.9 ft^2/p during the weekday PM peak hour, an increase of 1.5 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS D with an average space of 24.5 ft^2/p during the Saturday midday peak hour, an increase of 1.3 ft^2/p relative to the Future No-Action Condition.
- South sidewalk of 39th Avenue between Janet Place and College Point Boulevard which would:
  - Continue to operate at LOS E with an average space of 16.4 ft^2/p during the weekday midday peak hour, an increase of 1.2 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 18.0 ft^2/p during the weekday PM peak hour, an increase of 1.2 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 20.8 ft^2/p during the Saturday midday peak hour, an increase of 1.3 ft^2/p relative to the Future No-Action Condition.
- North sidewalk of 39th Avenue between Janet Place and College Point Boulevard which would:
  - Rise to LOS E with an average space of 13.9 ft^2/p during the weekday midday peak hour from LOS F in the Future No-Action Condition, resulting in an increase in average space of 3.5 ft^2/p.
  - Rise to LOS E with an average space of 13.4 ft^2/p during the weekday PM peak hour from LOS F in the Future No-Action Condition, resulting in an increase in average space of 3.7 ft^2/p.
  - Continue to operate at LOS E with an average space of 20.9 ft^2/p during the Saturday midday peak hour, an increase of 4.9 ft^2/p relative to the Future No-Action Condition.
- North sidewalk of WB Roosevelt Avenue between College Point Boulevard and Prince Street which would:
  - Continue to operate at LOS D with an average space of 31.2 ft^2/p during the weekday midday peak hour, a decrease of 0.5 ft^2/p relative to the Future No-Action Condition.
- North sidewalk of WB Roosevelt Avenue between Janet Place and College Point Boulevard which would:
  - Continue to operate at LOS E with an average space of 15.9 ft^2/p during the weekday midday peak hour, a decrease of 0.4 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS D with an average space of 25.4 ft^2/p during the weekday PM peak hour, a decrease of 0.6 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS D with an average space of 24.4 ft^2/p during the Saturday midday peak hour, a decrease of 0.6 ft^2/p relative to the Future No-Action Condition.

- South sidewalk of EB Roosevelt Avenue between College Point Boulevard and Prince Street which would:
  - Continue to operate at LOS E with an average space of 20.5 ft^2/p during the weekday midday peak hour, with no change in pedestrian space relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 15.9 ft^2/p during the weekday PM peak hour, with no change in pedestrian space relative to the Future No-Action Condition.
  - Continue to operate at LOS E with an average space of 12.8 ft^2/p during the Saturday midday peak hour, with no change in pedestrian space relative to the Future No-Action Condition.
- North sidewalk of Roosevelt Avenue between Janet Place and College Point Boulevard which would:
  - Continue to operate at LOS E with an average space of 15.7 ft^2/p during the weekday midday peak hour, a decrease of 0.5 ft^2/p relative to the Future No-Action Condition.
  - Continue to operate at LOS D with an average space of 24.5 ft^2/p during the Saturday midday peak hour, a decrease of 0.9 ft^2/p relative to the Future No-Action Condition.
- North sidewalk of 39th Avenue between Janet Place and College Point Boulevard which would:
  - Operate at LOS E with an average space of 13.9 ft^2/p during the weekday midday peak hour.
  - Operate at LOS E with an average space of 22.0 ft^2/p during the weekday PM peak hour.
  - Operate at LOS E with an average space of 20.9 ft^2/p during the Saturday midday peak hour.
  - Note that this sidewalk would be a newly created pedestrian element as part of the Future With-Action Condition.
- South sidewalk of 39th Avenue between Janet Place and College Point Boulevard which would:
  - Operate at LOS E with an average space of 16.4 ft^2/p during the weekday midday peak hour.
  - Operate at LOS D with an average space of 27.2 ft^2/p during the weekday PM peak hour.
  - Operate at LOS D with an average space of 25.6 ft^2/p during the Saturday midday peak hour.
  - Note that this sidewalk would be a newly created pedestrian element as part of the Future With-Action Condition.

Table M-21C: Future With-Action Condition Sidewalk Analysis

Intersection ID	Location	Sidewalk Movement	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
			Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS
2	East Sidewalk of College Point Boulevard betw. 36th Road & 37th Avenue	North-South	194	488.5	B	400	227.2	B	345	249.0	B	347	230.9	B
	East Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	392	252.2	B	923	106.3	B	715	157.0	B	778	85.4	C
	West Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	334	198.9	B	845	71.2	C	625	113.1	B	605	113.8	B
	West Sidewalk of College Point Boulevard betw. 36th Road & 37th Avenue	North-South	387	227.6	B	884	90.5	B	700	134.1	B	727	125.7	B
	North Sidewalk of 37th Avenue between College Point Boulevard & Prince Street	East-West	377	73.7	C	847	24.7	D	668	27.5	D	697	20.4	E
	South Sidewalk of 37th Avenue between College Point Boulevard & Prince Street	East-West	705	74.8	C	1,845	29.7	D	1,285	41.4	C	1,232	60.4	C
	South Sidewalk of 37th Avenue between Janet Place & College Point Boulevard	East-West	473	119.6	B	1,255	44.4	C	851	66.1	C	787	71.6	C
	North Sidewalk of 37th Avenue between Janet Place & College Point Boulevard	East-West	158	359.5	B	418	135.3	B	284	199.8	B	262	216.1	B
3	East Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	481	68.4	C	1,098	33.8	D	839	49.8	C	895	31.6	D
	East Sidewalk of College Point Boulevard betw. 39th Avenue & Roosevelt Avenue	North-South	356	143.7	B	914	62.1	C	701	67.4	C	840	65.3	C
	West Sidewalk of College Point Boulevard betw. 39th Avenue & Roosevelt Avenue	North-South	292	298.9	B	796	98.0	B	599	159.4	B	626	176.5	B
	West Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	347	254.7	B	908	112.3	B	694	129.3	B	658	157.6	B
	North Sidewalk of 39th Avenue between College Point Boulevard & Prince Street	East-West	857	25.4	D	2,342	6.2	F	1,640	5.6	F	1,670	11.2	E
	South Sidewalk of 39th Avenue between College Point Boulevard & Prince Street	East-West	629	41.5	C	1,964	17.7	E	1,270	27.9	D	1,478	24.5	D
	South Sidewalk of 39th Avenue between Janet Place & College Point Boulevard	East-West	693	59.7	C	2,283	16.4	E	1,471	18.0	E	1,555	20.8	E
	North Sidewalk of 39th Avenue between Janet Place & College Point Boulevard	East-West	662	45.6	C	1,910	13.9	E	1,311	13.4	E	1,368	20.9	E
4A	East Sidewalk of College Point Boulevard betw. 39th Avenue & WB Roosevelt Avenue	North-South	358	160.1	B	918	53.0	C	690	79.1	C	843	64.4	C
	West Sidewalk of College Point Boulevard betw. WB Roosevelt Avenue & EB Roosevelt Avenue	North-South	414	257.5	B	1,162	130.4	B	935	173.6	B	1,155	140.1	B
	West Sidewalk of College Point Boulevard betw. 39th Avenue & WB Roosevelt Avenue	North-South	313	211.3	B	822	112.1	B	604	177.1	B	666	126.5	B
	North Sidewalk of WB Roosevelt Avenue betw. College Point Boulevard & Prince Street	East-West	739	124.6	B	2,691	31.2	D	1,966	47.6	C	2,360	41.9	C
	North Sidewalk of WB Roosevelt Avenue betw. Janet Place & College Point Boulevard	East-West	739	53.3	C	2,556	15.9	E	1,628	25.4	D	1,742	24.4	D
4B	East Sidewalk of College Point Boulevard betw. EB Roosevelt Avenue & 40th Road	North-South	487	106.4	B	1,277	56.9	C	1,090	65.1	C	1,187	60.9	C
	West Sidewalk of College Point Boulevard betw. EB Roosevelt Avenue & 40th Road	North-South	748	97.0	B	3,019	34.8	D	2,949	36.7	D	2,645	36.1	D
	West Sidewalk of College Point Boulevard betw. WB Roosevelt Avenue & EB Roosevelt Avenue	North-South	414	257.5	B	1,162	130.4	B	935	173.6	B	1,155	140.1	B
	South Sidewalk of EB Roosevelt Avenue betw. College Point Boulevard & Prince Street	East-West	501	65.2	C	1,913	20.5	E	2,381	15.9	E	2,852	12.8	E
	South Sidewalk of EB Roosevelt Avenue betw. Skyview Mall Drive & College Point Boulevard	East-West	47	766.1	A	61	645.2	A	54	612.9	A	107	408.5	B
5	East Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	10	4,150.2	A	17	2,766.8	A	27	2,075.1	A	22	2,075.1	A
	West Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	101	354.7	B	360	148.6	B	225	158.4	B	236	227.1	B
	North Sidewalk of Roosevelt Avenue betw. Janet Place & College Point Boulevard	East-West	723	65.7	C	2,540	15.7	E	1,601	33.8	D	1,736	24.5	D
	North Sidewalk of Roosevelt Avenue betw. the Skyview Mall Driveway & Janet Place	East-West	618	122.0	B	2,170	33.9	D	1,362	54.9	C	1,479	50.5	C
6	East Sidewalk of Transverse Road betw. 39th Avenue & Roosevelt Avenue	North-South	99	575.2	A	357	158.8	B	219	258.9	B	234	242.6	B
	West Sidewalk of Transverse Road betw. 39th Avenue & Roosevelt Avenue	North-South	99	575.2	A	357	158.8	B	219	258.9	B	234	242.6	B
7	East Sidewalk of College Point Boulevard betw. 37th Avenue & 38th Avenue	North-South	392	240.7	B	923	102.0	B	715	131.8	B	778	121.2	B
	East Sidewalk of College Point Boulevard betw. 38th Avenue & 39th Avenue	North-South	429	219.9	B	960	98.1	B	743	126.9	B	802	117.6	B
	West Sidewalk of College Point Boulevard betw. 38th Avenue & 39th Avenue	North-South	347	267.4	B	908	102.1	B	694	133.7	B	658	141.0	B
	West Sidewalk of College Point Boulevard betw. 37th Avenue & 38th Avenue	North-South	435	171.8	B	1140	65.1	C	851	87.5	C	802	92.9	B
	South Sidewalk of 38th Avenue betw. Janet Place & College Point Boulevard	East-West	239	236.7	B	633	89.2	C	449	126.0	B	459	123.2	B
	North Sidewalk of 38th Avenue betw. Janet Place & College Point Boulevard	East-West	245	231.3	B	649	86.9	C	448	126.4	B	431	131.3	B

Table M-21C: Future With-Action Condition Sidewalk Analysis (cont.)

Intersection ID	Location	Sidewalk Movement	Weekday AM			Weekday Midday			Weekday PM			Saturday Midday		
			Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS	Two-Way Peak Hour Volume	Average Space (ft^2/p)	Platoon LOS
8	East Sidewalk of Janet Place betw. 38th Avenue & 39th Avenue	North-South	0	N/A	N/A	0	N/A	N/A	0	N/A	N/A	0	N/A	N/A
	East Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	10	4980.2	A	17	2929.5	A	27	1915.5	A	22	2371.5	A
	West Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	101	563.5	A	360	157.4	B	225	251.8	B	236	240.5	B
	West Sidewalk of Janet Place betw. 38th Avenue & 39th Avenue	North-South	91	620.6	A	242	234.6	B	173	327.9	B	180	314.5	B
	North Sidewalk of 39th Avenue betw. Janet Place & College Point Boulevard	East-West	662	45.6	C	1910	13.9	E	1311	22.0	E	1368	20.9	E
	South Sidewalk of 39th Avenue betw. Janet Place & College Point Boulevard	East-West	693	59.7	C	2283	16.4	E	1471	27.2	D	1555	25.6	D
	South Sidewalk of 39th Avenue betw. Transverse Road & Janet Place	East-West	586	128.8	B	2048	36.0	D	1277	58.6	C	1359	55.0	C
	North Sidewalk of 39th Avenue betw. Transverse Road & Janet Place	East-West	554	102.0	B	1541	35.9	D	1074	52.1	C	1124	49.8	C
9	East Sidewalk of Janet Place betw. 37th Avenue & 38th Avenue	North-South	105	539.3	A	279	203.1	B	189	299.8	B	175	324.2	B
	East Sidewalk of Janet Place betw. 38th Avenue & 39th Avenue	North-South	0	N/A	N/A	0	N/A	N/A	0	N/A	N/A	0	N/A	N/A
	West Sidewalk of Janet Place betw. 38th Avenue & 39th Avenue	North-South	91	620.6	A	242	234.6	B	173	327.9	B	180	314.5	B
	West Sidewalk of Janet Place betw. 37th Avenue & 38th Avenue	North-South	105	539.3	A	279	203.1	B	189	299.8	B	175	324.2	B
	North Sidewalk of 38th Avenue betw. Janet Place & College Point Boulevard	East-West	245	231.3	B	649	86.9	C	448	126.4	B	431	131.3	B
	South Sidewalk of 38th Avenue betw. Janet Place & College Point Boulevard	East-West	239	236.7	B	633	89.2	C	449	126.0	B	459	123.2	B
	South Sidewalk of 38th Avenue betw. Transverse Road & Janet Place	East-West	146	387.8	B	386	146.5	B	277	204.8	B	288	196.5	B
	North Sidewalk of 38th Avenue betw. Transverse Road & Janet Place	East-West	37	1551.5	A	97	586.9	A	69	820.0	A	72	786.5	A
10	East Sidewalk of Transverse Road betw. 38th Avenue & 39th Avenue	North-South	91	620.6	A	242	234.6	B	173	327.9	B	180	314.5	B
	West Sidewalk of Transverse Road betw. 38th Avenue & 39th Avenue	North-South	91	620.6	A	242	234.6	B	173	327.9	B	180	314.5	B
	North Sidewalk of 38th Avenue betw. Transverse Road & Janet Place	East-West	37	1551.5	A	97	586.9	A	69	820.0	A	72	786.5	A
	South Sidewalk of 38th Avenue betw. Transverse Road & Janet Place	East-West	146	387.8	B	386	146.5	B	277	204.8	B	288	196.5	B
	South Sidewalk of 38th Avenue betw. Shore Public Walkway & Transverse Road	East-West	0	N/A	N/A	0	N/A	N/A	0	N/A	N/A	0	N/A	N/A
	North Sidewalk of 38th Avenue betw. Shore Public Walkway & Transverse Road	East-West	37	1551.5	A	97	586.9	A	69	820.0	A	72	786.5	A
11	East Sidewalk of Transverse Road betw. 38th Avenue & 39th Avenue	North-South	91	620.6	A	242	234.6	B	173	327.9	B	180	314.5	B
	East Sidewalk of Transverse Road betw. 39th Avenue & Roosevelt Avenue	North-South	99	575.2	A	357	158.8	B	219	258.9	B	234	242.6	B
	West Sidewalk of Transverse Road betw. 39th Avenue & Roosevelt Avenue	North-South	99	575.2	A	357	158.8	B	219	258.9	B	234	242.6	B
	West Sidewalk of Transverse Road betw. 38th Avenue & 39th Avenue	North-South	91	620.6	A	242	234.6	B	173	327.9	B	180	314.5	B
	North Sidewalk of 39th Avenue betw. Janet Place & Transverse Road	East-West	371	152.5	B	1058	52.9	C	728	77.4	C	764	73.8	C
	South Sidewalk of 39th Avenue betw. Janet Place & Transverse Road	East-West	388	145.7	B	1334	41.7	C	839	67.1	C	892	63.1	C
	South Sidewalk of 39th Avenue betw. Transverse Road & Shore Public Walkway	East-West	197	287.5	B	713	79.1	C	438	129.2	B	467	121.1	B
	North Sidewalk of 39th Avenue betw. Transverse Road & Shore Public Walkway	East-West	183	310.2	B	483	117.1	B	346	163.8	B	360	157.1	B

PARKING

Future With-Action Condition (2025)

In the Future With-Action Condition, Projected Development Sites 1, 2, 3 and 4 would provide 510, 318, 539 and 166 on-site parking spaces, respectively, totaling to 1,533 on-site parking spaces. A 24-hour parking accumulation analysis was conducted for the Proposed Actions based on the Future With-Action Condition Trip Generation Estimates (see Table M-6), *2013–2017 U.S. Census Bureau's ACS Tenure by Vehicles* data for the overnight parking demand of the Residential component, the *2017 Flushing Waterfront BOA Plan EAR* for the 24-hour in/out and temporal distributions of the Local Retail, Destination Retail, Community Facility (Medical Office), Hotel and Residential components, and the *2005 Brooklyn Bridge Park FEIS* for the 24-hour parking accumulation factors of the Park component.

The Future With-Action Condition 24-hour parking accumulation on a site-by-site basis is shown in Tables M-22 through M-25. The combined 24-hour parking accumulation compared to the total proposed on-site parking supply is shown in Table M-26.

Table M-22. Project-Generated Hourly Parking Accumulation – Projected Development Site 1

Time period	Local Retail			Destination Retail			Community Facility (Medical Office)			Hotel			Office			Park			Residential			Total		
	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.
Overnight			0			0			0			47			0			0			203			250
12:00 AM -- 1:00 AM	0	0	0	0	0	0	0	0	0	2	2	47	0	0	0	0	0	0	7	7	203	8	8	250
1:00 AM -- 2:00 AM	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0	0	0	3	3	203	3	3	250
2:00 AM -- 3:00 AM	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0	0	0	0	0	203	0	0	250
3:00 AM -- 4:00 AM	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0	0	0	0	0	203	0	0	250
4:00 AM -- 5:00 AM	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0	0	0	0	0	203	0	0	250
5:00 AM -- 6:00 AM	0	0	0	0	0	0	0	0	0	0	0	47	0	0	0	0	0	0	0	0	203	0	0	250
6:00 AM -- 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	47	10	2	8	0	0	0	0	6	197	11	8	252
7:00 AM -- 8:00 AM	18	17	1	12	3	9	2	0	2	3	6	44	20	4	25	0	0	0	5	21	181	61	51	262
8:00 AM -- 9:00 AM	26	26	1	14	9	14	3	2	3	10	15	40	139	6	158	0	0	0	13	53	142	206	110	358
9:00 AM -- 10:00 AM	18	17	1	18	5	28	3	0	6	9	10	38	76	21	213	0	0	0	9	37	115	133	89	402
10:00 AM -- 11:00 AM	49	37	14	40	13	54	3	0	9	6	9	35	35	26	222	0	0	0	10	23	101	143	109	436
11:00 AM -- 12:00 PM	69	69	14	40	21	73	3	1	11	4	8	31	32	52	203	0	0	0	13	13	101	161	164	432
12:00 PM -- 1:00 PM	132	127	19	31	38	66	2	2	10	3	10	24	71	50	224	0	0	0	16	17	101	255	243	444
1:00 PM -- 2:00 PM	164	164	19	38	31	73	3	3	10	29	14	39	4	4	223	0	0	0	17	16	102	255	233	467
2:00 PM -- 3:00 PM	95	95	19	34	34	73	1	2	9	3	10	32	54	31	246	0	0	0	13	13	102	200	186	480
3:00 PM -- 4:00 PM	61	61	19	34	34	73	1	3	7	5	10	27	40	32	254	0	0	0	18	15	105	160	154	486
4:00 PM -- 5:00 PM	61	61	19	34	34	73	1	3	6	11	11	27	20	88	186	0	0	0	25	21	110	153	218	421
5:00 PM -- 6:00 PM	86	86	19	32	36	69	1	3	4	24	16	35	8	161	34	0	0	0	47	25	131	199	328	292
6:00 PM -- 7:00 PM	59	62	17	41	27	82	0	4	0	11	17	29	11	25	20	0	0	0	39	21	149	161	156	297
7:00 PM -- 8:00 PM	15	20	11	12	49	46	0	0	0	12	12	29	0	13	7	0	0	0	34	18	165	74	113	258
8:00 PM -- 9:00 PM	8	10	10	0	38	8	0	0	0	6	3	33	0	0	7	0	0	0	18	8	176	33	58	232
9:00 PM -- 10:00 PM	4	14	0	0	8	0	0	0	0	5	2	36	0	0	7	0	0	0	14	6	183	23	29	226
10:00 PM -- 11:00 PM	0	0	0	0	0	0	0	0	0	5	1	41	0	0	7	0	0	0	14	6	191	19	7	239
11:00 PM -- 12:00 AM	0	0	0	0	0	0	0	0	0	6	0	47	0	0	7	0	0	0	13	1	203	19	1	257

Notes:
1. In/Out and Temporal Distributions for the Local Retail, Destination Retail, Community Facility (Medical Office), Hotel, Office, Industrial, Park and Residential components during the AM, midday and PM peak hours are based on the transportation planning assumptions and demand estimates used for Trip Generation.
2. In/Out and Temporal Distributions for the Local Retail, Destination Retail, Community Facility (Medical Office), Hotel, Office, Industrial and Residential components for the remaining hours of the 24-hr profile based on the *Flushing Waterfront BOA Plan EAR, 2017* .
3. Parking accumulation factors for the Park component during the remaining hours of the 24-hr profile are based on the *Brooklyn Bridge Park FEIS, 2005.*
4. Overnight parking demand for the residential component based on the *2013-2017 U.S. Census Bureau ACS Tenure by Vehicles* data (aggregate).

Table M-23. Project-Generated Hourly Parking Accumulation – Projected Development Site 2

Time period	Local Retail			Destination Retail			Community Facility (Medical Office)			Hotel			Office			Park			Residential			Total		
	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.
Overnight			0			0			0			112			0			0			148			260
12:00 AM -- 1:00 AM	0	0	0	0	0	0	0	0	0	4	4	112	0	0	0	0	0	0	5	5	148	9	9	260
1:00 AM -- 2:00 AM	0	0	0	0	0	0	0	0	0	0	0	112	0	0	0	0	0	0	2	2	148	2	2	260
2:00 AM -- 3:00 AM	0	0	0	0	0	0	0	0	0	0	0	112	0	0	0	0	0	0	0	0	148	0	0	260
3:00 AM -- 4:00 AM	0	0	0	0	0	0	0	0	0	0	0	112	0	0	0	0	0	0	0	0	148	0	0	260
4:00 AM -- 5:00 AM	0	0	0	0	0	0	0	0	0	0	0	112	0	0	0	0	0	0	0	0	148	0	0	260
5:00 AM -- 6:00 AM	0	0	0	0	0	0	0	0	0	0	0	112	0	0	0	0	0	0	0	0	148	0	0	260
6:00 AM -- 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	112	0	0	0	0	0	0	0	5	144	0	5	256
7:00 AM -- 8:00 AM	7	7	0	0	0	0	6	0	6	8	14	106	0	0	0	0	0	0	4	15	132	25	37	244
8:00 AM -- 9:00 AM	10	10	0	0	0	0	10	6	10	24	35	95	0	0	0	0	0	0	10	38	103	55	90	208
9:00 AM -- 10:00 AM	7	7	1	0	0	0	11	0	20	20	24	91	0	0	0	0	0	0	7	27	83	45	58	196
10:00 AM -- 11:00 AM	20	15	5	0	0	0	9	2	28	15	22	84	0	0	0	0	0	0	7	17	74	51	56	191
11:00 AM -- 12:00 PM	28	28	5	0	0	0	8	3	33	10	19	75	0	0	0	0	0	0	10	10	74	56	59	188
12:00 PM -- 1:00 PM	53	51	8	0	0	0	5	6	33	6	24	57	0	0	0	0	0	0	12	12	74	76	92	172
1:00 PM -- 2:00 PM	66	66	8	0	0	0	9	10	32	71	33	95	0	0	0	0	0	0	12	12	74	158	121	208
2:00 PM -- 3:00 PM	38	38	8	0	0	0	3	7	28	6	24	77	0	0	0	0	0	0	10	10	74	57	79	187
3:00 PM -- 4:00 PM	24	24	8	0	0	0	4	8	23	13	24	66	0	0	0	0	0	0	13	11	76	55	68	173
4:00 PM -- 5:00 PM	24	24	8	0	0	0	4	10	18	26	26	66	0	0	0	0	0	0	18	15	80	73	75	171
5:00 PM -- 6:00 PM	35	35	8	0	0	0	5	9	14	57	40	83	0	0	0	0	0	0	34	18	96	131	102	201
6:00 PM -- 7:00 PM	24	25	7	0	0	0	0	14	0	27	40	70	0	0	0	0	0	0	28	15	109	79	94	185
7:00 PM -- 8:00 PM	6	8	5	0	0	0	0	0	0	30	30	70	0	0	0	0	0	0	25	13	120	61	51	195
8:00 PM -- 9:00 PM	3	4	4	0	0	0	0	0	0	16	7	79	0	0	0	0	0	0	13	6	128	32	16	211
9:00 PM -- 10:00 PM	2	5	0	0	0	0	0	0	0	11	4	86	0	0	0	0	0	0	10	4	134	23	14	220
10:00 PM -- 11:00 PM	0	0	0	0	0	0	0	0	0	13	2	98	0	0	0	0	0	0	10	4	139	23	6	237
11:00 PM -- 12:00 AM	0	0	0	0	0	0	0	0	0	15	0	112	0	0	0	0	0	0	9	1	148	24	1	260

Notes:

1. In/Out and Temporal Distributions for the Local Retail, Destination Retail, Community Facility (Medical Office), Hotel, Office, Industrial, Park and Residential components during the AM, midday and PM peak hours are based on the transportation planning assumptions and demand estimates used for Trip Generation.
2. In/Out and Temporal Distributions for the Local Retail, Destination Retail, Community Facility (Medical Office), Hotel, Office, Industrial and Residential components for the remaining hours of the 24-hr profile based on the *Flushing Waterfront BOA Plan EAR, 2017* .
3. Parking accumulation factors for the Park component during the remaining hours of the 24-hr profile are based on the *Brooklyn Bridge Park FEIS, 2005.*
4. Overnight parking demand for the residential component based on the *2013-2017 U.S. Census Bureau ACS Tenure by Vehicles* data (aggregate).

Table M-24. Project-Generated Hourly Parking Accumulation – Projected Development Site 3

Time period	Local Retail			Destination Retail			Community Facility (Medical Office)			Hotel			Office			Park			Residential			Total		
	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.
Overnight			0			0			0			70			0			0			327			397
12:00 AM -- 1:00 AM	0	0	0	0	0	0	0	0	0	2	2	70	0	0	0	0	0	0	6	6	327	8	8	397
1:00 AM -- 2:00 AM	0	0	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	3	3	327	3	3	397
2:00 AM -- 3:00 AM	0	0	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	327	0	0	397
3:00 AM -- 4:00 AM	0	0	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	327	0	0	397
4:00 AM -- 5:00 AM	0	0	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	327	0	0	397
5:00 AM -- 6:00 AM	0	0	0	0	0	0	0	0	0	0	0	70	0	0	0	0	0	0	0	0	327	0	0	397
6:00 AM -- 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	70	11	2	9	0	0	0	0	6	322	12	8	400
7:00 AM -- 8:00 AM	8	7	0	0	0	0	1	0	1	5	9	66	23	4	27	0	0	0	5	19	307	41	40	401
8:00 AM -- 9:00 AM	11	11	0	0	0	0	1	1	1	15	22	59	156	7	177	0	0	0	12	49	270	196	89	508
9:00 AM -- 10:00 AM	8	7	1	0	0	0	1	0	2	13	15	57	85	23	239	0	0	0	9	34	245	115	80	544
10:00 AM -- 11:00 AM	21	16	6	0	0	0	1	0	3	9	14	52	39	29	250	0	0	0	9	21	233	80	80	544
11:00 AM -- 12:00 PM	30	30	6	0	0	0	1	0	4	6	12	47	36	58	228	0	0	0	12	12	233	86	113	517
12:00 PM -- 1:00 PM	57	55	8	0	0	0	1	1	4	4	15	36	79	56	251	0	0	0	15	15	232	156	142	531
1:00 PM -- 2:00 PM	71	71	8	0	0	0	1	1	4	44	21	59	5	5	251	0	0	0	16	15	233	136	113	555
2:00 PM -- 3:00 PM	41	41	8	0	0	0	0	1	3	4	15	48	60	35	276	0	0	0	12	12	233	118	104	568
3:00 PM -- 4:00 PM	26	26	8	0	0	0	0	1	3	8	15	41	45	36	285	0	0	0	17	14	236	97	92	574
4:00 PM -- 5:00 PM	26	26	8	0	0	0	1	1	2	16	16	41	23	99	209	0	0	0	23	19	240	89	162	501
5:00 PM -- 6:00 PM	37	37	8	0	0	0	1	1	2	35	25	52	9	180	38	0	0	0	44	23	261	126	267	360
6:00 PM -- 7:00 PM	26	27	7	0	0	0	0	2	0	17	25	43	13	28	22	0	0	0	36	19	277	90	101	350
7:00 PM -- 8:00 PM	6	9	5	0	0	0	0	0	0	18	18	43	0	15	8	0	0	0	32	17	292	57	59	348
8:00 PM -- 9:00 PM	3	4	4	0	0	0	0	0	0	10	4	49	0	0	8	0	0	0	17	7	302	30	16	362
9:00 PM -- 10:00 PM	2	6	0	0	0	0	0	0	0	7	2	53	0	0	8	0	0	0	13	5	309	22	14	370
10:00 PM -- 11:00 PM	0	0	0	0	0	0	0	0	0	8	1	61	0	0	8	0	0	0	13	5	316	21	7	384
11:00 PM -- 12:00 AM	0	0	0	0	0	0	0	0	0	9	0	70	0	0	8	0	0	0	12	1	327	21	1	404

Notes:

1. In/Out and Temporal Distributions for the Local Retail, Destination Retail, Community Facility (Medical Office), Hotel, Office, Industrial, Park and Residential components during the AM, midday and PM peak hours are based on the transportation planning assumptions and demand estimates used for Trip Generation.
2. In/Out and Temporal Distributions for the Local Retail, Destination Retail, Community Facility (Medical Office), Hotel, Office, Industrial and Residential components for the remaining hours of the 24-hr profile based on the *Flushing Waterfront BOA Plan EAR, 2017* .
3. Parking accumulation factors for the Park component during the remaining hours of the 24-hr profile are based on the *Brooklyn Bridge Park FEIS, 2005.*
4. Overnight parking demand for the residential component based on the *2013-2017 U.S. Census Bureau ACS Tenure by Vehicles* data (owner occupied).

Table M-25. Project-Generated Hourly Parking Accumulation – Projected Development Site 4

Time period	Local Retail			Destination Retail			Community Facility (Medical Office)			Hotel			Office			Park			Residential			Total		
	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.	In	Out	Accum.
Overnight			0			0			0			0			0			0			113			113
12:00 AM -- 1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	113	4	4	113
1:00 AM -- 2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	113	2	2	113
2:00 AM -- 3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	0	0	113
3:00 AM -- 4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	0	0	113
4:00 AM -- 5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	0	0	113
5:00 AM -- 6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113	0	0	113
6:00 AM -- 7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	110	0	3	110
7:00 AM -- 8:00 AM	2	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	12	101	6	14	102
8:00 AM -- 9:00 AM	3	3	0	0	0	0	2	1	2	0	0	0	0	0	0	0	0	0	7	29	79	12	34	81
9:00 AM -- 10:00 AM	2	2	0	0	0	0	2	0	4	0	0	0	0	0	0	0	0	0	5	20	64	9	23	68
10:00 AM -- 11:00 AM	6	5	2	0	0	0	2	0	5	0	0	0	0	0	0	0	0	0	5	13	56	13	18	63
11:00 AM -- 12:00 PM	9	9	2	0	0	0	1	0	6	0	0	0	0	0	0	0	0	0	7	7	56	18	17	64
12:00 PM -- 1:00 PM	17	16	2	0	0	0	1	1	6	0	0	0	0	0	0	0	0	0	9	9	56	27	26	65
1:00 PM -- 2:00 PM	21	21	2	0	0	0	2	2	6	0	0	0	0	0	0	0	0	0	9	9	57	32	32	65
2:00 PM -- 3:00 PM	12	12	2	0	0	0	1	1	5	0	0	0	0	0	0	0	0	0	7	7	57	20	21	64
3:00 PM -- 4:00 PM	8	8	2	0	0	0	1	2	4	0	0	0	0	0	0	0	0	0	10	8	58	18	17	65
4:00 PM -- 5:00 PM	8	8	2	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	14	11	61	23	21	67
5:00 PM -- 6:00 PM	11	11	2	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	26	14	73	38	27	78
6:00 PM -- 7:00 PM	7	8	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	21	11	83	29	22	85
7:00 PM -- 8:00 PM	2	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	10	92	21	13	93
8:00 PM -- 9:00 PM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	4	98	11	6	99
9:00 PM -- 10:00 PM	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	3	102	8	5	102
10:00 PM -- 11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	3	106	8	3	106
11:00 PM -- 12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	113	7	1	113

Notes:
1. In/Out and Temporal Distributions for the Local Retail, Destination Retail, Community Facility (Medical Office), Hotel, Office, Industrial, Park and Residential components during the AM, midday and PM peak hours are based on the transportation planning assumptions and demand estimates used for Trip Generation.
2. In/Out and Temporal Distributions for the Local Retail, Destination Retail, Community Facility (Medical Office), Hotel, Office, Industrial and Residential components for the remaining hours of the 24-hr profile based on the *Flushing Waterfront BOA Plan EAR, 2017* .
3. Parking accumulation factors for the Park component during the remaining hours of the 24-hr profile are based on the *Brooklyn Bridge Park FEIS, 2005.*
4. Overnight parking demand for the residential component based on the *2013-2017 U.S. Census Bureau ACS Tenure by Vehicles* data (aggregate).

Table M-26. Project-Generated Hourly Parking Accumulation – All Sites

Time period	Site 1			Site 2			Site 3			Site 4			Total		
	Demand	Supply	Surplus/ (Shortfall)	Demand	Supply	Surplus/ (Shortfall)	Demand	Supply	Surplus/ (Shortfall)	Demand	Supply	Surplus/ (Shortfall)	Demand	Supply	Surplus/ (Shortfall)
Overnight	250	510	260	260	318	58	397	539	142	113	166	53	1,020	1,533	513
12:00 AM -- 1:00 AM	250	510	260	260	318	58	397	539	142	113	166	53	1,020	1,533	513
1:00 AM -- 2:00 AM	250	510	260	260	318	58	397	539	142	113	166	53	1,020	1,533	513
2:00 AM -- 3:00 AM	250	510	260	260	318	58	397	539	142	113	166	53	1,020	1,533	513
3:00 AM -- 4:00 AM	250	510	260	260	318	58	397	539	142	113	166	53	1,020	1,533	513
4:00 AM -- 5:00 AM	250	510	260	260	318	58	397	539	142	113	166	53	1,020	1,533	513
5:00 AM -- 6:00 AM	250	510	260	260	318	58	397	539	142	113	166	53	1,020	1,533	513
6:00 AM -- 7:00 AM	252	510	258	256	318	62	400	539	139	110	166	56	1,018	1,533	515
7:00 AM -- 8:00 AM	262	510	248	244	318	74	401	539	138	102	166	64	1,009	1,533	524
8:00 AM -- 9:00 AM	358	510	152	208	318	110	508	539	31	81	166	85	1,155	1,533	378
9:00 AM -- 10:00 AM	402	510	108	196	318	122	544	539	(5)	68	166	98	1,209	1,533	324
10:00 AM -- 11:00 AM	436	510	74	191	318	127	544	539	(5)	63	166	103	1,233	1,533	300
11:00 AM -- 12:00 PM	432	510	78	188	318	130	517	539	22	64	166	102	1,201	1,533	332
12:00 PM -- 1:00 PM	444	510	66	172	318	146	531	539	8	65	166	101	1,212	1,533	321
1:00 PM -- 2:00 PM	467	510	43	208	318	110	555	539	(16)	65	166	101	1,295	1,533	238
2:00 PM -- 3:00 PM	**480**	**510**	**30**	**187**	**318**	**131**	**568**	**539**	**(29)**	**64**	**166**	**102**	**1,299**	**1,533**	**234**
3:00 PM -- 4:00 PM	486	510	24	173	318	145	574	539	(35)	65	166	101	1,298	1,533	235
4:00 PM -- 5:00 PM	421	510	89	171	318	147	501	539	38	67	166	99	1,160	1,533	373
5:00 PM -- 6:00 PM	292	510	218	201	318	117	360	539	179	78	166	88	931	1,533	602
6:00 PM -- 7:00 PM	297	510	213	185	318	133	350	539	189	85	166	81	918	1,533	615
7:00 PM -- 8:00 PM	258	510	252	195	318	123	348	539	191	93	166	73	894	1,533	639
8:00 PM -- 9:00 PM	232	510	278	211	318	107	362	539	177	99	166	67	904	1,533	629
9:00 PM -- 10:00 PM	226	510	284	220	318	98	370	539	169	102	166	64	918	1,533	615
10:00 PM -- 11:00 PM	239	510	271	237	318	81	384	539	155	106	166	60	967	1,533	566
11:00 PM -- 12:00 AM	257	510	253	260	318	58	404	539	135	113	166	53	1,035	1,533	498

Note:
Yellow shading denotes the maximum parking demand generated by the four Projected Development Sites.

Based on the 24-hour parking accumulation, peak parking demand across the four Projected Development Sites is anticipated to occur during the weekday midday hours. As shown in Table M-26, the Proposed Actions are anticipated to generate a peak parking demand of approximately 1,299 spaces between 2:00 PM and 3:00 PM. Out of the four Projected Development Sites, Site 3 is anticipated to experience a shortfall of approximately 29 parking spaces; however, this demand

would be accommodated at the parking facilities of the remaining three Projected Development Sites which are anticipated to have 263 available parking spaces, resulting in a net surplus of 234 parking spaces.

In addition, the Proposed Actions would displace the existing 135-space surface parking facility located at 37-02 College Point Boulevard (location of Projected Development Site 3). Based on a survey conducted in September 2019, 122 of the 135 parking spaces were utilized during the weekday midday period. It is anticipated that this displaced demand would be accommodated by the remaining available parking spaces at the on-site parking facilities or other off-street parking facilities in the area, including the Skyview Mall parking facility which has significant capacity available during the weekday midday period.

Hence, the parking demand generated by the Proposed Actions would be accommodated by the on-site parking facilities and the Proposed Actions would not result in a parking shortfall in the study area.

VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

Vision Zero Queens Pedestrian Safety Action Plan

Within the traffic study area, College Point Boulevard and Roosevelt Avenue is identified as a "Priority Intersection," Roosevelt Avenue is included as a "Priority Corridor" and Downtown Flushing is identified as a "Priority Area" in the *Vision Zero Queens Pedestrian Safety Action Plan*, respectively. To enhance pedestrian safety, the *Vision Zero Queens Pedestrian Safety Action Plan* identifies measures including engineering and planning improvements, law enforcement, and education and awareness campaigns. More specifically, these include:

Engineering and Planning

- Implement at least 50 Vision Zero safety engineering improvements at Priority Corridors, Intersections, and Areas citywide, informed by community input at project locations;
- Significantly expand exclusive pedestrian crossing time on all Queens Priority Corridors;
- Add exclusive pedestrian crossing time to all feasible Queens Priority Intersections;
- Modify signal timing to reduce off-peak speeding on all feasible Queens Priority Corridors;
- Install expanded speed limit signage on all Queens Priority Corridors;
- Drive community input and engagement at Queens Priority Corridors, Intersections, and Areas;
- Install additional lighting under elevated trains and around other key transit stops;
- Coordinate with MTA to ensure bus operations contribute to a safe pedestrian environment;
- Expand a bicycle network in Queens that improves safety for all road users; and,
- Proactively design for pedestrian safety in high-growth areas in Queens including locations in the Housing New York plan.

Enforcement

- Install the majority of speed cameras at Priority Corridors, Intersections, and Areas;
- Focus enforcement and deploy dedicated resources to Queens NYPD precincts that overlap

- substantially with Priority Areas; and,
- Prioritize targeted enforcement at all Queens Priority Corridors, Intersections, and Areas annually.

Education and Awareness Campaigns

- Target child and senior safety education at Queens Priority Corridors and Priority Areas;
- Launch multilingual public information campaigns in Queens Priority Areas; and,
- Target street-level outreach at Queens Priority Corridors, Intersections, and Areas. These include:
    - NYCDOT-Sponsored Driveway Safety Programs; and,
    - NYCDOT-Hosted Pedestrian Safety Workshops.

To address the safety concerns in the Downtown Flushing area and its vicinity, NYCDOT implemented a number of projects to increase the supply of pedestrian space and reduce the likelihood of conflict between pedestrians and vehicles. These projects included:

- Installing painted, bollard-protected curb and sidewalk extensions at particularly high-volume pedestrian corridors to supply additional space for safe pedestrian circulation; and,
- Banning turns and modifying traffic signal timing at multiple intersections along Northern Boulevard, Main Street, Roosevelt Avenue, and Union Street to reduce erratic vehicle movements and better organize traffic flow.

<u>High-Crash Locations</u>

Crash data for the study area intersections were obtained from New York State Department of Transportation (NYSDOT) for the January 1, 2016 and December 30, 2018 period. Table M-27 summarizes the total number of reportable crashes, fatalities, and injuries during the study period, as well as a yearly breakdown of vehicular crashes with pedestrians and bicycles at each location. Based on this information, the intersection of Roosevelt Avenue and College Point Boulevard is identified as a high-crash location, with six total bicycle and pedestrian injury crashes from the consecutive 12-month period beginning in January 2018 and ending in December 2018.

Table M-27: Crash Data Analysis Summary

#	Intersection Name	Pedestrian Injury Crashes			Bicycle Injury Crashes			Total Bicycle + Pedestrian Injury Crashes Combined			Motorist Injury Crashes			Motorist Non-Inury Crashes			Total Crashes (Reportable + Non-Reportable)		
		2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
1	College Point Boulevard & 36th Avenue	0	0	1	0	0	0	**0**	**0**	**1**	1	1	0	0	0	5	**1**	**1**	**6**
2	College Point Boulevard & 37th Avenue	1	1	0	0	0	0	**1**	**1**	**0**	0	0	0	0	1	6	**1**	**2**	**6**
3	College Point Boulevard & 39th Avenue	0	0	0	0	0	0	**0**	**0**	**0**	0	1	1	1	1	2	**1**	**2**	**3**
4	College Point Boulevard & Roosevelt Avenue	1	0	4	1	1	2	**2**	**1**	**6**	3	4	4	3	4	21	**8**	**9**	**31**
5	Roosevelt Avenue & Janet Place	0	0	0	2	0	1	**2**	**0**	**1**	0	1	0	1	0	1	**3**	**1**	**2**
6	Roosevelt Avenue & Skyview Mall Driveway	0	0	0	0	0	0	**0**	**0**	**0**	0	0	0	0	0	0	**0**	**0**	**0**

Note: Yellow shading denotes a high-crash location, per CEQR criteria.

Table M-28 shows a detailed description of each pedestrian/bicyclist-related crash at the intersection Roosevelt Avenue and College Point Boulevard during the three-year period. This intersection is signalized and equipped with pedestrian signal countdown timers on the north, south and east crosswalks. In addition, Traffic Enforcement Agents (TEAs) are present during peak traffic periods on weekdays and Saturdays. Based on the review of crash history data, most of the pedestrian/bicyclist crashes were caused by vehicles making a northbound left- or southbound right-turn, conflicting with the west crosswalk and failing to yield to the pedestrian right-of-way. In addition, some of these accidents were also caused by driver inattention to roadway workers and improper lane usage.

Table M-28: Crash Data Analysis Summary

Intersection	Date	Crash Class			Action of Vehicle	Action of Pedestrian/ Bicyclist	Cause of Crash			
		Type	Injury	Fatality			Left/ Right Turns	Pedestrian Error/ Confusion	Driver Inattention	Other
College Point Boulevard and Roosevelt Avenue	10/8/2016	Collision with Pedestrian	X		Making westbound right-turn	Not Applicable	X			Failure to yield right of way
	11/3/2016	Collision with Bicyclist	X		Backing	Going straight - east		X		Not entered
	4/27/2017	Collision with Bicyclist	X		Going straight - east	Going straight - east				
	7/31/2018	Collision with Pedestrian	X		Going straight - south	Working in Roadway			X	
	8/29/2018	Collision with Bicyclist	X		Making southbound right-turn	Going straight - south	X			Failure to yield right of way
	9/29/2018	Collision with Pedestrian	X		Making southbound right-turn	Working in Roadway	X			Failure to yield right of way
	10/12/2018	Collision with Pedestrian	X		Unknown	Unknown				Failure to yield right of way
	10/13/2018	Collision with Pedestrian	X		Making northbound left-turn	Working in Roadway	X			Passing too Closely
	11/12/2018	Collision with Bicyclist	X		Making eastbound U-turn	Going straight - east	X			Passing or Lane Usage Improperly

In the Future With-Action Condition, this intersection would experience approximately -52, -38, -25 and -32 incremental vehicle trips and approximately 56, 95, 79 and 67 incremental pedestrian trips (combined for all crosswalks) during the weekday AM, midday, PM and Saturday midday peak hours, respectively. With the Proposed Actions, this intersection would likely experience an increase in pedestrian volumes on the crosswalks, however it would likely experience a decrease in turning vehicles (as compared to the AOR conditions) that would conflict with pedestrians on these crosswalks.

To improve safety conditions at this intersection, apart from the measures stated in the *Vision Zero Queens Pedestrian Safety Action Plan,* additional measures can be implemented. These measures could include restriping partially faded crosswalks, installing pedestrian countdown signals on the west crosswalk to inform pedestrians about the impending expiration of walk-time indication, and modifying signal timings during off-peak periods to discourage speeding. These additional safety measures, coupled with the proposed initiatives identified as part of the *Vision Zero Queens Pedestrian Safety Action Plan*, are expected to enhance pedestrian safety at this location.

TRANSPORTATION MONITORING PLAN

Prior to the implementation of the proposed traffic/pedestrian PCREs, a Transportation Monitoring Plan (TMP) will be completed by the Applicant. The purpose of the TMP is to allow for adjustment to one or more individual PCREs based on operational conditions at the time of implementation and, if warranted, identify interim measures. The TMP will include but not be limited to conducting additional analyses (e.g., Synchro for progression/queuing analysis), data collection, trip generation and modal split surveys, updated warrant studies, and topographic survey(s). The specifications and timing for conducting the TMP will be pursuant to the terms in the restrictive declaration.

CONCLUSION

As discussed above, the Proposed Actions would implement PCREs in the Future With-Action Condition to accommodate project-generated traffic and pedestrian volumes in the study area. With the PCREs in place, based on the results of detailed traffic, pedestrian, and vehicular and pedestrian safety analyses, the Proposed Actions would not adversely affect the transportation conditions in the study area. In addition, prior to the implementation of PCREs, a TMP will be completed in consultation with NYCDOT to determine any potential revisions to the PCREs as well as their implementation schedule.

INTRODUCTION

This chapter examines the potential for air quality impacts that may result from the Proposed Actions. As described in Attachment A, "Project Description," the Proposed Project include nine new mixed-use buildings on four sites. The Project Area is generally bound by 40th Road to the south, College Point Boulevard to the east, Lot 212 at 36th Avenue to the north, and Flushing Creek to the west.

Air quality impacts can be either direct or indirect. Direct impacts result from on-site emissions generated by stationary sources at a development site, such as emissions from on-site fuel combustion for heat and hot water systems, or emissions from parking garage ventilation systems. Indirect impacts are caused by off-site emissions associated with a project, such as emissions from nearby existing stationary sources (impacts on the development site) or by emissions from on-road vehicle trips ("mobile sources") generated by the proposed actions or other changes to future traffic conditions due to a project.

The peak hourly traffic generated by the Proposed Actions is predicted to exceed the *City Environmental Quality Review (CEQR) Technical Manual* carbon monoxide (CO) and particulate matter (PM) screening thresholds. Therefore, a mobile analysis of the potential impacts on air quality from traffic generated by the Proposed Actions was conducted for CO and PM.

A mobile analysis was also conducted for Northern Boulevard, which is more than two lanes and is located within 200 feet of Projected Development Site 4 and considered an atypical roadway, in order to assess potential impacts from traffic for CO and PM.

The Proposed Actions would facilitate construction of two parking facilities with incremental parking spaces greater than 85. Therefore, an analysis was conducted to evaluate potential future pollutant concentrations from the mobile sources and the proposed parking facilities.

Fossil fuel-fired heat and hot water systems are anticipated at each Projected and Potential Development Site. A stationary source analysis was conducted to evaluate potential air quality impacts from the heating and hot water systems. The analysis was conducted to evaluate potential future pollutant concentrations from the Proposed Project on both the surrounding neighborhood (project-on-existing) and the Proposed Project (project-on-project). An analysis of groups or "clusters" of heat and hot water sources were analyzed to address any potential cumulative impacts from fuel combustion from multiple sources.

In addition, potential effects from small industrial manufacturing and major or large sources of emissions in the study area on the Proposed Project were evaluated.

POLLUTANTS FOR ANALYSIS

Ambient air quality is affected by air pollutants produced by both motor vehicles and stationary sources. Emissions from motor vehicles are referred to as mobile source emissions, while emissions from fixed facilities are referred to as stationary source emissions. Ambient concentrations of CO are

predominantly influenced by mobile source emissions. PM, volatile organic compounds (VOCs), and nitrogen oxides (NO and NO_2, collectively referred to as NO_X) are emitted from both mobile and stationary sources. Fine PM is also formed when emissions of NO_X, sulfur oxides (SO_X), ammonia, organic compounds, and other gases react or condense in the atmosphere. Emissions of SO_2 are associated mainly with stationary sources, and some sources utilizing non-road diesel such as large international marine engines. On-road diesel vehicles currently contribute very little to SO_2 emissions since the sulfur content of on-road diesel fuel, which is federally regulated, is extremely low. Ozone is formed in the atmosphere by complex photochemical processes that include NOx and VOCs. Ambient concentrations of CO, PM, NO_2, SO_2, and lead are regulated by the U.S. Environmental Protection Agency (EPA) under the Clean Air Act (CAA), and are referred to as 'criteria pollutants'; emissions of VOCs, NO_X, and other precursors to criteria pollutants are also regulated by EPA.

Carbon Monoxide

CO, a colorless and odorless gas, is produced in the urban environment primarily by the incomplete combustion of gasoline and other fossil fuels. In urban areas, approximately 80 to 90 percent of CO emissions are from motor vehicles. CO concentrations can diminish rapidly over relatively short distances; elevated concentrations are usually limited to locations near crowded intersections, heavily traveled and congested roadways, parking lots, and parking garages. Consequently, CO concentrations must be predicted on a local, or microscale, basis. The Proposed Actions are expected to result in an increase in vehicle trips higher than the *CEQR Technical Manual* screening threshold of 170 trips at any intersection. Therefore, a mobile source analysis to evaluate future CO concentrations was warranted. In addition, the Proposed Actions would facilitate new parking facilities. Therefore, an assessment of CO impacts from the proposed parking garages was also conducted.

Nitrogen Oxides, VOCs and Ozone

NO_X compounds are of principal concern because of their role, together with VOCs, as precursors in the formation of ozone. Ozone is formed through a series of reactions that take place in the atmosphere in the presence of sunlight. Because the reactions are slow, and occur as the pollutants are advected downwind, elevated ozone levels are often found many miles from sources of the precursor pollutants. Therefore, the effects of NO_X and VOC emissions from all sources are generally examined on a regional basis. The contribution of any action or project to regional emissions of these pollutants would include any added stationary or mobile source emissions.

In addition to being a precursor to the formation of ozone, NO_2 (one component of NO_X) is also a regulated pollutant. Since NO_2 is mostly formed from the transformation of NO in the atmosphere, it has mostly been of concern further downwind from large stationary point sources, and is not a local concern from mobile sources. (NO_X emissions from fuel combustion are typically greater than 90 percent NO with the remaining fraction primarily NO_2 at the source.) While NO_2 emissions are a concern from stationary source of combustion, with the promulgation of the 2010 1-hour average standard for NO_2, local sources such as mobile sources may also become of greater concern for this pollutant in the future. However, any increase in NO_2 from mobile sources associated with the Proposed Actions would be relatively small and would not be expected to significantly affect levels of NO_2 experienced near roadways. Potential impacts on local NO_2 concentrations from the fuel

combustion related to the heat and hot water systems for Projected and Potential Development Sites were assessed.

Lead

Airborne lead emissions are currently associated principally with industrial sources. Lead in gasoline has been banned under the CAA, and therefore, lead is not a pollutant of concern for the Proposed Project; therefore, an analysis of this pollutant from stationary or mobile sources is not warranted.

Lead may be emitted from industrial sources. Lead emissions were found to be not present at the industrial sources addressed in this analysis.

Respirable Particulate Matter – PM_{10} and $PM_{2.5}$

PM is a broad class of air pollutants that includes discrete particles of a wide range of sizes and chemical compositions, as either liquid droplets (aerosols) or solids suspended in the atmosphere. The constituents of PM are both numerous and varied, and they are emitted from a wide variety of sources (both natural and anthropogenic). Natural sources include the condensed and reacted forms of naturally occurring VOCs; salt particles resulting from the evaporation of sea spray; wind-borne pollen, fungi, molds, algae, yeasts, rusts, bacteria, and material from live and decaying plant and animal life; particles eroded from beaches, soil, and rock; and particles emitted from volcanic and geothermal eruptions, and forest fires. Naturally occurring PM is generally greater than 2.5 micrometers in diameter. Major anthropogenic sources include the combustion of fossil fuels (e.g., vehicular exhaust, power generation, boilers, engines, and home heating), chemical and manufacturing processes, construction and agricultural activities, and wood-burning stoves and fireplaces. PM also acts as a substrate for the adsorption (accumulation of gases, liquids, or solutes on the surface of a solid or liquid) of other pollutants, often toxic, and some likely carcinogenic compounds.

As described below, PM is regulated in two size categories: particles with an aerodynamic diameter of less than or equal to 2.5 micrometers, or $PM_{2.5}$, and particles with an aerodynamic diameter of less than or equal to 10 micrometers (PM_{10}, which includes $PM_{2.5}$). $PM_{2.5}$ has the ability to reach the lower regions of the respiratory tract, delivering with it other compounds that adsorb to the surfaces of the particles, and is also extremely persistent in the atmosphere. $PM_{2.5}$ is directly emitted from combustion material that has volatilized and then condensed to form primary PM (often soon after the release from a source exhaust) or from precursor gases reacting in the atmosphere to form secondary PM. Gasoline-powered and diesel-powered vehicles, especially heavy duty trucks and buses, are a significant source of respirable PM, most of which is $PM_{2.5}$; PM concentrations may, consequently, be locally elevated near roadways with high volumes of heavy diesel powered vehicles. The Proposed Actions would result in an increase in truck traffic near the Project Area and an increase in $PM_{2.5}$ vehicle emissions as defined in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*. Therefore, an analysis of potential mobile source impacts of PM from the Proposed Actions was warranted. Furthermore, since the Proposed Actions would facilitate new parking facilities, an analysis of $PM_{2.5}$ from the proposed parking garages was also conducted. Finally, the Proposed Project would include natural gas-fired heating and hot water systems; therefore, emissions of PM from the stationary sources as part of the Proposed Project were analyzed.

Sulfur Dioxide

SO_2 emissions are primarily associated with the combustion of sulfur-containing fuels (oil and coal). SO_2 is also of concern as a precursor to $PM_{2.5}$ and is regulated as a $PM_{2.5}$ precursor under the New Source Review permitting program for large sources. Due to the federal restrictions on the sulfur content in diesel fuel for on-road vehicles, no significant quantities are emitted from vehicular sources. Vehicular sources of SO_2 are not significant, and, therefore, an analysis of SO_2 from mobile sources is not warranted. The Proposed Project is likely to use natural gas for the heating and hot water systems of the new buildings. Therefore, an analysis of SO_2 from stationary sources was not warranted.

AIR QUALITY STANDARDS, REGULATIONS, AND BENCHMARKS

National and State Air Quality Standards

As required by the Clean Air Act (CAA), primary and secondary National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: CO, NO_2, ozone, respirable PM (both $PM_{2.5}$ and PM_{10}), SO_2, and lead. The primary standards represent levels that are requisite to protect the public health, allowing an adequate margin of safety. The secondary standards are intended to protect the public's welfare, and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the environment. The primary and secondary standards are the same for NO_2 (annual), ozone, lead, and PM; there is no secondary standard for CO and the 1-hour NO_2 standard. The NAAQS are presented in Table N-1. The NAAQS for CO, annual NO_2, and 3-hour SO_2 have also been adopted as the ambient air quality standards for New York State, but are defined on a running 12- month basis rather than for calendar years only. New York State also has standards for total suspended PM, SO_2, settleable particles, non-methane hydrocarbons, and ozone that correspond to federal standards that have since been revoked or replaced, and for beryllium, fluoride, and hydrogen sulfide.

EPA lowered the primary annual average $PM_{2.5}$ standard from 15 $\mu g/m^3$ to 12 $\mu g/m^3$, effective March 2013. The 8-hour ozone standard of 0.075 parts per million (ppm) is effective as of May 2008, and the previous 1997 ozone standard was fully revoked effective April 1, 2015. Effective December 2015, EPA reduced the 2008 ozone NAAQS, lowering the primary and secondary NAAQS from the current 0.075 ppm to 0.070. EPA issued final area designations for the revised standard on April 30, 2018. Federal ambient air quality standards do not exist for noncriteria pollutants; however, as mentioned above, The New York State Department of Environmental Conservation (DEC) has issued standards for three noncriteria compounds. As described above, DEC has also developed a guidance document DAR-1, which contains a compilation of annual and short-term (1-hour) guideline concentrations for numerous other noncriteria compounds. The DEC guidance thresholds represent ambient levels that are considered safe for public exposure.

Table N-1: National Ambient Air Quality Standards (NAAQS)

Pollutant	Primary		Secondary	
	ppm	µg/m³	ppm	µg/m³
Carbon Monoxide (CO)				
Eight-Hour Average[1]	9	10,000	None	
One-Hour Average[1]	35	40,000		
Lead				
Rolling Three-Month Average	NA	0.15	NA	0.15
Nitrogen Dioxide (NO_2)				
One Hour Average[2]	0.100	188	None	
Annual Average	0.053	100	0.053	100
Ozone (O_3)				
Eight-Hour Average[3,4]	0.070	140	0.070	140
Respirable Particulate Matter (PM_{10})				
24-Hour Average[1]	NA	150	NA	150
Fine Respirable Particulate Matter ($PM_{2.5}$)				
Annual Mean[5]	NA	12	NA	15
24-Hour Average[6]	NA	35	NA	35
Sulfur Dioxide (SO_2)				
One-Hour Average[7,8]	0.075	196	NA	NA
Maximum Three-Hour Average[1]	NA	NA	0.500	1,300

Notes:

ppm – parts per million (unit of measure for gases only)
µg/m³ – micrograms per cubic meter (unit of measure for gases and particles, including lead)
NA – not applicable

All annual periods refer to the calendar year.
Standards are not defined in ppm. Approximately equivalent concentrations in µg/m³ are presented.

1 Not to be exceed more than once a year.
2 Three-year average of the annual 98th percentile daily maximum one-hr average concentration.
3 Three-year average of the annual fourth highest daily maximum eight-hr average concentration.
4 EPA lowered the NAAQS for ozone down to 0.070 from 0.075 ppm, effective December 2015.
5 Consecutive Three-year average of annual mean.
6 98th percentile, averaged over three years.
7 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years.
8 Previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will remain in certain areas.

Source: *40 CFR Part 50: National Primary and Secondary Ambient Air Quality Standards and dec.ny.gov/chemical/8542.html*

NAAQS Attainment Status and State Implementation Plans

The CAA, as amended in 1990, defines non-attainment areas (NAA) as geographic regions that have been designated as not meeting one or more of the NAAQS. When an area is designated as non-attainment by EPA, the state is required to develop and implement a State Implementation Plan (SIP), which delineates how a state plans to achieve air quality that meets the NAAQS under the deadlines established by the CAA, followed by a plan for maintaining attainment status once the area is in attainment. In 2002, EPA re-designated New York City as in attainment for CO. Under the resulting maintenance plans, New York City is committed to implementing site-specific control measures throughout the city to reduce CO levels, should unanticipated localized growth result in elevated CO levels during the maintenance period. The second CO maintenance plan for the region was approved by EPA on May 30, 2014. Manhattan, which had been designated as a moderate NAA for PM_{10}, was reclassified by EPA as in attainment on July 29, 2015. The five New York City counties and Nassau, Suffolk, Rockland, Westchester, and Orange Counties which collectively had been designated as a $PM_{2.5}$ NAA (New York Portion of the New York–Northern New Jersey–Long Island, NY–NJ–CT NAA) were redesignated as in attainment for the standard on April 18, 2014, and are now under a maintenance plan. EPA lowered the annual average primary standard to 12 $\mu g/m^3$, effective March 2013. EPA designated the area as in attainment for the new 12 $\mu g/m^3$ NAAQS, effective April 15, 2015. Effective June 15, 2004, EPA designated Nassau, Rockland, Suffolk, Westchester, and the five New York City counties as in moderate nonattainment for the 1997 8-hour average ozone standard. In March 2008, EPA strengthened the 8-hour ozone standards. EPA designated these same areas as a marginal NAA for the 2008 ozone NAAQS, effective July 20, 2012. On April 11, 2016, as requested by New York State, EPA reclassified the area as a moderate NAA. New York State began submitting SIP documents in December 2014. On July 19, 2017, DEC announced that the New York Metropolitan Area is not projected to meet the July 20, 2018 attainment deadline and DEC is therefore requesting that EPA reclassify the area to "serious" nonattainment, which would impose a new attainment deadline of July 20, 2021 (based on 2018-2020 monitored data). On November 18, 2018, EPA proposed reclassifying the NYMA from moderate to serious nonattainment. On April 30, 2018, EPA designated the same area as a moderate NAA for the revised 2015 ozone standard. New York City is currently in attainment of the annual average NO_2 standard. EPA has designated the entire state of New York as "unclassifiable/attainment" for the new 1-hour NO_2 standard effective February 29, 2012. Since additional monitoring is required for the 1-hour standard, areas will be reclassified once three years of monitoring data are available.

EPA has established a new 1-hour SO_2 standard, replacing the former 24-hour and annual standards, effective August 23, 2010. Based on the available monitoring data, all New York State counties currently meet the 1-hour standard. In January 2017, New York State recommended that EPA designate most of State of New York, including New York City, as in attainment for this standard; the remaining areas will be designated upon the completion of required monitoring by December 31, 2020.

DETERMINING THE SIGNIFICANCE OF AIR QUALITY IMPACTS

The State Environmental Quality Review Act (SEQRA) regulations and the *CEQR Technical Manual* state that the significance of a predicted consequence of a project (i.e., whether it is material, substantial, large or important) should be assessed in connection with its setting (e.g., urban or

rural), its probability of occurrence, its duration, its irreversibility, its geographic scope, its magnitude, and the number of people affected. In terms of the magnitude of air quality impacts, any action predicted to increase the concentration of a criteria air pollutant to a level that would exceed the concentrations defined by the NAAQS (see Table N-1) would be deemed to have a potential significant adverse impact. In addition, in order to maintain concentrations lower than the NAAQS in attainment areas, or to ensure that concentrations will not be significantly increased in non-attainment areas, threshold levels have been defined for certain pollutants; any action predicted to increase the concentrations of these pollutants above the thresholds would be deemed to have a potential significant adverse impact, even in cases where violations of the NAAQS are not predicted

CO De Minimis Criteria

New York City has developed de minimis criteria to assess the significance of the increase in CO concentrations that would result from the impact of projects or actions on mobile sources, as set forth in the *CEQR Technical Manual*. These criteria set the minimum change in CO concentration that defines a significant environmental impact. Significant increases of CO concentrations in New York City are defined as: (1) an increase of 0.5 ppm or more in the maximum 8-hour average CO concentration at a location where the predicted No-Action 8-hour concentration is equal to or between 8 and 9 ppm; or (2) an increase of more than half the difference between baseline (i.e., No Action) concentrations and the 8-hour standard, when No-Action concentrations are below 8.0 ppm.

$PM_{2.5}$ De Minimis Criteria

For projects subject to CEQR, the de minimis criteria currently employed for determination of potential significant adverse $PM_{2.5}$ impacts are as follows: Predicted increase of more than half the difference between the background concentration and the 24-hour standard; or Annual average $PM_{2.5}$ concentration increments that are predicted to be greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations); or Annual average $PM_{2.5}$ concentration increments that are predicted to be greater than 0.3 $\mu g/m^3$ at a discrete or ground level receptor location for stationary sources. Actions under CEQR predicted to increase $PM_{2.5}$ concentrations by more than the CEQR de minimis criteria above will be considered to have a potential significant adverse impact. The above de minimis criteria have been used to evaluate the significance of predicted impacts on $PM_{2.5}$ concentrations and determine the need to minimize particulate matter emissions resulting from the Proposed Actions.

METHODOLOGY FOR PREDICTING POLLUTANT CONCENTRATIONS

MOBILE SOURCE ANALYSIS

Mobile Traffic

Screening Assessment

Peak hour incremental vehicular traffic data for the study area was obtained from the transportation analysis completed for the project (see Attachment M, "Transportation") and used for screening the Proposed Actions. This includes the No-Action and With-Action peak hour traffic volumes and the heavy vehicle percentages. To be conservative, heavy vehicles were considered as heavy-duty diesel vehicles. Auto traffic volumes were considered to include all vehicular movements except for heavy duty diesel vehicles. The screening levels were compared to the allowable thresholds to determine the necessity of a detailed analysis.

Refined Assessment

The Proposed Actions are expected to generate peak hour auto traffic resulting in 170 or more auto trips along 38th Avenue at intersections with Transverse Road, Janet Place and College Point Boulevard, and expected to generate peak hour heavy vehicles equivalent traffic resulting in 23 or more trips at intersections of 38th Avenue and Transverse Road, 38th Avenue and Janet Place, 39th Avenue and Janet Place, and Roosevelt Avenue and Skyview Mall Driveway. Therefore, a microscale mobile source analysis was performed to determine the potential impact from the mobile emissions of PM and CO generated by vehicles to receptors on the Project Area.

Traffic Data

Traffic data for the air quality analysis were derived from existing traffic counts, projected future growth in traffic, and other information developed as part of the transportation analysis for the Proposed Actions. Existing traffic speed data, vehicle distribution, and lane configuration were employed in the air quality modeling under No-Action and With-Action conditions.

Traffic conditions for each of the peak periods (Weekday AM Peak (8-9am), Weekday MD Peak (1-2pm), Weekday PM Peak (5-6pm) and Weekend MD Peak (3-4pm)) were applied to the analysis for both the daily and weekly time scales. In addition, traffic volumes for these peak periods were used as the baseline for determining off-peak volumes. Off-peak traffic volumes in the future without the Proposed Actions, and off-peak increments from the Proposed Actions, were determined by adjusting the peak period volumes by the 24-hour distributions of actual vehicle counts collected at appropriate locations. For annual impacts, average weekday 24-hour distributions were used to simulate traffic patterns over longer periods.

Vehicle Emissions

Vehicular CO, $PM_{2.5}$ and PM_{10} emission factors to be utilized in the dispersion modeling were computed using EPA's mobile source emissions model, Motor Vehicle Emission Simulator, or MOVES2014b. This emissions model is capable of calculating engine emission factors for various

vehicle types, based on the fuel type (gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway types, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. County-specific vehicle age, vehicle population, fuel information, and inspection and maintenance information were provided by DEC. No-Action and With-Action traffic speeds were estimated by incorporating the road segment length and traffic delay times to the posted speed limit. Traffic speeds were assumed to be zero for delay times greater than 10,000 seconds. Heavy vehicle percentages were assumed to be the same between No-Action and With-Action conditions.

Road dust silt factors were obtained from Chapter 17 of the 2014 *CEQR Technical Manual*. County-specific hourly temperature and relative humidity data obtained from DEC were used. Emission factors were developed for the peak periods based on traffic data. Emission factors generated by MOVES2014b and the estimated traffic volumes based on the 24-hour distribution were used in dispersion modeling.

Dispersion Modeling

The CO mobile source analysis was conducted using the CAL3QHC model Version 2.0. The CAL3QHC model employs a Gaussian (normal distribution) dispersion assumption. CAL3QHC calculates emissions and dispersion of CO from idling and moving vehicles.

Following the guidance in Section 321.1 of Chapter 17 of the *CEQR Technical Manual*, CAL3QHC computations were performed using a wind speed of 1 meter per second, and the neutral stability class D. In order to ensure that reasonable worst-case meteorology was used in estimating impacts, concentrations were calculated for all wind directions and use an assumed surface roughness based on the CAL3QHC guidelines and the building layout in the area. The 8-hour average CO concentrations were estimated from the predicted 1-hour average CO concentrations using a factor of 0.7 to account for persistence of meteorological conditions and fluctuations in traffic volumes.

If maximum predicted CO concentrations result in a potential impact, a refined version of the model, CAL3QHCR, will be used. CAL3QHCR is an extended module of the CAL3QHC model which allows for the incorporation of hourly traffic volumes factors, hourly emission factors and meteorological data. Five years of meteorological data (2014-2018) from the La Guardia International Airport and concurrent upper air data from Brookhaven, New York were used in the refined modeling. The refined CAL3QHCR version of the model was used for microscale analysis of $PM_{2.5}$ and PM_{10}, per current EPA guidance.

Multiple receptors (i.e., precise locations at which concentrations are predicted) were modeled, and placement of the receptors follow the guidance in the *CEQR Technical Manual*. Ground-level receptors were placed at sidewalk locations around the Projected and Potential Development Sites at a pedestrian height of 1.8 meters.

Northern Boulevard

Traffic data from the Flushing Bridge obtained from the 2016 NYC Bridge Traffic Report published by the New York City Department of Transportation was used for the analysis of Northern Boulevard.

Projections of traffic volumes were made to 2025 using this data and the annual background growth rate of 0.25 percent for Queens from Table 16-4 of the *CEQR Technical Manual*.

The methodology for estimating emission factors of Northern Boulevard is consistent with the mobile traffic analysis. Traffic speeds were obtained from Uber Movement data for each of the peak periods based on data from January to March 2019. Dispersion modeling was performed using CAL3QHCR. Elevated receptors were placed at operable window locations on the façade of Projected Development Site 4 facing Northern Boulevard.

Parking Garage Analysis

The Proposed Actions include on-site accessory parking facilities to account for the new parking demand and supply generated by the Proposed Actions. Emissions from vehicles using this parking area could potentially affect ambient levels of carbon monoxide (CO) and particulate matter (PM) at the intersections analyzed in the With-Action Condition.

The total increment of additional on-site parking generated by the proposed development was considered and compared to the allowable threshold increment to determine if a screening or detailed analysis was warranted.

The anticipated total incremental parking spaces for Projected Development Sites 1, 2, and 3 and Proposed Development Site A are less than 85 parking spaces. It is anticipated that a total increment of 94 parking spaces would be provided with Projected Development Site 4 and 117 parking spaces would be provided with Potential Development Site B.

An analysis of the emissions from the 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 were estimated using emission factors based on MOVES2014b. For all arriving and departing vehicles, an average speed of 5 miles per hour (mph) was conservatively assumed for travel within the parking garages. In addition, all departing vehicles were assumed to idle for one minute before proceeding to the exit. The concentrations of CO and PM within the garages were calculated assuming a minimum ventilation rate, based on New York City Building Code requirements, of 1 cubic foot per minute of fresh air per gross square foot of garage area. To determine compliance with the NAAQS, CO concentrations were determined for the maximum eight-hour average period (no exceedances of the one-hour standard would occur; the eight-hour values have been analyzed for impacts.).

To determine pollutant concentrations, the outlet vents were analyzed as “virtual point sources” using the methodology in USEPA’s 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.

When using AP-26, the receptors are situated at the adjacent sidewalk and across the street. The across-the-street receptor includes impacts from the street traffic, represented as a line source. The emission factor for the line source contribution was based on a vehicle speed of 15 mph.

The CO and PM concentrations were conservatively determined based on the assumption that the numbers of cars entering and leaving the garage during any 8-hour period were equal to the greatest number of hourly ins and outs over 24 hours.

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 stationary sources in the region. Background concentrations are added to modeling results to obtain total pollutant concentrations at an analysis site.

The background concentrations used in the air quality analysis were based on concentrations recorded at a monitoring station representative of the county or from the nearest available monitoring station and in the statistical format of the NAAQS, as provided in the *CEQR Technical Manual*. The background concentrations are presented in Table N-2.

Table N-2: Background Concentrations

Location	Station	Pollutant	Averaging Period	Units	Calculation Method	Background Level	NAAQS/ *De Minimis*
Queens	Queens College 2	$PM_{2.5}$	24-hour	$\mu g/m^3$	3-year average of 98th percentile for 2016, 2017 and 2018	17.7	35 (*De minimis* Increment = 8.6)
Queens	Queens College 2	$PM_{2.5}$	Annual	$\mu g/m^3$	3-year average of annual mean for 2016, 2017 and 2018	7.0	12 (*De minimis* increment = 0.3)
Queens	Queens College 2	PM_{10}	24-hour	$\mu g/m^3$	2nd max value for 2016, 2017 and 2018	31.0	150
Queens	Queens College 2	NO_2	1-hour	$\mu g/m^3$	3-year average of 98th percentile of the daily max for 2016, 2017 and 2018	106	188
Queens	Queens College 2	NO_2	Annual	$\mu g/m^3$	Max Annual average of 2014 to 2018	32.3	100
Queens	Queens College 2	SO_2	1-hour	$\mu g/m^3$	3-year average of 99th percentile of the daily max for 2016, 2017 and 2018	14.8	196
Queens	Queens College 2	SO_2	Annual	$\mu g/m^3$	Max Annual average for 2014 to 2018	2.1	80
Queens	Queens College 2	CO	1-hour	ppm	Highest 2nd max from 2014 to 2018	1.7	35
Queens	Queens College 2	CO	8-hour	ppm	Highest 2nd max from 2014 to 2018	1.4	9 (*De minimis* increment = 3.43)

STATIONARY SOURCE ANALYSIS

A stationary source analysis was conducted to evaluate potential impacts from the Projected and Potential Development Sites' heating and hot water systems. In addition, an assessment was conducted to determine the potential for impacts due to industrial activities within the affected area, and from any nearby large or major emission sources.

Individual Heat and Hot Water Systems

A screening analysis was performed to assess air quality impacts associated with emissions from heating and hot water systems associated with the development site. The methodology described in the *CEQR Technical Manual* was used for the analysis and considered impacts on sensitive uses (i.e., existing residences and other developments under construction).

The methodology determines the threshold of development size below which the action would not have a potential significant adverse impact. The screening procedures utilize information regarding the type of fuel to be used, the maximum development size, and the exhaust stack height of the heating and hot water systems to evaluate whether a significant adverse impact may occur. Based on the distance from the development site to the nearest building of similar or greater height, if the maximum development size is greater than the threshold size in the *CEQR Technical Manual*, there is the potential for significant air quality impacts, and a refined dispersion modeling analysis would be required. Otherwise, the source passes the screening analysis, and no further analysis is required.

The following sequential analyses was conducted until a passing result was obtained:

1. Fuel oil operation analysis using the graphical screening procedure for fuel oil firing (Figure 17-5 in the Appendix of the *CEQR Technical Manual*);

2. Natural gas operation analysis using the graphical screening procedure for natural gas firing (Figure 17-7 in the Appendix of the *CEQR Technical Manual*);

3. Refined analysis for natural gas operation;

4. Further refined analysis for natural gas using a taller stack or increased setback; and

5. Further analysis for natural gas using low NOx (natural gas) boiler.

If the results indicate that the first step using fuel oil is not adequate, then an (E) designation is placed on the site outlining the use of natural gas and possibly the need for a taller stack, increased setback and/or low NO_X boiler. If the results for Steps 1 demonstrate compliance, then the heat and hot water systems for the site would result in no potential significant adverse air quality impacts using No. 2 fuel oil.

Refined Dispersion Analysis for Individual HVAC Systems

If the project did not pass the screening analyses using the *CEQR Technical Manual* procedures, a refined modeling analysis was performed for natural gas only. The CEQR TM indicates that the detailed analysis can be conducted using AERSCREEN, however AERMOD is more suitable for this

project due to the close proximity of the sites. Concentrations of nitrogen dioxide (NO_2), and particulate matter ($PM_{2.5}$) were determined at off-site receptors sites, as well as on Projected and Potential Development Site receptors. Receptors were situated at elevated locations that could represent operable windows and outside air intakes. Pedestrian level receptors were not included as the HVAC sources will be located at roof level, and the worst-case impacts will occur at elevated levels. AERMOD simulations were conducted with and without building downwash (the downwash option accounts for the effects on plume dispersion created by the structure the stack is located on, and other nearby structures). The analyses of potential impacts from exhaust stacks were made assuming urban dispersion. Surface roughness was determined with the AERSURFACE model as allowed by the *CEQR Technical Manual*.

For natural gas, the primary pollutants of concern are NO_2 and PM. Emission rates were determined based on emission factors in the natural gas combustion sections of the U.S. EPA's AP-42: Compilation of Air Emission Factors. Specifically, emission rates for the natural gas combustion were estimated using the emission factors in Table 1.4-2 in Chapter 1.4 Natural Gas Combustion. PM (Total) was assumed to be $PM_{2.5}$, so the PM emission factor was used to estimate $PM_{2.5}$ emissions.

One-hour average NO_2 concentrations associated with the proposed development's hot water systems will be estimated using AERMOD model's Plume Volume Molar Ratio Method (PVMRM) module to analyze chemical transformation within the model. An initial NO_2 to NO_X ratio of ten percent at the source exhaust stack will be assumed, which is considered representative for boilers.

For the refined dispersion analysis, five years of meteorological data (2014-2018) from La Guardia International Airport and concurrent upper air data from Brookhaven, New York, were utilized for the simulation program. Predicted values were compared with NAAQS for NO_2, and the CEQR *de minimis* criteria for $PM_{2.5}$. In the event that exceedances were predicted, the air quality (E) designation proposed for the projected or potential development site includes HVAC exhaust stack restrictions that would be required to avoid a significant adverse air quality impact.

Cumulative Impacts from Heat and Hot Water Systems

In addition to the individual source analysis, groups or "clusters" of heat and hot water sources with similar stack heights were analyzed, to address the cumulative impacts of multiple sources. The affected area was reviewed to determine areas where clusters with high density of development sites with similar building heights would be located which could result in cumulative impacts on nearby buildings of a similar or greater height. A total of two clusters were selected for analysis. The development sites associated with each cluster and their location are Site 2B with 3A, and Site 1-7 with Site 1-9.

The cluster sites were assessed using AERMOD, following the same methodology as described above for the individual HVAC analysis.

Industrial Manufacturing Source Analysis (Air Toxics)

Pollutants emitted from the exhaust vents of existing permitted and future industrial facilities were examined to identify potential adverse impacts on the project site. All existing industrial air pollutant emission sources within 400 feet of a Projected or Potential Development

Site boundary were considered for inclusion in the air quality impact analyses. Based on a review of the New York City DEP Clean Air Tracking System (CATS) data base, the following sites were found to have a permit for auto body shops with possible paint spray booths:

- Block 4945, Lot 1 - Lottee & Hanmi II Auto Repair (Permit ID PB026812)

The following block and lot was found to have a permit for a concrete plant:

- Block 4942, Lot 1 – Best Concrete Mix Corp (Permit ID PW002918)

A survey of aerial imagery revealed one additional paint spray booth within a 400 feet radius of the site. A request was made to the DEP to locate any existing operating permits for E.T. Auto Group (Permit ID PB010511).

For sources that perform paint spraying, such as auto body shops, emission rate information from DEP permits were used in the analysis applied. The E.T. Auto Group and Lottee & Hanmi II Auto Repair permits do not contain information on the VOC composition, and as a result, the VOC composition from the Solow EAS was applied, shown in Table N-3. The information provides maximum percentage by weight for individual air toxics that are commonly found in coatings used in paint spraying operations. The solvent usage from a source permit for each auto body shop assessed was multiplied by the weight percentage for each air toxic to estimate the maximum emission rate for the air toxics, by source. Industrial screening was performed to determine the cumulative potential impact from the two auto spray booths in accordance with *CEQR Technical Manual* guidelines. The hazard index was calculated based on the sum of the maximum annual concentrations from each paint spray booth.

Table N-3: VOC Composition of Paints and Coatings

Pollutant	CAS Number	Maximum Percentage in Material	SCG ($\mu g/m^3$)	*ACG* ($\mu g/m^3$)
Acetone	67-64-1	43%	180,000	30,000
Aliphatic Hydrocarbon	64742-89-8	10%	N/A	3200
Aromatic Petroleum Distillates (naptha heavy aromatic)	64742-94-5	5%	N/A	100
Butane	106-97-8	11%	238,000	N/A
Ethanol	64-17-5	2%	N/A	45,000
Ethyl 3-ethoxypropianate	763-69-9	9%	140	64
Ethylbenzene	100-41-4	5%	N/A	1,000
Methyl ethyl ketone	78-93-3	8%	13,000	5,000
N-butyl acetate	123-86-4	5%	95,000	17,000
Propane	74-98-6	11%	N/A	43,000
Stoddard Solvents	8052-41-3	10%	N/A	900
Toluene	108-88-3	10%	37,000	5,000
Xylene	1330-20-7	10%	22,000	100

For sources from the Best Concrete Mix Corp. concrete batching plant, emission rates of material handling and processing were determined based on plant throughput and Section 11.12 of US EPA AP-42. Annual average emission rates were scaled based on the permitted operating days per year. Baghouse source parameters were obtained from the NYC DEC Permit #PA702-90N, as the most recent NYC DEP Permit PW002918 does not contain baghouse stack parameters and are not reflective of the current operations. Based on the DEC permit, baghouses are used to capture

emissions from processes involving cement storage silos and mixers. The baghouse stacks were modeled as point sources, and emission source characteristics are summarized in Table N-4. Fugitive dust emissions from onsite operations were included in the modeling as area sources. A refined cumulative analysis of the concrete batching plant and the Harper Street Asphalt Plant was conducted using the AERMOD version 18081 model.

Table N-4: Emission Point Sources at Best Concrete Mix Corp.

Emission Source	Stack Height (m) [a]	Stack Diameter (m) [a]	Flow Rate (Am^3/s)	Exit Velocity (m/s)	Stack Temperature (^oK)
Stack 1	18.29	0.483	0.168	0.9144	294.26
Stack 2	18.29	0.483	0.168	0.9144	294.26
Stack 3	18.29	0.483	0.168	0.9144	294.26
Stack 4	18.29	0.483	0.168	0.9144	294.26
Stack 5	18.29	0.483	0.168	0.9144	294.26
Stack 6	18.29	0.483	0.168	0.9144	294.26

a. Source: NYC DEC Permit ID PA702-90N

Large or Major Industrial Sources

A review of existing large and major sources of emissions (i.e., sources having a Title V or State Facility Air Permit) within 1,000 feet of the Project Area was performed to assess potential effects on the development sites. A search for Title V and State Facility Air Permits was also conducted using registration lists maintained by NYSDEC and EPA. The Harper Street Asphalt Plant located at 30-01 Harper Street in Queens, New York, was identified within 1,000 feet of the Project Area.

Emission rates and source characteristics information from the NYS DEC permit for the Harper Street Asphalt Plant for heaters and generators were used in the analysis. Emission source locations were determined based on street view and satellite imagery as the coordinates for sources in the permit were determined to be inaccurate. According to correspondence between DCP and NYC DOT, a rebuild is planned for the asphalt plant, and the work plan indicates that the rebuild will be completed in 2023, about the same time when first of the proposed developments (Development Site 4) would complete. Another DOT owned asphalt plant, Hamilton Street Asphalt Plant in Brooklyn was rebuilt and reopened in 2014. The future new Harper Street Plant is expected to have the similar upgrades as the Hamilton Street Plant. As such, emission factors for the major production equipment - rotary dryer and crasher of the Hamilton Street Plant were applied in the Harper Street Asphalt Plant impact analysis. The exhaust flow rate and temperature of the rotary dryer stack were also updated to more representative conditions. Based on permit conditions, it was assumed that all sources are emitting from 7:00 am to 11:00 pm, except for 0S007 and 0S008, which are permitted to operate 24 hours a day. Emission source characteristics are summarized in Table N-5, and emission rates are summarized in Table N-6.

Table N-5: Emission Sources at the Harper Street Asphalt Plant

Emission Source	Stack Height (m) [a]	Stack Diameter (m) [a]	Flow Rate (Am^3/s) [b]	Exit Velocity (m/s)	Stack Temperature (^oK) [c]
0S007	3.7	0.152	0.415	22.8	455
0S008	3.7	0.152	0.188	10.3	455
0S006	9.1	0.254	0.011	0.2	455
0S011	9.1	0.254	0.019	0.4	455
0S001	15.8	1.372	33.615	22.8	366
0S005[d]	4.6	0.152	0.602	33.0	566
0S004[d]	4.6	0.152	0.602	33.0	566
0S003[e]	4.6	0.152	0.403	22.1	566
0S009	10.1	0.152	0.027	1.5	455
0S010	10.1	0.152	0.027	1.5	455
0S012	10.1	0.152	0.024	1.3	455
0S002	4.0	1.524	2.526	1.4	566

a. Source: NYSDEC Permit, Facility DEC ID 2-6302-00138/00028.
b. Flow rates were estimated based on equipment power rating and information on similar equipment.
c. Assumed exhaust temperature based on similar equipment.
d. Only one of the two can operate at the same time.
e. Source is only used occasionally and as a replacement for the 900 kW generators.

Table N-6: Modeled Short-Term Emission Rates for the Harper Street Asphalt Plant (in g/s)

Emission Source	NO_X [a]	CO [a]	$PM_{2.5}$ [b,c]	PM_{10}	SO_2 [d]
0S007	0.0383	0.0034	0.0026	0.0029	0.00023
0S008	0.0173	0.0015	0.0012	0.0013	0.00010
0S006	0.0010	0.0008	0.0001	0.0001	0.00001
0S011	0.0017	0.0014	0.0001	0.0001	0.00001
0S001	0.7497	1.0174	1.2096	1.3100	-
0S005[d]	0.0706	0.0176	0.0090	0.0100	0.10019
0S004[d]	0.0706	0.0176	0.0090	0.0100	0.10019
0S003[e]	0.0471	0.0118	0.0070	0.0078	0.06691
0S009	0.0025	0.0021	0.0002	0.0002	0.00001
0S010	0.0025	0.0021	0.0002	0.0002	0.00001
0S012	0.0022	0.0019	0.0002	0.0002	0.00001
0S002	0.1889	0.1630	0.0052	0.0057	5.64E-04

Source: NYSDEC Permit, Facility DEC ID 2-6302-00138/00028.
Emission sources 0S007 and 0S008 are assumed to operate 24 hours per day, all other sources are assumed to be in operation 16 hours per day from 7:00am to 11:00 pm.
a. Emission factors for the Rotary Dryer and Crusher are based on data for the Hamilton Plant. Emission factors for building furnaces and heaters are based on AP-42.
b. Total PM emissions were obtained based on permit and AP-42 emission factors. Total PM emission were scaled AP-42 PM size distribution factors to obtain $PM_{2.5}$ and PM_{10} emission rates.
c. To obtain annual emission rates for $PM_{2.5}$ maximum hourly emissions were scaled based on actual production data versus the maximum permitted values.
d. Based on equipment power rating and AP-42 emission factors.

The refined modeling analysis of the asphalt plant and concrete batching plant was performed using the AERMOD version 18081 model and five years of meteorological data (2014-2018) from La Guardia International Airport and concurrent upper air data from Brookhaven, New York. The AERMOD model was run with and without downwash and the highest concentrations are reported. Building footprint and heights were determine based on satellite imagery. Discrete receptors (i.e., locations at which concentrations were calculated) were placed on the potentially affected sites. The receptor network consisted of receptors located at spaced intervals along the sides of the

development site from the ground floor to the upper level, and pedestrian-height receptors representing sidewalks.

ASSESSMENT RESULTS

Mobile Source Analysis

Mobile Traffic Analysis

The *CEQR Technical Manual* describes a screening evaluation based on predicted incremental traffic counts determined from a separate traffic study to determine whether any roadway intersections would need to be evaluated. The increments are 170 or more automobile trips in the peak hour for CO for the Project Area. For $PM_{2.5}$ several thresholds of incremental peak hour trips for heavy duty diesel vehicles (HDDV) are specified depending on the type of roadway, ranging from 13 to 23 HDDVs. The expected traffic levels generated by the Proposed Action are provided in Table N-7.

Table N-7: Peak Hour Project Generated Vehicle Trips Increment

Peak Hour	Intersection	Autos	Heavy Vehicles	Heavy Vehicle Equivalent
Weekday AM	36th Avenue-Site 4 Driveway/College Point Boulevard	84	5	21
	37th Avenue/College Point Boulevard	-93	0	-19
	39th Avenue/College Point Boulevard	-18	-7	-9
	Roosevelt Avenue WB/College Point Boulevard	-52	-9	-17
	Roosevelt Avenue EB/College Point Boulevard	39	3	10
	Roosevelt Avenue WB/Janet Place	-57	-13	-22
	Roosevelt Avenue/Skyview Mall Driveway	40	-1	7
	38th Avenue Extension/ Tangram Plaza Driveway/ College Point Boulevard	31	1	7
	39th Avenue/ Janet Place	123	5	28
	38th Avenue Extension/ Janet Place Extension	255	10	59
	38th Avenue Extension/ Transverse Road	229	9	53
	39th Avenue Extension/ Transverse Road	82	3	19
Weekday Midday	36th Avenue-Site 4 Driveway/College Point Boulevard	58	1	13
	37th Avenue/College Point Boulevard	-213	0	-42
	39th Avenue/College Point Boulevard	-87	-5	-21
	Roosevelt Avenue WB/College Point Boulevard	-39	-5	-12
	Roosevelt Avenue EB/College Point Boulevard	13	1	3
	Roosevelt Avenue WB/Janet Place	2	0	0
	Roosevelt Avenue/Skyview Mall Driveway	131	-2	24
	38th Avenue Extension/ Tangram Plaza Driveway/ College Point Boulevard	48	1	11
	39th Avenue/ Janet Place	13	0	3
	38th Avenue Extension/ Janet Place Extension	392	12	87
	38th Avenue Extension/ Transverse Road	300	9	67
	39th Avenue Extension/ Transverse Road	50	2	11
Weekday PM	36th Avenue-Site 4 Driveway/College Point Boulevard	96	3	21
	37th Avenue/College Point Boulevard	-185	-3	-39
	39th Avenue/College Point Boulevard	-68	-3	-16
	Roosevelt Avenue WB/College Point Boulevard	-24	-4	-8
	Roosevelt Avenue EB/College Point Boulevard	39	1	9
	Roosevelt Avenue WB/Janet Place	11	-1	1
	Roosevelt Avenue/Skyview Mall Driveway	141	-1	28

Peak Hour	Intersection	Autos	Heavy Vehicles	Heavy Vehicle Equivalent
	38th Avenue Extension/ Tangram Plaza Driveway/ College Point Boulevard	148	4	33
	39th Avenue/ Janet Place	13	0	3
	38th Avenue Extension/ Janet Place Extension	512	15	114
	38th Avenue Extension/ Transverse Road	343	10	76
	39th Avenue Extension/ Transverse Road	-113	-3	-25
Saturday Midday	36th Avenue-Site 4 Driveway/College Point Boulevard	62	2	14
	37th Avenue/College Point Boulevard	-111	-4	-25
	39th Avenue/College Point Boulevard	-36	-1	-8
	Roosevelt Avenue WB/College Point Boulevard	-33	0	-7
	Roosevelt Avenue EB/College Point Boulevard	21	1	5
	Roosevelt Avenue WB/Janet Place	-22	-2	-6
	Roosevelt Avenue/Skyview Mall Driveway	31	-3	4
	38th Avenue Extension/ Tangram Plaza Driveway/ College Point Boulevard	38	1	8
	39th Avenue/ Janet Place	44	1	10
	38th Avenue Extension/ Janet Place Extension	225	7	50
	38th Avenue Extension/ Transverse Road	185	6	41
	39th Avenue Extension/ Transverse Road	33	1	7

As shown in Table N-7, the maximum number of peak hour automobile trips is 512 and the maximum HDDV equivalent trips (including 15 HDDV trips) is 114 on collector roads. These values are above the CO and $PM_{2.5}$ screening thresholds, and, consequently, a detailed intersection analysis of mobile source emissions is warranted. Intersections with the highest trip increment based on With-Action traffic volumes and the incremental traffic volumes in Table N-7 are the intersections of 39th Avenue Extension and Transverse Road, and 38th Avenue Extension and Janet Place Extension. The intersection of 38th Avenue Extension and Janet Place was selected for detailed analysis as the projected increment was greatest. Moreover, intersections with the highest incremental traffic on roadways and the highest total traffic volumes were considered to have the greatest potential for air quality impacts; therefore, the intersection of 38th Avenue and College Point Boulevard, and the intersection of Roosevelt Avenue and Transverse Road were selected for PM impact analysis. The intersections reviewed for detailed analysis are presented in Table N-8.

Table N-8: Mobile Traffic Intersections Selected for Detailed Analysis

Intersection	Contaminants to be Analyzed
Roosevelt Avenue WB/College Point Boulevard	PM and CO
Roosevelt Avenue EB/College Point Boulevard	PM and CO
38th Avenue Extension/Janet Place	PM and CO
38th Avenue/College Point Boulevard	PM
Roosevelt Avenue/ Transverse Road	PM

CO concentrations for future conditions in the No-Action and With-Action conditions were predicted using the methodology previously described. Table N-9 shows the future maximum predicted 8-hour average CO concentrations at the intersection studied. (No 1-hour values are shown, since no exceedances of the NAAQS would occur and the de minimis criteria are only applicable to 8-hour concentrations; therefore, the 8-hour values are the most critical for impact assessment.) The values shown are the highest predicted concentrations. The results indicate that the Proposed Actions

would not result in any violations of the 8-hour CO standard. In addition, the incremental increases in 8-hour average CO concentrations are very small, and consequently would not result in a violation of the CEQR de minimis CO criteria. Therefore, mobile source CO emissions resulting from the Proposed Actions would not result in a significant adverse impact on air quality.

Table N-9: Maximum Predicted Eight-Hour CO With-Action Concentrations (ppm)

Location	No-Action	With-Action	Increment	*De Minimis*
Roosevelt Avenue/College Point Boulevard	2.14	2.16	0.02	3.43
38th Avenue Extension/Janet Place	2.12	2.11	-0.01	3.43

a. Eight-hour standard (NAAQS) is nine ppm.
b. Concentration includes a background concentration of 1.20 ppm.

PM_{10} concentrations for the No-Action and With-Action conditions were determined using the methodology previously described. Table N-10 presents the predicted PM_{10} 24-hour concentrations at the analyzed intersections in the No-Action and With-Action conditions. The values shown are the highest predicted concentrations for the modeled receptor locations and include background concentrations, and do not exceed the NAAQS in the No-Action and With-Action conditions.

Table N-10: Maximum Predicted 24-Hour Average PM_{10} With-Action Concentrations ($\mu g/m^3$)

Location	No-Action	With-Action
College Point Boulevard & 36th Avenue	71.42	70.44
38th Avenue Extension/Janet Place	69.08	68.19
38th Avenue/College Point Boulevard	71.42	70.44
Roosevelt Avenue/ Transverse Road	63.77	67.06

a. 24-hour standard (NAAQS) is 150 $\mu g/m^3$.
b. Concentration includes a background concentration of 31.0 $\mu g/m^3$.

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 N-11 and N-12, respectively.

Table N-11: Maximum Predicted 24-Hour Average $PM_{2.5}$ With-Action Concentrations ($\mu g/m^3$)

Location	No-Action	With-Action	Increment	*De Minimis*
College Point Boulevard & 36th Avenue	28.92	28.81	-0.11	8.6
38th Avenue Extension/Janet Place	27.11	27.35	0.24	8.6
38th Avenue/College Point Boulevard	28.92	28.81	-0.11	8.6
Roosevelt Avenue/ Transverse Road	26.78	27.69	0.91	8.6
38th Avenue Extension/Janet Place	27.11	27.35	0.24	8.6

a. The incremental 24-hour $PM_{2.5}$ concentration should not exceed the de minimis, defined as half the difference between the background concentration and the 24-hour standard (35 $\mu g/m^3$).
b. Concentration includes a background concentration of 17.7 $\mu g/m^3$.

Table N-12: Maximum Predicted Annual Average $PM_{2.5}$ Incremental Concentrations ($\mu g/m^3$)

Location	No-Action	With-Action	Increment	*De Minimis*
Roosevelt Avenue/College Point Boulevard	1.019	1.062	0.043	0.1
38th Avenue Extension/Janet Place	0.977	0.918	0.059	0.1
38th Avenue/College Point Boulevard	0.767	0.767	0.000	0.1
Roosevelt Avenue/ Transverse Road	1.019	1.062	0.043	0.1
a. The incremental annual neighborhood scale concentration should not exceed the de minimis, defined as 0.1 $\mu g/m^3$.				

The results show that the daily (24-hour) $PM_{2.5}$ increments are predicted to be below the de minimis criteria. The maximum annual incremental $PM_{2.5}$ concentration is below the de minimis criteria at the intersection of College Point Boulevard & 36th Avenue. The annual $PM_{2.5}$ maximum annual incremental concentration is predicted to not exceed the de minimis criteria.

Northern Boulevard Analysis

Proposed Development Site 4 is located within 200 feet of the elevated Northern Boulevard, necessitating a detailed analysis to determine the potential impact from the mobile emissions generated by vehicles on the atypical roadway to receptors on the site.

Vehicular CO, $PM_{2.5}$ and PM_{10} emission factors were estimated using MOVES. Dispersion modelling was conducted using CAL3QHCR model dated 13196 for refined analysis.

Maximum predicted concentrations are shown in Table N-13. The maximum predicted 24-hour average PM_{10} and $PM_{2.5}$ concentrations did not exceed the respective NAAQS. Predicted 24-hour maximum $PM_{2.5}$ does not increase by more than half the difference between the 24-hour background concentration and the 24-hour NAAQS, and therefore model predictions were below the de minimis criteria threshold for $PM_{2.5}$.

Maximum predicted 1-hour and 8-hour average concentrations of CO with background added did not exceed the respective NAAQS. The de minimis criteria threshold for CO were not exceeded as an increase of less than 0.5 ppm for 8-hour was predicted, and predictions for CO results in an increase less than half the difference between baseline concentration and the 8-hour standard.

Table N-13: Maximum Predicted Concentrations

Pollutant	Averaging Period	Units	Maximum Predicted Concentration	Background Level	Maximum Predicted Concentration with Background	NAAQS
$PM_{2.5}$	24-hour	$\mu g/m^3$	0.6	17.7	18.3	35
	Annual	$\mu g/m^3$	0.08	7.0	7.1	12
PM_{10}	24-hour	$\mu g/m^3$	1.8	31.0	32.8	150
CO	1-hour	ppm	0.1	1.7	1.8	35
	8-hour	ppm	0.07	1.4	1.5	9

Parking Garage Analysis

Based on the methodology previously described, the maximum predicted CO and PM concentrations from the proposed parking facility at Projected Development Sites 4 and Potential Development Site B were analyzed. The parking garage entrance to Potential Development Site B was assumed to be on College Point Boulevard. The near sidewalk receptor was assumed to be on the same side of the street (10.8 feet) as the parking facility and a far sidewalk receptor on the opposite side of the street (96.8 feet from the parking facility). The maximum predicted eight-hour average CO concentration increment at Projected Development Site 4 is 0.0511 ppm for the sidewalk, 0.0223 ppm across the street. The maximum predicted eight-hour average CO concentration increment at Potential Development Site B is 0.144 ppm for the sidewalk, 0.0691 ppm across the street. The maximum predicted concentration is below the de minimis CO criteria (not counting background).

The maximum predicted 24-hour and annual average $PM_{2.5}$ increments from parking garage emissions from Projected Development Sites 4 on sidewalks including increments associated with on-street traffic are 0.491 $\mu g/m^3$ and 0.104 $\mu g/m^3$, respectively. For Potential Development Site B, the maximum predicted 24-hour and annual average $PM_{2.5}$ increments from parking garage emissions on sidewalks including increments associated with on-street traffic are 0.897 $\mu g/m^3$ and 0.181 $\mu g/m^3$, respectively. The maximum predicted $PM_{2.5}$ increments are well below the respective $PM_{2.5}$ de minimis criteria of 8.65 $\mu g/m^3$ for the 24-hour average concentration and 0.3 $\mu g/m^3$ for the annual concentration. Therefore, the proposed parking garages would not result in any significant adverse air quality impacts.

Stationary Source Analysis

A stationary source analysis was conducted to evaluate potential impacts from the Projected and Potential Development Sites' heat and hot water systems. In addition, an assessment was conducted to determine the potential for impacts due to industrial activities within a 400-foot-radius around the affected area, and from any nearby large or major emission sources.

Individual Heat and Hot Water Systems

A screening analysis was performed to assess air quality impacts associated with emissions from heat and hot water systems associated with the Projected and Potential Development Sites. The methodology described in the *CEQR Technical Manual* was used for the analysis and considered impacts on sensitive uses (i.e., existing residences and other developments under construction).

The methodology determines the threshold of development size below which the action would not have a potential significant adverse impact. The screening procedures utilize information regarding the type of fuel to be used, the maximum development size, and the exhaust stack height of the heat and hot water systems to evaluate whether a significant adverse impact may occur. Based on the distance from the development site to the nearest building of similar or greater height, if the maximum development size is greater than the threshold size in the *CEQR Technical Manual*, there is the potential for significant air quality impacts, and a refined dispersion modeling analysis would be required. Otherwise, the source passes the screening analysis, and no further analysis is required.

The maximum floor area from the RWCDS in Attachment A, "Project Description," was used as input for the screening analysis, along with factors predicting fuel usage as a function of floor area. As Projected Development Sites 1-3 comprise multiple buildings, information from each site's design team was incorporated into the screening analysis, including the approximate amount of square footage that would be served by each heat and hot water system. Table N-14 summarizes the screening analysis for air quality impacts associated with emissions from heat and hot water systems associated with the Projected and Potential Development Sites.

Table N-14: Screening Analysis Summary for Stationary Sources

Development Site	Building Use	Total with Action Building Area (GSF; sqft)	Building Height (ft)	Stack Height (on tallest tier of building; ft)	Fuel Oil Screening Result (Figure 17-5 in CEQR Appendix)	Natural Gas Screening Result (Figure 17-7 and 17-8 in CEQR Appendix)	Screening Outcome
1, Lot 7	Residential	449,091	209.3	3	Fail	**Pass**	***pass; natural gas required*** [1]
1, Lot 8	Residential	298,304	190.0	3	Fail	Fail	***fail; refined analysis required***
1, Lot 9	Residential	252,615	209.3	3	Fail	Fail	***fail; refined analysis required***
2A	Residential	500,167	235.0	3	Fail	Fail	***fail; refined analysis required***
2B	Commercial	317,165	239.5	3	Fail	Fail	***fail; refined analysis required***
3A, 147' Tier	Commercial	236,990	147.0	3	Fail	Fail	***fail; refined analysis required***
3A, 237' Tier	Residential	340,235	237.0	3	Fail	Fail	***fail; refined analysis required***
3B, 237' Tier	Residential	162,205	237.0	3	Fail	Fail	***fail; refined analysis required***
3B, 239' Tier	Commercial	231,618	239.0	3	**Pass**	**Pass**	***pass; refined analysis not required***
4	Residential	248,356	200.0	3	**Pass**	**Pass**	***pass; refined analysis not required***
A	Residential	107,182	150.0	3	**Pass**	**Pass**	***pass; refined analysis not required***
B	Commercial	177,000	200.0	3	Pass	**Pass**	***pass; refined analysis not required***

a. 1, Lot 7 passed screening assessment, however refined modelling was performed for cumulative impact analysis.

If the project did not pass the screening analyses using the *CEQR Technical Manual* procedures, a refined modeling analysis was performed for natural gas only. The CEQR TM indicates that the detailed analysis can be conducted using AERSCREEN, however AERMOD is more suitable for this project due to the close proximity of the sites. Concentrations of nitrogen dioxide (NO_2), and particulate matter ($PM_{2.5}$) were determined at off-site receptors sites, as well as on Projected and Potential Development Site receptors. Receptors were situated at elevated locations that could represent operable windows and outside air intakes. Pedestrian level receptors were not included as

the HVAC sources will be located at roof level, and the worst-case impacts will occur at elevated levels. AERMOD simulations were conducted with and without building downwash (the downwash option accounts for the effects on plume dispersion created by the structure the stack is located on, and other nearby structures). The analyses of potential impacts from exhaust stacks were made assuming urban dispersion. Surface roughness was determined with the AERSURFACE model as allowed by the *CEQR Technical Manual*.

For natural gas, the primary pollutants of concern are NO_2 and PM. Emission rates were determined based on emission factors in the natural gas combustion sections of the U.S. EPA's AP-42: Compilation of Air Emission Factors. Specifically, emission rates for the natural gas combustion were estimated using the emission factors in Table 1.4-2 in Chapter 1.4 Natural Gas Combustion. PM (Total) was assumed to be $PM_{2.5}$, so the PM emission factor was used to estimate $PM_{2.5}$ emissions.

The 1-hour and 24-hour emissions rates were increased by a factor of 3.65 to account for a typical heating season of 100 days.

One-hour average NO_2 concentrations associated with the proposed development's hot water systems will be estimated using AERMOD model's Plume Volume Molar Ratio Method (PVMRM) module to analyze chemical transformation within the model. An initial NO_2 to NO_x ratio of ten percent at the source exhaust stack will be assumed, which is considered representative for boilers.

For the refined dispersion analysis, five years of meteorological data (2014-2018) from La Guardia International Airport and concurrent upper air data from Brookhaven, New York, were utilized for the simulation program. Predicted values were compared with NAAQS for NO_2 and the CEQR *de minimis* criteria for $PM_{2.5}$. In the event that exceedances were predicted, the air quality (E) designation proposed for the Projected or Potential Development Site also included HVAC exhaust stack restrictions that would be required to avoid a significant adverse air quality impact. Table N-15 summarizes the maximum predicted air quality impacts associated with emissions from heat and hot water systems associated with the Projected and Potential Development Sites.

Table N-15: Maximum Predicted Impacts from Development Site Stationary Sources on Existing and Projected/Proposed Buildings (in µg/m³)

Development Site	1-hour NO_2 [1,2]	Annual NO_2 [1,3]	24-hour $PM_{2.5}$	Annual $PM_{2.5}$	Pass/Fail	Requires (E) Designation
1, Lot 7 [4]	165.3	32.9	6.45	0.18	Pass	Yes
1, Lot 8	182.6	34.9	7.68	0.26	Pass	Yes
1, Lot 9	138.7	34.0	4.78	0.18	Pass	Yes
2A	179.3	33.5	4.76	0.28	Pass	Yes
2B	172.1	33.5	4.17	0.28	Pass	Yes
3A, 147' Tier	143.4	34.1	4.98	0.18	Pass	Yes
3A, 237' Tier	179.3	33.4	4.57	0.26	Pass	Yes
3B, 237' Tier	181.6	33.4	3.68	0.26	Pass	Yes
4	Passed Screening	Passed Screening	Passed Screening	Passed Screening	Pass	No
A	Passed Screening	Passed Screening	Passed Screening	Passed Screening	Pass	No
B	Passed Screening	Passed Screening	Passed Screening	Passed Screening	Pass	Yes

a. AERMOD was run with and without building downwash. The maximum modeled concentration between the two scenarios is shown in the table.
b. All sites (except Site 4 and A) were modeled with natural gas.
c. [1] NO_2 concentrations include ambient background values. Seasonal and hourly averaged background values were used for the 1-hour NO_2 modelling using the PVMRM methodology in AERMOD.
d. [2] 1-hour NO_2 results are based on Low NO_X emission rates for all sources
e. [3] Annual NO_2 results are based on Low NO_X emission rates for Development Site 1, Lot 7, and are based on regular NO_X emission rates for all other sources
f. [4] 1, Lot 7 passed screening assessment, however refined modelling was performed for cumulative impact analysis.

Cumulative Impacts from Heat and Hot Water Systems

An analysis was conducted to evaluate potential air quality impacts from two groups or "clusters" of heat and hot water systems. Cluster 1 consists of 1, Lot 7 and 1, Lot 9; and cluster 2 includes 2B and 3A, 237' Tier.

No screening analysis was performed for the cumulative impacts from heat and hot water systems based on the assumption that a refined analysis would be necessary to demonstrate compliance with the applicable NAAQS and de minimis criteria. Two clusters were examined with refined modeling as discussed below.

A refined analysis was performed for all pollutants using the AERMOD model. The analysis was performed using the EPA AERMOD model using the general assumptions and procedures outlined earlier for individual development sites.

The results of the analysis determined that Clusters 1 and 2 would not result in significant adverse air quality impacts when low NO_x burners are used. The $PM_{2.5}$, and NO_2, concentrations predicted by the AERMOD model are presented in Table N-16. The required changes to ensure there are no adverse impacts for the cumulative assessment are summarized in the (E)-Designations (E-557) for the sites in Table N-17.

Table N-16: Maximum Pollutant Concentration

Pollutant	Averaging Period	Total Concentration (µg/m³)		Standard
		Cluster 1	Cluster 2	
$PM_{2.5}$ [1]	24-hour	6.45	4.63	8.63
	Annual	0.22	0.30	0.3
NO_2 [2]	1-hour	165.4	180.2	188
	Annual	33.0	33.5	100

a. [1] Standard is the incremental value for $PM_{2.5}$
b. [2] Clusters were modeled using low NO_x burner emission rates.

Table N-17: Requirements of the (E) Designation for the Project (E-557)

Development Site	Block	Lot	Proposed (E) Designation
1, Lot 7	4963	7	Any new residential and/or commercial development on Block 4963, Site 1, Lot 7 must exclusively use natural gas as the type of fuel and boilers equipped with low NO_x burners (30 ppm) for HVAC systems, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 239.2 feet above mean sea level (0.0 NAVD88) and at least 156 feet away from the East line of Lot 7 (measured parallel to the North line of Lot 7) to avoid any potential significant air quality impacts.
1, Lot 8	4963	8	Any new residential and/or commercial development on Block 4963, Site 1, Lot 8 must exclusively use natural gas as the type of fuel and boilers equipped with low-NO_x burners (30 ppm) for HVAC systems, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 210 feet above mean sea level (0.0 NAVD88) to avoid any potential significant air quality impacts.
1, Lot 9	4963	9	Any new residential and/or commercial development on Block 4963, Site 1, Lot 9 must exclusively use natural gas as the type of fuel and boilers equipped with low-NO_x burners (30 ppm) for HVAC systems, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 229.3 feet above mean sea level (0.0 NAVD88), to avoid any potential significant air quality impacts.
2A	4963	65	Any new residential and/or commercial development on Block 4963, Site 2A must exclusively use natural gas as the type of fuel and boilers equipped with low-NO_x burners (30 ppm) for HVAC systems, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 245 feet above mean sea level (0.0 NAVD88), at least 490 feet away from the East line of Lot 65, at least 276 feet away from the North line of Lot 65 (measured parallel to the West line of Lot 65), to avoid any potential significant air quality impacts. Additionally, Site 2A must have no air intakes in the bulkheads, no air intakes above 235 feet on the north edge of the South Tower, and no air intakes above 234 feet within 30 feet of the stack.
2B	4963	65	Any new residential and/or commercial development on Block 4963, Site 2B must exclusively use natural gas as the type of fuel and boilers equipped with low NOx burners (30 ppm) for HVAC systems, have no operable windows and air intakes above 232.5 feet, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 245 feet above mean sea level (0.0 NAVD88), and at most 75 feet away from the East line of Lot 65, to avoid any potential significant air quality impacts.
3A, 147' tier	4963	85	Any new residential and/or commercial development on Block 4963, the 147 foot tier of Site 3A, must exclusively use natural gas as the type of fuel and boilers equipped with low NO_x burners (30 ppm) for

Development Site	Block	Lot	Proposed (E) Designation
			HVAC systems, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 162 feet above mean sea level (0.0 NAVD88) and at least 377 feet away from the East line of Lot 85 and 44 feet away from the South line of Lot 85 (measured perpendicular to the line), to avoid any potential significant air quality impacts.
3A, 237' tier	4963	85	Any new residential and/or commercial development on Block 4963, the 237 foot tier of Site 3A, must exclusively use natural gas as the type of fuel and boilers equipped with low NOx burners (30 ppm) for HVAC systems, have no operable windows and air intakes above 235 feet, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located 245 feet above mean sea level (0.0 NAVD88), and at least 271 feet away from the South line of Lot 85, to avoid any potential significant air quality impacts.
3B, 237' tier	4963	85	Any new residential and/or commercial development on Block 4963, the 237 foot tier of Site 3B, must exclusively use natural gas as the type of fuel and boilers equipped with low NO_x burners (30 ppm) for HVAC systems, have no air intakes in the bulkheads, and ensure that the heating, ventilating and air conditioning stack(s) is located at least 245 feet above mean sea level (0.0 NAVD88), and 143' away from the East line of Lot 85 to avoid any potential significant air quality impacts.
B	4963	200	Any new residential and/or commercial development on Block 4963, Lot 200 must exclusively use natural gas as the type of fuel and ensure that the heating, ventilating and air conditioning stack(s) is located at least 165 feet above mean sea level (0.0 NAVD88) to avoid any potential significant air quality impacts.

Industrial Manufacturing Source Analysis (Air Toxics)

As discussed above in "Methodology," two existing industrial sources were analyzed. The results in Table N-18 demonstrate that there would be no predicted significant adverse air quality impacts from both paint spray booths based on the assumptions described in the methodology.

Table N-18: Maximum Predicted Impacts Concentrations from Existing Paint Spray Booths

Pollutant	Chemical Abstract Service (CAS) Number	Short Term Concentration Impact (µg/m³)	SGC (µg/m³)	Annual Concentration Impact (µg/m³)	AGC (µg/m³)
Acetone	67-64-1	651.3	180,000	5.06	30,000
Aliphatic Hydrocarbon	64742-89-8	N/A	N/A	1.18	3200
Aromatic Petroleum Distillates (naptha heavy aromatic)	64742-94-5	N/A	N/A	0.59	100
Butane	106-97-8	166.6	238,000	N/A	N/A
Ethanol	64-17-5	N/A	N/A	0.24	45,000
Ethyl 3-ethoxypropianate	763-69-9	136.3	140	1.06	64
Ethylbenzene	100-41-4	N/A	N/A	0.59	1,000
Methyl ethyl ketone	78-93-3	121.2	13,000	0.94	5,000
N-butyl acetate	123-86-4	75.7	95,000	0.59	17,000
Propane	74-98-6	N/A	N/A	1.29	43,000
Stoddard Solvents	8052-41-3	N/A	N/A	1.18	900
Toluene	108-88-3	151.5	37,000	1.18	5,000
Xylene	1330-20-7	151.5	22,000	1.18	100
Generic $PM_{2.5}$ solids (auto body)[1,2]	NY075-02-5	N/A	88 (Federal)	0.25	12 (Federal)

a. Source: NYSDEC, DAR-1 AGC/SGC Tables, August 2016.
b. [1]Pollutant includes emissions from both Particulates (NY075-00-0) and Total Solid Particulate (NY079-00-0).
c. [2]Conservatively assumes all particulate emissions would be $PM_{2.5}$. SGC and AGC from Particulate ($PM_{2.5}$) used.
d. [3]"N/A" Indicates that either the SGC or AGC does not exist for this pollutant.

Based on the screening results using Table 17-3 in the *CEQR Technical Manual*, the maximum hazard index was calculated for the Projected and Potential Development Sites associated with the Proposed Actions. The hazard index approach was used to determine the effects of multiple non-carcinogenic compounds. None of the compounds from the paint spray booths were found to have carcinogenic unit risk factors, so only annual AGC values were used.

Table N-19 presents the screening results of the assessment of cumulative non-carcinogenic effects on the Proposed Actions. As shown in the table, the results of this assessment indicated that there would be no significant adverse air quality impacts on the development sites because the hazard index for any affected receptor on the site would not exceed 1.0. Also, none of the compounds have a cancer risk factor.

Table N-19: Estimated Maximum Hazard Index from Existing Paint Spray Booths

Pollutant	CAS Number	Estimated Annual Pollutant Concentration (µg/m³)	AGC (µg/m³)	Ratio of Annual Concentration to AGC
Acetone	67-64-1	5.06	30,000	1.7E-04
Aliphatic Hydrocarbon	64742-89-8	1.18	3200	3.7E-04
Aromatic Petroleum Distillates (naptha heavy aromatic)	64742-94-5	0.59	100	5.9E-03
Butane	106-97-8	N/A	N/A	N/A
Ethanol	64-17-5	0.24	45,000	5.2E-06
Ethyl 3-ethoxypropianate	763-69-9	1.06	64	1.7E-02
Ethylbenzene	100-41-4	0.59	1000	5.9E-04
Methyl ethyl ketone	78-93-3	0.94	5000	1.9E-04

Pollutant	CAS Number	Estimated Annual Pollutant Concentration (µg/m³)	AGC (µg/m³)	Ratio of Annual Concentration to AGC
N-butyl acetate	123-86-4	0.59	17,000	3.5E-05
Propane	74-98-6	1.29	43,000	3.0E-05
Stoddard Solvents	8052-41-3	1.18	900	1.3E-03
Toluene	108-88-3	1.18	5,000	2.4E-04
Xylene	1330-20-7	1.18	100	1.2E-02
Generic $PM_{2.5}$ solids (auto body)[1,2]	NY075-02-5	0.25	12 (Federal)	2.1E-02
Total Hazard Index				**0.0577**
Hazard Index Threshold Value				**1.0**

a. Source: NYSDEC, DAR-1 AGC/SGC Tables, August 2016.
b. [1]Pollutant includes emissions from both Particulates (NY075-00-0) and Total Solid Particulate (NY079-00-0)
c. [2]Conservatively assumes all particulate emissions would be $PM_{2.5}$. SGC and AGC from Particulate ($PM_{2.5}$) used.

Large or Major Sources and Industrial Manufacturing Sources

A search for existing large and major sources of emissions (i.e., sources having a Title V or State Facility Air Permit) within 1,000 feet of the Project Area was performed using registration lists maintained by NYSDEC and EPA. The Harper Street Asphalt Plant was identified with a State Facility Air Permit and sources listed in the permit were assessed as discussed in the methodology section. The Best Concrete Mix Corp. was identified when conducting the industrial manufacturing analysis. The sources from these two facilities were modeled together. The results in Table N-20 demonstrate that there would be no predicted significant adverse air quality impacts expected at the Project Area from existing large or major sources or from industrial manufacturing sources.

Table N-20: Predicted Maximum Concentrations from Harper Street Asphalt Plant and Best Concrete Mix Corp. Sources

Pollutant	Averaging Period	Maximum Modeled Concentration (µg/m³)	Maximum Concentration with Background (µg/m³)	NAAQS (µg/m³)
NO_2	1-hour [1]	19.5	125.3	188
	Annual	6.84	39.1	100
SO_2	1-hour [1]	8.00	22.8	196
	Annual	1.21	3.31	80
$PM_{2.5}$	24-hour [2]	6.21	23.9	35 (*de minimis* = 8.6)
	Annual	0.29	7.3	12 (*de minimis* = 0.3)
PM_{10}	24-hour [3]	10.09	41.1	150
CO	1-hour [4]	25.7	1,995	40,000
	8-hour [5]	25.7	1,995	10,000

a. [1]Conservatively presenting the maximum predicted pollutant concentrations instead of the percentile of 1-hour daily maximum concentrations
b. [2]Conservatively presenting the maximum predicted 98th percentile of pollutant concentrations instead of the three-year average.
c. [3]Conservatively presenting the highest value instead of the second highest maximum.
d. [4]Conservatively, presenting the maximum predicted pollutant concentrations instead of the second highest max from the latest three years.
e. [5]Conservatively presenting the 1-hour maximum results instead of the 8-hour average concentrations.

CONCLUSION

The Proposed Actions would not result in any significant adverse mobile or stationary source air quality impacts. The increases in traffic volumes associated with the Proposed Actions would not result in any adverse air quality impacts. An analysis of Northern Boulevard shows no adverse air quality impacts on the Project Area resulting from traffic. The Proposed Actions would not create a new stationary air quality source that would adversely affect the surrounding area. In addition, analysis of auto spray booths within the Study Area show no adverse air quality effects on the Project Area. Analysis of the Harper Street Asphalt Plant and Best Concrete Mix Corp. show no adverse air quality effects on the Project Area. Under the proposed zoning, (E) Designations (E-557) are proposed to avoid adverse air quality impacts on Projected or Potential Development Sites with respect to air quality (heating systems and industrial sources).

Based on this assessment, the Proposed Actions would not result in any adverse air quality impacts.

ATTACHMENT O: NOISE

INTRODUCTION

According to the *CEQR Technical Manual*, the goal of a CEQR noise assessment is to determine both (i) a proposed project's potential effects on sensitive noise receptors, including the effects on the level of noise inside residential, commercial, and institutional facilities (if applicable), and at open spaces; and (ii) the effects of ambient noise levels on new sensitive uses introduced by a proposed project. If significant adverse impacts are identified, CEQR requires such impacts to be mitigated or avoided to the greatest extent practicable.

The noise analysis for the Proposed Project – the implementation of the Special Flushing Waterfront District (SFWD) as described in Attachment A, "Project Description" – was conducted to determine the level of building attenuation necessary to ensure that interior noise levels within the Proposed Project would satisfy applicable interior noise criteria. The noise analysis concludes that noise level increases of up to 0.7 dBA (over the No-Action Condition, as discussed below) would be experienced as a result of increased traffic, which would not be considered a significant adverse noise impact.

The building attenuation analysis concludes that in order to meet CEQR interior noise level requirements, up to 40 dBA of building attenuation would be required for project buildings. The requirement for these levels of façade attenuation as well as an alternate means of ventilation will be included in an (E) designation for all affected privately-held Projected and Potential Development Sites. Therefore, there would be no significant adverse noise impact with respect to building attenuation, as described below.

NOISE STANDARDS AND CRITERIA

The *CEQR Technical Manual* provides attenuation requirements for buildings based on exterior noise levels (see Table O-1, "Required Attenuation Values to Achieve Acceptable Interior Noise Levels"). Recommended noise attenuation values for buildings are designed to maintain interior noise levels of 45 dBA or lower for residential uses and 50 dBA or lower for commercial uses, and are determined based on exterior $L_{10(1)}$ noise levels.

Table O-1: Required Attenuation Values to Achieve Acceptable Interior Noise Levels

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

Notes:
[A] The above composite window-wall attenuation values are for residential dwellings. Commercial office spaces and meeting rooms would be 5 dBA less in each category. All the above categories require a closed window situation and hence an alternate means of ventilation.
[B] Required attenuation values increase by 1 dBA increments for L_{10} values greater than 80 dBA.
Source: New York City Department of Environmental Protection.

According to CEQR guidelines, an initial impact screening assessment considers whether a proposed project would (i) generate any mobile or stationary sources of noise; and/or (ii) be located in an area with existing high ambient noise levels. To trigger a mobile source analysis, a project must impact

vehicular traffic noise, aircraft noise, and/or train noise. Because the Project Area includes areas with high existing ambient noise levels and would generate mobile sources of noise, an initial noise assessment on vehicular, airplane, and train noise would be warranted. Based on the *CEQR Technical Manual*, an initial noise assessment on vehicular traffic noise is necessary if a proposed project would (i) generate or reroute traffic; or (ii) introduce a new receptor near a heavily trafficked thoroughfare. A detailed aircraft noise analysis is appropriate if the proposed project would cause a receptor to be located within an L_{dn} 65 contour or if the proposed project would introduce a receptor within this area for an existing flight path. In order for a detailed analysis on train noise to be warranted the proposed project must (i) be located within 1,500 feet of existing rail activity and have a direct line of sight to that rail facility; or (ii) add rail activity to existing or new rail lines within 1,500 feet and have a direct line of site to a receptor. Because the Proposed Project is located within the L_{dn} 65-70 contour, a detailed analysis of aircraft noise is appropriate. Because the Proposed Project will be within 1,500 feet of an existing rail line and will have a direct line of site to the receptor, a detailed train noise assessment is also warranted.

SELECTION OF NOISE RECEPTOR LOCATIONS

Noise survey receptor locations were selected by examining the location of the Proposed Project and the location of the dominant sources of ambient noise (ex: street traffic, subway lines, flight paths). Existing noise levels were determined at each location by performing field measurements. The measured noise levels were used to determine minimum window/wall attenuation requirements to satisfy CEQR interior noise level criteria.

EXISTING NOISE LEVELS

Existing noise levels at the Project Area were measured at ten (10) locations as shown below in Table O-2 (also see Figure O-1).

24-hour continuous noise level measurements were conducted at Receptor Sites A, B, C, D, and E. Noise levels were measured for 1-hour periods at Receptor Sites 1 and 2 and for 20-minute periods at Receptor Sites 3 through 5 during three weekday peak periods – AM (7:00 AM – 9:00 AM), midday (12:00 PM – 2:00 PM), and PM (4:00 PM – 6:00 PM), and during a Saturday midday peak period (12:00 PM – 2:00 PM). Measurements were taken on June 5, 11, 12, and 22, 2019.

Table O-2: Receptor Locations

Noise Receptor Site	Duration	Development Sites	Location Description
A	24-hour	3	Next to Flushing Creek
B	24-hour	B	West side of College Point Blvd across from 36th Rd
C	24-hour	3, A	West side of College Point Blvd, between 37th and 39th Avenues
D	24-hour	4	West side of College Point Blvd, across from 36th Ave
E	24-hour	4	Northwest corner of undeveloped lot across College Point Blvd from 36th Ave. Meter elevated to give a line of sight to Northern Blvd
1	1-hour	1	Northwest corner of intersection between Roosevelt Ave and private street

Noise Receptor Site	Duration	Development Sites	Location Description
2	1-hour	1	Northwest corner of Roosevelt Ave and Janet Pl
3	20-minute	2	Northwest corner of 39th Ave and Janet Pl
4	20-minute	3, A	Northwest corner of parking lot across from 37th Ave
5	20-minute	4	Undeveloped lot across from 36th Ave

24-hour measurements were performed using Larson Davis LxT sound level meters. Spot measurements were performed using Larson Davis 831 and NTi XL2 sound level meters. The SLMs are Type 1 instruments according to ANSI Standard S1.4-1983 (R2006). Microphones were mounted at a height of approximately 5 to 8 feet above the ground for all positions except for Receptor Site E, which was mounted approximately 25-30 feet above the ground to give a clear line of sight to the elevated Northern Boulevard. All microphones were mounted at least 5 feet away from any large reflecting surfaces. The SLMs' calibration was field checked before and after readings. Measurements at each location were made on the A-scale (dBA). The data were recorded digitally by the SLMs and displayed at the end of the measurement period in units of dBA. Measured quantities included Leq, L1, L10, L50, L90, and 1/3 octave band levels. A windscreen was used during all sound measurements except for calibration.

Previous reports with existing noise information were made available to substantiate and compare to the recent noise measurements. A report issued in 2014 by Shen Milsom & Wilke (SMW) established the noise levels at Projected Development Site 1; the noise measurement for those locations were set back from the Roosevelt Avenue and the 7-train line. A report issued in 2016 by Longman Lindsey (LL) established the noise levels at Projected Development Site 2. Noise Receptor Sites 1, 2, and 3 were selected to verify the levels measured and presented in these earlier reports. The NYC Department of City Planning (DCP) has approved the use of these reports as baseline existing noise levels, based on the protocol issued May 22, 2019 and subsequent email correspondence.

As outlined in sections 421.2 Aircraft Noise and 421.3 Train Noise, because the Project Area is subject to aircraft and rail noise, the impact must be assessed, and the building design must provide attenuation sufficient enough to reduce these noise levels to acceptable interior noise levels. As such, all aircraft activity and rail noise at the Project Area was included in the existing noise levels, so that the subsequent analysis and attenuation requirements consider these noise sources.

The results of the existing noise level measurements are summarized in Table O-3.

Table O-3: Existing Noise Levels (in dBA)

Site	Day	Time	Leq	L1	L10	L50	L90
A	Weekday	AM	70.8	80.2	74.0	67.6	66.4
		MD	70.9	80.3	75.1	66.1	64.3
		PM	71.0	79.7	73.3	69.0	67.1
	Saturday	MD	70.4	79.9	72.3	68.4	66.9
B	Weekday	AM	74.2	83.2	77.2	71.6	66.5
		MD	74.8	84.1	78.7	70.9	65.6
		PM	73.8	84.1	76.5	70.8	66.5
	Saturday	MD	67.9	73.2	69.9	67.1	64.6
C	Weekday	AM	73.7	81.7	77.4	71.0	65.2
		MD	74.5	82.4	77.6	72.5	68.9
		PM	72.9	83.3	75.6	69.9	66.9
	Saturday	MD	70.6	78.8	73.0	68.9	65.4
D	Weekday	AM	76.2	84.4	78.4	74.8	71.1
		MD	77.3	84.9	80.4	74.7	72.0
		PM	72.9	83.2	75.6	69.9	64.9
	Saturday	MD	71.9	83.4	71.8	67.0	62.6
E[1]	Weekday	AM	69.6	79.4	73.2	65.9	64.4
		MD	71.6	80.6	75.4	68.1	66.0
		PM	70.9	83.1	72.9	65.6	63.9
1	Weekday (SMW)	Max Period	--	--	74	--	--
	Weekday (Cerami)	AM	79.5	89.9	82.5	73.1	68.5
		MD	76.7	86.4	80.8	71.2	66.7
		PM	78.4	89.8	79.9	70.5	67.3
	Saturday (Cerami)	MD	75.5	87.9	77.1	69.5	67.7
2	Weekday (SMW)	Max Period	--	--	69.5	--	--
	Weekday (Cerami)	AM	74.5	83.7	79.0	70.2	65.1
		MD	87.6	83.9	79.8	69.6	63.7
		PM	1.6	81.0	74.7	68.5	64.4
	Saturday (Cerami)	MD	71.0	79.3	74.0	58.9	66.1
3	Weekday (LL)	Max Period (PM)	72.3	78.2	73.8	--	--
	Weekday (Cerami)	Max Period (MD)	75.2	84.5	80.4	67.8	62.9
	Saturday (Cerami)	MD	67.4	78.8	67.8	64.3	62.7
4	Weekday	AM	66.8	77.7	69.5	63.5	60.5
		MD	70.6	80.9	75.8	62.0	58.8
		PM	69.7	82.2	72	63.7	60.8
	Saturday	MD	66.9	78.6	66.9	63.6	62.1
5	Weekday	AM	65.2	76.2	68.4	60.5	58.6
		MD	70.7	81.4	74.6	63.4	61.0
		PM	68.6	81.8	70.6	58.2	56.3
	Saturday	MD	62.9	81.7	69.9	62.7	61.3

[1]Site E does not include a Saturday measurement as noise levels are controlled by Northern Boulevard which is not expected to change with the Proposed Actions.

Airplanes flying overhead were a major noise source at all of the measurement positions. Vehicular traffic along College Point Boulevard also contributed to the measured noise levels at Receptor Sites B, C, and D; vehicular traffic on Northern Boulevard contributed to the noise levels at Receptor Site E. The NYCMTA 7 train and vehicular traffic along Roosevelt Avenue contributed to the noise levels at Receptor Sites 1 and 2.

In each location where measurements were compared to the 2014 and 2016 reports, the new noise levels were higher than the previous noise levels. At Receptor Sites 1 and 2, this difference is due to the location of the measurement position relative to Roosevelt Avenue and the 7-train line. The earlier measurement locations were set back from the road and subway line at the position of the

planning building façade, while the new measurements were taken on the sidewalk closer to the predominant noise sources. Note that when noise levels are projected back to the locations of the earlier measurements, they are roughly equivalent; however, as the set back is not a requirement of the Proposed Actions, the more recent sidewalk location (Receptor Sites 1 and 2) will be used in this analysis.

At the time of our measurements, staging had begun for construction at Projected Development Site 1. Receptor Site 3 was located directly at the entrance to the construction site, leading to a high volume of heavy trucks driving past and idling near the measurement position, raising the noise levels above those measured in the earlier reports. Construction had not yet begun when the earlier measurements were taken in 2014 and 2016, thus the previously reported levels for this position were used as a more typical representation of noise levels at that site.

In terms of the CEQR criteria, in accordance with *CEQR Technical Manual* guidelines, the existing noise levels at Receptor Sites A, B, C, E, 2, 4, and 5 are in the "marginally unacceptable" category. The existing noise level at Receptor Site D is in the "clearly unacceptable" category. The measured noise levels at Receptor Sites 1 and 3 are in the "clearly unacceptable" category, but the previously reported levels were in the "marginally unacceptable" category.

The entire Project Area is located within the L_{DN} 65-70 contour, but the measured L_{eq} levels were higher than 65 dBA. Therefore, the measured levels are used in the analysis instead of the aircraft noise contours.

NOISE PREDICTION METHODOLOGY

General Methodology

Future noise levels along College Point Boulevard and Roosevelt Avenue (Receptor Sites B, C, D, 1, and 2) were calculated using a proportional modeling technique, which was used as a screening tool to estimate changes in noise levels. The proportional modeling technique is an analysis methodology recommended for analysis purposes in the *CEQR Technical Manual*.

The noise analysis for this project examined the weekday AM, midday (MD), and PM, and Saturday midday (MD) peak hours. The selected time periods are when development facilitated by the Proposed Actions would be expected to produce the maximum traffic generation (based on the traffic studies presented in Chapter 14, "Transportation") and therefore would result in the maximum potential for significant noise level increases. Where there is no existing traffic or the volumes are extremely small, Traffic Noise Models (TNMs) were created based on the future traffic estimates to predict future noise levels. The proportional modeling methodology used for the noise analysis is described below. Adjustment factors were applied to the predicted No-Action and With-Action TNM noise levels based the difference between measured existing noise levels and TNM predicted noise levels.

Proportional Modeling

Proportional modeling was used to determine locations with the potential for having significant noise impacts. Using this technique, the prediction of future noise levels where traffic is the dominant noise source is based on a calculation using measured existing noise levels and predicted changes in traffic volumes to determine No-Action and With-Action noise levels. Vehicular traffic volumes are converted into Passenger Car Equivalent (PCE) values, for which one medium-duty truck (having a gross weight between 9,900 and 26,400 pounds) is assumed to generate the noise equivalent of 13 cars, and one heavy-duty truck (having a gross weight of more than 26,400 pounds) is assumed to generate the noise equivalent of 47 cars, and one bus (vehicles designed to carry more than nine passengers) is assumed to generate the noise equivalent of 18 cars. Future noise levels are calculated using the following equation:

F NL - E NL = 10 * log10 (F PCE / E PCE)

where:

F NL = Future Noise Level
E NL = Existing Noise Level
F PCE = Future PCEs
E PCE = Existing PCEs

Sound levels are measured in decibels and therefore increase logarithmically with sound source strength. In this case, the sound source is traffic volumes measured in PCEs. For example, when traffic is the dominant noise source at a particular location, if the existing traffic volume on a street is 100 PCE and if the future traffic volume increased by 50 PCE to a total of 150 PCE, the noise level would increase by 1.8 dBA. Similarly, if the future traffic increased by 100 PCE, or doubled to a total of 200 PCE, the noise level would increase by 3.0 dBA.

NO-ACTION CONDITION

Using the methodologies described above, No-Action noise levels for the 2025 analysis year were calculated at the 10 mobile source analysis receptors. These No-Action values are shown in Table O-4. The Receptor Site 3 Existing Leq values for weekday peak periods are pulled from the 2014 LL report. The remainder of the values are based on the June 2019 measurements and predictions. The predictions for Receptor Sites B, C, D, 1, and 2 are based on proportional modeling and the predictions for Receptor Sites A, E, 3, 4, and 5 are based on traffic noise modeling.

Table O-4: 2025 No-Action Condition Noise Levels (in dBA)

Site	Day	Time	Existing Leq	No-Action Leq	Leq Change	No-Action L10
A	Weekday	AM	70.8	70.8[1]	0.0	74.0
		MD	70.9	70.9[1]	0.0	75.1
		PM	71.0	71.0[1]	0.0	73.3
	Saturday	MD	70.4	70.4[1]	0.0	72.3
B	Weekday	AM	74.2	75.5	1.3	78.5
		MD	74.8	76.7	1.9	80.6
		PM	73.8	75.9	2.1	78.6
	Saturday	MD	67.9	69.0	1.1	71.0
C	Weekday	AM	73.7	75.2	1.5	78.9
		MD	74.5	76.2	1.7	79.3
		PM	72.9	74.6	1.7	77.3
	Saturday	MD	70.6	71.9	1.3	74.3
D	Weekday	AM	76.2	77.2	1.0	79.4
		MD	77.3	79.3	2.0	82.4
		PM	72.9	74.9	2.0	77.6
	Saturday	MD	71.9	72.6	0.7	72.5
E	Weekday	AM	69.6	71.1[3]	1.5	74.7
		MD	71.6	74.8[3]	3.2	78.6
		PM	70.9	73.6[3]	2.7	75.6
1	Weekday	AM	79.3	80.2	0.7	83.2
		MD	76.7	78.1	1.4	82.2
		PM	78.4	78.4	0.0	79.9
	Saturday	MD	75.5	76.3	0.8	77.9
2	Weekday	AM	74.5	75.7	1.2	80.2
		MD	87.6	89.6	2.0	81.8
		PM	71.6	73.3	1.7	76.4
	Saturday	MD	71.0	72.4	1.4	75.4
3	Weekday	AM	71.9[2]	73.5[3]	1.6	73.9
		MD	71.7[2]	74.4[3]	2.7	75.5
		PM	72.3[2]	74.7[3]	2.4	76.2
	Saturday	MD	67.4	73.3[3]	5.9	73.7
4	Weekday	AM	66.8	70.0[3]	3.2	72.7
		MD	70.6	75.5[3]	4.9	80.7
		PM	69.7	72.8[3]	3.1	75.1
	Saturday	MD	66.9	70.4[3]	3.5	70.4
5	Weekday	AM	65.2	66.7[3]	1.5	69.9
		MD	70.7	74.1[3]	3.4	78.0
		PM	68.6	71.5[3]	2.9	73.5
	Saturday	MD	62.9	65.4[3]	2.5	72.4

[1] N/A: No Action Condition noise level is equal to Existing Condition as no new traffic is introduced near receptor.
[2] Existing Leq values from LL report.
[3] Based on TNM model.

In 2025, the maximum increase in L_{eq} noise levels for the No-Action Condition based on the proportional modeling method would be 2.1 dBA at Receptor Site B. The maximum increase based on the TNM would be 5.9 dBA at Receptor Site 3.

The predicted No-Action Condition noise levels at Receptor Sites A, C, E, and 5 remain in the "marginally unacceptable" category. The predicted No-Action Condition noise level at Receptor Sites D and 1 remain in the "clearly unacceptable" category. The noise levels at Receptor Site 3 move from the "clearly unacceptable" to "marginally unacceptable" category. The noise levels at Receptor Sites B, 2, and 4 move from the "marginally unacceptable" to "clearly unacceptable" category.

WITH-ACTION CONDITION

Using the methodologies described above, With-Action noise levels were calculated at the 10 noise receptors for the 2025 analysis year. The With-Action noise levels are shown in Table O-5. Receptor Site 3 is based on the predicted increases over the values presented in Table O-4 above. Receptor Sites 1, 2, B, C, and D are based on June 2019 measurements and proportional modeling, and Receptor Sites A, E, 4, and 5 are also based on June 2019 measurements and traffic noise modeling.

In 2025, the maximum increase in Leq noise levels for the With-Action Condition compared to the No-Action condition for all receptor sites would be 0.7 dBA. Changes of this magnitude would be barely perceptible and would not be considered a significant noise impact based on the *CEQR Technical Manual* impact criteria. In terms of CEQR noise exposure guidelines, noise levels at Receptor Sites B, D, 1, and 2 would remain in the "clearly unacceptable" category, and noise levels at Receptor Sites A, C, E, 3, and 5 would remain in the "marginally unacceptable" category. Noise levels at Receptor Site 4 would move from the "clearly unacceptable" to "marginally unacceptable" category.

Table O-5: 2025 With-Action Condition Noise Levels (in dBA)

Site	Day	Time	No-Action Leq	With-Action Leq	Leq Change	With-Action L10
A	Weekday	AM	70.8	69.8[1]	-1.0	73.0
		MD	70.9	70.8[1]	-.01	**75.0**
		PM	71.0	71.7[1]	0.7	74.0
	Saturday	MD	70.4	68.6[1]	-1.8	70.5
B	Weekday	AM	75.5	75.3	-0.2	78.3
		MD	76.7	76.8	0.1	**80.7**
		PM	75.9	75.8	-0.1	78.5
	Saturday	MD	69.0	68.9	-0.1	70.9
C	Weekday	AM	75.2	75.2	-0.1	78.9
		MD	76.2	76.0	-0.2	**79.1**
		PM	74.6	74.5	-0.1	77.2
	Saturday	MD	71.9	71.9	0.0	74.3
D	Weekday	AM	77.2	75.4	-1.9	77.6
		MD	79.3	79.3	0.0	**82.4**
		PM	74.9	74.9	0.1	77.6
	Saturday	MD	72.6	72.7	0.1	72.6
E	Weekday	AM	71.1[1]	71.7[1]	0.6	75.3
		MD	74.8[1]	74.6[1]	-0.2	**78.4**
		PM	73.6[1]	73.6[1]	0.0	75.6
1	Weekday	AM	80.2	80.3	0.2	**83.3**
		MD	78.1	78.3	0.2	82.4
		PM	78.4	78.7	0.3	80.2
	Saturday	MD	76.3	76.4	0.1	78.0
2	Weekday	AM	75.7	75.5	-0.2	80.0
		MD	89.6	89.6	0.1	**81.8**
		PM	73.3	73.3	0.0	76.4
	Saturday	MD	72.4	72.3	-0.1	75.3
3	Weekday	AM	73.5[1]	73.3[1]	-0.2	73.7
		MD	74.4[1]	74.5[1]	0.1	**75.6**
		PM	74.7[1]	73.3[1]	-1.4	74.8
	Saturday	MD	73.3[1]	72.6[1]	-0.7	73.0
4	Weekday	AM	70.0[1]	69.5[1]	-0.5	72.2
		MD	75.5[1]	74.3[1]	-1.2	**79.5**
		PM	72.8[1]	72.1[1]	-0.7	74.4
	Saturday	MD	70.4[1]	69.8[1]	-0.6	69.8
5	Weekday	AM	66.7[1]	67.2[1]	0.5	70.4
		MD	74.1[1]	73.9[1]	-0.2	**77.8**
		PM	71.5[1]	71.5[1]	0.0	73.5
	Saturday	MD	65.4[1]	65.5[1]	0.1	72.5

[1] Based on TNM model

The With-Action Condition includes the construction of a playground on the western side of Projected Development Site 1, along the waterfront. Per the *CEQR Technical Manual*, the playground is expected to be approximately 75 dBA. The nearest sensitive receptor is the project building, which is approximately 30 feet away. Based on the attenuation due to distance, the expected noise level at the building façade is less than 70 dBA. The worst case Leq along the waterfront on Site 1 is 71.1 dBA. Given that the projected Leq is higher than the playground noise levels, the required façade attenuation will mitigate playground noise and there is no significant impact.

ASSESSMENT

Attenuation Requirements

As shown in Table O-1, the *CEQR Technical Manual* has set noise attenuation values for building facades, based on exterior L10(1) noise levels. These recommended noise attenuation values are designed to maintain interior noise levels of 45 dBA or lower for residential, hotel, and community facility uses and 50 dBA for commercial office uses.

Table O-6 lists the required building attenuation values for each of the Projected and Potential Development Sites. The With-Action L_{10} noise levels were calculated using the existing noise measurements and the traffic noise analysis.

The attenuation of a composite structure is a function of the attenuation provided by each of its component parts and how much of the area is comprised of each part. Normally, a building façade consists of a wall, glazing, and any vents or louvers associated with the building mechanical systems in various ratios of area. The Proposed Project's design would include acoustically rated windows and an alternate means of ventilation (such as air conditioning) that does not degrade the acoustical performance of the façade. The buildings would be designed, including these elements, to provide a composite Outdoor-Indoor Transmission Class (OITC) rating greater than or equal to the attenuation requirements listed in Table O-6, Table O-7, and Figure O-2. By designing the Proposed Project to provide a composite OITC rating greater than or equal to the attenuation requirements listed in Table O-6, Table O-7, and Figure O-2, the proposed building would be expected to provide sufficient attenuation to achieve the CEQR interior noise level guideline of 45 dBA or lower for residential, hotel, and community facility uses and 50 dBA or lower for commercial office uses.

Table O-6: CEQR Building Attenuation Analysis Summary – By Receptor

Receptor	Maximum L_{10}	Attenuation Requirement[1] (dBA)
A	75.0	31
B	80.7	37
C	79.1	35
D	82.4	39
E	78.4	35
1	83.3	40
2	81.8	38
3	75.6	31
4	79.5	35
5	77.8	33

[1] Attenuation requirements are for residential, hotel, and community facility uses. Commercial office uses are allowed a 5 dBA reduction.

Table O-7: CEQR Building Attenuation Analysis Summary – By Development

Development Site	BBL	Building[1]	Façade Facing	Associated Receptors[2]	Maximum L_{10}	Attenuation Requirement[3] (dBA)
1	Block 4963, Lots 7/8/9	1W	Roosevelt Avenue	1	83.3	40
			East	2, 3	75.6-81.8	31-38
			West	A	75.0	31
			North	A, 3	75.0-75.6	31
		1E	Roosevelt Avenue	2	81.8	38
			Janet Place	2,3	75.6-81.8	35-38
			West	2,3	75.6-81.8	35-38
			North	3	75.6	31
2	Block 4963, Lot 65	2W	South	A, 3,	75.0-75.6	31
			East	4	79.5	35
			North	A, 4	75.0-79.5	31-35
			West	A	75.0	31
		2E	South	3	75.6	31
			East	C	79.1	35
			North	4	79.5	35
			West	4	79.5	35
3	Block 4963, Lot 85	3W	South	A, 4	75.0-79.5	31-35
			East	4	79.5	35
			North	A, C	75.0-79.5	31-35
			West	A	75.0	31
		3E	South	4	79.5	35
			College Point Boulevard	C	79.1	35
			North	C	79.1	35
			West	4	79.5	35
4	Block 4963, Lots 212/ 249	-	South	5	77.8	33
			College Point Boulevard	D	82.4	39
			North	D, E	78.4-82.4	35-39
			West	E	78.4	35
A	Block 4963, Lot 75	-	All	C	79.1	35
B[4]	Block 4963, Lot 200	-	College Point Boulevard	B	80.7	32
			All other facades	4	75.0-79.5	30

[1] "W" refers to the western building on the site, while "E" refers to the eastern building.
[2] Where multiple receptors are associated, the distance required is outlined in the E-Designation.
[3] Attenuation requirements are for residential, hotel, and community facility uses. Commercial office uses are allowed a 5 dBA reduction.
[4] As proposed use for Site B is commercial office, required attenuation values reflect 5 dBA reduction.

To implement the attenuation requirements shown above, the project sites will be mapped with (E) designations for noise specifying the appropriate amount of window/wall attenuation. This also requires alternate means of ventilation, such as air conditioning, so that windows may remain closed while fresh air is provided. The minimum required attenuation for the Projected and Potential Development Sites are shown in Table O-7: Building Attenuation Analysis Summary. The following Noise (E) designation E-557 will be mapped on the site:

Block 4963, Lots 7/8/9 (Development Site 1W): To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 40 dBA window/wall attenuation on facades facing Roosevelt Avenue and 38 dBA of attenuation on portions of facades facing the eastern lot line within 50 feet of Roosevelt Avenue and 31 dBA of attenuation on all other facades to maintain an interior noise level not greater than 45 dBA for residential, hotel, and community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lots 7/8/9 (Development Site 1E): To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 38 dBA window/wall attenuation on all facades facing Roosevelt Avenue or portions of façades facing Janet Place or western lot line within 50 feet of Roosevelt Avenue and 31 dBA of attenuation on all other facades to maintain an interior noise level not greater than 45 dBA for residential, hotel, and community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 65 (Development Site 2W): To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on all facades facing the eastern lot line or portions of façade facing the northern lot line beyond 180 feet from the northwest corner of the zoning lot and 31 dBA of attenuation on all other facades to maintain an interior noise level not greater than 45 dBA for residential, hotel, and community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 65 (Development Site 2E): To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 35 dBA of attenuation on facades facing the northern lot line or eastern lot line or western lot line and 31 dBA of attenuation on façade facing the southern lot line to maintain an interior noise level not greater than 45 dBA for residential, hotel, community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 75 (Development Site A): To ensure an acceptable interior noise environment, future residential/commercial uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on all facades to maintain an interior noise level not greater than 45 dBA for residential and hotel uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 85 (Development Site 3W): To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on all facades facing the eastern lot line or portions of facade facing the northern lot line beyond 145 feet from the northwest corner of the zoning lot or portions of façade facing the southern lot line beyond 180 feet of the southwest corner of the zoning lot and 31 dBA of attenuation on all other facades to maintain an interior noise level not greater than 45 dBA for residential, hotel, community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 85 (Development Site 3E): To ensure an acceptable interior noise environment, future residential/commercial/community facility uses must provide a closed-window condition with a minimum of 35 dBA window/wall attenuation on all facades to maintain an interior noise level not greater than 45 dBA for residential, hotel, and community facility uses or not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lot 200 (Development Site B): To ensure an acceptable interior noise environment, future commercial office uses must provide a closed-window condition with a minimum of 32 dBA window/wall attenuation on façade facing College Point Boulevard and 30 dBA of attenuation on all other façades to maintain an interior noise level not greater than 50 dBA for commercial office uses. To maintain a closed-window condition, an alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

Block 4963, Lots 212 and 249 (Development Site 4): To ensure an acceptable interior noise environment, future residential/commercial office/community facility uses must provide a closed-window condition with a minimum of 39 dBA window/wall attenuation on all facades facing College Point Boulevard or portions of façade facing the northern lot line within 100 feet of College Point Boulevard and 35 dBA of attenuation on all façades facing the western lot line or portions of façade facing the northern lot line beyond 100 feet from College Point Boulevard and 33 dBA of attenuation on façade facing the southern lot line to maintain an interior noise level not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial office use. To maintain a closed-window condition, an

alternate means of ventilation must also be provided. Alternate means of ventilation includes, but is not limited to, air conditioning.

With this (E) designation in place, no significant adverse noise impacts related to noise are expected, and no further analysis is warranted.

Mechanical Systems

The design of and specification for building mechanical systems, such as heating, ventilation, and air conditioning (HVAC), should be designed to meet all applicable noise regulations (such as Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Mechanical Code) to ensure that the equipment does not result in any significant increase in ambient noise levels.

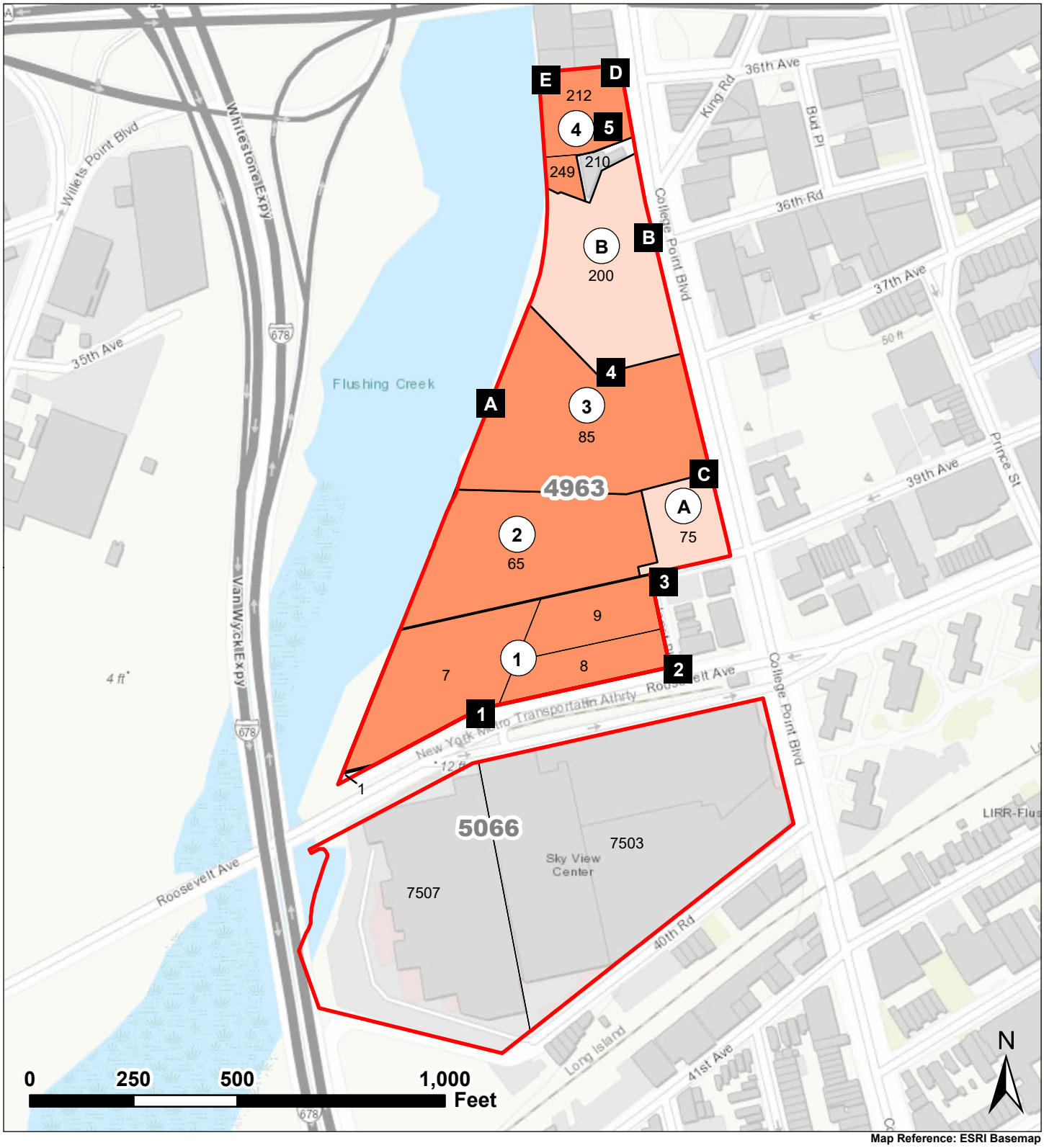
CONCLUSION

Based on the 0.7 dBA increase between the No-Action and With-Action conditions as presented above, the Proposed Project would not result in any predicted exceedances of *CEQR Technical Manual*-suggested incremental thresholds at noise receptor locations. Therefore, the implementation of the proposed Special Flushing Waterfront District would not have any significant adverse noise impacts.

FIGURE O-1

SPECIAL FLUSHING WATERFRONT DISTRICT

NOISE RECEPTOR LOCATIONS



Map Reference: ESRI Basemap

Project Area

Projected Development Sites

Potential Development Sites

Tax Lot

4963 Tax Block

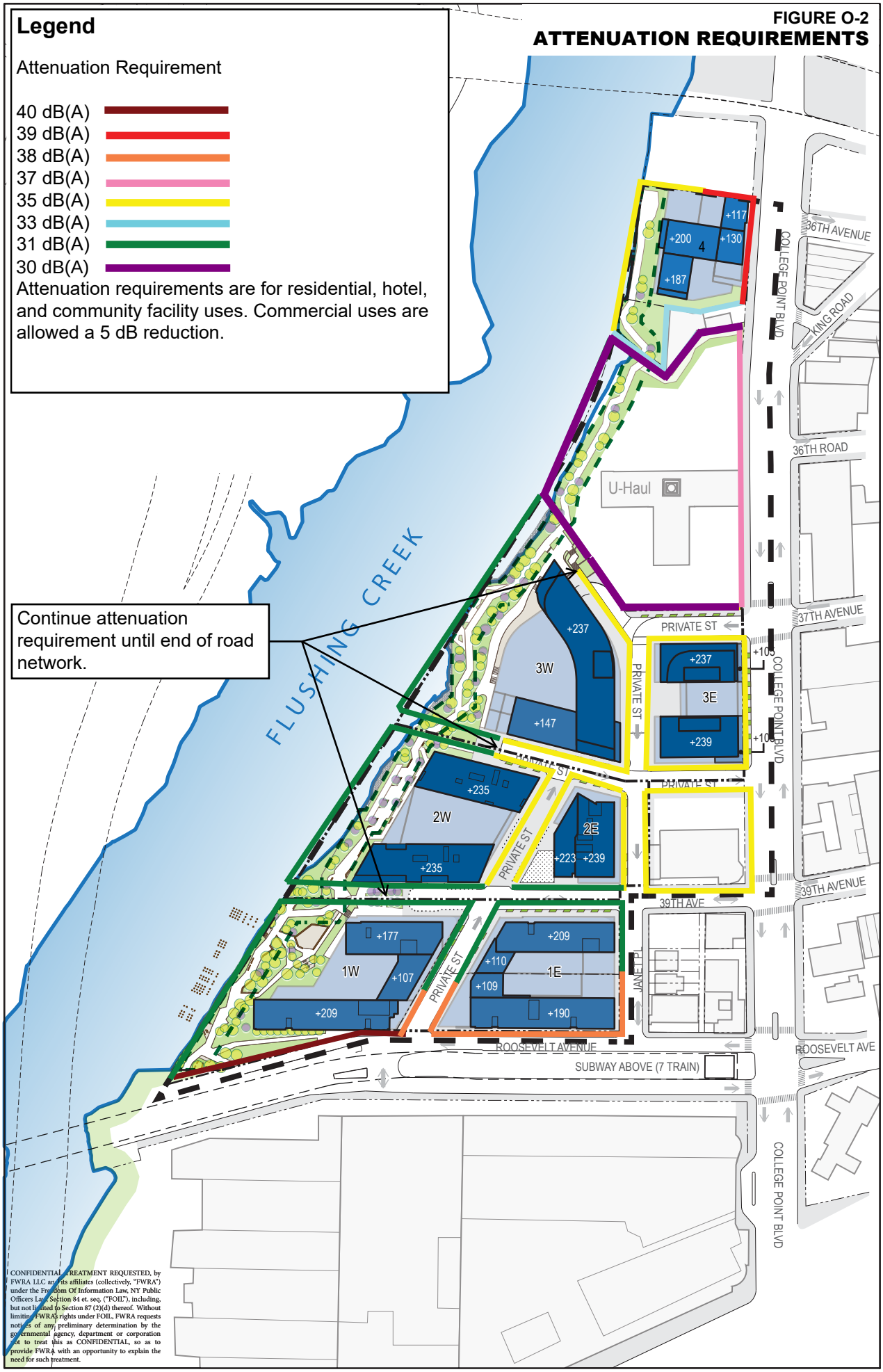
Noise Monitoring Location

FLUSHING, QUEENS, NY

LANGAN

FIGURE O-2

ATTENUATION REQUIREMENTS



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ATTACHMENT P: PUBLIC HEALTH

INTRODUCTION

As defined in the *CEQR Technical Manual,* public health is the organized effort of society to protect and improve the health and well-being of the population through monitoring; assessment and surveillance; health promotion; prevention of disease, injury, disorder, disability and premature death; and reducing inequalities in health status. The *CEQR Technical Manual* defines as its goal with respect to public health "to determine whether adverse impacts on public health may occur as a result of a proposed project and, if so, to identify measures to mitigate such effects."

For most proposed projects, a public health analysis is not necessary. According to the *CEQR Technical Manual*, where no significant unmitigated adverse impact is found in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise, no public health analysis is warranted. If an unmitigated significant adverse impact is identified in one of these analysis areas, the lead agency may determine that a public health assessment is warranted for that specific technical area.

The Proposed Actions would modify underlying and waterfront regulations related to bulk, use, parking, loading, and the public realm. As described in the relevant analyses of this EAS and in the summary below, the Proposed Actions are not anticipated to result in unmitigated significant adverse impacts in any of the technical areas that contribute to public health: air quality, water quality, hazardous materials, or noise. Therefore, a public health analysis is not warranted.

SUMMARY OF ANALYSIS AREAS

Air Quality

According to Attachment N, "Air Quality," and Attachment R, "Construction," the Proposed Actions would not result in any significant adverse air quality impacts on sensitive uses in the surrounding community, and the Proposed Project would not be adversely affected by existing sources of air emissions in the Study Area. At certain sites, an (E) designation would be mapped as part of the Proposed Actions to ensure the developments would not result in any significant air quality impacts from fossil fuel-fired heat and hot water systems. Further, the Applicant will implement certain Project Components Related to the Environment (PCRE) to ensure no significant adverse impacts related to construction activities, including the use of newer equipment and best available tailpipe reduction technologies.

Water Quality

As described in Attachment I, "Natural Resources," and Attachment K, "Water and Sewer Infrastructure," no significant adverse impacts on water quality are anticipated to result from the Proposed Actions.

Hazardous Materials

As described in Attachment J, "Hazardous Materials," no significant adverse impacts on hazardous materials are anticipated to result from the Proposed Actions. At certain sites, an (E) designation would be mapped as part of the Proposed Actions to ensure the developments would not result in significant adverse impacts related to hazardous materials.

Noise

As described in Attachment O, "Noise," and Attachment R, "Construction," no significant adverse noise impacts were anticipated to result from the Proposed Actions. Noise levels would not be high enough to significantly affect public health, as they would be below the public health noise threshold of 85 dBA from the *CEQR Technical Manual*. Additionally, the Applicant will implement PCRE that specifies requirements for select noise-generating equipment in order to ensure no significant adverse impacts related to construction.

Therefore, as described above, a public health analysis would not be warranted.

ATTACHMENT Q: NEIGHBORHOOD CHARACTER

INTRODUCTION

This section assesses the Proposed Actions' potential effects on neighborhood character. As defined in the *CEQR Technical Manual*, neighborhood character is an amalgam of various elements that give a neighborhood its distinct "personality." These elements may include a neighborhood's land use, socioeconomic conditions, open space, historic and cultural resources, urban design and visual resources, shadows, transportation, and noise conditions; however, not all of these elements contribute to neighborhood character in all cases. For a proposed project or action, a neighborhood character assessment pursuant to CEQR should first identify the defining features of the neighborhood and then evaluate whether the project or action has the potential to adversely affect one or more of these defining features. A project has the potential to affect a neighborhoods' character by a combination of moderate effects or significant adverse impacts to any of the defining features of the neighborhood. Therefore, to determine the effects of a proposed action on neighborhood character, the relevant features of neighborhood character are considered cumulatively. In addition, a significant impact identified in one of the technical areas that may contribute to a neighborhood's character is not automatically equivalent to a significant impact on neighborhood character, but rather serves as an indication that neighborhood character should be examined.

METHODOLOGY

An assessment of neighborhood character is generally needed when a proposed action has the potential to result in significant adverse impacts to the technical areas listed above. A preliminary neighborhood character assessment determines whether anticipated impacts in identified technical areas may adversely impact a defining feature of the neighborhood. The preliminary assessment first identifies the defining features and then evaluates whether the proposed project or action has the potential to adversely impact those defining features, either through the potential for a significant adverse impact in a single relevant technical area or a combination of moderate effects in the relevant technical areas. A "moderate" effect is generally defined reasonably close to the significant adverse impact threshold for a particular technical analysis area.

The key elements that define neighborhood character, and their relationships to one another, form the basis of determining impact significance. In general, the more uniform and consistent the existing neighborhood character, the more sensitive it is to change. A neighborhood that has a varied context typically is able to tolerate greater change without experiencing significant impacts. If there is no potential for the proposed project or action to affect the defining features of neighborhood character, a detailed assessment is not warranted.

Study Area

According to the *CEQR Technical Manual*, the study area for a preliminary assessment of neighborhood character is typically consistent with the study areas in other relevant technical areas assessed, such as land use and urban design. The study areas for these analysis areas range from 400

feet (urban design) to a quarter-mile (land use). For the purpose of this assessment, each technical area will be reviewed based on the study area used in its individual assessment.

PRELIMINARY ASSESSMENT

Defining Features

The Project Area is characterized by its topography and its relative lack of connection to the Downtown Flushing neighborhood. It is surrounded by several highly trafficked roadways (Northern Boulevard to the north and College Point Boulevard to the east), Flushing Creek to the west, and both the MTA Subway's IRT Flushing Line and Long Island Railroad (LIRR) Port Washington Branch to the south, which breaks up the street grid that exists to the east of the Project Area in Downtown Flushing. The topography slopes gradually from higher elevations on the eastern part of the site near College Point Boulevard, to lower elevations in the west near Flushing Creek. Although the Project Area fronts Flushing Creek, it is not defined by this natural resource. There are no existing publicly accessible connections to the waterfront, and the sloping topography of the Project Area limits views of the waterfront from the east. The existing shoreline of the Project Area is neglected, consisting of debris and remnants of timber piles. Although residential uses have historically not been prevalent in this area of Flushing, recent years have brought an increasing trend of new mid-rise, mixed-use development, due to the proximity to LaGuardia Airport, ease of access to public transportation, and a strong residential market. These include Sky View Parc within the Project Area, and the Tangram development under construction just east of the Project Area.

The Study Area is characterized by a diverse range of land uses. Historically, Main Street has been the central commercial corridor, bounded by Northern Boulevard to the north and Roosevelt Avenue to the south. This area of Main Street is heavily retail and pedestrian oriented, containing many multi-story retail buildings with large floor plates split among multiple retail tenants, as well as some office buildings and institutional uses such as St. George's Episcopal Church.

The area north of the Project Area generally contains manufacturing and industrial uses. Northern Boulevard is a heavily trafficked roadway bordered by industrial uses, although the southern section between Prince and Main Streets contains some retail storefronts. East of Prince Street and north of Northern Boulevard are a mix of uses, including commercial, mixed-use, institutional, and multi-family walk-ups. West of Prince Street is heavily industrial along the waterfront, containing both concrete and asphalt plants.

West of the Project Area across Flushing Creek is the historically industrial neighborhood of Willets Point, which primarily consists of low-density auto-related uses. Other uses in this area include the NYC Department of Transportation (DOT) Harper Street Asphalt Plant located at the northernmost point of Willets Point, west of the Whitestone Expressway along Marina Road. Willets Point has been the focus of City redevelopment efforts for over a decade, including the approval of the Special Willets Point District in 2008.

Assessment of the Potential to Affect the Defining Features of the Neighborhood

The section below discusses the potential for adverse impacts resulting from the Proposed Actions in the following technical areas that are considered in the neighborhood character assessment

pursuant to the *CEQR Technical Manual*: land use, zoning, and public policy; socioeconomic conditions; open space; historic and cultural resources; urban design and visual resources; shadows; transportation; and noise. The assessment uses the information and conclusions from the respective chapters of this EAS to identify whether the Proposed Actions would result in any significant adverse impacts or moderate adverse effects in these technical areas, and whether any such changes would have the potential to affect the defining features of neighborhood character. As described below, defining features of the Study Area would not be adversely impacted either through the potential of any single significant adverse impact or combination of moderate effects in these technical areas.

Land Use, Zoning, and Public Policy

Defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on land use, zoning, and public policy, either independently, or in combination with potential impacts in other relevant technical areas discussed in this section. Both the No-Action and With-Action conditions would modify the existing isolated land use pattern of the Project Area. In the No-Action Condition, Projected Development Sites 1, 2, and 3, as well as Potential Development Site A, would be developed pursuant to existing zoning, creating mixed-use developments containing residential, retail, hotel, and office space. Projected Development Site 4 would be developed pursuant to the existing manufacturing district with a self-storage facility.

In the With-Action Condition, the Proposed Actions would establish the Special Flushing Waterfront District (SFWD) across the entirety of the Project Area. Modifications to height, setbacks, location of uses, parking, and façade would provide flexibility and allow these sites to accommodate the currently permitted FAR, a new street network, and improved circulation and connection to Downtown Flushing through modified upland connection and shore public walkway requirements. The Proposed Actions would also modify the underlying zoning in the portions of the site generally north of 37th Avenue from C4-2 and M3-1 to M1-2/R7-1, affecting Potential Development Site B and Projected Development Site 4. The proposed mixed use district would allow commercial and residential development to occur on these sites, facilitating mixed-use development through the entire Project Area and a fully connected shore public walkway along Flushing Creek.

Development in the With-Action Condition would be consistent with current development trends in the Study Area and other planned development projects. The Proposed Actions would result in modest land use changes to the Project Area when compared to what could be developed in the No-Action Condition. Additionally, the Proposed Actions would facilitate improved upland connections and the new street network, more cohesively connecting the Project Area to the larger development pattern of Downtown Flushing. The zoning changes under the Proposed Actions would be similar to existing residential and commercial zoning districts within the Study Area. The Proposed Actions align with the initiatives and goals of the public policies that are applicable to the Study Area.

Based on this information, the Proposed Actions would not result in a significant adverse impact on neighborhood character as a result of land use, zoning, and public policy.

Socioeconomic Conditions

Defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on socioeconomic conditions either independently or in combination with

potential impacts in other relevant technical areas discussed in this section. The Proposed Actions would not result in the direct or indirect displacement of residents. Although the development in the With-Action Condition is anticipated to have the potential to result in a population with a higher median income than the median income within the Study Area, the population is only anticipated to increase by approximately 803 residents (3.98 percent) compared to the development in the No-Action Condition. Accordingly, because the increase in population would be less than five percent, the development in the With-Action Condition is not anticipated to be large enough to cause indirect displacement of residents, or broadly affect real estate market conditions.

Based on CEQR thresholds, the development in the With-Action Condition would not add to or create a retail concentration that draws a substantial amount of sales from existing businesses, to the extent that the businesses would close or vacancies would increase around Downtown Flushing.

Based on this information, the Proposed Actions would not result in a significant adverse impact on neighborhood character as a result of socioeconomic conditions.

Open Space

Defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on open space either independently or in combination with potential impacts in other relevant technical areas discussed in this section. The Project Area is within an area that is neither well-served nor underserved by open space. The Proposed Actions would not result in direct open space impacts, and a preliminary indirect residential open space analysis was warranted. The development sites would generate 803 incremental residents in the Study Area over the No-Action Condition. The With-Action Condition would result in an approximately 2.47 percent increase in the Open Space Ratio (OSR) in the Study Area compared to the No-Action Condition, due to the increased amount of publicly accessible open space that would be generated by the Proposed Project within the shore public walkway.

In the With-Action condition, the Study Area would have a passive OSR of 0.38 acres per 1,000 residents and an active OSR of 1.28 acres per 1,000 residents. The overall OSR in the With-Action Condition would be 1.66 acres per 1,000 residents, which is above the City's median community district OSR of 1.5 acres per 1,000 residents. Accordingly, the Proposed Actions are not anticipated to overburden existing open space resources.

Based on this information, the Proposed Actions would not result in a significant adverse impact on neighborhood character as a result of availability and utilization of open space resources.

Shadows

Defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on shadows either singularly or in combination with potential impacts in other relevant technical areas discussed in this section. The Proposed Actions would permit development up to 245 feet in height. As shown in Figure F-1, the proposed buildings would cast a shadow extending over a maximum radius of 1,054 feet (Shadow Study Area). The Shadow Study Area includes four sunlight-sensitive resources -- two open space resources, one natural resource, and one historic resource. The Tier 2 assessment demonstrated that one of the open space resources, Sky

View Parc's shore public walkway, is in an area that cannot be shaded by the development in the With-Action Condition, and therefore was not considered for further analysis. A Tier 3 screening assessment was required to determine if the incremental shadows from the development would reach the other resources of concern during the representative analysis days, resulting in an adverse impact. The Tier 3 assessment indicated the Proposed Actions have the potential to result in incremental shadows on the natural resource, Flushing Creek, lasting for more than four hours on each analysis day, and therefore a detailed analysis was warranted for this resource.

The detailed analysis determined that both No-Action and incremental shadows on Flushing Creek would occur from the start of each analysis day and continue to move in a clockwise direction, exiting the creek entirely by midday on the March 21st and May 6th analysis days. Incremental shadows would move entirely off Flushing Creek by 11:25 AM on the June 21st analysis day, and by 1:00 PM on the December 21st analysis day. Both No-Action and incremental shadows would be cast on Flushing Creek primarily in the morning periods, and incremental shadow would increase shadow durations on the high marsh and intertidal marsh areas of the creek by a few minutes on each analysis day. These areas would remain in direct sunlight for the remainder of the analysis period.

As discussed in Attachment I, "Natural Resources," the open waters of Flushing Creek within the Project Area are tidally influenced and are mapped by NYSDEC as Tidal Wetlands (Littoral Zone). During November 2018 and June 2019 field visits, wetland vegetation typically associated with tidal wetlands as well as invasive vegetation were encountered in several areas landward of the mudflats and debris-strewn eastern shoreline of the creek on Projected Development Sites 2 and 3. The Proposed Actions would facilitate the removal of invasive vegetation along the Project Area's shoreline and introduce native species that are tolerant of the conditions of the Project Area. Overall, incremental shadows would not have the potential to significantly affect the public's use or enjoyment of the sunlight-sensitive resources in the Study Area, and does not have the potential to adversely affect vegetation or aquatic biota.

Based on this information, the Proposed Actions would not result in a significant adverse impact on neighborhood character as a result of changes to the area's sunlight-sensitive resources.

Historic and Cultural Resources

Defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on historic and cultural resources either singularly or in combination with potential impacts in other relevant technical areas discussed in this section. As part of the historic and cultural resources assessment, a request was sent to the Landmarks Protection Commission (LPC) and the New York State Historic Preservation Office (SHPO) for comment on the architectural and archaeological significance of the Project Area. Based on this correspondence, both LPC and SHPO confirmed there are no LPC-designated landmarks in the Study Area, and that the Project Area has no archeological sensitivity. SHPO determined that the U-Haul building on Potential Development Site B is eligible for listing on the State and National Registers (S/NR). The Proposed Actions could facilitate a 177,000-gross-square-foot (gsf) structure north of the existing U-Haul building to contain commercial office space. The new building in the With-Action Condition would be separated from the U-Haul building by a 50-foot-wide upland connection and would not alter the defining architectural features that make it eligible for S/NR listing. Views of the U-Haul building, including its cupola and

clock tower, would continue to be available for public enjoyment from publicly-accessible locations along College Point Boulevard and from the shore public walkway.

Based on this information, the Proposed Actions would not result in a significant adverse impact on neighborhood character as a result of changes to the area's historic and cultural resources.

Urban Design and Visual Resources

Defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on urban design and visual resources either singularly or in combination with potential impacts in other relevant technical areas discussed in this section. The Proposed Actions would result in open space and circulation improvements over the existing and No-Action Conditions. Although there would be modifications to permissible building bulk to accommodate these improvements, the maximum permissible FAR at Projected Development Sites 1-3 and Potential Development Site A would not change. With the Proposed Actions, additional commercial and residential FAR would be facilitated on Projected Development Site 4 and Potential Development Site B. The incremental change between the With-Action and No-Action floor area would be minimal but the public realm — the private street network, provision of open space, shore public walkway, building articulation requirements, and connections across College Point Boulevard to downtown Flushing — would be improved in the With-Action Condition and would result in a better public realm and streetscape experience. Accordingly, the Proposed Actions do not have the potential to result in a significant adverse urban design and visual resource impact.

Based on this information, the Proposed Actions would not result in any significant adverse impacts on neighborhood character in relation to urban design and visual resources.

Transportation

Defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on transportation, either singularly or in combination with other relevant technical areas discussed in this section. As described in Attachment M, "Transportation," the incremental level of vehicle and pedestrian trip activity facilitated by the Proposed Actions is below the CEQR Level 1 trip generation threshold (50 peak hour vehicle trip-ends and 200 peak hour pedestrian trip-ends, respectively). However, the existing traffic circulation patterns and pedestrian elements would be modified in the With-Action Condition due to the construction of new roadways and intersections. Therefore, detailed traffic and pedestrian analyses were conducted at existing key intersections and modeled for the proposed new intersections during the weekday AM, midday, PM and Saturday midday peak hours. In conjunction with the detailed traffic and pedestrian analyses, given that the surrounding area exhibits Central Business District (CBD) characteristics and would feature a shore public walkway, an assessment of vehicular and pedestrian safety was also conducted.

For traffic operations in the With-Action Condition, five new private roadways would be created connecting to existing roadways in the study area, and three new intersections would be created (see Figure M-8). As part of the Proposed Actions, Project Components Related to the Environment (PCREs) were incorporated in the analysis. The PCREs include modifications to the type of intersection control (Two-Way Stop-Control [TWSC] vs. All-Way Stop-Control [AWSC] vs. Signal Control), signal timing at existing intersections, intersection geometry (including lane restriping and

curb extensions) and parking regulations. With the PCREs in place, all intersection approaches would operate with service conditions similar to the No-Action Condition, without any significant increase in delays. Therefore, pursuant to CEQR criteria, the Proposed Actions with PCREs would not adversely affect the future traffic operating conditions in the study area.

For pedestrian operations in the With-Action Condition, new pedestrian elements would be introduced as part of the proposed street network. Existing pedestrian elements fronting the Projected Development Sites would be reconstructed in the Proposed Actions, thus PCREs were incorporated in the analyses. The PCREs relevant to the pedestrian analyses include modifications to the type of intersection control (Unsignalized vs. Signalized), signal timing at existing intersections, and intersection pedestrian element geometry (including crosswalk striping, curb extensions, corner curb radius reconstruction and obstruction reduction/relocation/removal). With the PCREs in place, all pedestrian elements would operate with service conditions similar to the No-Action Condition without any significant decrease in pedestrian space, the primary performance measure for corners and sidewalks. Therefore, pursuant to CEQR criteria, the Proposed Actions with PCREs would not adversely affect the future pedestrian conditions in the study area.

Overall, current intersections in the study area are largely characterized by high levels of traffic. The creation of a private street network under the Proposed Actions would improve vehicular and pedestrian circulation through each Development Site and the Special Flushing Waterfront District as a whole, minimize the effects of project-generated traffic on the surrounding streets, and provide contiguous publicly accessible streets and sidewalks between the waterfront and areas east of College Point Boulevard. The Proposed Actions would improve vehicular and pedestrian safety, making the neighborhood safer for drivers and pedestrians.

Based on this information, the Proposed Actions would not result in any potentially significant adverse impacts on neighborhood character in relation to transportation.

Noise

Defining features of the neighborhood would not be adversely affected due to potential effects of the Proposed Actions on noise, either singularly or in combination with other relevant technical areas discussed in this section. The majority of existing noise levels within the Project Area fall within the "marginally unacceptable" category according to the CEQR guidelines for noise exposure, due to traffic from nearby roadways, aircraft noise from LaGuardia Airport, and proximity to nearby elevated rail lines. Existing noise levels at the Project Area were measured at 10 receptor locations, and included five 24-hour measurements, two one-hour measurements, and three 20-minute measurements. Future noise levels were calculated using a proportional modeling technique, which was used as a screening tool to estimate changes in noise levels. The No-Action and With-Action noise levels were logarithmically added to the existing noise levels to determine contributions to future noise levels. By the analysis year of 2025, the maximum increase in Leq noise levels for the With-Action Condition compared to the No-Action Condition for all receptor sites would be 1.6 dBA. Changes of this magnitude would be barely perceptible and would not be considered a significant noise impact based on the *CEQR Technical Manual* impact criteria.

The results of the building attenuation analysis indicate that to meet interior noise level requirements, building attenuation would be required for the Proposed Project, ranging from 31 - 40 dBA depending on proximity to noise sources. The requirement for these levels of façade attenuation, along with the requirement for an alternate means of ventilation, would be included in an (E) designation for all affected privately-held Projected and Potential Development Sites.

Based on this information, the Proposed Actions would not result in any potentially significant adverse impacts on neighborhood character in relation to noise.

CONCLUSION

As stated in the *CEQR Technical Manual*, if a proposed project would have the potential to affect the defining features of the neighborhood, either through the potential for a significant adverse impact or a combination of moderate effects in relevant technical areas, then a detailed assessment is required to determine whether the proposed project may have a significant adverse neighborhood character impact. The Proposed Actions would not cause significant adverse impacts to land use, zoning, and public policy, socioeconomic conditions, open space, shadows, historic and cultural resources, urban design and visual resources, transportation, or noise. In addition, the technical areas that contribute to a neighborhood's character would not, either individually or in combination, result in moderate adverse impact on neighborhood character.

Therefore, based on the results of the preliminary assessment, there is no potential for the Proposed Actions to result in significant adverse impacts to neighborhood character, and further analysis is not warranted.

ATTACHMENT R: CONSTRUCTION

INTRODUCTION

As discussed in Attachment A, "Project Description," the Proposed Actions would facilitate nine new mixed-use buildings on four development sites (the Proposed Project). The Proposed Project would be developed in multiple phases. Construction would commence as soon as the necessary discretionary and permitting approvals and building permits are granted. The Proposed Project is expected to be complete and operational by the end of 2025. It is expected that construction activities would last approximately five years. Construction activity would occur on multiple development sites within the Project Area, such that there is the potential for several construction timelines to overlap. If the Proposed Actions were not approved, it would be the Applicant's intention to begin construction on the as-of-right No-Action development in 2020.

This chapter summarizes the construction of the Proposed Project facilitated by the Proposed Actions, and assesses the potential for significant adverse impacts during construction. 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. The types of construction equipment are also discussed, along with the expected number of workers and truck trips. Based on this information and by comparing the construction of the Proposed Project to construction of the as-of-right development that would be allowed under the No-Action Condition, an assessment of potential impacts from construction activity is conducted and the methods that may be employed to avoid significant adverse construction-related impacts are evaluated.

METHODOLOGY

According to the *CEQR Technical Manual,* construction activities, although temporary, may sometimes result in significant impacts. Construction duration, which is a critical measure to determine a project's potential for adverse impacts during construction, is categorized as short-term (less than 24 months) and long-term (24 months or more). For construction activities not related to in-ground disturbance, short-term construction generally does not warrant a detailed construction analysis. However, consideration of several factors, including the location and setting of the project in relation to other uses and the intensity of construction activities, may indicate that a project's construction activities, even if short-term, warrant analysis in additional areas such as traffic, hazardous materials, historic and cultural resources, noise, and air quality.

Construction activity would occur on multiple development sites within the same geographic area concurrently, such that there is the potential for several construction timelines to overlap. Construction is considered to be long-term, as it would take approximately five years to be completed. Thus, an assessment of potential construction impacts was prepared in accordance with the guidelines of the *CEQR Technical Manual*.

REGULATORY AGENCIES AND OVERSIGHT

Regardless of the length of the construction period, New York City has defined a number of regulations that must be adhered to. In addition to the regulatory requirements, applicants must

coordinate with New York City, New York State, and occasionally federal agencies to ensure construction is facilitated appropriately (Table R-1).

Table R-1: Construction Oversight in New York City

Agency	Area(s) of Responsibility
New York City	
Department of Buildings (DOB)	Primary oversight for Building Code and site safety
Department of Environmental Protection (DEP)	Noise, hazardous materials, dewatering, dust
Fire Department (FDNY)	Compliance with Fire Code, tank installation and operation
Department of Transportation (DOT)	Traffic land and sidewalk closures
New York City Transit (NYCT)	Bus stop relocation; any subsurface construction within 200 feet of a subway
Landmarks Preservation Commission (LPC)	Archaeological and historic architectural protection
New York State	
Department of Environmental Conservation (DEC)	Dewatering, hazardous materials, tanks, stormwater
Department of Labor (DOL)	Asbestos workers
Federal	
Environmental Protection Agency (EPA)	Air emissions, noise, hazardous materials, toxic substances
Occupational Safety and Health Administration (OSHA)	Worker safety

New York City Air Pollution Control Code

All projects, whether or not subject to the requirements of CEQR, are required to comply with the New York City Air Pollution Control Code, which regulates fugitive dust under Section 1402.2-9.11, "Preventing Particulate Matter from Becoming Air-Borne; Spraying of Asbestos Prohibited; Spraying of Insulating Material and Demolition Regulated" (Title 24 of the Administrative Code of the City of New York, Chapter 1, Subchapter 6, Section 24-146).

New York City Asbestos Control Program

The regulations of the New York City Asbestos Control Program include specific procedures that must be followed for the control of asbestos during construction. In instances where demolition of an existing building could result in release of asbestos, the qualitative analysis should document a commitment to the adherence of these measures and requirements during construction.

Required Permits from DOT's Office of Construction Mitigation and Coordination

Before receiving construction permits from the DOT (such as street opening, sidewalk construction, construction activity, or canopy permits), traffic, bicycle detour, and pedestrian access plans must be approved by the Office of Construction Mitigation and Coordination (OCMC). Pedestrian access plans should identify the extent to which any sidewalks and/or crosswalks would be closed or narrowed to allow for construction-related activity and describe how pedestrian access to adjacent land uses and uses through the area/intersections would be maintained.

New York City Noise Control Code

The New York City Noise Control Code, as amended by Local Law 113 of 2005, defines "unreasonable and prohibited noise standards and decibel levels" for the City of New York. The New York City Noise Control Code, Section 24-219, contains rules that prescribe "noise mitigation strategies, methods, procedures, and technology that shall be used at construction sites" when certain construction devices or activities occur. Additionally, the New York City Noise Control Code requires construction activities to occur between 7 AM and 6 PM Monday through Friday. Construction activities occurring outside the permitted days/hours would require prior authorization.

New York City Procedure for the Avoidance of Damage to Historic Structures

Regulations for the protection of historic structures are found in "Technical Policy and Procedure Notice (TPPN) #10/88, Procedures for the Avoidance of Damage to Historic Structures Resulting from Adjacent Construction When Subject to Controlled Inspection by Section 27-724 and for Any Existing Structure Designated by the Commissioner," issued by the New York City Department of Buildings (DOB).

CONSTRUCTION SCHEDULE

The construction schedule reflects the sequencing of construction activities as currently contemplated by the Applicant, comprised of three different ownership groups for Projected Development Sites 1 through 4. Construction of the Proposed Project would begin in October 2020 and is expected to be complete in September 2025. Construction tasks are comprised of excavation and foundation, roadway construction, superstructure, envelope and façade, interior and fit-out activities, and waterfront/shore public walkway construction. As shown in Table R-2, the four sites would be in construction concurrently.

Table R-2: Anticipated Construction Schedule – Proposed Project

Development Site	Start Month	End Month	Approximate Duration (months)
Site 1	October 2020	March 2025	54
Site 2	July 2020	November 2023	40
Site 3	October 2020	March 2025	54
Site 4	April 2021	March 2024	36
Source: United Construction & Development Group, Grand Construction & Development Group (Site 1); ZhongGeng Group (Site 2); and Top 8 Construction and Sky Materials Corporation (Sites 3 and 4).			

Figure R-1 shows a detailed schedule of each individual development site. Prior to construction, a permitting phase accounts for estimated waterfront and remediation permitting application periods. Figure R-2 presents the construction schedule for the as-of-right No-Action development.

Figure R-1: Detailed Construction Schedule – Proposed Project

Development Sites	Duration (months)	Start	End
Site 1 (United)	**54**	**Oct-20**	**Mar-25**
Permitting	*18*	*Jul-19*	*Dec-20*
Excavation & Foundation	*15*	*Oct-20*	*Dec-21*
Roadway Construction	*3*	*Jan-22*	*Mar-22*
Lots 8 & 9	27	Jan-22	Mar-24
Superstructure	*12*	*Jan-22*	*Dec-22*
All Envelope and Façade	*12*	*Jul-22*	*Jun-23*
All Interiors/ Fitout Activities	*12*	*Apr-23*	*Mar-24*
Lot 7	27	Jan-23	Mar-25
Superstructure	*12*	*Jan-23*	*Dec-23*
All Envelope and Façade	*12*	*Jul-23*	*Jun-24*
All Interiors/ Fitout Activities	*12*	*Apr-24*	*Mar-25*
Waterfront/ Shore Public Walkway	15	Jul-21	Mar-25
Site 2 (YNG)	**40**	**Jul-20**	**Nov-23**
Permitting	*18*	*Apr-19*	*Sep-20*
Excavation & Foundation	*18*	*Jul-20*	*Jan-22*
Roadway Construction	*3*	*Jan-22*	*Mar-22*
Hotel	20	Jan-22	Sep-23
Superstructure	*7*	*Jan-22*	*Aug-22*
All Envelope and Façade	*6*	*Apr-22*	*Sep-22*
All Interiors/ Fitout Activities	*19*	*Feb-22*	*Sep-23*
Residential	23	Jan-22	Nov-23
Superstructure	*12*	*Jan-22*	*Dec-22*
All Envelope and Façade	*6*	*Sep-22*	*Feb-23*
All Interiors/ Fitout Activities	*15*	*Aug-22*	*Nov-23*
Waterfront/ Shore Public Walkway	12	Jul-21	Mar-23
Site 3 (F&T)	**54**	**Oct-20**	**Mar-25**
Permitting	*18*	*Jul-19*	*Dec-20*
Excavation & Foundation	*24*	*Oct-20*	*Sep-22*
Roadway Construction	*3*	*Oct-22*	*Dec-22*
Superstructure	*24*	*Oct-21*	*Sep-23*
All Envelope and Façade	*24*	*Apr-22*	*Mar-24*
All Interiors/ Fitout Activities	*30*	*Oct-22*	*Mar-25*
Waterfront/ Shore Public Walkway	*12*	*Jan-24*	*Mar-25*
Site 4 (F&T)	**36**	**Apr-21**	**Mar-24**
Permitting	*18*	*Jan-20*	*Jun-21*
Excavation & Foundation	*12*	*Apr-21*	*Mar-22*
Superstructure	*15*	*Apr-22*	*Jun-23*
All Envelope and Façade	*12*	*Apr-22*	*Mar-23*
All Interiors/ Fitout Activities	*15*	*Jan-23*	*Mar-24*
Waterfront/ Shore Public Walkway	*12*	*Apr-23*	*Mar-24*

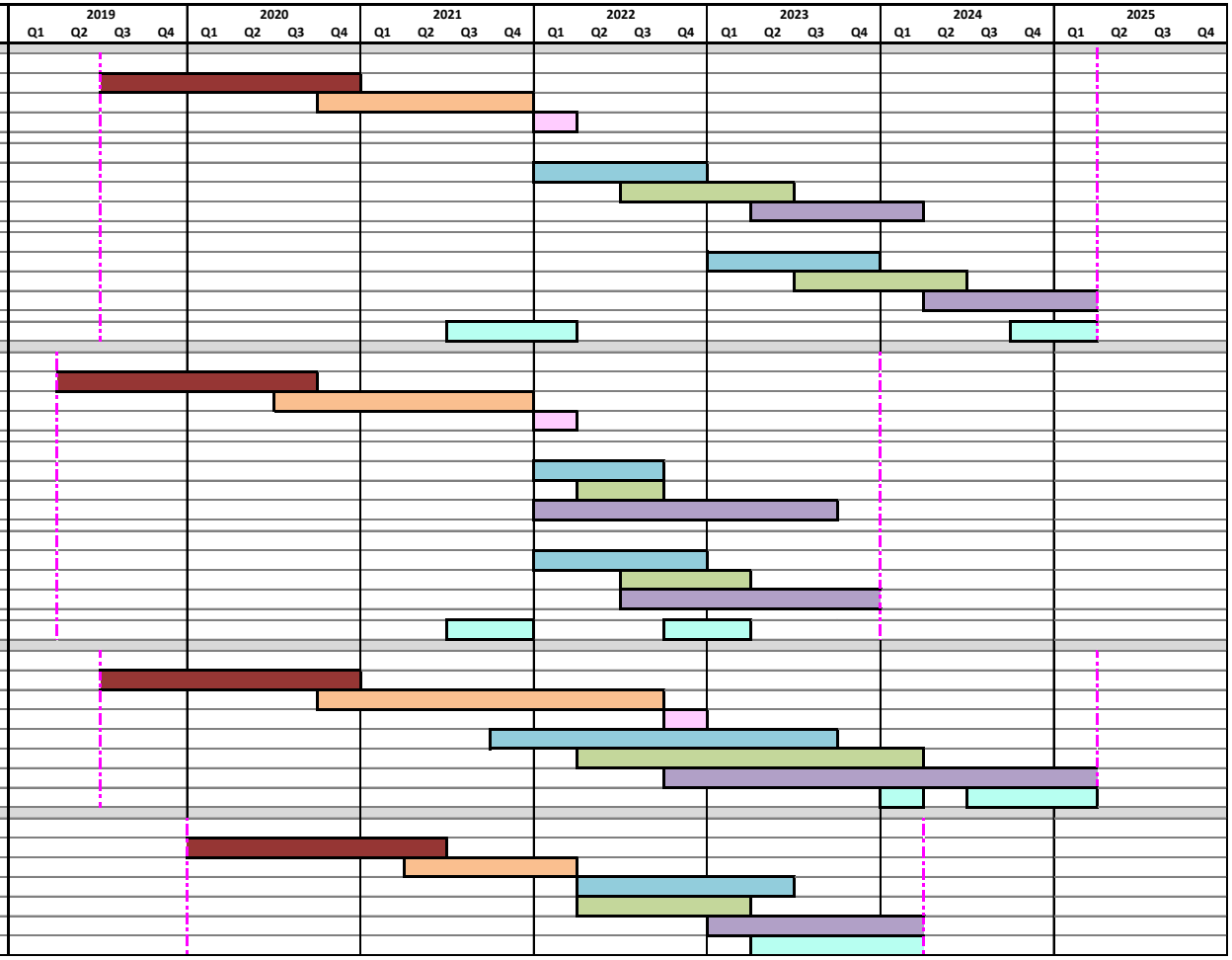
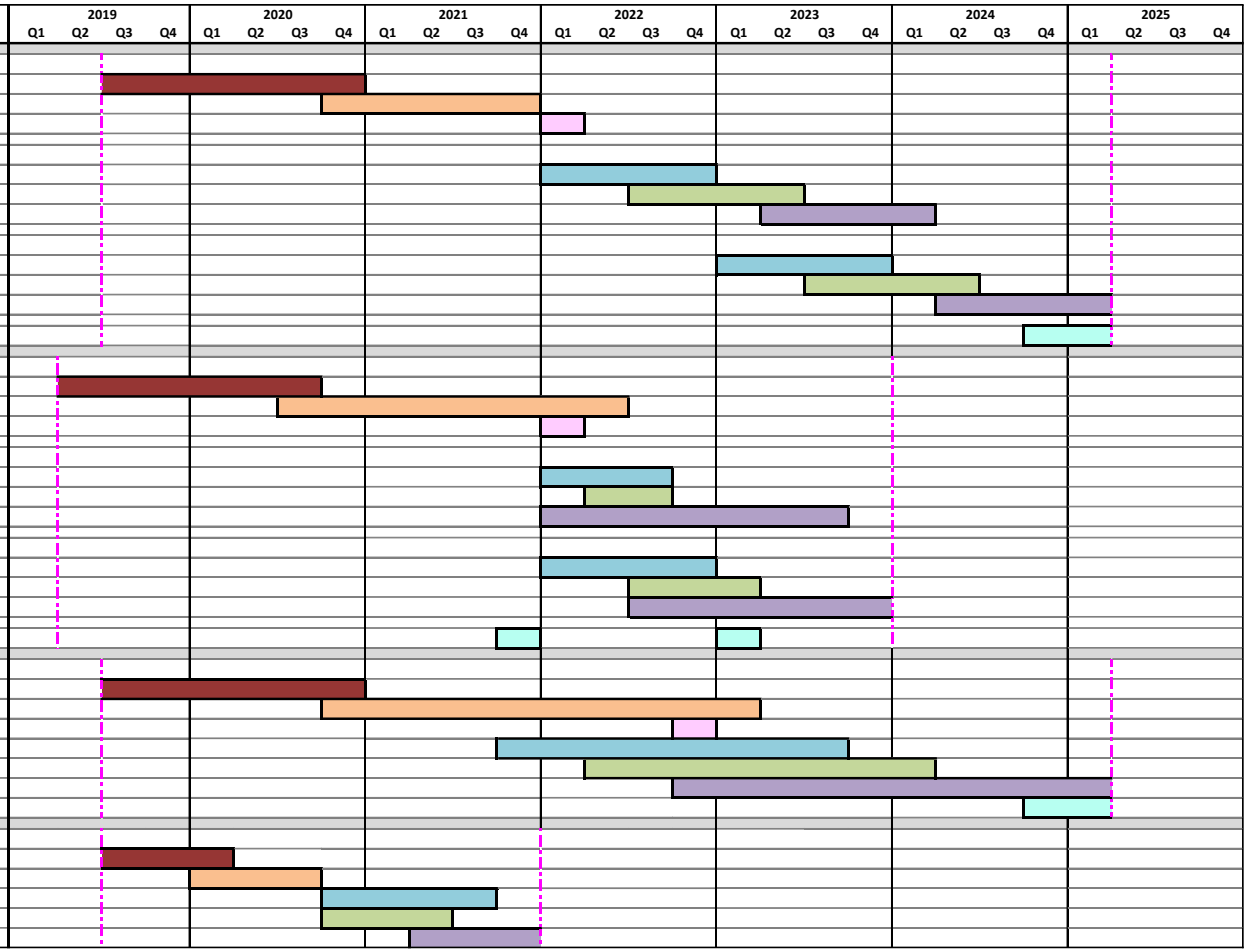


Figure R-2: Detailed Construction Schedule – No-Action Development

Development Sites	Duration (months)	Start	End
Site 1 (United)	**54**	**Oct-20**	**Mar-25**
Permitting	*18*	*Jul-19*	*Dec-20*
Excavation & Foundation	*15*	*Oct-20*	*Dec-21*
Roadway Construction	*3*	*Jan-22*	*Mar-22*
Lots 8 & 9	27	Jan-22	Mar-24
Superstructure	*12*	*Jan-22*	*Dec-22*
All Envelope and Façade	*12*	*Jul-22*	*Jun-23*
All Interiors/ Fitout Activities	*12*	*Apr-23*	*Mar-24*
Lot 7	27	Jan-23	Mar-25
Superstructure	*12*	*Jan-23*	*Dec-23*
All Envelope and Façade	*12*	*Jul-23*	*Jun-24*
All Interiors/ Fitout Activities	*12*	*Apr-24*	*Mar-25*
Waterfront/ Shore Public Walkway	6	Oct-24	Mar-25
Site 2 (YNG)	**40**	**Jul-20**	**Nov-23**
Permitting	*18*	*Apr-19*	*Sep-20*
Excavation & Foundation	*24*	*Jul-20*	*Jun-22*
Roadway Construction	*3*	*Jan-22*	*Mar-22*
Hotel	20	Jan-22	Sep-23
Superstructure	*7*	*Jan-22*	*Aug-22*
All Envelope and Façade	*6*	*Apr-22*	*Sep-22*
All Interiors/ Fitout Activities	*19*	*Feb-22*	*Sep-23*
Residential	23	Jan-22	Nov-23
Superstructure	*12*	*Jan-22*	*Dec-22*
All Envelope and Façade	*6*	*Sep-22*	*Feb-23*
All Interiors/ Fitout Activities	*15*	*Aug-22*	*Nov-23*
Waterfront/ Shore Public Walkway	6	Oct-21	Mar-23
Site 3 (F&T)	**54**	**Oct-20**	**Mar-25**
Permitting	*18*	*Jul-19*	*Dec-20*
Excavation & Foundation	*30*	*Oct-20*	*Mar-23*
Roadway Construction	*3*	*Oct-22*	*Dec-22*
Superstructure	*24*	*Oct-21*	*Sep-23*
All Envelope and Façade	*24*	*Apr-22*	*Mar-24*
All Interiors/ Fitout Activities	*30*	*Oct-22*	*Mar-25*
Waterfront/ Shore Public Walkway	*6*	*Oct-24*	Mar-25
Site 4 (F&T)	**24**	**Jan-20**	**Dec-21**
Permitting	*9*	*Jul-19*	*Mar-20*
Excavation & Foundation	*9*	*Jan-20*	*Sep-20*
Superstructure	*12*	*Oct-20*	*Sep-21*
All Envelope and Façade	*9*	*Oct-20*	*Jun-21*
All Interiors/ Fitout Activities	*9*	*Apr-21*	*Dec-21*



If the Proposed Actions were not approved, it would be the Applicant intention to begin construction on the as-of-right No-Action development in January 2020 and be complete in March 2025. Construction tasks would also consist of excavation and foundation, roadway construction, superstructure, envelope and façade, interior and fit-out activities, and waterfront/shore public walkway construction. As shown on Table R-3, absent the Proposed Actions, construction on Projected Development Sites 1-3 would be the same duration because the overall development program, including square footages and land uses, would be the same. Projected Development Site 4 would require approximately 24 months, as compared to 36 months for the Proposed Project. Construction on this site would commence 15 months earlier, during the first quarter of 2020. This site would be developed with a self-storage facility in the No-Action Condition. As the only site subject to a zoning change, the With-Action Condition reflects a different use (a mixed residential and commercial development) and square footage than the No-Action Condition development.

Table R-3: Anticipated Construction Schedule – No-Action Development

Development Site	Start Month	End Month	Approximate Duration (months)
Site 1	October 2020	March 2025	54
Site 2	July 2020	November 2023	40
Site 3	October 2020	March 2025	54
Site 4	January 2020	December 2021	24

Source: United Construction & Development Group, Grand Construction & Development Group (Site 1); ZhongGeng Group (Site 2); and Top 8 Construction and Sky Materials Corporation (Sites 3 and 4).

Permitting Needs

All waterfront and remediation permitting needs have been factored into the overall construction schedules for both the Proposed Project and the No-Action development (Figures R-1 and R-2). Generally, waterfront permitting requires a Joint Permit Application (JPA) that would be submitted to the New York State Department of Environmental Conservation (NYSDEC) and the U.S. Army Corps of Engineers (USACE), which requires a six-month review process. Following the provision of the JPA, an application is submitted to NYC Small Business Services (SBS), a process that takes approximately three months. On all of the development sites, the waterfront area is located far enough from the excavation/foundation work that shore stabilization is not required prior to excavation; excavation activities would not destabilize the shoreline.

Remediation permitting requires approval by the Mayor's Office of Environmental Remediation (OER) or the New York State Brownfield Cleanup Program (BCP), depending on the remediation program chosen, which differs by development site. These approvals have been factored into the permitting phase, and the remediation processes has been factored into the permitting and excavation and foundation stage of the construction schedule as follows:

- Projected Development Site 1 was almost fully excavated upon purchase by the Applicant, so only minor soil remediation activities would occur during the excavation and foundation phase;

- Construction of Projected Development Site 2 would require a deep foundation and involve remediation through the New York State BCP Program. The clean-up work -- support of

excavation, soil excavation and disposal, dewatering and groundwater treatment, and installation of a waterproofing membrane -- would be an approximately eight-month process and would occur prior to the excavation and foundation stage, during permitting; and

- For Projected Development Sites 3 and 4, a remedial action plan (RAP) is currently being developed and would be approved through the State or City BCP Program, the timing of which has been accounted for in the permitting phase of the construction schedule. Remediation would then occur concurrently with excavation activities.

Additionally, the Applicant plans to obtain Temporary Certificates of Occupancy (TCOs) for some part of the development prior to full build-out of the development sites. As a condition of obtaining TCOs, and as memorialized in the Restrictive Declaration for the Proposed Project, the Applicant would be required to complete a portion of the site's public waterfront access (upland connections and shore public walkway), as shown in DCP's phasing proposal in Appendix L. The waterfront/shore public walkway phase of the Proposed Project's construction schedule reflects the timing of when the Applicant plans to obtain the TCOs for the eastern portion of the sites, and thus when the Applicant would be required to complete a portion of the waterfront access.

GENERAL CONSTRUCTION PRACTICES

Hours of Work

Construction activities will follow New York City laws and regulations, which allows construction work to generally begin at 7:00 AM on weekdays, with workers arriving to prepare work areas between 6:00 AM and 7:00 AM. Construction activities would typically finish around 3:30 PM, but on occasion can be extended to finish specific tasks, such as finishing a concrete pour of a floor deck. In the case of an extended workday, construction activities would last until about 6:00 PM and would only include workers involved in the task requiring additional work time.

Occasionally, Saturday or overtime hours may be required to complete some time-sensitive tasks. A permit from DOB and approval of a noise mitigation plan from the DEP may be required for weekend work. The New York City Noise Control Code limits construction to weekdays between the hours of 7:00 AM and 6:00 PM and sets noise limits for specific pieces of construction equipment. Construction activities occurring after hours may be permitted only to accommodate: (i) emergency conditions; (ii) public safety; (iii) construction projects by or on behalf of city agencies; (iv) construction activities with minimal noise impacts; and (v) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. Similar to an extended workday during the week, only workers and equipment needed to complete the specific task during weekend work are required. The typical weekend workday would be on Saturday from 7:00 AM to 5:00 PM, therefore the level of activity for any weekend work would be less than a normal workday.

Sidewalk Lanes and Closures

Traffic lanes and sidewalks would be closed or protected during the construction period at varying lengths of time. The Office of Construction Mitigation and Coordination (OCMC) within NYCDOT reviews and approves all Maintenance and Protection Traffic (MPT) plans, which identify any

planned sidewalk or lane closures and staging for all construction sites. Additionally, coordination with NYCDOT will be made to determine the appropriate measures to ensure pedestrian safety surrounding the development sites.

Depending on the stage of construction, truck movements would generally occur between 6:00 AM and 3:00 PM. No rerouting of traffic is anticipated during construction activities and all moving lanes on streets are expected to be available to traffic at all times. Due to construction activities, there would be temporary closing of some street lanes or sidewalks, but pedestrian circulation and access would be maintained through the use of a temporary sidewalk or be diverted to walk on the opposite side of the street. Additionally, the use of sidewalk enclosures or sidewalk bridges can be implemented.

Deliveries and Access

The work areas for each site would be fenced off and limited access points for workers and construction-related trucks would be provided. Both workers and trucks that are not needed on the development site will not be granted entry. Additionally, besides the required workers on site, both security guards and flaggers may be posted as necessary and security guards may patrol the development sites after hours and over the weekends to prevent unauthorized access. The gates at each development site would be locked and closed after hours.

Material deliveries to the development sites would be controlled and scheduled, with both workers and trucks required to pass through security points. Flaggers would be located at each of the entry gates to assist delivery schedules as well as provide traffic aid to trucks as they enter and exit the on-street traffic streams.

Rodent Control

Construction contracts may include provisions for a rodent control program. Before the start of construction, the contractor would survey and bait the appropriate areas and provide for proper site sanitation as necessary. During construction, the contractor would carry out a maintenance program as necessary and signage on all baiting areas would be posted to protect the community along with coordination with appropriate public agencies. Additionally, only EPA and DEC registered rodenticides would be permitted. A rodent control program would be required to be implemented in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

PRIMARY CONSTRUCTION TASKS

Excavation and Foundation

Projected Development Sites 1, 2, and 3 are vacant and would not require any demolition activities. Projected Development Site 4 has a small 2,800 gross-square-foot (gsf) building that would be demolished, which has been accounted for during the excavation and foundation stage.

Sheeting would be installed to hold back soil around the excavation area and excavators would then be used to excavate soil. Below-grade elements and foundations would be built for all sites. Equipment that would be used during the foundation process include the use of bar benders, compactors, compressors, front end loaders, dozers, pumps (concrete), impact pile drivers, gradalls,

vibratory concrete mixers, generators, and mobile cranes. Vehicles during this construction stage would include dump trucks, flatbed trucks, pickup trucks, and concrete mix and pump trucks. These trucks would assist the excavation and foundation process through the removal of excavated soil from the sites and transport the soil to other construction sites, to a licensed disposal facility, or elsewhere within the Project Area.

Dewatering

The sites would not be waterproofed after excavation until a slab-on-grade is built creating the potential for water to accumulate in the excavated area. Water from rain and snow collected in the excavation area during construction would be removed as necessary using a dewatering pump. If dewatering is required, it would be performed in accordance with DEP sewer use requirements. Testing would be required to protect against contaminated groundwater before it can be discharged into the existing sewer system.

Roadway Construction

The construction schedule assumes that roadway construction on each site would occur after the completion of the excavation and foundation stage. The roadway network would be rough-graded during the excavation and foundation stage, using excavated soils suitable for on-site reuse. Soils would be reviewed for environmental and geotechnical compliance prior to placement. During the rough-grading operation, utilities within the private roadways (storm drainage, sanitary sewer, domestic water, and electric for site lighting) would be installed. Once the earthwork operation is complete, and the roadway network is at final grade, the gravel subbase for the roads would be placed. The gravel would act as temporary construction access for the superstructure, facade, and fit out phases. Prior to the opening of any building, the final binder and top courses would be installed.

Superstructure

The superstructure of a building would include the building's framework 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 rooms, core stairs, and restroom areas. A mobile crane or a tower crane would typically be brought onto the site during the superstructure stage to lift structural components, façade elements, and other large materials. Superstructure activities would typically also require the use of rebar benders, welding equipment 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.

Envelope and Façade

The superstructure process mentioned above would overlap with construction activity on the various building envelopes and façades. During this stage of construction, the exterior façade of each site would be installed and elements of the façades would arrive on trucks and lifted into place for attachment by a crane.

Interior and Fit-Out Activities

This final stage of construction would typically 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 building system (e.g., electrical system, fire alarm, plumbing, etc.) testing and inspections would also be part of this stage of construction. Equipment used during interiors and finishing would generally include hoists, forklifts, scissor lifts, delivery trucks, and a variety of small hand-held tools.

NUMBER OF CONSTRUCTION WORKERS AND MATERIAL DELIVERIES

Table R-4 shows the estimated average number of daily workers and deliveries to all sites by calendar quarter for the duration of the construction period for the Proposed Project. Construction would begin in the third quarter of 2020 and conclude with full build-out of the Project Area in the first quarter of 2025. The average number of workers throughout the entire construction period would be approximately 558 per day. The peak number of workers would reach 1,020 per day during the second quarter of 2023. For truck deliveries, the average number of truck deliveries would be 59 per day, and the peak of 107 truck deliveries per day would occur in the third quarter of 2022.

Table R-4: Proposed Project - Average Number of Daily Workers and Trucks by Year and Quarter

Year	2019				2020				2021				2022			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Workers	0	0	0	0	0	0	120	200	220	280	310	390	665	820	888	960
Trucks	0	0	0	0	0	0	20	60	60	70	75	85	95	87	107	85
Year	2023				2024				2025				Total			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	Average		Peak	
Workers	995	1,020	950	820	580	370	320	350	350	0	0	0	558		1,020	
Trucks	72	76	66	46	31	18	18	23	23	0	0	0	59		107	

Sources:
Projected Development Site 1- United Construction & Development Group, Grand Construction & Development Group
Projected Development Site 2- ZhongGeng Group
Projected Development Site 3- Top 8 Construction, F&T Group, and Sky Materials Corp.
Projected Development Site 4- Top 8 Construction, F&T Group, and Sky Materials Corp.

Table R-5 shows the estimated average number of daily workers and deliveries to all sites by calendar quarter for the duration of the construction period for the No-Action development. Construction would begin in the first quarter of 2020 and conclude with full build-out of the Project Area in the first quarter of 2025. The average number of workers throughout the entire construction period would be approximately 531 per day. The peak number of workers would reach 930 per day during the second and fourth quarters of 2022. For truck deliveries, the average number of truck deliveries would be 64 per day, and the peak of 121 truck deliveries per day would occur in the second quarter of 2022.

Table R-5: No-Action development - Average Number of Daily Workers and Trucks by Year and Quarter

Year	2019				2020				2021				2022			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Workers	0	0	0	0	40	40	195	375	395	515	495	505	780	930	843	930
Trucks	0	0	0	0	10	10	35	95	95	97	96	98	119	121	116	106
Year	2023				2024				2025				Total			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	Average		Peak	
Workers	880	845	855	725	445	375	305	335	335	0	0	0	531		930	
Trucks	96	61	61	41	19	18	13	18	18	0	0	0	64		121	

Sources:
Projected Development Site 1- United Construction & Development Group, Grand Construction & Development Group
Projected Development Site 2- ZhongGeng Group
Projected Development Site 3- Top 8 Construction, F&T Group, and Sky Materials Corp.
Projected Development Site 4- Top 8 Construction, F&T Group, and Sky Materials Corp.

Table R-6 shows the net incremental average number of daily workers and deliveries to all sites by calendar quarter for the duration of the construction period of the Proposed Project and the No-Action development. The net incremental average number of workers throughout the entire construction period would be approximately -25 per day. The peak incremental number of workers would reach 175 per day during the second quarter of 2023. For truck deliveries, the net incremental average number of truck deliveries would be -11 per day, and the net incremental peak of 15 truck deliveries per day would occur in the second quarter of 2023.

Table R-6: Net Incremental - Average Number of Daily Workers and Trucks by Year and Quarter

Year	2019				2020				2021				2022			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Workers	0	0	0	0	-40	-40	-75	-175	-175	-235	-185	-115	-115	-110	45	30
Trucks	0	0	0	0	-10	-10	-15	-35	-35	-27	-21	-13	-24	-34	-9	-21
Year	2023				2024				2025				Total			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	Average		Peak	
Workers	115	175	95	95	135	-5	15	15	15	0	0	0	-25		175	
Trucks	-24	15	5	5	12	0	5	5	5	0	0	0	-11		15	

NO-ACTION CONDITION

Absent the Proposed Actions, Projected Development Sites 1, 2, and 3 would be developed to the maximum permitted FAR pursuant to the existing C4-2 zoning. Building heights would rise to approximately 175 feet (including penthouse) per special waterfront zoning regulations (ZR Section 62-341), not including the bulkhead. These buildings would consist of high lot coverage buildings with active ground floor uses, and residential towers atop commercial podiums. Under C4-2 zoning, parking is required for 70 percent of market-rate dwelling units. For commercial uses, one space per eight hotel rooms and one space per 300 sf of retail and office uses would be required. New access driveways would be established along the prolongations of 39th Avenue and 37th Avenue. These driveways would provide access to each individual site, but would not provide for internal circulation among the development sites and thus would not be considered a street network. A shore public walkway with a minimum width of 40 feet would be developed within 50 feet north of Roosevelt Avenue (on Projected Development Site 1), as measured along the shoreline, and this shore public walkway would have a 20-foot width beyond 50 feet from Roosevelt Avenue (on Projected Development Sites 2 and 3).

Projected Development Site 4 would be developed under the existing M3-1 district as a self-storage facility, which permits a FAR of up to 2.0 for manufacturing and commercial uses. Projected Development Site 4 is not a part of the existing WAP, and underlying waterfront zoning does not require shore public walkways for Use Group 16 developments, which includes self-storage facilities. Parking would be provided pursuant to the requirement for warehouses and other storage establishments: one space for every three employees or every 2,000 sf of floor area.

Construction of the No-Action development would not provide pedestrian and vehicular street network improvements or incorporate the air quality emissions reduction program or noise control measures that could, if necessary, be committed to by the Applicant as part of the Proposed Project.

WITH-ACTION CONDITION

Construction activities in relation to the Proposed Project may result in some temporary disruptions in the surrounding area throughout the construction period, which is common amongst large development projects within New York City.

The Applicant will implement, as part of the Proposed Project, certain Project Components Related to the Environment (PCRE) to ensure no significant adverse impacts related to construction activities would occur. These PCREs include the following:

- Use of Newer Equipment: All non-road construction equipment with a power rating of 50 hp or greater shall meet at least the Tier 3 emissions standard to the extent practicable. Tier 3 NOx emissions range from 40 to 60 percent lower than Tier 1 emissions and considerably lower than uncontrolled engines. All non-road engines used in the project rated less than 50 hp would meet at least the Tier 2 emissions standard.

- Best Available Tailpipe Reduction Technologies: Non-road diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract with the project) including but not limited to concrete mixing and pumping trucks, would utilize the best available tailpipe (BAT) technology for reducing diesel particulate matter emissions. Construction contracts with subcontractors would specify that all diesel engines rated at 50 hp or greater would utilize DPFs, either installed by the original equipment manufacturer (OEM) or retrofitted. Retrofitted DPFs must be verified by EPA or the California Air Resources Board (CARB). Active DPFs (modeled with a 90 percent control factor) or other technologies proven to achieve an equivalent reduction may also be used.

- All generators are to be less than 25 kVA with Lmax of 70 dBA.

- For Projected Development Site 2, ventilation fans are to have a sound power level LwA of 91 dBA.

- A noise mitigation plan will be prepared and provided to DCP (directly or through environmental monitor[80]) prior to the start of construction activities.

[80] Compliance with the construction air emission and noise PCREs shall be confirmed by an onsite environmental monitor and such monitor shall be provided by applicant pursuant to the terms in the restrictive declaration.

Preliminary Assessment

In accordance with the guidelines of the *CEQR Technical Manual*, the following analyses describes a preliminary assessment of construction impacts on transportation, air quality, noise and vibration, land use and neighborhood character, socioeconomic conditions, community facilities, open space, historic and cultural resources, natural resources, and hazardous materials.

Transportation

The transportation assessment is based on a study of peak worker and truck trips, taking into account worker modal splits, vehicle occupancy and trip distribution, truck passenger car equivalents (PCEs) and arrival patterns. The construction activities for the Proposed Project were compared with the activities for the No-Action development to assess potential transportation impacts during construction. Because the potential transportation impacts during construction are based on peak construction-related activities on a quarter-by-quarter basis, the quarter with the highest level of incremental construction trip generation was assessed.

Construction Trip-Generation

Average daily construction worker and truck trips by quarter were projected for the duration of the construction period. The projected quarterly average worker and truck trips reflect worker modal splits and vehicular occupancy, arrival and departure distributions, and the PCE factor for construction truck traffic.

Peak Daily Worker Trips and Truck Deliveries

For a reasonable worst-case analysis of potential traffic-related impacts during construction, the incremental daily worker and truck trip projections in the peak quarter were used as the basis for estimating peak-hour construction trips. As indicated in Table R-6, it is expected that construction associated with the Proposed Project as compared to the No-Action development would generate the highest amount of incremental daily traffic in the second quarter of 2023, with an estimated average of 175 incremental workers and 15 incremental truck deliveries per day. The construction activities are discussed further below.

Construction Worker Modal Splits and Vehicle Occupancy

Per NYCDOT guidance, the construction worker modal split was based on a survey conducted in 2017 of workers arriving at the construction sites of the proposed Halletts Point Development in Astoria, Queens. Modal splits of 43.6 percent by auto, 1.8 percent by taxi, 50.0 percent by transit and 4.6 percent by walk; and average occupancy of 1.40 persons per vehicle are anticipated by construction workers arriving to the Project Area.

Peak-Hour Construction Worker Vehicle and Truck Trips

The majority of the construction activities at the Project Area 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 early morning), and most trucks would remain in the area for short durations, construction workers would commute during the hours before and after the work shift. For analysis purposes, each taxi trip and truck delivery was assumed to result in two 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. Furthermore, in accordance with the *CEQR Technical Manual*, the traffic analysis assumed that each truck has a PCE of 2.

The estimated daily vehicle trips were distributed throughout the workday based on projected work shift allocations and conventional arrival/departure patterns for construction workers and trucks. For construction workers, the majority (approximately 80 percent) of the arrival and departure trips would take place during the hour before and after each work shift. Construction truck deliveries typically peak during the hour before each shift (25 percent), overlapping with construction worker arrival traffic. Table R-7 presents the hourly-trip projections for the peak incremental construction quarter (second quarter of 2023) for the Proposed Project. As shown, the maximum construction-generated peak-hour vehicle trips would be approximately 350 PCEs between 6:00 AM and 7:00 AM and 282 PCEs between 3:00 PM and 4:00 PM.

Table R-7: Peak Construction Vehicle Trip Projections – Proposed Project (Q2 2023)

Hour	Auto and Taxi Trips			Truck Trips			Total					
							Vehicle Trips			PCE Trips		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
6 - 7 AM	**264**	**10**	**274**	**19**	**19**	**38**	**283**	**29**	**312**	**302**	**48**	**350**
7 - 8 AM	67	3	70	8	8	16	75	11	86	83	19	102
8 - 9 AM	0	0	0	8	8	16	8	8	16	16	16	32
9 - 10 AM	0	0	0	8	8	16	8	8	16	16	16	32
10 - 11 AM	0	0	0	8	8	16	8	8	16	16	16	32
11 AM - 12 PM	0	0	0	8	8	16	8	8	16	16	16	32
12 - 1 PM	0	0	0	8	8	16	8	8	16	16	16	32
1 - 2 PM	0	0	0	4	4	8	4	4	8	8	8	16
2 - 3 PM	1	17	18	4	4	8	5	21	26	9	25	34
3 - 4 PM	**10**	**264**	**274**	**2**	**2**	**4**	**12**	**266**	**278**	**14**	**268**	**282**
4 - 5 PM	2	50	52	2	2	4	4	52	56	6	54	60

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).

Using the same methodology, construction vehicle trip projections were also developed for the No-Action development. Table R-8 presents the hourly-trip projections for the peak incremental construction quarter (second quarter of 2023) for the No-Action development. As shown, the maximum construction-generated peak-hour vehicle trips would be approximately 288 PCEs between 6:00 AM and 7:00 AM and 236 PCEs between 3:00 PM and 4:00 PM.

Table R-8: Peak Construction Vehicle Trip Projections – No-Action Development (Q2 2023)

Hour	Auto and Taxi Trips			Truck Trips			Total					
							Vehicle Trips			PCE Trips		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
6 - 7 AM	**219**	**9**	**228**	**15**	**15**	**30**	**234**	**24**	**258**	**249**	**39**	**288**
7 - 8 AM	55	2	57	6	6	12	61	8	69	67	14	81
8 - 9 AM	0	0	0	6	6	12	6	6	12	12	12	24
9 - 10 AM	0	0	0	6	6	12	6	6	12	12	12	24
10 - 11 AM	0	0	0	6	6	12	6	6	12	12	12	24
11 AM - 12 PM	0	0	0	6	6	12	6	6	12	12	12	24
12 - 1 PM	0	0	0	6	6	12	6	6	12	12	12	24
1 - 2 PM	0	0	0	3	3	6	3	3	6	6	6	12
2 - 3 PM	1	14	15	3	3	6	4	17	21	7	20	27
3 - 4 PM	**9**	**219**	**228**	**2**	**2**	**4**	**11**	**221**	**232**	**13**	**223**	**236**
4 - 5 PM	2	41	43	2	2	4	4	43	47	6	45	51

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 R-9 shows the incremental construction trips in PCEs. Compared to the No-Action development, construction of the Proposed Project would generate 62 additional PCE trips during the 6:00 – 7:00 AM peak-hour. The incremental construction PCE trips would slightly exceed the CEQR Level 1 threshold of 50 incremental peak-hour vehicle trips. However, given that these trips would be distributed across the four construction sites and will access/egress the study area from multiple intersections, it is not anticipated that these would exceed the CEQR Level 2 threshold of 50 incremental peak-hour vehicle trips per intersection. Therefore, the construction of the Proposed Project is not anticipated to result in any significant adverse traffic impacts and further detailed analyses of traffic conditions are not warranted.

Table R-9: Incremental Peak-Hour (6:00 to 7:00 AM) Construction Vehicle Trips in PCEs

Scenario	Auto and Taxi Trips			Truck Trips			Total					
							Vehicle Trips			PCE Trips		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Peak Hour (6:00 AM to 7:00 AM)												
No-Action Development (2023 Q2)	219	9	228	15	15	30	234	24	258	249	39	288
Proposed Project (2023 Q2)	264	10	274	19	19	38	283	29	312	302	48	350
Incremental	**45**	**1**	**46**	**4**	**4**	**8**	**49**	**5**	**54**	**53**	**9**	**62**

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).

Parking

As shown in Table R-4, the peak number of average daily workers on-site during the construction of the Proposed Project would be approximately 1,020 per day, and would occur in the second quarter of 2023. Based on a survey conducted in 2017 of workers arriving at the construction sites of the proposed Halletts Point Development in Astoria, Queens, it is anticipated that 43.6 percent of construction workers would commute to the Project Area by private autos at an average occupancy of approximately 1.40 persons per vehicle. The anticipated construction activities are therefore projected to generate a maximum parking demand of 318 spaces during the weekday midday.

To assess the parking utilization in the study area, a detailed parking inventory of off-street parking facilities within a ¼-mile radius of the Project Area was conducted during a typical weekday midday period in September 2019. As shown in Figure R-3, the ¼-mile radius study area is generally bounded by 33rd Avenue to the north, Willets Point Boulevard to the west, Main Street to the east and Sanford

Avenue to the south. Based on this survey, there are 13 off-street parking facilities within a ¼-mile radius of the Project Area (see Figure R-3 and Table R-10). These parking facilities have a combined licensed capacity of 4,283 spaces. In Existing Conditions, the parking facilities operate at approximately 44.6 percent utilization during the weekday midday hours with 2,373 available off-street parking spaces within the ¼-mile radius of the Project Area.

Table R-10: Existing Conditions Off-Street Public Parking Facilities within ¼-mile

Facility/ Map Number	License Number	Business Name	Address	Licensed Capacity	Weekday Midday		
					Occupied Spaces	Vacant Spaces	Utilization (%)
1	2030870	MP Flushing LLC	40-28 College Point Boulevard	2,583	567	2,016	22%
2	NYCDOT	Flushing #4 Municipal Parking Field	Northern Boulevard	93	90	3	97%
3	2002027	Prince Tower Parking Corp.	36-36 Prince Street	162	97	65	60%
4	2047939	Clean Air Car Service & Parking Branch 3, LLC	37-20 Prince Street	200	33	167	17%
5	NYCDOT	Flushing #2 Municipal Parking Field	135-03 39th Avenue	87	87	0	100%
6	200937	LAZ Parking New York/New Jersey, LLC[1]	39-16 Prince Street	306	306	0	100%
7	2016406	SJS 39 Avenue Parking, LLC	39-07 Prince Street	126	88	38	70%
8	889309	Flushing Center, Inc.	135-20 39th Avenue	181	181	0	100%
9	1299171	Full House Parking, LLC[1]	135-11 40th Road	65	65	0	100%
10	2081940	MP Flushing 41 LLC	133-45 41st Avenue	156	120	36	77%
11	1415618	SP Plus Corporation	132-35 Sanford Avenue	84	59	25	70%
12	2087956	RKKS Group, Inc.	132-03 Sanford Avenue	105	95	10	90%
13	1416794	CP Parking Corp.	37-02 College Point Boulevard	135	122	13	90%
TOTAL				**4,283**	**1,910**	**2,373**	**44.6%**

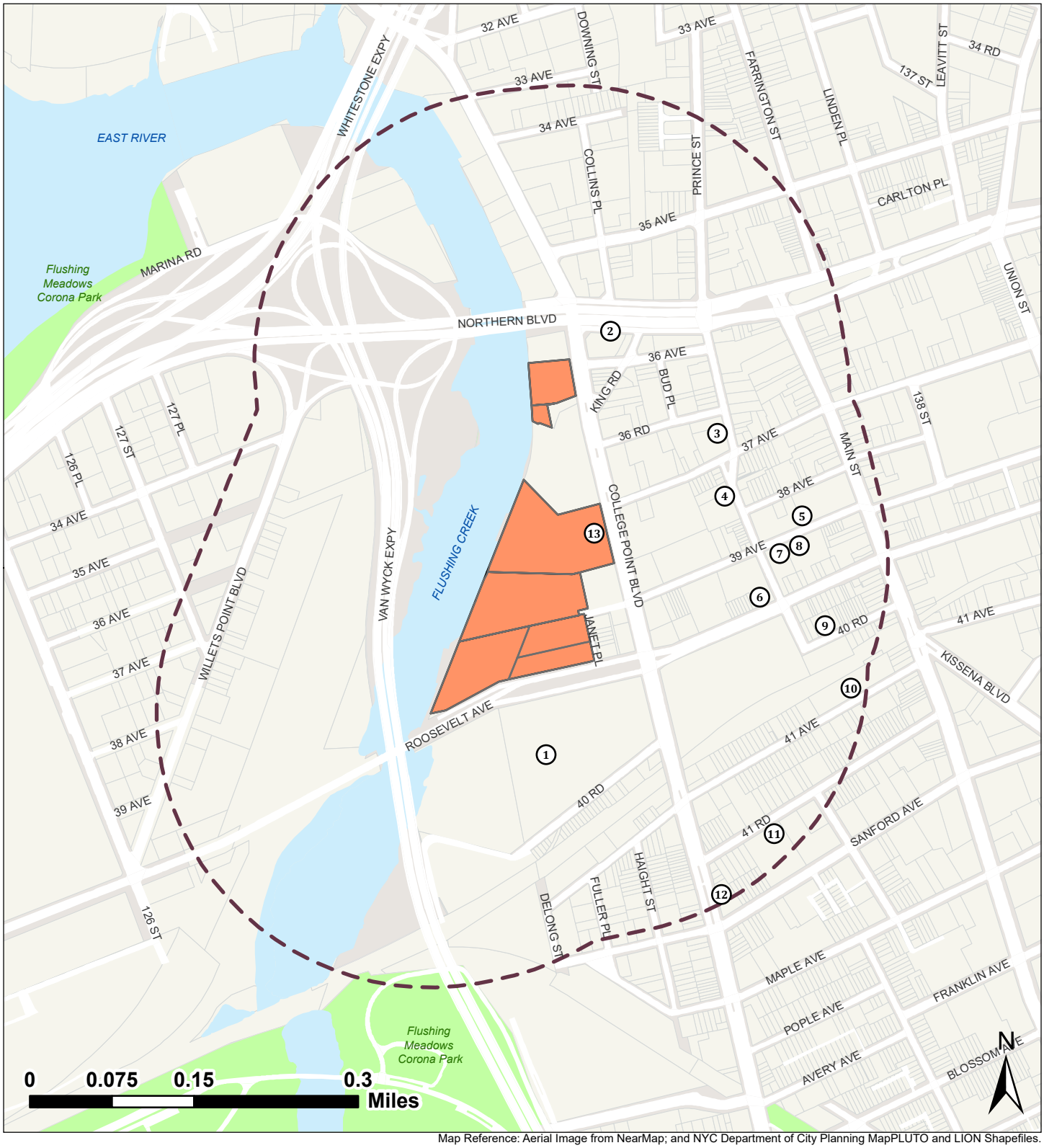
Notes:
1. No parking utilization information was available. Conservatively, 100% parking utilization was assumed.
2. Parking survey was conducted on Wednesday, September 25 and Thursday, September 26, 2019.

During construction of the Proposed Project, on-site parking for construction workers would not be provided. For the study-area off-street public parking facilities, existing occupancies in the study-area were increased in order to reflect future parking conditions. As recommended by the *CEQR Technical Manual*, a compounded annual background growth rate of 0.50 percent for *Other Queens* was applied to the existing occupied parking spaces for four years (2019 through 2023). In addition, the 37-02 College Point Boulevard surface lot would be eliminated due to the development of Projected Development Site 3. The existing parking demand located at this surface lot would be displaced to the other off-street parking facilities in the study area. As summarized above, the anticipated construction activities are projected to generate a maximum parking demand of 318 spaces during the second quarter of 2023.

FIGURE R-3

SPECIAL FLUSHING WATERFRONT DISTRICT

PARKING SURVEY



Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Projected Development Sites

0.25-Mile Radius

Tax Lot

(#) Parking Facility Number

FLUSHING, QUEENS, NY

LANGAN

Table R-11 presents the off-street parking occupancy within a ¼-mile of the Project Area during construction of the Proposed Project in the second quarter of 2023. As indicated in the table, there would be a supply of approximately 4,148 off-street parking spaces, 54.6 percent of which are anticipated to be utilized during the weekday midday period. In total, approximately 1,882 off-street parking spaces would remain available during the weekday midday period. Therefore, the construction of the Proposed Project is not anticipated to result in a parking shortfall.

Table R-11: Off-Street Parking Utilization during Construction of the Proposed Project within ¼-mile (Q2 2023)

Study Area	Existing Capacity	Parking Demand	Utilization (%)	Parking Surplus
1/4-mile radius	4,148	2,266	54.6%	1,882
Note: Peak construction-related parking demand in the Future With-Action Condition would be generated during Q2 of 2023.				

Transit

Based on a survey conducted in 2017 of workers arriving at the construction sites of the proposed Halletts Point Development in Astoria, Queens, it is anticipated that 50.0 percent of construction workers would commute to the Project Area by transit. The study area is well served by mass transit, including the No. 7 subway line, 20 New York City Transit (NYCT)/MTA bus lines and 1 Nassau Inter-County Express (NICE) bus line, as well as the Long Island Rail Road (LIRR) commuter rail system.

During the peak incremental construction quarter for workers for the Proposed Project compared to the No-Action development (Q2 2023), a maximum of 1,020 average daily construction workers for the Proposed Project and a maximum of 845 average daily construction workers for the No-Action development would arrive to the construction site. This would correspond to approximately 1,020 and 845 daily transit trips, respectively. With 80 percent of the workers arriving or departing during the construction peak hours, the estimated number of peak-hour transit trips would be 408 and 338, respectively. Table R-12 provides a summary of the peak-hour incremental transit trips during the peak incremental construction quarter. As shown in Table R-12, construction associated with the Proposed Project would generate 70 incremental peak-hour transit trips during the peak construction period, which would be below the CEQR Level 1 threshold of 200 peak-hour transit trips. Therefore, the construction of the Proposed Project is not anticipated to result in any significant adverse transit impacts and further detailed analyses of transit conditions are not warranted.

Table R-12: Incremental Peak-Hour (6:00 to 7:00 AM) Construction Transit Trip Projections (Q2 2023)

Scenario	Peak Construction Period 6:00 AM to 7:00 AM		
	Daily Construction Workers	Daily Construction Transit Trips	Peak Hour Construction Transit Trips
No-Action Development (2023 Q2)	845	845	338
Proposed Project (2023 Q2)	1,020	1,020	408
Incremental	**175**	**175**	**70**

Pedestrians

As summarized above, during the peak incremental construction quarter for workers for the Proposed Project compared to the No-Action development (Q2 2023), up to 1,020 and 845 average daily construction workers are projected for the construction of the Proposed Project and the No-Action development, respectively. With 80 percent of these workers arriving or departing during the construction peak hours (6:00 to 7:00 AM and 3:00 to 4:00 PM), the corresponding peak-hour pedestrian trips traversing the area's sidewalks, corners, and crosswalks would be approximately 816 and 676, respectively. Table R-13 provides a summary of the peak-hour incremental pedestrian trips during the peak incremental construction quarter. As shown in Table R-12, construction associated with the Proposed Project would generate 140 incremental peak-hour pedestrian trips during the peak construction period, which would be below the CEQR Level 1 threshold of 200 peak-hour pedestrian trips. Therefore, the construction of the Proposed Project is not anticipated to result in any significant adverse pedestrian impacts and further detailed analyses of pedestrian conditions are not warranted.

Table R-13: Incremental Peak-Hour (6:00 to 7:00 AM) Construction Pedestrian Trip Projections (Q2 2023)

Scenario	Peak Construction Period 6:00 AM to 7:00 AM	
	Daily Construction Workers	Peak Hour Construction Pedestrian Trips
No-Action Development (2023 Q2)	845	676
Proposed Project (2023 Q2)	1,020	816
Incremental	**175**	**140**

Air Quality

According to the *CEQR Technical Manual*, a quantitative assessment of air quality for construction activities is likely not warranted if the project's construction activities: (1) are considered short term, which for air quality assessments has generally been accepted as two years or less; (2) are not located near sensitive receptors; and, (3) do not involve the construction of multiple buildings where there is a potential for cumulative impacts from different buildings under simultaneous construction before the final build - out. If a project does not meet one or more of the criteria above, a quantitative air quality assessment could be required.

The determination whether it is sufficient to conduct a qualitative analysis of air quality emissions or whether a quantitative analysis is required cannot be made based solely on the duration of the construction period, and should take into account such factors as the location of the project site in relation to existing residential uses or other sensitive receptors, the intensity of the construction activity, and the extent to which the project incorporates commitments to appropriate emission control measures.

Because construction of the projected development sites would involve the construction of multiple buildings near sensitive receptors and the use of multiple pieces of diesel equipment, with all four of the projected development sites anticipated to be under construction for more than two years, additional analysis beyond what would consist for a qualitative analysis is warranted for the Proposed Actions. As a result, a detailed quantitative air quality assessment is required to assess if

the construction activities due to the Proposed Actions would result in a significant adverse air quality impacts and that analysis is provided herein following the "Preliminary Assessment" section of this chapter.

Noise

According to the *CEQR Technical Manual*, an assessment of noise for construction activities is likely not warranted if the project's construction activities: (1) are considered short term; (2) are not located near sensitive receptors; and, (3) do not involve the construction of multiple buildings where there is a potential for cumulative impacts from different buildings under simultaneous construction before the final build - out. If a project does not meet one or more of the criteria above, a quantitative noise assessment could be required.

The determination whether it is sufficient to conduct a qualitative analysis or whether a quantitative analysis is required cannot be made based solely on the duration of the construction period, and should take into account such factors as the location of the project site in relation to existing residential uses or other sensitive receptors, the intensity of the construction activity, and the extent to which the project incorporates commitments to appropriate noise control measures

Because construction of the development sites would involve the construction of multiple buildings near sensitive receptors and the use of multiple pieces of diesel equipment, with all development sites anticipated to be under construction for more than two years, the Proposed Project does not screen out on any of the above criteria. Therefore, a preliminary analysis was conducted. The purpose of this preliminary analysis was to determine if the potential for significant adverse noise impacts could occur during construction, and if so, to examine the feasibility of implementing certain measures would eliminate such impacts.

Impacts on community noise levels during construction of the Proposed Project could result from noise from construction equipment operation and from construction and delivery vehicles traveling to and from the construction site. Noise levels caused by construction activities vary widely and depend on the stage of construction and the location of the construction relative to receptor locations. The most significant construction noise sources are expected to be the operation of impact equipment such as pile rigs and tower cranes, as well as movements of trucks to and from each development site. Noise from construction activities and some construction equipment is regulated by the New York City Noise Control Code and by EPA. The New York City Noise Control Code requires the adoption and implementation of a noise mitigation plan for each construction site, limits construction (absent special approvals) to weekdays between the hours of 7:00 AM and 6:00 PM, and sets noise limits for certain specific pieces of construction equipment.

As discussed in Attachment A, "Project Description," while the Proposed Actions would modify underlying requirements related to bulk, use, parking, loading, and the public realm, they would not facilitate a significant increase in floor area or new or different land uses than what is currently allowed on the Project Area. Therefore, construction phasing and logistics for the No-Action Condition would be similar to the project developed under the With-Action Condition. For these reasons, the No-Action Condition includes construction noise from the No-Action development in the Project Area.

The presence of window/wall attenuation measures at noise receptor sites, such as double-glazed windows and alternate means of ventilation, is considered when evaluating locations predicted to experience noise level increments from construction in excess of *CEQR Technical Manual* impact criteria.

Construction Noise Impact Criteria

For impact determination purposes, the significance of adverse noise impacts is determined based on whether predicted incremental noise levels at sensitive receptor locations would be greater than the 3 dBA noise impact threshold criteria for two consecutive years or more. The impact threshold has been assessed for both the Existing Conditions and the No-Action Condition.

While typically, increases exceeding the noise impact threshold criteria for less than two years may be noisy and intrusive and are not considered to be significant adverse noise impacts using the *CEQR Technical Manual* methodology, additional criteria were reviewed:

- Whether predicted incremental noise levels at sensitive receptor locations would be equal to or greater than 15 dBA for 12 months or longer;
- Whether predicted incremental noise levels at sensitive receptor locations would be equal to or greater than 20 dBA for 3 months or longer; and
- Whether any predicted noise levels exceed 85 dBA.

Noise Analysis Methodology

Construction activities would be expected to result in increased noise levels as a result of: (1) the operation of construction equipment on-site; and (2) the movement of construction-related vehicles (i.e., worker trips, and material and equipment trips) on the surrounding roadways. The effect of each of these noise sources was evaluated.

Noise from the operation of construction equipment on site at a specific receptor location near a construction site is evaluated by considering 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 noise emission level of the equipment;
- The distance between the piece of equipment and the receptor;
- Topography and ground effects; and
- Shielding.

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

- The noise emission levels of the type of vehicle (e.g., auto, light-duty truck, heavy-duty truck, bus, etc.);
- Vehicular speed;
- The distance between the roadway and the receptor;
- Topography and ground effects; and

- Shielding.

Construction activity associated with the Proposed Project would be spread out over an approximately five-year period and would be concurrent throughout the Project Area. The construction activities would take place between 2020 and 2025. The number of workers, types and number of pieces of equipment, and number of construction vehicles anticipated to be operating during various construction period was determined.

Noise Reduction Measures

Construction associated with the Proposed Project would be required to follow the requirements of the New York City Noise Control Code (NYC Noise Code) for construction noise control measures. Specific noise control measures will be described in a noise mitigation plan 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 New York City Noise Control Code would be utilized from the start of construction. Table R-14 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 Project.
- Where identified, such as at Projected Development Site 2, lower CFM equipment is used.
- 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 practical.
- Where feasible and practical, construction sites would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than three minutes at the construction site based upon New York City Local Law.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.
- A properly secured impact cushion (either a commercially available model or one fabricated from scrap wood, leather, or rubber at the job site) shall be installed on top of piles that are being driven by an impact hammer.

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, which go beyond typical construction techniques, would be implemented to the extent feasible and practical:

- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations. Once building foundations are completed, delivery trucks would operate behind construction fences, where possible;

- Noise barriers constructed from plywood or other materials would be utilized to provide shielding (e.g., the construction sites would have a minimum eight-foot barrier and, where logistics allow, truck deliveries would take place behind these barriers once building foundations are completed); and
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) would be required for certain dominant noise equipment to the extent feasible and practical, i.e., generators, jack hammers, pile drivers and pumps. These barriers were assumed based on guidance from NYCDEP's Rules for Citywide Construction Noise Mitigation to offer a ten dBA reduction in noise levels for each piece of equipment to which they are applied, as shown in Table R-14. The details to construct portable noise barriers, enclosures, tents, etc. are also shown in NYCDEP's Rules for Citywide Construction Noise Mitigation.

Table R-14: Typical Construction Equipment Noise Emission Levels (dBA)

Equipment List	**DEP & FTA Typical L_{max} Noise Level at 50 feet[1]**	**L_{max} Noise Level with Path Controls at 50 feet[1,2]**
Backhoe/Loader	80	
Concrete Trowel	67[7]	
Concrete Vibrator	80	
Cranes (Crawler Cranes)	85	
Dozer	85	
Excavator	85	
Forklift	64[3]	
Generators	82	72
Generators (<25 KVA)	70	
Hoist	75[4]	
Jack Hammer	85	75
Lift	85	
Portable Cement Mixer	80	
Pile Driving Rig (Impact)	95	85
Pump	77	67
Rebar Bender	80	
Saw	76[5]	
Scissor Lift	63[6]	
Ventilation Fan	85	
Ventilation Fan (1500 CFM)	59[8]	
Welding Machines	73	

Notes:
[1] Sources: Citywide Construction Noise Mitigation, Chapter 28, Department of Environmental Protection of New York City, 2007. Transit Noise and Vibration Impact Assessment, FTA, 2006
[2] Path controls include portable noise barriers, enclosures, acoustic panels, and curtains, whichever feasible and practical.
[3] Based on product literature
[4] Based on "Noise Control for Construction Equipment and Construction Sites" for Hydro Quebec, 1985
[5] Based on FTA Manual
[6] Based on product literature
[7] Based on noise certifications for Columbia Manhattanville Construction project
[8] Based on Greenheck Sidewall Exhaust Fan for Projected Site 2

Receptor Sites

Noise measurement locations were used to determine the baseline existing noise levels, and receptor locations close to the development sites were selected as discrete noise receptor sites for the

construction noise analysis. Noise measurement locations match the existing noise level measurement locations in Attachment O, "Noise." These receptors were located directly adjacent to the development sites. Each receptor site was the location of a residence or other noise-sensitive use. The receptor sites selected for analysis are representative of other noise receptors in the immediate area and are the locations where maximum With-Action impacts due to construction would occur. Noise level increases were predicted for these representative noise receptor locations, and the geographic extent of potential noise impacts was determined. The construction schedule was used to determine duration of the construction noise levels and aided in determining which receptors would experience construction noise levels that exceed the noise impact threshold criteria for two consecutive years or more. The construction schedule and analysis included the potential for development sites to become sensitive receptors during the overall construction period (i.e., a residential building opening to tenants while the adjacent hotel is under construction).

Construction Noise Impact Criteria

For impact determination purposes, the significance of adverse noise impacts is determined based on whether predicted incremental noise levels at sensitive receptor locations would be greater than the 3 dBA noise impact threshold criteria for two consecutive years or more. The impact threshold has been assessed for both the Existing Conditions and the No-Action Condition.

While typically, increases exceeding the noise impact threshold criteria for less than two years may be noisy and intrusive and are not considered to be significant adverse noise impacts using the *CEQR Technical Manual* methodology, additional criteria were reviewed:

- Whether predicted incremental noise levels at sensitive receptor locations would be equal to or greater than 15 dBA for 12 months or longer;
- Whether predicted incremental noise levels at sensitive receptor locations would be equal to or greater than 20 dBA for 3 months or longer; and
- Whether any predicted noise levels exceed 85 dBA.

Construction Noise Analysis Results

Using the methodology described above and considering the noise abatement measures for source and path controls to satisfy DEP's Rules for Citywide Construction Noise Mitigation specified above, cumulative noise analyses were performed to determined maximum noise levels that would be expected to occur during each of the excavation/foundation, superstructure, interior fit-out, waterfront, and roadway construction stages.

The noise analysis results show that predicted noise levels due to construction related activities would result in an increase in noise levels that would exceed the noise impact threshold criteria during one or more months at several receptor locations.

For impact determination purposes, the significance of adverse noise impacts is determined based on whether predicted incremental noise levels at sensitive receptor locations would be greater than

the noise impact threshold criteria noted above. The impact threshold has been assessed for both the Existing Conditions and the No-Action Condition.

The noise analysis found that there are no predicted noise levels that exceed 85 dBA, which is the public health noise exposure limit defined in the *CEQR Technical Manual*. The analysis also shows that while there are no increments greater than 10 dBA, predicted noise levels would exceed the 3 dBA noise impact threshold criteria during two or more consecutive years at approximately twelve (of 90 analyzed) receptor locations. These increases are based on comparison to Existing Conditions. The maximum noise increase at the sites range from 4.3 to 9.6 dBA. All of the receptor locations were also analyzed to determine the increase over the noise impact threshold criteria as compared to the No-Action Condition. The maximum noise increase for the No-Action Condition range from 0.0 to 2.2 dBA.

At other analyzed receptor locations, exceedances of the noise impact threshold criteria that may occur during two or more consecutive years would not occur continuously for two or more consecutive years. While these receptor locations may experience construction noise levels that are readily noticeable and even intrusive, these noise level increases would be temporary and would not be considered a significant impact according to CEQR criteria.

Where projected development sites become sensitive receivers during the ongoing construction of adjacent sites, the facades will include minimum window/wall attenuation of 31 dBA for residential, hotel, and some community facility uses, or 26 dBA for commercial uses. Additionally, based on the construction schedule, new receptors would only be exposed to project construction for nine (9) quarters, starting from the earliest anticipated TCO request. Of that time, there is no exposure to excavation & foundation work or superstructure, and only six (6) quarters that include envelope and façade construction. Receptors were also accounted for on the public sidewalks that would open while construction continued. There are no predicted noise levels 85 dB(A) or higher at public sidewalks, as they are still protected by the construction barriers.

Conclusion

While there are some locations that are predicted to experience an increase of more than 3 dBA above existing conditions, all of these locations are predicted to experience noise levels within 1 dBA of the No-Action Condition. Additionally, the exceedances would be due principally to noise generated by on-site construction activities (rather than construction-related traffic), which will occur in the No-Action Condition. This noise analysis examined reasonable worst-case noise levels that would result from construction period and is therefore conservative in predicting significant increase in noise levels. Typically, the loudest noise level during each month of construction would not persist throughout the entire month. Furthermore, it is possible that the actual construction may be of less magnitude, in which case construction noise would be less intense than the analysis predicts.

Therefore, the construction of the Proposed Project is not anticipated to result in any significant adverse noise impacts and further detailed analyses of construction noise is not warranted.

Vibration

Introduction

Construction activities have the potential to result in vibration levels that may in turn result in structural or architectural damage, and/or annoyance or interference with vibration-sensitive activities. In general, vibratory levels at a receiver are a function of the source strength (which in turn is dependent upon the construction equipment and methods utilized), the distance between the equipment and the receiver, the characteristics of the transmitting medium, and the construction of the receiver building. Construction equipment operation causes ground vibrations that spread through the ground and decrease in strength with distance. Vehicular traffic, even in locations close to major roadways, typically does not result in perceptible vibration levels unless there are discontinuities in the roadway surface. With the exception of the case of fragile and possibly historically significant structures or buildings, generally construction activities do not reach the levels that can cause architectural or structural damage, but can achieve levels that may be perceptible in buildings close to a construction site. An assessment has been prepared to quantify potential vibration impacts of construction activities on structures and residences near the project sites.

Construction Vibration Criteria

For purposes of assessing potential structural or architectural damage, the determination of a significant impact was based on the vibration impact criterion used by LPC of a peak particle velocity (PPV) of 0.50 inches/second. For non-fragile buildings, vibration levels below 0.60 inches/second would not be expected to result in any structural or architectural damage. For purposes of evaluating potential annoyance or interference with vibration-sensitive activities, vibration levels greater than 65 VdB would have the potential to result in significant adverse impacts if they were to occur for a prolonged period of time.

Analysis Methodology

For purposes of assessing potential structural or architectural damage, the following formula was used:

$$PPVequip = PPVref \times (25/D)^{1.5}$$

where: PPVequip is the peak particle velocity in in/sec of the equipment at the receiver location;

PPVref is the reference vibration level in in/sec at 25 feet; and

D is the distance from the equipment to the received location in feet.

For purposes of assessing potential annoyance or interference with vibration sensitive activities, the following formula was used:

$$Lv(D) = Lv(ref) - 30\log(D/25)$$

where: Lv(D) is the vibration level in VdB of the equipment at the receiver location;

Lv(ref) is the reference vibration level in VdB at 25 feet; and

D is the distance from the equipment to the receiver location in feet.

Table R-15 shows vibration source levels for typical construction equipment.

Table R-15: Vibration Source Levels for Construction Equipment

Equipment List	PPVref (in/sec)	Approximate LV (ref) (Vdb)
Pile Driver (impact)	0.664-1.518	104-112
Bulldozer	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Source: Transit Noise and Vibration Impact Assessment, FTA-VA-90-1003-06, May 2006.		

Construction Vibration Analysis Results

The buildings and structures of most concern with regard to the potential for structural or architectural damage due to vibration would be buildings immediately adjacent to a development site. Vibration levels at all of the existing buildings and structures would be expected to be below the 0.50 inches/second PPV limit. While development sites may experience high levels of vibration, particularly during use of the pile drivers, none of the development sites would be completed during another site's foundation work. At locations further from the development sites, the distance between construction equipment and receiving buildings or structures is large enough to avoid vibratory levels that would approach the levels that would have the potential to result in architectural or structural damage.

In terms of potential vibration levels that would be perceptible and annoying, the pieces of equipment that would have the most potential for producing levels that exceed the 65 VdB limit are pile drivers. They would produce perceptible vibration levels (i.e., vibration levels exceeding 65 VdB) at receptor locations within a distance of approximately 400 feet. However, the operation would only occur for limited periods of time at a particular location and, therefore, would not result in any significant adverse impacts. In no case are significant adverse impacts from vibrations expected to occur.

Air Quality – Detailed Analysis

As noted under "Preliminary Assessment" above, it was determined that a detailed quantitative air quality assessment was warranted to determine if the construction of the Proposed Actions would result in a significant adverse air quality impacts. The methodologies and results of this analysis are described below.

Emissions from on-site construction equipment and on-road construction-related vehicles, as well as dust generated from construction activities, have the potential to affect air quality. The analysis of

potential impacts of the construction activities under the Proposed Actions includes a quantitative analysis of both on-site and off-site mobile sources of air emissions, and the overall combined impact of both sources, where applicable.

In general, much of the heavy equipment used in construction is powered by diesel engines that have the potential to produce relatively high levels of nitrogen oxides (NOx) and particulate matter (PM). Fugitive dust generated by construction activities is also a source of PM. Gasoline engines produce relatively high levels of carbon monoxide (CO). Since ultra-low-sulfur diesel (ULSD) fuel would be used for all diesel engines used in the construction under the Proposed Actions, sulfur oxides (SOx) emitted from those construction activities would be negligible, and an assessment of the resultant sulfur dioxide (SO2) levels was not included in the detailed assessment. Chapter 15, "Air Quality," contains a review of these pollutants; applicable regulations, standards, and benchmarks; and general methodology for stationary source air quality analyses. The general methodology for stationary source modeling (regarding model selection, receptor placement, and meteorological data) presented in Chapter 15, "Air Quality" was followed for modeling dispersion of pollutants from on-site sources during the construction period. Additional modeling details relevant only to the construction air quality analysis methodology are presented and discussed herein.

Emissions Control Measures

As is typical with construction projects, construction activities have the potential to adversely affect air quality as a result of diesel emissions. Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. These include the following dust suppression measures and the idling restriction for off-site mobile sources (i.e., construction vehicles):

- Dust Control - All necessary measures will be implemented to ensure that the New York City Air Pollution Control Code regulating construction-related dust emissions is followed. For example, excavation site and truck routes within the site would be watered as needed to avoid the re-suspension of dust, and with a maximum on-site travel speed of 5 mph. All trucks hauling loose material will be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the construction site. Water sprays will be used to ensure that materials are dampened as necessary to avoid the suspension of dust into the air.

- Idling Restrictions - In addition to adhering to the local law restricting unnecessary idling on roadways, on-site vehicle idle time will also be restricted to three minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or otherwise required for the proper operation of the engine.

In addition to the required laws and regulations, an emissions reduction program for all construction activities that extend on a site for more than two years would be implemented to the extent practicable, consisting of the following components (commitments relating to the items set forth below will be included as part of construction contract specifications, where necessary):

- Use 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). All non-road construction equipment with a power rating of 50 hp or greater would meet at least the Tier 3 emissions standard to the extent practicable. Tier 3 NOx emissions range from 40 to 60 percent lower than Tier 1 emissions and considerably lower than uncontrolled engines. All non-road engines in the project rated less than 50 hp would meet at least the Tier 2 emissions standard.

- Best Available Tailpipe Reduction Technologies - Non-road diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract with the project) including but not limited to concrete mixing and pumping trucks would utilize the best available tailpipe (BAT) technology for reducing diesel particulate matter emissions. Diesel particulate filters (DPFs) have been identified as being the tailpipe technology currently proven to have the highest reduction capability. Construction contracts would specify that all diesel engines rated at 50 hp or greater would utilize DPFs, either installed by the original equipment manufacturer (OEM) or retrofitted. Retrofitted DPFs must be verified by EPA or the California Air Resources Board (CARB). Active DPFs (modeled with a 90 percent control factor) or other technologies proven to achieve an equivalent reduction may also be used.

Overall, the proposed emission reduction measures described above are expected to greatly reduce air pollutant emissions related to construction activities.

Methodology

To determine which construction period constitutes the worst-case period for the pollutants of concern (PM, CO, NO_2), construction-related emissions were calculated throughout the duration of construction from all of the Projected Development Sites on an annual work-day average of 8 hours and a peak daily work day of 11 hours for the entire study period (2020-2025). $PM_{2.5}$ was selected for determining the worst-case periods, because the ratio of predicted $PM_{2.5}$ incremental concentrations to impact criteria due to construction activities is higher than for other pollutants. Therefore, initial estimates of $PM_{2.5}$ emissions throughout the construction years were used for determining the worst-case periods for the analysis of all pollutants. Generally, emission patterns of NO_2 would follow $PM_{2.5}$ emissions, since their emission rates are related to the sizes of diesel engines. CO emissions may have a somewhat different pattern but generally would also be highest during periods when the most construction activity would occur.

In accordance with the construction schedule (Figure R-1) all four Projected Development Sites have been identified for air quality analysis purposes. In general, where the construction is expected to be short-term, any impacts resulting from such short-term construction generally do not require detailed assessment. However, as construction activities associated with the Proposed Actions may occur on multiple development sites in proximity with each other, there is a potential for cumulative construction impacts. Therefore, an emissions profiles was generated for all four Projected Development Sites, to determine the construction periods with the highest potential to affect air quality.

Based on the resulting multi-year profiles of peak day average emissions of $PM_{2.5}$, and the proximity of the construction activities at each development site to each other and to nearby sensitive receptor

locations (i.e., residences, publicly accessible open spaces, etc.), worst-case short-term periods for construction were identified for the detailed dispersion modeling. The modeling was then conducted to predict the annual and 24-hour $PM_{2.5}$, 24-hour PM_{10}, one-hour and eight-hour CO, and annual NO_2 concentrations. For prediction of the annual levels, the emissions were calculated for each month and the worst-case 12 month period was considered in the model. Dispersion of the relevant air pollutants from the construction sites during these periods was then analyzed, and the highest resulting concentrations are presented in the following sections. Broader conclusions regarding potential pollutant concentrations during other periods, which were not modeled, are presented as well, based on the multi-year emissions profiles and the reasonable worst-case period results.

Engine Emissions

The sizes, types, and number of units of construction equipment were estimated based on the construction activity schedule. Emission factors for NO_x, CO, $PM_{10,}$ and $PM_{2.5}$ from on-site construction engines were developed using the NONROAD module in the US EPA MOVES 2014b emission model. With respect to trucks, emission rates for NO_X, CO, $PM_{10,}$ and $PM_{2.5}$ for truck engines were developed using the MOVES emission model.

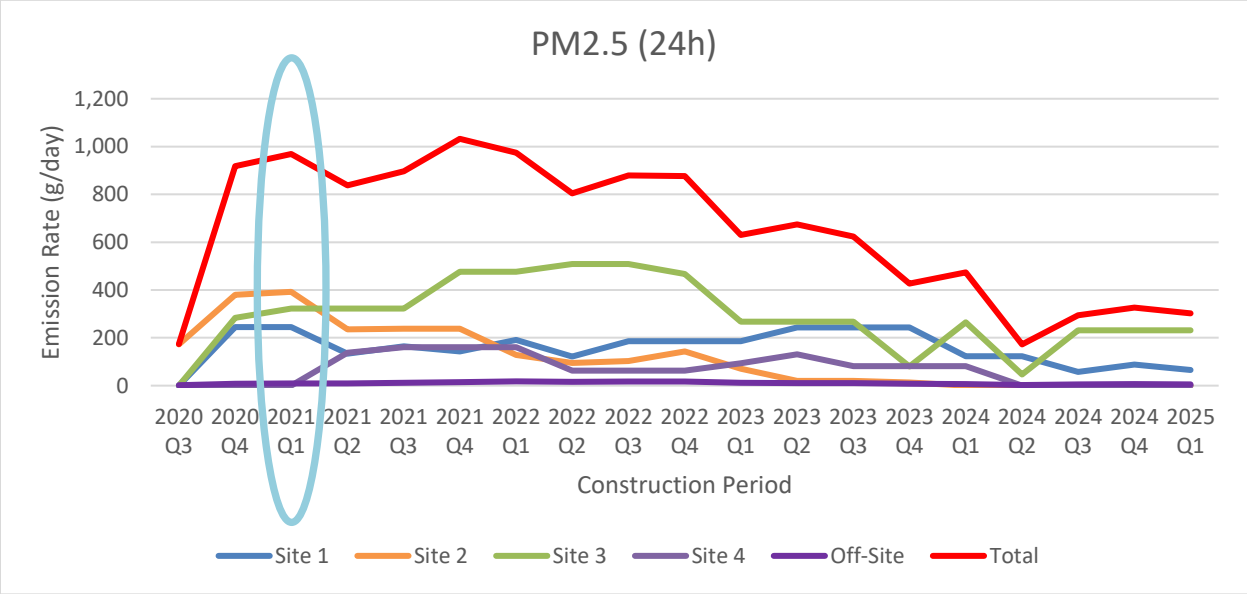
Fugitive Dust

Fugitive dust emissions from construction operations (e.g., excavation, grading, and transferring of excavated materials into dump trucks) were calculated based on EPA procedures delineated in AP-42 Table 13.2.3-1. As discussed above in "Emissions Control Measures," all necessary measures would be implemented to ensure that the New York City Air Pollution Control Code regulating construction-related dust emissions are followed. It was estimated that the planned control of fugitive emissions would reduce PM emissions from such operations by 50 percent.

Analysis Periods

The resulting emission factors were used for the emissions and dispersion analyses. Short-term (24-hour average) $PM_{2.5}$ engine emissions profiles were prepared by multiplying the emission rates for each piece of equipment by the number of engines, the work hours per day, and fraction of the day each engine would be expected to work during each month of construction. The resulting overall short-term emission profiles is presented in Figure R-3.

Figure R-3: Short Term (24-hour) PM2.5 Construction Emissions Profile



As shown in Figure R-3, based on the short-term $PM_{2.5}$ construction emissions profile, October 2021 to December 2021 (2021 Q4) indicates that it would be the short-term period with the highest project-wide emissions. However, the construction activities during this period includes contributions from Site 4, which is separated from Sites 1-3 and therefore would not represent the overall worst-case cumulative construction impact for air quality. Therefore, this period was not considered representative of the overall worst-case analysis period and was not selected for analysis. Instead, January 2021 to March 2021 (2021 Q1) was identified as the worse-case short-term analysis period because all activities during these periods would occur at Development Sites 1 to 3, which are in close proximity with each other. The worst-case annual period also begins in 2021 Q4; however, the period starting in 2021 Q1 was also selected for modelling due to site proximity, similar to the short-term analysis.

Although later stages of the construction period will have some occupancy in late 2023 and in 2024 on Sites 1 and 2, when other sites are in the envelope and façade and interior fit out phases, the worst-case period for construction has been captured with the time periods listed above because the emissions during 2023 Q4 and onward are significantly lower than the emissions during the peak period.

The dispersion of pollutants during the worst-case short-term and annual periods was then modeled in detail to predict resulting maximum concentration increments from construction activities and total concentrations (including background concentrations) in the surrounding area. Although the modeled results are based on construction scenarios for specific sample periods, conclusions regarding other periods can be derived based on the fact that lower pollutant concentration increments from construction activities would generally be expected during periods with lower construction emissions. However, since the worst-case short-term pollutant concentrations are often indicative of very localized construction activities, similar maximum local concentrations may occur at any stage at various locations in the development area, and therefore, would not persist in any single location. Emission sources would not be located continuously at any single location throughout

construction, but rather construction equipment would move throughout the site as construction work progresses. Overall, the modeled peak construction periods are considered representative of worst-case construction activities associated with the Proposed Actions.

Source Stimulation

For the short-term model scenarios (predicting concentration averages for periods of 24 hours or less), all stationary sources, such as pile drivers, air compressors, and generators, which idle in a single location while operating, were simulated as point sources. Other engines, which would move around the site on any given day, were simulated as area sources. For periods of eight hours or less (less than the length of a shift), it was assumed that all engines would be active simultaneously. All on-site sources were considered as area sources for the annual analysis based on the assumption that the sources would move to various locations at the site throughout the year.

Receptor Locations

Receptors (locations in the model where concentrations are predicted) were placed off-site along sensitive uses at both ground-level and elevated locations (e.g., residential windows), at publicly accessible open spaces. None of the projected development sites will be completed and occupied during the worst-case construction periods, therefore, no on-site receptors were considered.

Off-Site Mobile Sources

As discussed above in "Transportation," the traffic conditions during construction peak hours would generally be similar, or better than during the operational peak hours with full build-out of the Proposed Project. Therefore, construction of the Projected Development Sites would not result in significant adverse air quality impacts related to vehicular traffic, and a standalone construction mobile-source analysis is not required. Since emissions from on-site construction equipment and off-site construction-related vehicles may contribute to concentration increments concurrently, off-site construction vehicle emissions adjacent to the construction sites were included with the on-site dispersion analysis (in addition to on-site truck and engine activity) in order to address all local project-related emissions cumulatively.

Results

Maximum predicted concentration increments from the construction period selected for analysis, and maximum overall concentrations including background concentrations, are presented in Table R-16. As described above under "Analysis Periods," 2021 Q1 had the highest emissions rate for $PM_{2.5}$ due to three of the four development sites conducting excavation and foundation construction during that time frame. For $PM_{2.5}$, monitored background concentrations are not added to modeled concentrations from sources, since impacts are determined by comparing the predicted increment from construction activities to the CEQR de minimis criteria. The maximum predicted concentration increments include both construction stationary sources and construction mobile sources.

Table R-16: Maximum Predicted Pollutant Concentrations from Construction Site Sources—January, February, March 2021 (2021 Q1) Peak Analysis Period

Pollutant	Averaging Period	Background ($\mu g/m^3$)	Maximum Modeled Increment ($\mu g/m^3$)	Total Concentration ($\mu g/m^3$)	De Minimis Criteria/ NAAQS ($\mu g/m^3$)
$PM_{2.5}$	24-hour	-	1.22	1.22	8.63
	Annual Local	-	0.23	0.23	0.3
PM_{10}	24-hour	31	2	33	150
NO_2[1]	Annual	32	12	44	100
CO	One-hour	1,969	155	2125	40,000
	Eight-hour[2]	1,603	60	1663	10,000

Notes:

1. The annual average background concentration for NO_2 is 32.3 $\mu g/m^3$. However, the AERMOD runs were done using PVMRM and the background levels vary depending on the hour of the day and season.

Conclusion

Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. These include dust suppression measures, idling restriction, and the use of ULSD. In addition to the required laws and regulations, an emissions reduction program, including the use of best available tailpipe reduction technologies and utilization of newer equipment would be implemented for projected development sites with construction durations of more than two years. In future years, the manufactured emissions for the construction equipment is expected to meet these emissions reduction requirements as there would be an increasing percentage of newer and cleaner engines, irrespective of any project specific commitments.

With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both on-site and off-site sources determined that the annual-average NO_2, one-hour and 8-hour CO, 24-hour $PM_{10,}$ and 24-hour and annual $PM_{2.5}$ concentrations would be below their corresponding NAAQS and de-minimus thresholds for the time period evaluated. Therefore, construction under the Proposed Actions would not result in significant adverse air quality impacts due to construction sources.

OTHER TECHNICAL AREAS

Land Use and Neighborhood Character

According to the *CEQR Technical Manual*, a construction impact analysis for land use and neighborhood character is typically needed if construction would require continuous use of property

for an extended duration, thereby having the potential to affect the nature of the land use and character of the neighborhood.

Construction on the four development sites would occur over a five-year period and all construction activities associated with the Proposed Project would affect land uses within the Project Area but would not alter the surrounding land uses. Both construction trucks and workers are anticipated to travel to the Project Area creating some disruption to the surrounding area, as is typical for construction projects in New York City. These disruptions would be temporary in nature and would have minimal effects on land uses within the quarter-mile study area because a majority of the construction activity would occur within the development sites. Additionally, as required by City regulations, throughout the construction period, access to residences, businesses, and institutions surrounding the Project Area would be maintained. Furthermore, measures to control noise and air pollutant emissions, as well as dust on the construction sites, would be implemented. Therefore, since construction activity related to land use would be relatively short-term and not continuous or permanent, no significant adverse construction impacts to land use and neighborhood character are expected.

Socioeconomic Conditions

According to the *CEQR Technical Manual,* construction impacts to socioeconomic conditions are possible if the Proposed Actions would entail construction for a long duration that could affect the access to and therefore viability of a number of businesses, and if the failure of those businesses has the potential to affect neighborhood character.

As stated above, access to residences, businesses, and institutions surrounding the development sites would be maintained throughout the construction period. Therefore, construction activities would not result in any significant adverse impacts on socioeconomic conditions.

Community Facilities and Services

According to the *CEQR Technical Manual,* construction impacts to community facilities are possible if a community facility were directly affected by construction (e.g., if construction would disrupt services provided at the facility or close the facility temporarily). Additionally, construction activities would not materially affect the New York Police Department (NYPD), New York City Fire Department (FDNY), or other emergency services or response times. A private street network certification process specific to the Proposed Project would allow development on each of the sites to proceed independently while providing an interim street network that provides sufficient FDNY access. Therefore, construction activities would not result in any significant adverse impacts on community facilities and services.

Open Space

According to the *CEQR Technical Manual,* construction impacts to open space are possible if an open space resource is taken out of service for an extended period of time during the construction process. As described in Attachment E, "Open Space" there are no publicly accessible open space resources within the Project Area that would be used for staging or other construction activities. Additionally,

approximately 3.09 acres of publicly accessible open space would be created as part of the Proposed Project's shore public walkway along Flushing Creek. Therefore, construction activities would not result in any significant adverse impacts on open space resources.

Historic and Cultural Resources

According to the *CEQR Technical Manual,* construction impacts may occur on historic and cultural resources if in-ground disturbances or vibration associated with the project's construction could undermine the foundation or structural integrity of nearby resources. As stated in Attachment G, "Historic and Cultural Resources," correspondence with the New York City Landmarks Preservation Commission (LPC) and the New York State Historic Preservation Office (SHPO) confirmed that the Project Area has no archaeological sensitivity. Additionally, a Phase IA Archaeological Assessment was completed in March 2016, which concluded that the Project Area is extremely unlikely to contain prehistoric archaeological resources.

Based on correspondence with LPC and SHPO, the U-Haul Building, formerly known as the Serval Slide Fasteners Factory, is within the Study Area and is a State/National Register (S/NR) eligible resource. Regulations for the protection of historic structures are found under the DOB's TPPN #10/88, which protects LPC-designated and S/NR-listed resources within 90 feet of a lot undergoing development or alteration. TPPN #10/88 would not apply to the U-Haul building as it is only considered an S/NR-eligible resource. However, the building would be afforded limited protection under the DOB regulations applicable to all buildings located next to construction sites; the New York City Building Code provides 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. Therefore, construction activities are not expected to result in any significant adverse impacts on historic and cultural resources.

Natural Resources

According to the *CEQR Technical Manual,* construction impacts may occur if a project or construction staging area is located near a sensitive natural resource. The natural resource may be affected by construction activities such as demolition, excavation, grading, degrading or soil compaction from construction vehicles and equipment.

Construction of the Proposed Project would comply with the New York State Guidelines for Urban Erosion and Sediment Control in regards to groundwater and water quality. Because groundwater is not used as a potable water supply in Queens, construction would not have the potential to affect drinking water supplies. Construction activities would have the potential to temporarily affect water quality by causing short-term disturbance to subsurface materials during excavation and installation of building foundations. Flushing Creek would be protected from construction activities by protection measures that follow a Stormwater Pollution Protection Plan (SWPPP). The SWPPP would address erosion control measures during construction, as well as post-development water quality treatment in accordance with NYSDEC regulations. Anticipated erosion control measures include stabilized construction entrances, a silt fence, inlet protection, and turbidity curtains.

The Project Area is adjacent to Flushing Creek, which is comprised of tidal wetlands that are regulated by the NYSDEC and USACE. Protection of wetlands would be accomplished through

NYSDEC and/or USACE permitting requirements, as well as the SWPPP that would be designed to limit the potential for adverse effects to water quality during and after the construction period. Construction of the Proposed Project would not involve construction in the waters of Flushing Creek.

Therefore, construction activities would not result in any significant adverse impacts on natural resources within the Study Area.

Hazardous Materials

According to the *CEQR Technical Manual,* any impacts from in-ground disturbance that are identified in hazardous materials studies should be identified within the Construction chapter as well as any institutional controls such as (E) designations or restrictive declarations.

As stated in Attachment J, "Hazardous Materials," Projected Development Site 4 and Potential Development Site B are both within the Project Area and do not currently have (E) Designations. (E) Designations are institutional controls that provide a mechanism to ensure that testing for and mitigation/remediation of hazardous materials, if necessary, are completed prior to or as a part of future development of an affected site, thereby eliminating the potential for a hazardous materials impact. An (E) Designation for hazardous materials is therefore proposed to be placed on Projected Development Site 4 and Potential Development Site B. This (E) Designation (E-557) would also supersede the existing (E) Designation (E-74) on Projected Development Sites 1-3 and Potential Development Site A, and thus would apply to all of the development sites within the Project Area.

With these measures in place, construction activities would not result in any significant adverse impacts on hazardous materials.

PART III: APPENDICES

APPENDIX A: PROJECT AREA PHOTOGRAPHS

FIGURE 1

PHOTOGRAPH LOCATION MAP

SPECIAL FLUSHING WATERFRONT DISTRICT

Map Reference: Aerial Image from NearMap; and NYC Department of City Planning MapPLUTO and LION Shapefiles.

Project Area

Study Area (.25-mile radius)

1 Photograph Location/Direction

FLUSHING, QUEENS, NY

LANGAN

Photograph 1: Flushing Meadows Pedestrian Bridge at Mets-Willets Point, looking east.

Photograph 2: Meridian Road Bridge on the northeast section of Flushing Meadows Corona Park, looking north.

Photograph 3: Intersection of College Point Boulevard and Maple Avenue, looking north.

Photograph 4: Corner of College Point Boulevard and 41st Avenue, looking northwest.

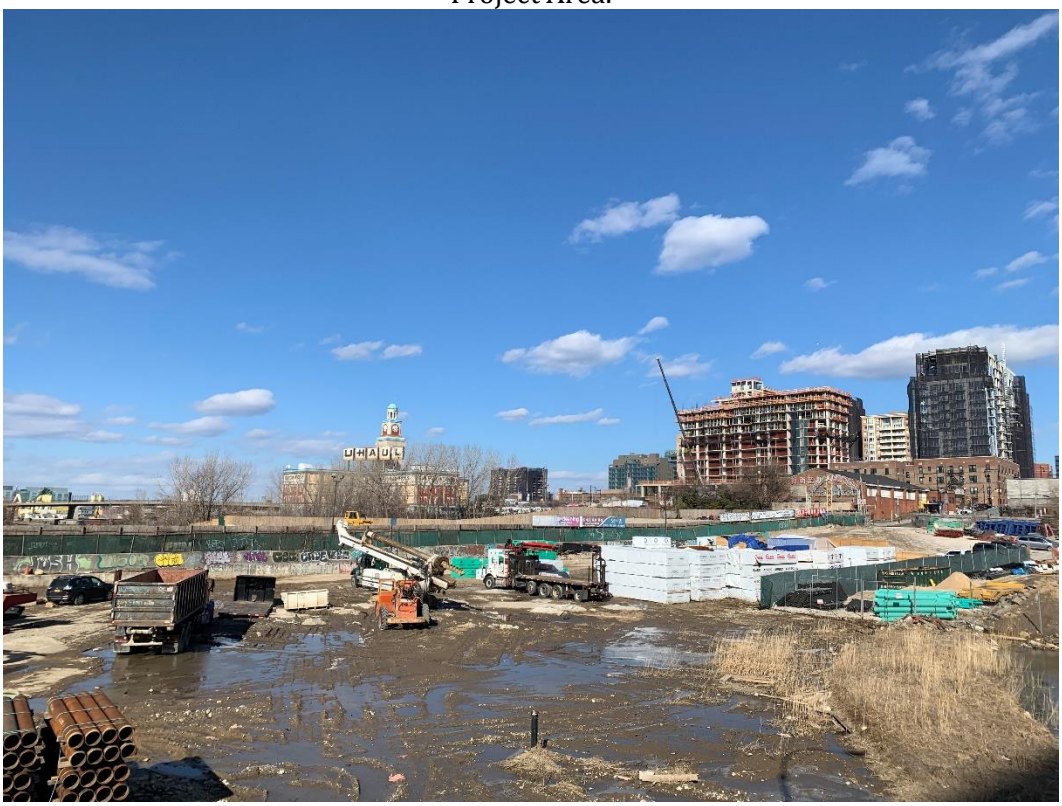
Photograph 5: Intersection of 40th Road and College Point Boulevard, looking east.

Photograph 6: Intersection of Roosevelt Avenue and College Point Boulevard, looking north.

Photograph 7: Intersection of Roosevelt Avenue and College Point Boulevard, looking east.

Photograph 8: 39th Avenue between College Point Boulevard and Prince Street, looking east.

Photograph 9: Janet Place between 39th Avenue and Roosevelt Avenue, looking north towards Project Area.



Photograph 10: Roosevelt Avenue between Flushing Creek and Janet Place, looking north towards the Project Area.

Photograph 11: Projected Development Site 2, looking north towards Projected Development Sites 3 and 4 and Potential Development Site B.

Photograph 12: College Point Boulevard between 37th Avenue and 39th Avenue, looking south.

Photograph 13: Intersection of 37th Avenue and College Point Boulevard, looking south.

Photograph 14: Intersection of College Point Boulevard and King Road, looking southwest towards Potential Development Site B.

Photograph 15: U-Haul Parking Lot – between Flushing Creek and College Point Boulevard, looking north towards Projected Development Site 4.

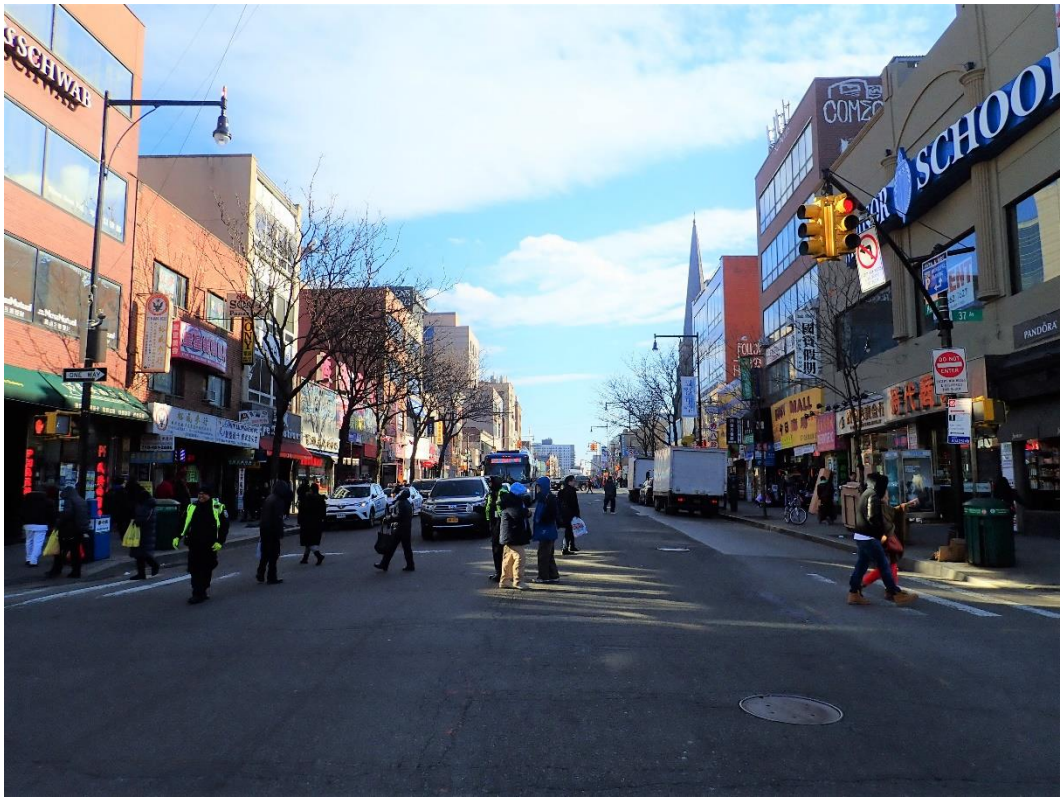
Photograph 16: College Point Boulevard and 36th Avenue, looking east.

Photograph 17: Corner of College Point Boulevard and 36th Avenue, looking southwest towards the Project Area.

Photograph 18: College Point Boulevard between 35th Avenue and Northern Boulevard, looking south towards the Project Area.

Photograph 19: Bud Place between 26th Avenue and 36th Road, looking south.

Photograph 20: Main Street between 39th Avenue and Roosevelt Avenue, looking south.



Photograph 21: Main Street between 37th Avenue and 38th Avenue, looking south.

Photograph 22: Corner of Janet Place and Roosevelt Avenue, looking west towards Flushing Creek.

Photograph 23: Across Flushing Creek looking east towards Projected Development Site 4.

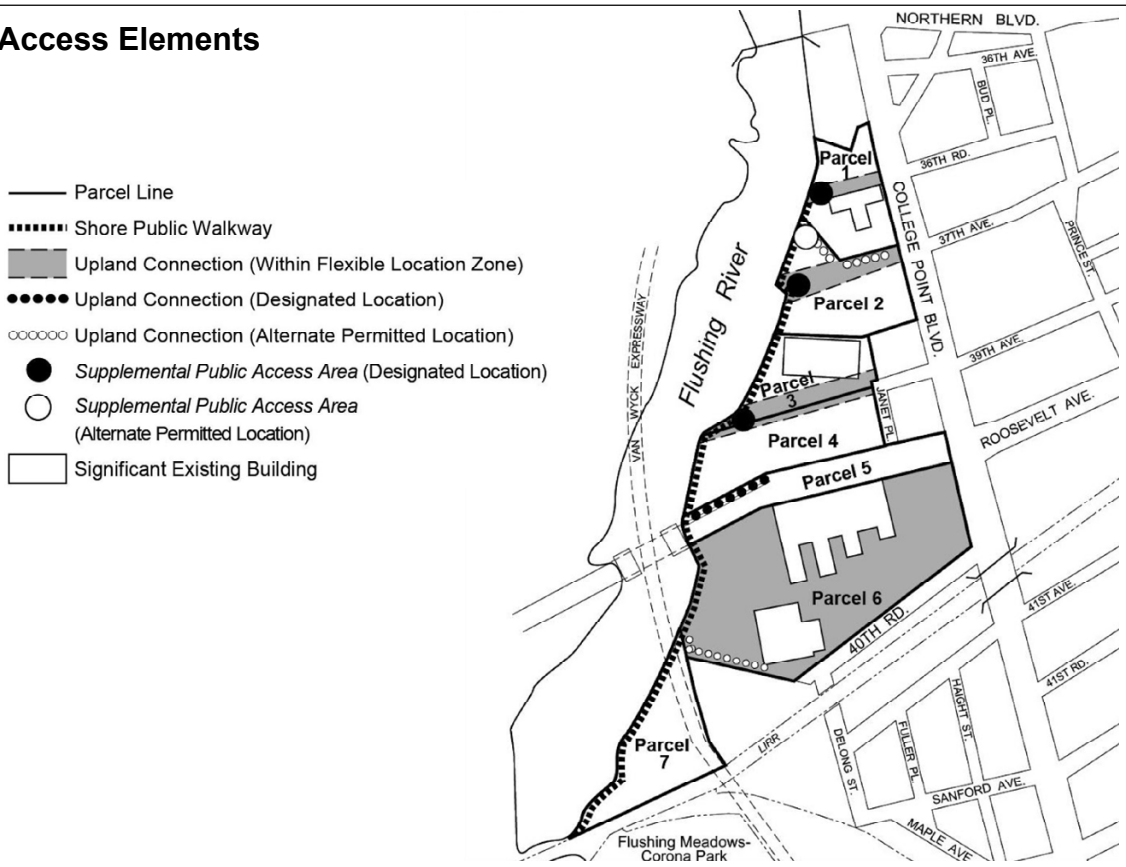
Photograph 24: Across Flushing Creek looking southeast towards Potential Development Site B and Projected Development Site 2 and 3.

Photograph 25: Across Flushing Creek looking southeast towards Projected Development Site 1, 2, and 3.

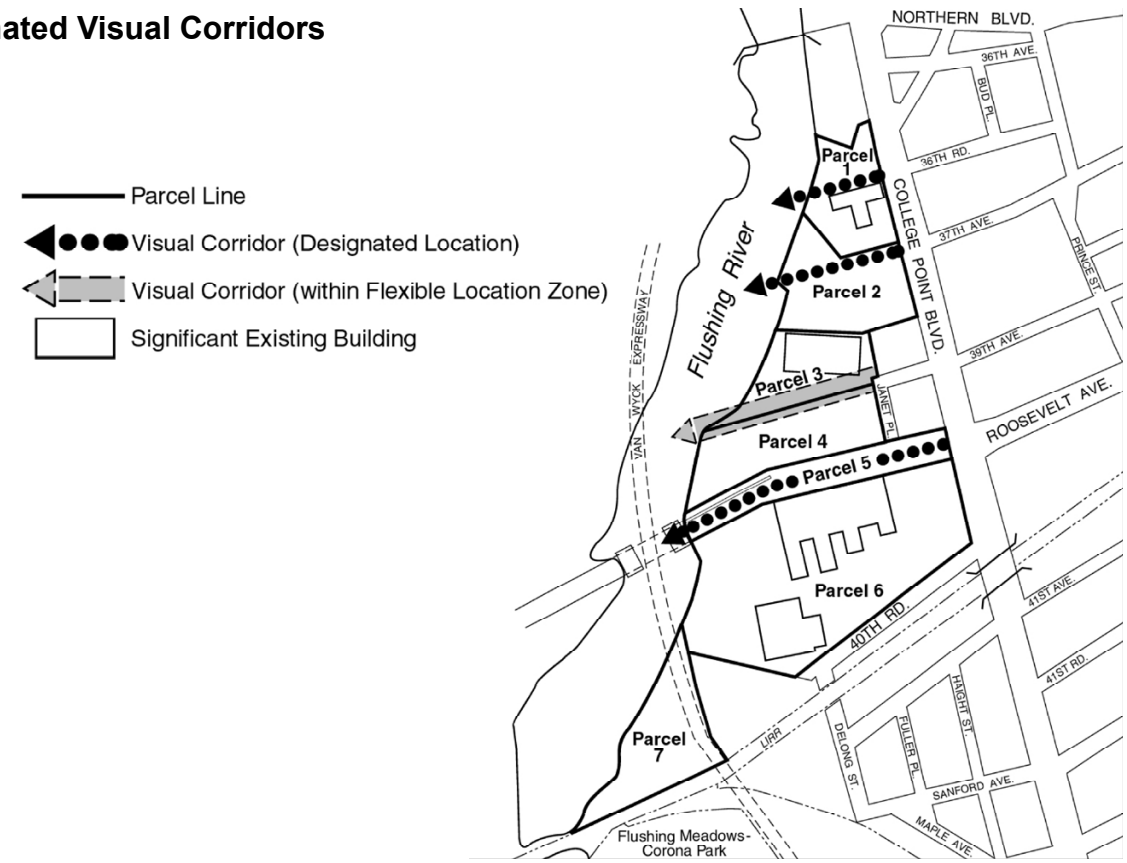
Photograph 26: 37th Avenue between College Point Boulevard and Prince Street, looking west towards Projected Development Site 3.

APPENDIX B: EXISTING DOWNTOWN FLUSHING WAP MAPS

Q-2b: Public Access Elements



Q-2c: Designated Visual Corridors



APPENDIX C: PROPOSED ZONING TEXT

Special Flushing Waterfront District Draft Text

Matter underlined is new, to be added;
Matter ~~struck out~~ is to be deleted;
Matter within # # is defined in Section 12-10;
* * * indicates where unchanged text appears in the Zoning Resolution

ARTICLE I
GENERAL PROVISIONS

Chapter 1
Title, Establishment of Controls and Interpretation of Regulations

* * *

11-122
Districts established

In order to carry out the purposes and provisions of this Resolution, the following districts are hereby established:

* * *

Special Purpose Districts

* * *

Establishment of the Special Enhanced Commercial District

In order to carry out the special purposes of this Resolution as set forth in Article XIII, Chapter 2, the #Special Enhanced Commercial District# is hereby established.

Establishment of the Special Flushing Waterfront District

In order to carry out the special purposes of this Resolution as set forth in Article XII, Chapter 7, the #Special Flushing Waterfront District# is hereby established.

Establishment of the Special Forest Hills District

* * *

Chapter 2
Construction of Language and Definitions

* * *

12-10
DEFINITIONS

* * *

Special Enhanced Commercial District

The "Special Enhanced Commercial District" is a Special Purpose District designated by the letters "EC" in which special regulations set forth in Article XIII, Chapter 2, apply.

Special Flushing Waterfront District

The "Special Flushing Waterfront District" is a Special Purpose District designated by the letters "FW" in which special regulations set forth in Article XII, Chapter 7, apply.

Special Forest Hills District

The "Special Forest Hills District" is a Special Purpose District designated by the letters "FH" in which special regulations set forth in Article VIII, Chapter 6, apply.

* * *

Chapter 4
Sidewalk Cafe Regulations

* * *

14-40
AREA ELIGIBILITY FOR SIDEWALK CAFES

* * *

14-44
Special Zoning Districts Where Certain Sidewalk Cafes Are Permitted

#Enclosed# or #unenclosed sidewalk cafes# shall be permitted, as indicated, in the following special zoning districts, where allowed by the underlying zoning. #Small sidewalk cafes#, however, may be located on #streets# or portions of #streets# within special zoning districts pursuant to the provisions of Section 14-43 (Locations Where Only Small Sidewalk Cafes Are Permitted).

* * *

Queens	#Enclosed Sidewalk Cafe#	#Unenclosed Sidewalk Cafe#
Downtown Far Rockaway District	No	Yes
Downtown Jamaica District	No	Yes

Flushing Waterfront	No	Yes
Forest Hills District[1]	No	Yes
Long Island City Mixed Use District[2]	No	Yes
Southern Hunters Point District	No	Yes
Willets Point District	No	Yes

* * *

ARTICLE II
RESIDENCE DISTRICT REGULATIONS

* * *

Chapter 3
Residence Bulk Regulations in Residence Districts

* * *

23-011
Quality Housing

* * *

R6 R7 R8 R9 R10

(c) In the districts indicated without a letter suffix, the optional Quality Housing #bulk# regulations permitted as an alternative pursuant to paragraph (b) of this Section, shall not apply to:

(1) Article VII, Chapter 8 (Special Regulations Applying to Large Scale Residential Developments);

(2) Special Purpose Districts

However, such optional Quality Housing #bulk# regulations are permitted as an alternative to apply in the following Special Purpose Districts:

#Special East Harlem Corridors District#;

#Special Flushing Waterfront District#;

#Special Grand Concourse Preservation District#;

* * *

ARTICLE VI
Special Regulations Applicable to Certain Areas

* * *

Chapter 2
Special Regulations Applying in the Waterfront Area

* * *

62-90
WATERFRONT ACCESS PLANS

* * *

62-95
Borough of Queens

The following Waterfront Access Plans are hereby established within the Borough of Queens. All applicable provisions of Article VI, Chapter 2, remain in effect within the areas delineated by such plans, except as expressly set forth otherwise in the plans:

Q-1: Northern Hunters Point, as set forth in Section 62-951

Q-2: Flushing Waterfront, in the #Special Flushing Waterfront District, as set forth in Section ~~62-952~~ 127-50 (Flushing Waterfront Access Plan)

Q-3: Newtown Creek, in the #Special Southern Hunters Point District#, as set forth in Section 125-46 (Newtown Creek Waterfront Access Plan).

* * *

~~**62-952**~~
~~**Waterfront Access Plan Q-2: Downtown Flushing**~~

[NOTE: existing provisions moved to Section 127-50]

* * *

ARTICLE XII
SPECIAL PURPOSE DISTRICTS

* * *

Chapter 7
Special Flushing Waterfront District

[All text in this Chapter is new text]

127-00

GENERAL PURPOSES

The "Special Flushing Waterfront District" established in this Resolution is designed to promote and protect public health, safety and general welfare. These general goals include, among others, the following specific purposes:

(a) to enhance neighborhood economic diversity by broadening the range of housing choices for residents of varied incomes;

(b) to create a lively and attractive built environment that will provide amenities and services for the use and enjoyment of area residents, workers and visitors;

(c) to encourage well-designed development that complements the pedestrian experience and enhances the built character of the neighborhood;

(d) to establish and maintain physical and visual public access to and along Flushing Creek;

(f) to make use of the waterfront by providing public access via private street network, direct connections to the water and to promote coordinated redevelopment of the area in a manner consistent with waterfront access and internal circulation within the Special District; and

(g) to promote the most desirable use of land and building development in accordance with the District Plan for Downtown Flushing and thus conserve the value of land and buildings and thereby improve the City's tax revenues.

127-01
General Provisions

The provisions of this Chapter shall apply within the #Special Flushing Waterfront District#. The regulations of all other Chapters of this Resolution are applicable, except as superseded, supplemented or modified by the provisions of this Chapter. In the event of a conflict between the provisions of this Chapter and other regulations of this Resolution, the provisions of this Chapter shall control unless expressly stated otherwise.

127-02
District Plan and Maps

In order to carry out the purposes and provisions of this Chapter, district maps are located in the Appendix to this Chapter and are hereby incorporated and made an integral part of this Resolution. They are incorporated for the purpose of specifying locations where special regulations and requirements, as set forth in the text of this Chapter, apply.

Map 1: Special Flushing Waterfront District and Subdistricts

Map 2: Publicly Accessible Private Street Network

Map 3: Requirements Along Street Frontages

Map 4: Waterfront Access Plan: Parcel Designation

Map 5: Waterfront Access Plan: Visual Corridors

Map 6: Waterfront Access Plan: Public Access Areas

Map 7: Waterfront Access Plan: Phase I Waterfront Public Access Improvements

Map 8: Waterfront Access Plan: Phase II Waterfront Public Access Improvements

127-03
Subdistricts

In order to carry out the provisions of this Chapter, three subdistricts, Subdistrict A, Subdistrict B and Subdistrict C, are established.

The location and boundaries of these subdistricts are shown on Map 1 (Special Flushing Waterfront District and Subdistricts) in the Appendix to this Chapter.

127-04
Definitions

For purposes of this Chapter, matter in italics is defined in Section 12-10 and within this Section, except where explicitly stated otherwise in individual provisions in this Chapter.

Conceptual plan

A "conceptual plan" is a plan that sets forth the proposed final design, in compliance with the requirements of Section 127-421 (Requirements for publicly accessible private streets), for the remaining portions of the #publicly accessible private street# or #upland connection# certified pursuant to paragraph (b)(1)(i) of Section 127-422 (Certification for publicly accessible private streets), or paragraph (a)(1)(i) of Section 127-542 (Supplemental provisions), respectively. The plan shall include the proposed location, dimensions and grading for such remaining portions on adjoining #zoning lots# and shall be considered by the Chairperson of the City Planning Commission in reviewing the proposed #final site plan# for such remaining portions, if and when they become the subject of a certification pursuant to paragraph (b)(2) of Section 127-422 or paragraph (a)(2) of Section 127-542.

Final site plan

A "final site plan" is a plan that specifies the final design for the location, dimensions, and grading of

all or portions of the #publicly accessible private streets# or #upland connection# that are the subject of a certification pursuant to paragraphs (a) or (b) of Section 127-422 or paragraphs (a)(1) or (a)(2) of Section 127-542. Where applicable, the design of such plan shall be consistent with any #conceptual plan# for the same portion of the #publicly accessible private street# or #upland connection# and, once certified and implemented in accordance with paragraph (b) of Section 127-422 or paragraph (a) of Section 127-542, such plan shall supersede any #interim plan# for the same portion of a #publicly accessible private street# or #upland connection#.

Interim site plan

An "interim site plan" is a plan that specifies, for an interim period, the design for the location, dimensions, and grading of portions of the #publicly accessible private street# or #upland connection# that are the subject of a certification pursuant to paragraph (b)(1) of Section 127-422 or paragraph (a)(1) of Section 127-542 and located on the applicant's #zoning lot#. A design for an interim period is necessary where it is not feasible to implement the final design for such portions until build-out of the remaining portions of the #publicly accessible private street# or #upland connection# occurs. Such #interim site plan#, once certified, shall remain in effect until implementation of the #final site plan# in accordance with paragraph (b) of Section 127-422 or paragraph (a) of Section 127-542, at which time the certified #final site plan# shall supersede the #interim site plan#.

Publicly accessible private street

A "publicly accessible private street" is a way specified on Map 2 in the Appendix to this Chapter that functions as a #street# for the purposes of general public use, including vehicular and pedestrian traffic, and is open and unobstructed from its ground level to the sky, except by streetscape elements required or permitted by the provisions of this Chapter.

127-05
Applicability of District Regulations

127-051
Applicability of the Quality Housing Program

Within Subdistrict A and Subdistrict B, any #building# containing #residences#, or any #building# containing #long-term care facilities# or philanthropic or non-profit institutions with sleeping accommodations, shall be #developed# or #enlarged# in accordance with the Quality Housing Program and the regulations of Article II, Chapter 8 (Quality Housing) shall apply. The #bulk# regulations of this Chapter shall be considered the applicable #bulk# regulations for #Quality Housing buildings#.

127-052
Applicability of the Inclusionary Housing Program

For the purposes of applying the Inclusionary Housing Program provisions set forth in Sections 23-154 and 23-90, #Mandatory Inclusionary Housing areas# within the #Special Flushing Waterfront District# are shown in APPENDIX F (Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas) of this Resolution.

127-053
Applicability of Article VI, Chapter 1

The provisions of Article VI, Chapter I (Special Regulations Applying Around Major Airports) shall apply, except as modified in accordance with the provisions of this Chapter.

127-054
Applicability of Article VI, Chapter 2

The provisions of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area) shall apply in all #waterfront areas#, except as modified in accordance with the provisions of this Chapter.

127-055
Applicability of Article VI, Chapter 4

The provisions of Article VI, Chapter 4 (Special Regulations Applying in Flood Hazard Areas) shall apply. In the event of a conflict between the provisions of this Chapter and Article VI, Chapter 4, the provisions of Article VI, Chapter 4 shall control.

127-056
Applicability of Article XII, Chapter 3

In M1 Districts paired with a #Residence District#, the special #use#, #bulk# and parking and loading provisions of Article XII, Chapter 3 (Special Mixed Use District) shall apply, except as modified by the provisions of this Chapter, and shall supplement or supersede the provisions of the designated #Residence District# or M1 District, as applicable.

127-10
SPECIAL USE REGULATIONS

Within the #Special Flushing Waterfront District#, the #use# regulations of the underlying zoning districts and of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area), and Article XII, Chapter 3 (Special Mixed Use District), shall apply, except as modified by the provisions of this

Section, inclusive.

127-11
Location of Residential Use Within Buildings

The provisions of Section 32-422 (Location of floors occupied by commercial uses) shall be modified to permit #dwelling units# on the same #story# as a #commercial use# provided no access exists between such #uses# at any level containing #dwelling units# and provided no #commercial uses# are located directly over any #dwelling units#. However, such #commercial uses# may be located over #dwelling units# by authorization of the City Planning Commission upon a finding that sufficient separation of #residential uses# from #commercial uses# exists within the #building#.

127-12
Physical Culture or Health Establishments

The provisions of Section 73-36 (Physical Culture or Health Establishments) shall not apply. In lieu thereof, #physical culture or health establishments# shall be permitted as-of-right. For the purposes of applying the underlying regulations to such #use#, a #physical culture or health establishment# shall be considered a Use Group 9 #use# and shall be within parking requirement category B.

127-13
Sign Regulations

For M1 Districts paired with a #Residence District#, the provisions regulating #signs# in C4 Districts, as set forth in Section 32-60 (SIGN REGULATIONS), inclusive, shall apply for any #signs#.

127-20
SPECIAL BULK REGULATIONS

For the purpose of applying the #bulk# regulations of this Section, inclusive, Subdistricts A, B and C, as shown on Map 1 in the Appendix to this Chapter, shall be considered #waterfront blocks#.

Within Subdistricts A and B, the applicable #bulk# regulations of the underlying districts and of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area), and Article XII, Chapter 3 (Special Mixed Use District), shall apply, except as modified by the provisions of this Section, inclusive.

Within Subdistrict C, the applicable #bulk# regulations of the underlying districts and of Article VI, Chapter 2 shall apply.

All #upland connections#, #visual corridors#, #shore public walkways# and #publicly accessible private streets#, shall be considered #streets# and their boundaries shall be considered #street lines# for the

purposes of applying all #bulk# regulations, except that such #streets# shall not subdivide a #zoning lot#. Furthermore, such #streets# shall be considered part of the #zoning lot# for the purpose of applying the #floor area# regulations of this Section, inclusive.

127-21
Special Floor Area Regulations

The #floor area# provisions of Section 62-32 (Maximum Floor Area Ratio and Lot Coverage on Waterfront Blocks) and applicable regulations shall apply except as modified in this Section, inclusive.

(a) Floor space for accessory off-street parking

The #floor area# of a #building# shall not include floor space used for #accessory# off-street parking spaces provided in any #story# located not more than 33 feet above the height of the #base plane#.

(b) Special floor area regulations for mixed use districts

For M1 Districts paired with a #Residence District#, located inside a #Mandatory Inclusionary Housing area#, the applicable maximum #floor area ratio# provisions of paragraph (d) of Section 23-154 (Inclusionary Housing) or Section 23-155 (Affordable independent residences for seniors) shall apply to all #residential uses#. In addition, the maximum #floor area ratio# shall be 4.8 for #community facility uses#, 3.0 for #commercial uses# and 3.0 for #manufacturing uses#.

127-22
Special Yard Regulations

On #waterfront zoning lots#, the #waterfront yard# provisions of Section 62-33 (Special Yard Regulations on Waterfront Blocks) and grading requirements of paragraph (a) of Section 64-82 (Modification of Waterfront Regulations Relating to Level of Yards, Visual Corridors and the Ground Floor) shall apply, except as modified as follows:

(a) for all #waterfront zoning lots#, as defined in Section 62-11 (Definitions), whose #developments# are comprised #predominantly#, as defined in Section 62-11, of #uses# in Use Groups 16, 17 and 18, a #waterfront yard#, as also defined in Section 62-11, shall be provided in accordance with the provisions of Section 62-332 (Rear yards and waterfront yards); and

(b) the grading requirements of paragraph (a) of Section 64-82 may be modified pursuant to a certification by the Chairperson of the City Planning Commission as set forth in Section 127-61 (Certification for Interim Grading Conditions).

On #zoning lots# that are not #waterfront zoning lots#, no #yard# regulations shall apply.

127-23
Special Height and Setback Regulations

The height and setback provisions of paragraphs (a)(4) of Section 62-341 (Developments on land and platforms) shall apply except as modified in Section 127-231 (Permitted obstructions). The remaining provisions of Section 62-341 shall be superseded by the provisions of this Section, inclusive.

The height of all #buildings or other structures# shall be measured from the #base plane#, except where modified by specific provisions of this Section, inclusive, or by the provisions of Article VI, Chapter 4.

Sidewalk widenings shall be provided along specified #street# frontages and at specified depths as set forth on Map 3 (Requirements Along Street Frontages) in the Appendix to this Chapter. Such sidewalk widening shall be improved to Department of Transportation standards for sidewalks, and be at the same level as the adjoining sidewalk.

127-231
Permitted obstructions

The permitted obstruction provisions of paragraph (a)(4) of Section 62-341 (Developments on land and platforms) shall be modified as follows:

(a) the dormer provisions of paragraph (a)(4)(i) of Section 62-341 shall be modified pursuant to the provisions of paragraph (c)(1) of Section 127-233 (Base heights and setback regulations);

(b) the penthouse regulations of paragraph (a)(4)(ii) of Section 62-341 shall not apply; and

(c) the maximum height of any permitted obstructions shall be determined in accordance with the provisions of Article VI, Chapter 1 (Special Regulations Applying Around Major Airports), except where modified by certification of the Chairperson of the City Planning Commission pursuant to Section 127-236 (Certification to modify maximum height of building or other structure).

127-232
Street wall location regulations

Along #street# frontages where a sidewalk widening is required pursuant to Map 3 in the Appendix to this Chapter, the #street wall# location requirements of this Section shall apply from the interior boundary of such sidewalk widening.

(a) Along primary #street# frontages

Along primary #street# frontages, as shown on Map 3, at least 60 percent of the #aggregate width of street walls# shall be located within eight feet of the #street line# and rise to at least the minimum base height as specified in Section 127-233 (Base heights and setback regulations), or the height of the building, whichever is lower. The remaining #aggregate width of street walls#

may be located either within eight feet of the #street line# or beyond eight feet of the #street line#. The requirements of this paragraph shall not apply to the portion of a #building# adjacent to the major portion of a publicly accessible area, as specified in Section 127-43 (Publicly Accessible Area).

(b) Along secondary #street# frontages

Along secondary #street# frontages, as shown on Map 3, #street walls# may be located at any distance from the #street line#.

(c) Along all #street# frontages

Along both primary and secondary #street# frontages, recesses shall be permitted at the ground floor level as follows:

(1) recesses up to three feet in depth from the #street wall# shall be permitted at any distance from the #street line# to provide access to the #building#; and

(2) recesses that exceed a depth of three feet from the #street wall# shall be permitted, provided that such recesses are not deeper than 10 feet and have a height of at least 15 feet, as measured from the adjacent sidewalk level to the ceiling of such ground floor recess.

127-233
Base heights and setback regulations

(a) Along primary #street# frontages

Along primary #street# frontages, as shown on Map 3 (Requirements Along Street Frontages) in the Appendix to this Chapter, the following shall apply:

(1) The minimum base height shall be 25 feet, or two #stories#, whichever is lower, and the maximum base height shall be 105 feet along College Point Boulevard and 75 feet along all other primary #street# frontages.

(2) Along Type 1 primary #street# frontages, at a height not lower than the minimum base height nor higher than the maximum base height, a setback with a minimum depth of 10 feet, as measured from the #street wall#, shall be provided, except that:

(i) the depth of such required setback may be reduced in accordance with the provisions of paragraph (c)(2) of Section 23-662 (Maximum height of buildings and setback regulations). However, where a sidewalk widening is required pursuant to this Section, as indicated on Map 4 (Waterfront Access Plan: Parcel Designation), the minimum depth of the required setback above the maximum base height may be reduced to five feet, as measured from the #street wall#; and

(ii) the depth of such setbacks may include the depth of recesses or #outer courts# in

the #street wall# of the #building# base, provided that the aggregate width of any such recessed portion of a #street wall# with a setback of less than seven feet, as applicable, does not exceed 40 percent of the #aggregate width of street wall# at any level.

(3) Along Type 2 primary #street# frontages, a #building# may rise without any setback above the maximum base height.

(b) Along secondary #street# frontages

Along secondary #street# frontages, as shown on Map 3, the following shall apply:

(1) Along the #shore public walkway#, the maximum base height shall be 75 feet, and any portion of a #building# that exceeds the maximum base height shall be set back at least 10 feet from the #street line#. Wherever a #supplemental public access area# is provided as a widened #shore public walkway#, such widened area shall be included in such setback distance.

(2) Along other secondary #street# frontages, the minimum base height shall be 25 feet, or two #stories#, whichever is lower, and the maximum base height shall be 75 feet. However, along secondary #street# frontages facing an #upland connection# with a width of less than 30 feet pursuant to the applicable provisions of paragraph (a) of Section 127-532 (Upland connections), the minimum base height shall be 15 feet. At a height not lower than the minimum base height nor higher than the maximum base height, a setback with a minimum depth of 10 feet, as measured from the #street wall#, shall be provided, except that:

(i) the depth of such required setback may be reduced in accordance with the provisions of paragraph (c)(2) of Section 23-662. However, where a sidewalk widening is required pursuant to this Section, as specified on Map 3, the portion of a #building# located above the maximum base height need not set back more than 10 feet from the #street line#, provided such #building# portion meets the requirements of paragraph (d) of Section 127-234 (Tower regulations), as applicable; and

(ii) the depth of such required setback may include the depth of recesses or #outer courts# in the #street wall# of the #building# base, provided that the aggregate width of any such recessed portion of a #street wall# with a setback of less than 10 feet, or the reduced setback distance pursuant to the provisions of paragraph (b)(2)(i) of this Section, as applicable, does not exceed 40 percent of the #aggregate width of street wall# at any level; and

(c) Additional allowances along all #street# frontages

(1) Within a required setback area, dormers and projections shall be considered permitted obstructions, and shall be permitted as follows:

(i) The aggregate #street wall# width of all dormers and projections combined shall not exceed 50 percent of the #aggregate width of street wall# of the #story#

below the required setback. Any projection deeper than five feet shall be considered a dormer.

(ii) The aggregate #street wall# width of dormers shall not exceed 30 percent of the #aggregate width of street wall# of the #story# below the required setback. The height of such dormers shall not exceed 135 feet in Subdistrict A and 175 feet in Subdistrict B, as measured above the #base plane#. No dormers shall be permitted along #street walls# fronting on the #shore public walkway#.

(2) Notwithstanding the applicable setback regulations in paragraphs (a) and (b) of this Section, portions of #buildings or other structures# located:

(i) within 150 feet of a publicly accessible area, and either

(ii) adjacent to such publicly accessible area, or

(iii) along a #street# across from such publicly accessible area located on the same #zoning lot#,

may rise without a setback, provided that such publicly accessible area is in compliance with the provisions of Section 127-43 (Publicly Accessible Area). In addition, all #street walls# facing such publicly accessible area shall be subject to the articulation requirements of Section 127-235 (Supplemental articulation regulations).

127-234
Tower regulations

For the purposes of applying the provisions of this Section, a "tower" shall be any portion of a #building or other structure# that is located above the maximum base height. Such portion of a #building or other structure# shall be subject to the following requirements:

(a) Maximum tower widths

Along the #shore public walkway#, the maximum width of a tower, or portion thereof, that is located within 110 feet of the pierhead line and facing the #shore public walkway#, shall not exceed 100 feet. Such width shall be determined by drawing perpendicular lines in plan view from the pierhead line to the outermost extents of the #street wall# of such tower, or portion thereof, within 110 feet of the pierhead line, exclusive of any permitted projections and dormers. However, in Subdistrict A, where the depth of a #zoning lot#, or portion thereof, is less than 220 feet, the maximum width of a tower within such shallow lot portion, shall not exceed 130 feet, provided that such depth was in existence both on [date of adoption] and on the date of application for a building permit.

Along all other #streets#, the #aggregate width of street wall# in a tower shall not exceed 250 feet.

(b) Tower top regulations

For all #zoning lots# in Subdistrict A, and for each portion of a #zoning lot# in Subdistrict B, bounded entirely by #streets, as such term is defined in Section 127-20, the following requirements shall apply:

(1) Where two or more towers are provided and any portion of such towers exceeds 175 feet, the following shall apply:

(i) the gross area of the highest two #stories# of at least one tower shall not exceed 80 percent of the gross area of the #story# immediately below such #stories#; or

(ii) a height difference of at least 20 feet, or two #stories#, whichever is less, shall be provided between such towers.

(2) Where only one tower is provided and the aggregate portions of such tower above 175 feet exceeds a gross area of 15,000 square feet, the gross area of the highest two #stories# shall not exceed 80 percent of the gross area of the #story# immediately below such #stories#.

(c) Maximum tower height

The maximum height of a #building or other structure# shall be determined in accordance with the provisions of Article VI, Chapter 1 (Special Regulations Applying Around Major Airports), except where modified by certification of the Chairperson of the City Planning Commission pursuant to Section 127-236 (Certification to modify maximum height of building or other structure).

(d) Additional requirements within Subdistrict B

Along Janet Place, where a sidewalk widening is required pursuant to Map 3, the width of each individual tower portion located within 50 feet of the #street line# of Janet Place shall not exceed 70 feet, exclusive of any permitted projections and dormers. Such width shall be determined by drawing perpendicular lines in plan view from the #street line# to the outermost extents of the #street wall# of such tower, or portion thereof, within 50 feet of the #street line#, exclusive of any permitted projections and dormers. Such tower portion and any other such tower portion within the same or an #abutting building# shall be separated by at least 40 feet.

127-235
Supplemental articulation requirements

In addition to all other provisions of Section 127-23 (Special Height and Setback Regulations), inclusive, for #street wall# widths exceeding 150 feet, as measured parallel to the #street line#, articulation shall be provided in accordance with the provisions of this Section.

The depth of required recesses or projections of a #building# shall be measured from the #street wall#.

For the purpose of applying the provisions of this Section, the base height of such #building# shall be either the maximum base height or the height of such #building# where a required setback pursuant to the provisions of Section 127-233 (Base heights and setback regulations) is provided, whichever is lower. However, if such #building# provides multiple setbacks, the highest of such multiple setbacks shall be considered the base height of such #building#.

The portion of a tower #street wall# subject to the tower top regulations of paragraph (b) of Section 127-234 (Tower regulations) shall not be included for the purposes of determining or satisfying the articulation requirements of this Section. In addition, setbacks provided in accordance with the provisions of Section 127-233 shall not constitute recesses.

(a) Along all #streets# other than #shore public walkways#

For #street walls# fronting #streets# other than the #shore public walkway#, a minimum of 15 percent of the entire surface area of each #street wall# shall either recess or project a minimum of two feet from the #street wall# with no individual recess or projection exceeding 50 percent of such surface area of the #street wall#.

Along each #street wall# frontage, at least one-third of such overall 15 percent requirement shall be provided in the form of articulation below the base height of such #building#, and at least one-third shall be provided above the base height, respectively. The remaining one-third of such 15 percent requirement may be located anywhere on the #street wall#. Where a #street wall# frontage does not exceed the maximum base height, the overall 15 percent requirement shall be provided in the #building# base.

Within the articulation provided in the #building# base, the aggregate width of articulation at each level where provided shall achieve a #street wall# width that is equivalent to at least 10 percent of the #aggregate width of street wall# at that level, and no individual recess or projection shall have a #street wall# width of less than 10 feet.

In no event shall the total amount of projections above the base height exceed the thresholds permitted pursuant paragraph (c)(1) of Section 127-233.

(b) Along the #shore public walkway#

For #street walls# fronting the #shore public walkway#, at least five percent of the entire surface area of the #street wall# below the base height shall either recess or project a minimum of two feet from the #street wall# with no individual recess or projection exceeding 50 percent of such surface area of the #street wall#.

Within the articulation provided in the #building# base, the aggregate width of articulation at each level where provided shall achieve a #street wall# width that is equivalent to at least 10 percent of the #aggregate width of street wall# at that level, and no individual recess or projection shall have a #street wall# width of less than 10 feet.

127-236
Certification to modify maximum height of building or other structure

The special permit provisions of Section 73-66 (Height Regulations Around Airports) shall not apply. In lieu thereof, the height restrictions of Sections 61-21 (Restriction on Highest Projection of Building or Structure) or 61-22 (Permitted Projection within any Flight Obstruction Area), may be modified where the Chairperson of the City Planning Commission has certified to the Department of Buildings that the provisions of this Section have been met. An application for such certification shall include:

(a) a site plan and elevations, showing the proposed #building or other structure# in relation to the underlying maximum height limits;

(b) separate verification letters from the Federal Aviation Administration and the Port Authority of New York and New Jersey that such #building or other structure#, including the location of temporary structures such as construction cranes, will not constitute a danger to the safety of air passengers or disrupt established airways or runway operations, respectively; and

(c) materials sufficient to demonstrate that the modified height of a #building or other structure# does not exceed 200 feet above mean sea level within Subdistrict A, and 245 feet above mean sea level within Subdistrict B.

127-30
SPECIAL ACCESSORY OFF-STREET PARKING AND LOADING REGULATIONS

Within the #Special Flushing Waterfront District#, the applicable parking and loading regulations set forth in Article III, Chapter 6, Article IV, Chapter 4 (Accessory Off-street Parking and Loading Regulations), Article VI, Chapter 4 (Special Regulations Applicable to Certain Areas), and Article XII, Chapter 3 (Special Mixed Use District) shall apply, inclusive, except as modified in this Section. For the purpose of applying the provisions of this Section, all #upland connections#, #visual corridors#, #shore public walkways# and #publicly accessible private streets#, as specified in Section 127-42 (Publicly Accessible Private Streets), shall be considered #streets# and their boundaries shall be considered a #street line#.

127-31
Accessory Off-street Parking Regulations

The underlying parking regulations shall be modified as follows:

(a) In M1 Districts paired with a #Residence District# in Subdistrict A, the following shall apply:

(1) #Commercial# and #manufacturing uses# shall provide either one parking space for every 1,000 square feet of #floor area#, or shall provide parking spaces at the rate required for M1-2 Districts pursuant to Section 44-21 (General Provisions), whichever requires a smaller number of spaces.

In addition, the provisions of Section 44-23 (Waiver of Requirements for Spaces Below Minimum Number) and paragraph (a) and (b) of Section 44-231 (Exceptions to application of waiver provisions) shall not apply to #manufacturing uses#. In lieu thereof, #accessory# off-street parking spaces may be waived for #manufacturing# and #commercial uses# if the number of spaces for all applicable uses is at or below 40 spaces.

(2) #Residential# and #community facility uses# shall be subject to the parking requirements of R7-1 Districts, as set forth in Article II, Chapter 5 (Accessory Off-Street Parking and Loading Regulations).

(b) In C4-2 Districts within Subdistricts B and C, the parking requirements applicable to C4-4 Districts, as set forth in Article III, Chapter 6 (Accessory Off-Street Parking and Loading Regulations), shall apply.

127-32
Loading Regulations

The provisions of the underlying loading regulations shall be modified as follows:

(a) in C4-2 Districts, the loading requirements applicable to C4-4 Districts, as set forth in Article III, Chapter 6 (Accessory Off-Street Parking and Loading Regulations), shall apply.

(b) the requirement of Sections 36-60 (OFF-STREET LOADING REGULATIONS), inclusive, and 44-50 (GENERAL PURPOSES), inclusive, shall not apply to changes of uses;

(c) the provisions of Sections 36-63 (Special Provisions for a Single Zoning Lot With Uses Subject to Different Loading Requirements), 36-64 (Wholesale, Manufacturing, or Storage Uses Combined With Other Uses), 44-53 (Special Provisions for a Single Zoning Lot With Uses Subject to Different Loading Requirements) and 44-54 (Wholesale, Manufacturing or Storage Uses Combined With Other Uses) shall not apply; and

(d) the minimum length requirements for loading berths #accessory# to #commercial uses#, other than funeral establishments, and wholesale, manufacturing or storage #uses#, as set forth in Sections 36-681 (Size of required berths), and 44-581 (Size of required loading berths), shall be 37 feet.

127-40
DISTRICT PLAN ELEMENTS

Within Subdistrict A and Subdistrict B, the district plan element provisions of this Section shall apply. For the purpose of applying the provisions of this Section, inclusive, all #upland connections#, #visual corridors#, #shore public walkways# and #publicly accessible private streets# shall be considered #streets# and their boundaries shall be considered a #street line#.

127-41
Special Streetscape Regulations

For the purposes of applying the special streetscape provisions of Section 37-30 to this Chapter, any portion of a #ground floor level street# frontage along primary #street# frontages designated on Map 3 (Requirements Along Street Frontages) in the Appendix to this Chapter shall be considered #primary street frontages#, and a #ground floor level street# frontage along secondary #street# frontages on Map 3 shall be considered a #secondary street frontage#. In addition, defined terms shall include those in Sections 12-10 and 37-311.

127-411
Special provisions for frontages along streets and the shoreline

The provisions of this Section shall apply to #developments# or #ground floor level enlargements#.

(a) At the intersection of #primary street frontages#

For #ground floor level street walls# within 50 feet of the intersection of two #primary street frontages#, as shown on Map 3 in the Appendix to this Chapter:

(1) #uses# on the #ground floor level#, to the minimum depth set forth in Section 37-32 (Ground Floor Depth Requirements for Certain Uses), shall be limited to non-#residential uses#, except for lobbies.

(2) #Group parking facilities# located on the #ground floor level# of a #building# shall be wrapped by #floor area# in accordance with the provisions of paragraph (a) of Section 37-35 (Parking Wrap and Screening Requirements), and above the #ground floor level#, such parking facilities shall be wrapped by #floor area# or screened in accordance with the provisions of Section 37-35.

(3) #Ground floor level street walls# shall be glazed in accordance with the provisions set forth in Section 37-34 (Minimum Transparency Requirements).

(b) Along other #street# frontages

For portions of #buildings# along the remainder of #primary street frontages#, and for #buildings# with #secondary street frontages#, as shown on Map 3, #group parking facilities# located on the #ground floor level# shall be wrapped by #floor area# or screened in accordance with the provisions of Section 37-35. However, for portions of #buildings# facing the #shoreline#, #group parking facilities# at all levels shall be wrapped by #floor area# or screened in accordance with the provisions of Section 37-35.

127-412
Special provisions for blank walls

The blank wall provisions of paragraph (a)(7)(ii) of Section 62-655 (Planting and trees) shall not apply. In lieu thereof, the provisions of this Section, inclusive, shall apply.

Along all frontages, where no transparent materials or #building# entrances or exits are provided on the #ground floor level street wall# lower than a height of four feet above the level of the adjoining sidewalk for a continuous width of at least 25 feet, at least 75 percent of the linear footage of any such portions of a #ground floor level street wall# shall be treated by one or more of the following visual mitigation elements which shall be provided on the #zoning lot#, except where such elements are permitted within the #street# under other applicable laws or regulations.

(a) Planting

Any combination of perennials, annuals, decorative grasses or shrubs shall be provided in planting beds, raised planting beds or planter boxes in front of the #street wall#. Each foot in width of a planting bed, raised planting bed or planter box, as measured parallel to the #street wall#, shall satisfy one linear foot of frontage mitigation requirements. Such planted area shall extend to a depth of at least three feet, inclusive of any structure containing the planted material. Any individual planted area shall have a width of at least five feet, and the height of such planting, inclusive of any structure containing the planted materials, shall be at least three feet.

Where a blank wall exceeds a #street wall# width of 50 feet, at least 25 percent of such #street wall# width shall be planted in accordance with the provisions of this paragraph.

(b) Benches

Fixed benches with or without backs shall be provided in front of the #street wall#. Unobstructed access shall be provided between such benches and an adjoining sidewalk or required circulation paths. Each linear foot of bench, as measured parallel to the #street wall#, shall satisfy one linear foot of frontage mitigation requirement. Any individual bench shall have a width of at least five feet, and no more than 20 feet of benches may be used to fulfill such requirement per 50 feet of frontage.

(c) Bicycle racks

Bicycle racks, sufficient to accommodate at least two bicycles, shall be provided in front of the #street wall#, and oriented so that the bicycles are placed parallel to the #street wall#. Each bicycle rack so provided shall satisfy five linear feet of frontage mitigation requirement. No more than three bicycle racks may be used to fulfill such requirement per 50 feet of frontage.

(d) Tables and chairs

Fixed tables and chairs shall be provided in front of the #street wall#. Each table shall have a minimum diameter of two feet, and have a minimum of two chairs associated with it. Each table and chair set so provided shall satisfy five linear feet of frontage mitigation requirement.

(e) Wall treatment

Wall treatment, in the form of permitted #signs#, graphic or sculptural art, rustication, decorative screening or latticework, or living plant material, shall be provided along the #street wall#. Each linear foot of wall treatment shall constitute one linear foot of frontage mitigation requirement. Such wall treatment shall extend to a height of at least 10 feet, as measured from the level of the adjoining sidewalk or grade, and have a minimum width of 10 feet, as measured parallel to the #street wall#.

127-42
Publicly Accessible Private Streets

The provisions of this Section, inclusive, shall apply to any #development#, as defined in Section 62-11 (Definitions), on a #zoning lot# that contains any portion of a required #publicly accessible private street#.

127-421
Requirements for publicly accessible private streets

#Publicly accessible private streets# shall be:

(a) accessible to the public at all times, except when required to be closed for repairs, and for no more than one day each year in order to preserve the private ownership of such area. Where an #upland connection# is designated on a #publicly accessible private street# as specified on Map 6 (Waterfront Access Plan: Public Access Areas) in the Appendix to this Chapter, the provisions of this paragraph shall supersede the hours of access provisions applicable to an #upland connection#;

(b) constructed to the dimensions specified on Map 2 (Publicly Accessibly Private Street Network) in the Appendix to this Chapter and be constructed to Department of Transportation standards for public #streets# including, but not limited to, sidewalks, curb design, lighting, traffic signage, pavement materials, drainage and crosswalks. In addition, where an #upland connection# is designated on a #publicly accessible private street# as specified on Maps 7 and 8 (Phase I and Phase II Waterfront Public Access Improvements, respectively) in the Appendix to this Chapter, the #upland connection# design requirements of Section 62-60 (DESIGN REQUIREMENTS FOR WATERFRONT PUBLIC ACCESS AREAS), inclusive, shall apply; and

(c) constructed with sidewalks that have a minimum clear path of eight feet along their #street lines#, except where an #upland connection# is designated on a #publicly accessible private street#. Such sidewalks shall be provided with street trees in accordance with the provisions of Section 26-41 (Street Tree Planting), except that such street trees shall be planted within a street tree pit or a raised planting bed, with at least 180 cubic feet of soil for each tree, and with a minimum horizontal width of four feet and vertical depth of 3 feet 6 inches, and such planting pit or raised planting bed shall be located adjacent to, and extend along the curb.

127-422
Certification for publicly accessible private streets

Where a #publicly accessible private street# is designated entirely within a #zoning lot#, the provisions of paragraph (a) of this Section shall apply. Where a #publicly accessible private street# is designated on two or more #zoning lots# and the design and construction of adjoining portions of the #publicly accessible private street# may not be finalized, the provisions of paragraph (b) of this Section shall apply. The provisions of paragraph (b) provide for certification of such portions of a #publicly accessible private street# in accordance with an #interim site plan# that satisfies the requirements of the New York City Fire Code; a #conceptual plan# for portions of the #publicly accessible private street# on other #zoning lots# that will be certified and constructed at a later time; and a #final site plan#, which will either supersede an #interim site plan# or be guided by a #conceptual plan#. The provisions of paragraph (c) shall apply to #development# on a #zoning lot# that contains any portion of a required #publicly accessible private street#.

No building permit shall be issued for a #development# on a #zoning lot#, containing any portion of a #publicly accessible private street#, until the Chairperson of the City Planning Commission certifies, in conjunction with a certification pursuant to Section 127-54 (Special Review Provisions) to the Department of Buildings that:

(a) where the #publicly accessible private street# is designated on one #zoning lot#, or where the #publicly accessible private street# is designated on two or more #zoning lots# and such #publicly accessible private street# will be constructed in its entirety concurrently with the applicant's #development#, a #final site plan# has been submitted;

(b) where the #publicly accessible private street# is designated on two or more #zoning lots# and the portion of such #publicly accessible private street# located outside of the applicant's property will not be or has not been constructed concurrently with the applicant's #development#:

(1) if no prior certification pursuant to this Section was issued for a portion of the #publicly accessible private street# on another #zoning lot#, the Chairperson shall certify that:

(i) a #conceptual plan# has been submitted for the #publicly accessible private street#. In addition, certified mailing of notification that the applicant is seeking to commence construction of such #publicly accessible private street# shall be given to all other owners whose property contains any remaining portion of such #publicly accessible private street#, along with a copy of such #conceptual plan#;

(ii) a #final site plan# for the applicant's #zoning lot# has been submitted showing compliance with the design standards of Section 127-421 (Requirements for publicly accessible private streets). In addition, where compliance with the fire apparatus access road requirements, set forth in the New York City Fire Code, require modifications to the design standards of Section 127-421, an #interim site plan# has been submitted that deviates from such design standards to the minimum extent necessary; and

(iii) the grading proposed in the #final site plan#, #conceptual plan# and #interim site plan# have been certified pursuant to Section 127-61.

Property owners of #zoning lots# containing any remaining portion of the #publicly accessible private street# shall have up to 30 days from the date of the applicant's certified mailing of the notification required in paragraph (b)(1)(i) of this Section to respond to the applicant and to confirm for the Chairperson that the construction of the entire #publicly accessible private street# is not feasible concurrently with the applicant's #development#. In the event that such notified property owners do not respond to the applicant and the Chairperson within the 30-day period, the applicant may proceed with completing this certification. Where a notified property owner responds that it is feasible to complete the portion of the #publicly accessible private street# on such owner's #zoning lot# concurrently with the applicant's portion, such property owner shall commence certification pursuant to the applicable provisions of this Section within 45 days from the date of submitting such response. In the event such notified property owners do not commence such certification within the 45-day period, the applicant may proceed with completing this certification.

In addition, where construction of #publicly accessible private streets# will not occur concurrently on the adjoining #zoning lot#, property owners of #zoning lots# containing any remaining portion of the #publicly accessible private street# shall have up to 45 days from the date of submitting their response to comment on any anticipated practical difficulties associated with the proposed location, dimensions and grading specified in the #conceptual plan# that would preclude the reasonable development of such owner's property. Any submission of comments to the applicant and Chairperson shall include documentation from a licensed architect, landscape architect, or engineer, as applicable, that demonstrates the reason for such anticipated practical difficulties.

Copies of the approved #conceptual plan#, as well as the certified #interim site plan# and #final site plan# shall be forwarded to all property owners of a #zoning lot# containing any remaining portion of the #publicly accessible private street#.

Any portion of the #publicly accessible private street# constructed in compliance with a certified #interim site plan# shall be converted to the final design in compliance with the certified #final site plan# for such portion upon receiving notice from an adjoining property owner as set forth in paragraph (b)(2) of this Section that the remaining portion of the #publicly accessible private street# has been substantially completed and opened to the public.

(2) If a prior certification pursuant to paragraph (b)(1) of this Section was issued for a portion of a #publicly accessible private street# on another #zoning lot#, the Chairperson shall certify that:

(i) a #final site plan# for the applicant's #zoning lot# has been submitted that is consistent with the #conceptual plan# from the prior certification; and

(ii) the proposed amenities and design elements within the #final site plan# in the applicant's portion of a #publicly accessible private street# shall match or complement those that were previously constructed.

Upon substantial completion by applicant of its portion of the #publicly accessible private

street# that has been constructed pursuant to a certified #interim site plan# and the opening of such portion to the public, notice shall be provided to any property owner of a #zoning lot# containing a portion of such #publicly accessible private street#. Such notice shall be provided to enable such other owner sufficient time, as shall be specified in the restrictive declaration required pursuant to paragraph (c) of this Section, to convert any constructed interim condition and complete the #publicly accessible private street# in compliance with the previously approved #final site plan#; and

(c) a restrictive declaration has been executed and recorded against the applicant's #zoning lot# in accordance with the provisions of Section 127-423 (Restrictive declaration). Required site plans, the #conceptual plan# and a maintenance and capital repair plan for the #publicly accessible private street# shall be included as exhibits to the restrictive declaration.

No temporary or final certificate of occupancy shall be issued until the Chairperson of the City Planning Commission notifies the Department of Buildings that the proposed #publicly accessible private street#, or portion thereof, has been substantially completed in compliance with the certified #interim site plan# or #final site plan#, and is open to the public. In addition, where a property owner seeks certification pursuant to paragraph (b)(2) of this Section, no temporary or final certificate of occupancy shall be issued until interim portions of the #publicly accessible private street# are completed in compliance with the previously approved #final site plan# for such portions.

127-423
Restrictive declaration

For any #publicly accessible private street# proposed for certification pursuant to Section 127-422 (Certification for a publicly accessible private street), a restrictive declaration shall be provided to ensure the proper construction, improvement, operation, maintenance and repair of the roadbed and any sidewalk adjacent to the roadbed. Adequate security shall be specified in such declaration to ensure that the #publicly accessible private street# is maintained in accordance with the declaration. The restrictive declaration shall further specify that the #publicly accessible private street# shall not be used for any other purposes than #street#-related purposes, including, but not limited to, pedestrian and vehicular circulation, and shall be publicly accessible at all times. To ensure proper #street# use and provide enforcement, in accordance with the parking provisions set forth in the restrictive declaration, executed contracts with a security monitoring and a towing company shall be required prior to the issuance of a temporary certificate of occupancy. In addition, a reserve account with sufficient funds for the maintenance and capital repair of the constructed #publicly accessible private street# shall be maintained at all times. Such reserves, contracts, and the required maintenance and repair shall be the responsibility of a Property Owner's Association that will oversee the management and maintenance of the #publicly accessible private streets#, upon the development on two or more #zoning lots#, and include as members all property owners of #zoning lots# bordering or containing the completed #publicly accessible private streets#. Filing and recording of the restrictive declaration shall be a precondition to the Chairperson's certification under Section 127-422.

Such restrictive declaration shall be prepared in a form acceptable to the Department of City Planning, filed and duly recorded in the Borough Office of the Register of the City of New York, and indexed against the property. The restrictive declaration and any maintenance and operation agreement shall run with the land and be binding on the owners, successors and assigns.

In addition, the portions of the #publicly accessible private streets# on a #developed zoning lot# shall be recorded on the certificate of occupancy for such #building# by the Department of Buildings. The recording information of the restrictive declaration shall be included on the certificate of occupancy for any #building#, or portion thereof, issued after the recording date.

127-424
Certification for zoning lot subdivision

In conjunction with a certification pursuant to Section 62-812 (Zoning lot subdivision), a #zoning lot# that existed before [date of adoption] containing any portion of #publicly accessible private street# may be subdivided into two or more #zoning lots# or reconfigured in a manner that would reduce its area or dimension, provided that the Chairperson of the City Planning Commission certifies that the provisions of paragraph (a), (b) or (c) of such Section are satisfied as to #waterfront public access area#, #visual corridors# and #publicly accessible private streets#, respectively. For the purposes of applying such provisions, the regulations pertaining to #waterfront public access areas# and #visual corridors# shall also be applied to #publicly accessible private streets#.

127-43
Publicly Accessible Area

Where a tower rises sheer in accordance with the provisions of paragraph (c)(2) of Section 127-233 (Base heights and setback regulations), no #building# permit shall be issued by the Department of Buildings until the Chairperson of the City Planning Commission certifies a site plan demonstrating that a publicly accessible area, in compliance with the following requirements, will be provided.

(a) Minimum size and location

A publicly accessible area shall contain a minimum area of at least 2,000 square feet. Such publicly accessible area shall be located at the intersection of two #streets#, and shall have a minimum width of 20 feet along each #street line#. A publicly accessible area shall in no event include area within a #publicly accessible private street#.

In addition, the major portion of a publicly accessible area shall occupy no less than 75 percent of the total publicly accessible area. The major portion is the largest area of the publicly accessible area and is the area of primary use. Major portions shall be generally regular in shape, easily and directly accessible from adjoining #buildings# and public spaces, and continuously visible from all portions of the publicly accessible area and from adjoining public spaces.

(b) Design requirements

All publicly accessible areas shall comply with the following provisions:

(1) a minimum of 20 percent of the open area shall be planted with any combination of perennials, annuals, decorative grasses, shrubs or trees in planting beds, raised planting beds or planter boxes. Such planting bed shall extend to a depth of at least two feet, inclusive of any structure containing the planted material, and any individual planted area

shall have a width of at least five feet;

(2) one linear foot of seating shall be provided for each 60 square feet of publicly accessible area. For the purposes of such calculation, moveable seating or chairs may be credited as 24 inches of linear seating per chair;

(3) permitted obstructions within such area shall be subject to the provisions of Section 37-726 (Permitted obstructions), and any kiosk or open air cafe provided shall meet the operational and service requirements listed in paragraphs (a) and (b) of Section 37-73 (Kiosks and Open Air Cafes);

(4) the provisions of Section 37-722 (Level of plaza) and 37-728 (Standards of accessibility for persons with disabilities) shall apply to such area, and any steps provided shall be subject to the provisions of Section 37-725 (Steps);

(5) entry plaques and information plaques shall be provided in accordance with the provisions of paragraphs (a) and (b) of Section 37-751 (Public space signage systems); and

(6) all ground floor level #building# walls located within a distance of 150 feet from and facing a publicly accessible area provided on the same #zoning lot# shall either comply with the provisions of paragraph (a) of Section 127-411 (Special provisions for frontages along streets and the shoreline), or the provisions of paragraph (e) of Section 127-412 (Special provisions for blank walls).

(c) Design changes

Any modification to a publicly accessible area certified pursuant to the provisions that, in the aggregate, results in design changes impacting more than 20 percent of the area of such publicly accessible area as compared to the certified plans, shall require a new certification pursuant to the provisions of this Section. Where a design change does not exceed 20 percent, the modifications made to the publicly accessible area shall not reduce the amount of amenities provided or otherwise creates a non-compliance with the provisions of this Section.

(d) Hours of public access

Such publicly accessible area shall be accessible to the public between the hours of 6:00 a.m. and 10:00 p.m. seven days of the week.

No certificate of occupancy shall be issued until the Chairperson of the City Planning Commission determines that the publicly accessible area is substantially completed in compliance with the certified plan and that such space has been made available for use by the public in compliance with the requirements of this Section.

127-50
FLUSHING WATERFRONT ACCESS PLAN

[NOTE: existing provisions moved from Section 62-952 and modified]

The provisions of Article VI, Chapter 2 (Special Regulations Applying in the Waterfront Area), shall apply, except as superseded, supplemented or modified by the provisions of this Section, inclusive. Map 4 (Waterfront Access Plan: Parcel Designation), Map 5 (Waterfront Access Plan: Visual Corridors), and Map 6 (Waterfront Access Plan: Public Access Areas) in the Appendix to this Chapter show the boundaries of the area comprising the Flushing Waterfront Access Plan, boundaries of parcels within the Plan and the location of certain features mandated or permitted by the Plan.

The Plan has been divided into parcels consisting of tax blocks and lots and other lands as established on [date of adoption], as follows:

Subdistrict A

Parcel 1:	Block 4963, Lots 212 and 249
Parcel 2:	Block 4963, Lot 210
Parcel 3:	Block 4963, Lot 200

Subdistrict B

Parcel 4:	Block 4963, Lot 85
Parcel 5:	Block 4963, Lot 65
Parcel 6:	Block 4963, Lot 75
Parcel 7:	Block 4963, Lots 7, 8 and 9
Parcel 8:	Block 4963, Lot 1

Subdistrict C

Parcel 9:	Block 5066, Lots 7503 and 7507

Any #development# on a #zoning lot# within the parcels listed above shall be subject to the requirements of Section 127-51 (Modified Applicability for Visual Corridors and Waterfront Public Access Areas), Section 127-52 (Special Requirements for Visual Corridors), Section 127-53 (Special Requirements for Waterfront Public Access Areas) and Section 127-54 (Special Review Provisions).

For the purposes of this Section, inclusive, defined terms shall include those listed in Sections 12-10 and 62-11, but #development# shall be as defined in Section 62-11.

127-51
Modified Applicability for Visual Corridors and Waterfront Public Access Areas

The applicability provisions for #visual corridors# pursuant to Section 62-51 (Applicability of Visual Corridor Requirements) and #waterfront public access areas# pursuant to Section 62-52 (Applicability of Waterfront Public Access Area Requirements) shall apply, except as modified as follows:

(a) #developments# comprised predominantly of #uses# in Use Groups 16, 17 or 18, except for docking facilities serving passenger vessels or sightseeing, excursion or sport fishing vessels, are subject to the special requirements for #visual corridors# set forth in Section 127-52; and

(b) #developments# comprised predominantly of #uses# in Use Groups 16, 17 or 18 shall provide a minimum amount of #waterfront public access area# in accordance with the provisions of Section 62-58 (Requirements for Water-Dependent Uses and Other Developments). Within such #waterfront public access area#, a circulation path shall be provided with a minimum clear width of at least 10 feet and shall connect with either an adjoining #shore public walkway# or additional circulation paths on adjoining #zoning lots#.

127-52
Special Requirements for Visual Corridors

For #developments# within Parcels 3, 5 and 7, #visual corridors# shall be provided in the locations designated on Map 5 in the Appendix to this Chapter and pursuant to the requirements of Sections 62-51 (Applicability of Visual Corridor Requirements) and 62-65 (Public Access Design Reference Standards).

127-53
Special Requirements for Waterfront Public Access Areas

#Waterfront public access areas# shall be provided pursuant to Sections 62-52 (Applicability of Waterfront Public Access Area Requirements), 62-60 (DESIGN REQUIREMENTS FOR WATERFRONT PUBLIC ACCESS AREAS), and 62-70 (MAINTENANCE AND OPERATION REQUIREMENTS FOR WATERFRONT PUBLIC ACCESS AREAS), inclusive, except as modified in this Section, inclusive.

For all such #waterfront public access areas#, as designated on Map 6 (Waterfront Access Plan: Public Access Areas) in the Appendix to this Chapter, the minimum seat depth requirement of paragraph (b) of Section 62-652 (Seating) shall be modified to 16 inches.

127-531
Shore public walkways

For #zoning lots developed# within Parcels 1, 3, 4, 5, 7 and 8, a #shore public walkway# shall be provided in the location designated on Map 6 in the Appendix to this Chapter. The applicable provisions of Section 62-53 (Requirements for Shore Public Walkways) and Section 62-60 (DESIGN REQUIREMENTS FOR WATERFRONT PUBLIC ACCESS AREAS), inclusive, shall apply except as modified in this Section:

(a) the circulation and access provisions of paragraph (a) of Section 62-62 (Design Requirements for Shore Public Walkways and Supplemental Public Access Areas) shall be modified as follows:

(i) the required circulation path within a #shore public walkway# shall be provided at a minimum elevation of 5 feet, 6 inches above the #shoreline#, except that such requirement need not include portions of a circulation path that slope downward to meet the elevation of an existing publicly accessible sidewalk;

(ii) where secondary circulation paths are provided, such paths may count as a part of the required circulation path for satisfying the locational requirement of being within 10 feet of the #shoreline# for at least 20 percent of the length of such #shoreline#. However, such secondary circulation paths may comply with the paving requirements of paragraph (a)(2) of Section 62-656; and

(iii) where a #shore public walkway# is on a #zoning lot# that is adjacent to a #waterfront zoning lot# without a #shore public walkway#, the portion of the circulation path that terminates at the common #zoning lot line# shall be located within 40 feet of the shoreline;

(b) the minimum width of the screening buffer pursuant to paragraph (c)(2)(ii) of Section 62-62 (Design Requirements for Shore Public Walkways and Supplemental Public Access Areas) shall be four feet. No screening buffer shall be required where there is a pathway connecting a required circulation path towards a publicly accessible sidewalk or entry to a commercial or community facility use; and

(c) the grade level of required planting areas pursuant to paragraph (d)(2) of Section 62-61 (General Provisions Applying to Waterfront Public Access Areas) shall be increased to no more than three feet higher or lower than the adjoining level of the pedestrian circulation path.

127-532
Upland connections

For #developments# within Parcels 1, 2, 3, 4, 5 and 7, #upland connections# shall be provided as specified on Map 6 (Waterfront Access Plan: Public Access Areas) in the Appendix to this Chapter. The applicable provisions of Section 62-56 (Requirements for Upland Connections) and Section 62-60 (DESIGN REQUIREMENTS FOR WATERFRONT PUBLIC ACCESS AREAS), inclusive, shall apply except as modified in this Section.

(a) Flexible location zone

For # developments# on Parcels 1, 2 and 3, a single #upland connection# shall be provided pursuant to the following provisions:

(1) If Parcel 1 #develops# before Parcels 2 or 3, a Type 1 #upland connection# shall be provided with a minimum width of 20 feet. The requirements of paragraph (a)(2) of Section 62-561 (Types of upland connections) shall not apply and the minimum planting area requirements shall be reduced to 25 percent. Where such #upland connection# is provided without a 20-foot-wide open area, an average maintained level of illumination

of not less than one and a half horizontal foot candles (lumens per foot) shall be provided throughout all walkable areas;

(2) If Parcels 1 and 2 are #developed# jointly before Parcel 3, an #upland connection# shall be provided on Parcels 1 and 2, along their southerly boundary, pursuant to the requirements of Sections 62-561 and 62-64 (Design Requirements for Upland Connections). The 20-foot-wide open area required pursuant to paragraph (a)(2) of Section 62-561 shall be provided on Parcel 3, along its northerly boundary, at the time Parcel 3 #develops#. In any event, the required open area shall abut such required upland connection;

(3) If Parcel 3 #develops# before Parcels 1 or 2:

(i) where a #development# is comprised predominantly of Use Groups 1 through 15 inclusive, an #upland connection# shall be provided on Parcel 3 pursuant to the requirements of Section 62-561 and Section 62-64. If such #upland connection# is provided along the northerly boundary of such Parcel, the required 20-foot-wide open area pursuant to paragraph (a)(2) of Section 62-561 shall be satisfied on Parcels 1 and 2, along the southerly boundary, at the time these parcels #develop#. However, in any event, the required open area shall abut such required upland connection;

(ii) where a #development# is comprised predominantly of #uses# in either Use Groups 16, 17 or 18, a Type 1 #upland connection# shall be provided with a minimum width of 20 feet. The requirements of paragraph (a)(2) of Section 62-561 shall not apply and the minimum planting area requirements shall be reduced to 25 percent; or

(4) If Parcels 2 and 3 are #developed# jointly before Parcel 1, an #upland connection# shall be provided pursuant to the requirements of Sections 62-561 and 62-64.

For any other sequencing or combination of #developments#, a single #upland connection# shall be provided pursuant to the provisions of Sections 62-561 and 62-64 within the flexible location zone on Map 6.

(b) Minimum standards for interim condition

Where an #upland connection# is designated on two or more parcels and only a portion of such #upland connection# can be constructed pursuant to a specific certification, such portion of the #upland connection# may be provided independently to satisfy the requirements of Section 62-56. Where the New York City Fire Department determines that such requirements conflict with the provision of unobstructed width for fire apparatus access roads pursuant to the New York City Fire Code, the design requirements of Section 62-60 shall be modified to the minimum extent necessary to accommodate such fire apparatus access roads requirements. However, all interim conditions shall meet the following requirements:

(1) provide public access from the first upland #street# to the #shore public walkway#; and

(2) for every tree pit required pursuant to the provisions of paragraph (c)(1) of Section 62-64 (Planting) that is not provided, a moveable planter shall be provided.

Such interim condition shall be certified pursuant to paragraph (a)(1) of Section 127-542 (Supplemental provisions) and Section 127-61 (Certification for Interim Grading Conditions).

127-533
Phased development of waterfront public access areas

When a parcel is undergoing partial #development# or the #zoning lot# corresponding to a parcel is subdivided or reconfigured pursuant to Section 62-812 (Zoning lot subdivision), the City Planning Commission may authorize a phasing plan to implement #waterfront public access area# improvements pursuant to paragraph (c) of Section 62-822 (Modification of waterfront public access area and visual corridor requirements).

However, in Subdistrict B, when partial #development# occurs on the upland portion of Parcels 4, 5 and 7 that is bounded by #publicly accessible private streets# or #streets#, a phasing plan to implement #waterfront public access areas# may be certified pursuant to Section 127-54 (Special Review Provisions), provided that the following requirements are met:

(a) the #waterfront public access area# shall be provided according to the phasing specified in Map 7 (Waterfront Access Plan: Phase I Waterfront Public Access Area Improvements) and Map 8 (Waterfront Access Plan: Phase II Waterfront Public Access Area Improvements). The requirements of Phase I shall apply when #development# occurs on the upland portion of the parcel bounded by #publicly accessible private streets# and other #streets# as shown on Map 6 (Waterfront Access Plan: Public Access Areas). The requirements of Phase II shall apply when #development# occurs on the seaward portion of the parcel bounded by both the #shoreline# and #publicly accessible private streets#; and

(b) any #upland connection# provided pursuant to Phase I shall meet the design requirements of paragraph (b) of Section 127-532 (Upland connections). For portions of the #shore public walkway# that are provided in Phase I, the requirements of Sections 62-53 (Requirements for Shore Public Walkways) and 62-60 (DESIGN REQUIREMENTS FOR WATERFRONT PUBLIC ACCESS AREAS) may be modified to the minimum extent necessary to accommodate a temporary waterfront viewing area.

Such phasing plan shall also be certified pursuant to Section 127-61 (Certification for Interim Grading Conditions).

127-54
Special Review Provisions

The applicable provisions of Section 62-80 (SPECIAL REVIEW PROVISIONS), inclusive, shall apply, except as specifically modified or supplemented by the provisions of this Section, inclusive.

127-541
Applicability

The provisions of Section 62-81, inclusive, shall apply to #zoning lots# containing predominantly #uses# in Use Groups 16, 17, or 18, subject to the modified #waterfront public access area# provisions of Section 127-50 (FLUSHING WATERFRONT ACCESS PLAN), inclusive.

127-542
Supplemental provisions

In conjunction with a certification pursuant to Section 62-811 (Waterfront public access and visual corridors), the Chairperson of the City Planning Commission shall further certify that:

(a) where an #upland connection# is designated on two or more parcels and the portion of such #upland connection# located outside of the applicant's parcel will not be constructed concurrently with the applicant's #development#:

(1) if no prior certification pursuant to this Section was issued for a portion of an #upland connection# on another parcel, the Chairperson shall certify that:

(i) a #conceptual plan# has been submitted for the #publicly accessible private street#. In addition, notification that the applicant is seeking to commence construction of such #publicly accessible private street# shall be given to any other owner whose property contains any remaining portion of the #publicly accessible private street#, along with a copy of such #conceptual plan#;

(ii) a site plan has been submitted, specifying the location, dimensions and grading of the portion of the #upland connection# to be constructed on the applicant's #zoning lot#. Such site plan shall demonstrate compliance with the requirements of paragraph (b) of Section 127-532 (Upland connections); and

(iii) the grading proposed in the #conceptual plan# has been certified pursuant to Section 127-61.

Property owners of the parcel containing a remaining portion of the #upland connection# shall have up to 30 days from the applicant's certified mailing of the notification required in paragraph (a)(1)(i) of this Section to respond to the applicant and to confirm for the Chairperson that the construction of the entire #upland connection# is not feasible concurrently with the applicant's #development#. In the event such notified property owners do not respond to the applicant and the Chairperson within the 30-day period, the applicant may proceed with completing this certification. Where a notified property owner responds that it is feasible to complete the portion of the #upland connection# on their parcels concurrently with the applicant's #development#, such property owner shall commence certification pursuant to the applicable provisions of this Section within 45 days from the date of submitting such response. In the event such notified property

owners do not commence such certification within the 45-day period, the applicant may proceed with completing this certification.

In addition, where construction of the #upland connection# will not occur concurrently, property owners of parcels containing a remaining portion of the #upland connection# shall have up to 45 days from the date of submitting their response to comment on any anticipated practical difficulties associated with the proposed location, dimensions and grading specified in the #conceptual plan# that would preclude the reasonable #development# of such owner's parcel. Any submission of comments to the applicant and Chairperson shall include documentation from a licensed architect, landscape architect, or engineer, as applicable, that demonstrates the reason for such anticipated practical difficulties.

Copies of the approved #conceptual plan#, as well as the certified #interim site plan# and #final site plan# shall be forwarded to any property owner of a parcel containing the remaining portion of the #upland connection#.

Any portion of the #upland connection# constructed in compliance with a certified #interim site plan# shall be converted to the final design in compliance with the certified #final site plan# for such portion upon receiving notice from an adjoining property owner as set forth in paragraph (a)(2) of this Section that the remaining portion of the #upland connection# has been substantially completed and is accessible to the public.

(2) If a prior certification pursuant to paragraph (a)(1) of this Section was issued for a portion of the #upland connection# on another parcel, the Chairperson shall certify that:

(i) a #final site plan# for the applicant's parcel has been submitted that is consistent with the #conceptual plan# from the prior certification; and

(ii) the proposed amenities and design elements within the #final site plan# for the applicant's portion of the #upland connection# shall match or complement those that were previously constructed.

Notice shall be provided to any property owner of a parcel containing a portion of the #upland connection# that has been constructed pursuant to a certified #interim site plan# upon the applicant substantially completing its portion of the #upland connection# and making such portion accessible to the public. Such notice shall be provided to enable such other owner sufficient time, as shall be specified in the restrictive declaration required pursuant to this paragraph (a), to convert any constructed interim condition and complete the #upland connection# in compliance with the previously approved #final site plan#.

A restrictive declaration shall be executed and recorded against the corresponding #zoning lot# of the applicant's parcel, in accordance with the provisions of Section 62-74 (Requirements for Recordation). Required site plans, the #conceptual plan# and a maintenance and capital repair plan for the #upland connection# shall be included as exhibits to the restrictive declaration.

No temporary or final certificate of occupancy shall be issued until the Chairperson of the City Planning Commission notifies the Department of Buildings that the proposed #upland

connection#, or portion thereof, has been substantially completed in compliance with the certified #interim site plan# or #final site plan#, and is open to the public. In addition, where a property owner sought certification pursuant to paragraph (a)(2) of this Section, no temporary or final certificate of occupancy shall be issued until interim portions of the #upland connection# are completed in compliance with the previously approved the #final site plan# for such portions.

(b) For phased implementation of #waterfront public access areas# pursuant to Section 127-533 (Phased development of waterfront public access areas), a plan has been submitted that complies with the required amount of #waterfront public access area# at each development phase pursuant to Section 127-533.

To ensure the provision of #waterfront public access areas# for phased #developments# occurring in Phase I, as specified on Map 7 (Waterfront Access Plan: Phase I Waterfront Public Access Improvements) in the Appendix to this Chapter, no temporary certificate of occupancy shall be issued for any #development# on the upland portion of each parcel that is bounded by #publicly accessible private streets# or #streets# until all required sections of #waterfront public access areas# designated on Map 7 have been substantially completed pursuant to the design requirements of Section 127-533.

For Phase II subsequent #development# occurring on the seaward portion of Parcels 4, 5 or 7, bounded by both the #shoreline# and #publicly accessible private streets#, all remaining #waterfront public access areas#, as specified on Map 8 (Waterfront Access Plan: Phase II Waterfront Public Access Improvements), shall be substantially completed pursuant to the design requirements of Section 127-533, prior to the issuance of a temporary or final certificate of occupancy. However, 50 percent of the #floor area# of any subsequent #development# on Parcels 4 and 5 may receive a temporary certificate of occupancy upon the completion of the required #shore public walkway# as designated on such parcel. A temporary or final certificate of occupancy for the remaining 50 percent of the #floor area# on Parcels 4 and 5 shall not be issued until all required #waterfront public access areas# pursuant to Map 8 are substantially complete.

An alternate location for the required section of an #upland connection# on Parcel 4 may be provided in Phase I, as specified in Map 7, in the event that Parcel 5 has substantially completed all of the required #waterfront public access areas# prior to partial #development# on the upland portion of Parcel 4. Where such alternate location is provided in Phase I, any subsequent #development# on Parcel 4 may only receive a temporary or final certificate of occupancy upon substantial completion of all required #waterfront public access areas# designated on Map 8.

A certification will be granted on condition that an acceptable restrictive declaration is executed and filed pursuant to Section 62-74 (Requirements for Recordation).

127-60
ADDITIONAL REVIEW REQUIREMENTS

127-61
Certification for Interim Grading Conditions

For any #development# or #enlargement# seeking:

(a) modification to the level of #waterfront yard# provisions of Section 127-22 (Special Yard Regulations);

(b) a certification pursuant to paragraph (b)(1) of Section 127-422 (Certification for a publicly accessible private street); or

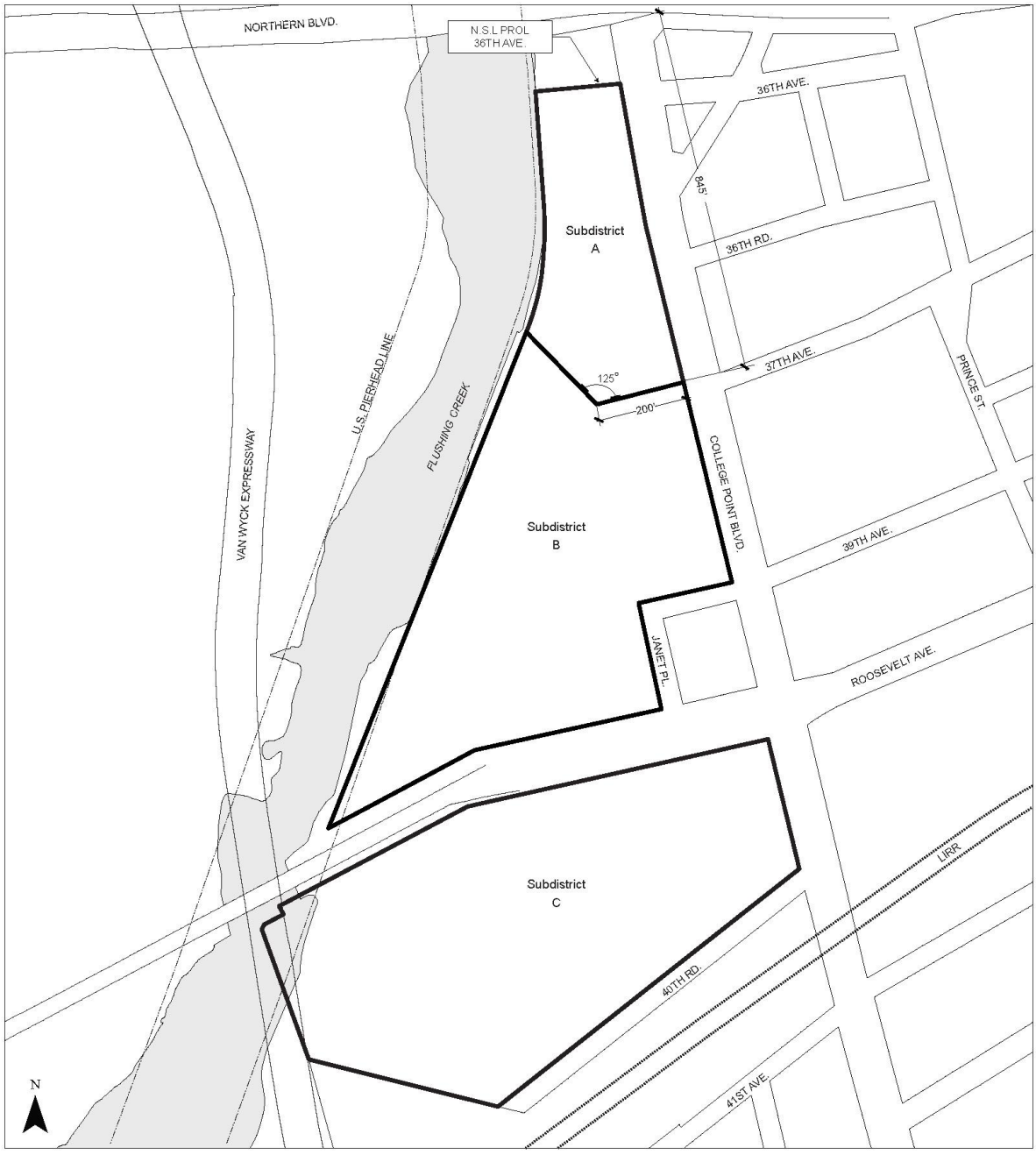
(c) a certification pursuant to Section 127-542 (Supplemental provisions),

the Chairperson of the City Planning Commission shall certify that a site survey has been conducted and sufficient documentation has been submitted, demonstrating that the proposed grades of a #waterfront yard#, interim plan for a #publicly accessible private street# or #upland connection# would not preclude #developments# or #enlargements# on adjacent parcels from complying with the provisions of this Chapter as part of an integrated public realm.

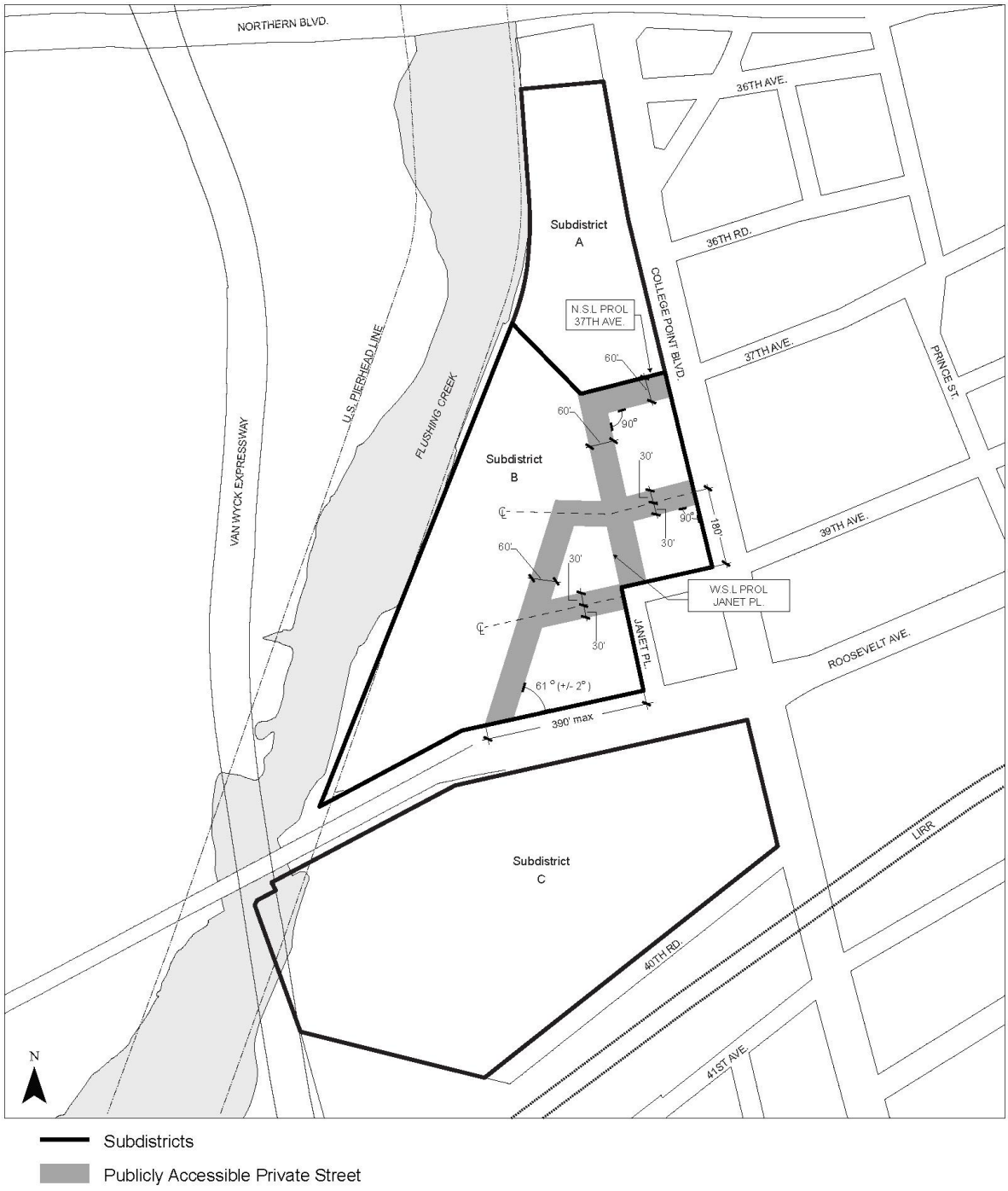
Appendix

SPECIAL FLUSHING WATERFRONT DISTRICT PLAN

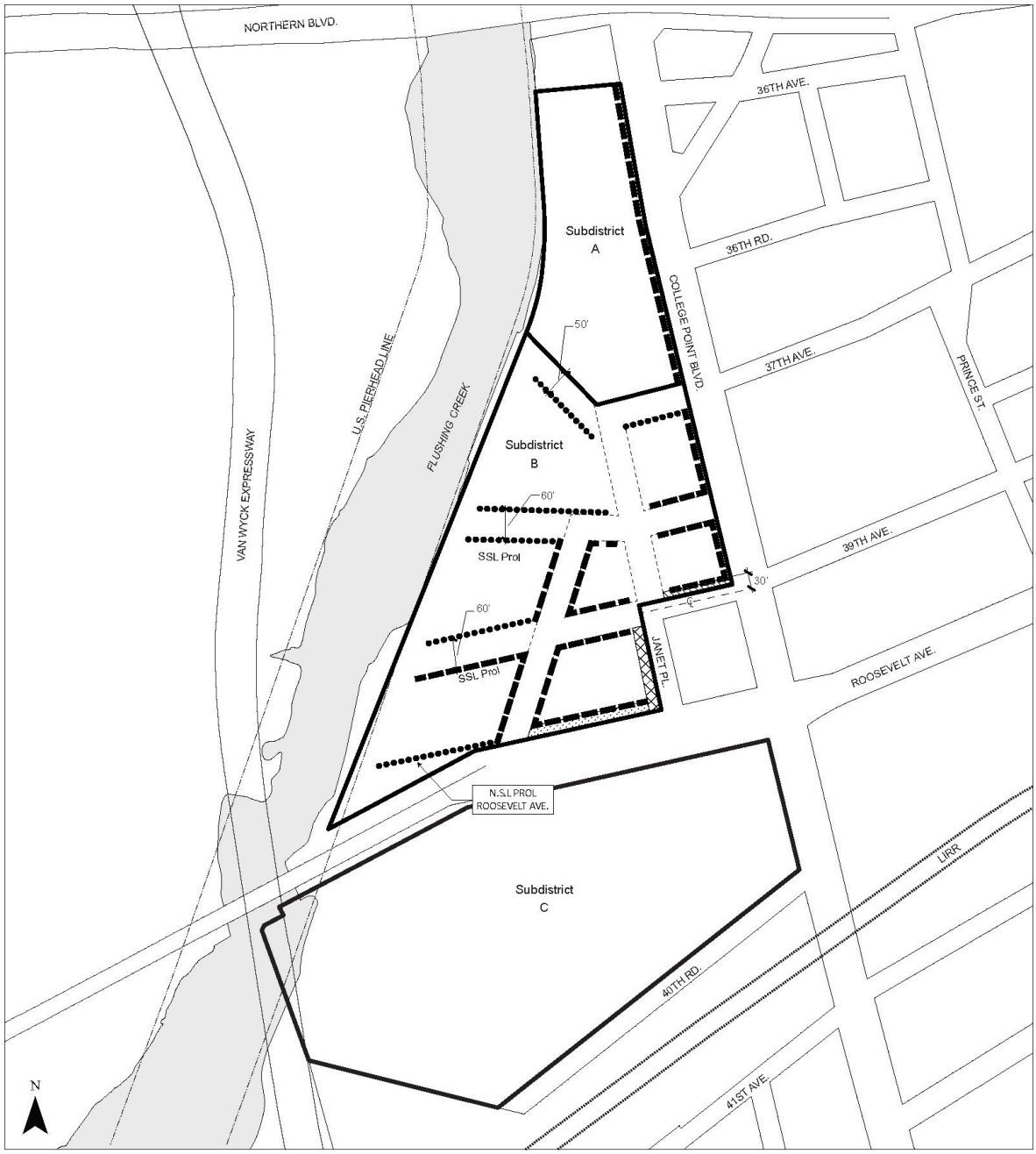
Map 1. Special Flushing Waterfront District and Subdistricts



Map 2. Publicly Accessible Private Street Network



Map 3. Requirements Along Street Frontages



Primary Street Frontages

- Type 1 Primary
- Type 2 Primary
- Subdistrict Boundary
- Publicly Accessible Private Street Boundary

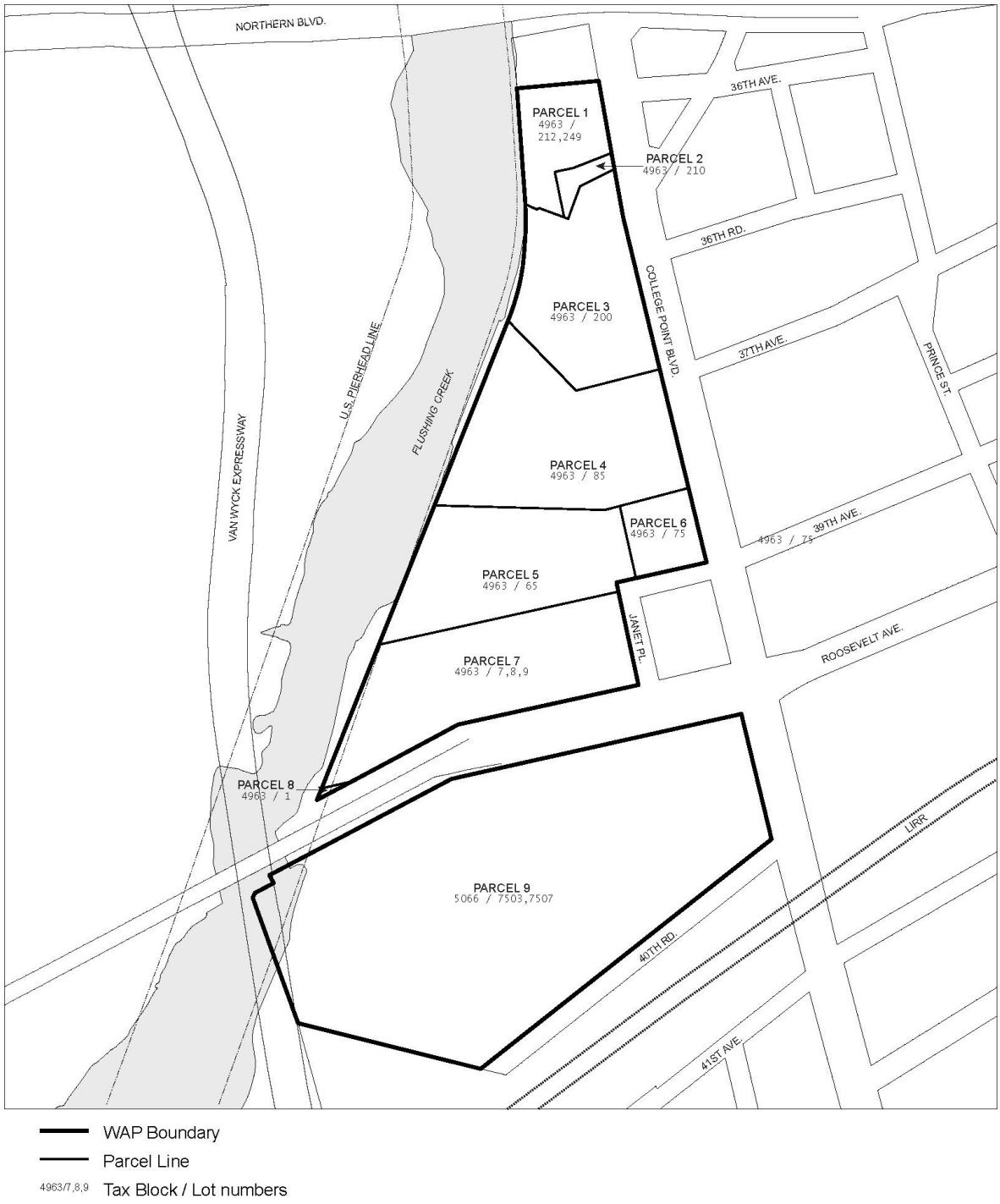
Secondary Street Frontages

All other street frontages not designated as primary street frontages are secondary street frontages.

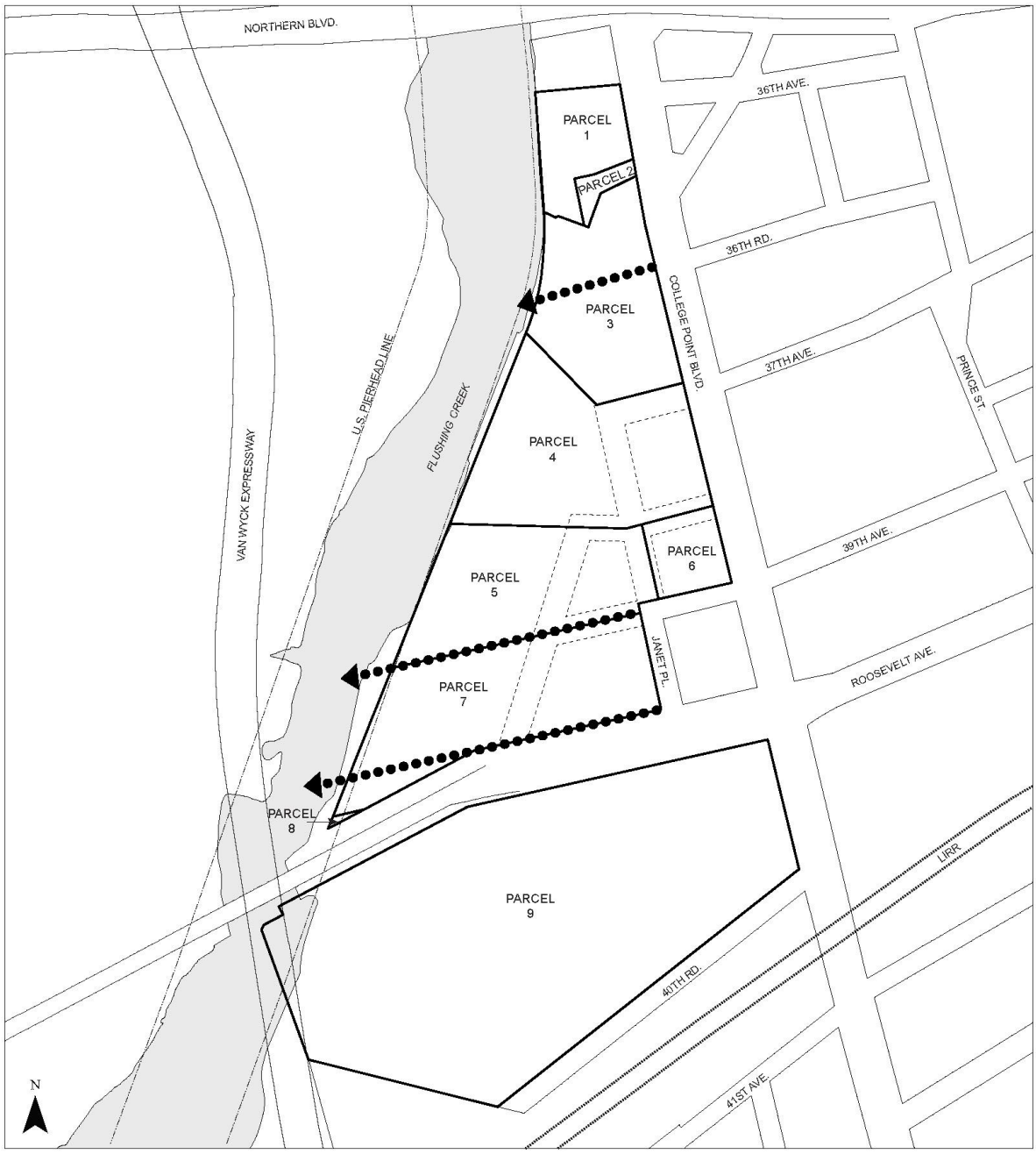
Sidewalk Widening

- 5 Feet
- @ 30-foot line parallel to the center line of 39TH Avenue
- 10 Feet

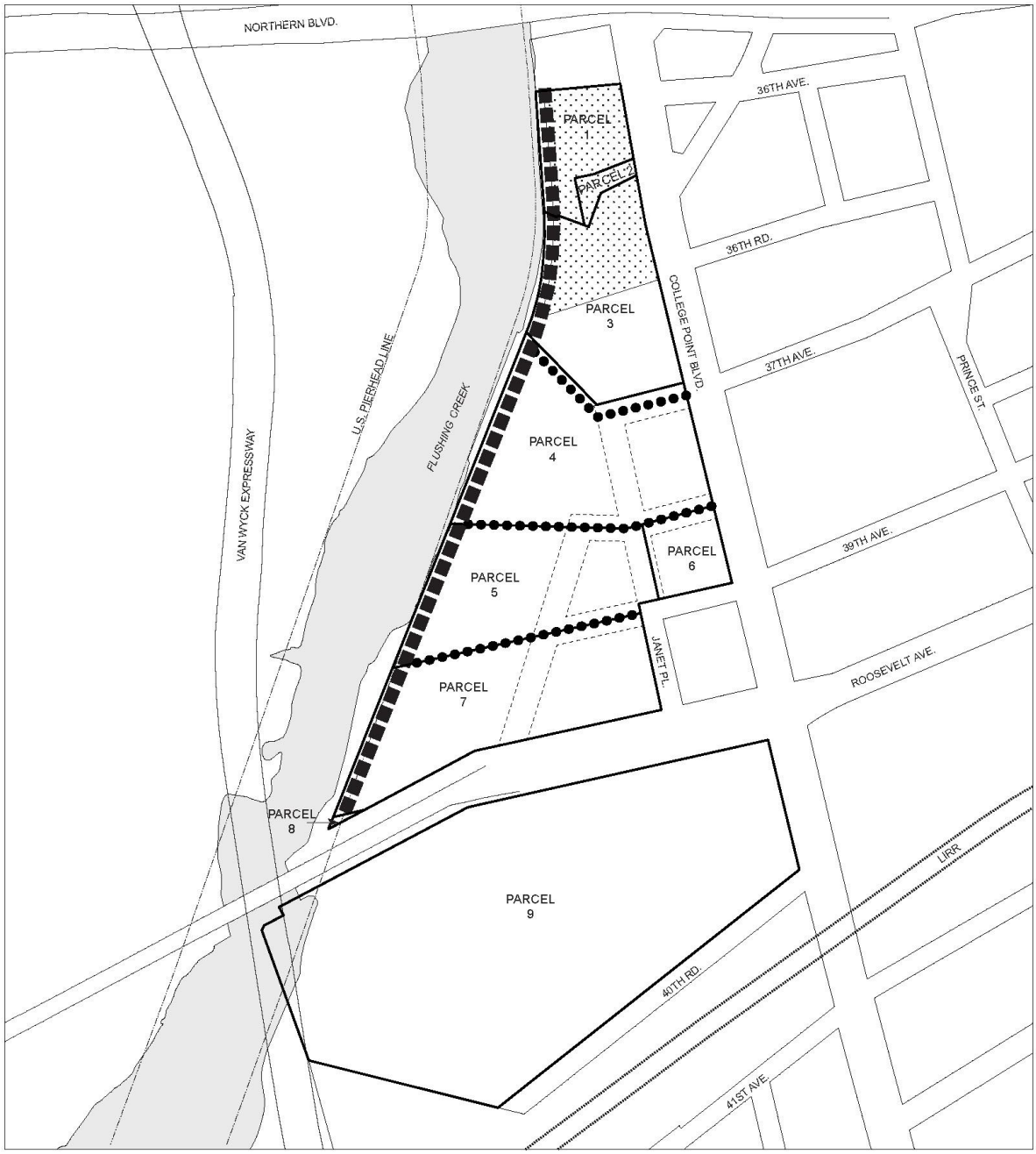
Map 4. Waterfront Access Plan: Parcel Designation



Map 5. Waterfront Access Plan: Visual Corridors

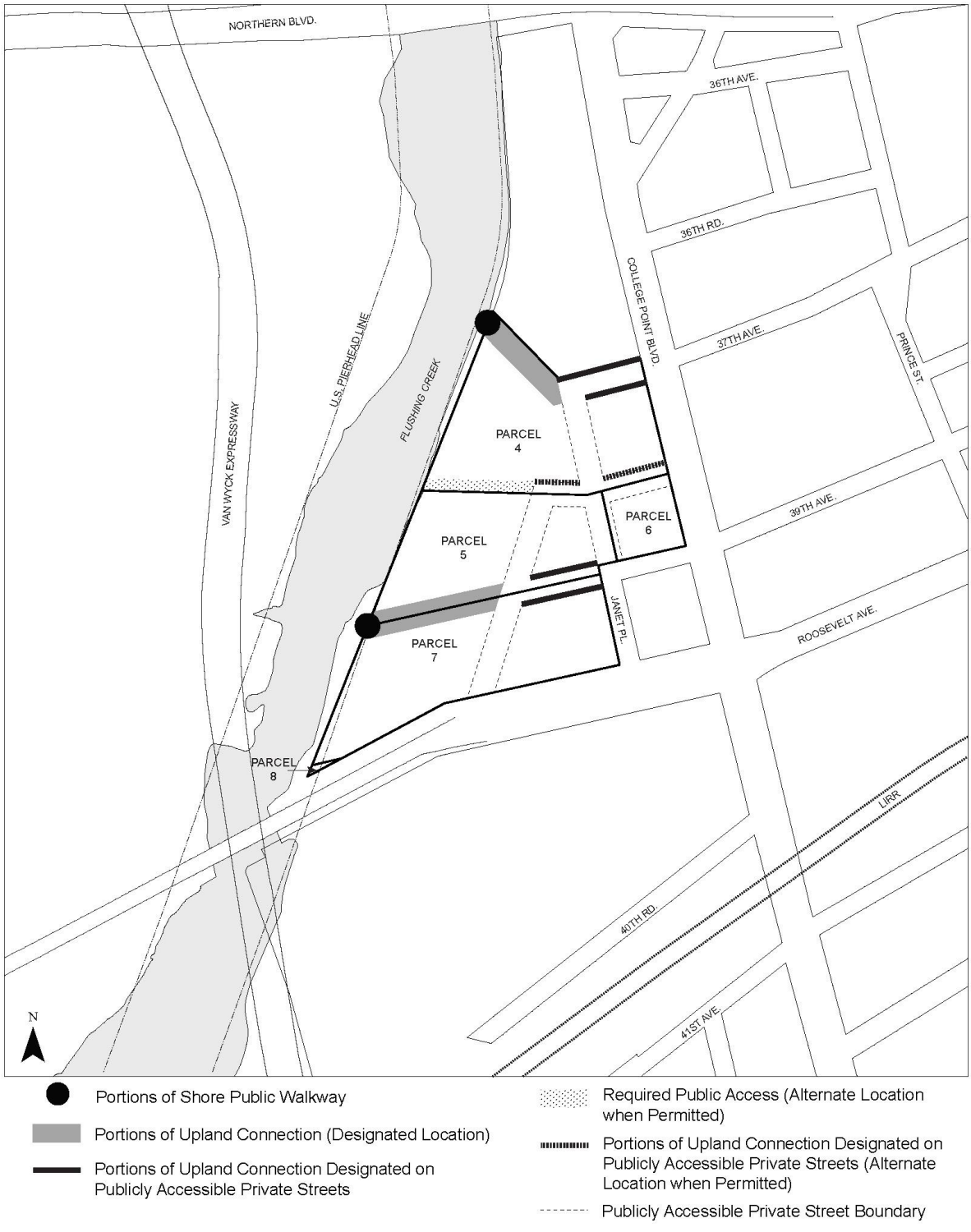


Map 6. Waterfront Access Plan: Public Access Areas

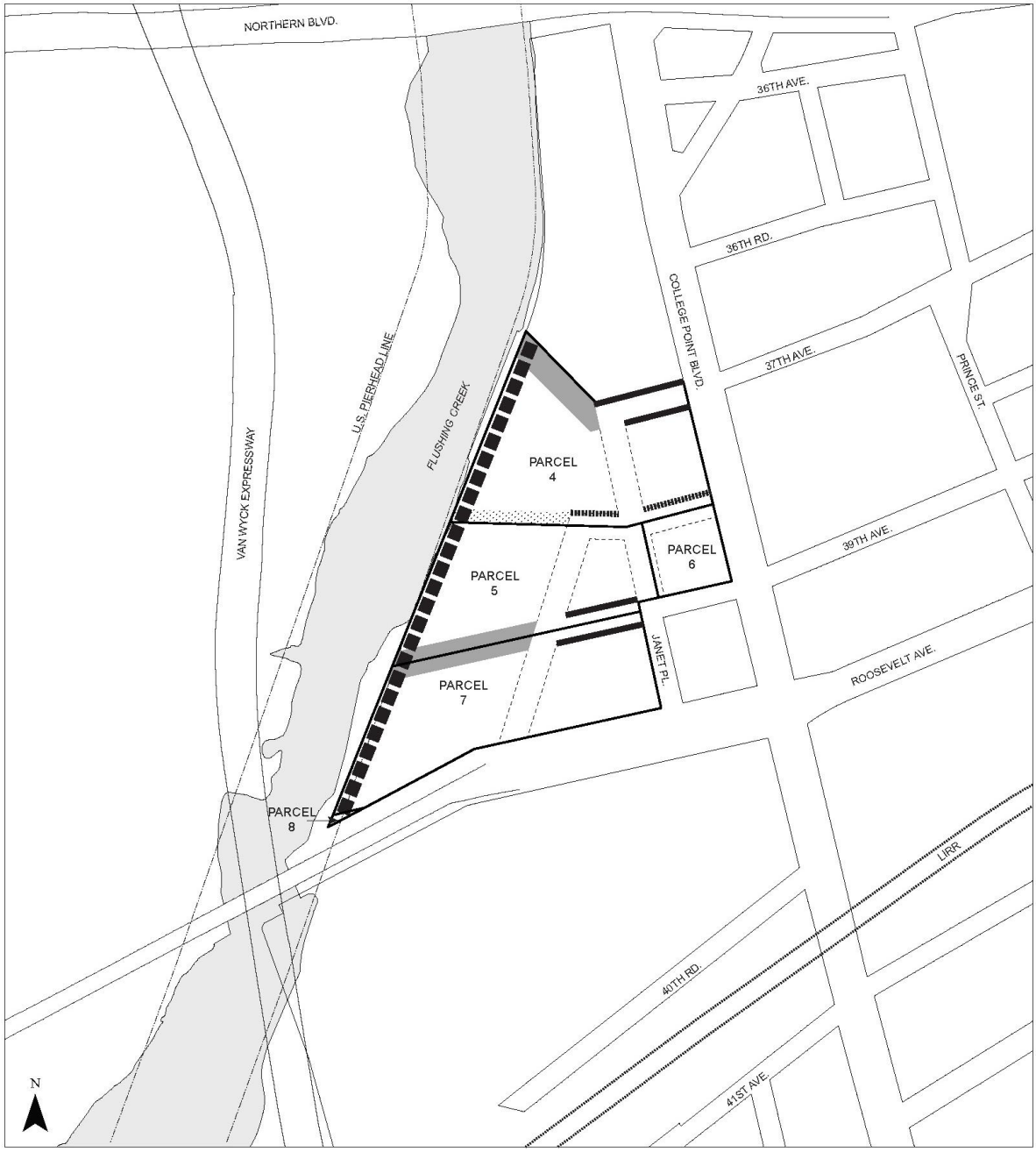


Upland Connection (Designated Location)
Upland Connection (Flexible Location)
Shore Public Walkway
Publicly Accessible Private Street Boundary

Map 7. Waterfront Access Plan: Phase I Waterfront Public Access Improvements



Map 8. Waterfront Access Plan: Phase II Waterfront Public Access Improvements



Shore Public Walkway

Required Public Access (Designated Location)

Portions of Upland Connection Designated on Publicly Accessible Private Streets

Required Public Access (Alternate Location when Permitted)

Portions of Upland Connection Designated on Publicly Accessible Private Streets (Alternate Location when Permitted)

Publicly Accessible Private Street Boundary

* * *

APPENDIX F

Inclusionary Housing Designated Areas and Mandatory Inclusionary Housing Areas

* * *

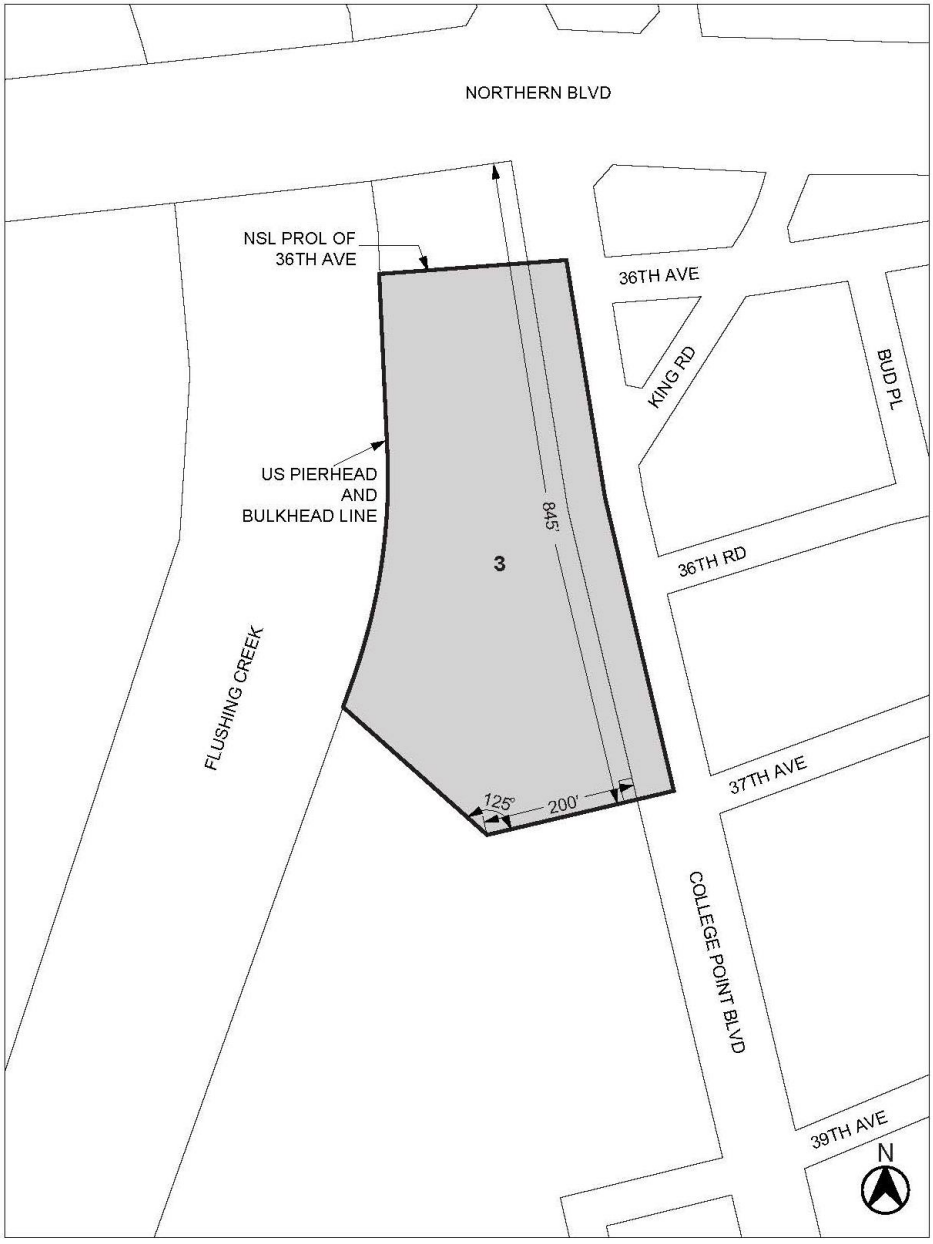
QUEENS

* * *

Queens Community District TK

Map 3 [date of adoption]

[PROPOSED MAP]



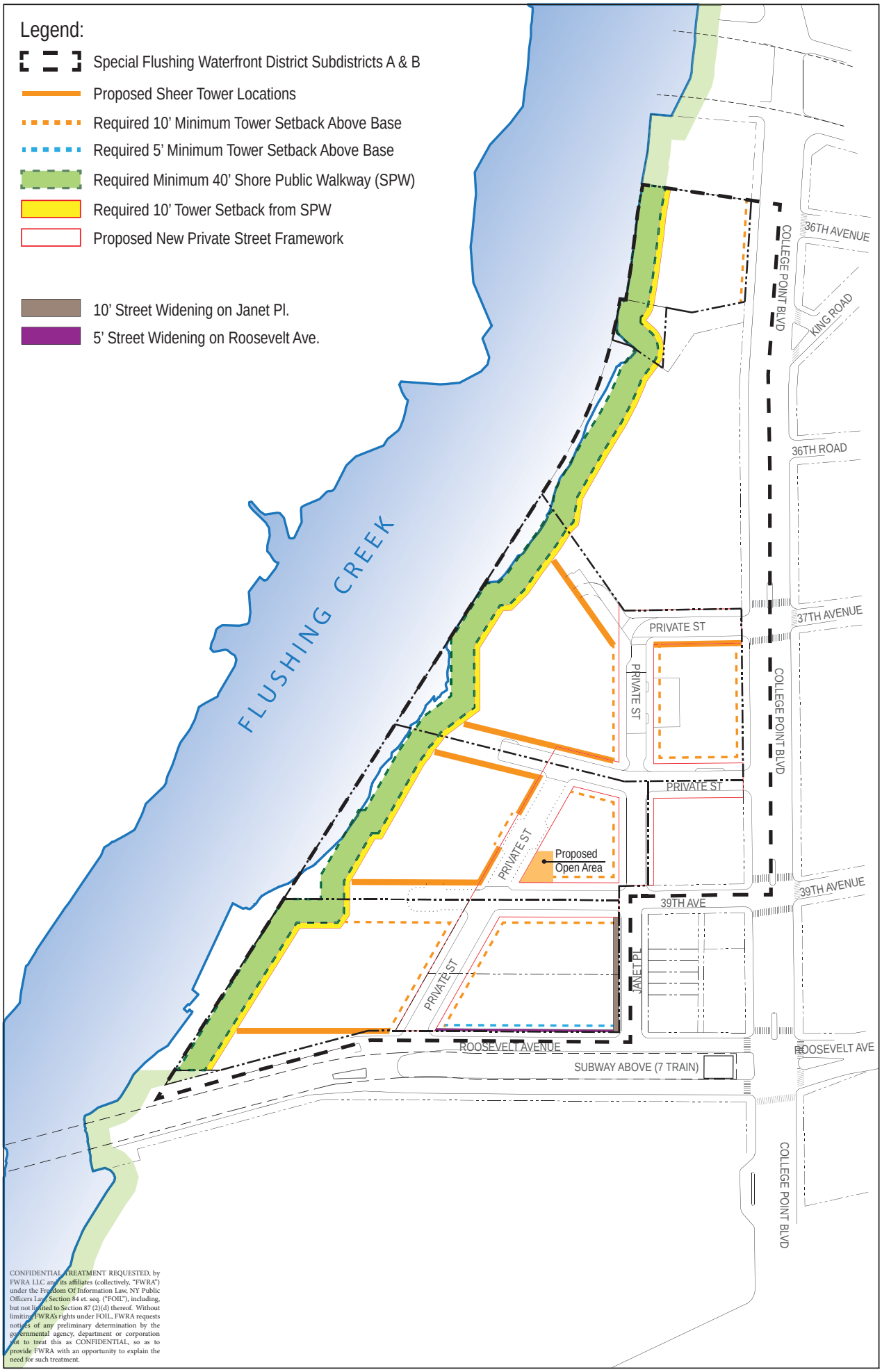
Mandatory Inclusionary Housing Area *see Section 23-154(d)(3)*

Area **3** — mm/dd/yy, MIH Program Option 1 and Option 2

Portion of Community District TK, Borough of Queens

* * *

APPENDIX D: SELECTED MASTER PLAN DRAWINGS AND RENDERINGS



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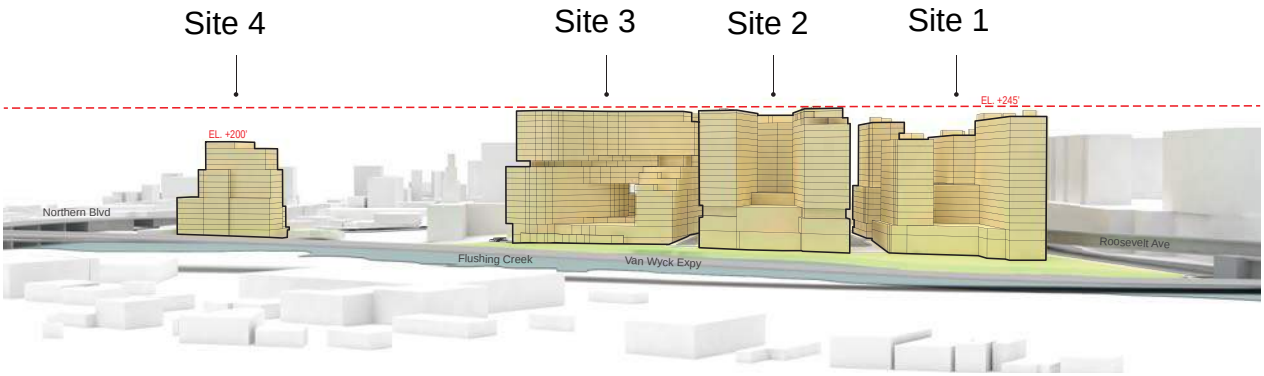

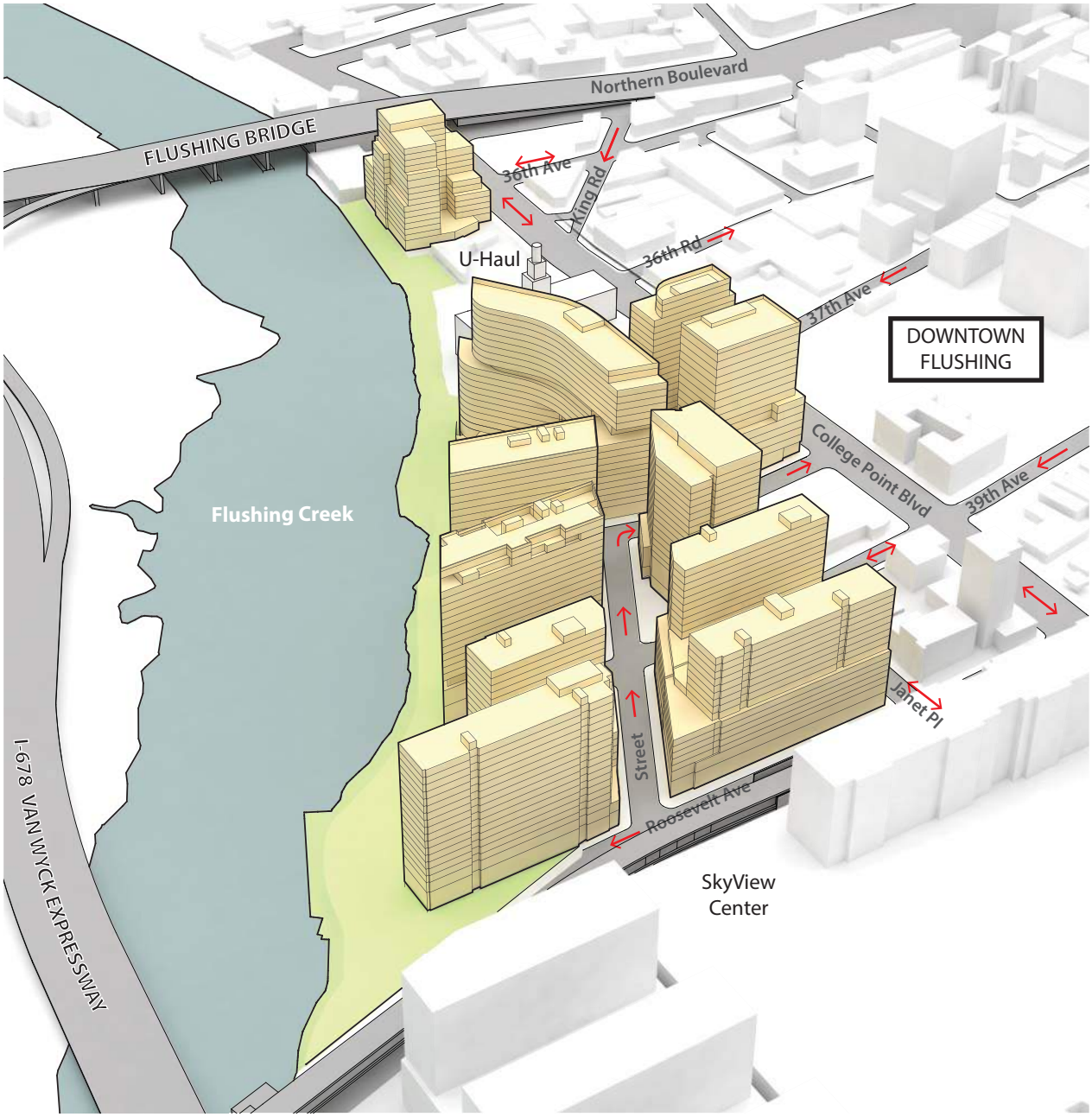

VIEW FROM WATERFRONT ↑

↓ VIEW FROM COLLEGE POINT BOULEVARD

VIEW FROM NORTHERN BOULEVARD ↑

↓ 4FS WATERFRONT SCHEMATIC DESIGN

VIEW FROM WATERFRONT ↑

↓ 38TH AVE UPLAND CONNECTION

VIEW FROM CPB LOOKING NORTH ↑

↓ VIEW FROM CPB LOOKING SOUTH

VIEW FROM 38TH AVE LOOKING WEST ↑

↓ VIEW FROM 38TH AVE LOOKING NORTHEAST

VIEW FROM WATERFRONT ↑

↓ AXON VIEW OF YNG DEVELOPMENT

TRANSVERSE ROAD VIEW LOOKING SOUTH ↑

↓ TRANSVERSE ROAD VIEW LOOKING NORTH

OPEN SPACE AREA ↑ ↓ OPEN SPACE AREA

YNG WATERFRONT AREA ↑

↓ YNG WATERFRONT AREA

VIEW FROM WATERFRONT ↑

↓ VIEW FROM WATERFRONT

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APPENDIX E: RWCDS

Site 1-RWCDS Analysis Framework Spreadsheet (Site Specific Only)

Existing

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 1	39-08 Janet Place	4963	7	88,449	88,449	C4-2		0.00	4.80	0.00	2.43	0.00	3.40	0.00	4.80	0.00	0.00	0		0	175 ft.	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
			8	36,046	36,046																																
			9	38,100	38,100																																
TOTAL				162,595	162,595																	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0

No-Action Scenario

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height*		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 1	39-08 Janet Place	4963	7	88,449	88,449	C4-2		4.80	4.80	2.42	2.43	2.35	3.40	0.03	4.80	0.00	0.00	13, 15, 16		175 ft.	175 ft.	958,828	780,363	458,604	394,197	495,924	381,894	4,300	4,272	0	0	290,438	546	0		546	382	1212	4
			8	36,046	36,046																																
			9	38,100	38,100																																
TOTAL				162,595	162,595																	958,828	780,363	458,604	394,197	495,924	381,894	4,300	4,272	0	0	290,438	546	0		546	382	1212	4

Commercial Breakdown - GSF		Hotel Rooms (Based on 400 sf DCP assumption)	Applicant provided hotel rooms
HOTEL	146,100	365	353
RETAIL	168,989		
OFFICE	180,835		

With-Action Scenario

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning	Proposed Zoning	TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height (ft)		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU (100% per HPD)	Affordable DU (@ 80% AMI)	Market-rate DU	Parking		
								Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 1	39-08 Janet Place	4963	7	88,449	88,449	C4-2	C4-2	4.80	4.80	2.42	2.43	2.35	3.40	0.03	4.80	0.00	0.00	16, 18		177-209 ft.	245 ft.	958,828	780,363	458,604	394,197	495,924	381,894	4,300	4,272	0	0	92,693	546	0	0	546	253	252	5
			8	36,046	36,046																																
			9	38,100	38,100																																
TOTAL				162,595	162,595																	958,828	780,363	458,604	394,197	495,924	381,894	4,300	4,272	0	0	92,693	546	0	0	546	253	252	5
INCREMENT				0	0																	0	0	0	0	0	0	0	0	0	0	(197,745)	0	0	0	0	(129)	(960)	1

Commercial Breakdown - GSF		Hotel Rooms (Based on 400 sf DCP assumption)	Applicant provided hotel rooms
HOTEL	146,100	365	353
RETAIL	168,989		
OFFICE	180,835		

*No-Action Maximum Height includes a 40-foot penthouse.

Site 2-RWCDS Analysis Framework Spreadsheet (Site Specific Only)

Existing

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 2	131-01 39th Ave	4963	65	138,309	138,309	C4-2		0.00	4.80	0.00	2.43	0.00	3.40	0.00	4.80	0.00	0.00	0	19	0	175 ft.	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0
TOTAL				138,309	138,309																	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0

No-Action Scenario

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 2	131-01 39th Ave	4963	65	138,309	138,309	C4-2		4.80	4.80	2.43	2.43	2.28	3.40	0.09	4.80	0.00	0.00	18	19	175 ft.	175 ft.	817,328	663,883	398,646	336,091	405,177	315,613	13,505	12,179	0	0	151,635	399	0		399	279	291	12
TOTAL				138,309	138,309																	817,328	663,883	398,646	336,091	405,177	315,613	13,505	12,179	0	0	151,635	399	0		399	279	291	12

Commercial Breakdown - GSF		Hotel Rooms (Based on 400 sf DCP assumption)	Applicant provided hotel rooms
HOTEL	350,873	877	301
RETAIL	54,304		

With-Action Scenario

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 2	131-01 39th Ave	4963	65	138,309	138,309	C4-2	C4-2	4.80	4.80	2.43	2.43	2.28	3.40	0.09	4.80	0.00	0.00	19	24	235-239 ft.	245 ft.	817,328	663,883	398,646	336,091	405,177	315,613	13,505	12,179	0	0	82,852	399	0	0	399	184	122	12
TOTAL				138,309	138,309																	817,328	663,883	398,646	336,091	405,177	315,613	13,505	12,179	0	0	82,852	399	0	0	399	184	122	12
INCREMENT				0	0																	0	0	0	0	0	0	0	0	0	0	(68,783)	0	0	0	0	(95)	(169)	0

Commercial Breakdown - GSF		Hotel Rooms (Based on 400 sf DCP assumption)	Applicant provided hotel rooms
HOTEL	350,873	877	301
RETAIL	54,304		

*No-Action Maximum Height includes a 40-foot penthouse.
Applicant provided DU count= 368. 399 is used based on GSF/1,000 sf due to it being more conservative.

Site 3 -RWCDS Analysis Framework Spreadsheet (Site Specific Only)

Existing

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 3	37-02 College Point Blvd	4963	85	174,500	174,500	C4-2		0.00	4.80	0.00	2.43	0.00	3.40	0.00	4.80	0.00	0.00	0	Sky Ex.	0	175 ft.	0	0	0	0	0	0	0	0	0	0	79,715	0	0		0	0	115	0
TOTAL				174,500	174,500																	0	0	0	0	0	0	0	0	0	0	0		0	0	115	0

No-Action Scenario

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height*		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 3	37-02 College Point Blvd	4963	85	174,500	174,500	C4-2		4.80	4.80	2.43	2.43	2.36	3.40	0.01	4.80	0.00	0.00	18	18	175 ft.	175 ft.	983,019	837,600	478,571	424,035	502,378	411,665	2,070	1,900	0	0	372,240	518	0		518	363	665	6
TOTAL				174,500	174,500																	983,019	837,600	478,571	424,035	502,378	411,665	2,070	1,900	0	0	372,240	518	0		518	363	665	6

Commercial Breakdown - GSF		Hotel Rooms (Based on 400 sf DCP assumption)	Applicant provided hotel rooms
HOTEL	297,354	743	344
RETAIL	80,855		
OFFICE	124,169		

With-Action Scenario

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning	Proposed Zoning	TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU (100% per HPD)	Affordable DU (@ 80% AMI)	Market-rate DU	Parking		
								Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 3	37-02 College Point Blvd	4963	85	174,500	174,500	C4-2	C4-2	4.80	4.80	2.43	2.43	2.36	3.40	0.01	4.80	0.00	0.00	11, 17, 20	23	147, 237, 239 ft.	245 ft.	971,048	837,359	490,570	424,035	478,804	411,650	1,674	1,674	0	0	178,560	507	0	0	507	254	283	2
TOTAL				174,500	174,500																	971,048	837,359	490,570	424,035	478,804	411,650	1,674	1,674	0	0	178,560	507	0	0	507	254	283	2
INCREMENT				0	0																	11,971	(241)	11,999	0	(23,574)	(15)	(396)	(226)	0	0	(193,680)	(11)	0	0	(11)	(109)	(382)	(4)

Commercial Breakdown - GSF		Hotel Rooms (Based on 400 sf DCP assumption)	Applicant provided hotel rooms
HOTEL	217,615	544	344
RETAIL	58,383		
OFFICE	202,806		

*No-Action Maximum Height includes a 40-foot penthouse.

Site 4-RWCDS Analysis Framework Spreadsheet (Site Specific Only)

Existing

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 4	35-32 College Point Blvd.	4963	212	39,636	39,636	M3-1		0.06	2.00	0.00	0.00	0.00	2.00	0.00	0.00	0.06	2.00	2		20 ft.	Sky Ex.	2,800	2,660	0	0	0	0	0	0	2,800	2,660	0	0	0		0	0	0	0
			249	7,395	7,395																																
TOTAL				47,031	47,031																	2,800	2,660	0	0	0	0	0	0	2,800	2,660	0	0	0		0	0	0	0

No-Action Scenario

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Projected Development Site 4	35-32 College Point Blvd.	4963	212	39,636	39,636	M3-1		2.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00	2.00	8	Sky Ex.	96 ft.	Sky Ex.	128,500	94,062	0	0	0	0	0	0	128,500	94,062	21,000	0	0		0	0	54	0
			249	7,395	7,395																																
TOTAL				47,031	47,031																	128,500	94,062	0	0	0	0	0	0	128,500	94,062	21,000	0	0		0	0	54	0

With-Action Scenario

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning	Proposed Zoning	TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height (ft)		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU (100% per HPD)	Affordable DU (@ 80% AMI)*	Market-rate DU	Parking			Commercial Breakdown - GSF	
								Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community		
Projected Development Site 4	35-32 College Point Blvd.	4963	212	39,636	39,636	M3-1	M1-2/R7-1	4.80	4.80	4.40	4.60	0.35	4.00	0.05	4.80	0.00	3.00	17	20	200	200	246,564	225,749	226,995	207,023	17,135	16,397	2,434	2,329	0	0	28,771	304	0	61	243	134	30	2	RETAIL	17,135
			249	7,395	7,395																																				
TOTAL				47,031	47,031																	246,564	225,749	226,995	207,023	17,135	16,397	2,434	2,329	0	0	28,771	304	0	61	243	134	30	2		
INCREMENT				0	0																	118,064	131,687	226,995	207,023	17,135	16,397	2,434	2,329	(128,500)	(94,062)	7,771	304	0	61	243	134	(24)	2		

*Affordable based on 20 percent of DUs

Potential Site A -RWCDS Analysis Framework Spreadsheet (Site Specific Only)

Existing

	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Potential Development Site A	37-52 College Point Blvd.	4963	75	30,023	30,023	C4-2		0.43	4.80	0.00	2.43	0.43	3.40	0.00	4.80	0.00	0.00	1			175 ft.	13,440	12,768	0	0	13,440	12,768	0	0	0	0	0	0	0		0	0	0	0
TOTAL				30,023	30,023																	13,440	12,768	0	0	13,440	12,768	0	0	0	0	0	0	0	0	0	0

No-Action Scenario

Owner	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height*		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Potential Development Site A	37-52 College Point Blvd.	4963	75	30,023	30,023	C4-2		3.40	4.80	0.00	2.43	3.40	3.40	0.00	4.80	0.00	0.00	9	19	135	175 ft.	107,182	102,078	0	0	107,182	102,078	0	0	0	0	22,000	0	0		0	0	110	0
TOTAL				30,023	30,023																	107,182	102,078	0	0	107,182	102,078	0	0	0	0	22,000	0	0		0	0	110	0

Commercial Breakdown - GSF		Hotel Rooms (Based on 400 sf DCP assumption)	Applicant provided hotel rooms
HOTEL	81,963	205	
RETAIL	9,457		
OFFICE	15,762		

With-Action Scenario

Owner	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning	Proposed Zoning	TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height (ft)		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU (100% per HPD)	Affordable DU (@ 80% AMI)	Market-rate DU	Parking		
								Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Potential Development Site A	37-52 College Point Blvd.	4963	75	30,023	30,023	C4-2	C4-2	3.40	3.40	0.00	2.43	3.40	3.40	0.00	4.80	0.00	0.00	19		150 ft.	245 ft.	107,182	102,078	0	0	107,182	102,078	0	0	0	0	7,400	0	0	0	0	0	37	0
TOTAL				30,023	30,023																	107,182	102,078	0	0	107,182	102,078	0	0	0	0	7,400	0	0	0	0	0	37	0
INCREMENT				0	0																	0	0	0	0	0	0	0	0	0	0	(14,600)	0	0	0	0	0	(72)	0

Commercial Breakdown - GSF		Hotel Rooms (Based on 400 sf DCP assumption)	Applicant provided hotel rooms
HOTEL	88,268	221	
RETAIL	18,914		
OFFICE	0		

*No-Action Maximum Height includes a 40-foot penthouse.

Potential Site B-RWCDS Analysis Framework Spreadsheet (Site Specific Only)

Existing

	Address	Block	Lot	Lot Size SF*	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	Exist.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Potential Development Site B	36-30 College Point Blvd.	4963	200	126,942	126,942	M3-1 / C4-2		0.82	4.80	0.00	2.43	0.00	3.40	0.00	4.80	0.82	2.00	4	19	65	110	110,000	104,500	0	0	0	0	0	0	110,000	104,500	0	0	0		0	0	0	0
TOTAL				126,942	126,942																	110,000	104,500	0	0	0	0	0	0	110,000	104,500	0	0	0		0	0	0	0

No-Action Scenario

Owner	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning		TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
								Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Potential Development Site B	36-30 College Point Blvd.	4963	200	126,942	126,942	M3-1 / C4-2		0.82	4.80	0.00	2.43	0.00	3.40	0.00	4.80	0.82	2.00	4	19	65	175	110,000	104,500	0	0	0	0	0	0	110,000	104,500	0	0	0		0	0	0	0
TOTAL				126,942	126,942																	110,000	104,500	0	0	0	0	0	0	110,000	104,500	0	0	0		0	0	0	0

0.8232106

With-Action Scenario

Owner	Address	Block	Lot	Lot Size SF	Projected Site Lot Size SF	Existing Zoning	Proposed Zoning	TOTAL FAR		Residential FAR		Commercial FAR		Community Facility FAR		Manufacturing FAR		# of Stories		Height (ft)		TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU (100% per HPD)	Affordable DU (@ 80% AMI)	Market-rate DU	Parking		
								Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	Prop.	Max.	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
Potential Development Site B	36-30 College Point Blvd.	4963	200	126,942	126,942	M3-1 / C4-2	M1-2/R7-1	2.15	4.80	0.00	4.60	1.32	4.00	0.00	4.80	0.82	3.00	4	22	65	200	287,000	272,650	0	0	177,000	168,150	0	0	110,000	104,500	35,400	0	0	0	0	0	177	0
TOTAL				126,942	126,942																	287,000	272,650	0	0	177,000	168,150	0	0	110,000	104,500	35,400	0	0	0	0	0	177	0
INCREMENT				0	0																	177,000	168,150	0	0	177,000	168,150	0	0	0	0	35,400	0	0	0	0	0	177	0

TOTAL Projected Development Sites -RWCDS Analysis Framework Spreadsheet

Existing

Owner	Lot Size SF	Projected Site Lot Size SF	TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
			GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
TOTAL	522,435	522,435	2,800	2,660	0	0	0	0	0	0	2,800	2,660	79,715	0	0		0	0	115	0

No-Action Scenario

Owner	Lot Size SF	Projected Site Lot Size SF	TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU		Market-rate DU	Parking		
			GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
TOTAL	522,435	522,435	2,887,675	2,375,908	1,335,821	1,154,323	1,403,479	1,109,172	19,875	18,351	128,500	94,062	835,313	1,463	0		1,463	1,024	2,222	22

Commercial Breakdown - GSF		Hotel Rooms (Based on 400 sf DCP assumption)
HOTEL	794,327	1985
RETAIL	304,148	
OFFICE	305,004	

With-Action Scenario

Owner	Lot Size SF	Projected Site Lot Size SF	TOTAL SF		Residential SF		Commercial SF		Community Facility SF		Manufacturing SF		Parking SF	Total DU (Market + Affordable)	Affordable DU (100% per HPD)	Affordable DU (@ 80% AMI)	Market-rate DU	Parking		
			GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF	GSF	ZSF						Residential	Commercial	Community
TOTAL	522,435	522,435	2,993,768	2,507,354	1,574,815	1,361,346	1,397,040	1,125,554	21,913	20,454	0	0	382,876	1,756	0	61	1,695	825	687	21
INCREMENT	0	0	106,093	131,446	238,994	207,023	(6,439)	16,382	2,038	2,103	(128,500)	(94,062)	(452,437)	293	0	61	232	(199)	(1,535)	(1)

Commercial Breakdown - GSF		Hotel Rooms (Based on 400 sf DCP assumption)
HOTEL	714,588	1786
RETAIL	298,811	
OFFICE	383,641	

HOTEL	(79,739)
RETAIL	(5,337)
OFFICE	78,637

APPENDIX F: NO-BUILD DEVELOPMENTS

Table 1: No-Build Developments within the Study Area

Site No.	Project Name/Address (Block/Lot)	Proposed No-Build Development	Estimated Net Residents[1]	Estimated Net Workers[2]
Secondary Study Area (Within 0.25-mile Radius of Primary Study Area)				
1	Tangram 133-31 39th Avenue and 133-12 37th Avenue (Block 4972/Lots 65, 66, and 67)	A four-building mixed-use development. Tangram would include a total of 375 residential units, 75,764 sf of office space, 224,985 sf of retail space, 1,434 sf of community facility space, 378 hotel rooms, and 1,147 parking spaces.	1,027	1,162
2	131-72 40th Road (Block 5060/ Lot 37)	Six-story ambulatory diagnostic and treatment health care facility. 59,502 sf of community facility use.	0	179
3	132-32 41st Avenue (Block 5039/ Lot 18)	Five-story 7,465 sf mixed-use building with 5,495 sf of residential (8 DUs) and 1,970 sf of community facility use.	22	6
4	132-03 41st Road (Block 5039/ Lot 1)	Six-story 9,212 sf mixed-use building with 6,923 sf of residential (8 DUs) and 2,289 sf community facility uses.	22	7
5	Flushing Point Plaza 131-02 40th Road (Block 5066/ Lot 150)	550,465 sf three 19-story building development including approximately, 275,600 sf of residential space, 259,479 sf of hotel space, and 1,497 sf of community facility use as well as 507 parking spaces and 278 DUs.	762	203
6	134-16 36th Road (Block 4970/ Lot 25)	Six-story 35,762 sf mixed-use building with 16,972 sf residential (26 DUs), 18,083 sf commercial, and 706 sf of community facility	71	32
7	36-18 Main Street (Block 4971/ Lot 16)	12-story hotel-medical-retail complex that includes 14,327 sf retail, 150 hotel rooms, 50,444 sf of medical space, and parking for 346 vehicles.	0	272
8	One Flushing 133-45 41st Avenue (Block 5037/ Lot 64)	10-story mixed-use 286,193 sf all-affordable residential and commercial building. Ground floor commercial retail and community facility space will total 28,864 sf and 13,872 sf, respectively. The building offers 232 all-affordable apartments and a 156-space public parking lot	636	141
9	132-53 41st Avenue (Block 5037/ Lot 89)	Six-story 14,282 sf residential (14 DUs) and community facility building with 10,907 sf of residential and 3,375 sf of community facility space.	38	11
10	132-55 41st Avenue (Block 5037/ Lot 88)	Five-story 6,831 sf residential and community facility building with 5,384 sf of residential (7 DUs) and 1,447 sf of community facility space	19	5
11	133-20 41st Road (Block 5042/ Lot 19)	10-story 31,075 sf medical facility with 23,619 sf of community facility use and 30 parking spaces.	0	71
12	133-24 41st Road (Block 5042/ Lot 22)	Nine-story 14,399 sf medical building with 11,996 sf of medical offices (community facility use).	0	36

Site No.	Project Name/Address (Block/Lot)	Proposed No-Build Development	Estimated Net Residents[1]	Estimated Net Workers[2]
13	The Farrington 134-37 35th Avenue (Block 4949/ Lot 31)	201,840 sf mixed-use development, including approximately 83,982 sf of hotel space (176 rooms); 16,774 sf of community facility space and 101,084 sf of residential space (89 condos), as well as 186 parking spaces.	244	124
14	134-03 35th Avenue (Block 4949/ Lot 46)	16-story mixed-use building including approximately 130 dwelling units, 14,182 sf of retail, 208 hotel rooms, 17,388 sf of community facility space, and 196 parking spaces.	356	182
15	34-09 College Point Boulevard (Block 4945/ Lot 34)	Three-story commercial storage building, including 105,377 sf of commercial space.	0	7
16	132-25 41st Avenue (Block 5037/ Lot 101)	Five-story eight-family (8 DUs) mixed-use residential and community facility building with 1,644 sf of community facility space.	22	5
17	36-45 Prince Street (Block 4971/Lot 1)	Five-story 8,151 sf mixed-use building with 4,125 sf residential (6 DUs), 3,578 sf commercial (office), and 448 sf of community facility space.	16	16
18[3]	Willets Point Development (Block 1833, Lots 103, 111, 117, and part of 120)	Redevelopment of the Willets Point/Citi Field area with a mix of uses encompassing 108.9 acres. The Project is to be completed in three phases.	1,370	20
Net Incremental Development for 0.25-mile Study Area		*Residential Dwelling Units: 1,681 DUs* *Commercial (Retail): 287,662 sf* *Commercial (Office): 79,342 sf* *Community Facility: 208,404 sf* *Hotel Units: 1,416* *Parking Spaces: 2,608 spaces* *Storage: 105,377 sf*	4,606	2,477
Beyond Secondary Study Area (Within 0.50-mile Radius of Primary Study Area)				
19	131-10 Avery Avenue (Block 5076/ Lot 61)	A proposed 50,621 sf seven-story commercial and community facility building. The building would contain 40,338 sf of community facility space and 10,283 sf of commercial space (retail).	N/A	152
20[4]	Mets-Willets Point AirTrain	Construction to begin in mid-2020 for an AirTrain at a revamped Mets-Willets Point Station which will provide a connection to LaGuardia Airport and transfers to the 7 train and the Long Island Railroad. The AirTrain will also offer a 30-minute ride to Midtown Manhattan, a 16-minute ride from Manhattan to Willets Point, and a six-minute ride from Willets Point to LaGuardia	N/A	N/A

Net Incremental Development for 0.50-mile Study Area (including net incremental development for 0.25-mile)	*Residential Dwelling Units: 1,681 DUs* *Commercial (Retail): 297,945 sf* *Commercial (Office): 79,342 sf* *Community Facility: 248,742 sf* *Hotel Units: 1,416* *Parking Spaces: 2,608 spaces* *Storage: 105,377 sf*	4,606	2,629

Notes:

[1]Assumes 2.74 persons per DU for residential units in Queens Community District 7, US Census Average Household 2010.

[2] The worker population is estimated based on standard ratios of 1 employee per 250 sf of office; 3 employees per 1,000 sf of retail/supermarket/restaurant uses; 1 employee per 25 dwelling units; 1 employee per 1,000 sf of manufacturing and industrial uses; 3 employees per 1,000 sf of all community facility uses; 1 employee per 2.67 hotel rooms; 1 employee per 15,000 sf of warehouse use and 1 employee per 50 parking spaces.

[3]A portion of the Willets Point Development was included in the residential calculations which includes 500 units of affordable housing by 2025. Worker calculations were not included due to the on-going discussions around the project and the residential nature of this portion of the Willets Point Development.

[4] The Mets-Willets Point Air Train was not included in the employee no-build calculation, due to the on-going environmental review process which is expected to be completed at the end of 2019.

APPENDIX G: WRP CONSISTENCY ASSESSMENT FORM

FOR INTERNAL USE ONLY	WRP No. _____
Date Received: _____	DOS No. _____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

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

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

A. APPLICANT INFORMATION

Name of Applicant: FWRA LLC

Name of Applicant Representative: Annie Boggs

Address: 360 West 31st Street, 8th Floor New York, NY 10001

Telephone: 212-479-5400 Email: aboggs@langan.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

Please see attachment.

2. Purpose of activity

Please see attachment.

C. PROJECT LOCATION

Borough: Queens Tax Block/Lot(s): Please see attachment.

Street Address: Please see attachment

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

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission ☑ Yes ☐ No

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

Board of Standards and Appeals ☐ Yes ☑ No

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

Other City Approvals

- ☐ Legislation
- ☐ Rulemaking
- ☐ Construction of Public Facilities
- ☐ 384 (b) (4) Approval
- ☐ Other, explain: _____
- ☐ Funding for Construction, specify: _____
- ☐ Policy or Plan, specify: _____
- ☐ Funding of Program, specify: _____
- ☐ Permits, specify: _____

State Actions/Approvals/Funding

- ☐ State permit or license, specify Agency: _____ Permit type and number: _____
- ☐ Funding for Construction, specify: _____
- ☐ Funding of a Program, specify: _____
- ☐ Other, explain: _____

Federal Actions/Approvals/Funding

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

Is this being reviewed in conjunction with a Joint Application for Permits? ☐ Yes ☑ No

E. LOCATION QUESTIONS

1. Does the project require a waterfront site? ☑ Yes ☐ No
2. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land under water or coastal waters? ☑ Yes ☐ No
3. Is the project located on publicly owned land or receiving public assistance? ☐ Yes ☑ No
4. Is the project located within a FEMA 1% annual chance floodplain? *(6.2)* ☑ Yes ☐ No
5. Is the project located within a FEMA 0.2% annual chance floodplain? *(6.2)* ☑ Yes ☐ No
6. Is the project located adjacent to or within a special area designation? *See Maps – Part III of the NYC WRP. If so, check appropriate boxes below and evaluate policies noted in parentheses as part of WRP Policy Assessment (Section F).* ☑ Yes ☐ No

   ☐ Significant Maritime and Industrial Area (SMIA) (*2.1*)
   ☑ Special Natural Waterfront Area (SNWA) (*4.1*)
   ☐ Priority 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
1	**Support and facilitate commercial and residential redevelopment in areas well-suited to such development.**	☑	☐	☐
1.1	Encourage commercial and residential redevelopment in appropriate Coastal Zone areas.	☑	☐	☐
1.2	Encourage non-industrial development with uses and design features that enliven the waterfront and attract the public.	☑	☐	☐
1.3	Encourage redevelopment in the Coastal Zone where public facilities and infrastructure are adequate or will be developed.	☑	☐	☐
1.4	In areas adjacent to SMIAs, ensure new residential development maximizes compatibility with existing adjacent maritime and industrial uses.	☐	☐	☑
1.5	Integrate consideration of climate change and sea level rise into the planning and design of waterfront residential and commercial development, pursuant to WRP Policy 6.2.	☑	☐	☐

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

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

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

G. CERTIFICATION

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

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

Applicant/Agent's Name: Annie Boggs

Address: 360 West 31st Street, 8th Floor New York, NY 10001

Telephone: 212-479-5400 Email: aboggs@langan.com

Applicant/Agent's Signature: A Boggs

Date: 12/13/19

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

New York City Waterfront Revitalization Program
Consistency Assessment Form
Section B & C – Proposed Activity and Project Location
Special Flushing Waterfront District (SFWD)
Queens, New York

BRIEF DESCRIPTION OF ACTIVITY

The Applicant, FWRA LLC, seeks City Planning Commission (CPC) approval of discretionary actions (the "Proposed Actions") to facilitate the development of an approximately 29-acre waterfront area (the "Project Area"), which includes nine new mixed-use buildings on four sites (the "Proposed Project"). The Project Area is generally bound by 40th Road to the south, College Point Boulevard to the east, Lot 212 at 36th Avenue to the north, and Flushing Creek to the west. The Proposed Actions would establish a Special Flushing Waterfront District (SFWD) in the Flushing neighborhood of Queens, Community District 7.

The Proposed Actions include a Zoning Text Amendment and Zoning Map Amendment to establish the SFWD, a new Special Purpose District coterminous with the Project Area. A Zoning Map Amendment would rezone the northern part of the Project Area from M3-1 and C4-2 to an M1-2/R7-1 district, and a Zoning Text Amendment would establish this part of the Project Area, the only part of the Project Area where the Proposed Actions would increase the permitted density, as a new Mandatory Inclusionary Housing (MIH) Area. The SFWD would modify underlying and waterfront regulations related to bulk, use, parking, loading, and the public realm. The SFWD would also modify and update the Downtown Flushing Waterfront Access Plan (WAP Q-2) and establish a new CPC Certification within the SFWD to permit an increase in the maximum permitted building height of a development. The Proposed Project would require ministerial waterfront and additional height certifications which would be sought after approval of the Proposed Actions. A detailed description of the Proposed Actions is provided in Attachment A, "Project Description."

The Applicant is comprised of three property owners within the Project Area. The Applicant-owned property, as shown in the attached Master Plan, consists of Site 1 (Block 4963, Lots 7, 8, and 9); Site 2 (Block 4963, Lot 65); Site 3 (Block 4963, Lot 85); and Site 4 (Block 4963, Lots 212 and 249). All four sites are located within the SFWD and Site 4 is located within the proposed M1-2/R7-1 district. The underlying floor area ratio (FAR) for Sites 1, 2, and 3 would remain subject to the underlying C4-2 floor area regulations. The proposed rezoning to an M1-2/R7-1 district would allow for Site 4 to be comprised of light industrial, commercial, residential, and community facility uses. Sites 1, 2, and 3 would be subject to the installation of a publicly accessible private street network. All four sites would be subject to the proposed WAP. Overall, the Proposed Project would comprise 1,725 dwelling units; 1,397,040 gross square feet (gsf) of commercial use (made up of retail, hotel, and office); and 21,913 gsf of community facility use.

PURPOSE OF ACTIVITY

The Proposed Actions build on a two-decade history of planning efforts to facilitate the development of the vacant, industrial, and underbuilt waterfront land as a new mixed-use neighborhood along the

Flushing waterfront. In 2010, the Flushing Willets Point Corona Local Development Corporation (FWCLDC) received a grant under the New York State Brownfield Opportunity Areas (BOA) Program to produce the Flushing Waterfront BOA Nomination Planning Study (the BOA Study). The purpose of the BOA Study was to facilitate the development of a vibrant, inclusive mixed-use neighborhood that would serve as an extension of Downtown Flushing and provide a distinct waterfront destination for residents, workers, and visitors. To accomplish these goals, the BOA Study also included the BOA Master Plan, which recommended various zoning map and text amendments, including the creation of a special district, and has served as a roadmap for private applicants to use in the redevelopment of the Flushing waterfront.

Most recently, the Applicant has been engaged with DCP through a collaborative process to implement the recommendations of the BOA Master Plan and develop the Proposed Project. As described above, the Proposed Actions would only increase the existing permitted density within the M1-2/R7-1 district. Therefore, the purpose of the Proposed Actions and the creation of the SFWD is not to increase density, but to create more appropriate building envelopes, reduced parking requirements, modify use regulations to provide additional flexibility, and improve the pedestrian experience and public realm of the Project Area and waterfront. Special urban design provisions would be adopted to facilitate a private publicly accessible street network, street-wall requirements, and increased waterfront access. Consistent with the recommendations of the BOA Master Plan, the Proposed Actions would result in a development with improved waterfront access and street connectivity, and more affordable dwelling units as compared to what could be developed under existing zoning.

New York City Waterfront Revitalization Program
Consistency Assessment Form
Section F – WRP Policy Assessment
Special Flushing Waterfront District
Queens, New York

WATERFRONT REVITALIZATION PROGRAM

The Project Area is wholly within the City's Coastal Zone and comprises Lots 1, 7, 8, 9, 65, 75, 85, 200, 210, 212, and 249 of Block 4963, and Lots 7503 and 7507 of Block 5066. Accordingly, the Proposed Project is subject to review for consistency with the policies of the New York City Waterfront Revitalization Program (WRP). The WRP includes policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront while minimizing the conflicts among those objectives. The WRP Consistency Form (Appendix I) lists the WRP policies and indicates whether the Proposed Actions would promote or hinder that policy, or if that policy would not be applicable. This section provides additional information for the policies that have been checked "promote" or "hinder" in the WRP Consistency Assessment Form.

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

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

The development facilitated by the Proposed Actions would serve as an extension of Downtown Flushing, a major commercial center in Queens and is appropriate for a dense, urban area in the Coastal Zone. The Proposed Project would include a combination of market-rate and affordable housing and retail, office, and hotel uses. The Project Area is appropriate for mixed-use development because it is well-served by transit and existing water and sewer infrastructure and largely consists of previously disturbed land.

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

The Proposed Actions will facilitate mixed use development on vacant and underbuilt land that would provide improved access from Downtown Flushing to the Flushing Creek waterfront. New development along Flushing Creek would be required to develop a shore public walkway along the portion of the property directly adjacent to Flushing Creek. The Waterfront Access Plan (WAP) would require new development to provide a shore public walkway with a minimum width of 40 feet and design features that would enliven the waterfront and attract the public. The WAP would establish provisions for more than three acres of open space that would include landscaping, walking paths, hardscape areas, and areas which would provide passive recreational opportunities while also stabilizing the shoreline to feature natural shoreline, rip-rap, and a bulkhead. Public realm improvements would include upland connections between the Flushing Creek waterfront and College Point Boulevard. Active ground floor uses such as residential lobbies, retail, community

facility space, and other commercial space would activate the ground floor within the Project Area. Accordingly, the Proposed Project is consistent with this policy.

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

The Project Area is served by multiple forms of public transportation and major roadways, with both the MTA New York City Transit (NYCT) 7 train and Long Island Rail Road (LIRR) Port Washington line within 0.3 miles. Flushing is served by several public and private elementary, intermediate, and high schools. Flushing Meadows Corona Park, a regional-serving park, is located within a half-mile of the Project Area. Additionally, the Proposed Actions would facilitate the development of new community facilities and the WAP would require new waterfront developments in the Project Area to provide publicly accessible waterfront open space along Flushing Creek.

New development in the Project Area would connect to existing water and sewer lines within the surrounding streets and would direct sanitary flows to the Tallman Island Wastewater Treatment Plant (WWTP). Utilities within the new private roadway network (storm drainage, sanitary sewer, domestic water, and electric for site lighting) would be installed as part of the Proposed Project. The proposed road network would create access to the Project Area from College Point Boulevard to the east and Roosevelt Avenue to the south. From Roosevelt Avenue, a new private street would travel diagonally northeast through the Project Area, providing access to Projected Development Sites 1, 2, and 3. The road would bisect Projected Development Site 1 and connect to a western extension of 39th Avenue, which currently has its terminus at Janet Place. The private street would continue northeast and bisect Projected Development Site 2. It would then make an easterly turn north of Potential Site A to connect to College Point Boulevard at 38th Avenue.

A private street would also extend west from College Point Boulevard into the Project Area as an extension of 37th Avenue, at the northern border of Projected Development Site 3. The street would travel south, bisecting Site 3 and connecting to the existing intersection at Janet Place and 39th Avenue. Janet Place between 39th Avenue and Roosevelt Avenue would be widened by 10 feet in order to accommodate additional traffic from the Proposed Project. Sidewalks will be provided along all private roads within the new network and would range from 13 to 18 feet in width.

The proposed private street network would establish nine development pads within the Project Area, with two pads each at Projected Development Sites 1, 2, and 3 and one development pad at Projected Development Site 4. There would be one pad each at Potential Development Sites A and B.

The Proposed Actions would encourage redevelopment in the Coastal Zone near a major urban center where public facilities and infrastructure are adequate or will be developed in the future as the need is identified.

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.

The Base Flood Elevation (BFE) of the Project Area is 13 feet (NAVD88) based on the Preliminary Flood Insurance Rate Map (pFIRM) published by the Federal Emergency Management Agency (FEMA). The majority of the Project Area is within the 100-year flood zone, with portions in the 500-

year (0.2 percent annual flood hazard chance) flood zone. The estimated sea level rise per New York City Climate Resiliency Design Guidelines through 2039 is approximately six inches, and approximately 16 inches for the period between 2040 and 2069. All new construction in the flood zone would be developed pursuant to the provisions set forth in Building Code Appendix G - Flood Resistant Construction. Additionally, the design measures described in response to WRP Policy 6.2 demonstrate how the Proposed Actions would be consistent with this policy.

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

Policy 4.1: Protect and restore the ecological quality and component habitat and resources within the Special Natural Waterfront Areas.

The Project Area is adjacent to Flushing Creek, which is identified as a Special Natural Waterfront Area (SNWA) in the New York City Comprehensive Waterfront Plan. The SNWA includes Flushing Bay and Flushing Meadows Corona Park. The coastline along Flushing Creek adjacent to the Project Area is identified by the New York State Department of State (DOS) as a coastal area with high to extreme risk of inundation in the future due to sea level rise. On the Willets Point (west) side of Flushing Creek, opposite the Project Area, is a sensitive coastal habitat (salt-and brackish-water marsh) identified by the National Oceanic and Atmospheric Administration (NOAA) Environmental Sensitivity Index. New waterfront development in the Project Area would be required to comply with New York State Department of Environmental Conservation (NYSDEC) and/or United States Army Corps of Engineers (USACE) permitting requirements. During periods of construction, Flushing Creek would be protected from construction activities by measures that follow a Stormwater Pollution Protection Plan (SWPPP). Each development site would be required to develop a SWPPP for construction and post-construction activities. Protection measures such as silt booms, hay bales, contained material storage, and designated equipment wash out stations could be implemented during construction. Additionally, the Proposed Actions would align with the shoreline restoration recommendations mentioned within the Flushing Waterfront Revitalization Plan, a Brownfield Opportunity Area (BOA) Nomination Study, through the replanting of native vegetation and the removal of trash and debris along the Flushing Creek shoreline adjacent to the Project Area. Through the NYSDEC and/or USACE permitting process and the protections provided by the SWPPP, the Proposed Actions would be consistent with this policy.

Policy 4.5: Protect and Restore tidal and freshwater wetlands.

The Project Area is adjacent to Flushing Creek, which is comprised of tidal wetlands that are regulated by the NYSDEC and USACE. The open waters of Flushing Creek adjacent to the Project Area are mapped by NYSDEC as Tidal Wetlands (Littoral Zone). There are no freshwater wetlands onsite. During field visits to the Project Area, wetland vegetation typically associated with tidal wetlands was encountered in several areas landward of the mudflats and debris-strewn eastern shoreline of the creek, including Spartina alternaflora (Salt marsh cordgrass) and Phragmites australis (Common reed).

Protection of wetlands would be accomplished through NYSDEC and/or USACE permitting requirements, as well as a the SWPPP that would be designed to limit the potential for adverse effects to water quality and the Essential Fish Habitat within Flushing Creek during and after the

construction period. The existing shoreline is in a dilapidated condition, and the Proposed Project would remove trash and debris along the shoreline and restore wetland habitats with native planting areas. The restoration strategies will be developed with sensitivity to the Project Area and would benefit existing ecological communities. During construction activities, Flushing Creek would be protected by measures such as the SWPPP. The existing tidal wetland adjacent areas would be stabilized to prevent further deterioration by installing an engineered toe stabilization along the existing slope, introducing native plantings, and replacing or removing deteriorated or broken timber elements. Shoreline stabilization would be implemented through a mix of natural shoreline, rip-rap shoreline, boulders with native plants, and steel bulkhead shoreline. The modified embankment would provide long-term stability and prevent erosion from tidal fluctuations.

Installation of permeable pavers along the shore public walkway would help to minimize runoff and improve water quality. The alignment of the shore public walkway would stay outside of all potential vegetated wetland areas. New stormwater outfalls would help reduce water-induced soil erosion. Each outfall would connect to a water treatment unit to clean the water prior to discharge into the creek. The value of the tidal wetland areas would be enhanced by improving the water quality of stormwater discharged into the creek. All waterfront activities would be finalized through the Joint Permit Application process and in coordination with applicable agencies.

The Project Area is in a highly urbanized area where the vegetation and wildlife are limited and the biodiversity is low. The Proposed Actions would facilitate the revitalization of a formerly industrial area and the creation of open space along the Flushing Creek waterfront, which would provide the opportunity to enhance biodiversity in the Project Area. Based on this information, the Proposed Actions would be consistent with 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.

The Project Area is in a Direct Stormwater Drainage Area along Flushing Creek. Stormwater generated on the Project Area would be discharged directly to Flushing Creek through proposed outfalls and water treatment units would be installed upstream of the outfalls. The proposed stormwater outfalls would collect stormwater runoff and treat the stormwater using water quality treatment units, and would therefore improve the quality of stormwater conveyed to Flushing Creek. The stormwater would be treated in accordance with the NYSDEC Special Pollutant Discharge Elimination System (SPDES) General Permit Regulations. The Proposed Project is currently in design, and the treatment practices would include a combination of hydrodynamic separators, green roofs, or storm water infiltration. These treatment practices would be designed to remove or reduce suspended solids and nitrogen from the stormwater runoff prior to being discharged to Flushing Creek. Approximately 83 percent of the Project Area is currently impervious. In the With-Action Condition, approximately 92 percent of the Project Area would be impervious, which represents a nine percent increase over existing conditions. The slight increase in impervious surface would result in a small increase in stormwater discharge to Flushing Creek compared to existing conditions, and this increase would be accommodated through new stormwater outfalls that would be developed as part of the Proposed Project.

Wastewater collected in the Project Area would be treated at the Tallman Island WWTP in the College Point neighborhood of Queens, which has a capacity of 80 millions of gallons per day. Activity within the Project Area would avoid any negative wastewater impacts to fish and wildlife habitats of Flushing Creek by having its wastewater sent to this WWTP. The Proposed Project aligns with the recommendations and best management practices (BMPs) found within the Flushing Creek Long Term Control Plan (LTCP) adopted in March 2017 to reduce water quality impacts by not discharging any stormwater to the City's Combined Sewer system, thus lowering the load on the system. Accordingly, the Proposed Actions would be consistent with this policy.

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

The Project Area would contain approximately 1,533 parking spaces, of which most would be below-grade in parking garages. With most parking sited in underground lots, the quality of stormwater being conveyed to Flushing Creek has little potential to include runoff from underground parking areas. In addition to the underground parking, built features have been designed to be flood resilient.

During the construction period, typical protection measures such as silt booms, hay bales, contained material storage, and designated equipment wash out stations would be employed in accordance with the SWPPP. Additionally, the shore public walkway would contain one trash bin per 4,000 square feet (sf) of shore public walkway. Trash bins in the shore public walkway would be maintained by the appropriate property owner. As a result, the Proposed Project would reduce non-point source pollution and stormwater runoff and would support BMPs towards runoff control within the Flushing Creek LTCP. Therefore, the Proposed Actions would be consistent with this policy.

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

As mentioned in the sub-policies within Policies 4 and 5 above, Flushing Creek would be protected from construction activities by protection measures that follow the SWPPP and would be subject to the requirements of the NYSDEC and/or USACE permitting process. Due to the shallow nature of Flushing Creek, there will be no in-water construction or construction barges, thus most of the waterfront construction will be performed from land. Each Projected and Potential Development Site would be required to develop a SWPPP for construction. The SWPPP would address erosion control measures during construction, as well as post-development water quality treatment in accordance with NYSDEC regulations. Erosion control measures implemented are anticipated to include stabilized construction entrances, silt fence, inlet protection, and turbidity curtains. Post-development water quality treatment is anticipated to include a combination of hydrodynamic separators, green roofs, or stormwater infiltration practices. Additionally, a silt boom would be installed within the waterway and water treatment units would be installed upstream of the outfalls during construction in accordance with the SWPPP. In addition to the SWPPP, a Joint Permit Application to NYSDEC and USACE will be submitted in advance of construction activities, which will outline construction procedures and cut/fill quantities towards the goal of the site remaining cut/fill neutral. Therefore, the Proposed Actions would protect water quality while excavation occurs near Flushing Creek and would be consistent with this policy.

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

Development facilitated by the Proposed Actions would be subject to the SWPPP and the NYSDEC and/or USACE permitting process, which collectively would protect the wetland water sources. Additionally, the Proposed Project would be compliant to the BMPs found within the Flushing Creek LTCP. Water treatment units would be installed to improve the water quality of stormwater before being discharged from the Project Area into Flushing Creek. The water treatment practices would include a combination of hydrodynamic separators, green roofs, or storm water infiltration. These treatment practices would be designed to remove or reduce suspended solids and nitrogen from the stormwater runoff prior to being discharged to Flushing Creek. The Shore Public Walkway would feature permeable pavers along the waterfront, minimizing the hardscape as much as possible. Therefore, the Proposed Project would be consistent with this policy.

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

As stated above, native plantings and habitat-enhancing materials would be implemented within the planned shore stabilization. The Proposed Project would incorporate a gradual slope down to the waterline from the upland area that would limit the need for bulkheads and rip-rap. Further strategies include: installing an engineered toe stabilization along the existing slope, replacing or removing deteriorated or broken timber elements, and the installation of permeable pavers along the shore public walkway to help minimize runoff and improve water quality. Additional protection measures in the SWPPP such as a silt boom would be implemented to protect Flushing Creek from construction activities and support grey infrastructure projects and initiatives mentioned in the Flushing LTCP. See responses to the sub-policies of Policy 5 above for additional information on how the Proposed Actions would be consistent with this policy.

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

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 development facilitated by the Proposed Actions would be designed and constructed to minimize damage to natural resources, natural features, and to protect the Project Area from flooding and erosion. Shoreline stabilization would minimize the potential for the Project Area and areas farther upland from damage, including during flood events. As such, new development would be constructed and operated to minimize any potential for loss of life, structures and natural recourses caused by flooding and erosion.

Development in the Project Area would include resilient elements within buildings built within the flood zone in accordance with the Building Code Appendix G - Flood Resistant Construction. Open space features such as street benches and other furniture would be designed and constructed to withstand flood water impact loads, thereby minimizing the potential for losses from flooding along

the shore public walkway. See response to WRP Policy 6.2 for further explanation on how the Proposed Project would be consistent with 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.

Coastal floodplains are influenced by astronomic tide and meteorological forces and not by fluvial flooding and, as such, are not affected by the placement of obstructions within the floodplain. Therefore, the Proposed Actions would not exacerbate future projected flooding conditions.

The Base Flood Elevation (BFE) of the Project Area is approximately 13 feet (NAVD88). The majority of the Proposed Project is within the 100-year floodplain (Zone AE), and portions of the Project Area are within the 500-year floodplain (Zone X, see FIRM panel No. 3604970114F and pFIRM panel No. 3604970114G in Image C-1 and C-2). The Project Area is beyond the limit of moderate wave action. The Projected and Potential Development Sites fall within multiple flood zones; therefore, the most restrictive regulations consistent with *Building Code Section G301.1.1* would be used for the Project Area.

Image D-1: Effective FIRM and pFIRM Maps

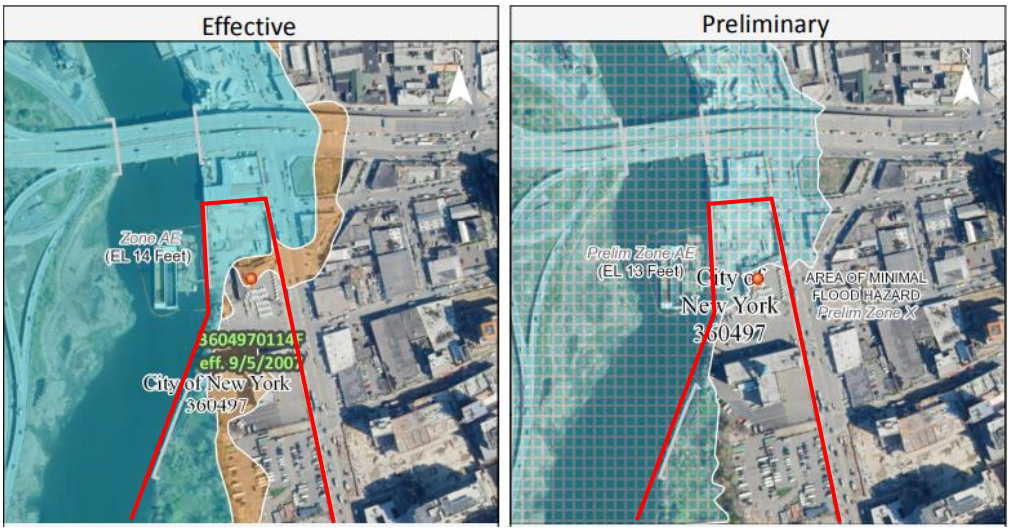

Image D-2: Effective FIRM and pFIRM Maps

Effective	
POI Longitude/Latitude	-73.8362, 40.7588
Effective FIRM Panel	3604970114F
Effective Date	9/5/2007
Flood Zone	X
Static BFE*	Not Available
Flood Depth	Not Available
Vertical Datum	Not Available

Preliminary	
POI Longitude/Latitude	-73.8362, 40.7588
Preliminary FIRM Panel	3604970114G
Preliminary Issue Date	1/30/2015
Flood Zone	X
Estimated Static BFE*	Not Available
Estimated Flood Depth	Not Available
Vertical Datum	Not Available

In accordance with the Department of City Planning (DCP) Climate Change Adaptation Guidance, the three step process below assesses the Proposed Actions' consistency with Policy 6.2 of the WRP. Step 1 identifies the vulnerabilities and consequences. Step 2 identifies adaptive strategies, and Step 3 assesses policy consistency.

Projected Development Site 1

Projected Development Site 1 would have six vulnerable features, one critical feature, and one other feature.

Of the analyzed features at this site, the lowest "other" feature would be the shore public walkway, which would have an approximate elevation of nine feet. The shore public walkway is projected to be within the Mean Higher High Water (MHHW) only in the 2100s under the high sea level rise (SLR) projections. The shore public walkway would be developed within the current one percent annual flood chance zone, and be wet flood proofed and designed to safely flood during flood events.

The cellar would be at an elevation of 9.6 feet and, like the shore public walkway, is currently in the one percent annual flood zone. The cellar is projected to be within the Mean Higher High Water (MHHW) only in the 2100s under the high sea level rise (SLR) projections. The cellar would be encased within dry flood proofed walls and designed to withstand damage during flood events.

The lowest building entrance that would provide access to the retail space from the shore public walkway would be constructed at an elevation of 17 feet. This entrance is projected to be entirely out of the MHHW throughout at least 2100 under all SLR projections, but would be in the one percent annual flood chance area in the 2080s under high SLR projections. By the 2100s, the entrance would be in the same flood chance area under high-mid projections. The lowest building entrance would be

outside of the 0.2 percent annual flood chance area until the 2050s, when it is projected to be within this flood hazard area under high projections. In the 2080s and up to 2100, this entrance would be within the 0.2 percent annual flood chance area under mid SLR projections.

The residential ground floor lobby space would be at an elevation of 20.1 feet, the hotel lobby space would be at an elevation of 20.5 feet, and the ground floor retail would be at an elevation of 21.6 feet. These ground floor spaces are not projected to be at or below the projected MHHW or one percent annual flood chance elevations through 2100. The residential and hotel lobbies are projected to be in the 0.2 percent annual flood chance by 2100 only during the high SLR projections. The retail lobby would be at an elevation above the 0.2 percent annual flood chance in high SLR projections.

All critical features (the general mechanical system) and habitable spaces at Projected Development Site 1 would be constructed at or above an elevation of 49.3 feet, which would not be at or below the projected elevation of the one percent or 0.2 percent annual chance flood areas through the 2100s.

The Design Flood Elevation (DFE) would be 14 feet, which would be in the 0.2 percent annual flood hazard area through 2050 when it is projected to be within the one percent flood hazard area under mid SLR projections. By the 2080s, the DFE would be within the one percent annual flood hazard area under low SLR projections.

Projected Development Site 2

Projected Development Site 2 would have four vulnerable features, two critical features, and two other features.

The two open space resources on Projected Development Site 2 would be the shore public walkway and an open plaza. The shore public walkway would have an elevation of 14 feet and the open plaza would have an elevation of 25 feet. Both open space resources are not projected to be within the MHHW through 2100. The shore public walkway is in the 0.2 percent annual flood hazard area and is projected to be in the one percent annual flood chance area in the 2050s under low-mid SLR projections. The shore public walkway would be in this same flood hazard area in the 2080s to 2100 under low SLR projections. The open plaza would be outside both the projected one percent and 0.2 percent annual flood chance areas through at least 2100 under all SLR projections.

The lowest potentially vulnerable feature would be the retail area sited at an elevation of 14 feet. The design of the Projected Development Site would not preclude additional future flood resiliency measures from being installed at the site to respond to any change in future projected flood conditions, including adaptive technologies that have not yet been developed. Future adaptive measures to accommodate continued sea level rise could be the use of deployable flood barriers. Similar to the elevation of the shore public walkway, the retail area is entirely out of the projected MHHW throughout 2100, but within the 0.2 percent annual flood hazard area and would be within the one percent annual chance flood under low-mid SLR projections in the 2050s. The retail area would be in the one percent annual chance flood area under low SLR projections in the 2080s and 2100s.

The central loading dock area would be at an elevation of 28 feet, the hotel units would be at or above an elevation of 73 feet, and the residential units would be at or above an elevation of 83 feet. All of

these vulnerable features are not projected to be in the projected MHHW or the one and 0.2 percent annual flood chances through 2100.

The analyzed critical features include two building mechanical spaces (1 and 2) at an elevation of -1 feet and 9 feet, respectively. The lowest elevated building mechanical space would contain potentially critical features such as an electrical equipment room, fuel oil tank storage, pump room, and water tanks which are all found below the projected MHHW and the one and 0.2 percent annual flood chances throughout 2100. The second lowest building mechanical space at an elevation of 9 feet would contain gas service and main telecommunication point of entries. The elevation of this mechanical space is only projected to be within the MHHW under high SLR projections beginning in the 2080s through the 2100s. Additionally, the elevation of this mechanical space would be entirely within both the one and 0.2 percent annual chance floods throughout the 2100s. The below grade portions of the building, including these critical mechanical areas, will be fully waterproofed up to the DFE with the use of a membrane-type waterproofing systems and permanent below-grade foundations walls designed to be resistant to lateral earth and hydrostatic pressures.

The DFE for this site would be 14 feet, which would be within the current 0.2 percent annual flood hazard area and within the projected one percent flood hazard area by 2050 under the low-mid SLR scenario. By the 2080s, the DFE would be within the one percent annual flood hazard area under low SLR projections.

Projected Development Site 3

Projected Development Site 3 would have four vulnerable features and one critical feature.

Of the analyzed features, the basement parking (B2) is the lowest potentially vulnerable feature which has an approximate elevation of two feet. This elevation is anticipated to be below the projected MHHW elevation through 2100. Sub-grade waterproofing would be implemented in the basement levels of Projected Development Site 3. Parking level B1 would be at an elevation of 15 feet and would serve as an entry/exit points at an elevation of 15 and 19 feet. B1 is projected to fall within the one percent annual chance flood in the 2050s under high SLR projections and in the 2080s and 2100s under mid SLR projections.

The remaining vulnerable features are the waterfront retail space found at an elevation of 15 feet and the lobby/ retail areas that would be at an elevation of 28 feet. The lobby/ retail areas are found entirely out of the projected MHHW and both the one and 0.2 percent chance annual floods through 2100. Similar to the elevation of parking level B1, the waterfront retail space would be in the 0.2 percent annual flood hazard area in the 2020s under low SLR projections and is projected to fall within the one percent annual chance flood in the 2050s under high SLR projections. In the 2080s and 2100s, the waterfront retail space would be in the one percent annual flood hazard area under mid SLR projections. The design of the Projected Development Site would not preclude additional future flood resiliency measures from being installed at the site to respond to any change in future projected flood conditions, including adaptive technologies that have not yet been developed. Future adaptive measures to accommodate continued sea level rise could be the use of temporary metal barriers to seal the doors and raising the impervious base of the storefront glass, one foot above the ground.

Critical mechanical features, such as electrical, and plumbing (MEP) equipment, would be sited at the DFE and on the same level as the B1 basement parking. The MEP equipment would be sited at an elevation of 15 feet and would be within the projected 0.2 percent annual flood hazard area in the 2020s under low SLR projections. The DFE would be in the one percent annual chance flood hazard area in the 2050s under high SLR projections, and would be in the same flood hazard area under mid SLR projections.

Projected Development Site 4

Projected Development Site 4 would have three vulnerable features, one critical feature, and two other features.

Cellar space would be used for parking and would be the lowest potentially vulnerable feature with an approximate elevation of 5 feet. The cellar space would be below the projected MHHW under low-mid SLR projections in the 2050s and under low SLR projections in the 2080s into 2100.

The ground floor lobby/retail use would be at an elevation of 15 feet. The lobby/retail use is projected to be in the one percent chance annual flood under high SLR projections in the 2050s and in the same flood hazard area in the mid SLR projections in the 2080s and 2100s. The design of the Projected Development Site would not preclude additional future flood resiliency measures from being installed at the site to respond to any change in future projected flood conditions, including adaptive technologies that have not yet been developed. Future adaptive measures to accommodate continued sea level rise could be the use of steel flood barriers.

At an elevation of 30 feet, the lowest elevation of habitable space would not be at an elevation of minimal flood hazard through the 2100s under all SLR projection scenarios.

The general mechanical systems would be at an approximate elevation of 167.3 feet and not at an elevation of projected minimal flood hazard through the 2100s under all SLR projection scenarios.

Projected Development Site 4 would contain two open spaces accessible to the general public. The edge of the property at the shoreline would be at an elevation of 7.5 feet, and the shore public walkway would be at an elevation of 8 feet. Both publicly accessible open spaces would fall within the projected MHHW under high SLR projections in the 2080s and under high-mid SLR projections in 2100. The open spaces would be within the existing one percent annual flood hazard area. Additionally, both open spaces would be designed to withstand flooding events.

The DFE would be 15 feet and would be within the projected 0.2 percent annual flood hazard area in the 2020s under low SLR projections. The DFE would be in the one percent annual chance flood hazard area in the 2050s under high SLR projections, and would be in the same flood hazard area under mid SLR projections.

Potential Development Sites A and B

Potential Development Sites A and B do not have any known plans for redevelopment. However, if either of these Potential Development Sites were to be developed in the future, new development would be required to comply with the applicable resiliency measures, including those outlined in Appendix G of the NYC Building Code.

Summary of Compliance

The Proposed Actions would not result in an increase of flooding or flooding severity. Projected development would contain some vulnerable and critical spaces at or below the projected future MHHW level and within projected future flood hazard areas. Vulnerable and critical features would be protected through flood damage reduction elements such as dry flood proofing. The Proposed Actions would not preclude the ability to implement adaptive solutions in the future, including any technological advancements that may exist in the future. Based on this information, the Proposed Project is consistent with this policy.

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.

Previous environmental investigations in the Project Area have identified contaminants in soil, soil vapor and groundwater as a result of historic use of the Project Area and surrounding properties. Projected Development Sites 1 through 3 and Potential Development Site A have (E)-Designations in place for hazardous materials. Solid waste material, hazardous wastes, toxic pollutants, and other substances hazardous to the environment would be managed through the (E)-Designation program and the SWPPP to protect public health, control pollution and prevent degradation of coastal ecosystems during and after construction. As a part of the Proposed Actions, it is anticipated that an (E)-Designation would be established on Projected Development Site 4 and Potential Development Site B, which would require new developments at these sites to satisfy the (E)-Designation program requirements. As part of the (E)-Designation, the property owner would submit a Phase 1A assessment of the site along with a soil and groundwater testing protocol memo, including a description of methods and sampling locations, to the New York City Mayor's Office of Environmental Remediation (OER). After the submission of a written report including the testing phase and laboratory analysis, OER shall determine whether remediation is necessary. A proposed remediation plan would be submitted to OER for review and approval if remediation is necessary. Accordingly, the Proposed Actions would be consistent with this policy.

Policy 7.2: Prevent and remediate discharge of petroleum products.

In the With-Action Condition, all of the Projected and Potential Development Sites would have (E)-Designations, and new development would be required to satisfy the (E)-Designation requirements. As part of the (E)-Designation the property owner would submit a Phase 1A assessment of the site along with a soil and groundwater testing protocol memo, including a description of methods and sampling locations, to the New York City Mayor's Office of Environmental Remediation (OER). After the submission of a written report including the testing phase and laboratory analysis, OER shall determine whether remediation is necessary. A proposed remediation plan would be submitted to OER for review and approval if remediation is necessary. With the (E)-Designations in place, the Proposed Actions would be consistent with 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 Actions would facilitate an updated Flushing WAP, which would include provisions for more than three acres of publicly accessible open space in the Project Area. Currently, there is no public waterfront access to Flushing Creek offered at any of the Projected or Potential Development Sites, and views to the waterfront are limited. The proposed update to the existing WAP would establish requirements for new developments on waterfront sites to provide a shore public walkway and upland connections.

As part of the Proposed Project, new upland connections and visual corridors would be constructed along 36th Road, 37th Avenue, 39th Avenue, and Roosevelt Avenue. Upland connections and additional public walkways and plaza areas would allow pedestrian access to the waterfront where, as part of the proposed public waterfront access area, a shore public walkway would be developed. The shore public walkway would provide views of Flushing Creek and western Queens. Additional amenities as part of the shore public walkway would include benches, seating, and landscaped areas as part of a beautification strategy.

Public access to the shore public walkway would be similar under existing waterfront regulations and the Proposed Actions, with slight modifications to the existing upland connection requirements to establish an upland connection between the shore public walkway and College Point Boulevard. Additionally, the updated WAP would require a 40-foot minimum shore public walkway width, which is double the minimum width currently required. The shore public walkway would be wider as a result of the Proposed Actions and would thereby enhance physical, visual and recreational access to the waterfront.

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

As described above, the updated WAP would provide more than three acres of shore public walkway along Flushing Creek. The Proposed Actions would also introduce multiple pedestrian circulation paths as well as upland connections to Roosevelt Avenue, 39th Avenue, 38th Avenue, 37th Avenue, and College Point Boulevard. The Proposed Actions would create a new publicly-accessible private road network within the Project Area and new ground-floor retail along portions of this street network that would activate the public realm and help connect the Project Area to downtown Flushing. The Proposed Actions would incorporate public access and publicly accessible open space into new private developments within the Project Area and would therefore be consistent with this policy.

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

The Proposed Actions would require development on waterfront sites within the Project Area to develop a shore public walkway along the Flushing Creek frontage of each waterfront site. The proposed SWFD would require that visual corridors be provided between College Point Boulevard and the Flushing Creek waterfront, and therefore, the Proposed Actions would be consistent with this policy.

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

The design of the shore public walkway would provide opportunities for the public to access the water's edge and make open space and upland connections inviting through the multiple pedestrian circulation paths and publicly-accessible private road network. The WAP would require the installation of lighting and benches along the shore public walkway as part of new private developments within the Project Area. The maintenance of the shore public walkway would be the responsibility of the private land owners. The shore public walkway would have a minimum width of 40 feet and have a variety of programmed passive and active recreational uses. Stewardship would be encouraged by the mix of uses that would occur in the Project Area, including retail, hotel, community facility, and residential tenants. The maintenance of the shore public walkway would be the responsibility of the private land owners, and therefore the Proposed Actions would be consistent with 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 historic and working waterfront.

The Proposed Actions would result in a significantly improved visual quality and urban context surrounding the waterfront over the existing condition. The current WAP requires a minimum shore public walkway width of 20 feet. As a result of the Proposed Actions, the minimum width of the shore public walkway would be expanded from 20 feet to 40 feet, providing significant additional space for beautification techniques such as landscaping and hardscaping. The proposed buildings and public spaces would improve the appearance of the Project Area, which is currently predominately vacant, and formerly an industrial waterfront. Visual connections to Flushing Creek would be provided from College Point Boulevard. The Proposed Actions would add visual interest within the Project Area and along the shore public walkway adjacent to Flushing Creek and would activate vacant and formerly industrial sites adjacent to Downtown Flushing. Therefore, the Proposed Actions would be consistent with this policy.

Policy 9.2: Protect and enhance scenic values associated with natural resources.

As described above, the Proposed Actions would improve the visual quality of the waterfront. The Proposed Project would provide new publicly-accessible viewing points towards Flushing Creek from the shore public walkway. Provisions of the WAP would require visual corridors from upland areas to Flushing Creek. Additionally, the Proposed Project would include wetland restoration through new plantings of native plants and the use of habitat enhancing materials within waterfront areas. Shoreline stabilization would be implemented through a mix of natural shoreline, rip-rap shoreline, boulders with native plants, and steel bulkhead shoreline. Accordingly, the Proposed Actions would be consistent with this policy.

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

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	Special Flushing Waterfront District (SFWD)
Location	Block 4963, Lots 7, 8, and 9
Type(s)	☑ Residential, Commercial, Community Facility; ☑ Parkland, Open Space, and Natural Areas; ☐ Tidal Wetland Restoration; ☐ Critical Infrastructure or Facility; ☐ Industrial Uses ☐ Over-water Structures; ☑ Shoreline Structures; ☐ Transportation; ☐ Wastewater Treatment/Drainage; ☑ Coastal Protection
Description	Please Refer to Sections B and C of the NYC WRP Consistency Assessment Form.
Planned Completion Date	2025
Expected Project Lifespan	2100

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Last update: Sept. 7, 2018

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	3.92	**3.92**	**NAVD88**	*Appendix A*
1% flood height	13.00	**13.00**	**NAVD88**	*NYC Flood Hazard Mapper*
Design flood elevation	-->			
As relevant:				
0.2% flood height	14.90	14.90	**NAVD88**	*FEMA Preliminary Flood Insurance Study (FIS) report*

Data will be converted based on the following datums:

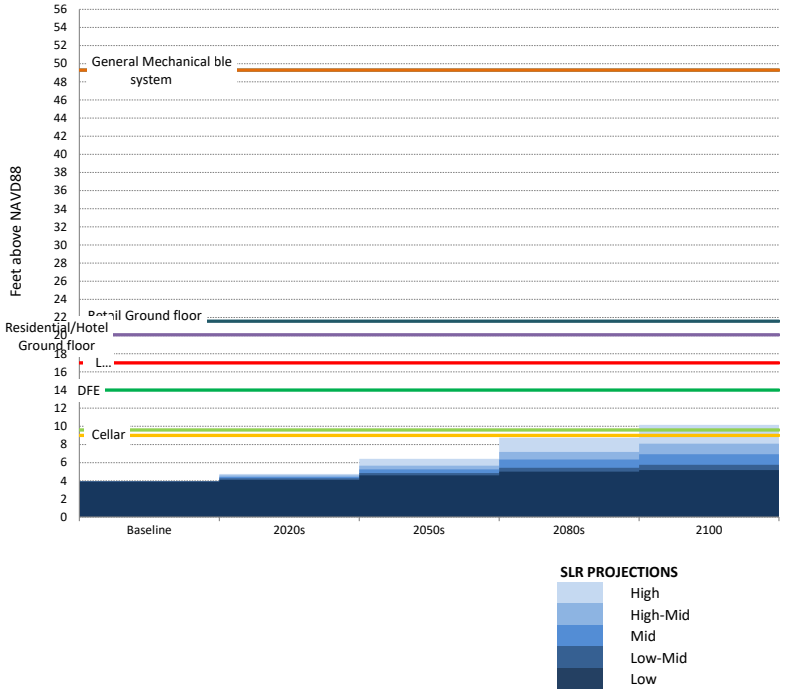
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*

Describe key physical features of the project.

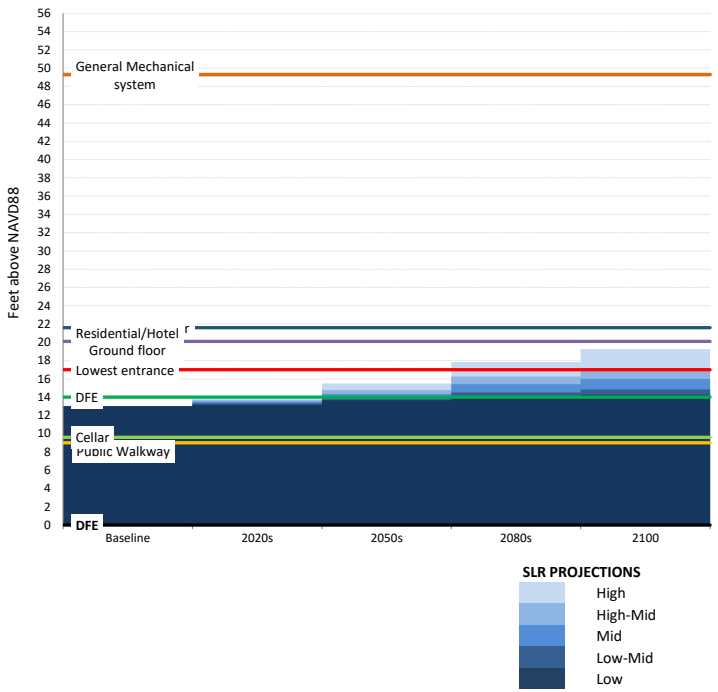
Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 0.2% flood height
Lowest entrance	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	17.0	Feet	NAVD88	*17.0*	*17.0*	*13.1*	*2.1*
Lowest entrances at mezzanine level connecting public shore walkway and 39th ave entering retail space, built with concrete curb, structural glazed storefront wall with stone panel.									
Public Walkway	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☑ Other	2100	9.0	Feet	NAVD88	*9.0*	*9.0*	*5.1*	*-5.9*
public walkway along shoreline with promenade pavers, wood benches, wood decking, stone curb, concrete playground, plants.									
Cellar	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	9.6	Feet	NAVD88	*9.6*	*9.6*	*5.7*	*-5.3*
Retail space, hotel amenity space, pump room. Concrete wall, waterproofing membrane, rigid insulation, and stone panel.									
Retail Ground floor	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	21.6	Feet	NAVD88	*21.6*	*21.6*	*17.7*	*6.7*
Retail space, concrete curb, structural glazed storefront wall with stone panel.									
Residential/Hotel Ground floor	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	20.1	Feet	NAVD88	*20.1*	*20.1*	*16.2*	*5.2*
Residential lobby (El: 20.1) and Hotel lobby (El: 20.5) , concrete curb, structural glazed storefront wall with stone panel.									
DFE	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	14.0	Feet	NAVD88	*14.0*	*14.0*	*10.1*	*-0.9*
Design Flood Elevation									
Lowest active habitable space	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	49.3	Feet	NAVD88	*49.3*	*49.3*	*45.4*	*34.4*
Hotel, glass window wall with aluminum mullion, concrete slab.									
General Mechanical system	☐ Vulnerable ☑ Critical ☐ Potentially Hazardous ☐ Other	2100	49.3	Feet	NAVD88	*49.3*	*49.3*	*45.4*	*34.4*
Electricity switchboards, emergency generator, heat pumps, cooling towers, condensers, data center, telephone room, smoke purge fan,etc.									

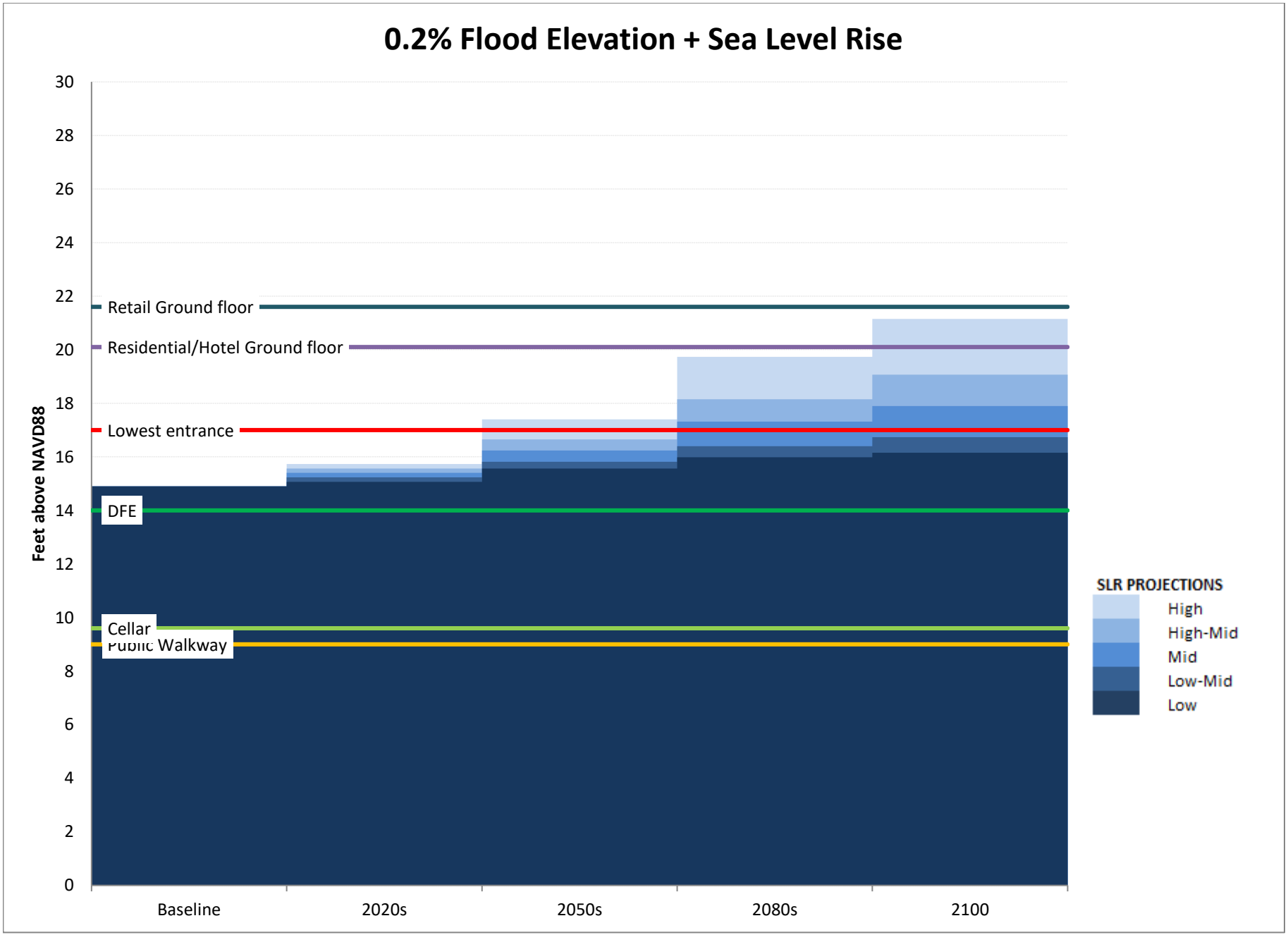
Assess project vulnerability over a range of sea level rise projections.

Mean Higher High Water + Sea Level Rise



1% Flood Elevation + Sea Level Rise




0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
Retail Ground floor
Residential/Hotel Ground floor
Lowest entrance
DFE
Cellar
Public Walkway
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low

	SLR (ft)				
	Low	Low-Mid	Mid	High-Mid	High
Baseline	0.00	0.00	0.00	0.00	0.00
2020s	0.17	0.33	0.50	0.67	0.83
2050s	0.67	0.92	1.33	1.75	2.50
2080s	1.08	1.50	2.42	3.25	4.83
2100	1.25	1.83	3.00	4.17	6.25

	SLR (in)				
	Low	Low-Mid	Mid	High-Mid	High
2014	0	0	0	0	0
2020s	2	4	6	8	10
2050s	8	11	16	21	30
2080s	13	18	29	39	58
2100	15	22	36	50	75

MHHW+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	3.92	3.92	3.92	3.92	3.92
2020s	4.09	4.25	4.42	4.59	4.75
2050s	4.59	4.84	5.25	5.67	6.42
2080s	5.00	5.42	6.34	7.17	8.75
2100	5.17	5.75	6.92	8.09	10.17

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	14.90	14.90	14.90	14.90	14.90
2020s	15.07	15.23	15.40	15.57	15.73
2050s	15.57	15.82	16.23	16.65	17.40
2080s	15.98	16.40	17.32	18.15	19.73
2100	16.15	16.73	17.90	19.07	21.15

	0	1
Lowest entrance	17	17
Public Walkway	9	9
Cellar	9.6	9.6
Retail Ground floor	21.6	21.6
Residential/Hotel Ground floo	20.1	20.1
DFE	14	14
Lowest active habitable space	49.3	49.3
General Mechanical system	49.3	49.3
DFE	0.00	0.00

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

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Background Information	
Project Name	Special Flushing Waterfront District (SFWD)
Location	Block 4963, Lot 65
Type(s)	☑ Residential, Commercial, Community Facility ☑ Parkland, Open Space, and Natural Areas ☐ Tidal Wetland Restoration ☐ Critical Infrastructure or Facility ☐ Industrial Uses ☐ Over-water Structures ☑ Shoreline Structures ☐ Transportation ☐ Wastewater Treatment/Drainage ☑ Coastal Protection
Description	Please Refer to Sections B and C of the NYC WRP Consistency Assessment Form.
Planned Completion Date	2025
Expected Project Lifespan	2100

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Last update: Sept. 7, 2018

Establish current tidal and flood heights.

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MHHW	3.92	**3.92**	**NAVD88**	*Appendix A*
1% flood height	13.00	**13.00**	**NAVD88**	*NYC Flood Hazard Mapper*
Design flood elevation	-->			
As relevant:				
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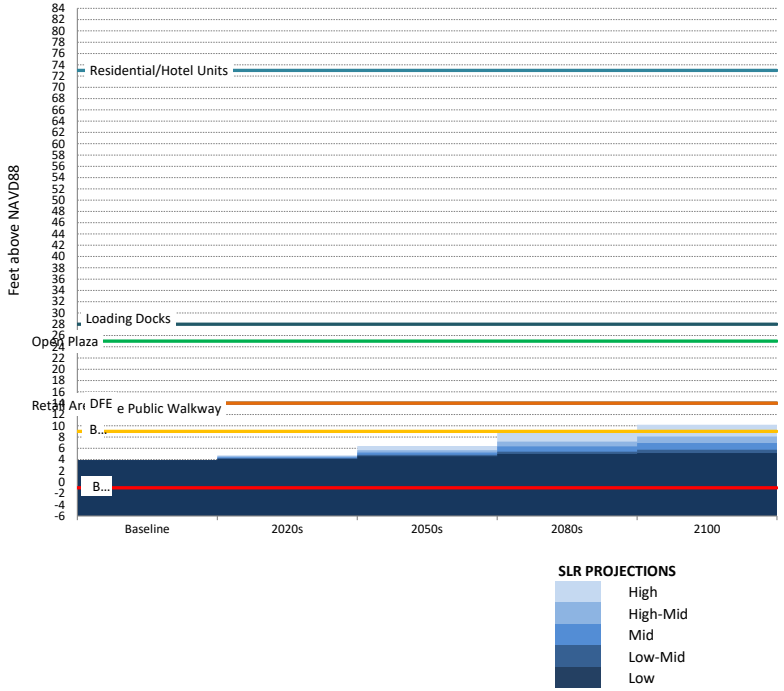
Queens Datum	*1.63*
Richmond Datum	*2.09*

Describe key physical features of the project.

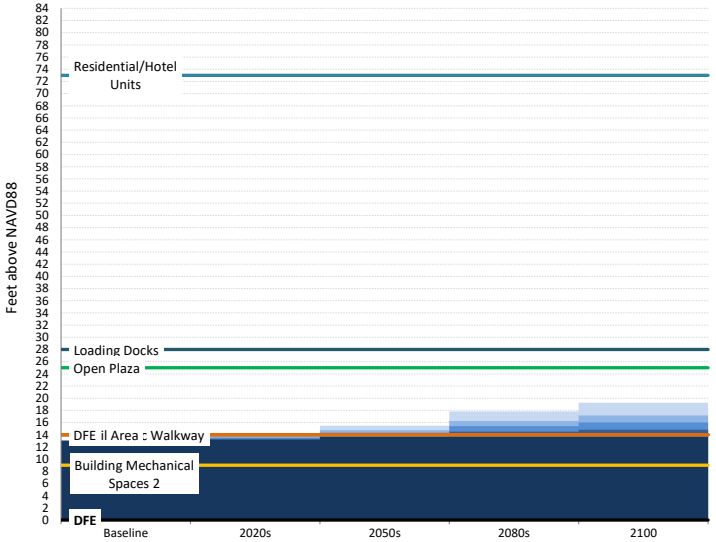
Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 0.2% flood height
Building Mechanical Spaces 1	☐ Vulnerable ☑ Critical ☐ Potentially Hazardous ☐ Other	2100	-1.0	Feet	NAVD88	*-1.0*	*-1.0*	*-4.9*	*-15.9*
Electrical Equipment room will be the electrical utility point of entry in to the building with the building's electrical distribution boards and utility company spot network compartnements connected to transformer vaults located below road, Fuel Oil Tank storage and pump room for two 1000 gallon tanks used for emergency generator fuel, Water tanks for Domestic use and Fire Protection									
Building Mechanical Spaces 2	☐ Vulnerable ☑ Critical ☐ Potentially Hazardous ☐ Other	2100	9.0	Feet	NAVD88	*9.0*	*9.0*	*5.1*	*-5.9*
Main Tel/Com room for telephone and data utility point of entry into the building from street & Gas Service room: point of entry loctation for Gas Utility lines and distribution point for heating systems									
Shore Public Walkway	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☑ Other	2100	14.0	Feet	NAVD88	*14.0*	*14.0*	*10.1*	*-0.9*
40' continuous landscaped zone running the entire length of site along Flushing Creek. Zone includes continuous 12' wide pedestrian walkway, landscape areas, seating areas and built up overlook with steps and slope areas up to Cellar Level Retail Area of building									
Loading Docks	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	28.0	Feet	NAVD88	*28.0*	*28.0*	*24.1*	*13.1*
Central Loading Dock area for receiving/shipping/garbage									
Retail Area	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	14.0	Feet	NAVD88	*14.0*	*14.0*	*10.1*	*-0.9*
Food court vendor area with indvidual food stalls and common seating area with access to Shore Public Walkway. Escalator access to ground floor retail shopping area above.									
Open Plaza	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☑ Other	2100	25.0	Feet	NAVD88	*25.0*	*25.0*	*21.1*	*10.1*
Open landscaped area within streetwall line adjacent to private roads. Will contain soft and hard landscape elements, seating and lighting.									
Residential/Hotel Units	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	73.0	Feet	NAVD88	*73.0*	*73.0*	*69.1*	*58.1*
Lowest habitable dwelling units/ hotel units									
DFE	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	14.0	Feet	NAVD88	*14.0*	*14.0*	*10.1*	*-0.9*
Design Flood Elevation									

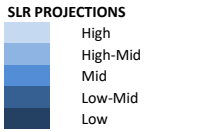
Assess project vulnerability over a range of sea level rise projections.

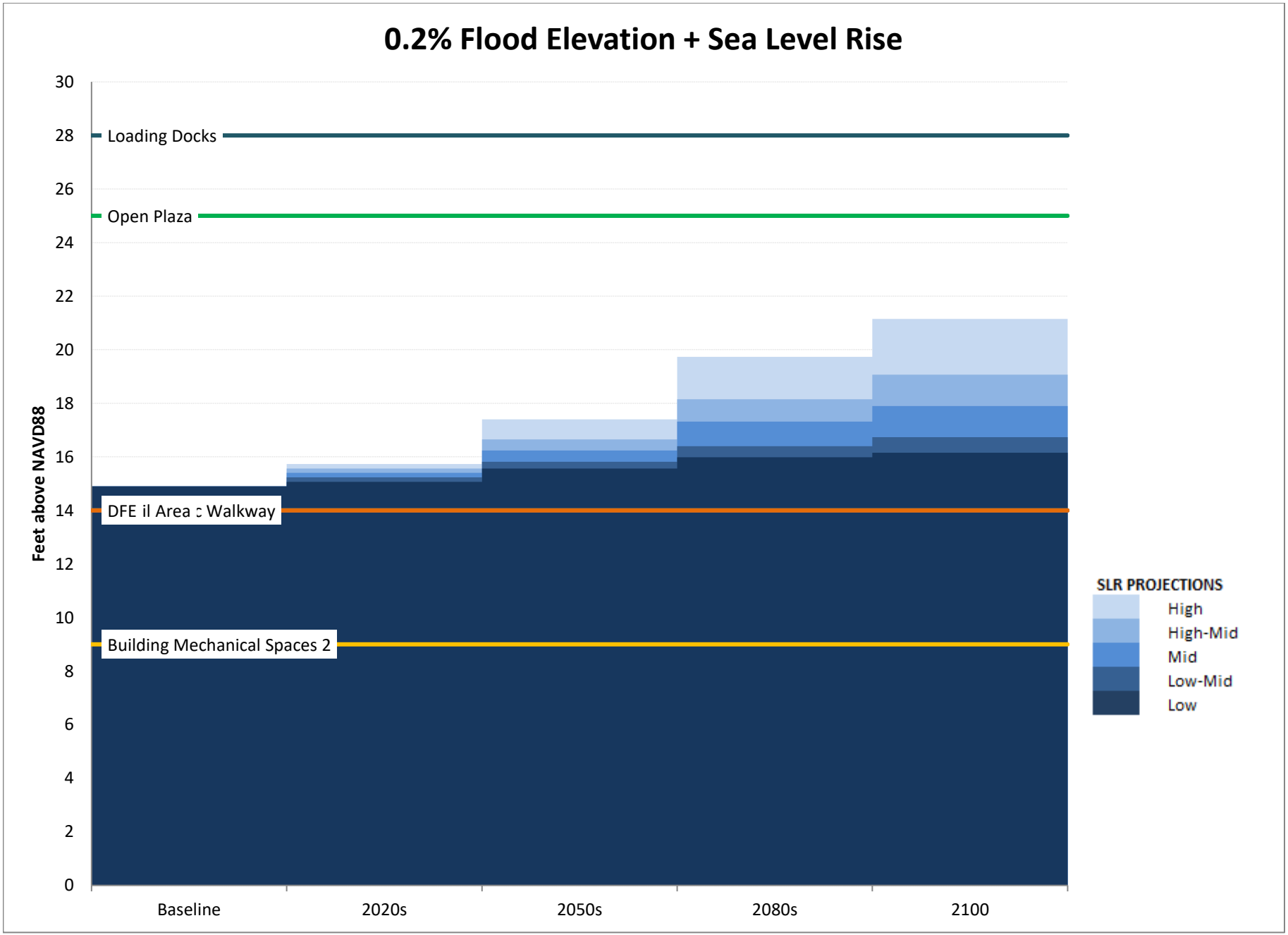
Mean Higher High Water + Sea Level Rise



1% Flood Elevation + Sea Level Rise






0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
Loading Docks
Open Plaza
DFE il Area c Walkway
Building Mechanical Spaces 2
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low

	SLR (ft)				
	Low	Low-Mid	Mid	High-Mid	High
Baseline	0.00	0.00	0.00	0.00	0.00
2020s	0.17	0.33	0.50	0.67	0.83
2050s	0.67	0.92	1.33	1.75	2.50
2080s	1.08	1.50	2.42	3.25	4.83
2100	1.25	1.83	3.00	4.17	6.25

	SLR (in)				
	Low	Low-Mid	Mid	High-Mid	High
2014	0	0	0	0	0
2020s	2	4	6	8	10
2050s	8	11	16	21	30
2080s	13	18	29	39	58
2100	15	22	36	50	75

	MHHW+SLR (ft above NAVD88)				
	Low	Low-Mid	Mid	High-Mid	High
Baseline	3.92	3.92	3.92	3.92	3.92
2020s	4.09	4.25	4.42	4.59	4.75
2050s	4.59	4.84	5.25	5.67	6.42
2080s	5.00	5.42	6.34	7.17	8.75
2100	5.17	5.75	6.92	8.09	10.17

	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	14.90	14.90	14.90	14.90	14.90
2020s	15.07	15.23	15.40	15.57	15.73
2050s	15.57	15.82	16.23	16.65	17.40
2080s	15.98	16.40	17.32	18.15	19.73
2100	16.15	16.73	17.90	19.07	21.15

	0	1
Building Mechanical Spaces 1	-1	-1
Building Mechanical Spaces 2	9	9
Shore Public Walkway	14	14
Loading Docks	28	28
Retail Area	14	14
Open Plaza	25	25
Residential/Hotel Units	73	73
DFE	14	14
DFE	0.00	0.00

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

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	Special Flushing Waterfront District (SFWD)
Location	Block 4963, Lot 85
Type(s)	☑ Residential, Commercial, Community Facility; ☑ Parkland, Open Space, and Natural Areas; ☐ Tidal Wetland Restoration; ☐ Critical Infrastructure or Facility; ☐ Industrial Uses ☐ Over-water Structures; ☑ Shoreline Structures; ☐ Transportation; ☐ Wastewater Treatment/Drainage; ☑ Coastal Protection
Description	Please Refer to Sections B and C of the NYC WRP Consistency Assessment Form.
Planned Completion Date	2025
Expected Project Lifespan	2100

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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	3.92	**3.92**	**NAVD88**	*Appendix A*
1% flood height	13.00	**13.00**	**NAVD88**	*NYC Flood Hazard Mapper*
Design flood elevation	-->			
As relevant:				
0.2% flood height	14.90	14.90	**NAVD88**	*FEMA Preliminary Flood Insurance Study (FIS) report*

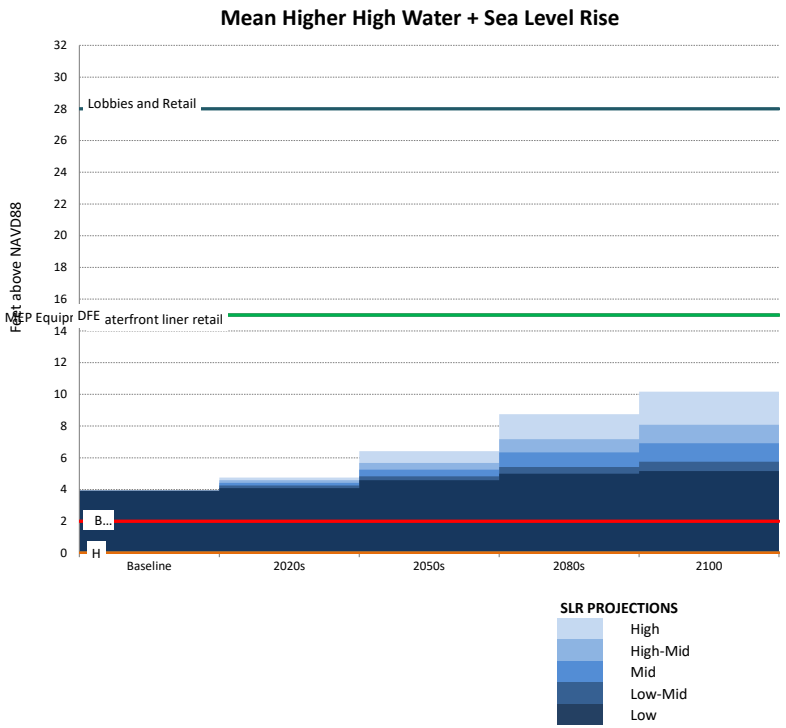
Data will be converted based on the following datums:

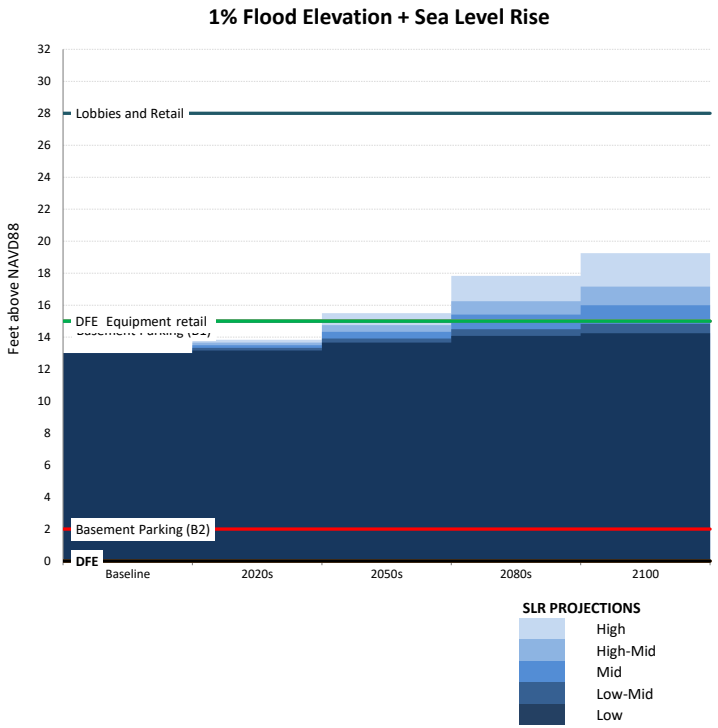
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*

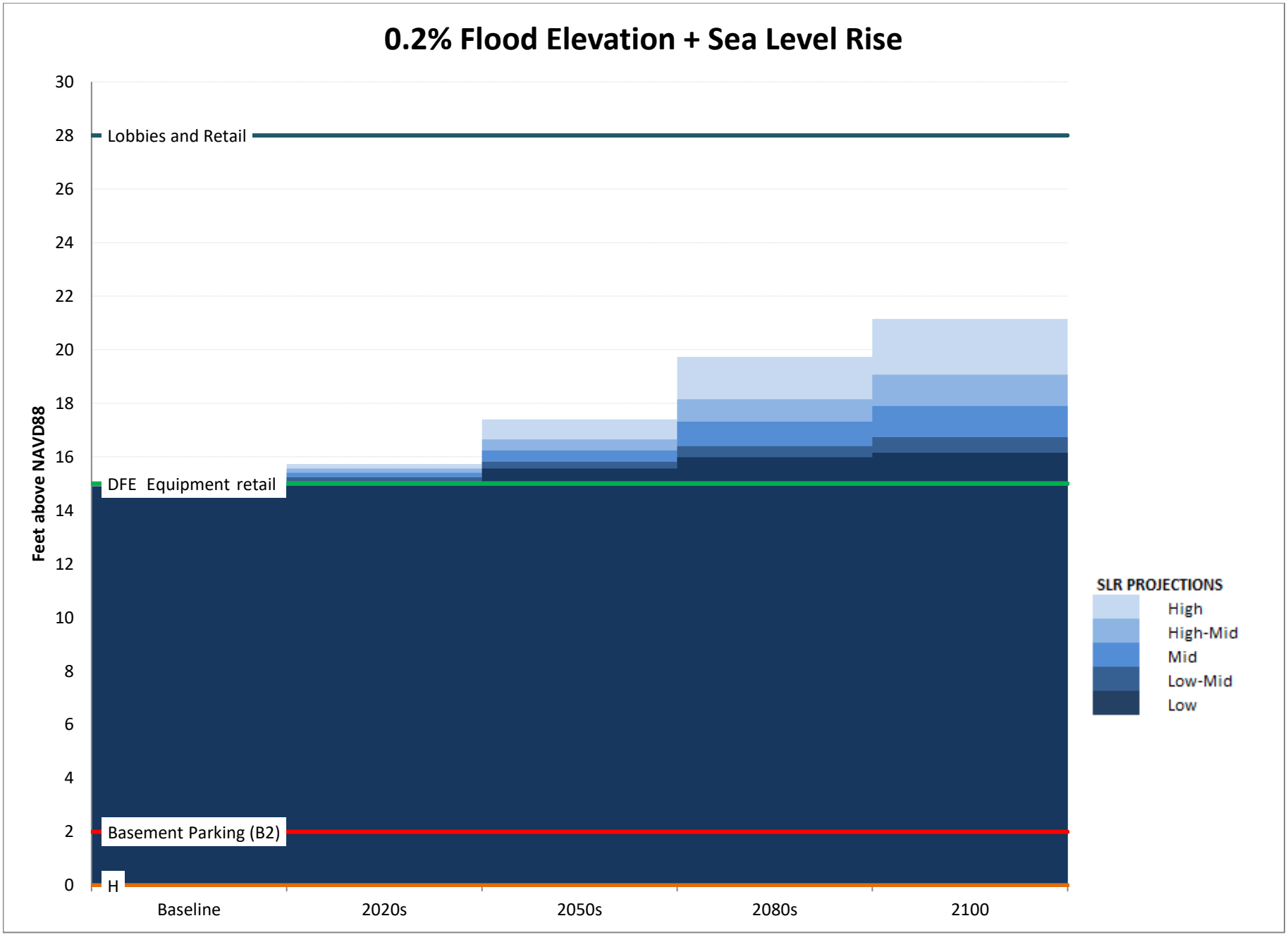
Describe key physical features of the project.

Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 0.2% flood height
Basement Parking (B2)	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	2.0	Feet	NAVD88	*2.0*	*2.0*	*-1.9*	*-12.9*
basement parking facilites									
Basement Parking (B1)	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	15.0	Feet	NAVD88	*15.0*	*15.0*	*11.1*	*0.1*
B1 basement parking and Residential, Hotel and Office Back of House									
Waterfront liner retail	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	15.0	Feet	NAVD88	*15.0*	*15.0*	*11.1*	*0.1*
waterfront liner retail space									
Lobbies and Retail	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	28.0	Feet	NAVD88	*28.0*	*28.0*	*24.1*	*13.1*
lobbies and Retail as well as other uses will be situated at an elevation of 28'									
MEP Equipment	☐ Vulnerable ☑ Critical ☐ Potentially Hazardous ☐ Other	2100	15.0	Feet	NAVD88	*15.0*	*15.0*	*11.1*	*0.1*
Mechanical, electrical, and plumbing to be located at B1									
DFE	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	15.0	Feet	NAVD88	*15.0*	*15.0*	*11.1*	*0.1*
Design Flood Elevation									
G	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									
H	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ 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
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
Lobbies and Retail
DFE Equipment retail
Basement Parking (B2)
H
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low

	SLR (ft)				
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**
Baseline	0.00	0.00	0.00	0.00	0.00
2020s	0.17	0.33	0.50	0.67	0.83
2050s	0.67	0.92	1.33	1.75	2.50
2080s	1.08	1.50	2.42	3.25	4.83
2100	1.25	1.83	3.00	4.17	6.25

	SLR (in)				
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**
2014	0	0	0	0	0
2020s	2	4	6	8	10
2050s	8	11	16	21	30
2080s	13	18	29	39	58
2100	15	22	36	50	75

	MHHW+SLR (ft above NAVD88)				
	Low	**Low-Mid**	**Mid**	**High-Mid**	**High**
Baseline	3.92	3.92	3.92	3.92	3.92
2020s	4.09	4.25	4.42	4.59	4.75
2050s	4.59	4.84	5.25	5.67	6.42
2080s	5.00	5.42	6.34	7.17	8.75
2100	5.17	5.75	6.92	8.09	10.17

	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	14.90	14.90	14.90	14.90	14.90
2020s	15.07	15.23	15.40	15.57	15.73
2050s	15.57	15.82	16.23	16.65	17.40
2080s	15.98	16.40	17.32	18.15	19.73
2100	16.15	16.73	17.90	19.07	21.15

	0	1
Basement Parking (B2)	2	2
Basement Parking (B1)	15	15
Waterfront liner retail	15	15
Lobbies and Retail	28	28
MEP Equipment	15	15
DFE	15	15
G	0	0
H	0	0
DFE	0.00	0.00

NYC Waterfront Revitalization Program - Policy 6.2 Flood Elevation Workhsheet

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	Special Flushing Waterfront District (SFWD)
Location	Block 4963, Lots 212, and 249
Type(s)	☑ Residential, Commercial, Community Facility ☑ Parkland, Open Space, and Natural Areas ☐ Tidal Wetland Restoration ☐ Critical Infrastructure or Facility ☐ Industrial Uses ☐ Over-water Structures ☑ Shoreline Structures ☐ Transportation ☐ Wastewater Treatment/Drainage ☑ Coastal Protection
Description	Please Refer to Sections B and C of the NYC WRP Consistency Assessment Form.
Planned Completion Date	2025
Expected Project Lifespan	2100

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Last update: Sept. 7, 2018

Establish current tidal and flood heights.

	FT (NAVD88)	Feet	Datum	Source
MHHW	3.92	**3.92**	**NAVD88**	*Appendix A*
1% flood height	13.00	**13.00**	**NAVD88**	*NYC Flood Hazard Mapper*
Design flood elevation	-->			
As relevant:				
0.2% flood height	14.90	14.90	**NAVD88**	*FEMA Preliminary Flood Insurance Study (FIS) report*

Data will be converted based on the following datums:

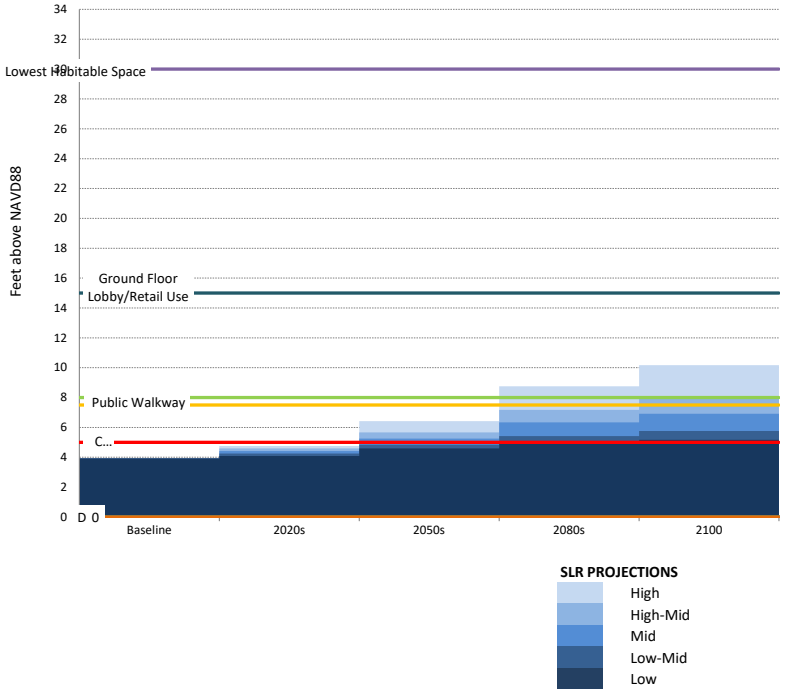
Datum	FT (NAVD88)
NAVD88	*0.00*
NGVD29	*-1.10*
Manhattan Datum	*1.65*
Bronx Datum	*1.51*
Brooklyn Datum (Sewer)	*0.61*
Brooklyn Datum (Highway)	*1.45*
Queens Datum	*1.63*
Richmond Datum	*2.09*

Describe key physical features of the project.

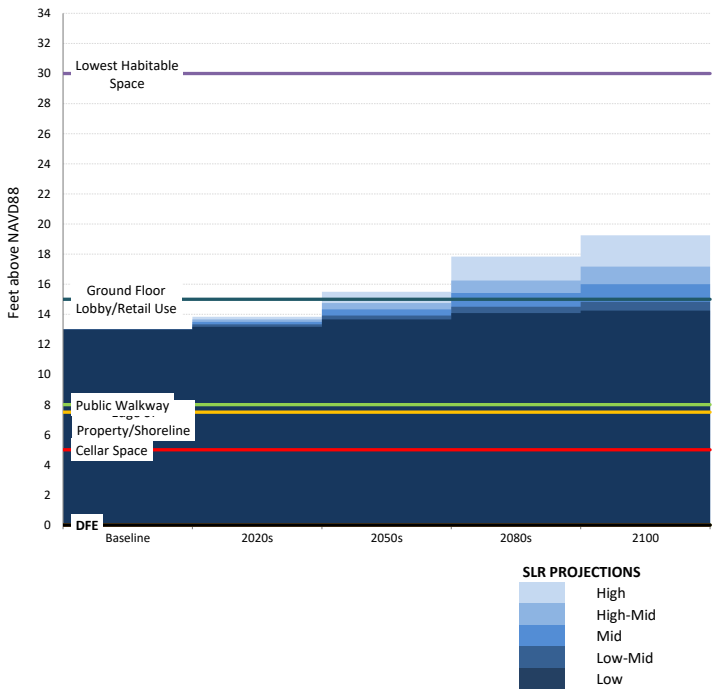
Feature *(enter name)*	Feature Category	Lifespan	Elevation	Units	Datum	Ft	Ft Above NAVD88	Ft Above MHHW	Ft Above 0.2% flood height
Cellar Space	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	5.0	Feet	NAVD88	*5.0*	*5.0*	*1.1*	*-9.9*
Cellar space is used for parking only									
Edge of Property/Shoreline	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☑ Other	2100	7.5	Feet	NAVD88	*7.5*	*7.5*	*3.6*	*-7.4*
For use by the general public, future residents living at the building, and emergency personels									
Public Walkway	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☑ Other	2100	8.0	Feet	NAVD88	*8.0*	*8.0*	*4.1*	*-6.9*
For use by the general public, future residents living at the building, and emergency personels									
Ground Floor Lobby/Retail Use	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	15.0	Feet	NAVD88	*15.0*	*15.0*	*11.1*	*0.1*
For use by the general public, future residents living at the building, and emergency personels									
Lowest Habitable Space	☑ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100	30.0	Feet	NAVD88	*30.0*	*30.0*	*26.1*	*15.1*
For use by the building residents, apartment units start on level 2									
DFE	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other	2100		Feet	NAVD88				
Design flood elevation									
	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									
	☐ Vulnerable ☐ Critical ☐ Potentially Hazardous ☐ Other			Feet	NAVD88				
Description of Planned Uses and Materials									

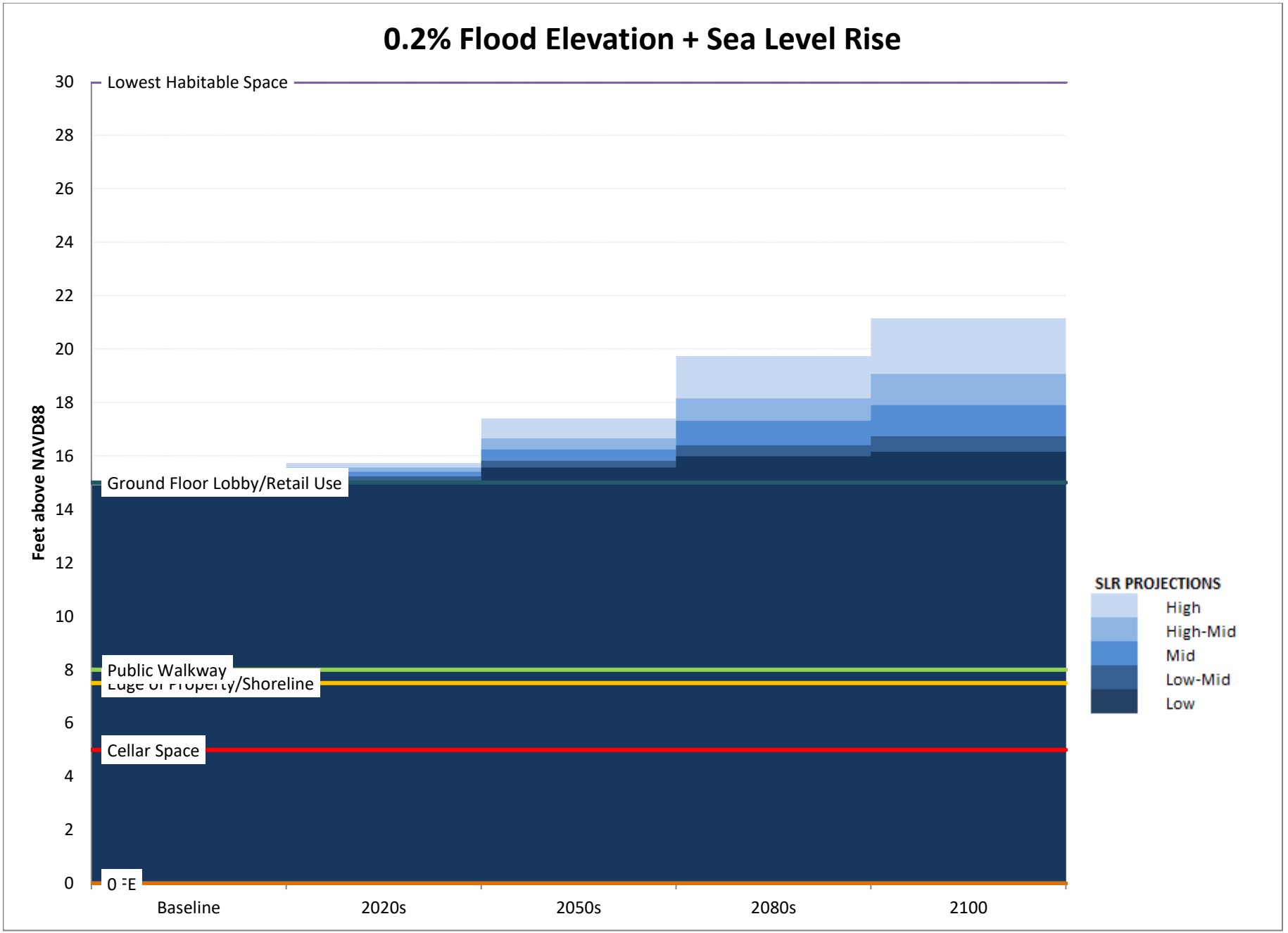
Assess project vulnerability over a range of sea level rise projections.

Mean Higher High Water + Sea Level Rise



1% Flood Elevation + Sea Level Rise




0.2% Flood Elevation + Sea Level Rise
Feet above NAVD88
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
Lowest Habitable Space
Ground Floor Lobby/Retail Use
Public Walkway
Edge of Property/Shoreline
Cellar Space
0 FE
Baseline
2020s
2050s
2080s
2100
SLR PROJECTIONS
High
High-Mid
Mid
Low-Mid
Low

	SLR (ft)				
	Low	Low-Mid	Mid	High-Mid	High
Baseline	0.00	0.00	0.00	0.00	0.00
2020s	0.17	0.33	0.50	0.67	0.83
2050s	0.67	0.92	1.33	1.75	2.50
2080s	1.08	1.50	2.42	3.25	4.83
2100	1.25	1.83	3.00	4.17	6.25

	SLR (in)				
	Low	Low-Mid	Mid	High-Mid	High
2014	0	0	0	0	0
2020s	2	4	6	8	10
2050s	8	11	16	21	30
2080s	13	18	29	39	58
2100	15	22	36	50	75

MHHW+SLR (ft above NAVD88)

	Low	Low-Mid	Mid	High-Mid	High
Baseline	3.92	3.92	3.92	3.92	3.92
2020s	4.09	4.25	4.42	4.59	4.75
2050s	4.59	4.84	5.25	5.67	6.42
2080s	5.00	5.42	6.34	7.17	8.75
2100	5.17	5.75	6.92	8.09	10.17

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	14.90	14.90	14.90	14.90	14.90
2020s	15.07	15.23	15.40	15.57	15.73
2050s	15.57	15.82	16.23	16.65	17.40
2080s	15.98	16.40	17.32	18.15	19.73
2100	16.15	16.73	17.90	19.07	21.15

	0	1
Cellar Space	5	5
Edge of Property/Shoreline	8	7.5
Public Walkway	8	8
Ground Floor Lobby/Retail Use	15	15
Lowest Habitable Space	30	30
DFE	0	0
0	0	0
0	0	0
DFE	0.00	0.00

FLUSHING CREEK

SITE 4
(Lot 212 & 249)

U-Haul

SITE 3
(Lot 85)

SITE 3
(Lot 85)

SITE 2
(Lot 65)

SITE 2
(Lot 65)

SITE 1
(Lot 7)

SITE 1
(Lot 9)

SITE 1
(Lot 8)

HILL | WEST
ARCHITECTS

SPECIAL FLUSHING WATERFRONT DISTRICT (SFWD)
PROPOSED MASTER PLAN

JULY
22
2019

APPENDIX H: HISTORIC RESOURCES – AGENCY CORRESPONDENCE

Landmarks Preservation Commission

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

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

ENVIRONMENTAL REVIEW

Project number: DEPARTMENT OF CITY PLANNING / 77DCP608Q
Project: SPECIAL FLUSHING WATERFRONT DISTRICT
Date Received: 6/6/2019

Properties with no Architectural or Archaeological significance:
1) Roosevelt Avenue, BBL: 4049630001
2) 131-01 Roosevelt Avenue, BBL: 4049630007
3) 39-08 Janet Place, BBL: 4049630008
4) 39-02 Janet Place, BBL: 4049630009
5) 131-01 39 Avenue, BBL: 4049630065
6) 37-52 College Point Blvd, BBL: 4049630075
7) 37-02 College Point Blvd, BBL: 4049630085
8) 35-50 College Point Blvd, BBL: 4049630210
9) 35-32 College Point Blvd, BBL: 4049630212
10) 35-50I College Point Blvd, BBL: 4049630249

Properties with no Archaeological significance:
36-30 College Point Blvd, BBL: 4049630200

Properties with Architectural significance:
1) 36-30 College Point Blvd, BBL: 4049630200, STATE/NATIONAL REGISTER
FINDINGS: ELIGIBLE FOR NATIONAL REGISTER LIST

AMENDED 6/14/19

Gina Santucci 6/14/2019

SIGNATURE DATE
Gina Santucci, Environmental Review Coordinator

File Name: 34149_FSO_DNP_06062019.docx

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Acting Commissioner

May 31, 2019

Ms. Rachel Belsky
Associate
Langan-Land Use Planning Services
360 West 31st Street, 8th Floor
New York, NY 10001

Re: CEQR
Special Flushing Waterfront District
Borough of Queens, Queens County, NY
19PR02576

Dear Ms. Belsky:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP) regarding the proposed Special Flushing Waterfront District. We have reviewed the submitted documents under the City Environmental Quality Review (CEQR) as requested. The role of this office in the CEQR process is act as a subject matter expert in the area of Historic Preservation. These comments are those of the Division for Historic Preservation 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 State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

We note that 37-52 College Point Boulevard, 35-20 College Point Boulevard, 132-25 41st Avenue, and the Flushing Bridge are not eligible for listing in the State and National Registers of Historic Places. We note that the former W. & J. Sloane Furniture Company building located at 36-30 College Point Boulevard is eligible for listing in the State and National Registers. We have reviewed the project description and supporting documentation that were provided to our office on April 15th and May 6th, 2019. Based upon our review, we have no archaeological concerns with the proposed work. We understand that a large addition may be proposed for the former Sloane building, which based on the projected square footage may be inappropriately large. We recommend following the guidance provided in the National Park Service's *Preservation Brief 14*, "New Exterior Additions to Historic Buildings: Preservation Concerns", which is available online at:
https://www.nps.gov/TPS/how-to-preserve/briefs/14-exterior-additions.htm

Please note that the Sloane building may be eligible for the Federal and State Historic Rehabilitation Tax Credit Programs. These programs enable developers of National Register listed historic properties to earn a tax credit equal to as much as 40% of the certified rehabilitation expenditures. Eligible costs include all hard and soft costs attributed to the rehabilitation of the historic property and can be used in conjunction with other tax credit programs. The potential 40% credit is a combination of 20% from the Federal Program and 20% from the New York State Program. See the attached documentation for more information on the New York State Program. Information regarding the Federal program can be found at https://www.nps.gov/tps/tax-incentives/before-you-apply.htm Please note that in order to receive

the state credits, you must first be approved for the federal Program; please investigate this program's requirements first.

The OPRHP appreciates the opportunity to comment under the CEQR review process as an interested agency. It should be noted that further consultation with our office will be necessary as the project moves forward if there is state or federal involvement in the projects. Involvement of a federal or state agency triggers a more formal review with our office under the National Historic Preservation Act of 1966 and Section 14.09 of the New York State Parks, Recreation, and Historic Preservation Law, respectively.

Sincerely,

Olivia Brazee
Historic Preservation Technical Specialist
olivia.brazee@parks.ny.gov

via e-mail only

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

M e m o r a n d u m

To: Gina Santucci

From: Olivia Brazee

Date: September 25, 2019

Subject: 36-30 College Point Boulevard, Queens

Dear Gina,

Please find below, the text of our office's eligibility determination for the former factory building located at 36-30 College Point Boulevard, in Queens. The text is also available on our Culture Resource Information System, in the USN record for the property (USN 08101.000044).

If you have any questions, Linda Mackey can be reached at (518)268-2148.

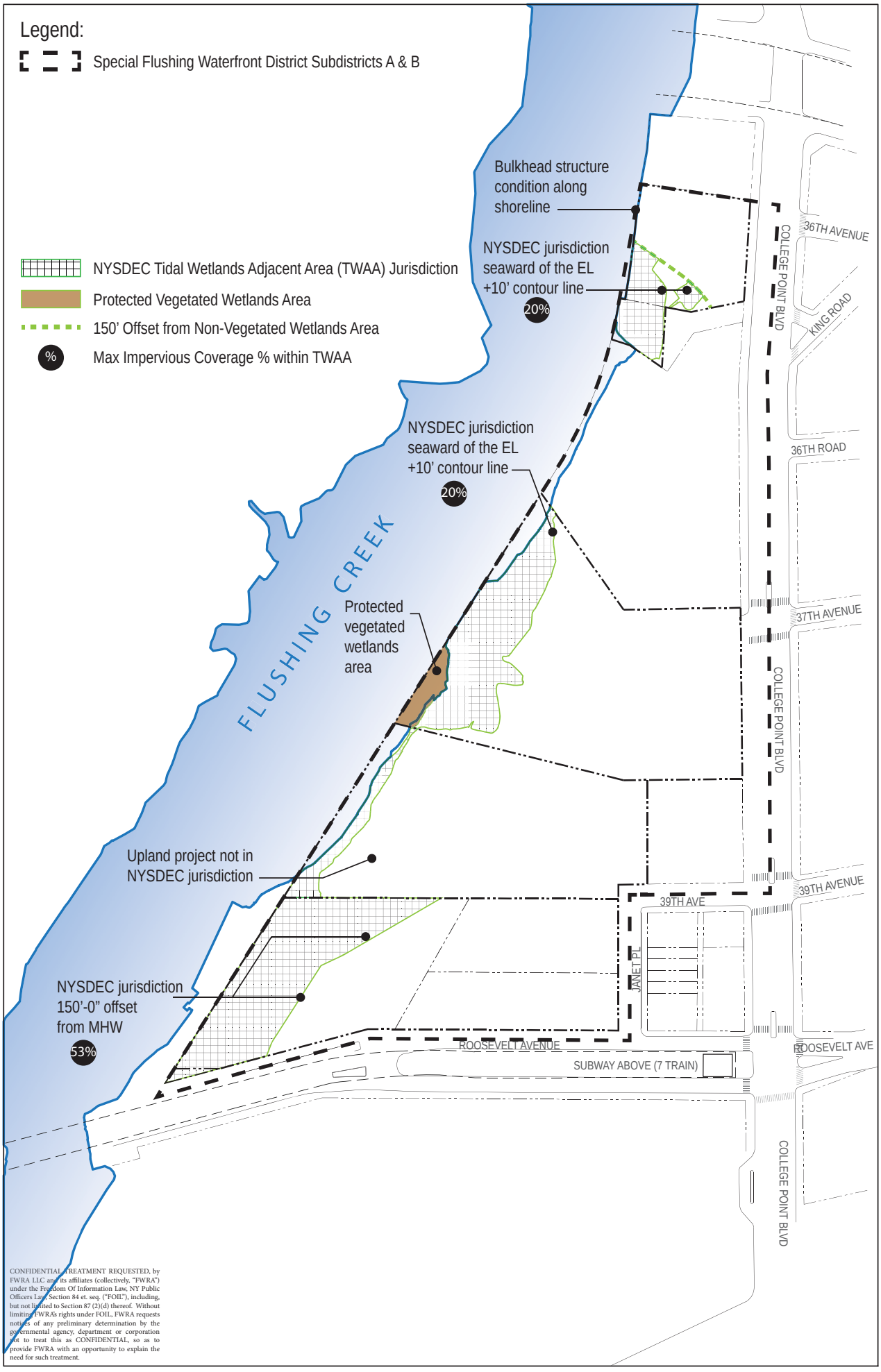
Regards,

Olivia Brazee
(518)268-2182

36-30 College Point Boulevard, Queens

The five-story T-shaped, reinforced concrete former factory building is eligible for the State and National Registers under Criteria A and C in the areas of industry and architecture. Designed by Lockwood Green & Company and constructed in 1925, the building, located on College Point Boulevard in Flushing, Queens, features a tall, visually prominent central clock tower and cupola; the clock was made by the Seth Thomas Clock Company in Connecticut. While most of the building's window and door openings have been sealed up, the fenestration pattern was retained. Research indicates the building was originally offices and a factory for the W. & J. Sloane Furniture Company. Founded in 1843 by Scottish immigrants William and John Sloane, the company gained a reputation as producing some of the finest examples of Colonial Revival furniture in the country. In 1891, Sloane opened a flagship store on Ladies' Mile in Manhattan, later moving to 5th Avenue and 38th Street. In the early to mid-twentieth century, the firm branched into upscale interior decoration; the White House and the Rhode Island mansion The Breakers were clients. Sloane also furnished the interiors of the World War II-era "liberty ships", or massive cargo vessels. Serval Slidefasteners, Inc., who manufactured zippers, purchased the facotyr buikding in 1942, and 9n 19790 it was taken over by U-Haul, which continues to operate a storage center in the space. Character-defining features of the building include the T-shaped plan; reinforced concrete construction which is expressed as a grid on the exterior; brick cladding; fenestration/window openings; clock tower with clock and copper-domed cupola; and any wall and ceiling structure exposed on the interior.

APPENDIX I: NATURAL RESOURCES - AGENCY CORRESPONDENCE AND RELATED MATERIALS



CONFIDENTIAL TREATMENT REQUESTED, by FWRA LLC and its affiliates (collectively, "FWRA") under the Freedom Of Information Law, NY Public Officers Law, Section 84 et. seq. ("FOIL"), including, but not limited to Section 87 (2)(d) thereof. Without limiting FWRAs rights under FOIL, FWRA requests notices of any preliminary determination by the governmental agency, department or corporation not to treat this as CONFIDENTIAL, so as to provide FWRA with an opportunity to explain the need for such treatment.

Morgan Devlin

From: Edith Carson-Supino - NOAA Federal <edith.carson-supino@noaa.gov>
Sent: Monday, May 6, 2019 9:58 AM
To: Morgan Devlin
Cc: Ursula Howson - NOAA Federal
Subject: Re: MNFS T&E Information Request

Ms. Devlin,

We received your email on May 3, 2019, regarding the proposed series of land use action to establish a Special Flushing Waterfront District in the Flushing neighborhood of Queens. In your email, you requested any available information regarding the presence of federally listed threatened or endangered species within the vicinity of the site. We offer the following comments.

Endangered Species Act

Atlantic Sturgeon

Atlantic sturgeon could be present in the waters of the East River and its adjacent bays and tributaries. The New York Bight, Chesapeake Bay, Carolina, and South Atlantic Distinct Population Segments (DPS) of Atlantic sturgeon are endangered; the Gulf of Maine DPS is threatened. Adult and subadult Atlantic sturgeon originating from any of these DPSs could occur in the proposed project area. As young remain in their natal river/estuary until approximately age 2, and early life stages are not tolerant of saline waters, no eggs, larvae, or juvenile Atlantic sturgeon will occur within the East River and its adjacent bays and tributaries.

Shortnose Sturgeon

Shortnose sturgeon could be present in the East River and could occur in its adjacent bays and tributaries. Shortnose sturgeon are listed as endangered throughout their range. As early life stages are not tolerant of saline water, no eggs, larvae, or juvenile shortnose sturgeon will occur within the saline waters of the East River and its adjacent bays and tributaries.

As project details develop, we recommend you consider the following effects of the project on Atlantic and shortnose sturgeon:

- For any impacts to habitat or conditions that temporarily render affected water bodies unsuitable for the above-mentioned species, consider the use of timing restrictions for in-water work.
- For activities that increase levels of suspended sediment, consider the use of silt management and/or soil erosion best practices (i.e., silt curtains and/or cofferdams).
- For activities that may affect underwater noise levels, consider the use of cushion blocks and other noise attenuating tools to avoid reaching noise levels that will cause injury or behavioral disturbance to sturgeon - see the table below for more information regarding noise criteria for injury/behavioral disturbance in sturgeon.

Organism	Injury	Behavioral Modification
Sturgeon	206 dB re 1 µPaPeak and 187 dB cSEL	150 dB re 1 µPaRMS

Depending on the amount and duration of work that takes place in the water, listed species of sturgeon may occur within the vicinity of your proposed project. The federal action agency will be responsible for

determining whether the proposed action may affect listed species. If they determine that the proposed action may affect a listed species, they should submit their determination of effects, along with justification and a request for concurrence to the attention of the Section 7 Coordinator, NMFS, Greater Atlantic Regional Fisheries Office, Protected Resources Division, 55 Great Republic Drive, Gloucester, MA 01930 or nmfs.gar.esa.section7@noaa.gov. Please be aware that we have recently provided on our website guidance and tools to assist action agencies with their description of the action and analysis of effects to support their determination. See - http://www.greateratlantic.fisheries.noaa.gov/section7. After receiving a complete, accurate comprehensive request for consultation, in accordance to the guidance and instructions on our website, we would then be able to conduct a consultation under section 7 of the ESA. Should project plans change or new information become available that changes the basis for this determination, further coordination should be pursued. If you have any questions regarding these comments, please contact me (978-282-8490; Edith.Carson-Supino@noaa.gov).

Magnuson-Stevens Fishery Conservation and Management Act - Essential Fish Habitat

Recent changes to the Corps of Engineers' Nationwide Permits have removed the requirement that NMFS be contacted for information on essential fish habitat and that applicants provide evidence of the contact and our resources. You now access the information on your own from our websites. The Habitat Conservation Division's website is: https://www.greateratlantic.fisheries.noaa.gov/habitat/index.html Information on essential fish habitat can be found there.

Thank you,

Edith

Edith Carson-Supino, M.Sc.
Section 7 Fish Biologist
NOAA Fisheries
U.S. Department of Commerce
Greater Atlantic Regional Fisheries Office
Phone: 978-282-8490
edith.carson-supino@noaa.gov

For ESA Section 7 guidance please see:
https://www.greateratlantic.fisheries.noaa.gov/section7

NOAA FISHERIES

---------- Forwarded message ---------
From: **Morgan Devlin** <mdevlin@langan.com>
Date: Fri, May 3, 2019 at 4:02 PM
Subject: MNFS T&E Information Request
To: karen.greene@noaa.gov <karen.greene@noaa.gov>

Dear Ms. Greene,

I have attached a letter and associated figures requesting a determination regarding the presence or absence of Federally Listed Threatened or Endangered Species, special aquatic habitats or critical habitats within the vicinity of the site along the Hackensack River in Flushing, Queens County, NY. The proposed project

includes proposing a series of land use actions to establish a Special Flushing Waterfront District (SFWD) in the Flushing neighborhood of Queens. The SFWD aims to create opportunities for mixed use development on vacant, industrial, or underbuilt land and provide improved access from Downtown Flushing to the Flushing Creek waterfront.

If you need any additional information feel free to contact me, my information is below.

Sincerely,

Morgan Devlin
Staff Scientist
Direct: 973.560.4465
File Sharing Link

LANGAN
Phone: 973.560.4900 Fax: 973.560.4901
300 Kimball Drive, 4th Floor
Parsippany, NJ 07054-2172
www.langan.com

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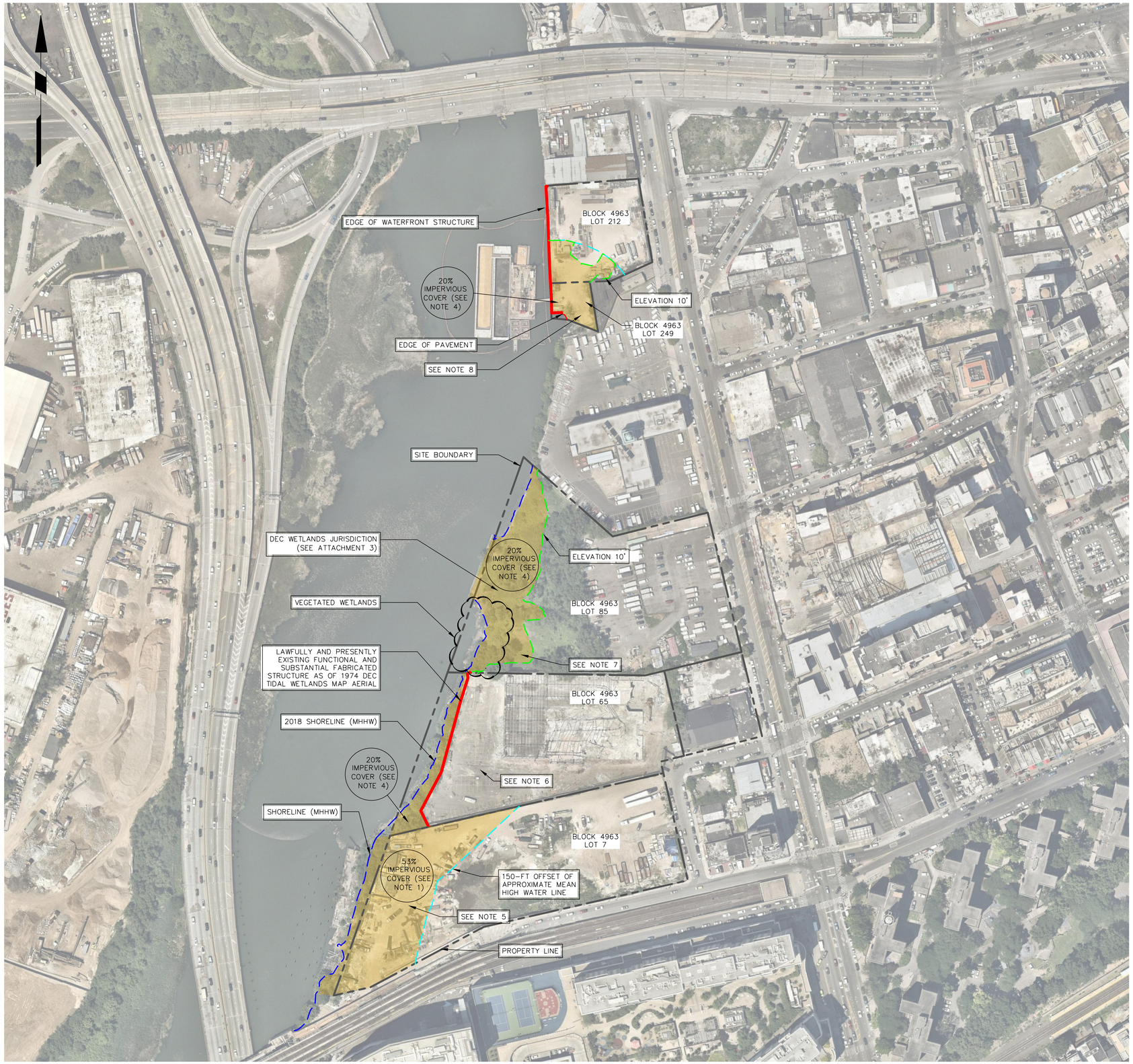

REVISED 12/6/2018

NOTES:

1. BASE MAP TAKEN FROM AERIAL IMAGE FROM NEARMAP.COM DATED 12 JUNE 2018.
2. 2018 SHORELINE BASED ON NEAR MAP AERIAL IMAGE.
3. WATERFRONT STRUCTURE AND EDGE OF PAVEMENT BASED ON 1966 AERIAL IMAGE PROVIDED BY EDR.
4. TYPICAL PERCENTAGE OF IMPERVIOUS COVER PERMITTED BY NYS DEC. FINAL PERCENTAGE OF COVERAGE DETERMINATION WILL BE MADE BY NYS DEC.
5. NYS DEC CONFIRMED THAT THE PREVIOUS COVERAGE WITHIN THE TIDAL WETLANDS ADJACENT AREA MAY BE MORE THAN 20%, BUT SHALL NOT EXCEED 53.33% REFER TO FEBRUARY 12, 2018 MEETING MINUTES (SEE ATTACHMENT 1).
6. PROJECT NOT IN NYS DEC JURISDICTION, AS INDICATED ON NYSDEC LETTER DATED FEBRUARY 1, 2016 (SEE ATTACHMENT 2).
7. NYS DEC LETTER DATED DECEMBER 6, 2016 STATES THAT THE NYSDEC JURISDICTION IS SEAWARD OF ELEVATION 10' (SEE ATTACHMENT 3).
8. TWAA AS DESCRIBED IN NYSDEC JURISDICTIONAL DETERMINATION LETTER DATED DECEMBER 6, 2016 (SEE ATTACHMENT 4).

TIDAL WETLAND ADJACENT AREA (TWAA)
WATERFRONT STRUCTURE (SINCE 1966-TODAY)
EDGE OF PAVEMENT (SINCE 1966-TODAY)
ELEVATION 10 CONTOUR (2015 SURVEY)
EXISTING SHORELINE (MHHW)
150' OFFSET

100 0 50 100
SCALE IN FEET

Date	Description	No.
REVISIONS		

SIGNATURE DATE SIGNED
PROFESSIONAL XXXXXXXXXX
STATE LIC. No. XXXXX

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Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project
SPECIAL FLUSHING WATERFRONT DISTRIC

QUEENS NEW YORK

Drawing Title
TIDAL WETLAND ADJACENT AREA PLAN

Project No.	Drawing No.
170551501	MA-101
Date: 11/6/2018	
Drawn By: FAC	
Checked By: DS	Sheet 1 of 1

LANGAN PROJECT NO. ########

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Filename: \\langan.com\data\NYC\data5\170551501\Project Data\CAD\01\SheetFiles\Jurisdictional\170551501-BE101-0101.dwg Date: 12/6/2018 Time: 15:45 User: skran Style Table: Langan.stb Layout: MA-101

DRAFT

ATTACHMENT 1

LANGAN

Meeting Minutes

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor New York, NY 10001 T: 212.479.5400 F: 212.479.5444

Meeting:	NYS DEC Pre-Application Meeting 39-08 Janet Place, Flushing, NY 11354 Langan Project Number: 170252602
Date / Location:	02/12/18 New York State DEC Division of Permits, Region 2 47-40 21st Street, Long Island City, NY 11101
Attendees:	Tamara Greco, Olabisi Kenku, Caitlin Frame (NYS DEC) Ken Huber, Chuck Harper (Langan) Chris Xu, William Xu (United Construction & Development Group)
Prepared By:	Chuck Harper
Date Prepared:	02/21/18

A summary of the February 12th Pre-Application meeting for 39-08 Janet Place is provided below:

- Langan presented the Pre-Application materials that were sent to DEC on 11/17/2017. (attached)
- NYS DEC confirmed the impervious coverage within the Tidal Wetlands Adjacent Area (TWAA) may be more than 20%, but shall not exceed 53.33%, as agreed upon during the 2014 Tidal Wetlands application review.
- NYS DEC confirmed that the applicant needs permission from the landowner to the west for all work outside of our property line. Owner is either the New York City or New York State. Design team to investigate. *(Post-meeting notes: team has confirmed that Flushing Creek is owned by New York City. Design Team will coordinate).*
- NYS DEC strongly requests that the toe of the proposed riprap revetment be constructed landward of the Tidal Wetland boundary (Mean High Water).
- Tamara Greco stated that New York City may be considering construction of a new outfall near our property, and using the area outside of our property as mitigation. Design team to coordinate with New York City Department of City Planning.
- NYS DEC stated that Langan can submit the permit application now and NYS DEC will begin review of the plans and documentation, but approval will be held until approval of the CEQR analysis associated with the rezoning of the subject property.
- Block 4963 Lot 1 is not part of the subject application. Langan to revise TWAA calculations prior to formal submission.

Attachments: Sign-in sheet, Pre-Application Request

6 November 2017

Mr. Stephen Watts
Regional Permit Administrator
New York State Department of Environmental Conservation – Region 2
One Hunters Point Place
47-40 21st Street
Long Island City, New York 11101-5407

Re: Pre-Joint Permit Application Meeting Request
39-08 Janet Place (Tax Block 4963, Lot 7)
Flushing, Queens, New York
Langan Project No.: 170252602

Dear Mr. Watts:

On behalf of Janet Place Management LLC, Langan Engineering, Environmental, Surveying and Landscape Architecture, DPC (Langan) requests a pre-application meeting to discuss permitting requirements for the proposed redevelopment at 39-08 Janet Place in Flushing, Queens. Below is a summary of the site.

PROJECT OVERVIEW

The 39-08 Janet Place site (Tax Block 4963, Lot 7) is bound by a commercial property to the north, Janet Place to the east, Roosevelt Avenue to the south and the Flushing River to the west. A site location map is provided as Figure 1.

The project site, about 3.73-acres, is vacant except for a small one-story metal-clad building on the northwest corner of the site. Grades generally range from about el 22 on the east side of the site (along Janet Place), to about el 9 on the west side (along Flushing Creek)[1]. Upland vegetation is consistent with a disturbed vacant urban site.

The referenced property has been developed for various industrial and commercial uses since 1917. Most recently (before 2007), several one-story concrete block and metal industrial buildings existed. The buildings were demolished in November 2007. Based on site reconnaissance, it appears that former building foundations were removed during demolition. A current aerial is provided as Figure 2.

WATERFRONT FEATURES

Shoreline structures along the Flushing River consist of an about 300-ft-long by 35-ft-wide, timber-pile-supported concrete platform (i.e., wharf) and a 50 ft-long embankment. The property limit does not extend to the Flushing River shoreline. The waterward edge of the wharf is about 25 to 70 ft west of the property line. The wharf is in poor condition with portions of the deck

[1] Elevations are referenced to the North American Vertical Datum of 1988 (NAVD88).

collapsed, advanced decay (necking) observed in the timber piles, and sinkholes in the ground surface immediately behind the wharf.

Proposed Development

The proposed development will feature three residential towers (with about 800,000 square ft of floor space), extension of 39th Avenue (private road), and waterfront access, as shown in the conceptual site plan (Drawing TWAA-1). Waterfront access will be provided via a walkway at the foot of the 39th Avenue extension and via a shore public walkway along Flushing Creek, with additional publically-accessible open space in between. The building limits, roadway extension and waterfront access are in accordance with New York City zoning requirements. As shown on the enclosed preliminary site plan, the current development plan reflects the allowance of 53.45% impervious coverage within the TWAA.

Proposed shoreline improvements consist of demolishing the existing wharf and constructing a new riprap revetment along Flushing Creek.

NYSDEC Permit Applications for Previous Developments

Langan has provided Joint Permit Applications for two previous landowners looking to develop this site.

2008 ABS Flushing Development

A pre-application meeting was held with New York State Department of Environmental Conservation (NYSDEC) Marine Resources representatives, Langan, and ABS Flushing LLC (ABS) on 28 February 2008. At the meeting, NYSDEC agreed to give full credit for the former buildings and impervious pavement within the 150-foot Tidal Wetlands Adjacent Area (TWAA) that existed before demolition in 2007. The impervious cover prior to the 2007 demolition was about 59%, as shown on Drawing DEC-1.

Langan submitted a Joint Permit Application (Application ID: 2-6302-00265/00005) to NYSDEC on 26 March 2008 on behalf of ABS. The development application included 53.4% impervious cover within the TWAA. Notice of Incomplete Application (NOIA) were issued by NYSDEC on 22 April and 27 October 2008. Langan responded to the first (on 15 May 2008), but the development was put on hold by the landowner before Langan could respond to the second.

2014 Olympia Heights Development

A pre-application meeting was held with NYSDEC Marine Resources representatives, Langan, and Olympia Heights LLC (Olympia) in fall of 2013. At the meeting, NYSDEC agreed to honor their previous decision regarding impervious cover within the TWAA.

Langan submitted a Joint Permit Application (Application ID: 2-6302-00265/00005) for the new development plans to NYSDEC on 21 January 2014. The development application included 55.0% impervious coverage. NYSDEC issued a NOIA on 19 February 2014. The NOIA requested that impervious coverage be reduced to 53.33% to match what was submitted on behalf of ABS in 2008.

CLOSING

We are requesting a pre-application meeting to discuss the proposed design with NYSDEC in relation to Tidal Wetlands and Protection of Waters regulations. In particular, we would like confirmation that the 59.1% impervious coverage within the TWAA agreed to by NYSDEC under the previously proposed projects would apply to the current proposed development. The 59.1 percent coverage was based on the previous development intensity of the site and was agreed to at the 28 February 2008 pre-application meeting for the ABS development project.

We look forward to meeting with you. I can be reached by telephone at 212-479-5415 or via email at khuber@langan.com.

Sincerely,

Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.

Kenneth A. Huber, P.E.
Senior Project Manager

Enclosure(s): Figure 1 – Site Location Map
Figure 2 – 2017 Aerial Photograph
Figure 3 – Photograph Location Map
Drawing DEC-1 – Pre-Development Impervious Summary
Drawing TWAA-1 – Preliminary TWAA Impervious Cover Exhibit
Attachment A - Site Photographs
Attachment B – Notice of Incomplete Application dated February 12, 2014

cc: P. Poon (Peter Poon Architects); D. Yudelson (SPR); C. Vitolano, G. Biesiadecki, D. Stasiak (Langan)

\\langan.com\data\NY\data6\170252602\Project Data_Discipline\Natural Resources\2017 DEC meeting request\39-08 Janet Place Pre Application Meeting Request.docx

SOURCE: WEEHAWKEN, FLUSHING, AND JAMAICA QUADRANGLE MAP, NEW YORK 7.5–MINUTE SERIES", U.S. GEOLOGICAL SURVEY, 2016

2000 0 1000 2000

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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A.
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project	39-08 JANET PLACE BLOCK No. 4963, LOT No.7 FLUSHING QUEENS NEW YORK
Figure Title	LOCATION PLAN
Project No.	170252601
Date	–
Scale	1" = 2000'
Drawn By	ECF
Checked By	KAH
Submission Date	–
Figure	1
Sheet	1 of 3

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Filename: \\langan.com\data\NYC\data6\170252601\Cadd Data - 170252601\SheetFiles\2017 DEC Meeting Request\170252601-BL101-0101.dwg Date: 11/9/2017 Time: 11:33 User: efinan Style Table: Langan.stb Layout: 1

SOURCE: AERA IMAGERY TAKEN FROM NEARMAP DATED 31 JULY 2017.

250 0 125 250

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Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project

39-08 JANET PLACE

BLOCK No. 4963, LOT No.7
FLUSHING
QUEENS NEW YORK

Figure Title

AERIAL MAP

Project No. 170252601	Figure 2
Date –	
Scale 1" = 250'	
Drawn By ECF / Checked By KAH	
Submission Date –	Sheet 2 of 3

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Filename: \\langan.com\data\NYC\data6\170252601\Cadd Data - 170252601\SheetFiles\2017 DEC Meeting Re□uest\170252601-BL101-0101.dwg Date: 11/9/2017 Time: 11:33 User: efinan Style Table: Langan.stb Layout: 2

NOTES:

1. SEE APPENDIX A FOR REPRESENTATIVE PHOTOGRAPHS
2. AERA IMAGERY TAKEN FROM NEARMAP DATED 31 JULY 2017.

LEGEND:

(1) PHOTOGRAPH IDENTIFICATION AND ORIENTATION

100 0 50 100

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LANGAN

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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A.
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project	**39-08 JANET PLACE** BLOCK No. 4963, LOT No.7 FLUSHING QUEENS NEW YORK
Figure Title	**PHOTO LOCATION MAP**
Project No.	170252601
Date	–
Scale	1" = 100'
Drawn By / Checked By	ECF / KAH
Submission Date	–
Figure	**3**
Sheet	3 of 3

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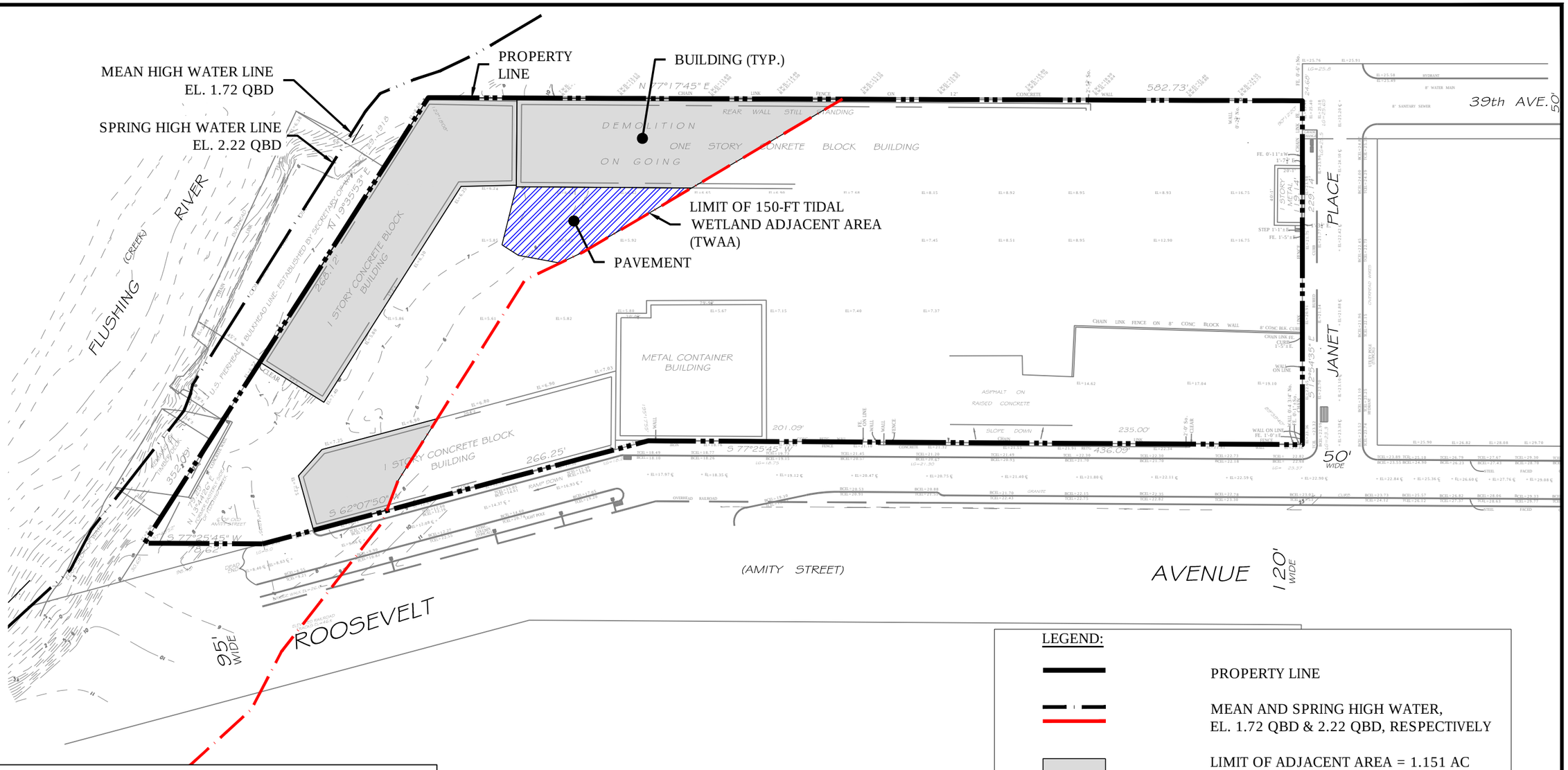

IMPERVIOUS COVERAGE WITHIN 150-FT TWAA	
PRE-DEVELOPMENT	
TOTAL IMPERVIOUS AREA	29,658 SF = 0.681 ACRES
BUILDING	25,765 SF
PAVEMENT	3,893 SF
TOTAL PERVIOUS AREA	20,477 SF = 0.470 ACRES
TOTAL TWAA	50,135 SF = 1.151 ACRES
TOTAL IMPERVIOUS AREA = 0.681AC / 1.151 AC = 59.16%	

LEGEND:

- PROPERTY LINE
- MEAN AND SPRING HIGH WATER, EL. 1.72 QBD & 2.22 QBD, RESPECTIVELY
- LIMIT OF ADJACENT AREA = 1.151 AC
- IMPERVIOUS - BUILDING
- IMPERVIOUS - PAVEMENT

LANGAN
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com
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Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project
39-08 JANET PLACE
BLOCK No. 4963, LOT No.7
FLUSHING
QUEENS **NEW YORK**

Drawing Title
DEC-1

Project No. 170252601	Drawing No. 1
Date X	
Scale 1" = 70'	
Drawn By ECF / Checked By DS	
Submission Date X	Sheet 1 of 1

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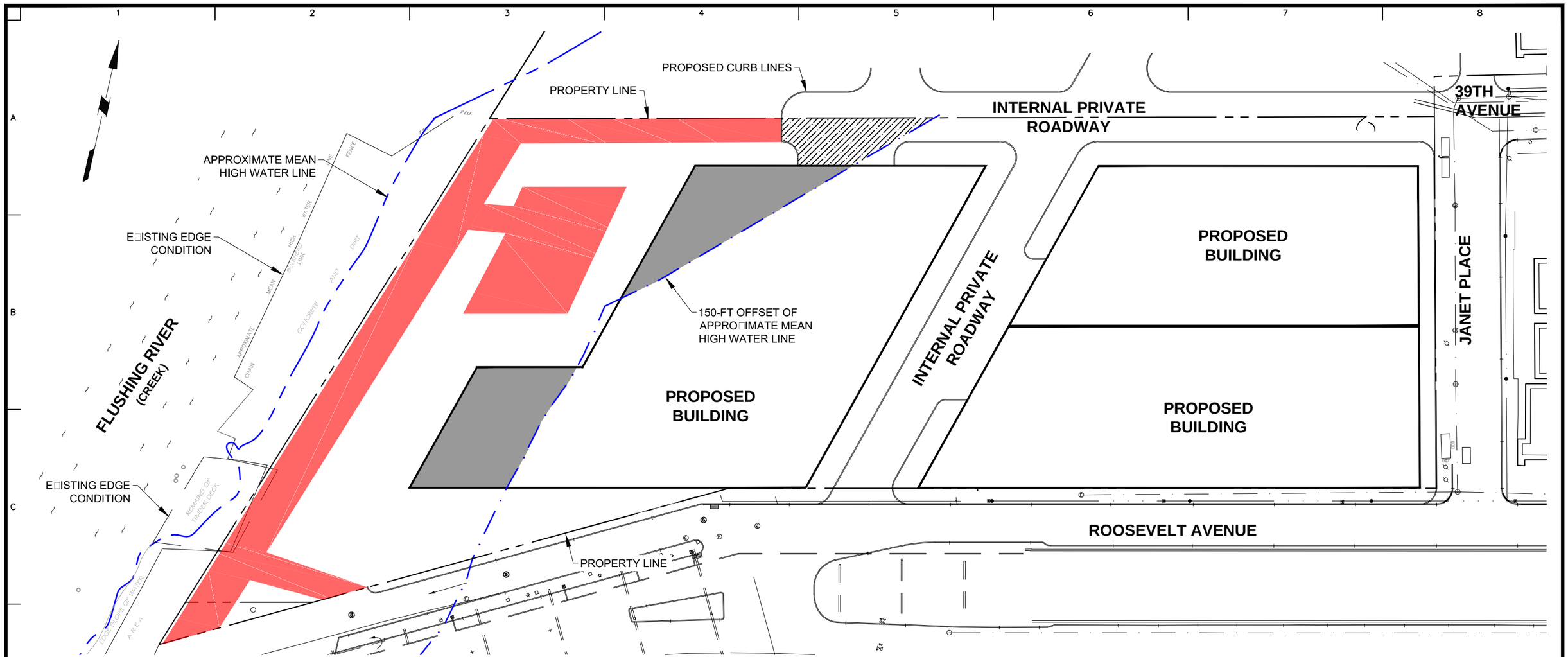
Filename: \\langan.com\data\NYC\data6\170252601\Cadd Data - 170252601\SheetFiles\2017 DEC Meeting Request\170252601-BL401-0101.dwg Date: 11/6/2017 Time: 16:14 User: efinan Style Table: Langan.stb Layout: 1



PROPOSED IMPERVIOUS COVERAGE WITHIN 150-FT OF APPROXIMATE HIGH WATER ELEVATION

POST-DEVELOPMENT

TOTAL SITE AREA	52,328 SF
IMPERVIOUS AREA	
BUILDING	8,715 SF
ROADWAY	1,890 SF
ADDITIONAL SITE AREA	17,365 SF
TOTAL IMPERVIOUS	27,970 SF
PERCENTAGE IMPERVIOUS	53.45%

LEGEND

- PROPERTY LINE
- APPROXIMATE MEAN HIGH WATER (MHW) LINE
- APPROXIMATE 150-FT OFFSET FROM MHW LINE
- PROPOSED BUILDING
- PROPOSED ROADWAY
- IMPERVIOUS SITE AREA

NOTES

1. EXISTING CONDITIONS INFORMATION OBTAINED FROM SURVEY PREPARED BY CONTROL POINT ASSOCIATES DATED 09-14-2017..
2. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), WHICH IS 1.636 FEET BELOW QUEENS BOROUGH DATUM.

60 0 20 40 60
SCALE IN FEET

LANGAN
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A.
Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C.
Langan Engineering and Environmental Services, Inc.
Langan CT, Inc.
Langan International LLC
Collectively known as Langan

Project	JANET PLACE BLOCK No. 4963, LOT No. 1, 7, 8, 9 QUEENS NEW YORK
Drawing Title	PRELIMINARY TWAA IMPERVIOUS COVER EXHIBIT
Project No.	170471801
Date	2017-11-08
Scale	1" = 60'
Drawn By / Checked By	JBF / CH
Submission Date	2017-11-08
Drawing No.	TWAA-1
Sheet	1 of 1

© 2017 Langan

Filename: \\Langan.com\data\NYC\data6\170252602\Project Data\CAD\02\2D-DesignFiles\Civil\sketches\TWAA-1.dwg Date: 11/8/2017 Time: 12:54 User: jfolinusz Style Table: Langan.stb Layout: ANSIB-BL

Photo 1: North side of site looking west.

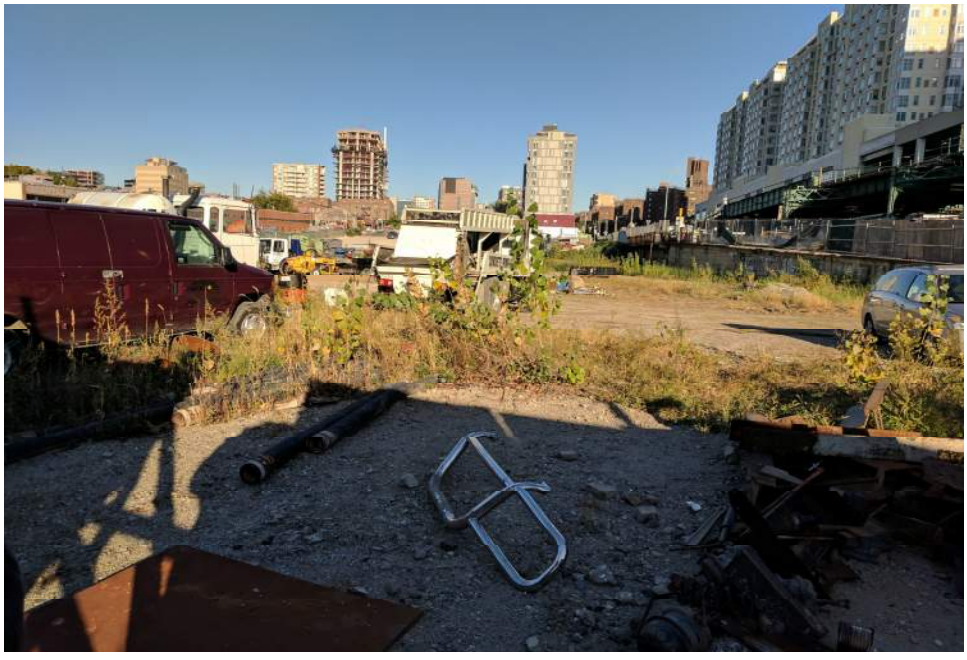


Photo 2: South side of site looking east.

Photo 3: Eastern side of site looking south.

Photo 4: Western side of site looking south.

Photo 5: Waterfront looking south.

Photo 6: Remnants of timber pile caps and timber piles at waterfront looking south.

Photo 7: Collapsed portion of wharf looking north.

Photo 8: Wharf looking north.

Photo 9: Waterfront embankment on northeast side of site looking north.

Photo 10: Concrete deck damage facing west.

Photo 11: Sink hole under grate facing west.

Photo 12: Timber deck piles and pile cap.

New York State Department of Environmental Conservation

Notice of Incomplete Application - This is NOT a Permit

Application ID: 2-6302-00265/00005 *Batch Number*: 601758

Facility: OLYMPIA HEIGHTS LLC - B 4963 L 7
39-08 JANET PL
FLUSHING, NY 11354

Applicant: ABS FLUSHING DEVELOPMENT LLC *Owner ID*: 1542976
1279 49TH ST STE 302
BROOKLYN, NY 11219

Permit(s) Applied for: 1 - Article 25 Tidal Wetlands

Project Location: in QUEENS in QUEENS COUNTY

Your application for Permit is incomplete. The following items are required:

1. Property Ownership: The proposed removal of deteriorated waterfront structures, and installation of a bulkhead, public walkway and storm water outfall, occurs beyond the property boundary of the site. Provide written permission of the property owner along Flushing Creek to conduct this work (and provide NYSDEC with a letter of approval), or modify project plans so the entire project is confined to the property boundary of 39-08 Janet Place.

2. Impervious Percent Coverage in Tidal Wetlands Adjacent Area:

a. Modify the current proposal so that impervious coverage of the tidal wetlands adjacent area does not exceed 53.33%. In a previous application for development of this site (See Drawing No. DEC-2, entitled, "Post-Development Impervious Summary", Last revised: 5/15/2008; received by NYSDEC on May 21, 2008), the proposed impervious coverage within the adjacent area was 53.33%.

b. Show ALL proposed impervious surfaces on project plans. The plans submitted do not show appurtenant structures (i.e. walkways leading to and from the towers, picnic areas, patios, footprints of balconies extending from the towers) that would increase percent impervious coverage in the adjacent area. Such structures must be included on revised plans.

3. Plot and Section Plan Details: Plot and section plan details must be provided for the bulkhead, sewer outfall and towers.

a. Bulkhead- Provide dimensions of the bulkhead in detailed plot and cross-sectional plans. Include the distance from an immovable structure (i.e. a road) to the seaward extent of the proposed bulkhead. Describe materials to be used in construction of the bulkhead and as fill behind the structure. Ensure that the bulkhead is built landward of mean high water and show this on project plans.

b. Sewer outfall- Show dimensions of the outfall in detailed cross-sectional plans. Provide the total amount of cut and fill required below mean high water to install the outfall.

c. Towers - Provide dimensions for towers in both plot and cross sectional plans. The towers must be shown in greater detail and any appurtenant structures increasing the total footprint of the towers must be included on plans.

4. Proposed Public Walkway:

a. Reduce the walkway to 10ft wide or provide adequate justification for a 20-40ft wide walkway. The application submitted in 2008 for development of this proposed a 10ft wide public walkway at the seaward extent of the property.

b. Provide detailed cross-sectional plans for the walkway and describe the materials that will be used for walkway construction.

c. Modify plans to show how the public walkway will be accessed at its northern and southern ends.

5. Grading of Site:

a. Indicate the slope of the finished grade on plans.

b. Identify the type of fill to be used as grading material.

6. Landscaped Areas: Identify any areas, on plot plans, that are to be landscaped.

7. Residential Liner: Describe the purpose of the residential liner as shown on "Permit Plan, DEC-3." Also, please provide liner specifications and details of the liner installation process.

8. Zoning - provide documentation of current City of New York zoning of project site.

9. Olympia Heights LLC;

a. Provide copies of the articles of organization of the limited liability company pursuant to §203 of the Limited Liability Company Law (LLC Law).

b. Provide copies of Certificate(s) of amendment, certificate(s) of change, and certificate(s) of correction, if any, of the articles of organization.

c. Provide copies of the company's operating agreement and any amendments thereto.

d. Provide copies of the affidavits of publication and their filing with the Department of State pursuant to §206 of the LLC Law. The publication must have been made within 120 days after the effectiveness of the initial articles of organization.

e. Provide a list of the names of all members, specifying their respective interest in the company (in percent).

f. Provide a list of the names of all managers or classes of managers, if any, and description of type(s) of office(s) and duties held by and assigned to each manager or class of managers.

g. Provide identification of the registered agent for service of process.

10. Application Fee - Provide a check in the amount of $900. payable to NYSDEC;

NOTICE TO ALL DEC PERMIT APPLICANTS REGARDING NEW PERMIT APPLICATION FEES FOR FRESHWATER AND TIDAL WETLANDS PERMITS EFFECTIVE APRIL 1, 2009

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NYSDEC REGION 2 HEADQUARTERS
47-40 21ST ST
LONG ISLAND CITY NY 11101
(718) 482-4997

SAVE THE TOP HALF OF THIS FORM FOR YOUR RECORDS AND RETURN THE BOTTOM HALF WHEN PROVIDING THE INFORMATION REQUESTED ON THE ACCOMPANYING **NOTICE OF INCOMPLETE APPLICATION.**

YOUR DOING SO WILL HELP US EXPEDITE YOUR PERMIT PROCESSING. THANK YOU.

DEC Contact:	HAROLD J DICKEY
Batch ID:	601758
Application ID:	2-6302-00265/00005
Owner ID:	1642194
Date Received:	03/27/2008
Date Incomplete:	02/12/2014
Application Type:	NEW
Applicant Name:	OLYMPIA HEIGHTS MANAGEMENT LL
Facility Name:	OLYMPIA HEIGHTS - B 4963 L 7
Project Desc:	Construct mixed use development, bulkhead & outfall

PLEASE PROVIDE REQUESTED INFORMATION ON OR BEFORE:

SAVE THIS PART !

DETACH

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION

NYSDEC REGION 2 HEADQUARTERS

DEC Contact:	HAROLD J DICKEY
Batch Id:	601758
Application Id:	2-6302-00265/00005
Owner Id:	1642194
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Applicant Name:	OLYMPIA HEIGHTS MANAGEMENT LLC
Facility name:	OLYMPIA HEIGHTS - B 4963 L 7
Project Desc:	Construct mixed use development, bulkhead & outfall
Information Due On Or Before:	

PLEASE ATTACH THIS HALF SO IT IS DISPLAYED PROMINENTLY ON YOUR RESUBMISSION

RETURN THIS PART !

RETURN THIS HALF OF THIS FORM WHEN PROVIDING
THE INFORMATION REQUESTED ON THE ACCOMPANYING

NOTICE OF INCOMPLETE APPLICATION.

Please be advised that the NYS Legislature passed legislation amending Section 70-0117 of the Environmental Conservation Law (Uniform Procedures) to require application fees for certain regulated activities requiring a permit from the Department. Any applications received on or after April 1, 2009 will be subject to the following fee schedule for each application, as applicable, before the Department can issue a permit decision.

Freshwater Wetlands Permits (ECL Article 24)

☐Minor projects (go to http://www.dec.ny.gov/permits/6275.html) $50
☐Modifications to Permits $50
☐Residential projects defined as associated with one single family dwelling and customary appurtenances thereto $50
☐Multiple family dwellings and customary appurtenances thereto $100
☐Other projects $200

Tidal Wetlands Permits (ECL Article 25)

☐Minor projects (go to http://www.dec.ny.gov/permits/6355.html) $200
☐Modifications to Permits $200
XOther projects $900

No cash or credit cards may be used for payment at this time. Only checks or money orders will be accepted, made payable to the New York State Department of Environmental Conservation (NYSDEC). The cancelled check will be your receipt. Please file your payment with your permit application. There are no provisions for partial or full refund once you file an application, regardless of project changes or permit decision. If you have any questions regarding these requirements, please contact the Environmental Permits Unit in any DEC regional office (go to http://www.dec.ny.gov/about/39381.html). Thank you for your cooperation.

Please provide 3 copies of all information requested above. Technical questions concerning this notice should be directed to Tina Batoh in the NYSDEC Bureau of Marine Resources at 718 482-6464. Administrative questions should be directed to the contact person listed below.

Please submit requested information by _____
No further action can be taken until all of these materials are received.

Contact Person:
HAROLD J DICKEY
NYSDEC
47-40 21ST ST
LONG ISLAND CITY, NY 11101

Telephone Number: (718) 482-4997

Signature:

Date: February 12, 2014

ATTACHMENT 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 2
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4997 I F: (718) 482-4975
www.dec.ny.gov

February 1, 2016

Jim Nash
AKRF Inc
34 S. Broadway
White Plains, NY 10601

Re: DEC Wetlands Jurisdictional Determination No. 2-6302-00950/00001
131-01 39th Ave, Block: 4963, Lot: 65
Queens, NY

Dear Mr. Nash,

In response to your jurisdictional determination request, the above referenced project as shown on the drawing titled "Site Plan," Sheet C-2, prepared by AKRF Engineering, PC, dated 12/22/15, received by NYSDEC on 12/28/15, is not within the jurisdiction of the NYSDEC under the NYSDEC Tidal Wetlands Act (Article 25 of the Environmental Conservation Law). Therefore, a NYSDEC tidal wetlands permit is not required to construct the referenced project.

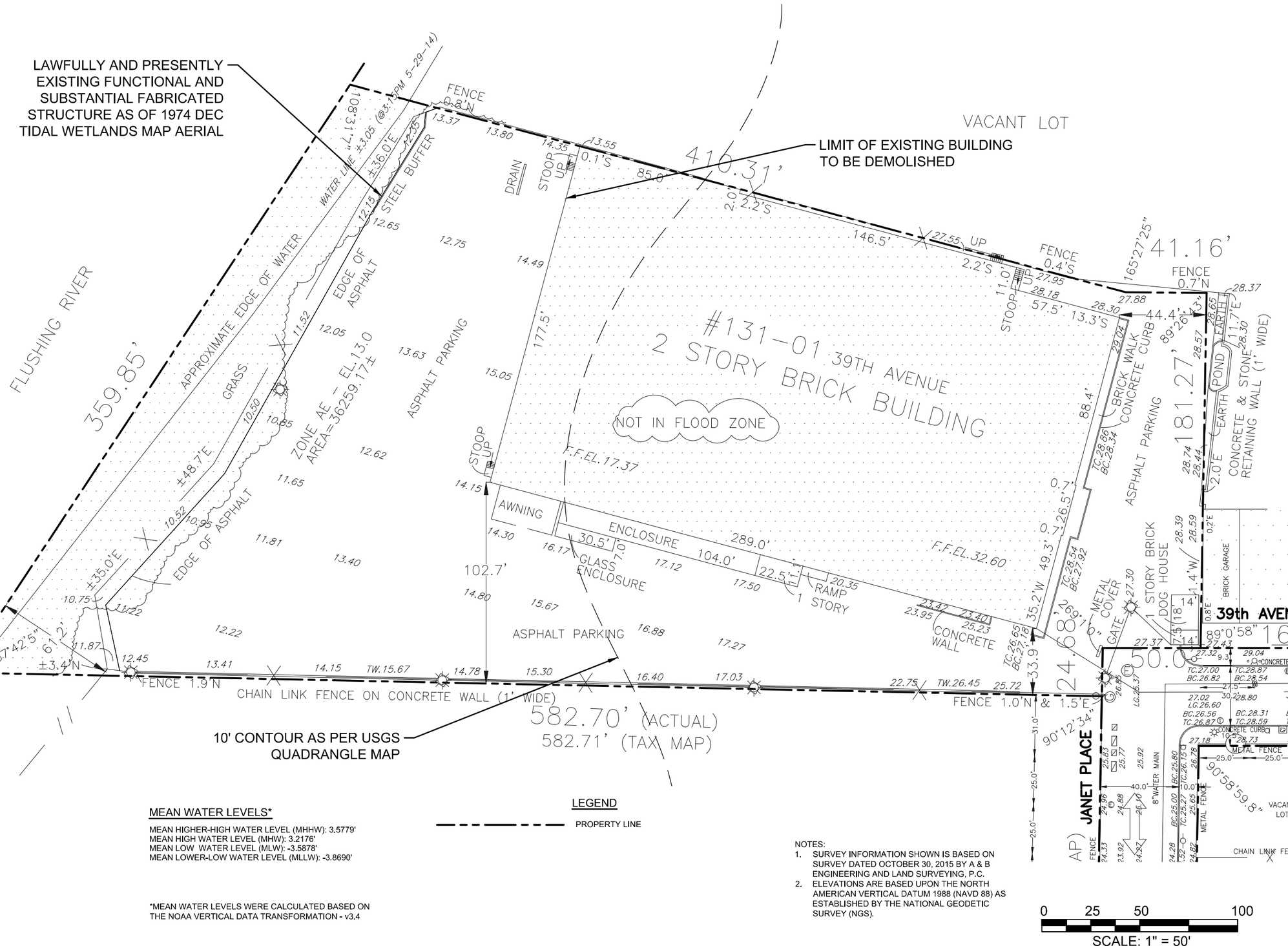
Please be advised this determination is based upon the location as shown on the referenced drawing and any modifications to the project site may require a NYSDEC Tidal Wetlands Permit.

Also, the referenced property is not within the jurisdiction of the Freshwater Wetlands Act (Article 24 of the Environmental Conservation Law). Therefore, a NYSDEC freshwater wetlands permit is not required to alter or develop this referenced property.

If you have any further questions, please call this office at the above telephone number.

Very truly yours,

Stephen A. Watts III
Regional Permit Administrator



MEAN WATER LEVELS*

MEAN HIGHER-HIGH WATER LEVEL (MHHW): 3.5779'
MEAN HIGH WATER LEVEL (MHW): 3.2176'
MEAN LOW WATER LEVEL (MLW): -3.5878'
MEAN LOWER-LOW WATER LEVEL (MLLW): -3.8690'

*MEAN WATER LEVELS WERE CALCULATED BASED ON THE NOAA VERTICAL DATA TRANSFORMATION - v3.4

LEGEND

PROPERTY LINE

NOTES:
1. SURVEY INFORMATION SHOWN IS BASED ON SURVEY DATED OCTOBER 30, 2015 BY A & B ENGINEERING AND LAND SURVEYING, P.C.
2. ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88) AS ESTABLISHED BY THE NATIONAL GEODETIC SURVEY (NGS).

0 25 50 100
SCALE: 1" = 50'

AKRF
AKRF ENGINEERING, P.C.
440 PARK AVENUE SOUTH
NEW YORK, NY 10016
(212) 696-0670 (PHONE)
(212) 726-0942 (FAX)

PROJECT
131-09 39TH AVENUE

DRAWN BY	CHECKED BY
KG	TD
SCALE	DATE
1"=50'	12/22/15

SHEET TITLE
EXISTING PLAN

SHEET NO.
C-1

SHEET 1 OF 2

W:\Projects\80502 - 131-09 39TH AVENUE MIXED USE\Drawings\JD Plan.dwg kgengler 8/12/2015

LIMIT OF EXISTING BUILDING TO BE DEMOLISHED

PROPOSED 15 STORY + CELLAR RESIDENTIAL AND COMMERCIAL BUILDING

LAWFULLY AND PRESENTLY EXISTING FUNCTIONAL AND SUBSTANTIAL FABRICATED STRUCTURE AS OF 1974 DEC TIDAL WETLANDS MAP AERIAL

LIMIT OF STRUCTURE BELOW

FLUSHING RIVER

359.85'

APPROXIMATE EDGE OF WATER

GRASS

EDGE OF ASPHALT

WATER LINE ±3.05 (@3:15PM 5-21-14)

±48.7'E

±35.0'E

±36.0'E

STEEL BUFFER

ZONE AE – EL.13.0
AREA=36259.17±

ASPHALT PARKING

FENCE 0.8'N

FENCE 1.9'N

CHAIN LINK FENCE ON CONCRETE WALL (1' WIDE)

582.70' (ACTUAL)
582.71' (TAX MAP)

10' CONTOUR AS PER USGS QUADRANGLE MAP

VACANT LOT

PROPOSED 15 STORY + CELLAR RESIDENTIAL AND COMMERCIAL BUILDING

LIMIT OF STRUCTURE ABOVE

416.31'

146.5'

#131-01 39TH AVENUE

2 STORY BRICK BUILDING

NOT IN FLOOD ZONE

F.F.EL.17.37

F.F.EL.32.60

177.5'

102.7'

AWNING

ENCLOSURE 30.5'

ENCLOSURE 104.0'

GLASS ENCLOSURE

RAMP

ASPHALT PARKING

CONCRETE WALL

25.0'

33.9'

24.0'

50.0'

FENCE 1.0'N & 1.5'E

FENCE 0.4'S

FENCE 0.7'N

165°27'25"

41.16'

44.4'

89°26'

181.27'

CONCRETE & STONE RETAINING WALL (1' WIDE)

POND

EARTH

BRICK GARAGE

1 STORY BRICK DOG HOUSE

39th AVENUE

89°0'58" 167.0

JANET PLACE

90°12'34"

90°58'59.8"

VACANT LOT LOT #26

METAL FENCE

CHAIN LINK FENCE

8" WATER MAIN

MEAN WATER LEVELS*

MEAN HIGHER-HIGH WATER LEVEL (MHHW): 3.5779'
MEAN HIGH WATER LEVEL (MHW): 3.2176'
MEAN LOW WATER LEVEL (MLW): -3.5878'
MEAN LOWER-LOW WATER LEVEL (MLLW): -3.8690'

*MEAN WATER LEVELS WERE CALCULATED BASED ON THE NOAA VERTICAL DATA TRANSFORMATION - v3.4

LEGEND

- PROPERTY LINE
- PROPOSED CONCRETE CURB (NYCDOT H-1044)
- PROPOSED BUILDING
- PROPOSED ASPHALT PAVEMENT
- LIMIT OF STRUCTURE BELOW
- LIMIT OF STRUCTURE ABOVE

NOTES:
1. SURVEY INFORMATION SHOWN IS BASED ON SURVEY DATED OCTOBER 30, 2015 BY A & B ENGINEERING AND LAND SURVEYING, P.C.
2. ELEVATIONS ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88) AS ESTABLISHED BY THE NATIONAL GEODETIC SURVEY (NGS).

0 25 50 100
SCALE: 1" = 50'

AKRF
AKRF ENGINEERING, P.C.
440 PARK AVENUE SOUTH
NEW YORK, NY 10016
(212) 696-0670 (PHONE)
(212) 726-0942 (FAX)

PROJECT
131-09 39TH AVENUE

DRAWN BY	CHECKED BY
KG	TD
SCALE	DATE
1"=50'	12/22/15

SHEET TITLE
SITE PLAN

SHEET NO.
C-2

SHEET 2 OF 2

W:\Projects\80502 – 131-09 39TH AVENUE MIXED USE\Drawings\CD\CD Plan.dwg kgengler 8/12/2015

ATTACHMENT 3

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Permits, Region 2
47-40 21st Street, Long Island City, NY 11101
P: (718) 482-4997 I F: (718) 482-4975
www.dec.ny.gov

December 6, 2016

Sunny Chiu
Three Fulton Square LLC
136-20 38th Ave, 12th Fl.
Flushing, NY 11354

Re: DEC Wetlands Jurisdictional Determination No. 2-6302-00959/00001
37-02 College Point Blvd, B 4963 / L 85
Queens, NY

Dear Mr. Chiu,

In response to the letter dated November 4, 2015, regarding 37-02 College Point Blvd, Queens, NY (Queens County Tax Block 4963 Lot 85) (the "Site"), as shown on the Survey titled "Boundary and Topographic Survey," dated November 13, 2105, and signed by the preparer, Vincent Zakrzewski, on December 2, 2015 ("the Survey"), the New York State Department of Environmental Conservation's ("NYSDEC") tidal wetlands jurisdiction pursuant to Environmental Conservation Law ("ECL") Article 25 is limited to that portion of the Site located on or seaward of the ten foot (10') contour line as reflected on the Survey. The area upland of the ten foot (10') contour line, as reflected on the Survey, is outside of NYSDEC tidal wetlands jurisdiction. Please note that any projects on the Site may require a NYSDEC Tidal Wetlands Permit.

Also, the referenced property is not within the jurisdiction of the Freshwater Wetlands Act (Article 24 of the Environmental Conservation Law). Therefore, a NYSDEC freshwater wetlands permit is not required to alter or develop this referenced property.

If you have any further questions, please call this office at the above telephone number.

Very truly yours,

Stephen A. Watts III
Regional Permit Administrator

NOTES:

1. PROPERTY KNOWN AS LOT 85, BLOCK 4963, AS SHOWN ON THE NEW YORK CITY DIGITAL TA□ MAP OF □UEENS, BLOCK 4963, □UEENS COUNTY, CITY AND STATE OF NEW YORK.
2. AREA □ 174,495 S.F. OR 4.005 AC.
3. LOCATION OF UNDERGROUND UTILITIES ARE APPRO□IMATE. LOCATIONS AND SIZES ARE BASED ON UTILITY MARK-OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE □ ACCESSIBLE IN THE FIELD, AND THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS-BUILT PLANS AND UTILITY MARKOUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY E□CAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES. CONTROL POINT ASSOCIATES, INC. DOES NOT GUARANTEE THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED.
4. THIS PLAN IS BASED ON INFORMATION PROVIDED BY A SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC. AND OTHER REFERENCE MATERIAL AS LISTED HEREON.
5. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN.
6. BY GRAPHIC PLOTTING ONLY PROPERTY IS LOCATED IN FLOOD HAZARD ZONE "□" 'AREAS DETERMINED TO BE OUTSIDE THE 0.2□' ANNUAL CHANCE FLOODPLAIN□; IN FLOOD HAZARD ZONE "□" HATCHED 'AREAS OF 0.2□' ANNUAL CHANCE FLOOD'□AREAS OF 1□' ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 S□UARE MILE□AND AREAS PROTECTED BY LEVEES FROM 1□' ANNUAL CHANCE FLOOD□AND IN FLOOD HAZARD ZONE "AE" □SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1□' ANNUAL CHANCE FLOOD, WITH BASE FLOOD ELEVATION DETERMINED TO BE 14.00 FEET□PER REF. □2.
7. THE E□ISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THE FIELD SURVEY.
8. ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 □NAVD 88□; WHICH IS 1.636 FEET BELOW □UEENS BOROUGH DATUM.

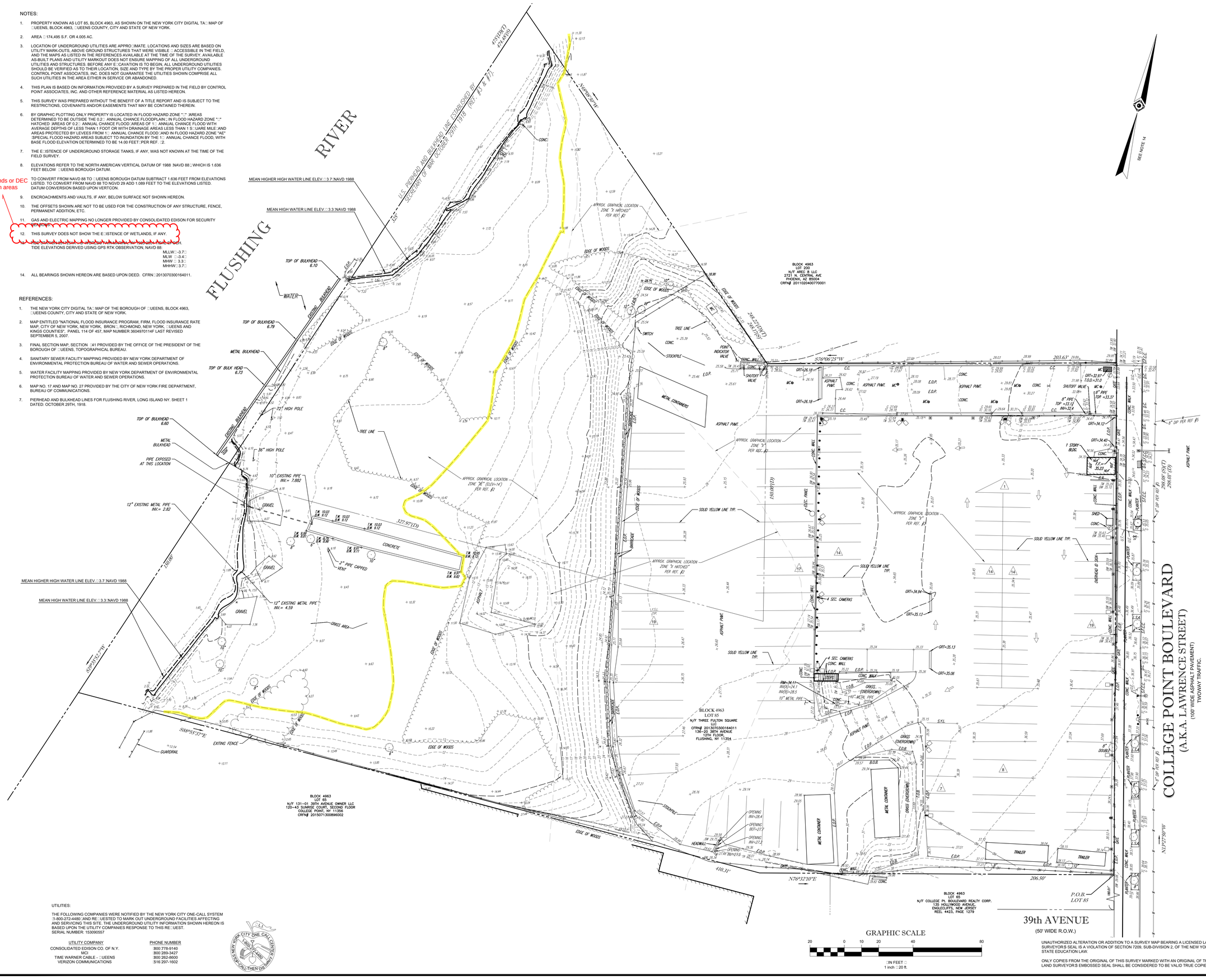
TO CONVERT FROM NAVD 88 TO □UEENS BOROUGH DATUM SUBTRACT 1.636 FEET FROM ELEVATIONS LISTED. TO CONVERT FROM NAVD 88 TO NGVD 29 ADD 1.089 FEET TO THE ELEVATIONS LISTED. DATUM CONVERSION BASED UPON VERTCON.

9. ENCROACHMENTS AND VAULTS, IF ANY, BELOW SURFACE NOT SHOWN HEREON.
10. THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADDITION, ETC.
11. GAS AND ELECTRIC MAPPING NO LONGER PROVIDED BY CONSOLIDATED EDISON FOR SECURITY REASONS.
12. THIS SURVEY DOES NOT SHOW THE E□ISTENCE OF WETLANDS, IF ANY.
13. [illegible] OF MEAN HIGH AND MEAN HIGHER HIGH WATER LINES AT THE TIME OF THIS SURVEY WERE DETERMINED BY APPLYING THE NOAA PREDICTED TIDE ELEVATIONS DERIVED USING GPS RTK OBSERVATION, NAVD 88:
   MLLW□-3.7□;
   MLW □-3.4□;
   MHW □ 3.3□;
   MHHW□3.7□
14. ALL BEARINGS SHOWN HEREON ARE BASED UPON DEED. CFRN□:2013070300164011.

No Wetlands or DEC jurisdiction areas shown.

REFERENCES:

1. THE NEW YORK CITY DIGITAL TA□ MAP OF THE BOROUGH OF □UEENS, BLOCK 4963, □UEENS COUNTY, CITY AND STATE OF NEW YORK.
2. MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, CITY OF NEW YORK, NEW YORK, BRON□; RICHMOND, NEW YORK, □UEENS AND KINGS COUNTIES", PANEL 114 OF 457, MAP NUMBER 3604970114F LAST REVISED SEPTEMBER 5, 2007.
3. FINAL SECTION MAP, SECTION □41 PROVIDED BY THE OFFICE OF THE PRESIDENT OF THE BOROUGH OF □UEENS, TOPOGRAPHICAL BUREAU.
4. SANITARY SEWER FACILITY MAPPING PROVIDED BY NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER AND SEWER OPERATIONS.
5. WATER FACILITY MAPPING PROVIDED BY NEW YORK DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WATER AND SEWER OPERATIONS.
6. MAP NO. 17 AND MAP NO. 27 PROVIDED BY THE CITY OF NEW YORK FIRE DEPARTMENT, BUREAU OF COMMUNICATIONS.
7. PIERHEAD AND BULKHEAD LINES FOR FLUSHING RIVER, LONG ISLAND NY. SHEET 1 DATED: OCTOBER 29TH, 1918.



UTILITIES:

THE FOLLOWING COMPANIES WERE NOTIFIED BY THE NEW YORK CITY ONE-CALL SYSTEM □1-800-272-4480□AND RE□UESTED TO MARK OUT UNDERGROUND FACILITIES AFFECTING AND SERVICING THIS SITE. THE UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS BASED UPON THE UTILITY COMPANIES RESPONSE TO THIS RE□UEST.
SERIAL NUMBER: 153090557

UTILITY COMPANY	PHONE NUMBER
CONSOLIDATED EDISON CO. OF N.Y.	800.778-9140
MCI	800.289-3427
TIME WARNER CABLE - □UEENS	800.262-8600
VERIZON COMMUNICATIONS	516.297-1602

NEW YORK CITY ONE CALL CENTER, INC. 1-800-272-4480 STOP-CALL-THEN DIG-SAFE

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

CONTROL POINT ASSOCIATES, INC.-ALL RIGHTS RESERVED
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PREPARED BY:
CONTROL POINT ASSOCIATES, INC. P.C.
14 PENN PLAZA, 225 WEST 34TH STREET
NEW YORK, NY 10122
646.780.0411 - 908.668.9595 FAX

WARREN, NJ 908.668.0099
CHALFONT, PA 215.712.9800
SOUTHBOROUGH, MA 508.948.3000
MT. LAUREL, NJ 609.857.2099

NO.	DATE	BY	DESCRIPTION	APPROVED

REVISIONS

PROJECT NAME
37-02 COLLEGE POINT BOULEVARD
LOT 85, BLOCK 4963
BOROUGH & COUNTY OF QUEENS
CITY AND STATE OF NEW YORK

DRAWING TITLE
BOUNDARY & TOPOGRAPHIC SURVEY

SEAL □ SIGNATURE

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH RAISED IMPRESSION OR BLUE INK SEAL

VINCENT E. ZAKRZEWSKI DATE
NEW YORK PROFESSIONAL LAND SURVEYOR #050351

FIELD DATE:	11-23-2015
FIELD BK:	15-41
F. B. PAGE:	58-64-90
DATE:	11-13-2015
SCALE:	1"□20'
PROJECT No:	CN150137
DRAWING BY:	S.S./ M.A.P.
CHK BY:	C.M.T.
APPROVED BY:	V.E.Z.
DWG No:	V-001.0.0
CAD FILE No:	PAGE No:
B04-150137	1 OF 1

ATTACHMENT 4

N.Y.S. DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NYSDEC Region 2 Headquarters
47-40 21st St
Long Island City NY 11101
(718) 482-4997

SAVE THE TOP HALF OF THIS FORM FOR YOUR RECORDS AND RETURN THE BOTTOM HALF WHEN PROVIDING THE INFORMATION REQUESTED ON THE ACCOMPANYING **NOTICE OF INCOMPLETE APPLICATION.**

YOUR DOING SO WILL HELP US EXPEDITE YOUR PERMIT PROCESSING. THANK YOU.

DEC Contact:	LISA E HORWITZ
Batch ID:	804391
Application ID:	2-6302-00960/00001
Owner ID:	1768455
Date Received:	11/15/2016
Date Incomplete:	12/06/2016
Application Type:	NEW
Applicant Name:	3532 CPB LLC
Facility Name:	Four Fulton Square
Project Desc:	Jurisdictional determination

PLEASE PROVIDE REQUESTED INFORMATION ON OR BEFORE:

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DETACH

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New York State Department of Environmental Conservation

Notice of Incomplete Application - This is NOT a Permit

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Facility: Four Fulton Square
35-32, 35-50 Rear College Point Blvd|B 4963 L 212, 249
Flushing, NY 11354

Applicant: 3532 CPB LLC *Owner ID*: 1768455
136-20 38th Ave 12th Fl
Flushing, NY 11354

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Project Location: in QUEENS in QUEENS COUNTY

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NYSDEC recommends the applicant schedule a wetland flagging by NYSDEC Natural Resources staff and a surveyor in order to determine the actual tidal wetlands boundary line.

Please submit requested information by _____
No further action can be taken until all of these materials are received.

Contact Person:
LISA E HORWITZ
NYSDEC
47-40 21st St
Long Island City, NY 11101

Telephone Number:

Signature: _____

Date: December 06, 2016

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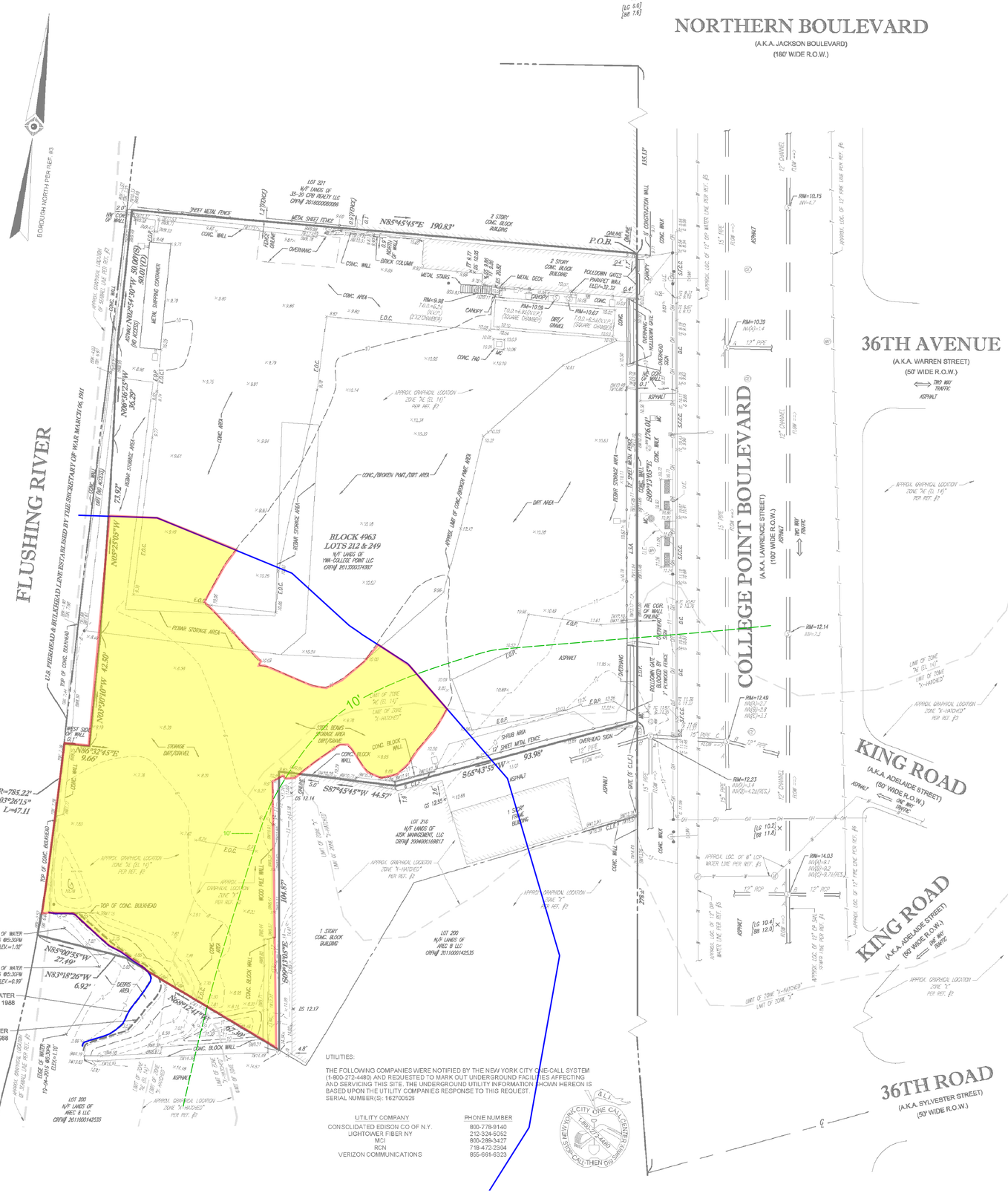
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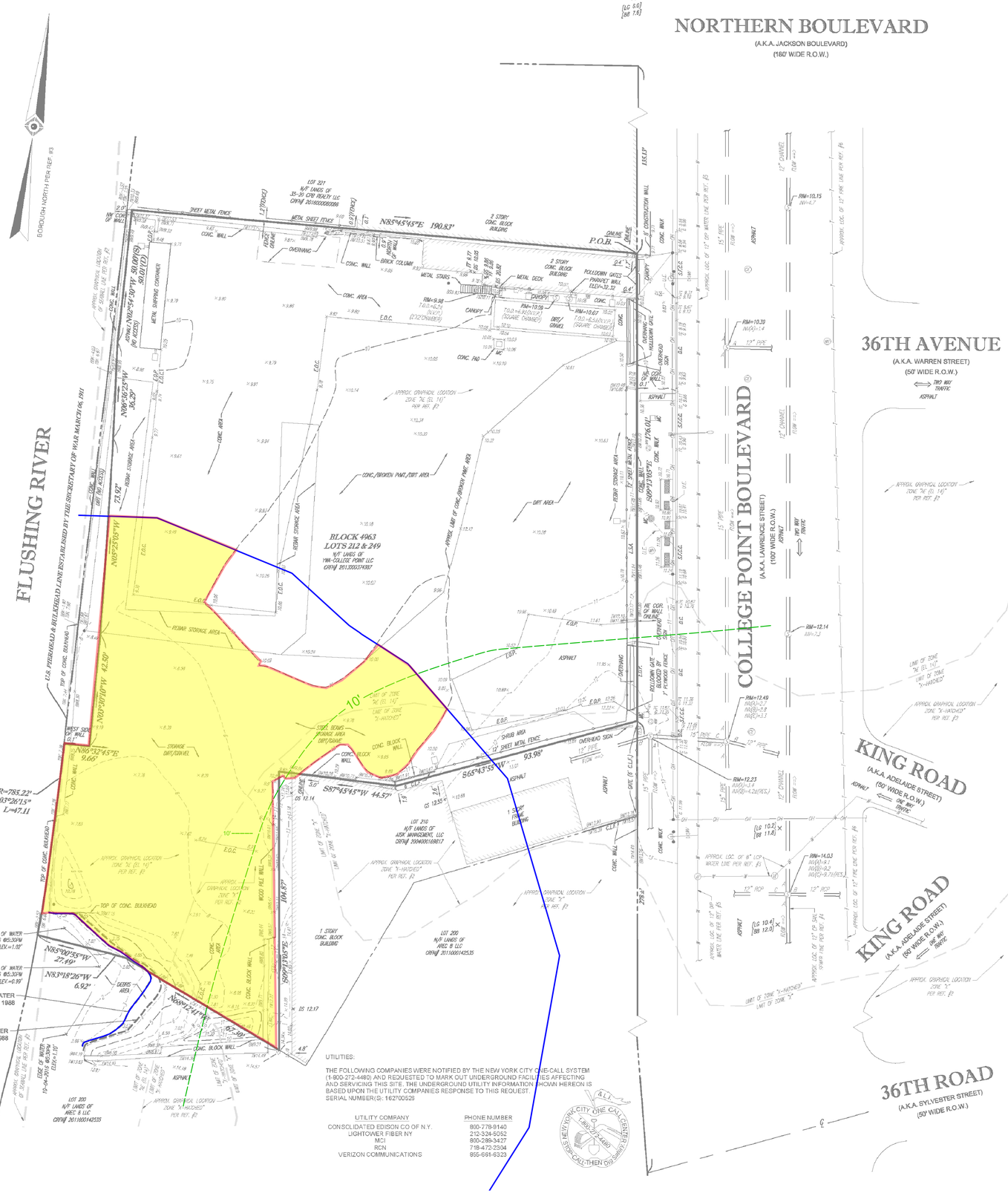
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[LG

APPENDIX J: WATER AND SEWER INFRASTRUCTURE - AGENCY CORRESPONDENCE

NYC Environmental Protection

Vincent Sapienza P.E.
Commissioner

Angela Licata
Deputy Commissioner of Sustainability

59-17 Junction Blvd.
Flushing, NY 11373

MEMORANDUM

To: Diane McCarthy
NYC Department of City Planning

From: Rasheed Lucas
Bureau of Environmental Planning & Analysis

Subject: CEQR # 77DCP608Q
Special Flushing Waterfront District
Borough of Queens

Date: October 22, 2019

This is in reference to the Flushing Waterfront Infrastructure Memo and Master Plan for CEQR # 77DCP608Q received by BWSO on September 24, 2019 via e-mail, and a follow up to our memorandum dated July 3, 2019 (copy attached). The current area is zoned as C4-2 and M3-1. However, the applicant is proposing to rezone to a mix of C4-2, M3-1, and M1-2/R7-1. The project will include 10 development sites consisting of residential (with affordable housing), retail, hotel, office, and community facility usage. Please be advised of the following comments:

Please be advised of the following comments.

1. The proposed development will likely result in an increase of 5.70 cfs of sanitary flow in the adjacent sewers based on the proposed dwelling units and estimated in accordance with the City's drainage design criteria.

a) **Site 1 and Site 2**: Langan will develop an Amended Drainage Plan (ADP) to accommodate the sanitary flow (based on the maximum buildout table provided by DCP) from these sites.
b) **Site 3 and Site 4**: A hydraulic analysis of the existing sewer system and coordination with the Bureau of Wastewater Treatment will be required prior to the submittal of the Site Connection Proposal Application (SCP) to determine whether the existing sewer system is capable of supporting higher density development and related increase in wastewater flow, or whether there will be a need to upgrade the existing sewer system. In addition, a separate ADP for sites 3 and 4 will also be required due to the proposed rezoning.

2. Existing infrastructure should be capable to handle the estimated increase in water demand. In addition, there are plans to upgrade the surrounding water mains.

C: Jannine McColgan, P.E., Director, Engineering
Mark Safari, P.E., Director, Connections and Permitting
Jerry Volgende, P.E., Chief, Collections Facilities Operations
Sham Hemraj, P.E., Chief, Distribution Engineering
Steve Carrea, P.E., Chief, Drainage and Modeling
Guo Zhan Wu, P.E., Chief, Regulatory Review
Ketki Patel, P.E., Chief, Site Connection and EARU
Vincent Malveaux, E.I.C., Site Connection
Andy Lu, P.E., Review Engineer
File; AL/al
Record No. 48830

APPENDIX K: TRANSPORTATION

Appendix K
Transportation

Traffic Volumes

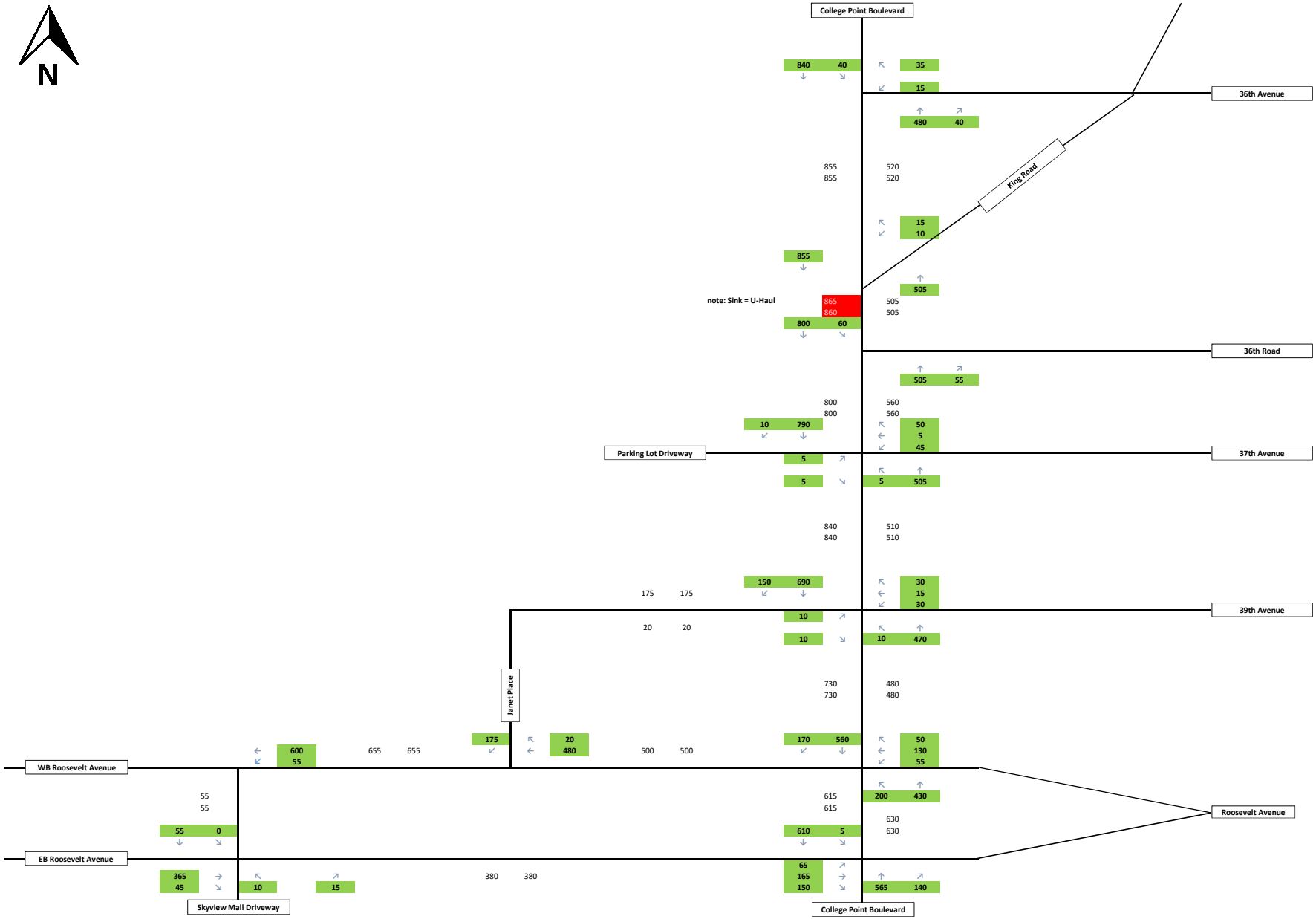


Figure K-1. Existing Conditions - Weekday AM Peak Hour Balanced Traffic Volumes (8:00 - 9:00 AM)

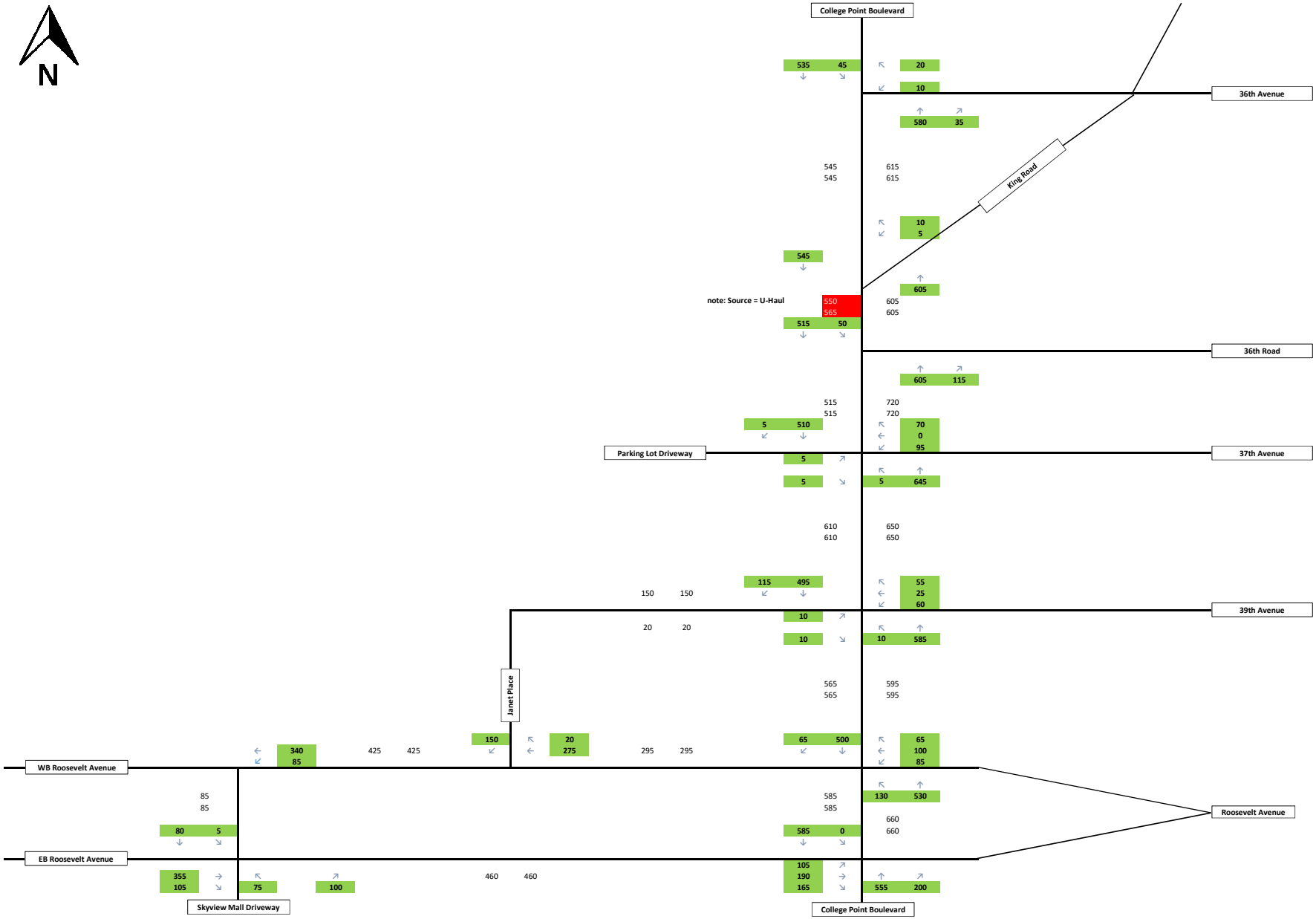


Figure K-2. Existing Conditions - Weekday Midday Peak Hour Balanced Traffic Volumes (12:45 - 1:45 PM

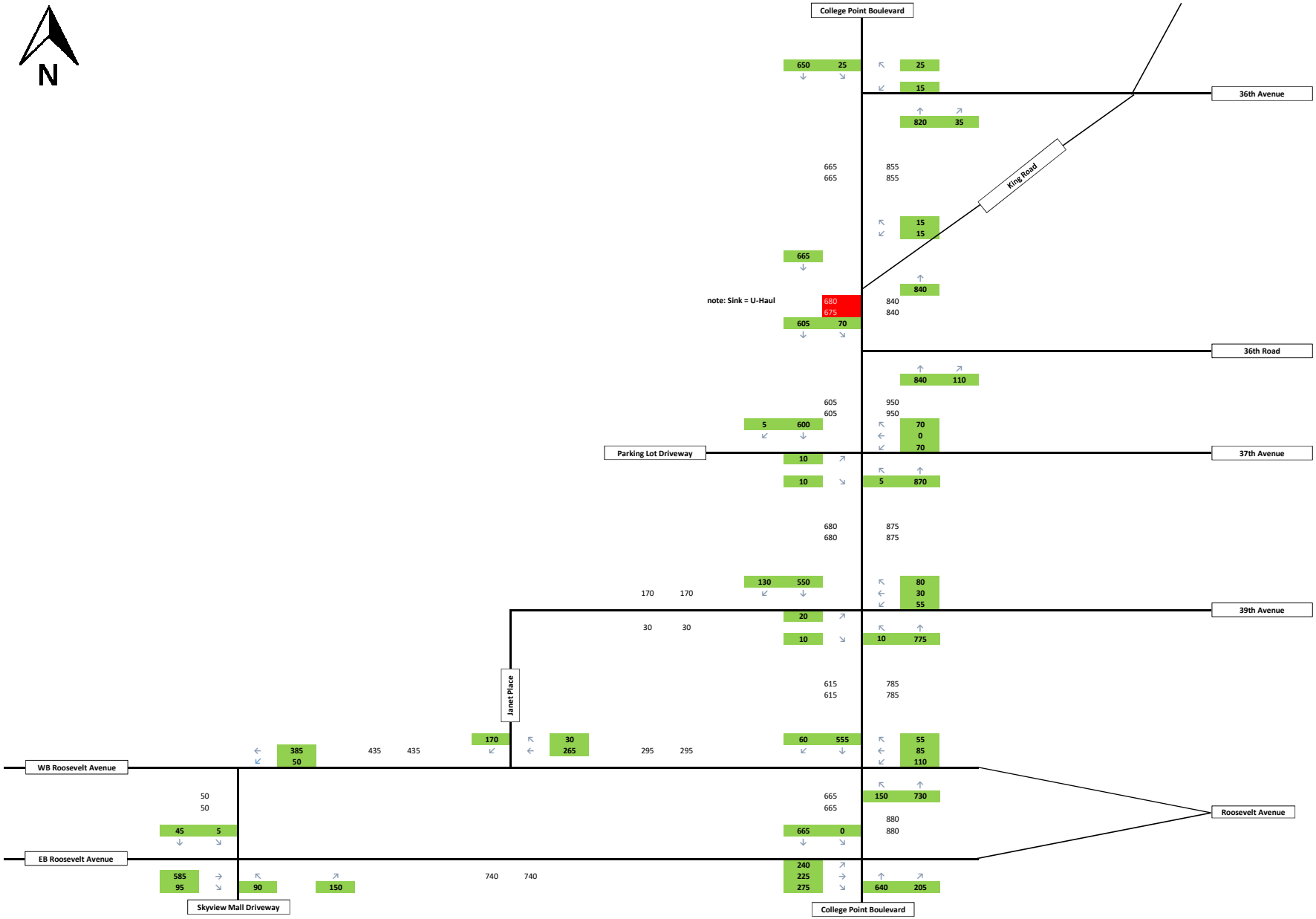


Figure K-3. Existing Conditions - Weekday PM Peak Hour Balanced Traffic Volumes (5:00 - 6:00 PM)

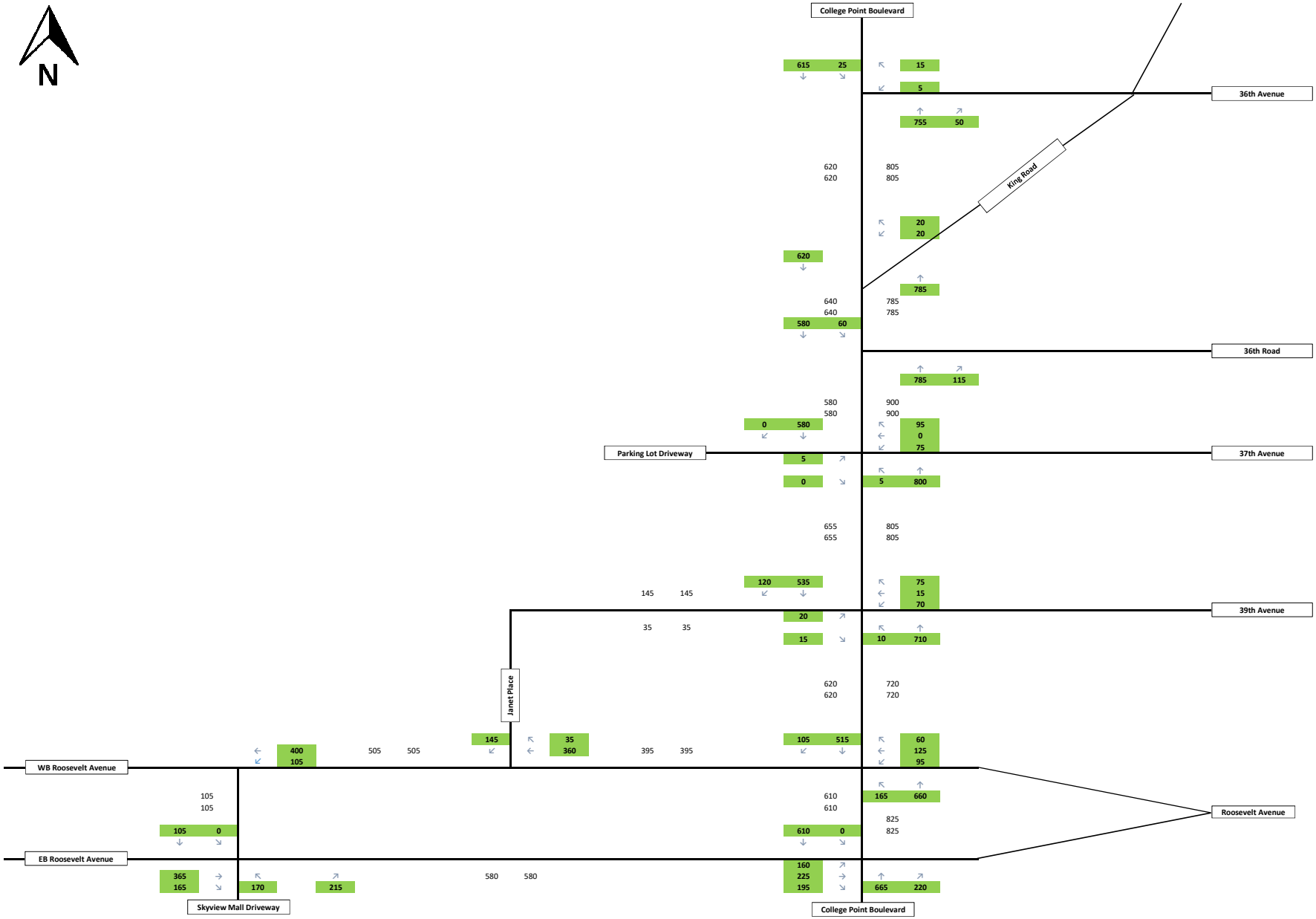


Figure K-4. Existing Conditions - Saturday Midday Peak Hour Balanced Traffic Volumes (3:15 - 4:15 PM)

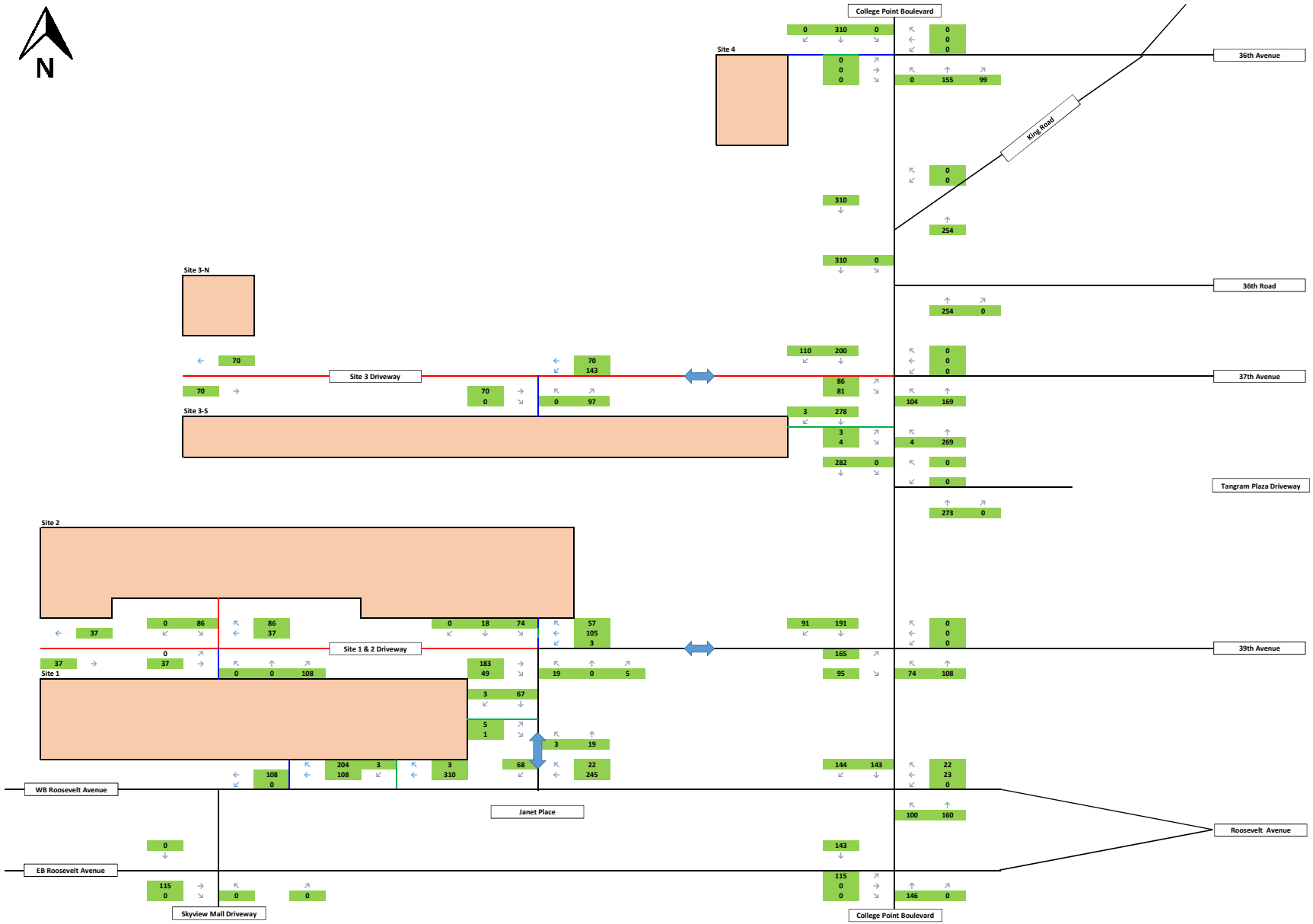


Figure K-5. As-Of-Right Generated Trips - Weekday AM Peak Hour Traffic Volumes

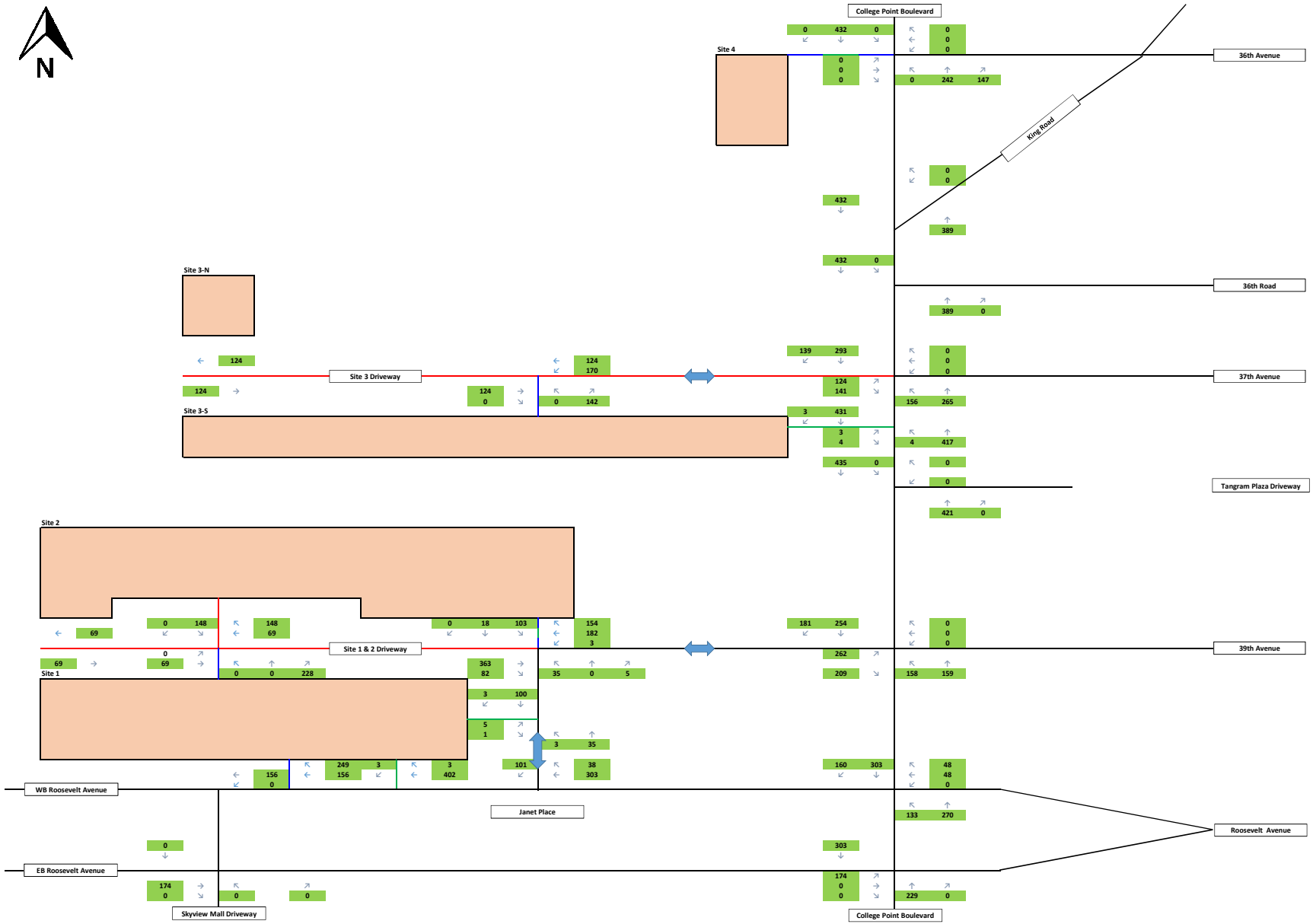


Figure K-6. As-Of-Right Generated Trips - Weekday Midday Peak Hour Traffic Volumes

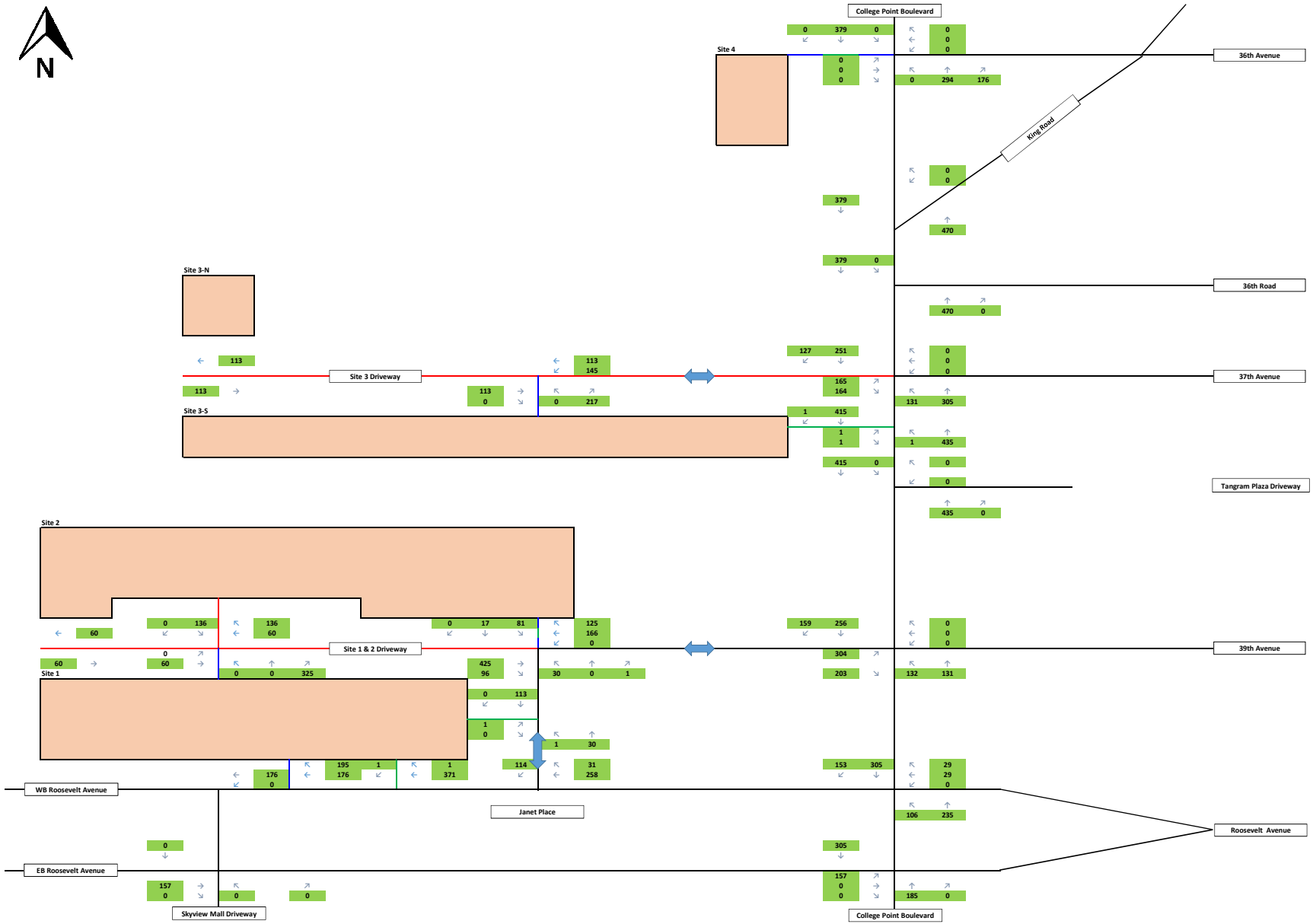


Figure K-7. As-Of-Right Generated Trips - Weekday PM Peak Hour Traffic Volumes

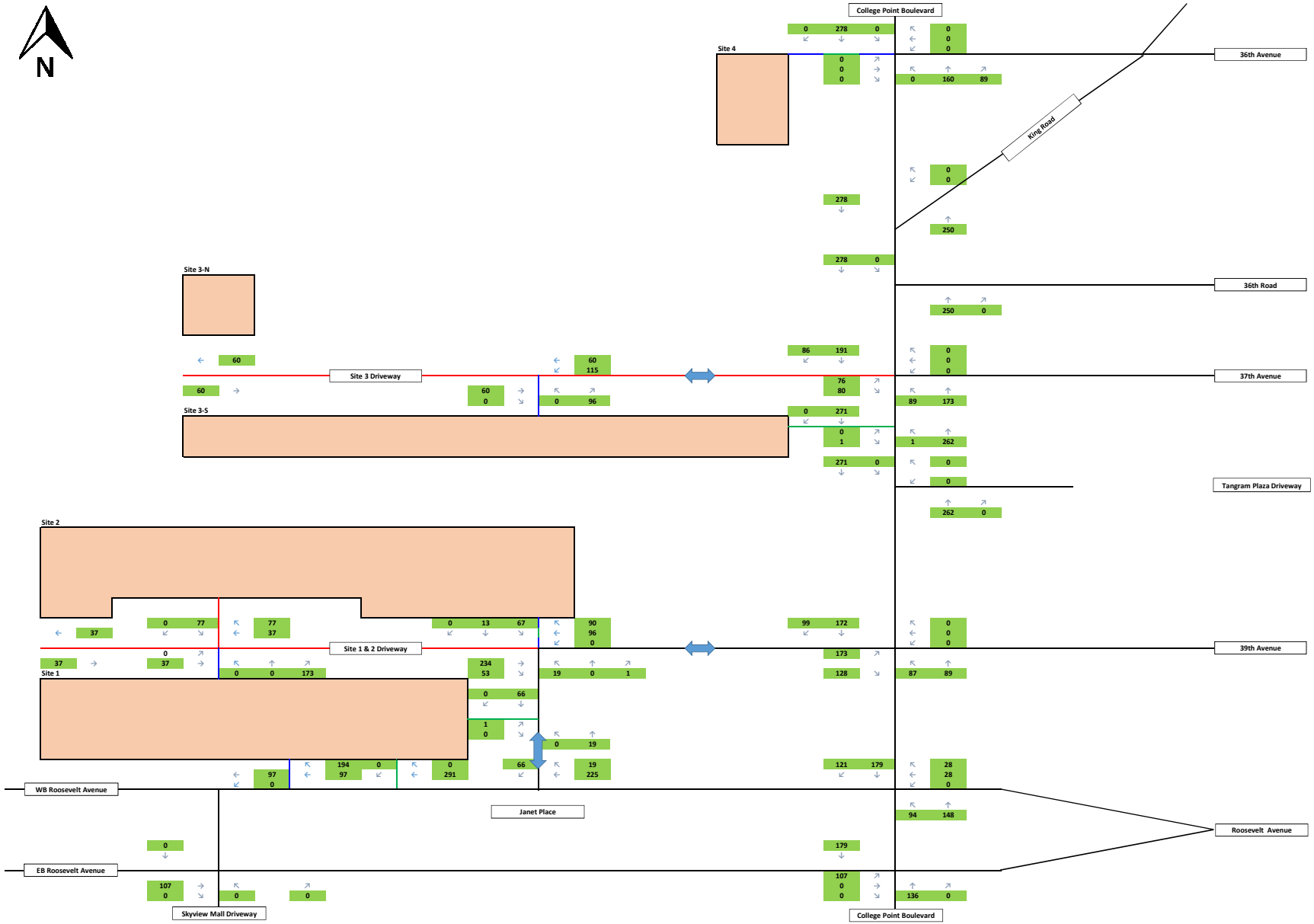


Figure K-8. As-Of-Right Generated Trips - Saturday Midday Peak Hour Traffic Volumes

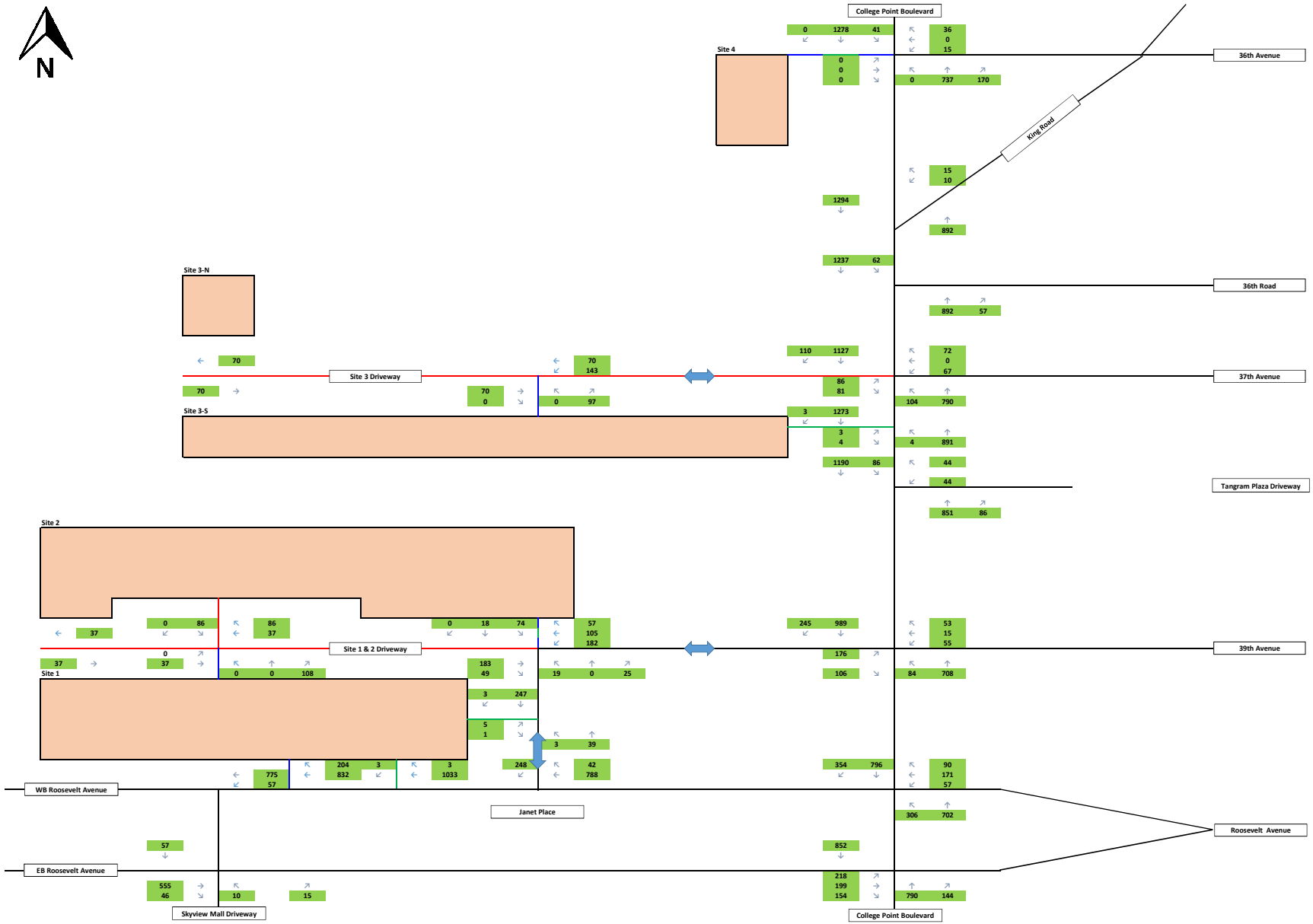


Figure K-9. Future No-Action Condition - Weekday AM Peak Hour Traffic Volumes

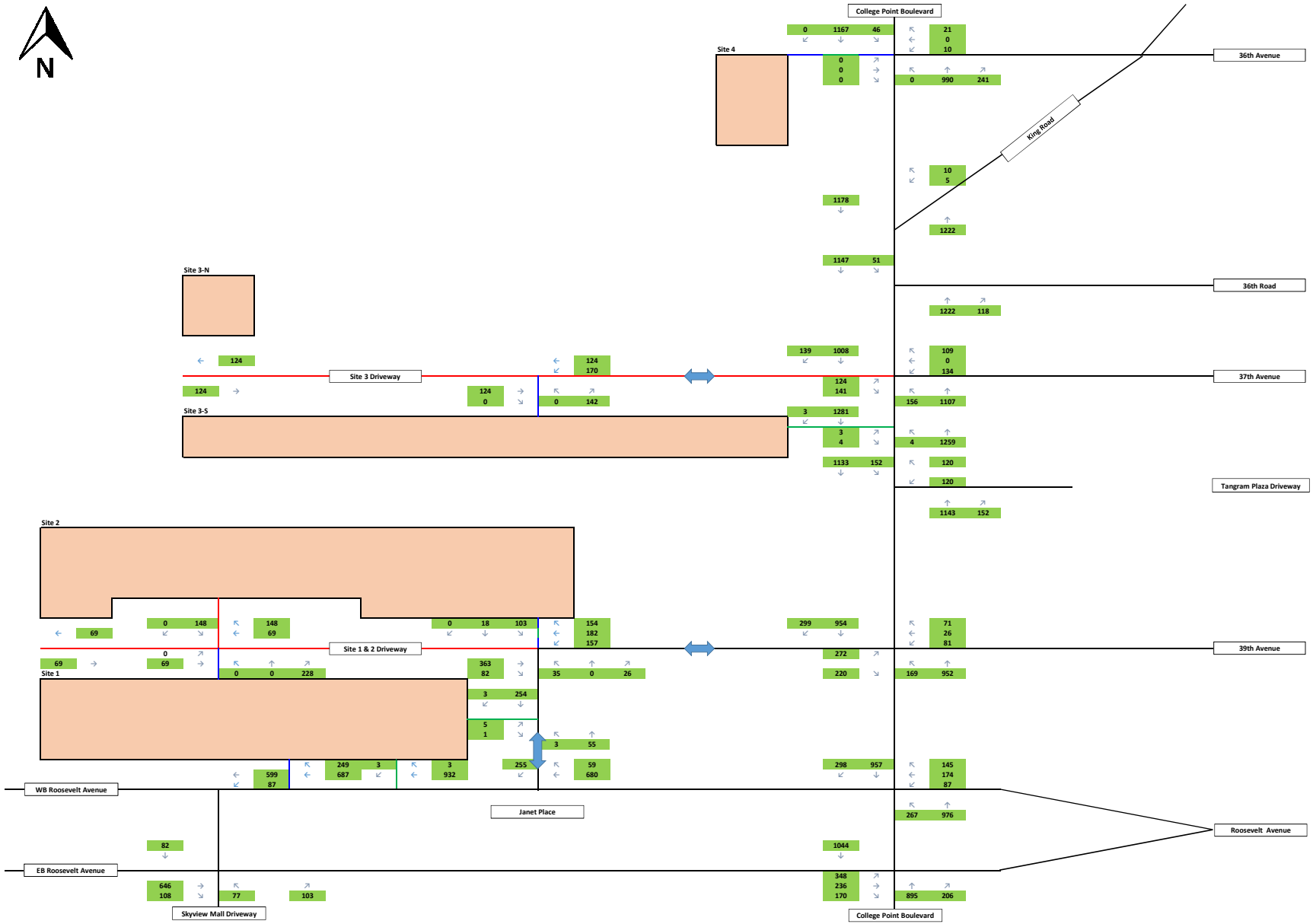


Figure K-10. Future No-Action Condition - Weekday Midday Peak Hour Traffic Volumes

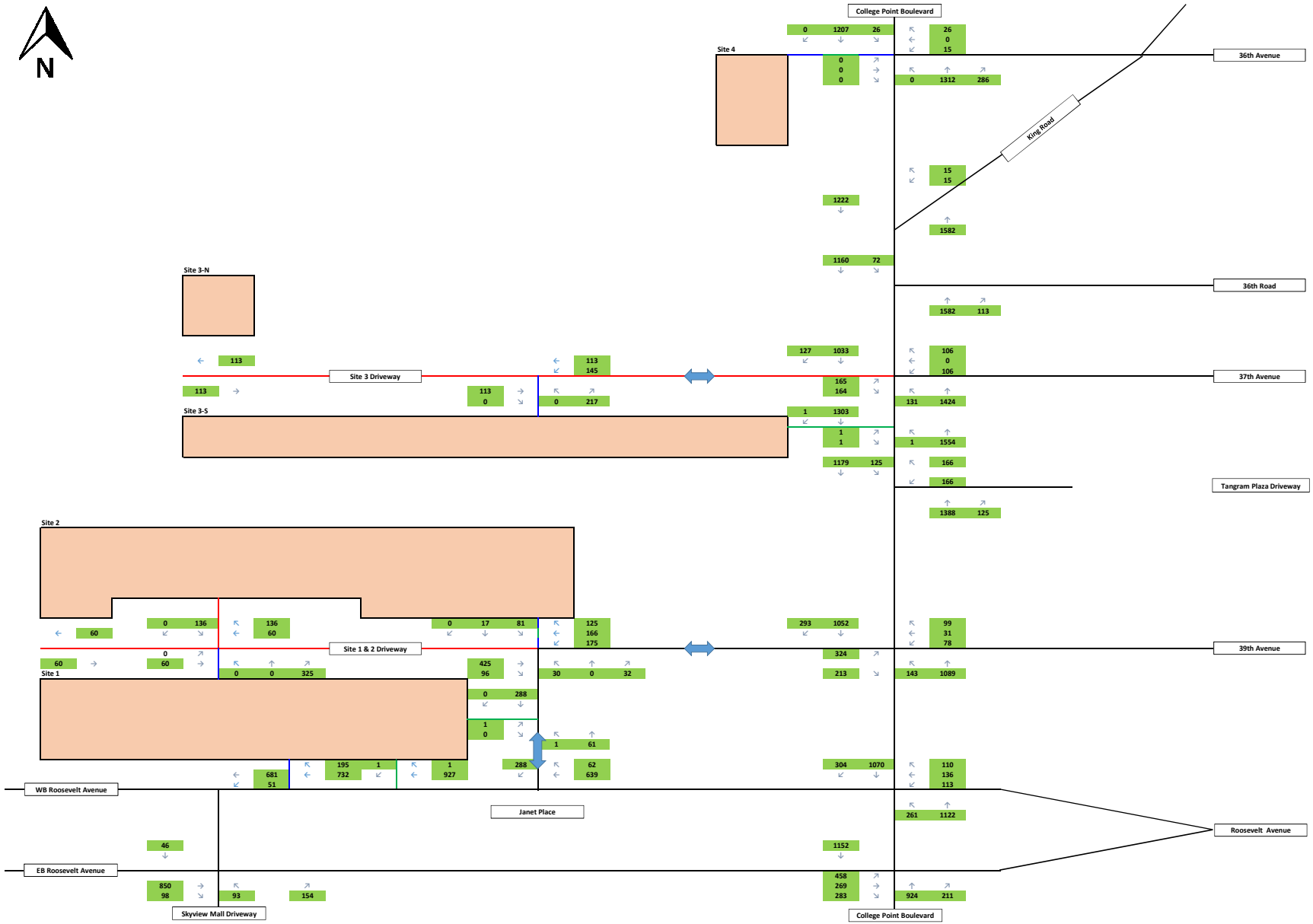


Figure K-11. Future No-Action Condition - Weekday PM Peak Hour Traffic Volumes

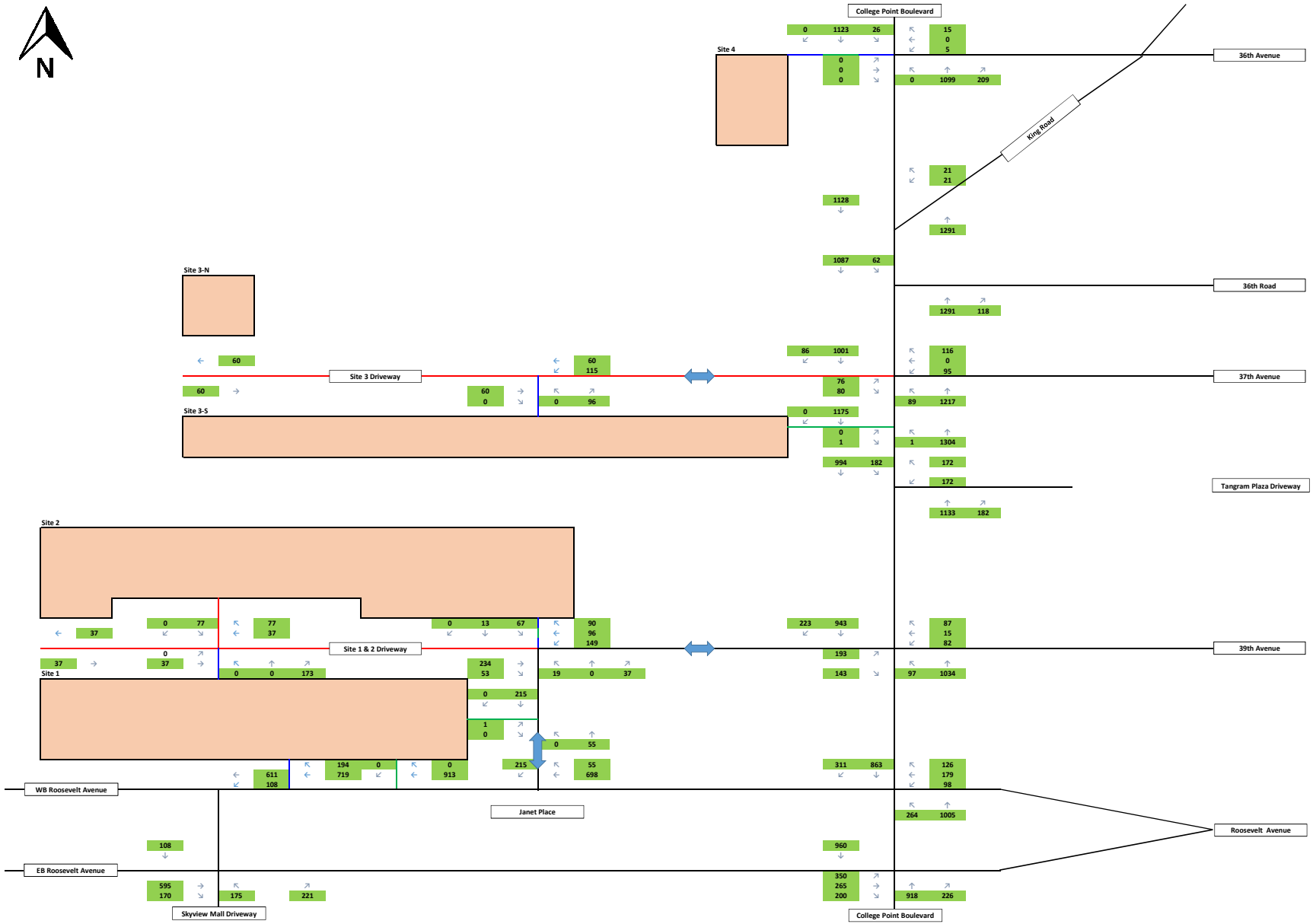


Figure K-12. Future No-Action Condition - Saturday Midday Peak Hour Traffic Volumes

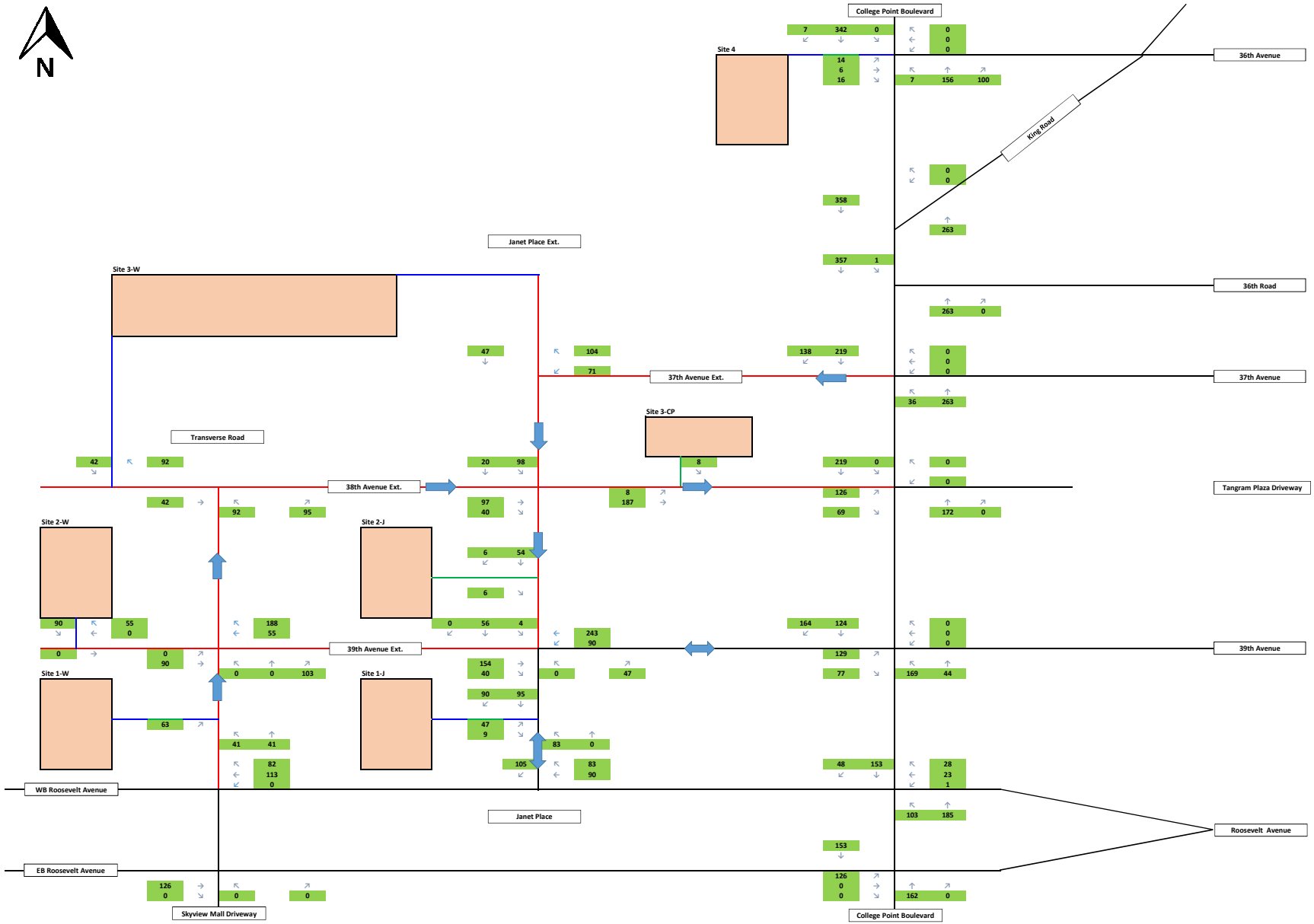


Figure K-13. Project Generated Trips - Weekday AM Peak Hour Traffic Volumes

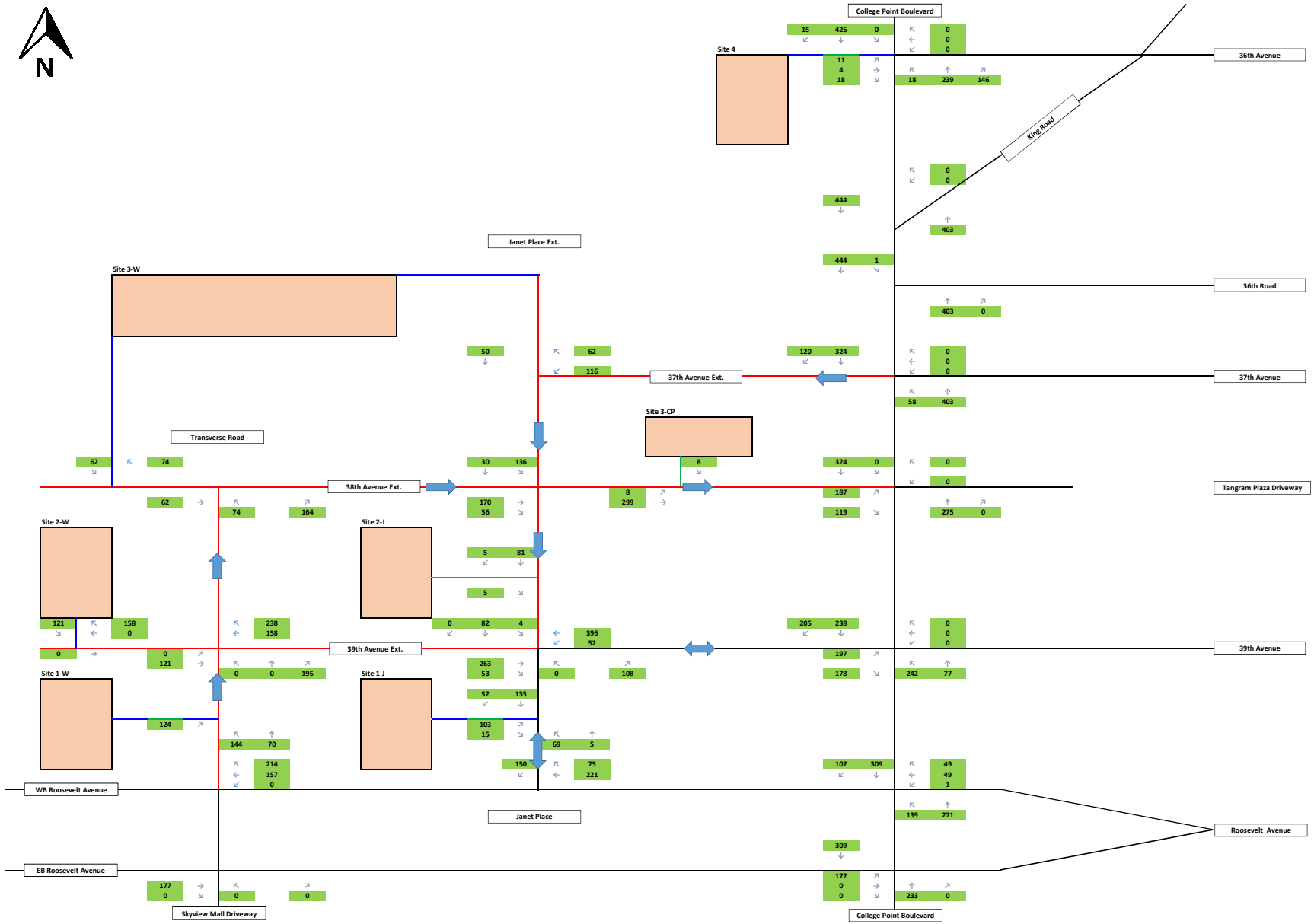


Figure K-14. Project Generated Trips - Weekday Midday Peak Hour Traffic Volumes

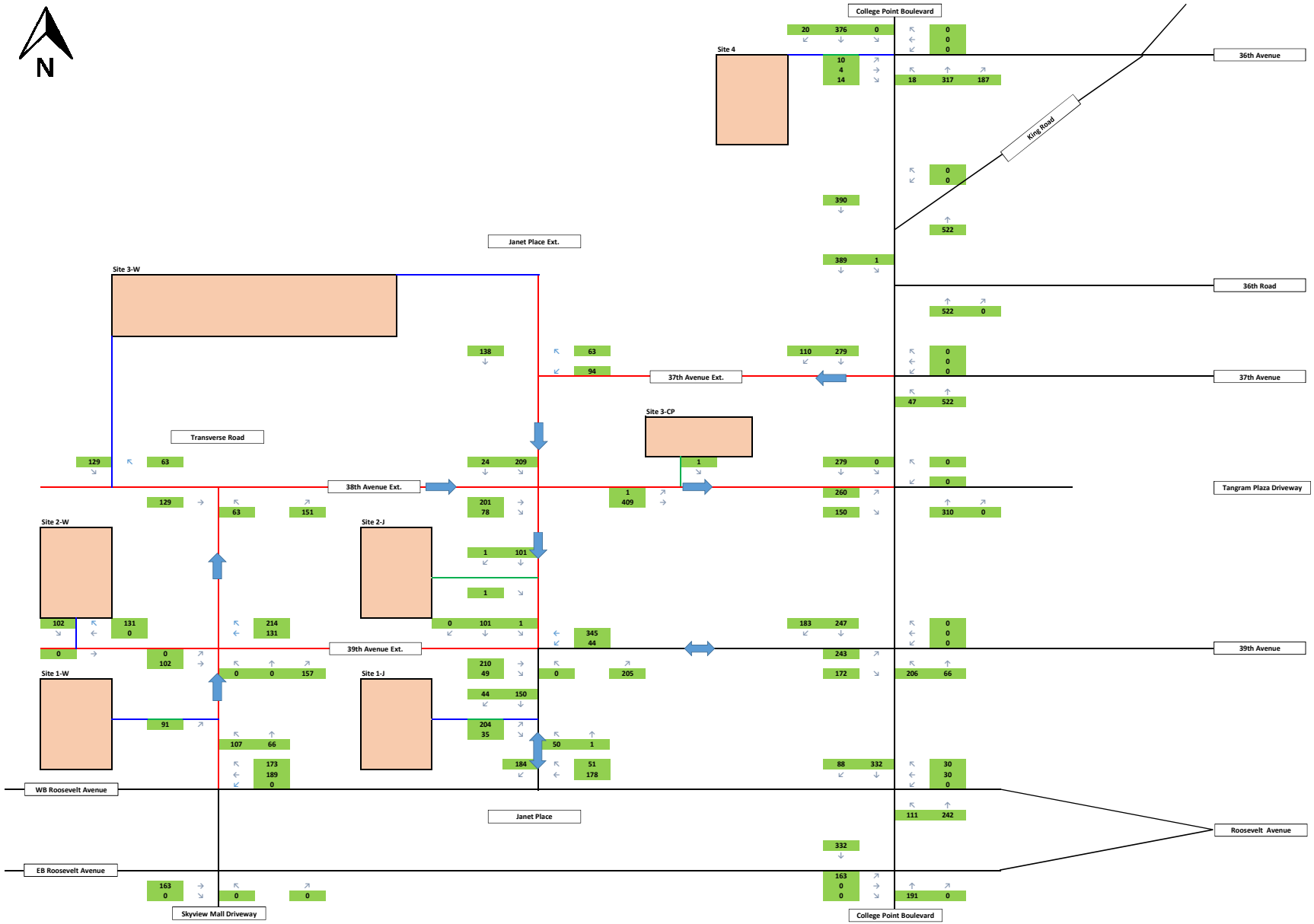


Figure K-15. Project Generated Trips - Weekday PM Peak Hour Traffic Volumes

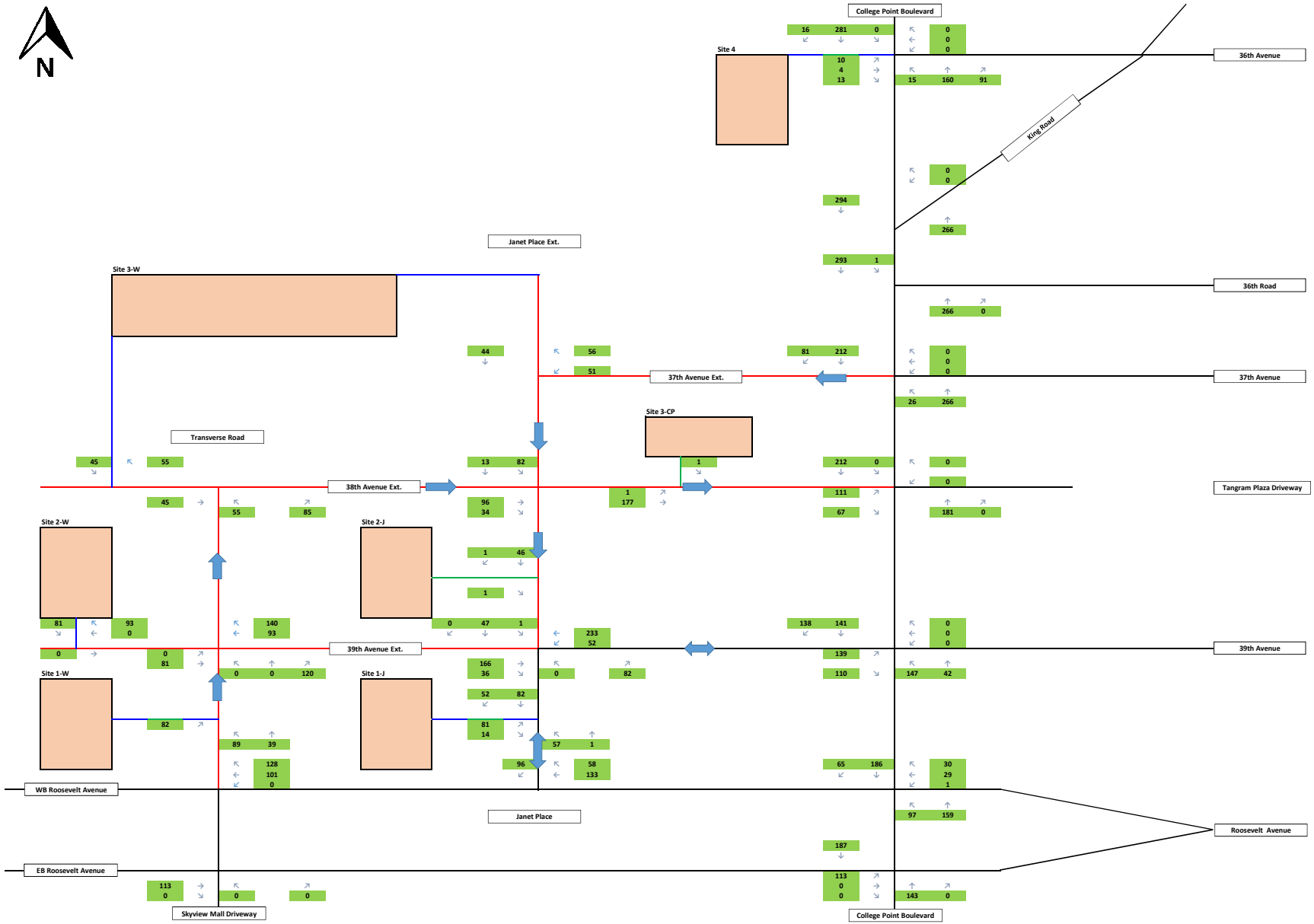


Figure K-16. Project Generated Trips - Saturday Midday Peak Hour Traffic Volumes

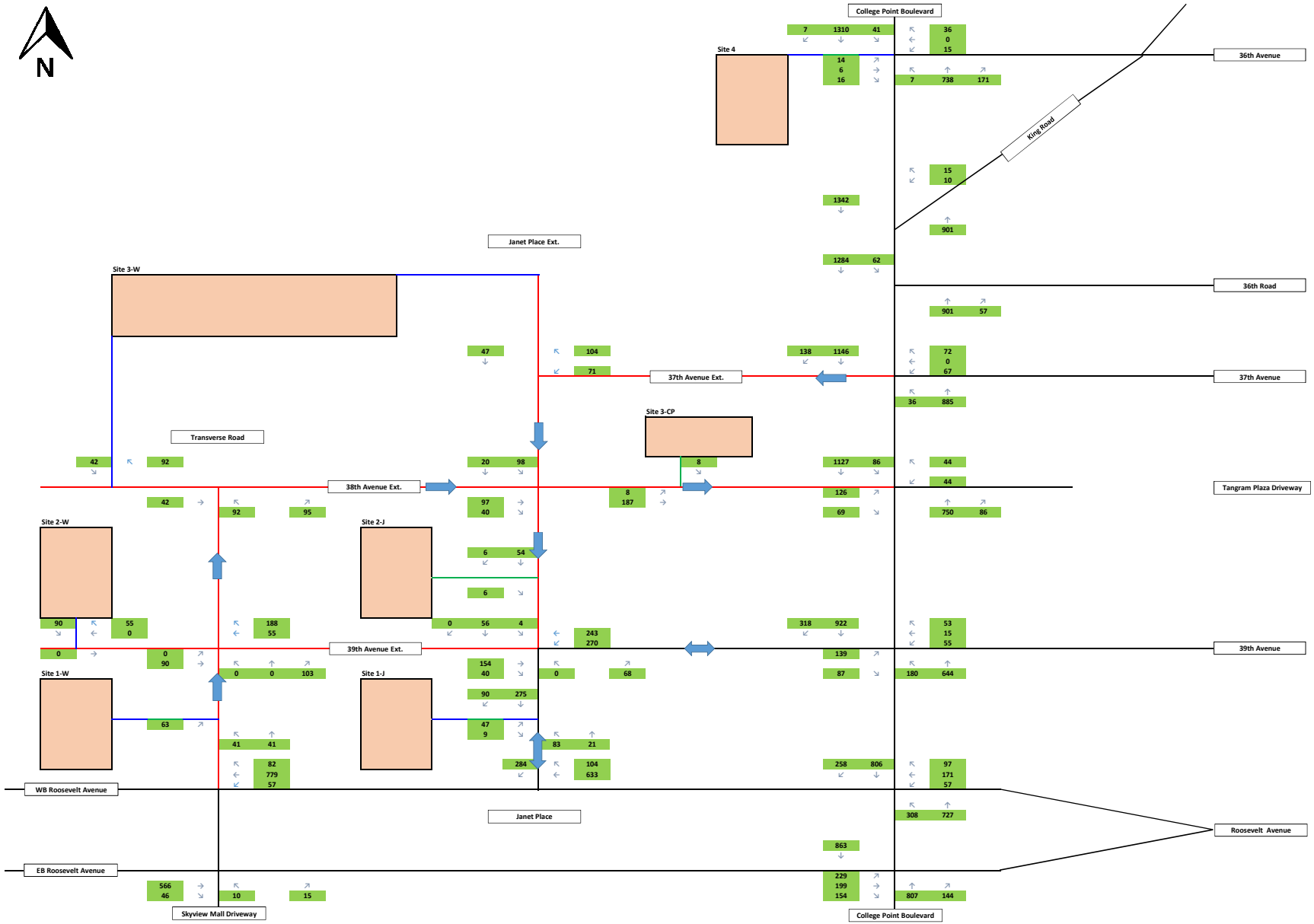


Figure K-17. Future With-Action Condition - Weekday AM Peak Hour Traffic Volumes

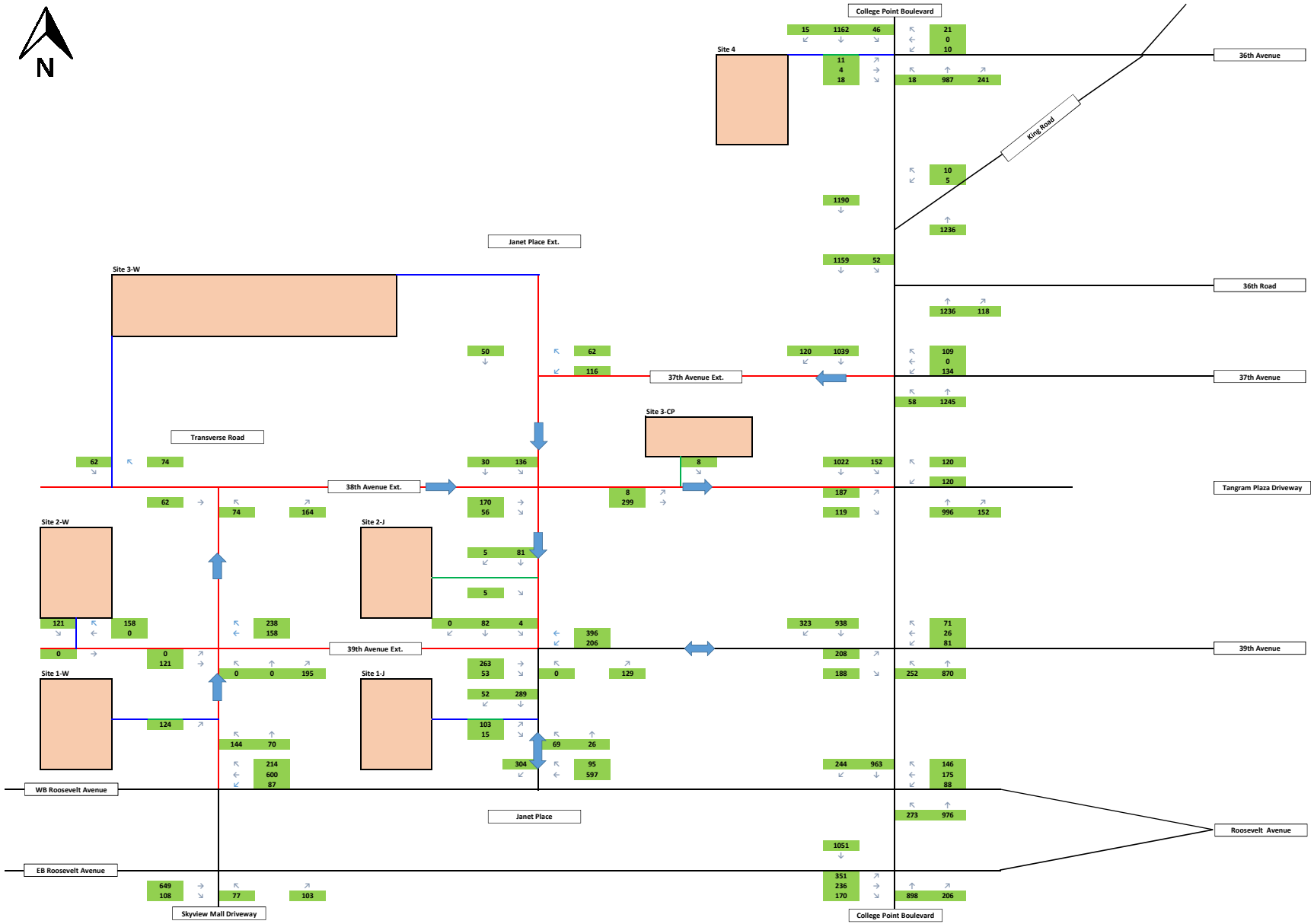


Figure K-18. Future With-Action Condition - Weekday Midday Peak Hour Traffic Volumes

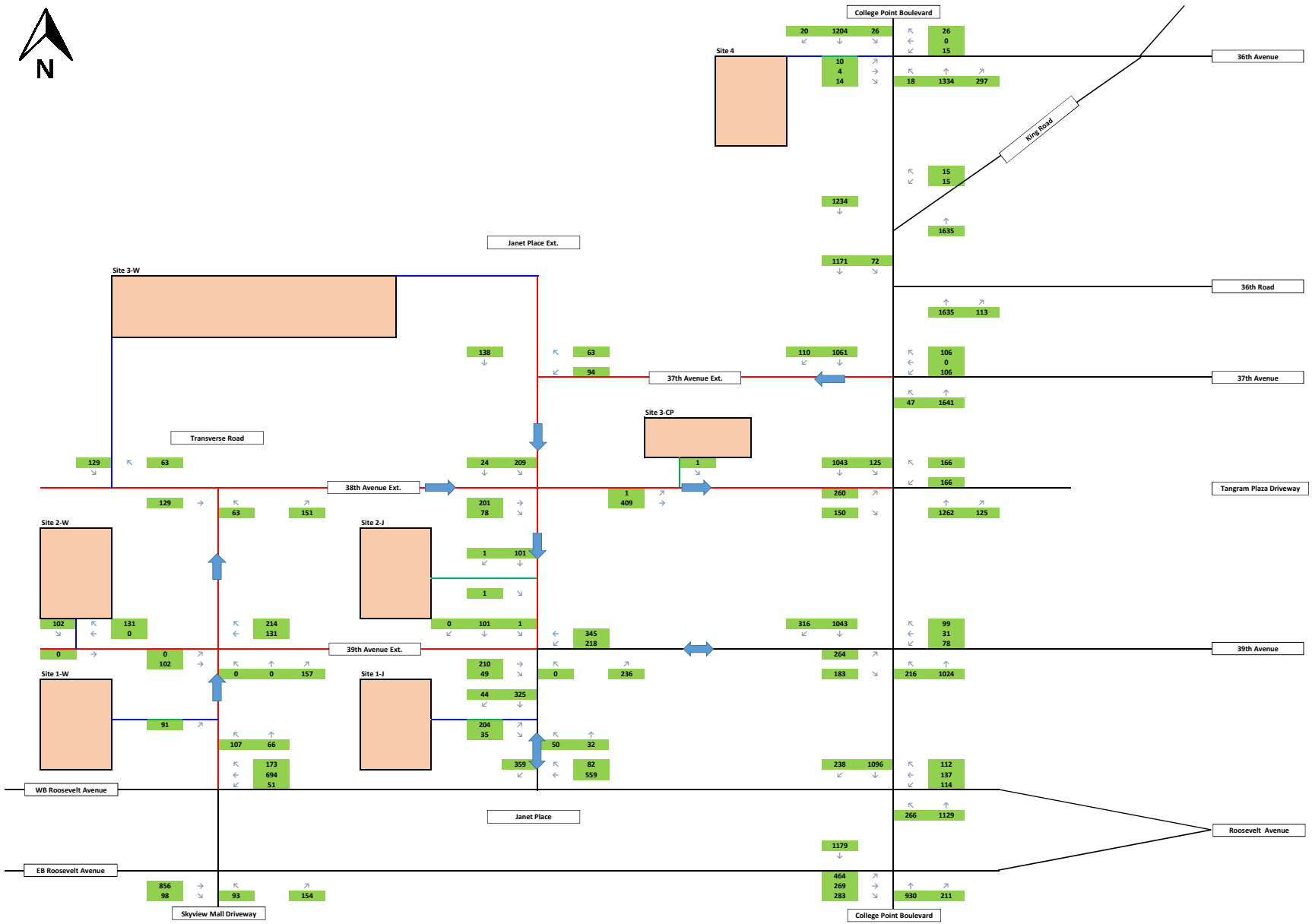


Figure K-19. Future With-Action Condition - Weekday PM Peak Hour Traffic Volumes

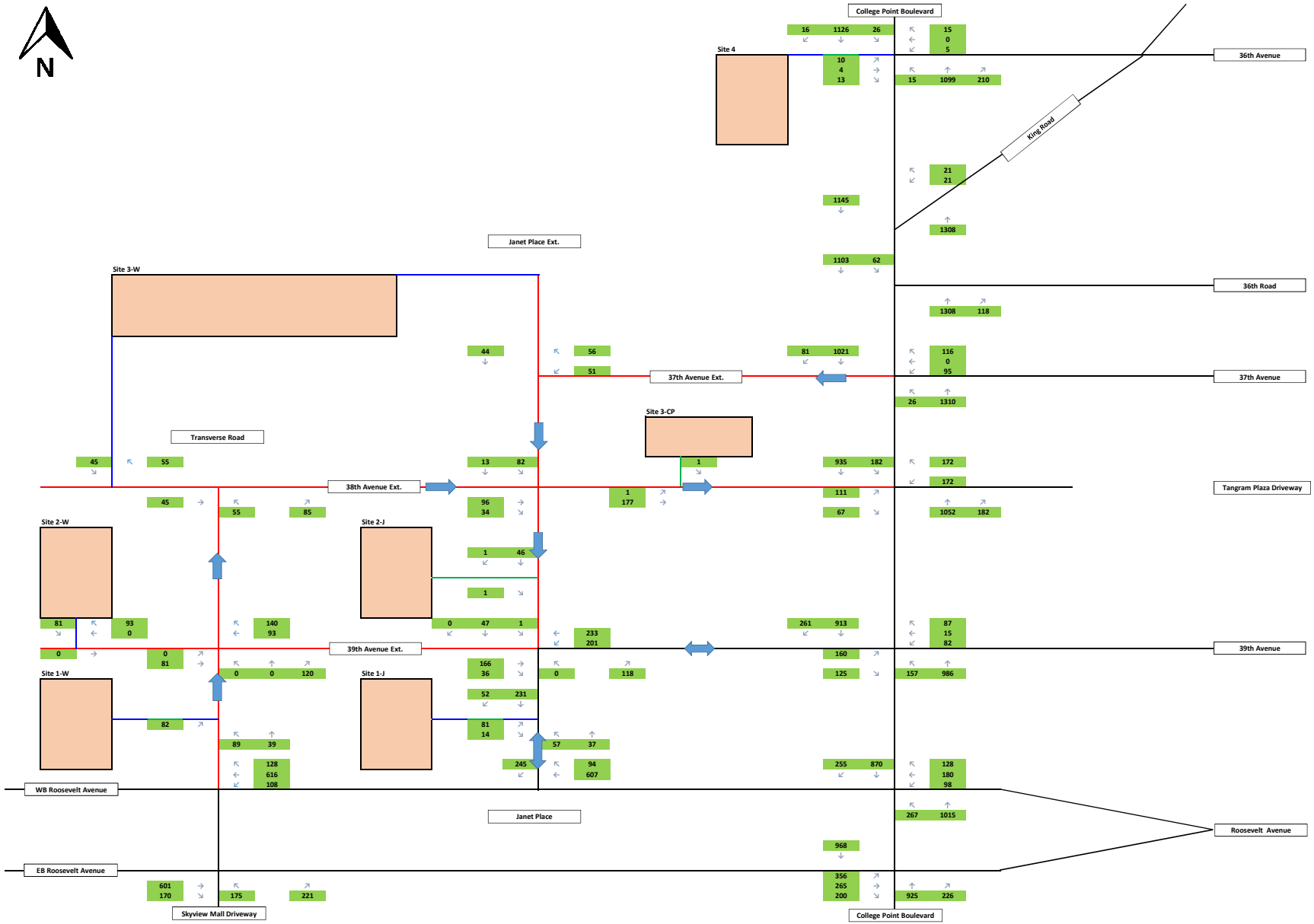


Figure K-20. Future With-Action Condition - Saturday Midday Peak Hour Traffic Volumes

Appendix K
Transportation

Pedestrian Volumes

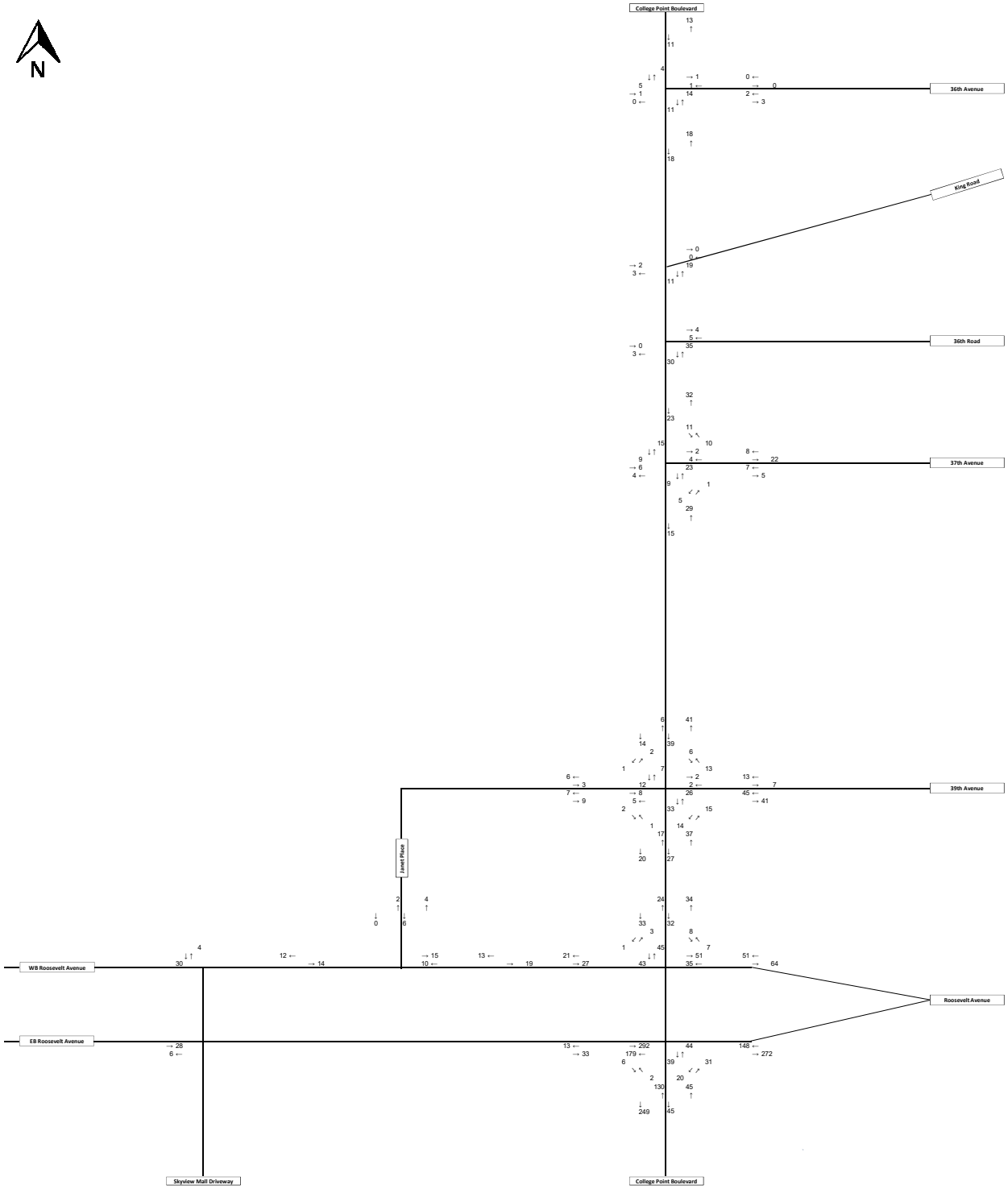


Figure K-21. Existing Conditions - Weekday AM Peak Hour Pedestrian Volumes (8:00 - 9:00 AM)

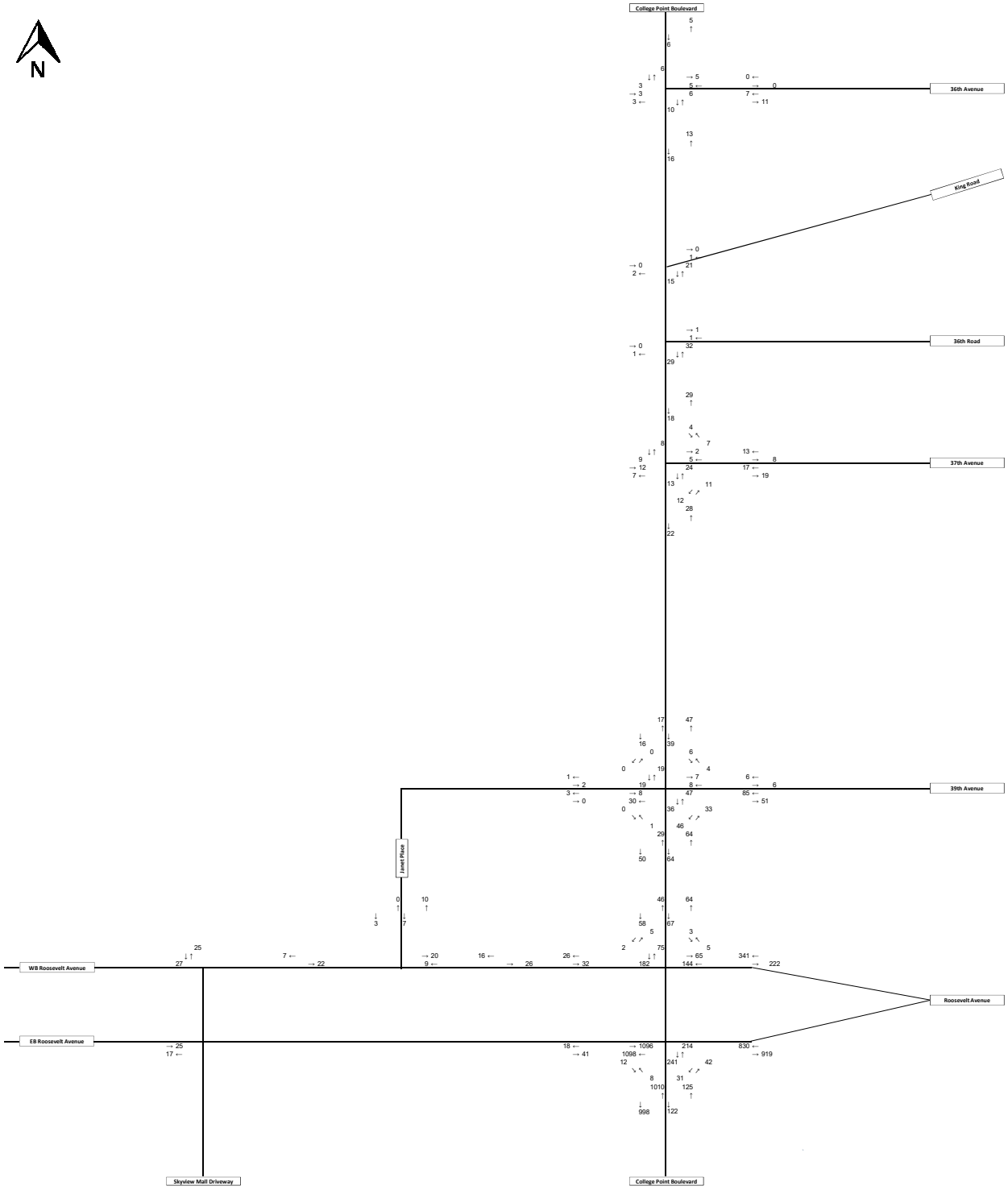


Figure K-22. Existing Conditions - Weekday Midday Peak Hour Pedestrian Volumes (1:00 - 2:00 PM)

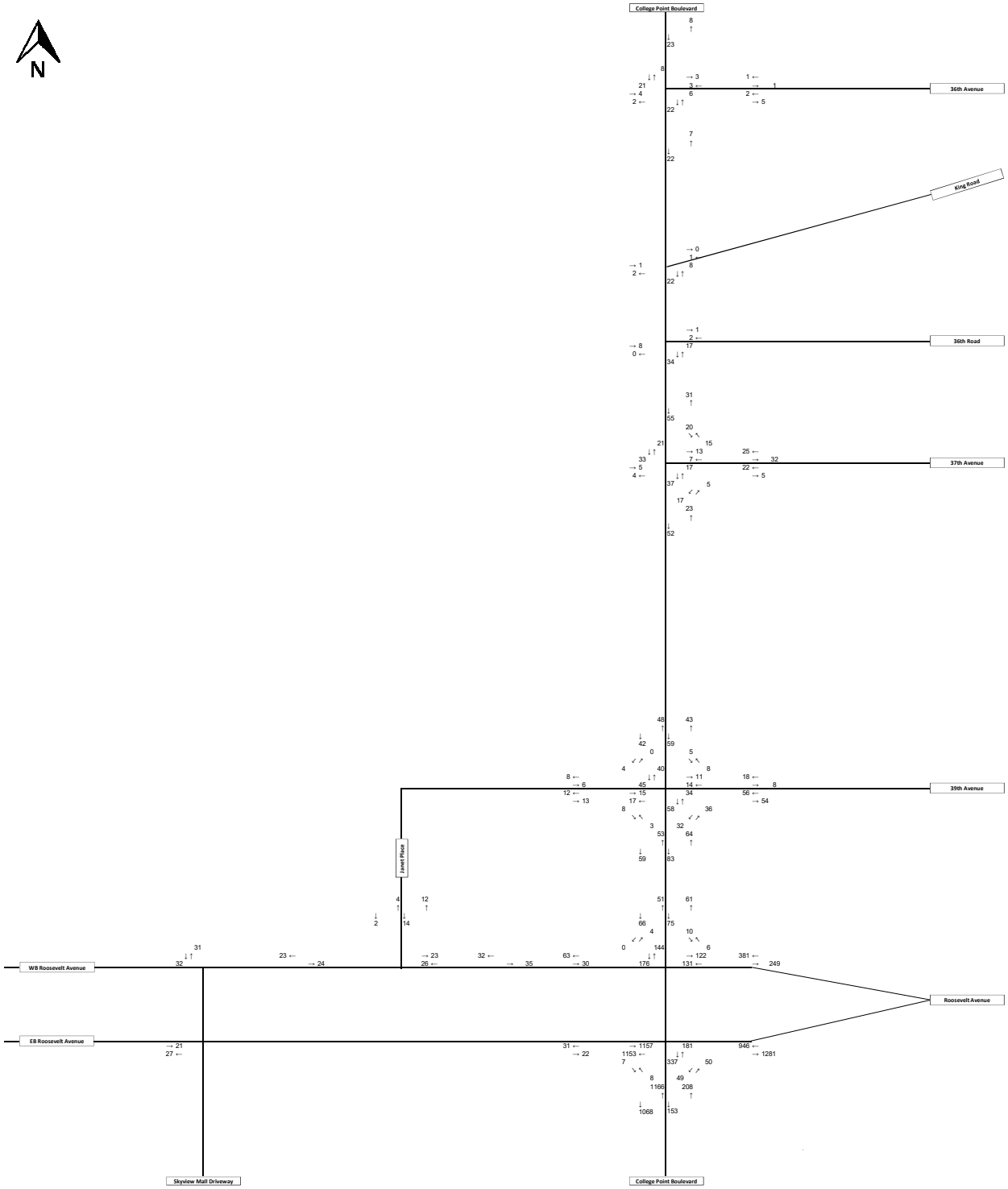


Figure K-23. Existing Conditions - Weekday PM Peak Hour Pedestrian Volumes (5:00 - 6:00 PM)

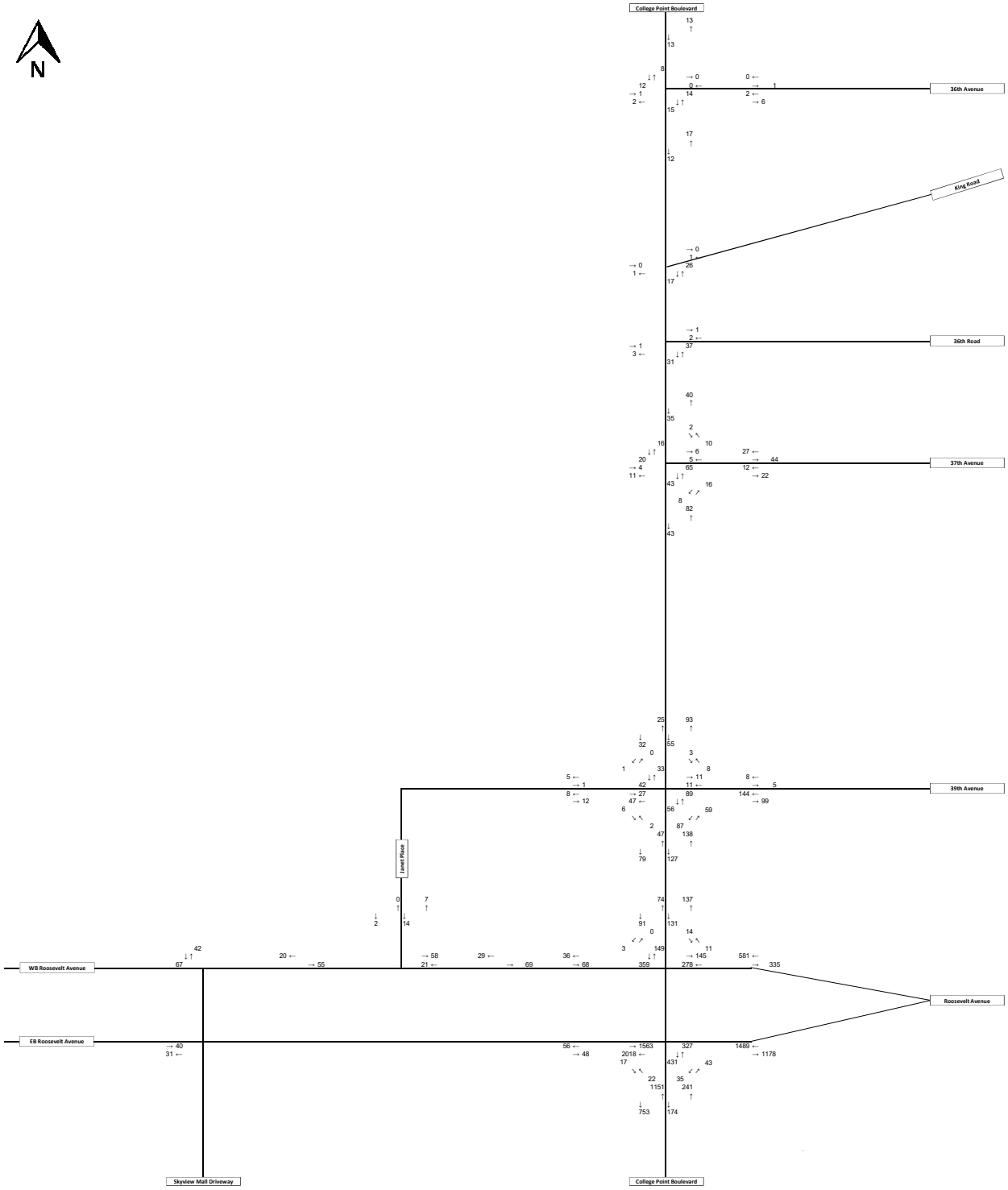


Figure K-24. Existing Conditions - Saturday Midday Peak Hour Pedestrian Volumes (1:45 - 2:45 PM)

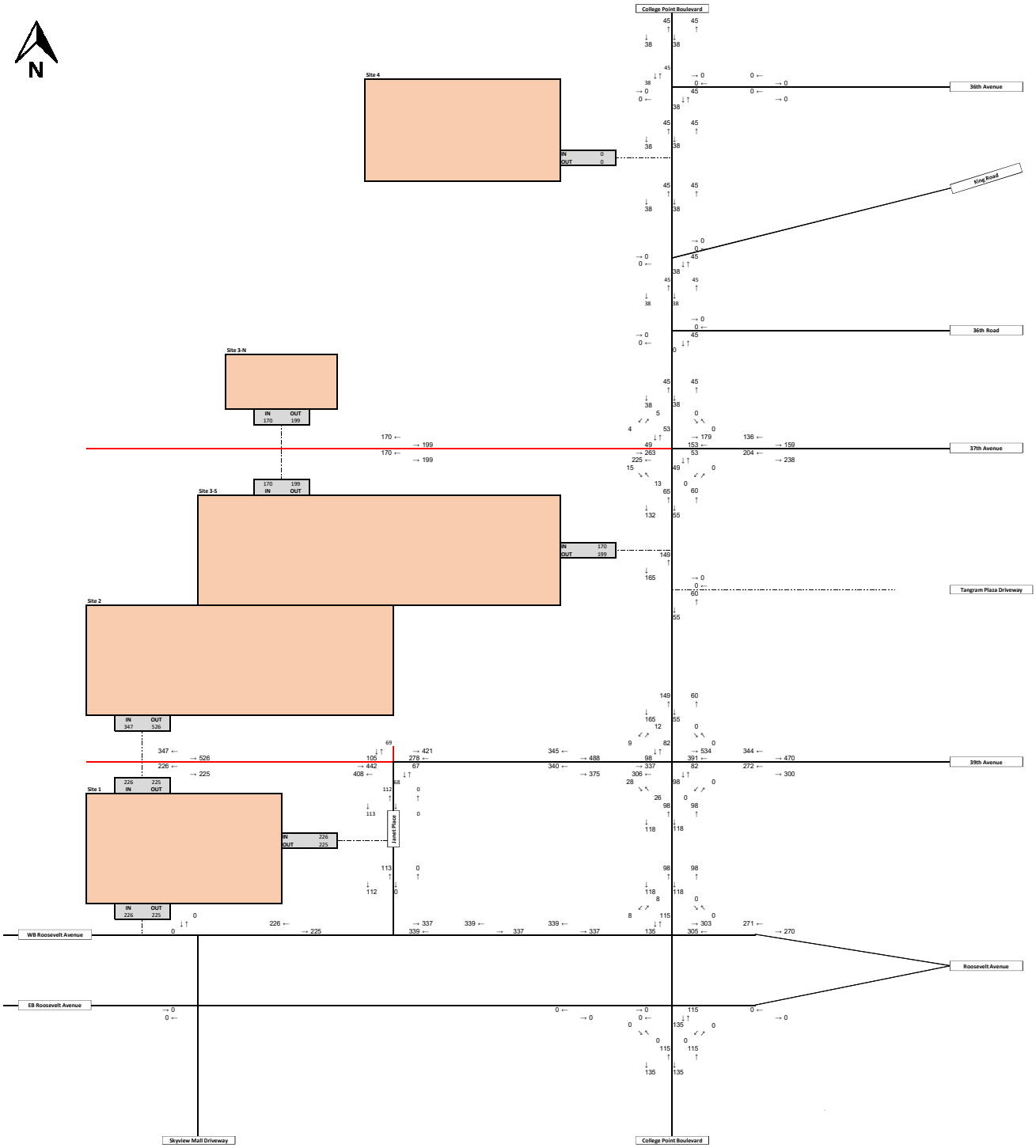


Figure K-25. As-Of-Right Generated Trips - Weekday AM Peak Hour Pedestrian Volumes

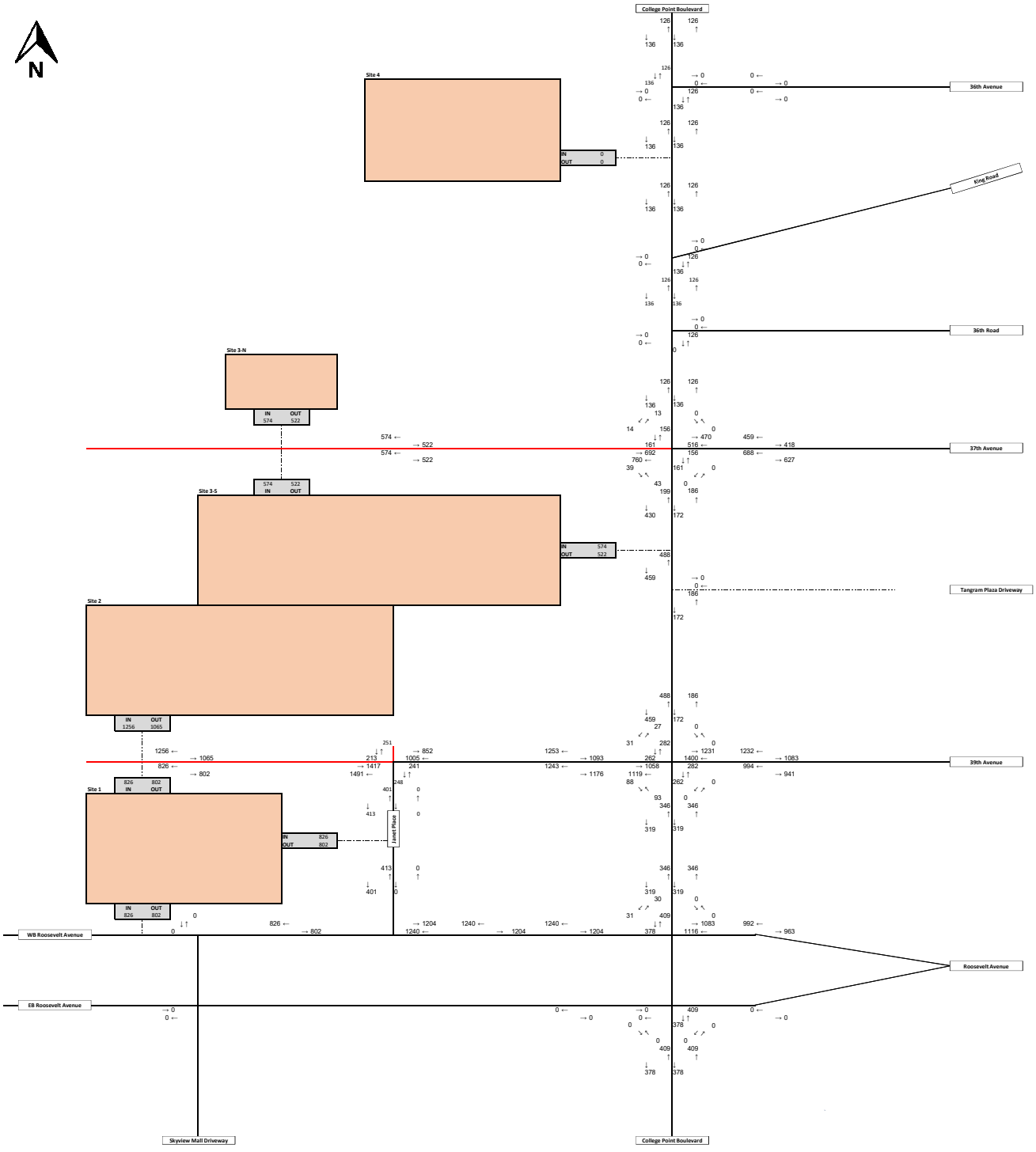


Figure K-26. As-Of-Right Generated Trips - Weekday Midday Peak Hour Pedestrian Volumes

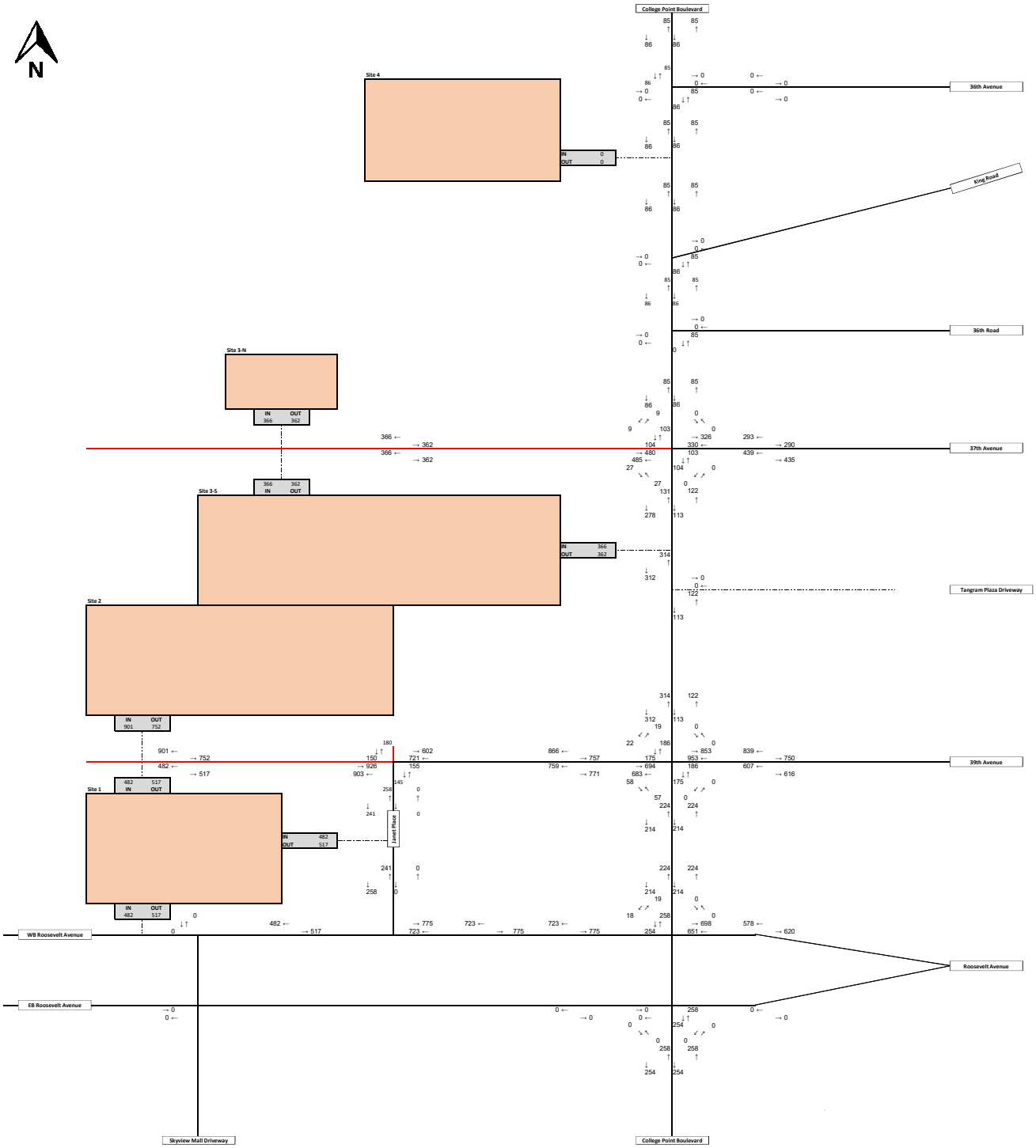


Figure K-27. As-Of-Right Generated Trips - Weekday PM Peak Hour Pedestrian Volumes

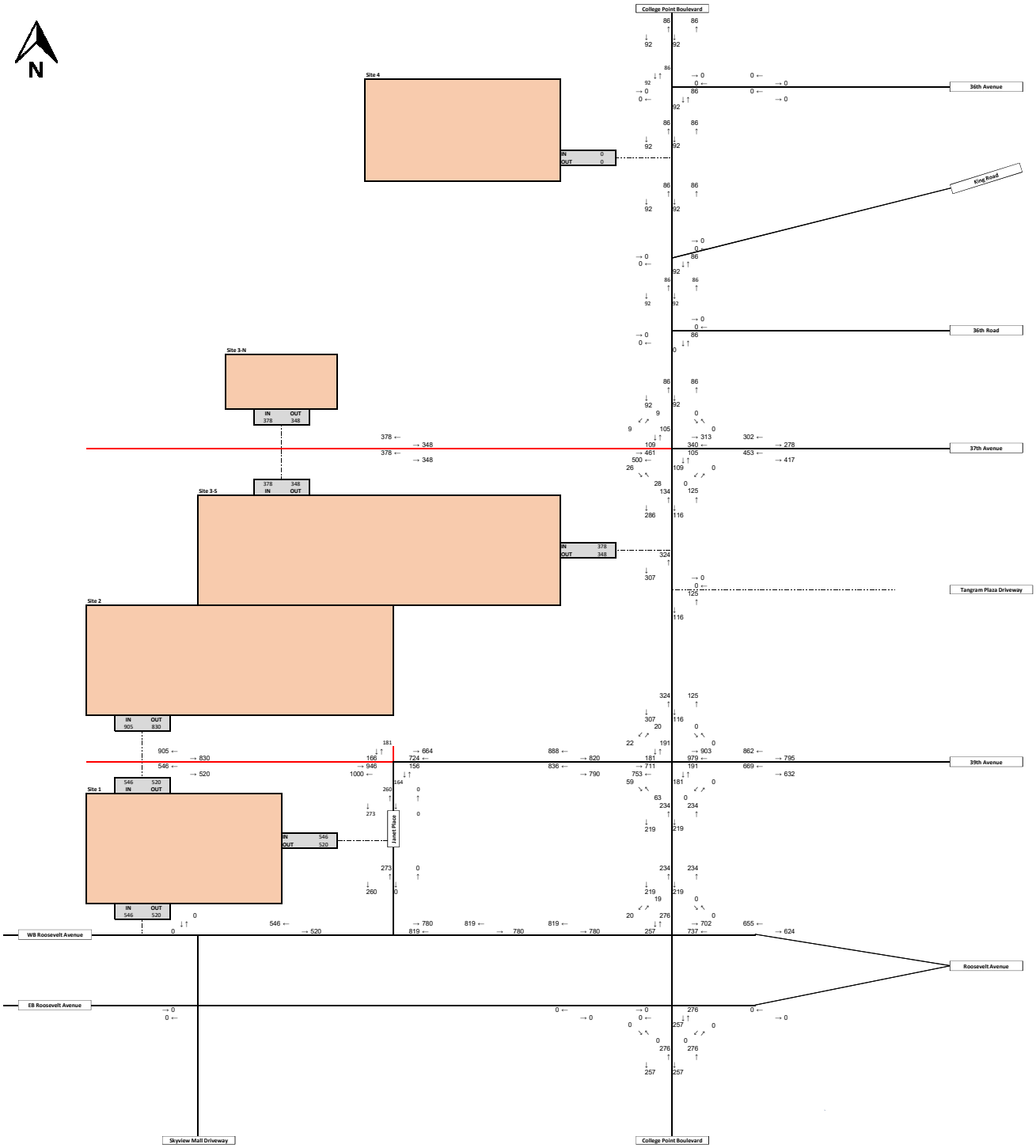


Figure K-28. As-Of-Right Generated Trips - Saturday Midday Peak Hour Pedestrian Volumes

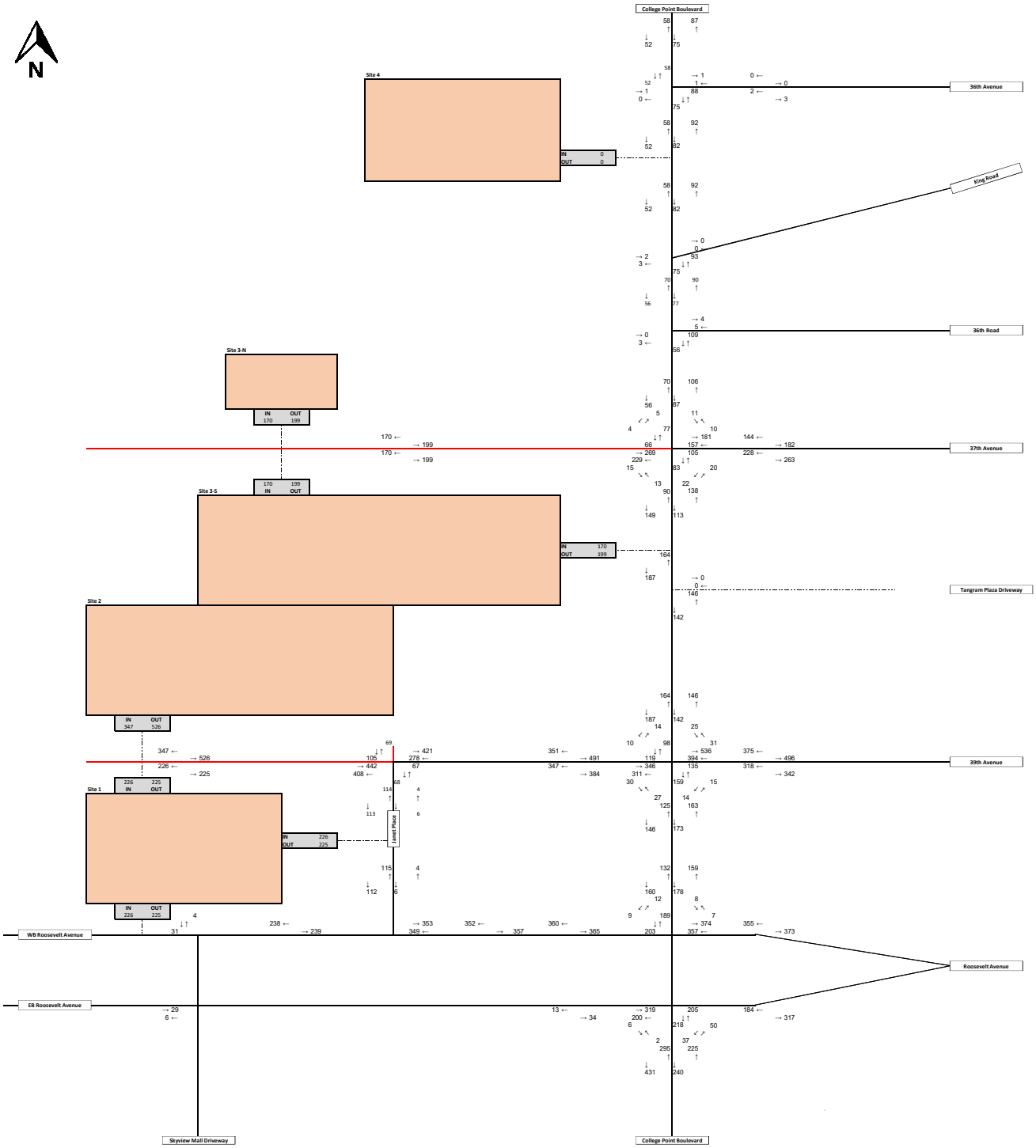


Figure K-29. Future No-Action Condition - Weekday AM Pedestrian Volumes

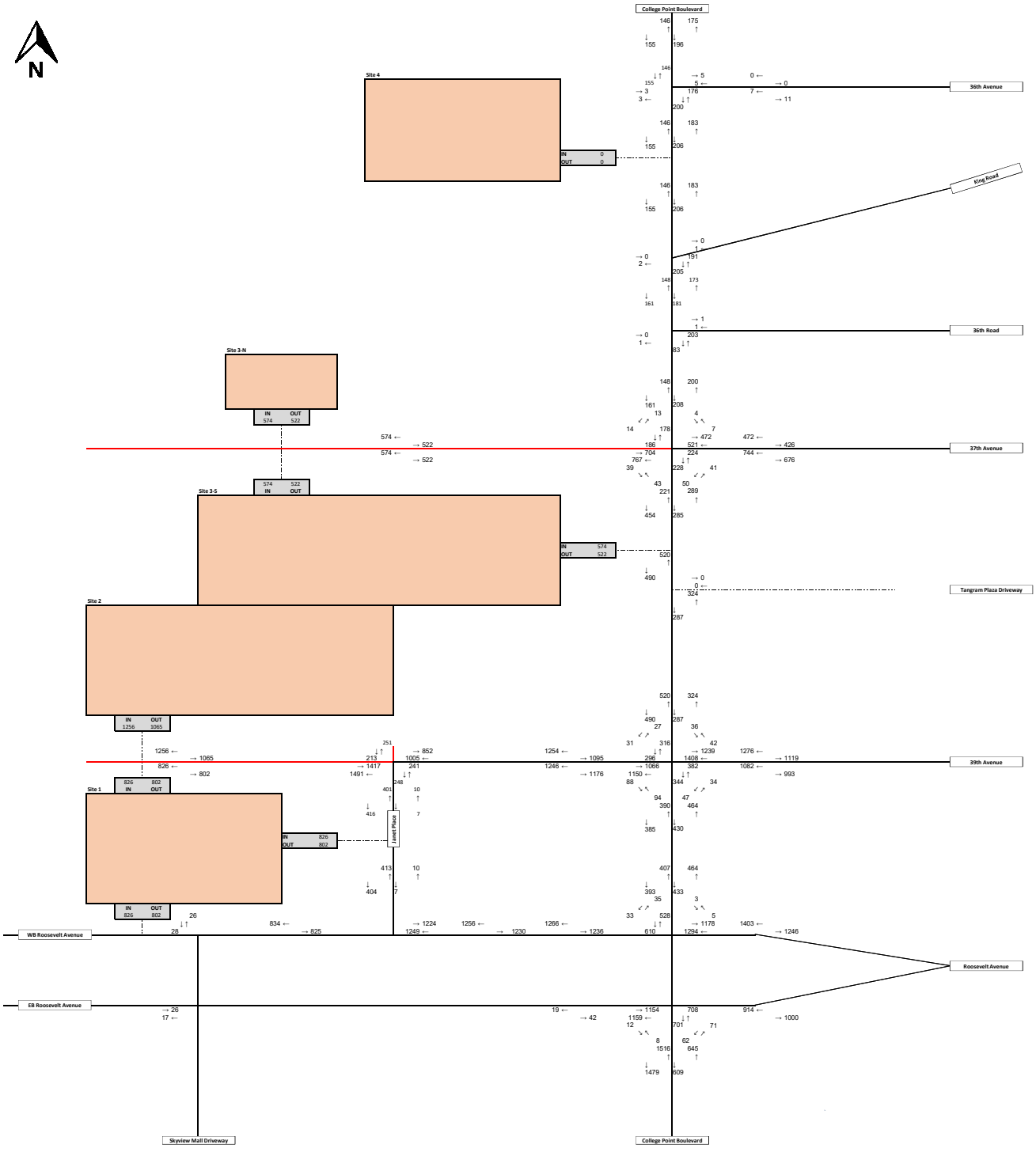


Figure K-30. Future No-Action Condition - Weekday Midday Pedestrian Volumes

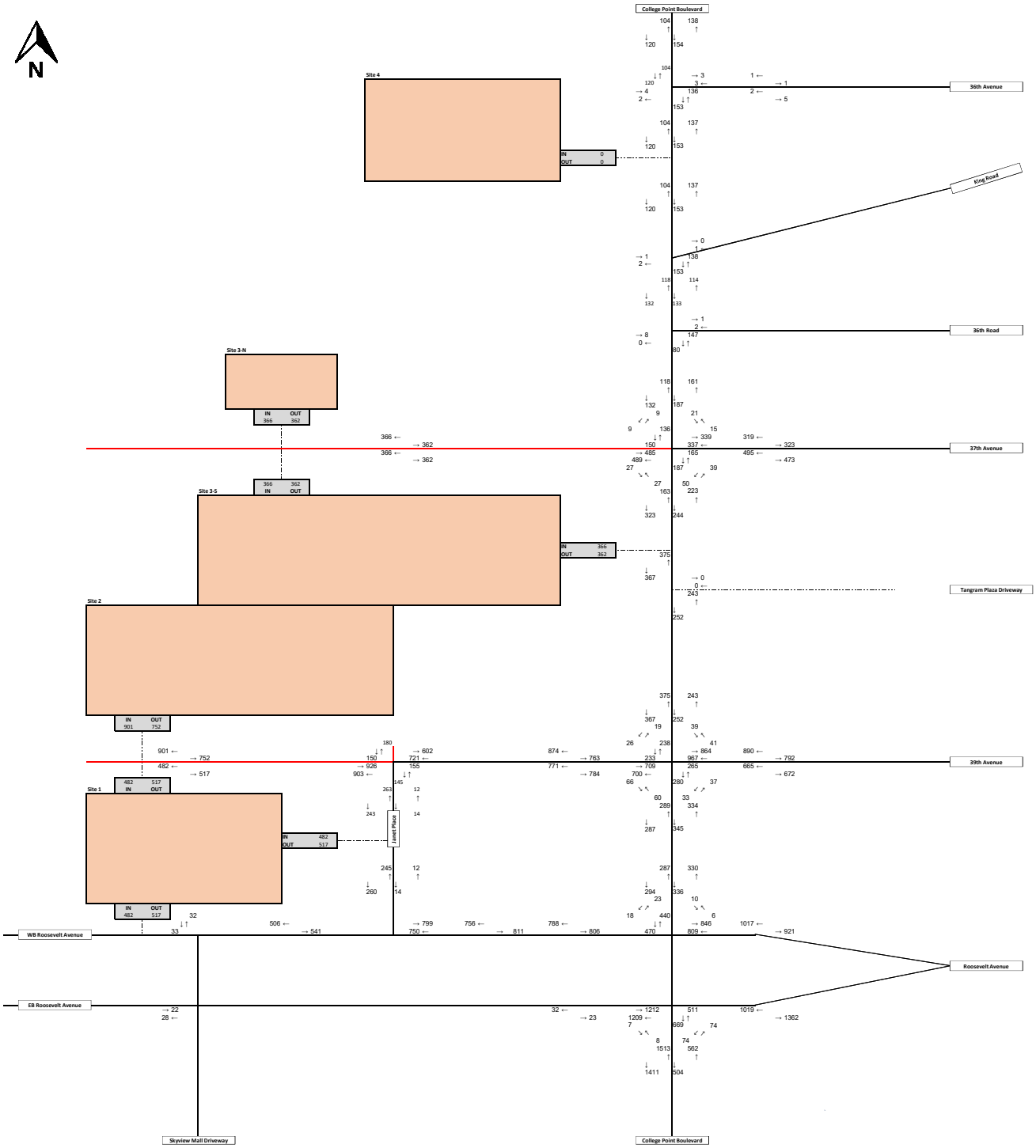


Figure K-31. Future No-Action Condition - Weekday PM Pedestrian Volumes

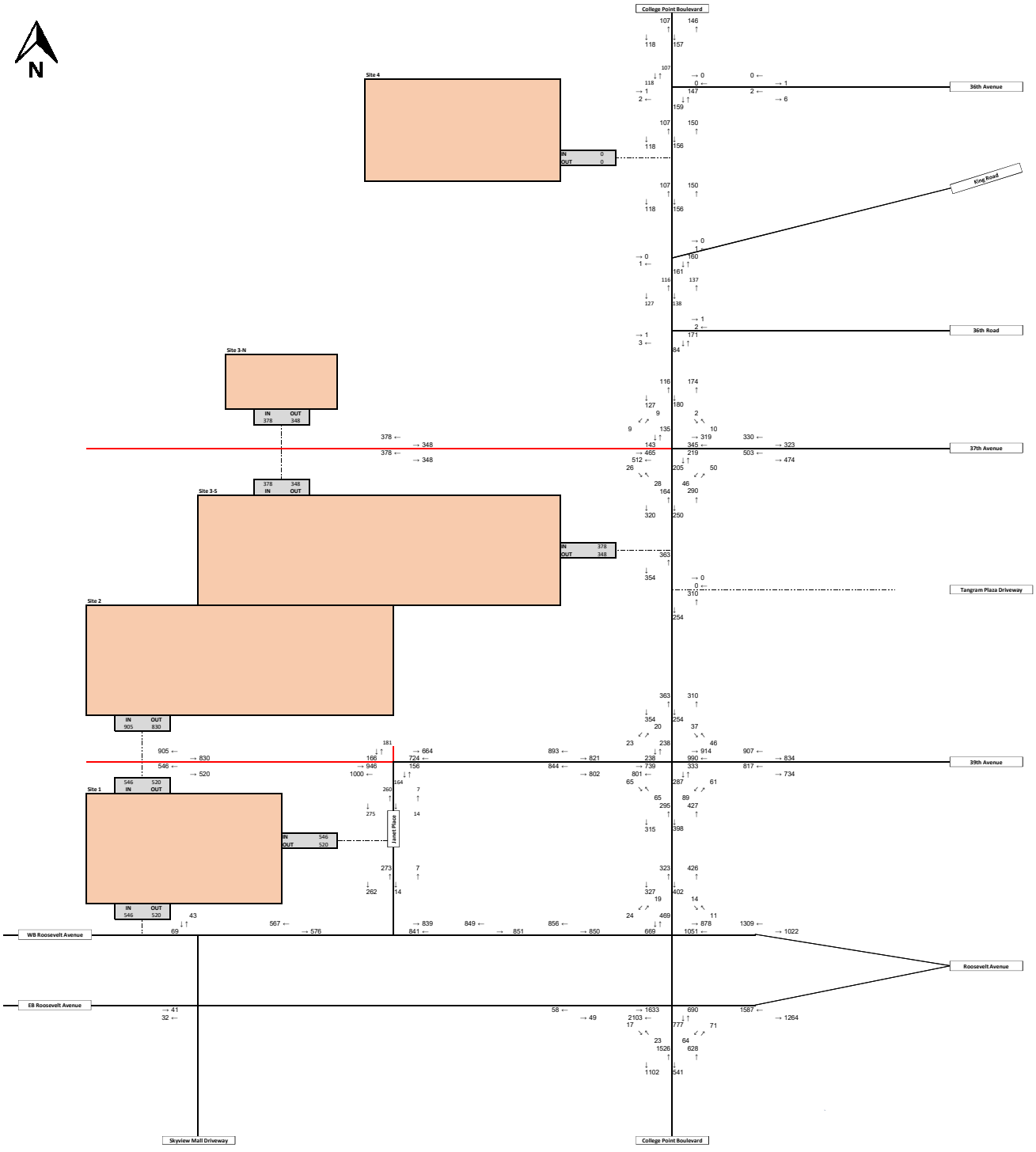


Figure K-32. Future No-Action Condition - Saturday Midday Pedestrian Volumes

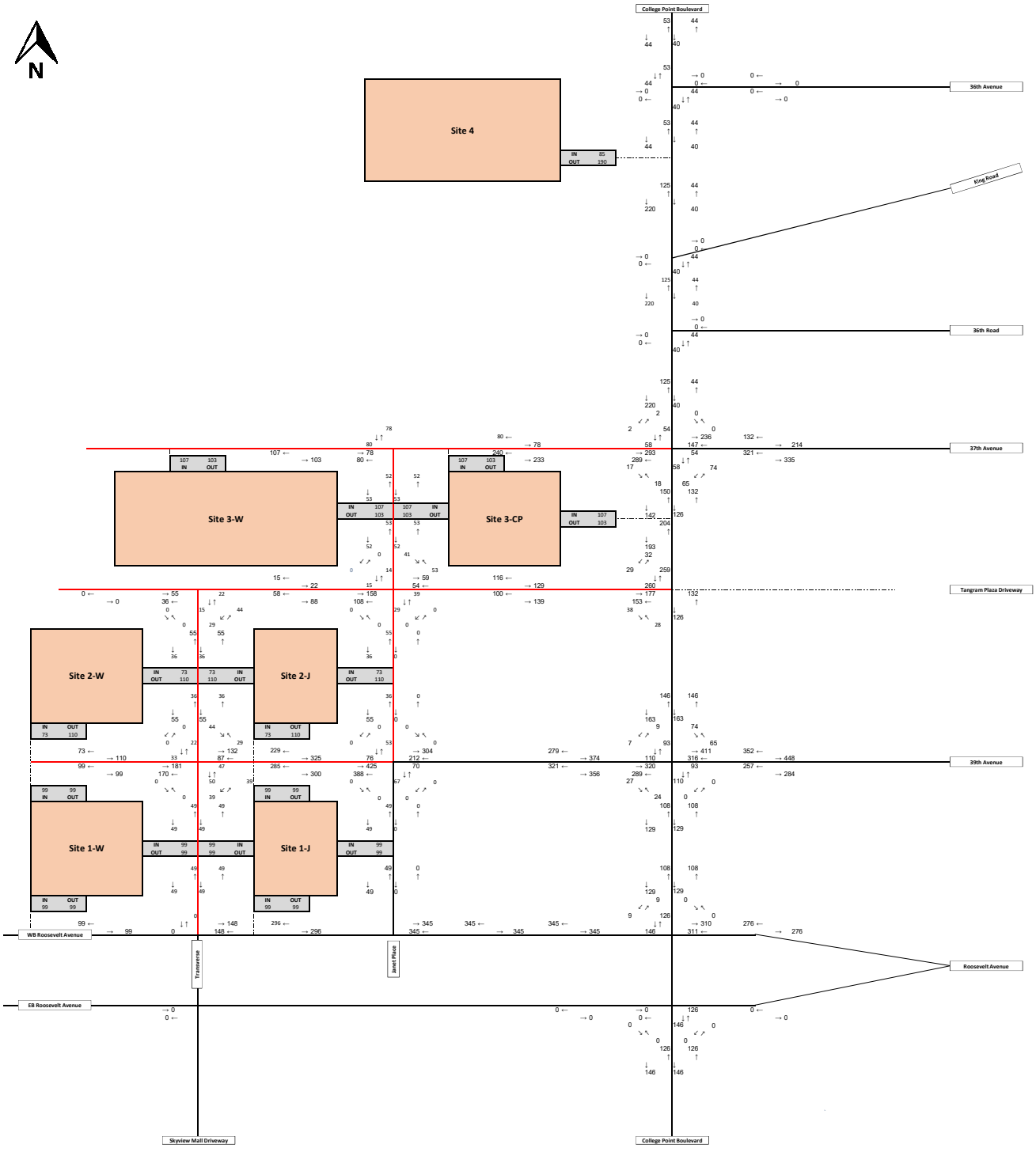


Figure K-33. Project Generated Trips - Weekday AM Peak Hour Pedestrian Volumes

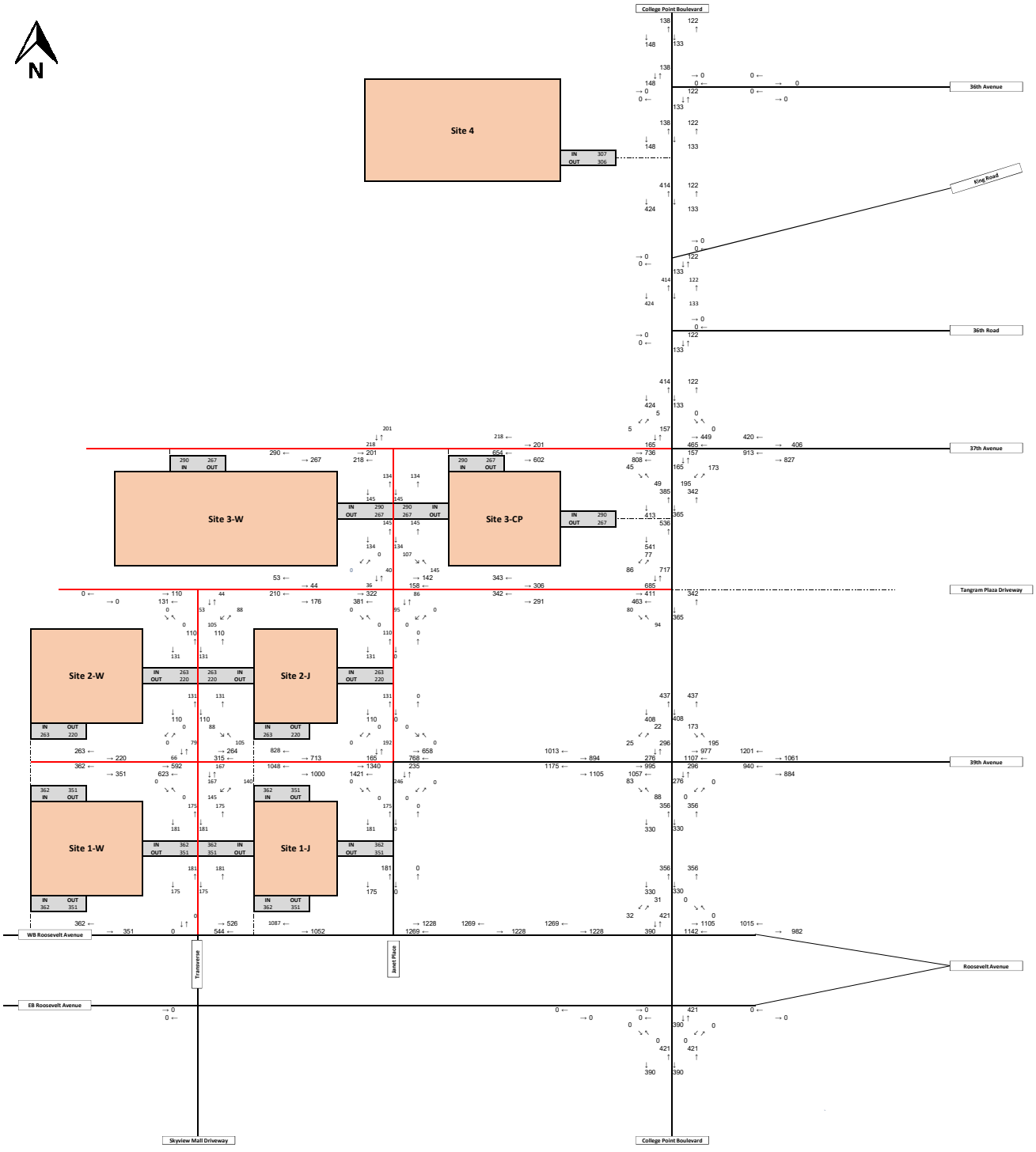


Figure K-34. Project Generated Trips - Weekday Midday Peak Hour Pedestrian Volumes

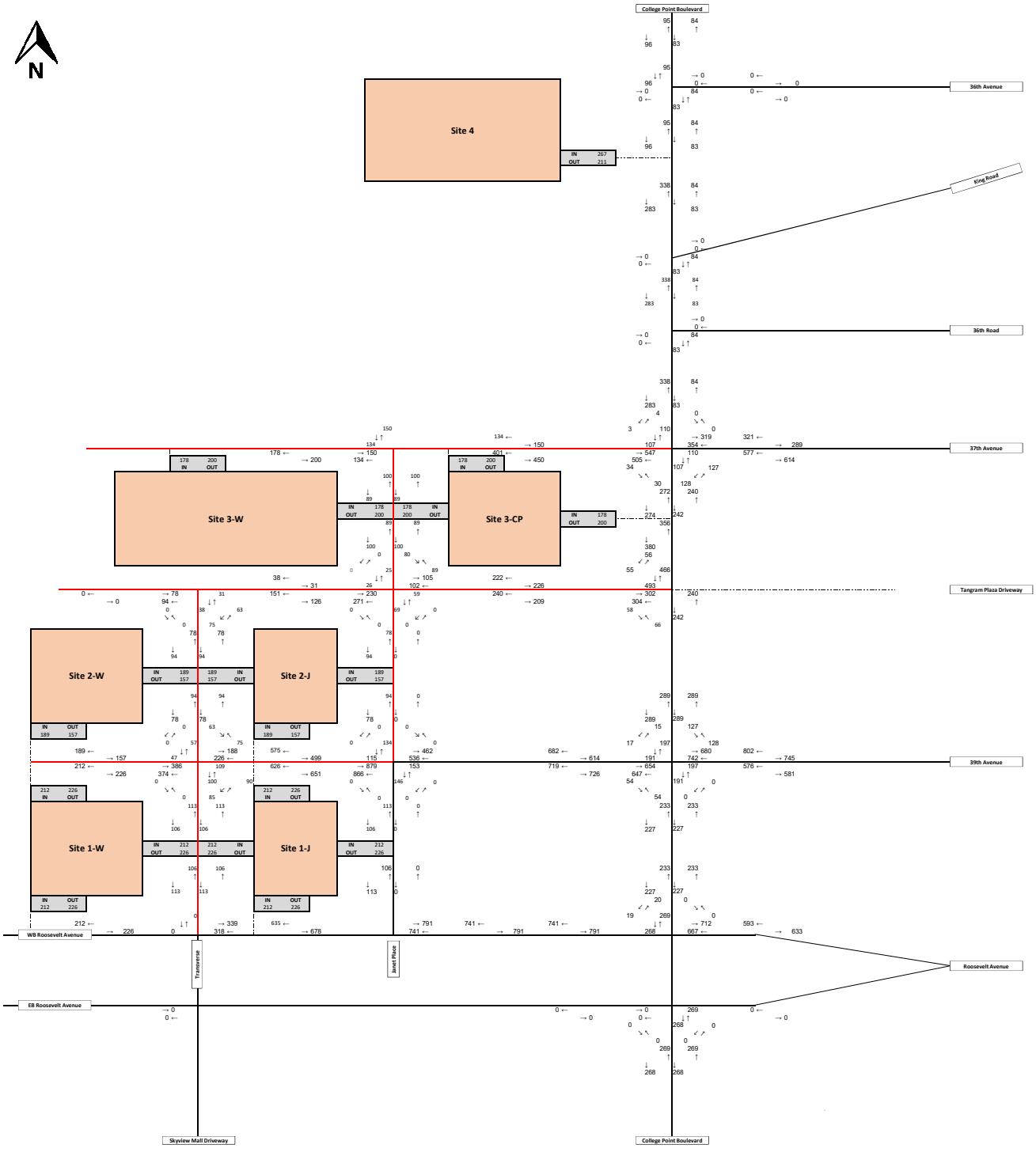


Figure K-35. Project Generated Trips - Weekday PM Peak Hour Pedestrian Volumes

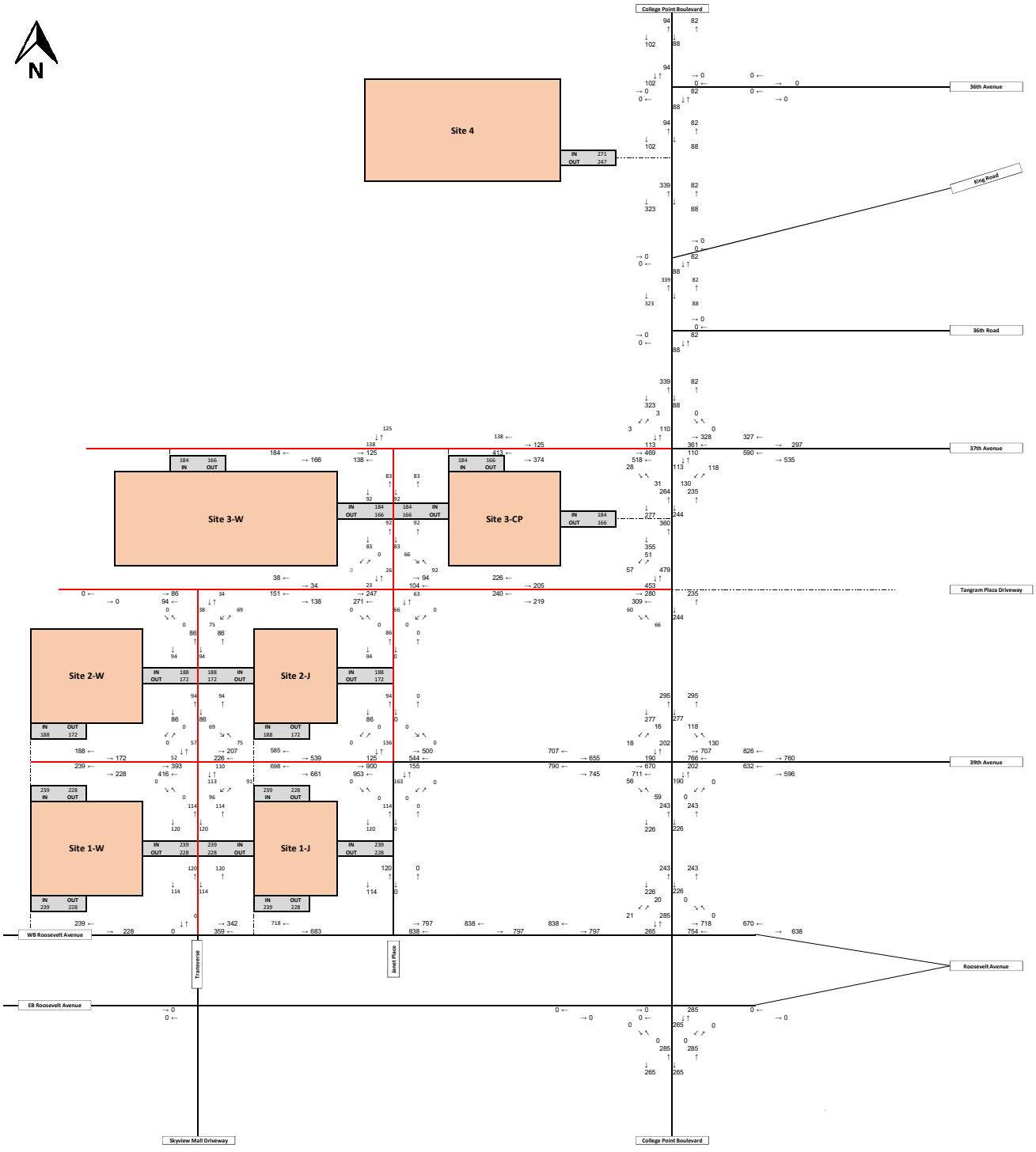


Figure K-36. Project Generated Trips - Saturday Midday Peak Hour Pedestrian Volumes

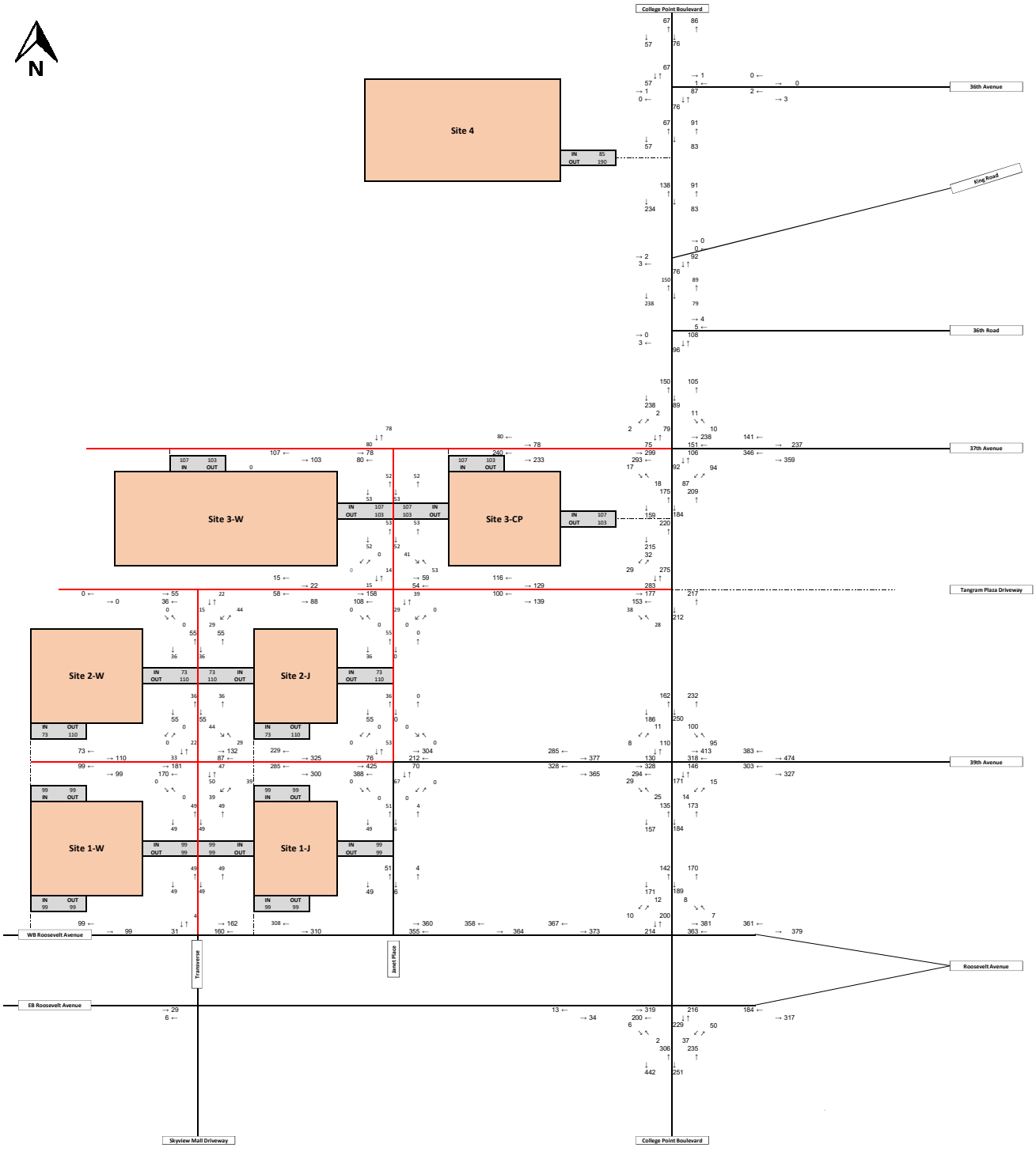


Figure K-37. Future With-Action Condition - Weekday AM Pedestrian Volumes

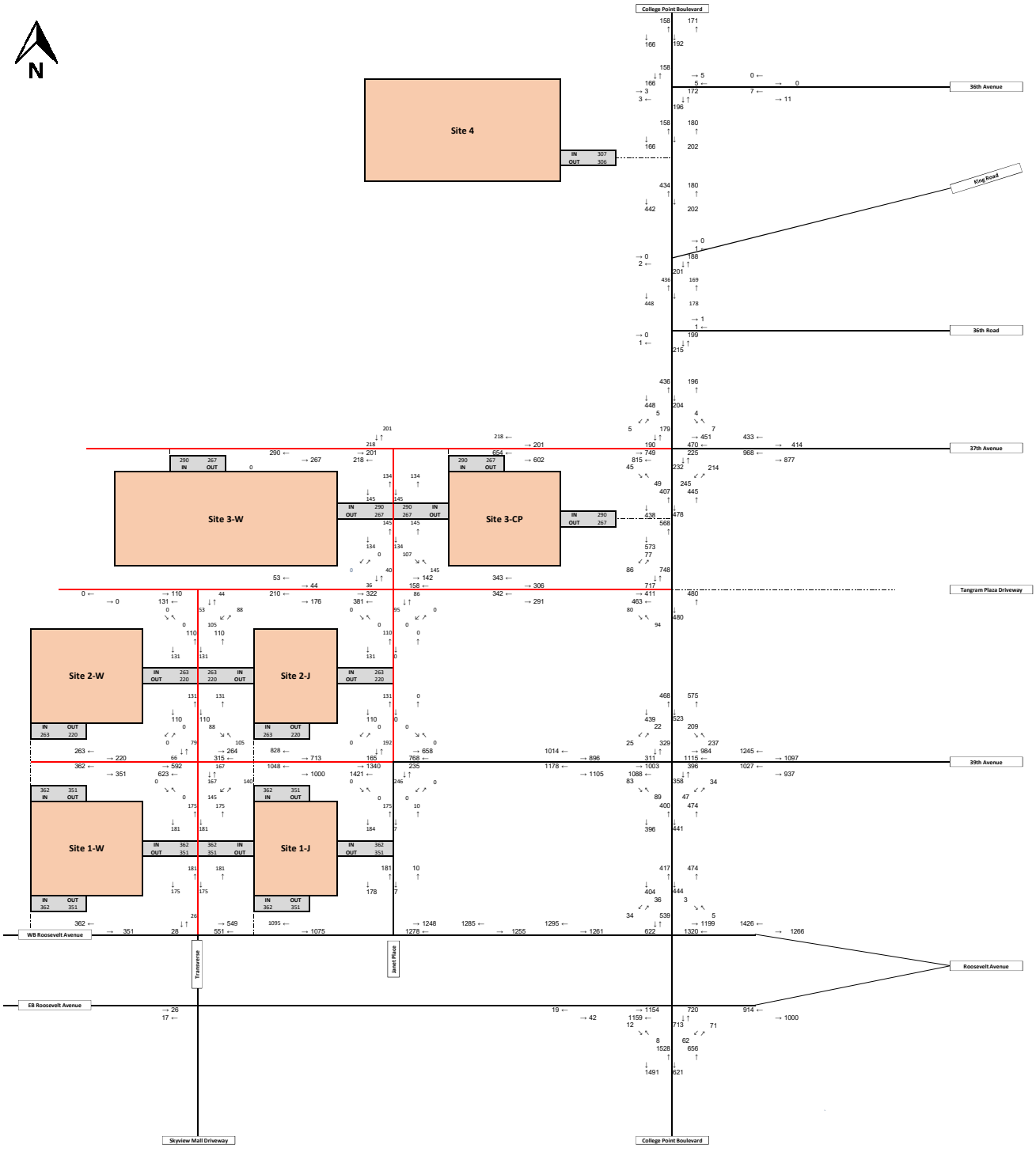


Figure K-38. Future With-Action Condition - Weekday Midday Pedestrian Volumes

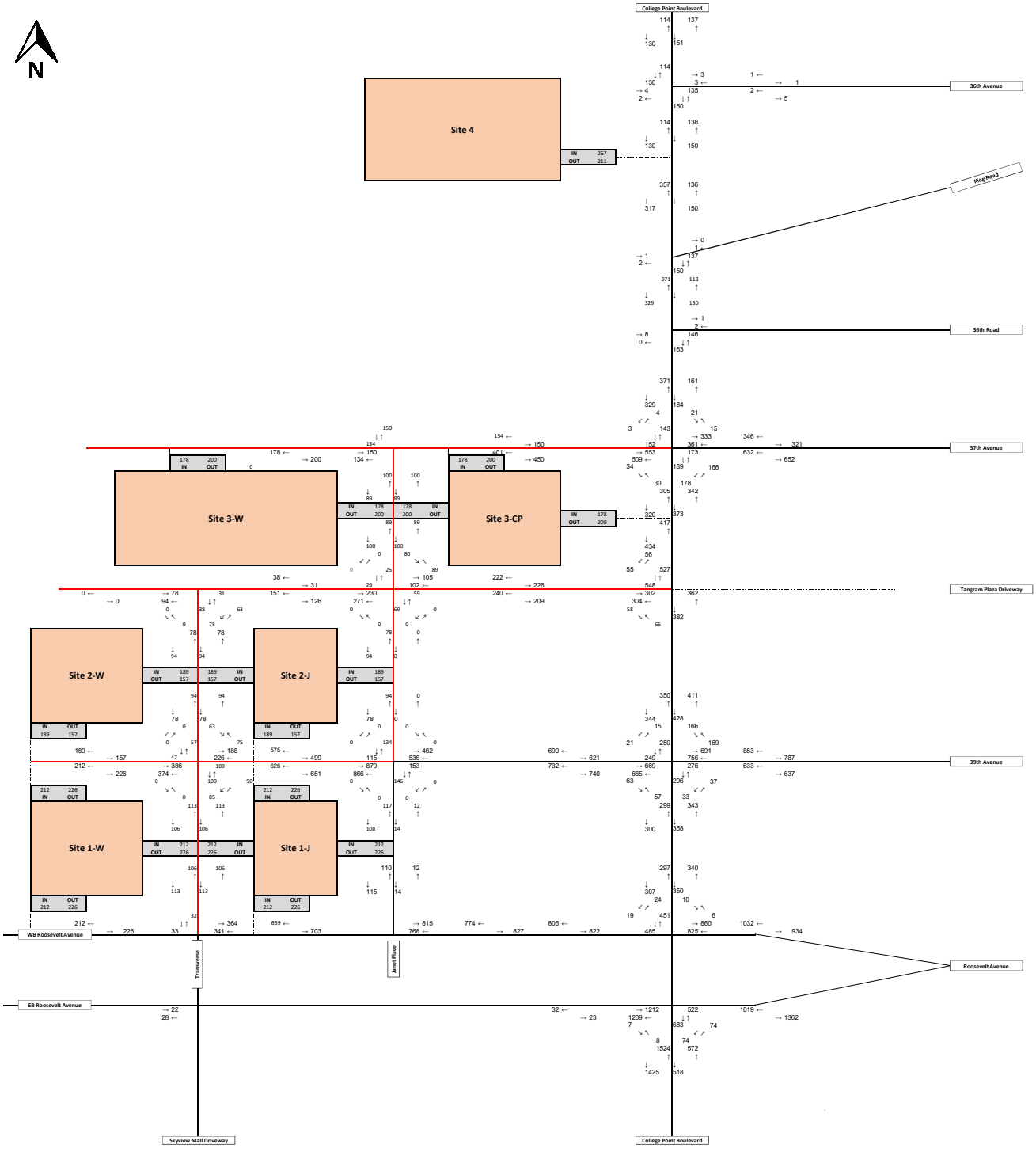


Figure K-39. Future With-Action Condition - Weekday PM Pedestrian Volumes

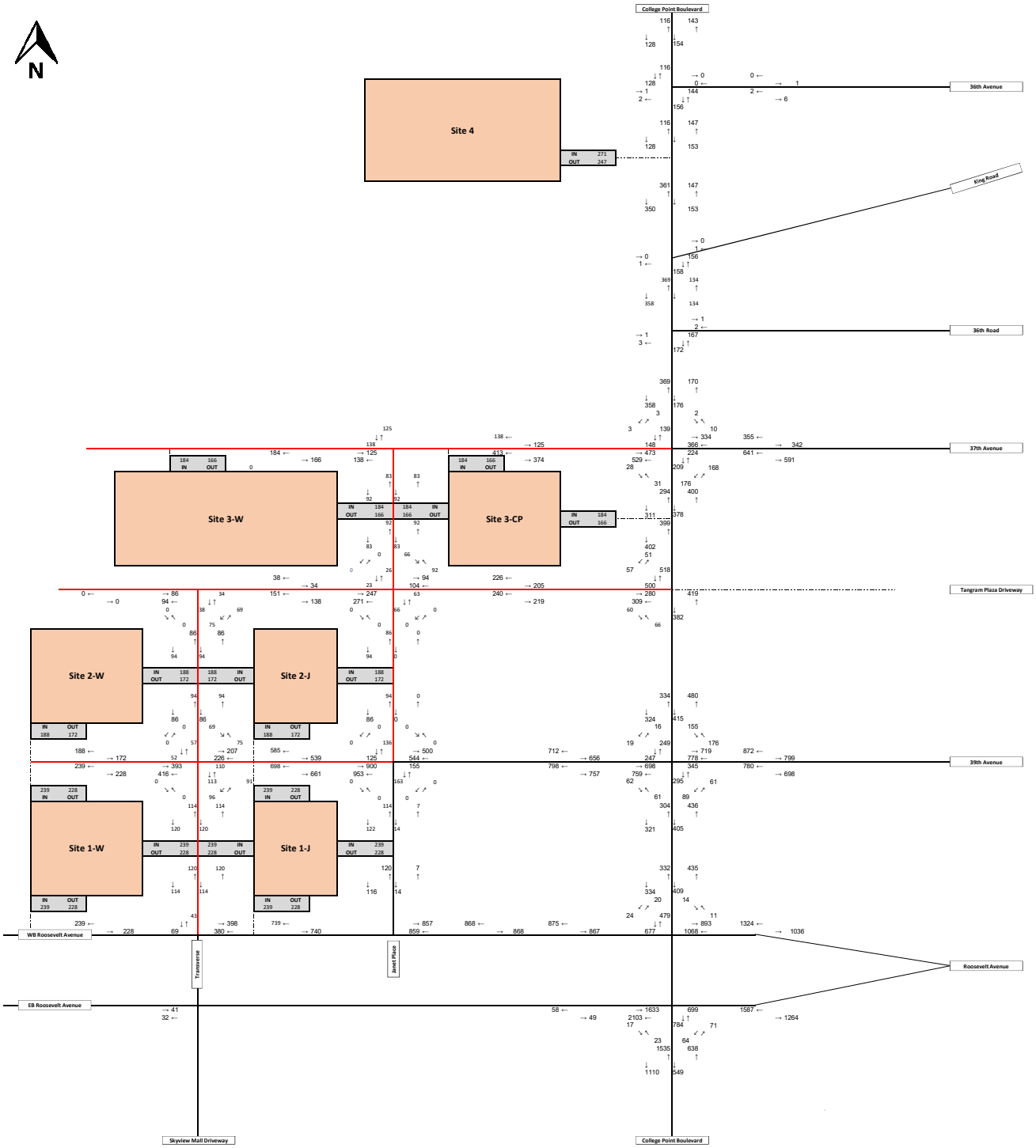


Figure K-40. Future With-Action Condition - Saturday Midday Pedestrian Volumes

Appendix K
Transportation

Future No-Action vs. Future With-Action Comparison Tables

Traffic and Pedestrian

Table K-1. Intersection Capacity Analysis

Future No-Action Condition (2025) vs. Future With-Action Condition (2025) - Traffic Level of Service Summary

Intersection ID	Intersection name	Control (With-Action)	Street name	Direction	Lane group	Weekday AM								Weekday Midday								Weekday PM							
						Future No-Action Condition			Future With-Action Condition			Impact Checker		Future No-Action Condition			Future With-Action Condition			Impact Checker		Future No-Action Condition			Future With-Action Condition			Impact Checker	
						v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	Δdelay (sec)	Impact	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	Δdelay (sec)	Impact	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	Δdelay (sec)	Impact
1	College Point Boulevard & 36th Avenue	TWSC[1]	Site 4 Driveway	EB	LTR	0.00	N/A	N/A	1.72	682.1	F	N/A	No[5]	0.00	N/A	N/A	6.50	3,655	F	N/A	No[5]	0.00	N/A	N/A	5.50	3,202	F	N/A	No[5]
			36th Avenue	WB	LTR	0.71	114.3	F	1.91	693.0	F	578.7	No[5]	3.18	1,666	F	Note 4	Note 4	F	N/A	No[5]	3.20	1,509	F	Note 4	Note 4	F	N/A	No[5]
			College Point Boulevard	NB	L	0.00	14.2	B	0.02	15.1	C	0.9	No	0.00	16.8	C	0.08	18.5	C	1.7	No	0.00	14.8	B	0.06	16.1	C	1.3	No
				SB	L	0.10	13.3	B	0.10	13.1	B	-0.2	No	0.28	29.4	D	0.26	27.8	D	-1.6	No	0.17	28.2	D	0.17	28.6	D	0.4	No
			Overall Intersection			-	Note 3	Note 3	-	Note 3	Note 3	N/A	-	-	Note 3	Note 3	-	Note 3	Note 3	N/A	-	-	Note 3	Note 3	-	Note 3	Note 3	N/A	-
2	College Point Boulevard & 37th Avenue	Signal	37th Avenue Ext.	EB	LR	0.53	33.8	C	N/A			-33.8	No	1.16	131.8	F	N/A			-131.8	No	1.28	186.9	F	N/A			-186.9	No
			37th Avenue	WB	LTR	0.51	33.6	C	0.55	36.8	D	3.2	No	1.17	138.5	F	1.13	123.0	F	-15.5	No	0.80	54.7	D	0.81	56.1	E	1.4	No
			College Point Boulevard	NB	L	1.24	142.3	F	0.58	38.3	D	-104.0	No	1.69	331.0	F	0.80	44.2	D	-286.8	No	1.97	462.7	F	0.50	23.4	C	-439.3	No
					T				0.63	20.0	C	-122.3	No				0.97	31.4	C	-299.6	No				1.20	121.8	F	-340.9	No
				SB	TR	0.96	43.1	D	0.98	44.6	D	1.5	No	0.95	34.0	C	0.97	38.4	D	4.4	No	0.83	27.2	C	0.83	27.2	C	0.0	No
			Overall Intersection			-	76.7	E	-	35.1	D	-41.6	-	-	174.8	F	-	44.0	D	-130.8	No	-	255.7	F	-	80.3	F	-175.4	No
3	College Point Boulevard & 39th Avenue	Signal	39th Avenue	EB	L	1.21	164.1	F	1.01	113.2	F	-50.9	No	2.10	533.3	F	1.66	356.7	F	-176.6	No	2.75	841.2	F	2.54	748.2	F	-93.0	No
					R				0.43	32.3	C	-131.8	No				1.08	110.0	F	-423.3	No				1.26	178.6	F	-662.6	No
				WB	L	0.50	37.8	D	0.31	39.7	D	1.9	No	0.69	35.2	D	0.53	38.8	D	3.6	No	0.93	77.0	E	0.59	54.6	D	-22.4	No
					TR				0.36	40.6	D	2.8	No				0.52	35.5	D	0.3	No				0.83	75.3	E	-1.7	No
			College Point Boulevard	NB	L	1.01	113.5	F	1.05	104.1	F	-9.4	No	2.61	776.7	F	1.69	352.2	F	-424.5	No	2.49	729.9	F	1.83	422.2	F	-307.7	No
					T	0.66	19.8	B	0.50	11.7	B	-8.1	No	1.07	69.6	E	0.76	16.2	B	-53.4	No	0.99	45.6	D	0.77	17.0	B	-28.6	No
				SB	TR	0.92	26.5	C	0.99	43.8	D	17.3	No	1.28	150.3	F	1.27	147.2	F	-3.1	No	1.06	57.0	E	1.04	51.4	D	-5.6	No
			Overall Intersection			-	46.1	D	-	42.5	D	-3.6	-	-	221.6	F	-	135.3	F	-86.3	No	-	221.5	F	-	137.1	F	-84.4	No
4A	College Point Boulevard & WB Roosevelt Avenue	Signal	Roosevelt Avenue	WB	LTR	0.50	35.5	D	0.51	35.9	D	0.4	No	0.70	32.2	C	0.70	32.4	C	0.2	No	0.60	39.0	D	0.61	39.2	D	0.2	No
			College Point Boulevard	NB	L	0.76	49.7	D	0.76	47.7	D	-2.0	No	0.68	30.5	C	0.69	30.9	C	0.4	No	0.64	36.8	D	0.65	37.0	D	0.2	No
					T	0.35	10.3	B	0.36	10.4	B	0.1	No	0.53	9.9	A	0.53	9.9	A	0.0	No	0.54	11.8	B	0.55	11.8	B	0.0	No
				SB	TR	1.56	291.0	F	1.39	216.6	F	-74.4	No	1.92	447.9	F	1.79	389.0	F	-58.9	No	1.94	463.0	F	1.82	409.7	F	-53.3	No
			Overall Intersection			-	154.6	F	-	113.1	F	-41.5	-	-	198.9	F	-	169.8	F	-29.1	No	-	216.1	F	-	188.6	F	-27.5	No
4B	College Point Boulevard & EB Roosevelt Avenue	Signal	Roosevelt Avenue	EB	LT	0.78	39.8	D	0.81	41.4	D	1.6	No	0.94	41.5	D	0.94	42.0	D	0.5	No	1.13	103.8	F	1.14	106.7	F	2.9	No
					R	0.43	28.6	C	0.43	28.6	C	0.0	No	0.53	21.4	C	0.53	21.4	C	0.0	No	0.74	38.4	D	0.74	37.3	D	-1.1	No
			College Point Boulevard	NB	TR	0.52	20.6	C	0.53	20.8	C	0.2	No	0.80	26.3	C	0.80	26.4	C	0.1	No	0.66	24.9	C	0.67	25.0	C	0.1	No
				SB	T	0.60	21.1	C	0.61	21.2	C	0.1	No	0.80	22.6	C	0.81	22.7	C	0.1	No	0.76	25.1	C	0.78	25.5	C	0.4	No
			Overall Intersection			-	24.9	C	-	25.3	C	0.4	-	-	27.8	C	-	28.0	C	0.2	No	-	44.3	D	-	45.0	D	0.7	No
5	Roosevelt Avenue & Janet Place	TWSC[1]	Roosevelt Avenue	WB	TR	-	0.0	A	-	0.0	A	0.0	No	-	0.0	A	-	0.0	A	0.0	No	-	0.0	A	-	0.0	A	0.0	No
			Janet Place	SB	R	15.53	6,928	F	6.63	2,689	F	-4,239	No	Note 4	Note 4	F	Note 4	Note 4	F	N/A	No	Note 4	Note 4	F	Note 4	Note 4	F	N/A	No
			Overall Intersection			-	Note 3	Note 3	-	Note 3	Note 3	N/A	-	-	Note 3	Note 3	-	Note 3	Note 3	N/A	-	-	Note 3	Note 3	-	Note 3	Note 3	N/A	-
6	Roosevelt Avenue & Skyview Mall Driveway	Signal	Roosevelt Avenue	EB	TR	0.35	10.0	A	0.35	10.0	B	0.0	No	0.67	24.6	C	0.68	24.6	C	0.0	No	0.63	22.2	C	0.64	22.3	C	0.1	No
				WB	L	0.41	50.6	D	0.41	51.7	D	1.1	No	0.46	35.9	D	0.46	35.9	D	0.0	No	0.37	50.3	D	0.37	50.3	D	0.0	No
					T	0.80	15.9	B	0.80	17.0	B	1.1	No	0.93	28.0	C	0.93	28.1	C	0.1	No	0.92	28.1	C	0.94	29.1	C	1.0	No
			Skyview Mall Driveway	NB	L	0.04	48.1	D	0.04	48.1	D	0.0	No	0.12	25.3	C	0.12	25.3	C	0.0	No	0.15	37.0	D	0.15	37.0	D	0.0	No
					R	0.05	33.7	C	0.05	33.7	C	0.0	No	0.19	14.6	B	0.19	14.6	B	0.0	No	0.30	27.2	C	0.30	27.2	C	0.0	No
			Overall Intersection			-	15.3	B	-	15.9	B	0.6	-	-	25.8	C	-	25.8	C	0.0	No	-	26.3	C	-	26.8	C	0.5	No
7	College Point Boulevard & 38th Avenue/ Tangram Plaza Driveway	Signal	38th Avenue Ext.	EB	L	N/A Approach would not exist			0.23	25.8	C	N/A	No	N/A Approach would not exist			0.44	28.8	C	N/A	No	N/A Approach would not exist			0.66	46.4	D	N/A	No
					TR				0.19	25.5	C	N/A	No				0.55	35.0	D	N/A	No				0.70	53.6	D	N/A	No
			Tangram Plaza Driveway	WB	L	2.35	972.1	F	0.14	25.0	C	-947.1	No	Note 4	Note 4	F	0.60	37.7	D	N/A	No	Note 4	Note 4	F	1.04	117.5	F	N/A	No
					R	0.17	18.2	C	0.08	17.4	B	-0.8	No	1.38	293.3	F	0.24	17.7	B	-275.6	No	1.59	361.7	F	0.38	30.1	C	-331.6	No
			College Point Boulevard	NB	TR	-	0.0	A	0.78	32.2	C	32.2	No	-	0.0	A	1.02	43.4	D	43.4	No	-	0.0	A	0.98	30.2	C	30.2	No
				SB	L	0.28	18.0	C	0.59	21.0	C	3.0	No	1.61	377.4	F	0.98	42.2	D	-335.2	No	1.23	222.7	F	1.06	103.1	F	-119.6	No
					T	-	0.0	A	0.96	31.5	C	31.5	No	-	0.0	A	0.89	16.6	B	16.6	No	-	0.0	A	0.92	24.8	C	24.8	No
			Overall Intersection			-	Note 3	Note 3	-	30.4	C	N/A	-	-	Note 3	Note 3	-	31.3	C	N/A	-	-	Note 3	Note 3	-	38.6	D	N/A	-
8	39th Avenue & Janet Place	Signal	39th Avenue Ext.	EB	L/TR	0.00	33.3	D	0.44	25.4	C	-7.9	No	Note 4	Note 4	F	0.80	41.1	D	N/A	No	Note 4	Note 4	F	0.78	44.4	D	N/A	No
			39th Avenue	WB	L/LT	Note 4	Note 4	F	0.75	10.2	B	N/A	No	Note 4	Note 4	F	1.03	35.5	D	N/A	No	Note 4	Note 4	F	1.04	42.4	D	N/A	No
			Janet Place	NB	LR	Note 4	Note 4	F	0.38	35.2	D	N/A	No	Note 4	Note 4	F	0.90	77.0	E	N/A	No	Note 4	Note 4	F	0.78	43.1	D	N/A	No
			Janet Place Ext.	SB	LTR	Note 4	Note 4	F	0.19	30.3	C	N/A	No	Note 4	Note 4	F	0.22	26.7	C	N/A	No	Note 4	Note 4	F	0.21	22.9	C	N/A	No
			Overall Intersection			-	Note 3	Note 3	-	17.3	B	N/A	-	-	Note 3	Note 3	-	41.2	D	N/A	-	-	Note 3	Note 3	-	41.2	D	N/A	-
9	38th Avenue Ext. & Janet Place Ext.	AWSC[2]	38th Avenue Ext.	EB	TR	N/A Intersection would not exist			0.19	8.1	A	N/A	No	N/A Intersection would not exist			0.33	9.5	A	N/A	No	N/A Intersection would not exist			0.43	10.9	B	N/A	No
			Janet Place Ext.	SB	LT				0.18	8.5	A	N/A	No				0.27	9.5	A	N/A	No				0.39	11.1	B	N/A	No
			Overall Intersection						-	8.3	A	N/A	-				-	9.5	A	N/A	-				-	11.0	B	N/A	-
10	38th Avenue Ext. & Transverse Road	TWSC[1]	38th Avenue Ext.	EB	T	N/A Intersection would not exist			-	0.0	A	N/A	No	N/A Intersection would not exist			-	0.0	A	N/A	No	N/A Intersection would not exist			-	0.0	A	N/A	No
			Transverse Road	NB	LR				0.31	12.1	B	N/A	No				0.72	33.3	D	N/A	No				0.55	21.5	C	N/A	No
			Overall Intersection						-	Note 3	Note 3	N/A	-				-	Note 3	Note 3	N/A	-				-	Note 3	Note 3	N/A	-
11	39th Avenue Ext. & Transverse Road	AWSC[2]	39th Avenue Ext.	EB	L/LT	N/A Intersection would not exist			0.14	8.3	A	N/A	No	N/A Intersection would not exist			0.21	9.5	A	N/A	No	N/A Intersection would not exist			0.17	8.9	A	N/A	No
				WB	TR				0.33	8.8	A	N/A	No				0.58	13.5	B	N/A	No				0.48	11.1	B	N/A	No
			Transverse Road	NB	LTR				0.15	8.0	A	N/A	No				0.32	10.0	B	N/A	No				0.24	9.0	A	N/A	No
			Overall Intersection						-	8.5	A	N/A	-				-	11.8	B	N/A	-				-	10.2	B	N/A	-

Intersection ID	Intersection name	Control (With-Action)	Street name	Direction	Lane group	Saturday Midday							
						Future No-Action Condition			Future With-Action Condition			Impact Checker	
						v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	Δdelay (sec)	Impact
1	College Point Boulevard & 36th Avenue	TWSC[1]	Site 4 Driveway	EB	LTR	0.00	N/A	N/A	3.20	1,734	F	N/A	No[5]
			36th Avenue	WB	LTR	0.83	308.8	F	Note 4	Note 4	F	N/A	No[5]
			College Point Boulevard	NB	L	0.00	14.5	B	0.05	15.6	C	1.1	No
				SB	L	0.13	22.4	C	0.13	21.7	C	-0.7	No
			Overall Intersection			-	Note 3	Note 3	-	Note 3	Note 3	N/A	-
2	College Point Boulevard & 37th Avenue	Signal	37th Avenue Ext.	EB	LR	0.61	33.1	C	N/A			-33.1	No
			37th Avenue	WB	LTR	0.88	56.6	E	0.85	51.6	D	-5.0	No
			College Point Boulevard	NB	L	1.44	219.2	F	0.26	14.0	B	-205.2	No
					T				0.93	26.1	C	-193.1	No
				SB	TR	0.76	19.6	B	0.79	21.2	C	1.6	No
			Overall Intersection			-	118.6	F	-	26.2	C	-92.4	No
3	College Point Boulevard & 39th Avenue	Signal	39th Avenue	EB	L	1.39	223.3	F	1.29	201.0	F	-22.3	No
					R				0.72	40.0	D	-183.3	No
				WB	L	0.73	37.5	D	0.57	40.3	D	2.8	No
					TR				0.62	41.8	D	4.3	No
			College Point Boulevard	NB	L	1.50	293.8	F	1.08	103.6	F	-190.2	No
					T	1.17	107.8	F	0.86	20.8	C	-87.0	No
				SB	TR	1.01	42.9	D	1.01	41.1	D	-1.8	No
			Overall Intersection			-	98.6	F	-	47.7	D	-50.9	No
4A	College Point Boulevard & WB Roosevelt Avenue	Signal	Roosevelt Avenue	WB	LTR	0.66	30.8	C	0.67	31.0	C	0.2	No
			College Point Boulevard	NB	L	0.60	28.4	C	0.61	28.4	C	0.0	No
					T	0.52	9.8	A	0.53	9.9	A	0.1	No
				SB	TR	1.76	375.1	F	1.64	319.8	F	-55.3	No
			Overall Intersection			-	164.5	F	-	137.8	F	-26.7	No
4B	College Point Boulevard & EB Roosevelt Avenue	Signal	Roosevelt Avenue	EB	LT	1.03	63.1	E	1.05	66.2	E	3.1	No
					R	0.57	22.6	C	0.57	22.5	C	-0.1	No
			College Point Boulevard	NB	TR	0.80	26.6	C	0.81	26.7	C	0.1	No
				SB	T	0.74	21.5	C	0.74	21.6	C	0.1	No
			Overall Intersection			-	32.9	C	-	33.7	C	0.8	No
5	Roosevelt Avenue & Janet Place	TWSC[1]	Roosevelt Avenue	WB	TR	-	0.0	A	-	0.0	A	0.0	No
			Janet Place	SB	R	Note 4	Note 4	F	Note 4	Note 4	F	N/A	No
			Overall Intersection			-	Note 3	Note 3	-	Note 3	Note 3	N/A	-
6	Roosevelt Avenue & Skyview Mall Driveway	Signal	Roosevelt Avenue	EB	TR	0.68	24.8	C	0.69	24.9	C	0.1	No
				WB	L	0.57	58.6	E	0.57	58.6	E	0.0	No
					T	1.00	37.4	D	1.01	39.7	D	2.3	No
			Skyview Mall Driveway	NB	L	0.25	26.7	C	0.25	26.7	C	0.0	No
					R	0.35	16.7	B	0.35	16.7	B	0.0	No
			Overall Intersection			-	30.3	C	-	31.2	C	0.9	No
7	College Point Boulevard & 38th Avenue/ Tangram Plaza Driveway	Signal	38th Avenue Ext.	EB	L	N/A Approach would not exist			0.30	28.7	C	N/A	No
					TR				0.33	30.6	C	N/A	No
			Tangram Plaza Driveway	WB	L	Note 4	Note 4	F	0.87	63.8	E	N/A	No
					R	1.47	303.1	F	0.39	22.4	C	-280.7	No
			College Point Boulevard	NB	TR	-	0.0	A	0.99	34.2	C	34.2	No
				SB	L	1.55	333.4	F	1.25	160.4	F	-173.0	No
					T	-	0.0	A	0.86	17.4	B	17.4	No
			Overall Intersection			-	Note 3	Note 3	-	38.0	D	N/A	-
8	39th Avenue & Janet Place	Signal	39th Avenue Ext.	EB	L/TR	Note 4	Note 4	F	0.35	17.9	B	N/A	No
			39th Avenue	WB	L/LT	Note 4	Note 4	F	0.83	16.2	B	N/A	No
			Janet Place	NB	LR	Note 4	Note 4	F	0.62	39.1	D	N/A	No
			Janet Place Ext.	SB	LTR	Note 4	Note 4	F	0.11	23.2	C	N/A	No
			Overall Intersection			-	Note 3	Note 3	-	20.5	C	N/A	-
9	38th Avenue Ext. & Janet Place Ext.	AWSC[2]	38th Avenue Ext.	EB	TR	N/A Intersection would not exist			0.18	8.0	A	N/A	No
			Janet Place Ext.	SB	LT				0.15	8.2	A	N/A	No
			Overall Intersection						-	8.1	A	N/A	-
10	38th Avenue Ext. & Transverse Road	TWSC[1]	38th Avenue Ext.	EB	T	N/A Intersection would not exist			-	0.0	A	N/A	No
			Transverse Road	NB	LR				0.40	16.3	C	N/A	No
			Overall Intersection						-	Note 3	Note 3	N/A	-
11	39th Avenue Ext. & Transverse Road	AWSC[2]	39th Avenue Ext.	EB	L/LT	N/A Intersection would not exist			0.13	8.2	A	N/A	No
				WB	TR				0.32	8.9	A	N/A	No
			Transverse Road	NB	LTR				0.17	8.0	A	N/A	No
			Overall Intersection						-	8.5	A	N/A	-

Notes:

1. Two-Way Stop-Controlled.
2. All-Way Stop-Controlled
3. Intersection delay and LOS information for TWSC intersections are not provided by HCS.
4. Lane group delay and v/c ratio information are not provided by HCS.
5. Not an impact per CEQR criteria, as total Future With-Action volume on minor approach of unsignalized intersection is less than 90 Passenger Car Equivalents (PCEs).
6. Blue shading denotes approaches/intersections that would not exist in the Future No-Action Condition.

Table K-2. Corner Analysis Comparison

Future No-Action Condition (2025) vs. Future With-Action Condition (2025)

Intersection ID	Location	Corner	Impact Checker															
			Weekday AM				Weekday Midday				Weekday PM				Saturday Midday			
			No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?
2	College Point Boulevard & 37th Avenue	North-East	107.9	98.7	-9.2	No	40.1	44.4	4.3	No	54.7	52.8	-1.9	No	48.9	47.7	-1.2	No
		South-East	102.6	74.2	-28.5	No	31.4	24.6	-6.9	No	41.5	33.3	-8.2	No	33.1	30.3	-2.9	No
		South-West	N/A	117.5	N/A	No	N/A	31.5	N/A	No	N/A	47.6	N/A	No	N/A	44.1	N/A	No
		North-West	N/A	171.4	N/A	No	N/A	66.4	N/A	No	N/A	80.3	N/A	No	N/A	91.6	N/A	No
3	College Point Boulevard & 39th Avenue	North-East	41.7	40.9	-0.9	No	5.8	6.1	0.3	No	9.3	11.1	1.8	No	8.8	9.6	0.8	No
		South-East	48.8	52.2	3.4	No	8.5	8.3	-0.2	No	14.4	14.8	0.4	No	14.4	15.2	0.9	No
		South-West	81.4	81.9	0.4	No	15.5	14.3	-1.2	No	36.3	37.6	1.2	No	37.9	38.8	0.9	No
		North-West	176.7	209.0	32.3	No	49.1	58.1	9.0	No	67.0	80.8	13.8	No	72.5	86.6	14.1	No
4A	College Point Boulevard & WB Roosevelt Avenue	North-East	52.1	47.9	-4.2	No	4.8	4.8	-0.1	No	14.3	14.1	-0.2	No	10.3	10.2	-0.1	No
		North-West	25.3	23.4	-1.9	No	-1.2	-1.1	0.0	No	4.7	4.7	0.1	No	2.4	2.4	0.0	No
4B	College Point Boulevard & EB Roosevelt Avenue	South-East	109.1	106.5	-2.6	No	22.0	22.1	0.1	No	18.7	19.1	0.4	No	10.2	10.5	0.3	No
		South-West	82.5	79.9	-2.6	No	19.7	19.8	0.1	No	14.9	15.5	0.5	No	10.1	10.3	0.3	No
7	College Point Boulevard & 38th Avenue/ Tangram Plaza Drwy	South-West	N/A	140.1	N/A	No	N/A	48.3	N/A	No	N/A	68.9	N/A	No	N/A	74.3	N/A	No
		North-West	N/A	163.0	N/A	No	N/A	60.6	N/A	No	N/A	84.5	N/A	No	N/A	90.3	N/A	No
8	39th Avenue & Janet Place	North-East	N/A	74.3	N/A	No	N/A	19.7	N/A	No	N/A	32.5	N/A	No	N/A	30.8	N/A	No
		South-East	N/A	84.8	N/A	No	N/A	20.2	N/A	No	N/A	34.9	N/A	No	N/A	32.7	N/A	No
		South-West	N/A	150.3	N/A	No	N/A	41.1	N/A	No	N/A	66.4	N/A	No	N/A	62.9	N/A	No
		North-West	N/A	219.1	N/A	No	N/A	75.7	N/A	No	N/A	110.4	N/A	No	N/A	105.3	N/A	No

Table K-3. Crosswalk Analysis Comparison

Future No-Action Condition (2025) vs. Future With-Action Condition (2025)

Intersection ID	Location	Crosswalk	Impact Checker															
			Weekday AM				Weekday Midday				Weekday PM				Saturday Midday			
			No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?
2	College Point Boulevard & 37th Avenue	North	64.0	56.2	-7.8	No	12.2	17.3	5.1	No	21.3	24.3	3.0	No	19.9	23.2	3.3	No
		East	97.7	103.4	5.7	No	59.6	65.0	5.4	No	95.4	100.8	5.4	No	43.7	47.3	3.6	No
		South	42.6	36.1	-6.5	No	6.5	8.1	1.6	No	12.6	13.7	1.0	No	8.9	10.7	1.8	No
		West	293.9	212.6	-81.3	No	104.0	82.3	-21.7	No	148.5	110.9	-37.6	No	151.5	112.4	-39.1	No
3	College Point Boulevard & 39th Avenue	North	15.6	20.4	4.9	No	4.0	3.9	0.0	No	4.5	5.2	0.7	No	5.9	5.8	-0.1	No
		East	133.1	140.7	7.6	No	42.5	51.6	9.0	No	85.7	95.0	9.2	No	42.3	51.7	9.4	No
		South	15.2	19.5	4.3	No	3.6	3.7	0.0	No	6.3	7.6	1.3	No	7.6	7.4	-0.2	No
		West	168.2	116.3	-51.9	No	39.6	33.1	-6.4	No	78.1	67.1	-11.0	No	58.4	49.9	-8.5	No
4A	College Point Boulevard & WB Roosevelt Avenue	North	7.4	7.2	-0.2	No	2.1	2.3	0.2	No	3.5	4.2	0.7	No	3.2	3.5	0.3	No
		East	87.5	83.0	-4.5	No	18.9	18.5	-0.3	No	27.0	26.4	-0.6	No	17.9	17.6	-0.2	No
		West	9.2	14.6	5.4	No	-1.5	0.2	1.6	No	5.5	7.9	2.4	No	-1.9	0.0	1.9	No
4B	College Point Boulevard & EB Roosevelt Avenue	East	82.4	78.2	-4.2	No	16.5	16.2	-0.3	No	24.4	23.8	-0.6	No	15.4	15.2	-0.2	No
		South	13.1	13.1	0.0	No	4.0	4.5	0.4	No	2.2	2.8	0.6	No	2.2	2.5	0.3	No
		West	53.0	49.9	-3.1	No	15.9	15.5	-0.4	No	28.1	27.3	-0.9	No	16.5	16.2	-0.3	No
7	College Point Boulevard & 38th Avenue/ Tangram Plaza Drwy	West	N/A	58.5	N/A	No	N/A	23.1	N/A	No	N/A	35.4	N/A	No	N/A	37.5	N/A	No
		South	N/A	125.8	N/A	No	N/A	20.4	N/A	No	N/A	28.2	N/A	No	N/A	22.5	N/A	No
8	39th Avenue & Janet Place	North	N/A	84.8	N/A	No	N/A	24.9	N/A	No	N/A	33.5	N/A	No	N/A	33.3	N/A	No
		East	N/A	78.3	N/A	No	N/A	24.5	N/A	No	N/A	45.2	N/A	No	N/A	46.4	N/A	No
		South	N/A	82.3	N/A	No	N/A	19.5	N/A	No	N/A	28.8	N/A	No	N/A	29.1	N/A	No
		West	N/A	100.3	N/A	No	N/A	44.5	N/A	No	N/A	80.6	N/A	No	N/A	71.0	N/A	No

Table K-4. Sidewalk Analysis Comparison
Future No-Action Condition (2025) vs. Future With-Action Condition (2025)

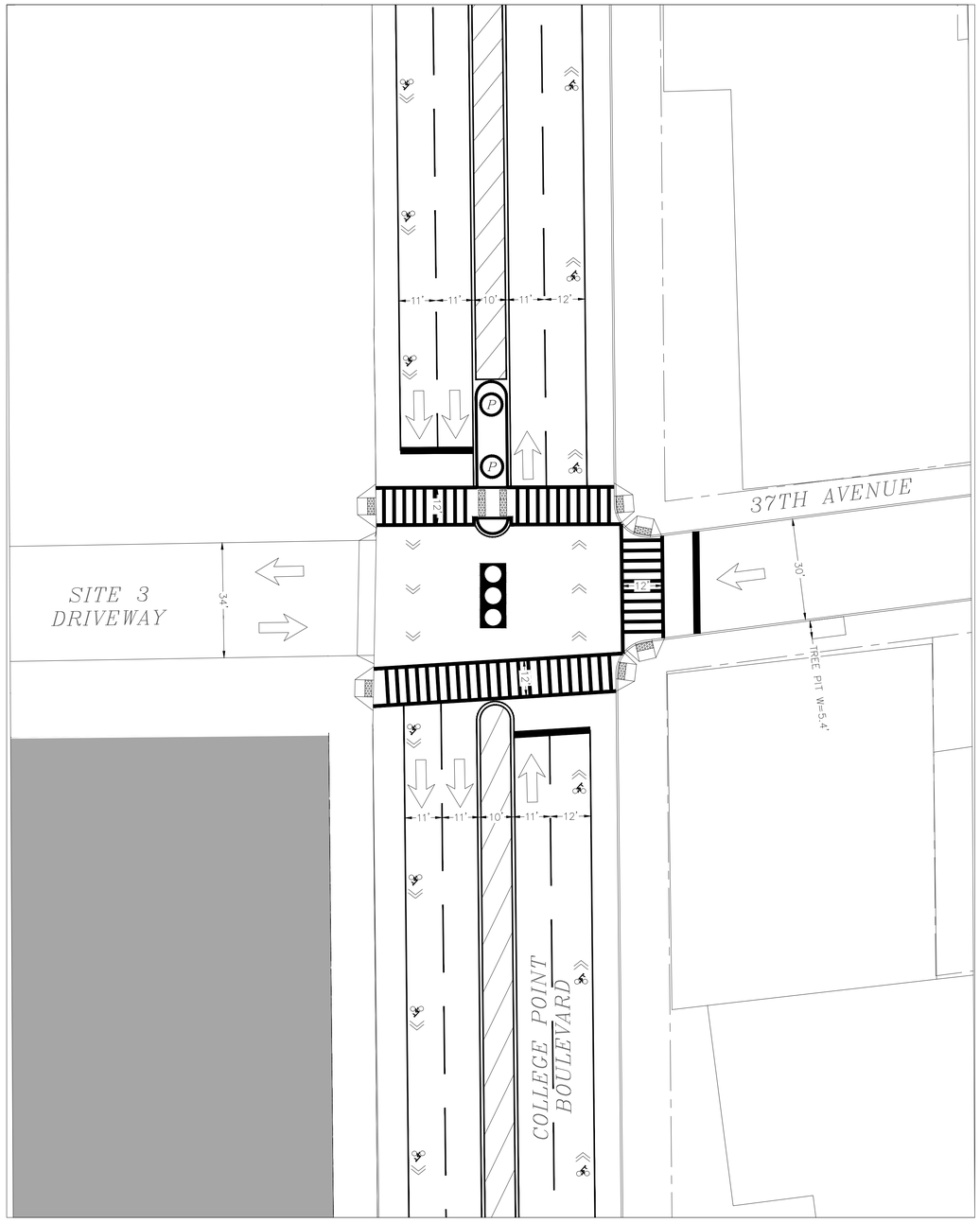
Intersection ID	Location	Sidewalk Movement	Impact Checker																	
			Weekday AM				Weekday Midday				Weekday PM				Saturday Midday			
			No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?
2	East Sidewalk of College Point Boulevard betw. 36th Road & 37th Avenue	North-South	489.4	488.5	-0.9	No	223.1	227.2	4.1	No	246.3	249.0	2.7	No	226.2	230.9	4.7	No
	East Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	394.5	252.2	-142.3	No	171.3	106.3	-65.0	No	240.6	157.0	-83.6	No	123.3	85.4	-37.9	No
	West Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	277.8	198.9	-78.9	No	89.3	71.2	-18.1	No	145.3	113.1	-32.2	No	142.4	113.8	-28.6	No
	West Sidewalk of College Point Boulevard betw. 36th Road & 37th Avenue	North-South	704.2	227.6	-476.7	No	260.0	90.5	-169.5	No	376.7	134.1	-242.6	No	377.9	125.7	-252.1	No
	North Sidewalk of 37th Avenue between College Point Boulevard & Prince Street	East-West	85.6	73.7	-11.8	No	23.1	24.7	1.6	No	28.7	27.5	-1.2	No	21.9	20.4	-1.6	No
	South Sidewalk of 37th Avenue between College Point Boulevard & Prince Street	East-West	90.7	74.8	-15.9	No	32.7	29.7	-3.1	No	46.5	41.4	-5.1	No	64.3	60.4	-3.9	No
	South Sidewalk of 37th Avenue between Janet Place & College Point Boulevard	East-West	N/A	119.6	N/A	No	N/A	44.4	N/A	No	N/A	66.1	N/A	No	N/A	71.6	N/A	No
	North Sidewalk of 37th Avenue between Janet Place & College Point Boulevard	East-West	N/A	359.5	N/A	No	N/A	135.3	N/A	No	N/A	199.8	N/A	No	N/A	216.1	N/A	No
3	East Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	94.5	68.4	-26.0	No	50.8	33.8	-17.0	No	69.8	49.8	-20.1	No	41.9	31.6	-10.2	No
	East Sidewalk of College Point Boulevard betw. 39th Avenue & Roosevelt Avenue	North-South	152.7	143.7	-9.0	No	63.6	62.1	-1.5	No	69.7	67.4	-2.3	No	66.5	65.3	-1.2	No
	West Sidewalk of College Point Boulevard betw. 39th Avenue & Roosevelt Avenue	North-South	322.1	298.9	-23.2	No	100.6	98.0	-2.7	No	165.7	159.4	-6.3	No	181.0	176.5	-4.5	No
	West Sidewalk of College Point Boulevard betw. 37th Avenue & 39th Avenue	North-South	251.6	254.7	3.1	No	100.9	112.3	11.5	No	121.0	129.3	8.3	No	144.6	157.6	13.1	No
	North Sidewalk of 39th Avenue between College Point Boulevard & Prince Street	East-West	24.9	25.4	0.4	No	5.9	6.2	0.3	No	5.3	5.6	0.3	No	10.5	11.2	0.7	No
	South Sidewalk of 39th Avenue between College Point Boulevard & Prince Street	East-West	39.5	41.5	2.0	No	16.5	17.7	1.1	No	26.4	27.9	1.5	No	23.2	24.5	1.3	No
	South Sidewalk of 39th Avenue between Janet Place & College Point Boulevard	East-West	56.4	59.7	3.2	No	15.2	16.4	1.2	No	16.8	18.0	1.2	No	19.5	20.8	1.3	No
	North Sidewalk of 39th Avenue between Janet Place & College Point Boulevard	East-West	35.5	45.6	10.1	No	10.4	13.9	3.5	No	9.8	13.4	3.7	No	16.0	20.9	4.9	No
4A	East Sidewalk of College Point Boulevard betw. 39th Avenue & WB Roosevelt Avenue	North-South	170.1	160.1	-10.0	No	54.3	53.0	-1.3	No	81.8	79.1	-2.7	No	65.6	64.4	-1.2	No
	West Sidewalk of College Point Boulevard betw. WB Roosevelt Avenue & EB Roosevelt Avenue	North-South	271.8	257.5	-14.3	No	133.1	130.4	-2.7	No	178.3	173.6	-4.7	No	142.3	140.1	-2.1	No
	West Sidewalk of College Point Boulevard betw. 39th Avenue & WB Roosevelt Avenue	North-South	226.6	211.3	-15.2	No	115.0	112.1	-3.0	No	184.0	177.1	-7.0	No	129.5	126.5	-3.0	No
	North Sidewalk of WB Roosevelt Avenue betw. College Point Boulevard & Prince Street	East-West	126.6	124.6	-1.9	No	31.7	31.2	-0.5	No	48.3	47.6	-0.7	No	42.5	41.9	-0.5	No
	North Sidewalk of WB Roosevelt Avenue betw. Janet Place & College Point Boulevard	East-West	54.4	53.3	-1.1	No	16.4	15.9	-0.4	No	26.0	25.4	-0.6	No	25.0	24.4	-0.6	No
4B	East Sidewalk of College Point Boulevard betw. EB Roosevelt Avenue & 40th Road	North-South	111.5	106.4	-5.0	No	58.0	56.9	-1.1	No	66.6	65.1	-1.5	No	61.8	60.9	-0.9	No
	West Sidewalk of College Point Boulevard betw. EB Roosevelt Avenue & 40th Road	North-South	99.9	97.0	-2.9	No	35.1	34.8	-0.3	No	37.0	36.7	-0.3	No	36.4	36.1	-0.2	No
	West Sidewalk of College Point Boulevard betw. WB Roosevelt Avenue & EB Roosevelt Avenue	North-South	271.8	257.5	-14.3	No	133.1	130.4	-2.7	No	178.3	173.6	-4.7	No	142.3	140.1	-2.1	No
	South Sidewalk of EB Roosevelt Avenue betw. College Point Boulevard & Prince Street	East-West	65.2	65.2	0.0	No	20.5	20.5	0.0	No	15.9	15.9	0.0	No	12.8	12.8	0.0	No
	South Sidewalk of EB Roosevelt Avenue betw. Skyview Mall Drive & College Point Boulevard	East-West	766.1	766.1	0.0	No	645.2	645.2	0.0	No	612.9	612.9	0.0	No	408.5	408.5	0.0	No
5	East Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	4150.2	4150.2	0.0	No	2766.8	2766.8	0.0	No	2075.1	2075.1	0.0	No	2075.1	2075.1	0.0	No
	West Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	143.0	354.7	211.8	No	59.1	148.6	89.5	No	63.8	158.4	94.6	No	90.9	227.1	136.2	No
	North Sidewalk of Roosevelt Avenue betw. Janet Place & College Point Boulevard	East-West	67.8	65.7	-2.0	No	16.3	15.7	-0.5	No	35.0	33.8	-1.2	No	25.4	24.5	-0.9	No
	North Sidewalk of Roosevelt Avenue betw. the Skyview Mall Driveway & Janet Place	East-West	125.1	122.0	-3.1	No	35.1	33.9	-1.3	No	56.6	54.9	-1.7	No	51.7	50.5	-1.3	No
6	East Sidewalk of Transverse Road betw. 39th Avenue & Roosevelt Avenue	North-South	N/A	575.2	N/A	No	N/A	158.8	N/A	No	N/A	258.9	N/A	No	N/A	242.6	N/A	No
	West Sidewalk of Transverse Road betw. 39th Avenue & Roosevelt Avenue	North-South	N/A	575.2	N/A	No	N/A	158.8	N/A	No	N/A	258.9	N/A	No	N/A	242.6	N/A	No
7	East Sidewalk of College Point Boulevard betw. 37th Avenue & 38th Avenue	North-South	N/A	240.7	N/A	No	N/A	102.0	N/A	No	N/A	131.8	N/A	No	N/A	121.2	N/A	No
	East Sidewalk of College Point Boulevard betw. 38th Avenue & 39th Avenue	North-South	N/A	219.9	N/A	No	N/A	98.1	N/A	No	N/A	126.9	N/A	No	N/A	117.6	N/A	No
	West Sidewalk of College Point Boulevard betw. 38th Avenue & 39th Avenue	North-South	N/A	267.4	N/A	No	N/A	102.1	N/A	No	N/A	133.7	N/A	No	N/A	141.0	N/A	No
	West Sidewalk of College Point Boulevard betw. 37th Avenue & 38th Avenue	North-South	N/A	171.8	N/A	No	N/A	65.1	N/A	No	N/A	87.5	N/A	No	N/A	92.9	N/A	No
	South Sidewalk of 38th Avenue betw. Janet Place & College Point Boulevard	East-West	N/A	236.7	N/A	No	N/A	89.2	N/A	No	N/A	126.0	N/A	No	N/A	123.2	N/A	No
	North Sidewalk of 38th Avenue betw. Janet Place & College Point Boulevard	East-West	N/A	231.3	N/A	No	N/A	86.9	N/A	No	N/A	126.4	N/A	No	N/A	131.3	N/A	No

Table K-4. Sidewalk Analysis Comparison (cont.)
Future No-Action Condition (2025) vs. Future With-Action Condition (2025)

Intersection ID	Location	Sidewalk Movement	Impact Checker																	
			Weekday AM				Weekday Midday				Weekday PM				Saturday Midday			
			No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?	No-Action Average Space (ft^2/p)	With-Action Average Space (ft^2/p)	Net Change	Impact?
8	East Sidewalk of Janet Place betw. 38th Avenue & 39th Avenue	North-South	N/A	N/A	N/A	No	N/A	N/A	N/A	No	N/A	N/A	N/A	No	N/A	N/A	N/A	No
	East Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	N/A	4980.2	N/A	No	N/A	2929.5	N/A	No	N/A	1915.5	N/A	No	N/A	2371.5	N/A	No
	West Sidewalk of Janet Place betw. 39th Avenue & Roosevelt Avenue	North-South	N/A	563.5	N/A	No	N/A	157.4	N/A	No	N/A	251.8	N/A	No	N/A	240.5	N/A	No
	West Sidewalk of Janet Place betw. 38th Avenue & 39th Avenue	North-South	N/A	620.6	N/A	No	N/A	234.6	N/A	No	N/A	327.9	N/A	No	N/A	314.5	N/A	No
	North Sidewalk of 39th Avenue betw. Janet Place & College Point Boulevard	East-West	35.5	45.6	10.1	No	10.4	13.9	3.5	No	9.8	22.0	12.2	No	16.0	20.9	4.9	No
	South Sidewalk of 39th Avenue betw. Janet Place & College Point Boulevard	East-West	56.4	59.7	3.2	No	15.2	16.4	1.2	No	16.8	27.2	10.4	No	19.5	25.6	6.1	No
	South Sidewalk of 39th Avenue betw. Transverse Road & Janet Place	East-West	N/A	128.8	N/A	No	N/A	36.0	N/A	No	N/A	58.6	N/A	No	N/A	55.0	N/A	No
	North Sidewalk of 39th Avenue betw. Transverse Road & Janet Place	East-West	N/A	102.0	N/A	No	N/A	35.9	N/A	No	N/A	52.1	N/A	No	N/A	49.8	N/A	No
9	East Sidewalk of Janet Place betw. 37th Avenue & 38th Avenue	North-South	N/A	539.3	N/A	No	N/A	203.1	N/A	No	N/A	299.8	N/A	No	N/A	324.2	N/A	No
	East Sidewalk of Janet Place betw. 38th Avenue & 39th Avenue	North-South	N/A	N/A	N/A	No	N/A	N/A	N/A	No	N/A	N/A	N/A	No	N/A	N/A	N/A	No
	West Sidewalk of Janet Place betw. 38th Avenue & 39th Avenue	North-South	N/A	620.6	N/A	No	N/A	234.6	N/A	No	N/A	327.9	N/A	No	N/A	314.5	N/A	No
	West Sidewalk of Janet Place betw. 37th Avenue & 38th Avenue	North-South	N/A	539.3	N/A	No	N/A	203.1	N/A	No	N/A	299.8	N/A	No	N/A	324.2	N/A	No
	North Sidewalk of 38th Avenue betw. Janet Place & College Point Boulevard	East-West	N/A	231.3	N/A	No	N/A	86.9	N/A	No	N/A	126.4	N/A	No	N/A	131.3	N/A	No
	South Sidewalk of 38th Avenue betw. Janet Place & College Point Boulevard	East-West	N/A	236.7	N/A	No	N/A	89.2	N/A	No	N/A	126.0	N/A	No	N/A	123.2	N/A	No
	South Sidewalk of 38th Avenue betw. Transverse Road & Janet Place	East-West	N/A	387.8	N/A	No	N/A	146.5	N/A	No	N/A	204.8	N/A	No	N/A	196.5	N/A	No
	North Sidewalk of 38th Avenue betw. Transverse Road & Janet Place	East-West	N/A	1551.5	N/A	No	N/A	586.9	N/A	No	N/A	820.0	N/A	No	N/A	786.5	N/A	No
10	East Sidewalk of Transverse Road betw. 38th Avenue & 39th Avenue	North-South	N/A	620.6	N/A	No	N/A	234.6	N/A	No	N/A	327.9	N/A	No	N/A	314.5	N/A	No
	West Sidewalk of Transverse Road betw. 38th Avenue & 39th Avenue	North-South	N/A	620.6	N/A	No	N/A	234.6	N/A	No	N/A	327.9	N/A	No	N/A	314.5	N/A	No
	North Sidewalk of 38th Avenue betw. Transverse Road & Janet Place	East-West	N/A	1551.5	N/A	No	N/A	586.9	N/A	No	N/A	820.0	N/A	No	N/A	786.5	N/A	No
	South Sidewalk of 38th Avenue betw. Transverse Road & Janet Place	East-West	N/A	387.8	N/A	No	N/A	146.5	N/A	No	N/A	204.8	N/A	No	N/A	196.5	N/A	No
	South Sidewalk of 38th Avenue betw. Shore Public Walkway & Transverse Road	East-West	N/A	N/A	N/A	No	N/A	N/A	N/A	No	N/A	N/A	N/A	No	N/A	N/A	N/A	No
	North Sidewalk of 38th Avenue betw. Shore Public Walkway & Transverse Road	East-West	N/A	1551.5	N/A	No	N/A	586.9	N/A	No	N/A	820.0	N/A	No	N/A	786.5	N/A	No
11	East Sidewalk of Transverse Road betw. 38th Avenue & 39th Avenue	North-South	N/A	620.6	N/A	No	N/A	234.6	N/A	No	N/A	327.9	N/A	No	N/A	314.5	N/A	No
	East Sidewalk of Transverse Road betw. 39th Avenue & Roosevelt Avenue	North-South	N/A	575.2	N/A	No	N/A	158.8	N/A	No	N/A	258.9	N/A	No	N/A	242.6	N/A	No
	West Sidewalk of Transverse Road betw. 39th Avenue & Roosevelt Avenue	North-South	N/A	575.2	N/A	No	N/A	158.8	N/A	No	N/A	258.9	N/A	No	N/A	242.6	N/A	No
	West Sidewalk of Transverse Road betw. 38th Avenue & 39th Avenue	North-South	N/A	620.6	N/A	No	N/A	234.6	N/A	No	N/A	327.9	N/A	No	N/A	314.5	N/A	No
	North Sidewalk of 39th Avenue betw. Janet Place & Transverse Road	East-West	N/A	152.5	N/A	No	N/A	52.9	N/A	No	N/A	77.4	N/A	No	N/A	73.8	N/A	No
	South Sidewalk of 39th Avenue betw. Janet Place & Transverse Road	East-West	N/A	145.7	N/A	No	N/A	41.7	N/A	No	N/A	67.1	N/A	No	N/A	63.1	N/A	No
	South Sidewalk of 39th Avenue betw. Transverse Road & Shore Public Walkway	East-West	N/A	287.5	N/A	No	N/A	79.1	N/A	No	N/A	129.2	N/A	No	N/A	121.1	N/A	No
	North Sidewalk of 39th Avenue betw. Transverse Road & Shore Public Walkway	East-West	N/A	310.2	N/A	No	N/A	117.1	N/A	No	N/A	163.8	N/A	No	N/A	157.1	N/A	No

Appendix K
Transportation

Conceptual Intersection Sketches



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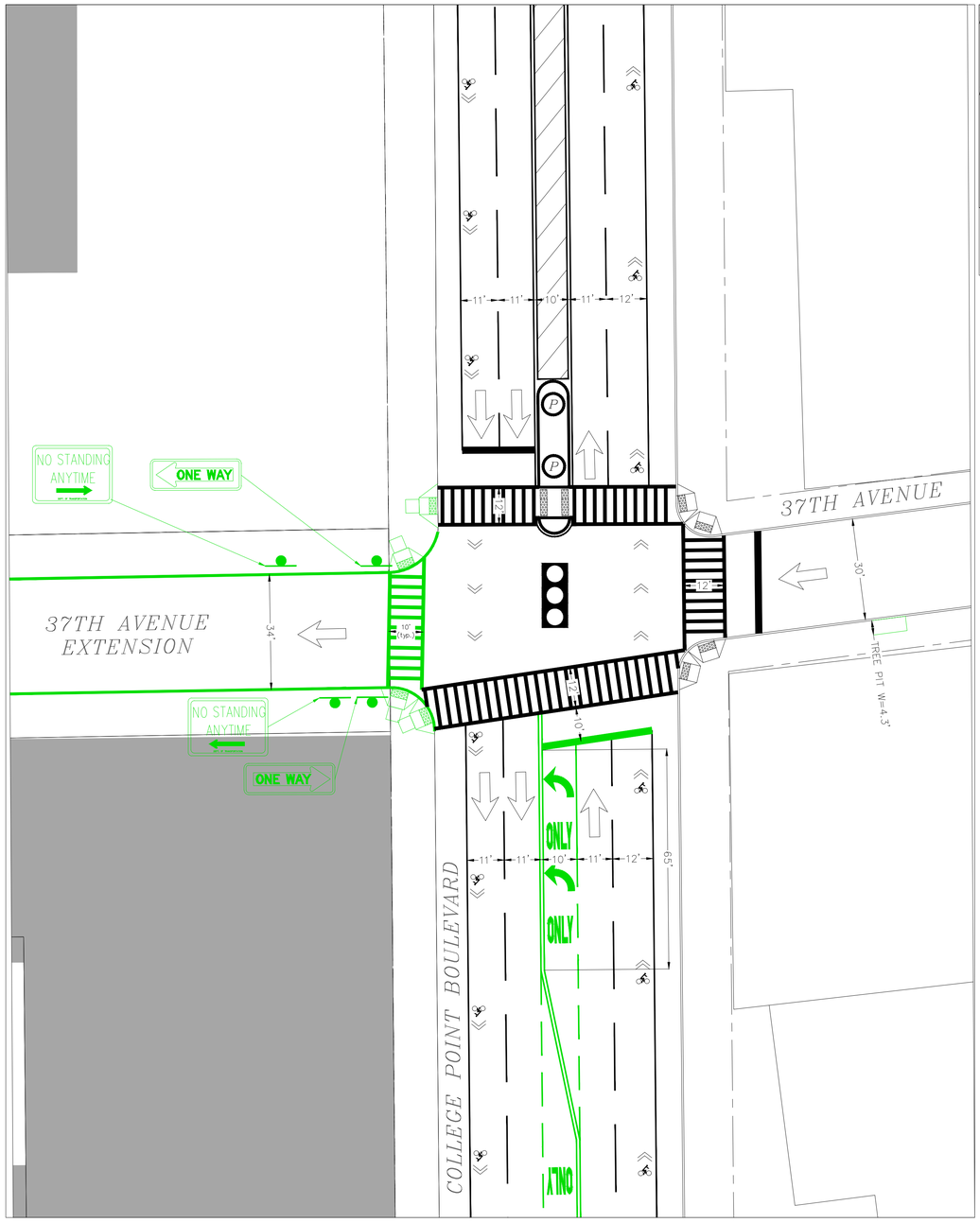

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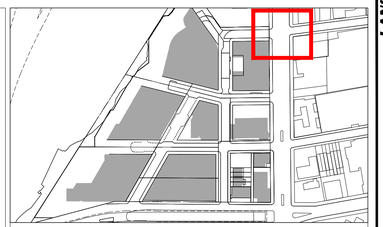

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

NOTE: ALL EXISTING PEDESTRIAN RAMPS AT DISTURBED CORNERS WILL BE UPGRADED TO COMPLY WITH ADA STANDARDS.

20 0 5 10 20

SCALE: 1 INCH = 20 FEET

WARNING:
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DRAFT CONCEPTUAL

Date	Description	No.
REVISIONS		

SIGNATURE DATE SIGNED
PROFESSIONAL XXXXXXXXXX
STATE LIC. No. XXXXX

LANGAN
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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
PROPOSED TRAFFIC IMPROVEMENTS
37TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-01
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
	Sheet 1 of 32

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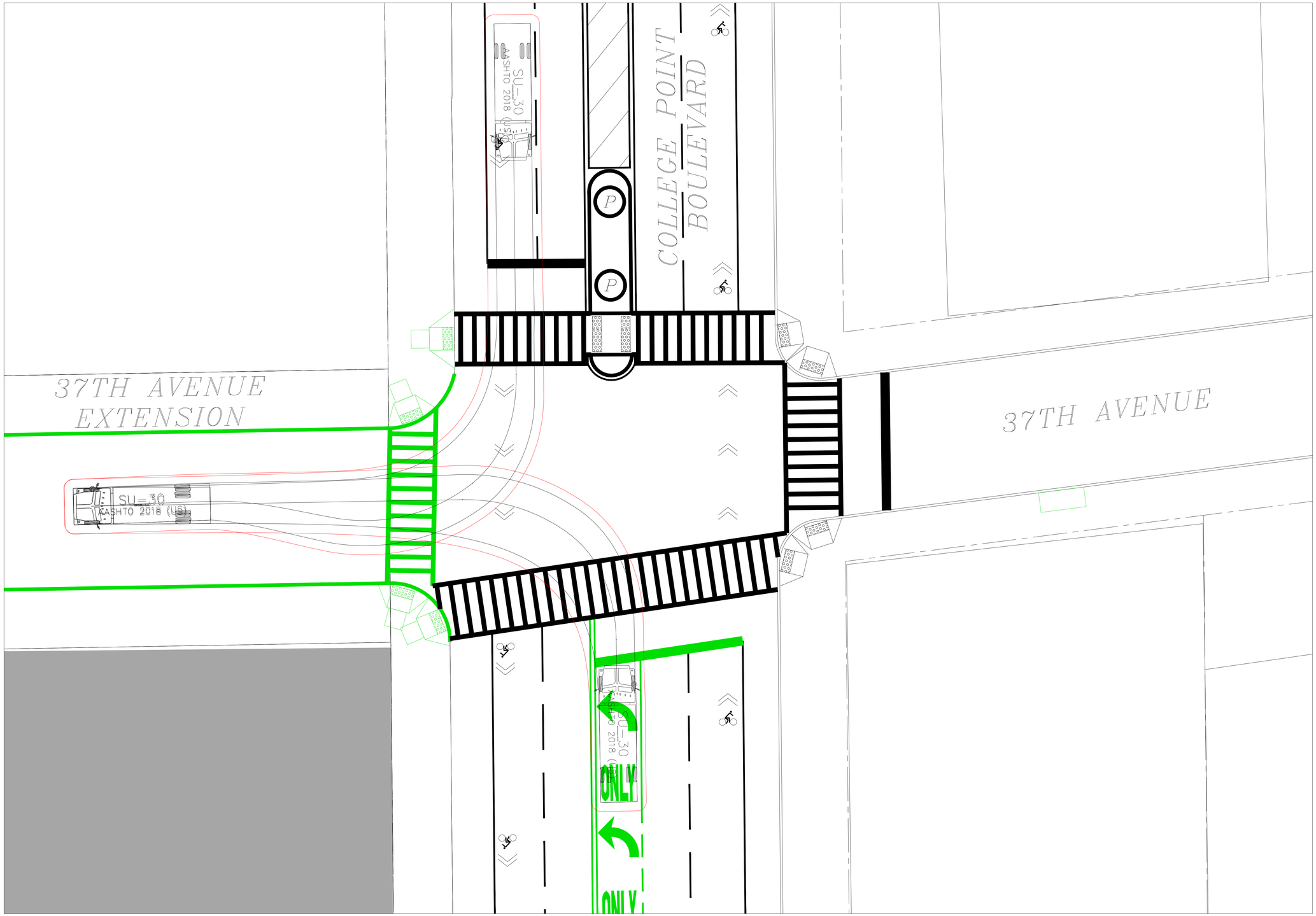

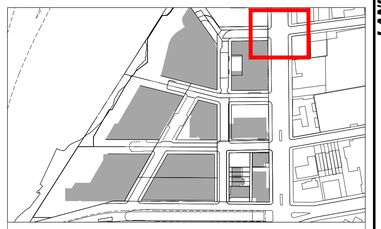

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
1 OF 1

SCALE: 1 INCH = 10 FEET

WARNING:
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DRAFT CONCEPTUAL

Date	Description	No.
REVISIONS		

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STATE LIC. No. XXXXX

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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
37TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-02
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	Sheet 2 of 32

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PROJECT NO. 170551501

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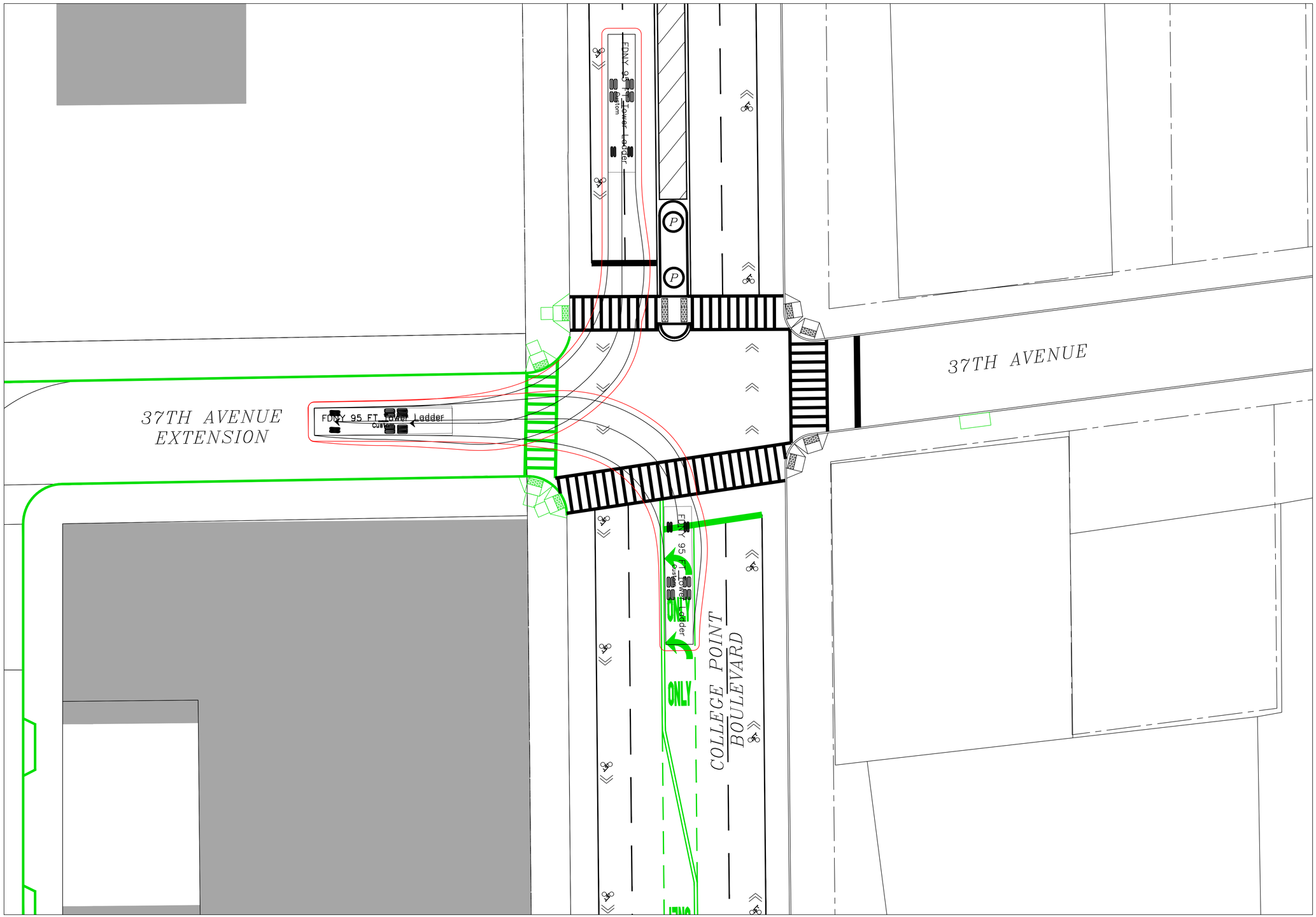

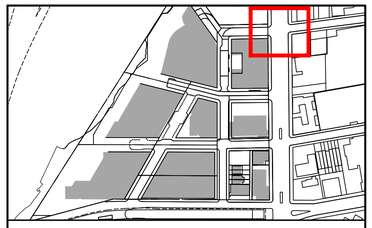

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FIRE TRUCK
1 OF 1

SCALE: 1 INCH = 15 FEET

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Project
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QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
37TH AVENUE &
COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-03
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
	Sheet 3 of 32

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PROJECT NO. 170551501

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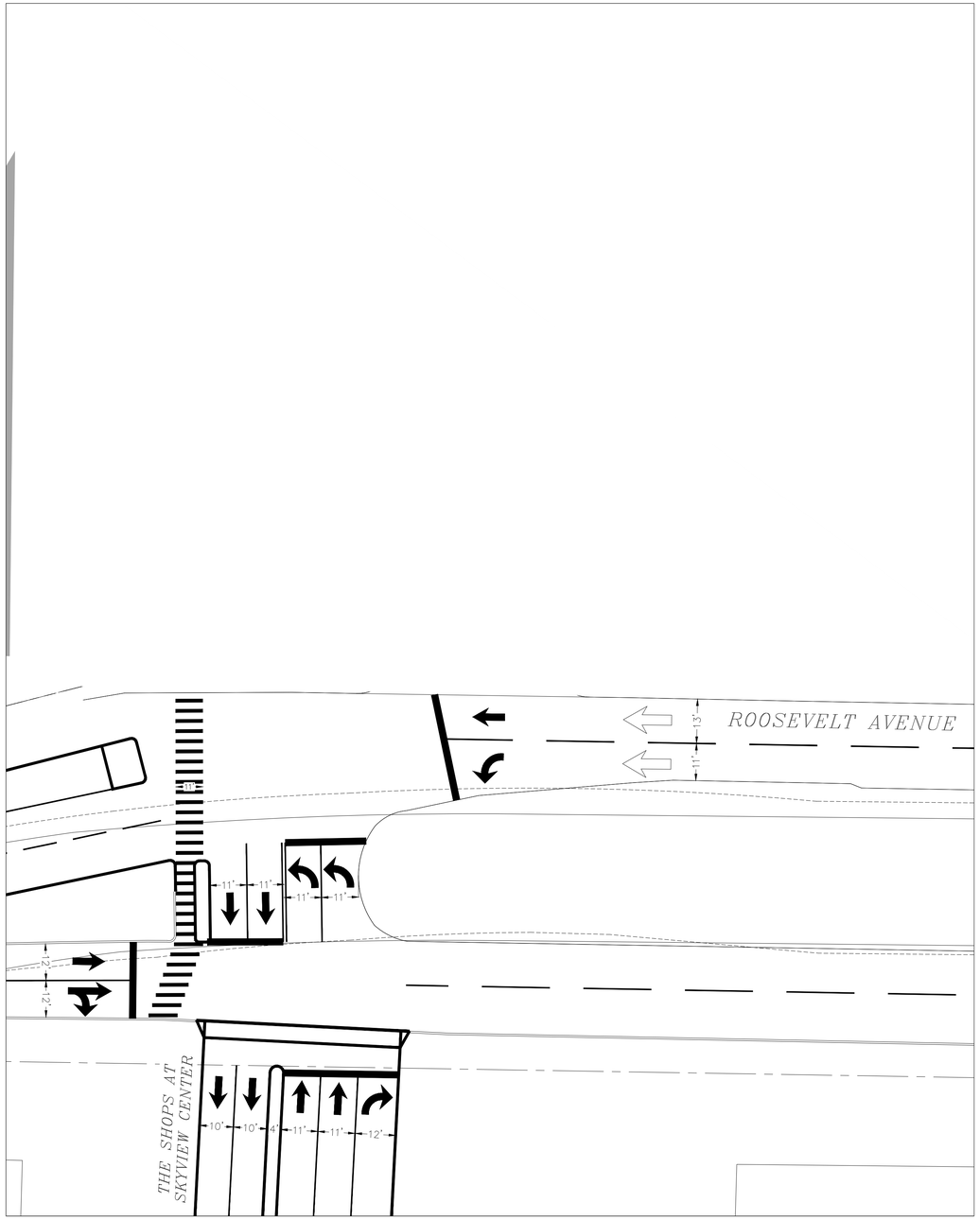

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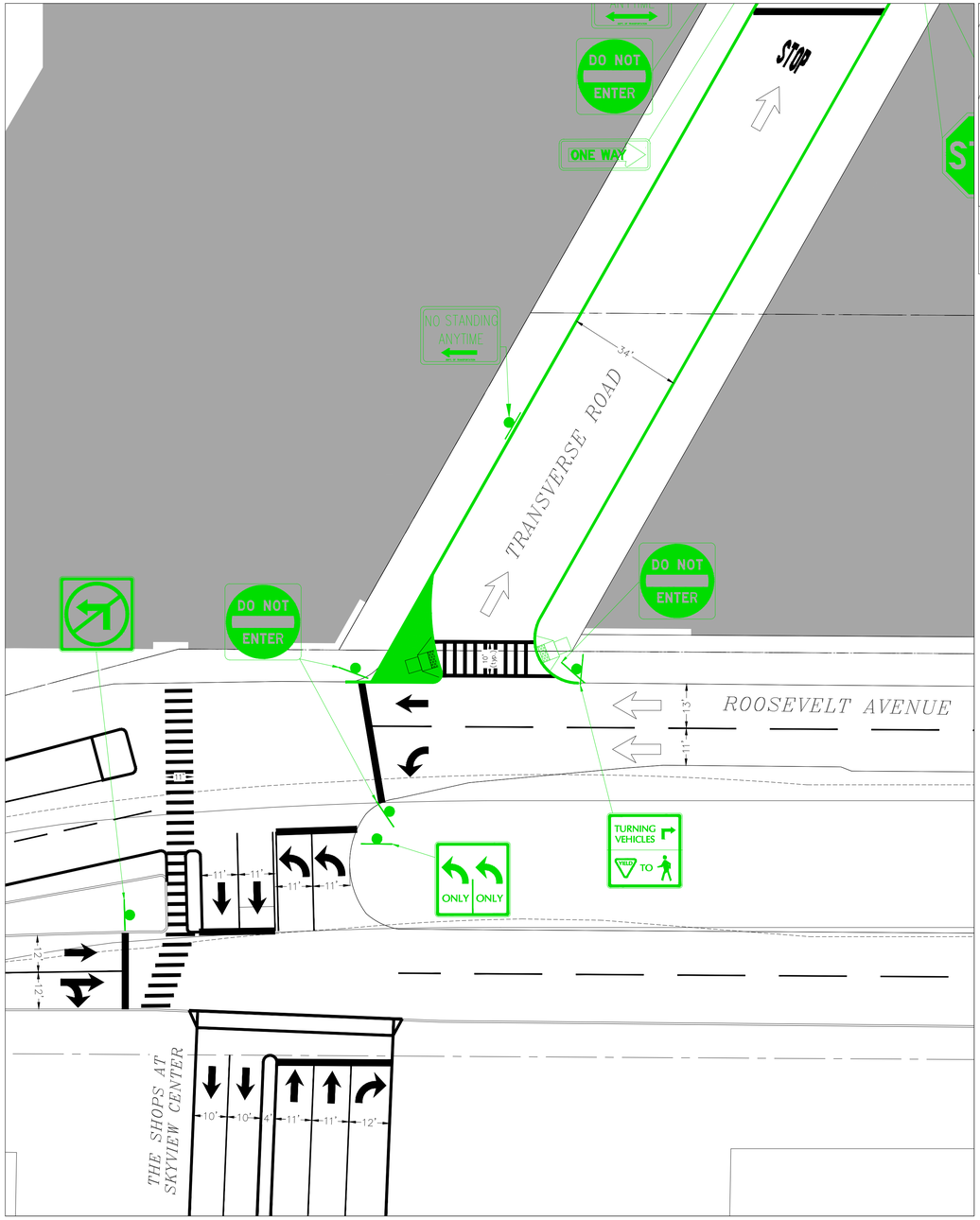

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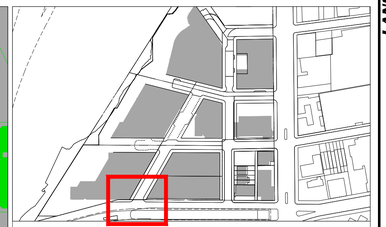

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

NOTE: ALL EXISTING PEDESTRIAN RAMPS AT DISTURBED CORNERS WILL BE UPGRADED TO COMPLY WITH ADA STANDARDS.

SCALE: 1 INCH = 20 FEET

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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
PROPOSED TRAFFIC IMPROVEMENTS
TRANSVERSE ROAD & ROOSEVELT AVENUE

Project No. 170551501
Date 12/10/2019
Drawn By NST
Checked By BMW

Drawing No. TC-04

Sheet 4 of 32

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PROJECT NO. 170551501

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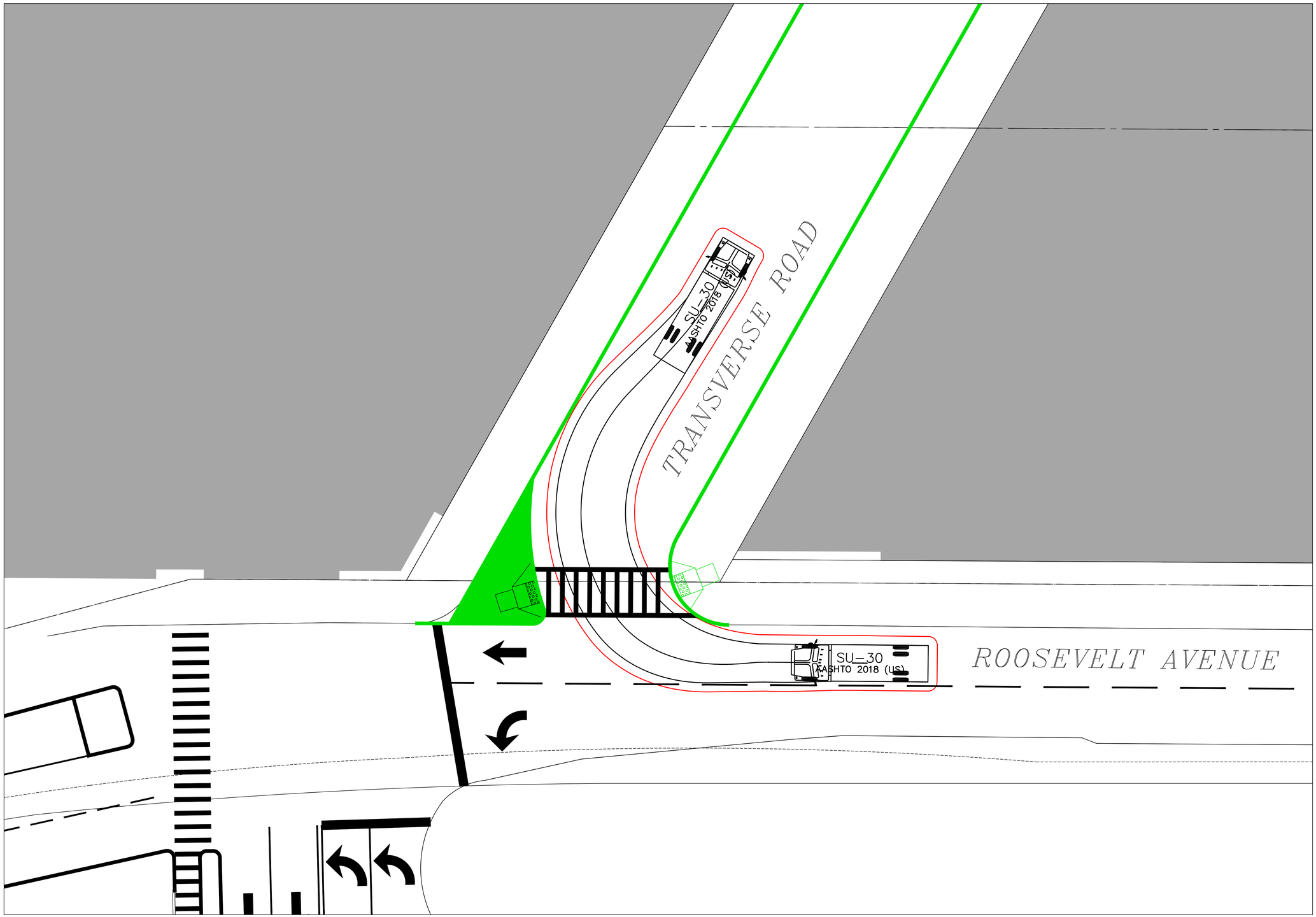

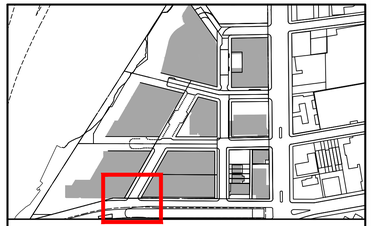

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
1 OF 1

10 0 2 4 10

SCALE: 1 INCH = 10 FEET

WARNING:
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Project
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QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
TRANSVERSE ROAD & ROOSEVELT AVENUE

Project No.	Drawing No.
170551501	TC-05
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
Sheet 5 of 32	

PROJECT NO. 170551501

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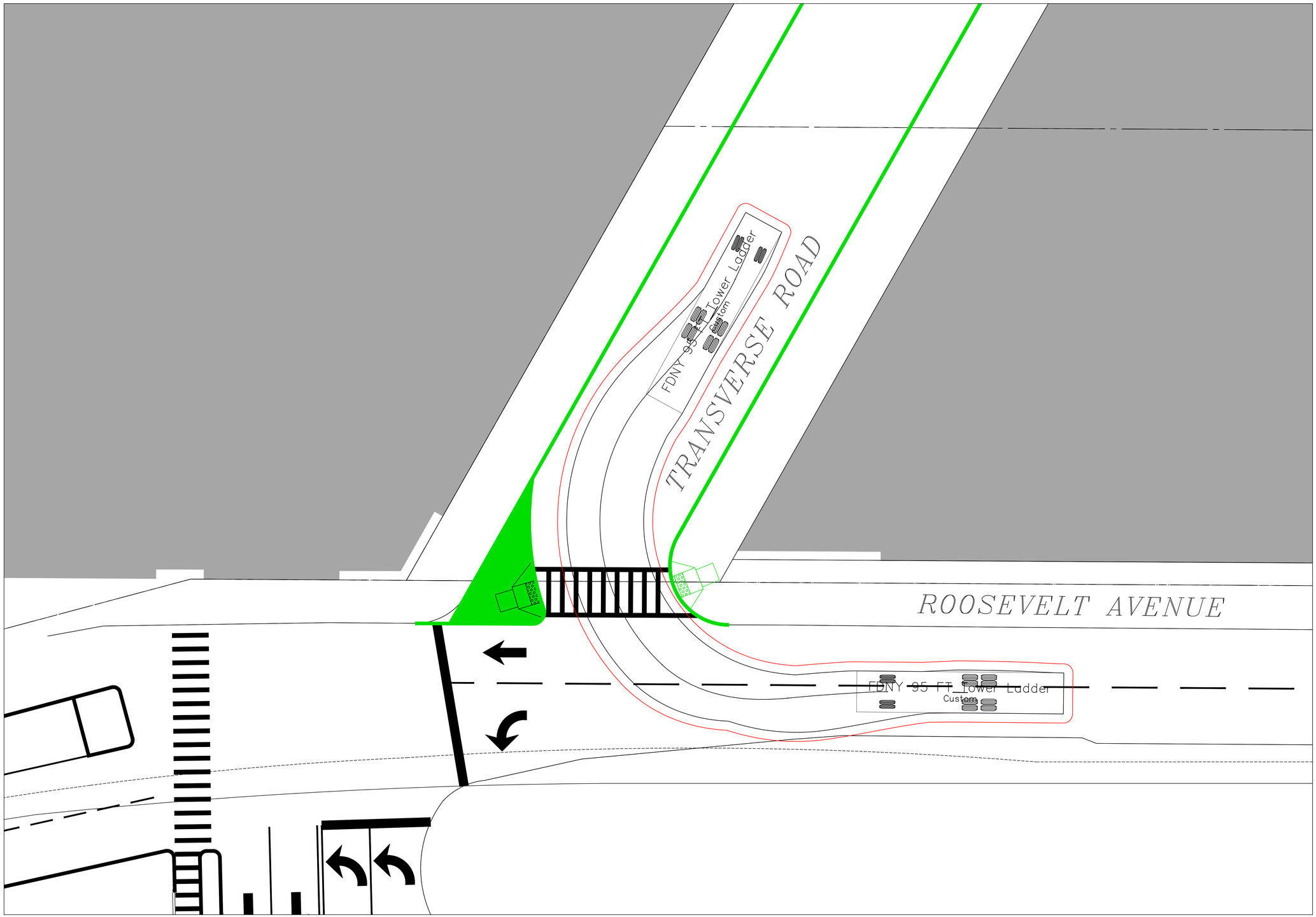

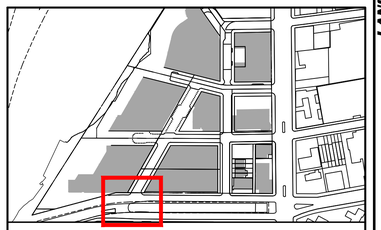

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FIRE TRUCK
1 OF 1

10 0 2 4 10

SCALE: 1 INCH = 10 FEET

WARNING:
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Project
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Drawing Title
MANEUVERABILITY ASSESSMENT
TRANSVERSE ROAD & ROOSEVELT AVENUE

Project No. 170551501
Date 12/10/2019
Drawn By NST
Checked By BMW

Drawing No. TC-06

Sheet 6 of 32

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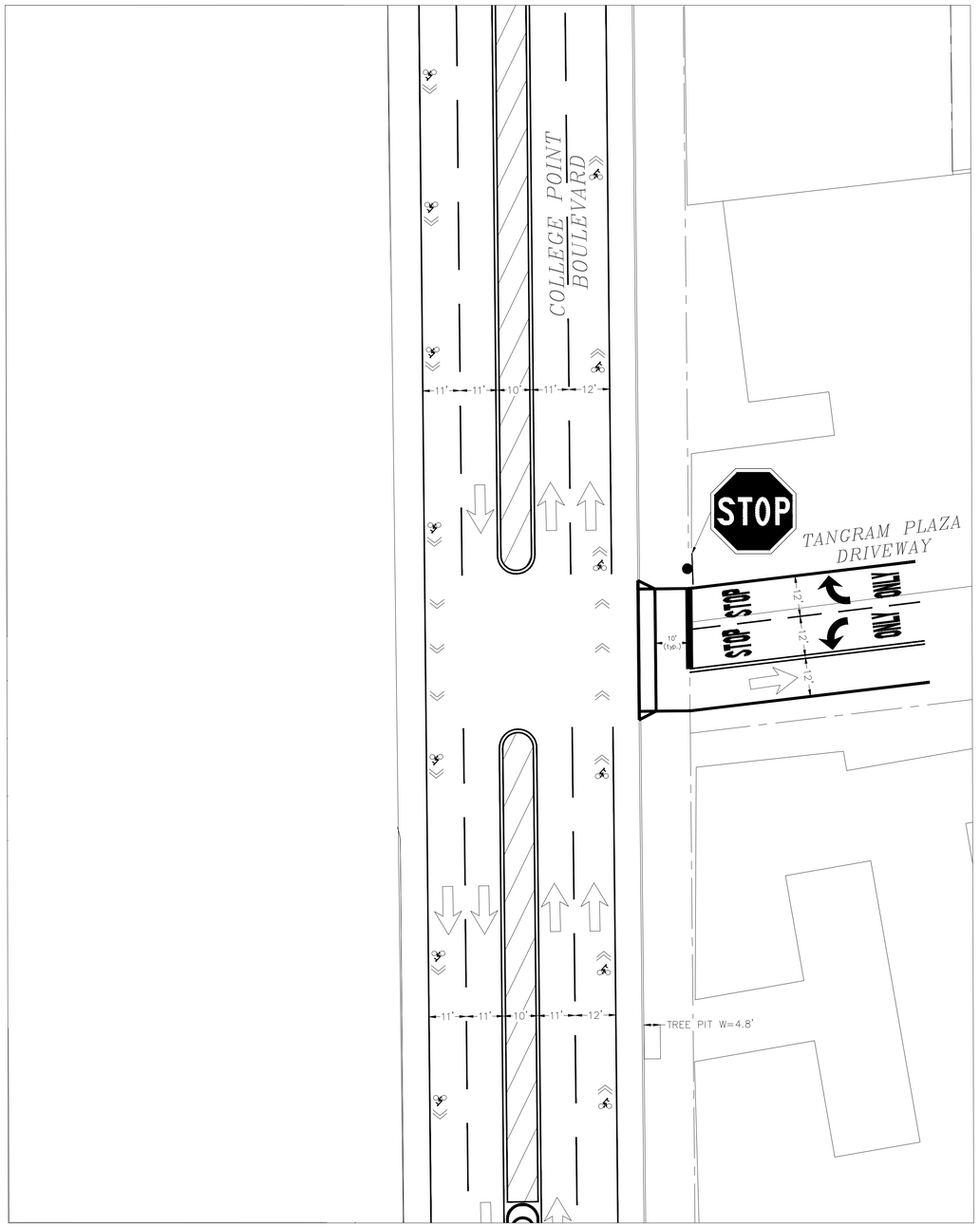

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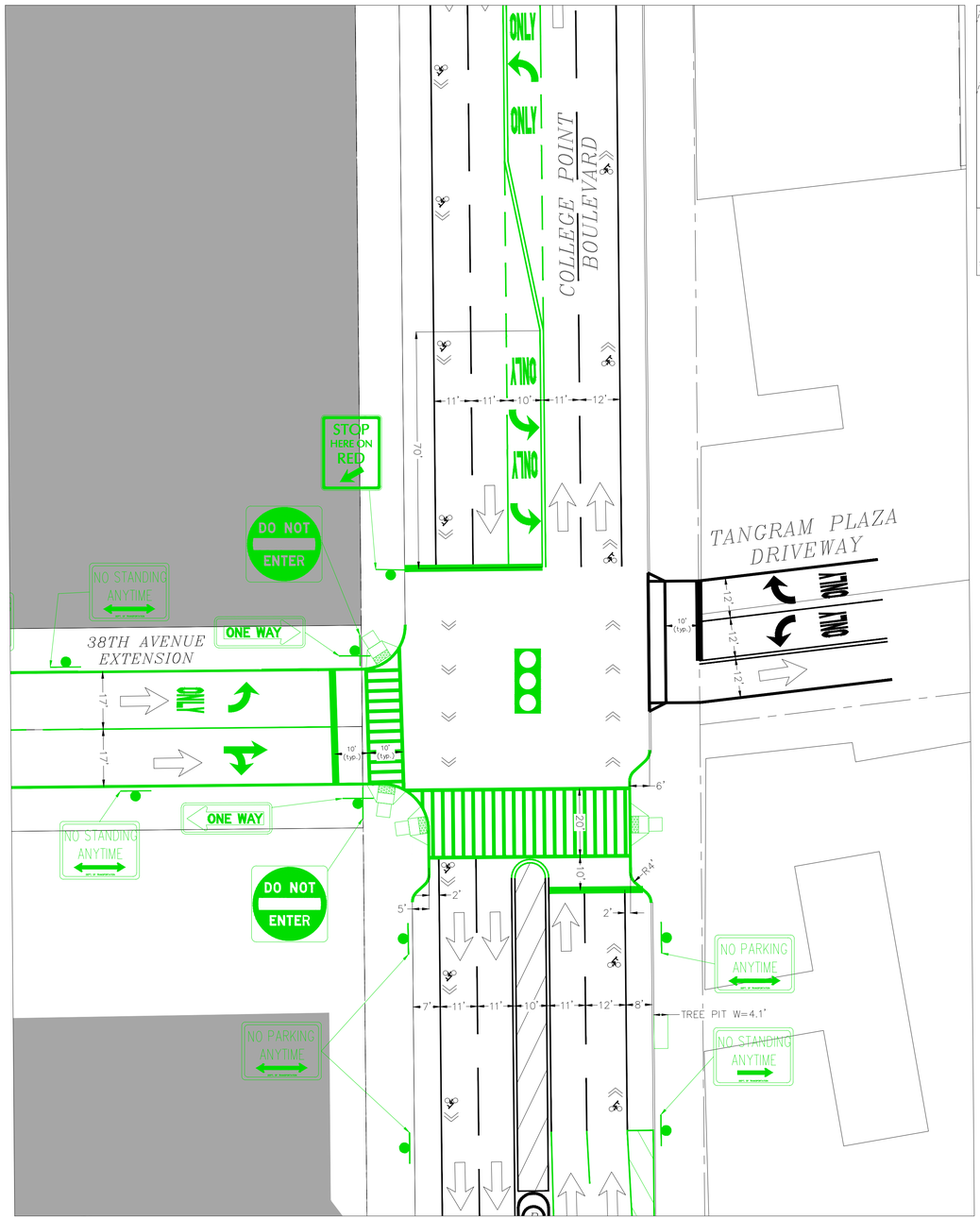

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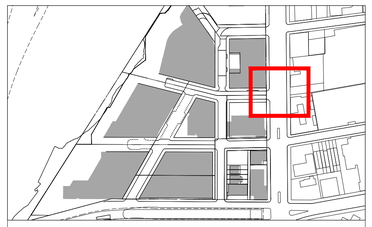

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

NOTE: ALL EXISTING PEDESTRIAN RAMPS AT DISTURBED CORNERS WILL BE UPGRADED TO COMPLY WITH ADA STANDARDS.

SCALE: 1 INCH = 20 FEET

WARNING:
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Project
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QUEENS FLUSHING NEW YORK

Drawing Title
PROPOSED TRAFFIC IMPROVEMENTS
38TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	170551501
Date	12/10/2019
Drawn By	NST
Checked By	BMW
Drawing No.	TC-07
Sheet	7 of 32

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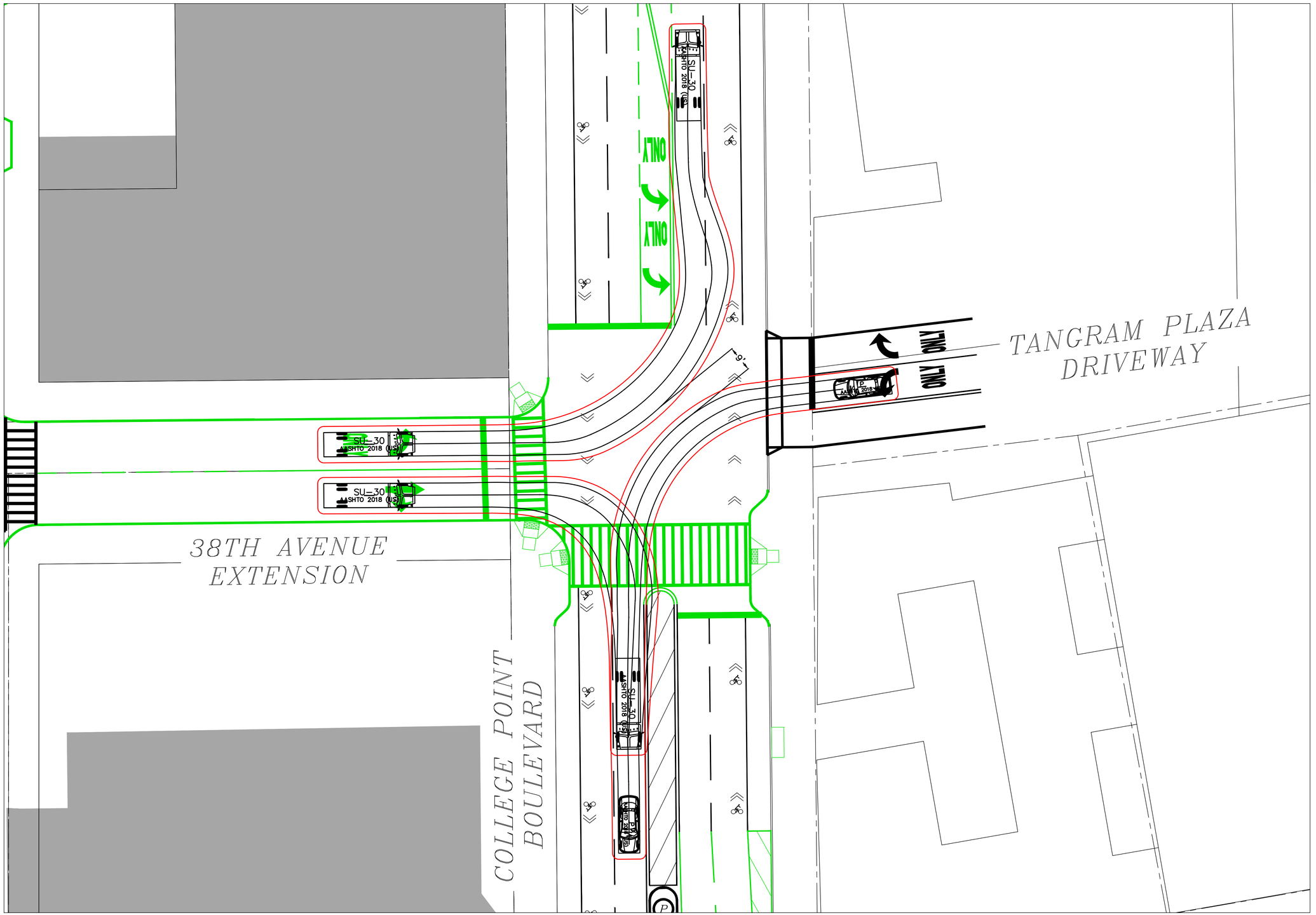
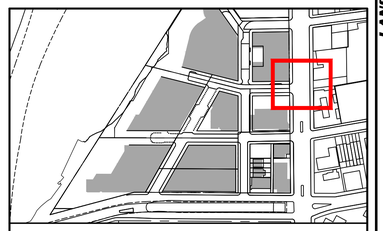
LANGAN PROJECT NO. 170551501





PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
1 OF 1

15 0 3 6 15

SCALE: 1 INCH = 15 FEET

WARNING:
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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
38TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-08
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
	Sheet 8 of 32

PROJECT NO. 170551501

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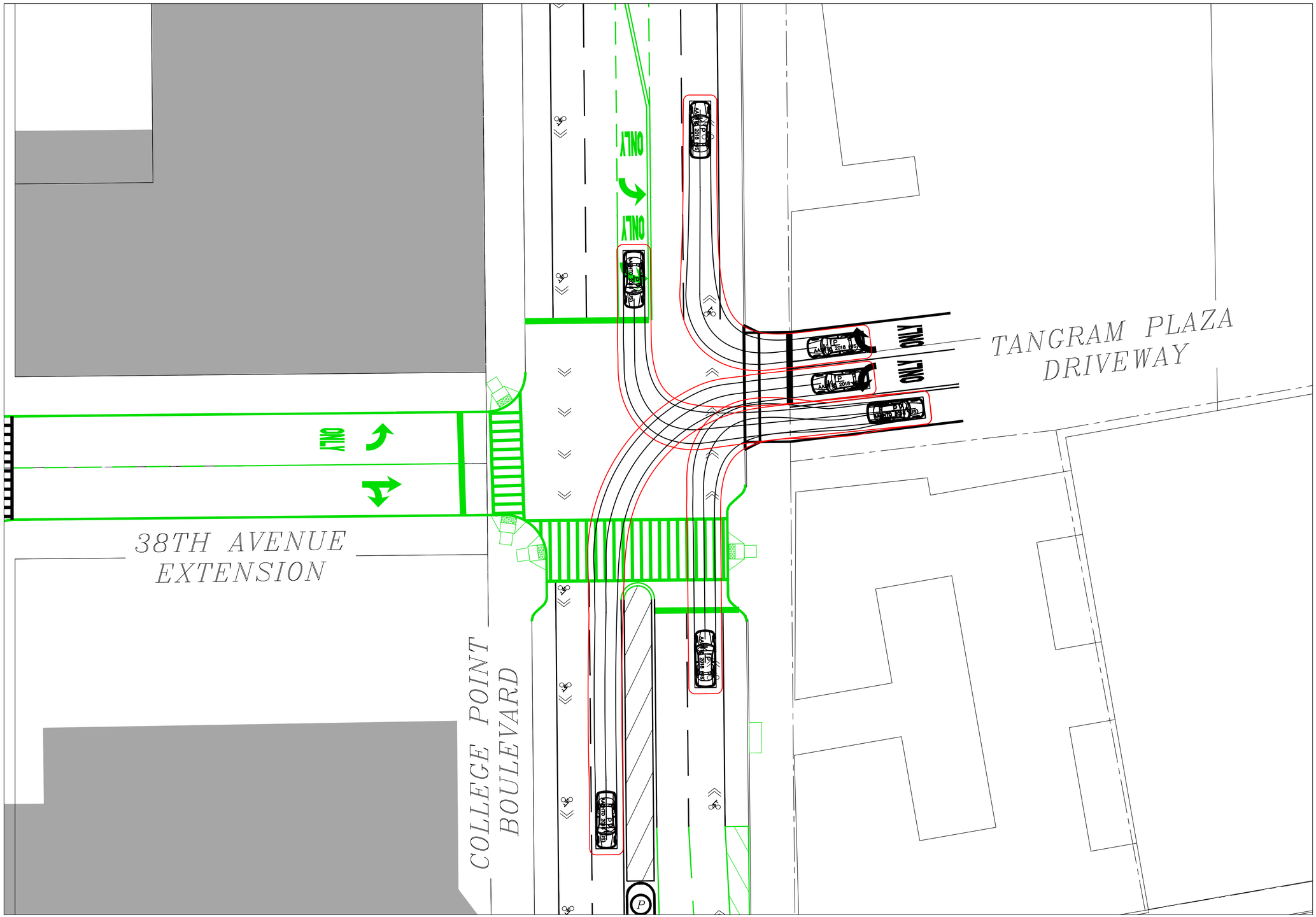

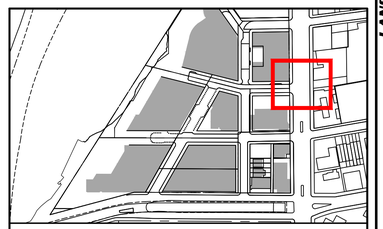

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

PASSENGER CAR 1 OF 1

NOTE: TRUCKS ARE NOT EXPECTED TO ENTER/EXIT TANGRAM PLAZA VIA THIS DRIVEWAY.

SCALE: 1 INCH = 15 FEET

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Project
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QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
38TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	170551501
Date	12/10/2019
Drawn By	NST
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Drawing No. TC-09

Sheet 9 of 32

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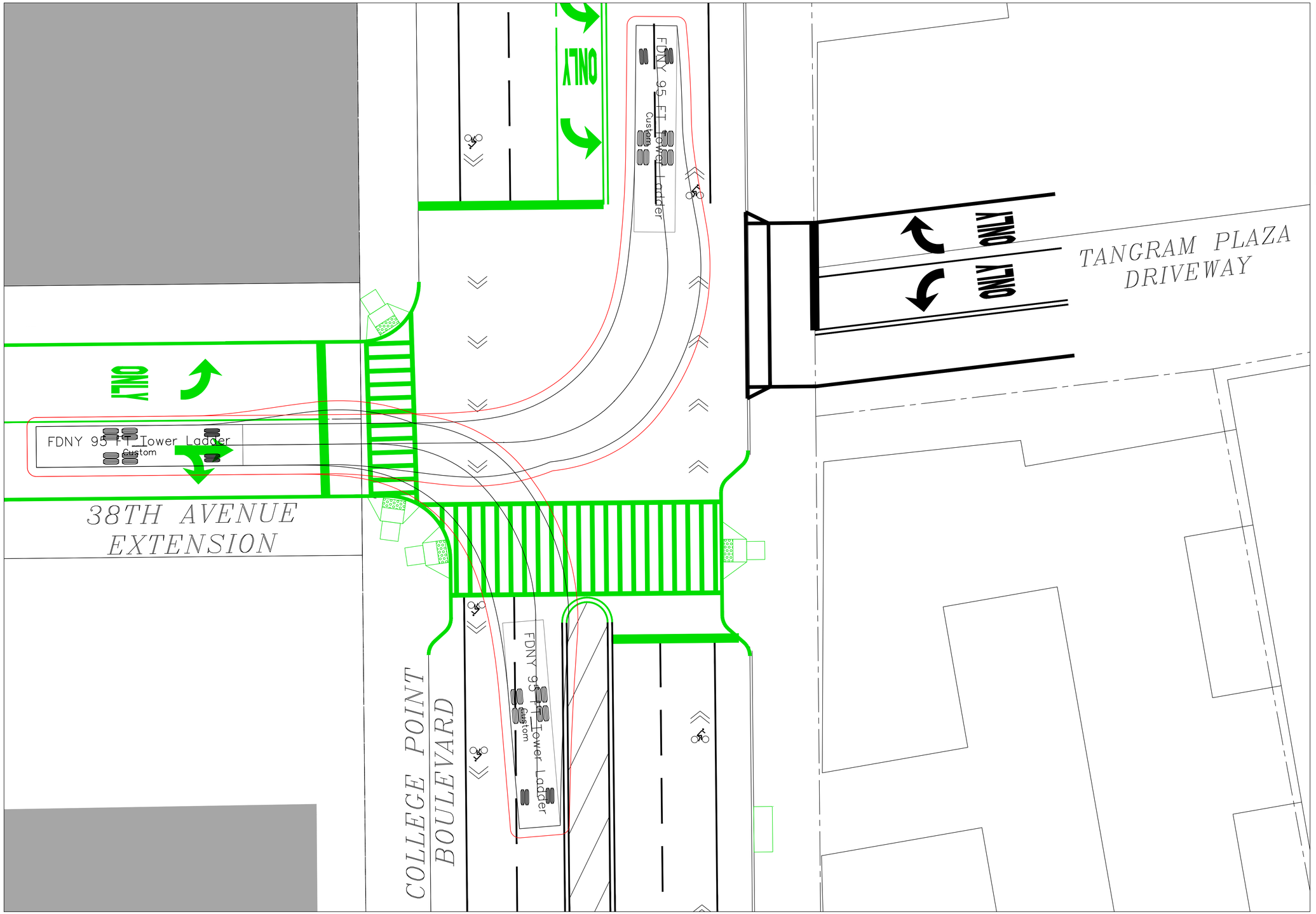

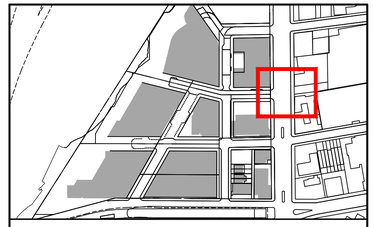

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FIRE TRUCK
1 OF 1

SCALE: 1 INCH = 10 FEET

WARNING:
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Date	Description	No.
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QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
38TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-10
Date: 12/10/2019	
Drawn By: NST	
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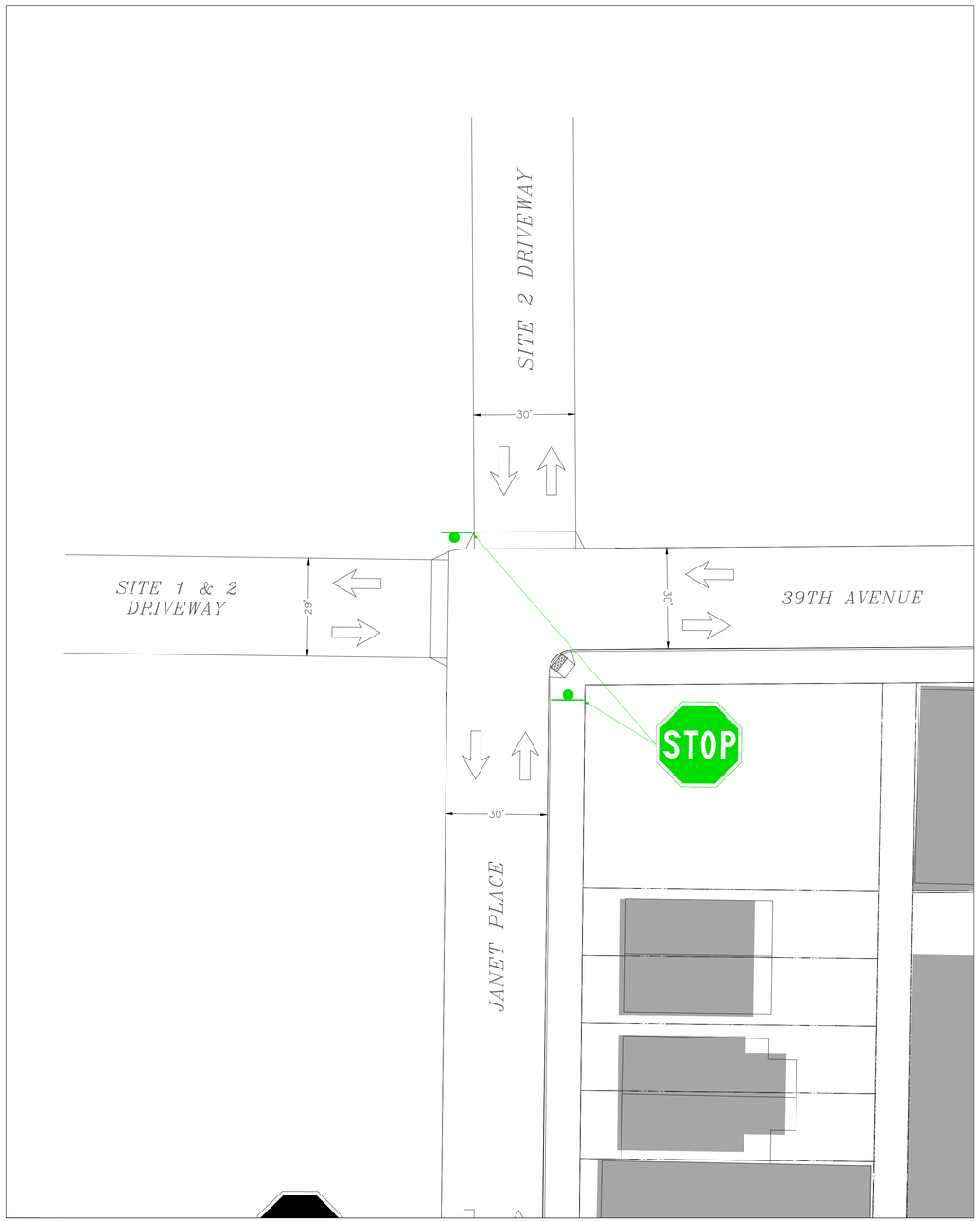

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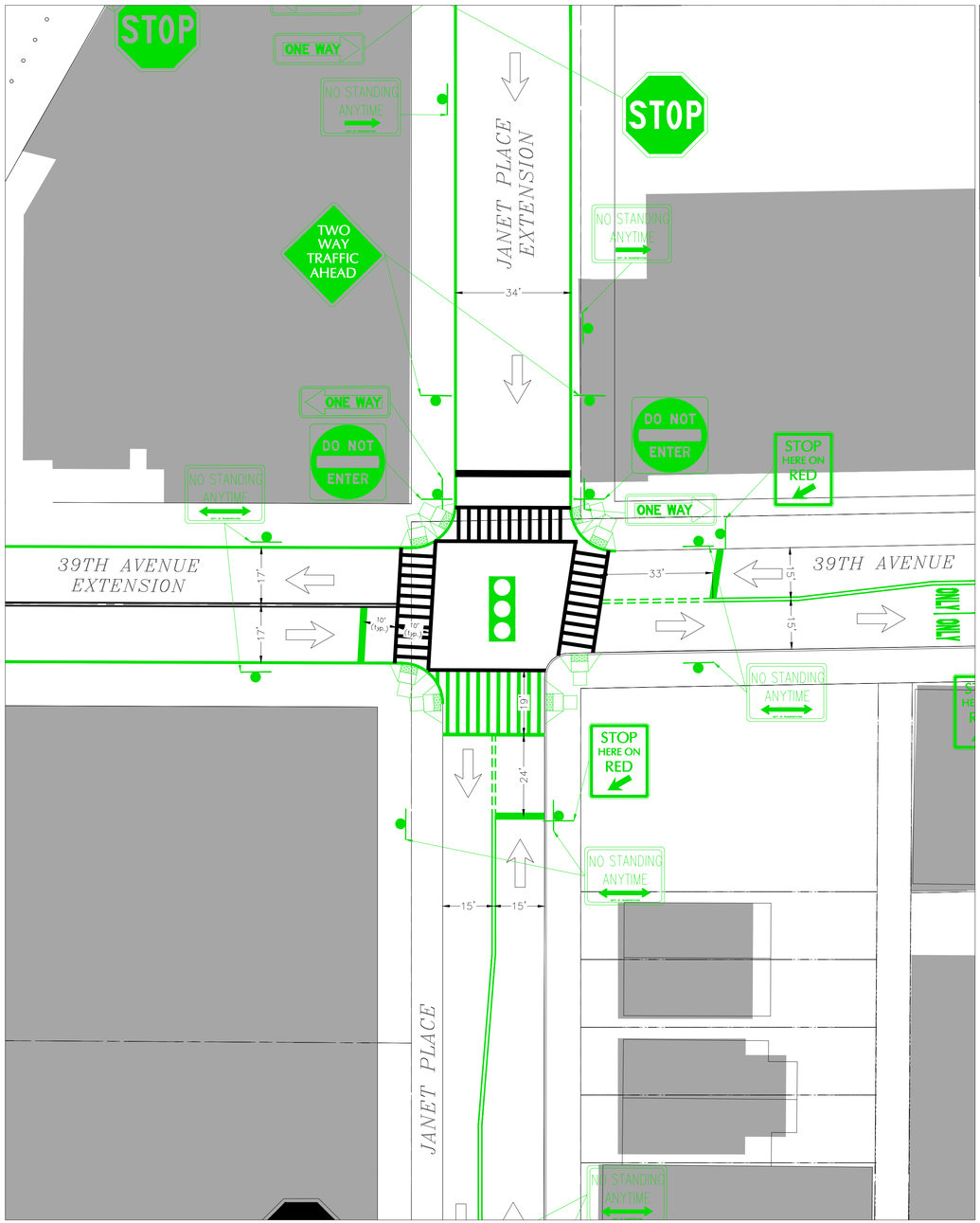
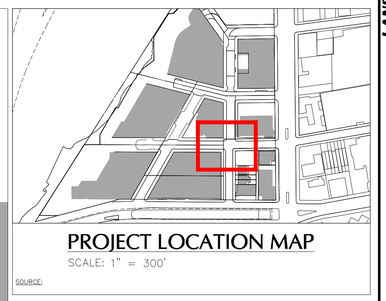


FUTURE WITH ACTION



NOTE: ALL EXISTING PEDESTRIAN RAMPS AT DISTURBED CORNERS WILL BE UPGRADED TO COMPLY WITH ADA STANDARDS.

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

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Project
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QUEENS FLUSHING NEW YORK

Drawing Title
PROPOSED TRAFFIC IMPROVEMENTS
39TH AVENUE & JANET PLACE

Project No.	Drawing No.
170551501	TC-11
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	

Sheet 11 of 32

LANGAN PROJECT NO. 170551501

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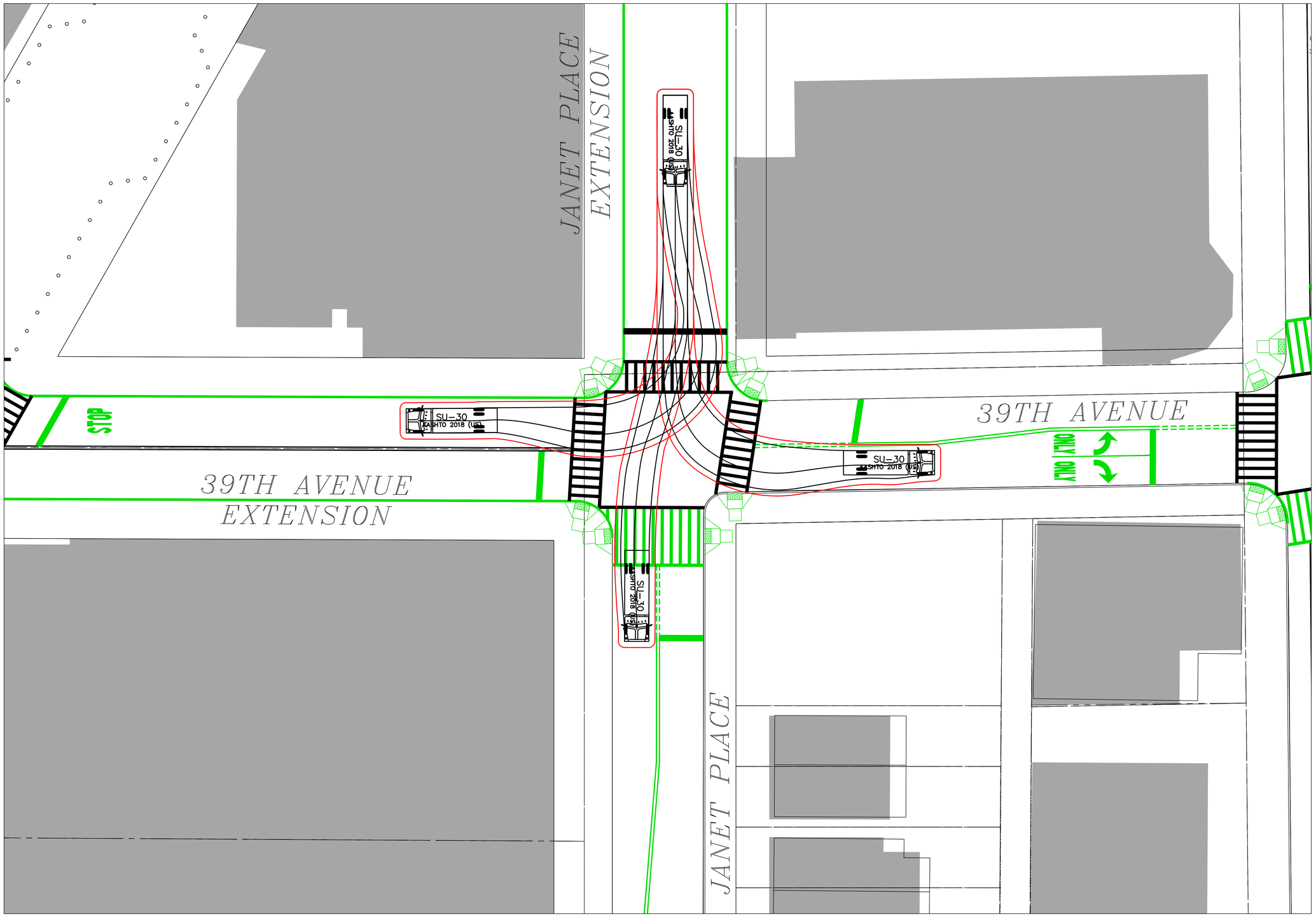

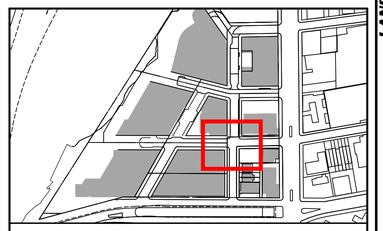

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

10 0 2 4 10

SCALE: 1 INCH = 10 FEET

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SU-30
1 OF 2

DRAFT CONCEPTUAL

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Project
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QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & JANET PLACE

Project No.	Drawing No.
170551501	TC-12A
Date: 12/10/2019	
Drawn By: NST	
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Sheet 12A of 32

PROJECT NO. 170551501

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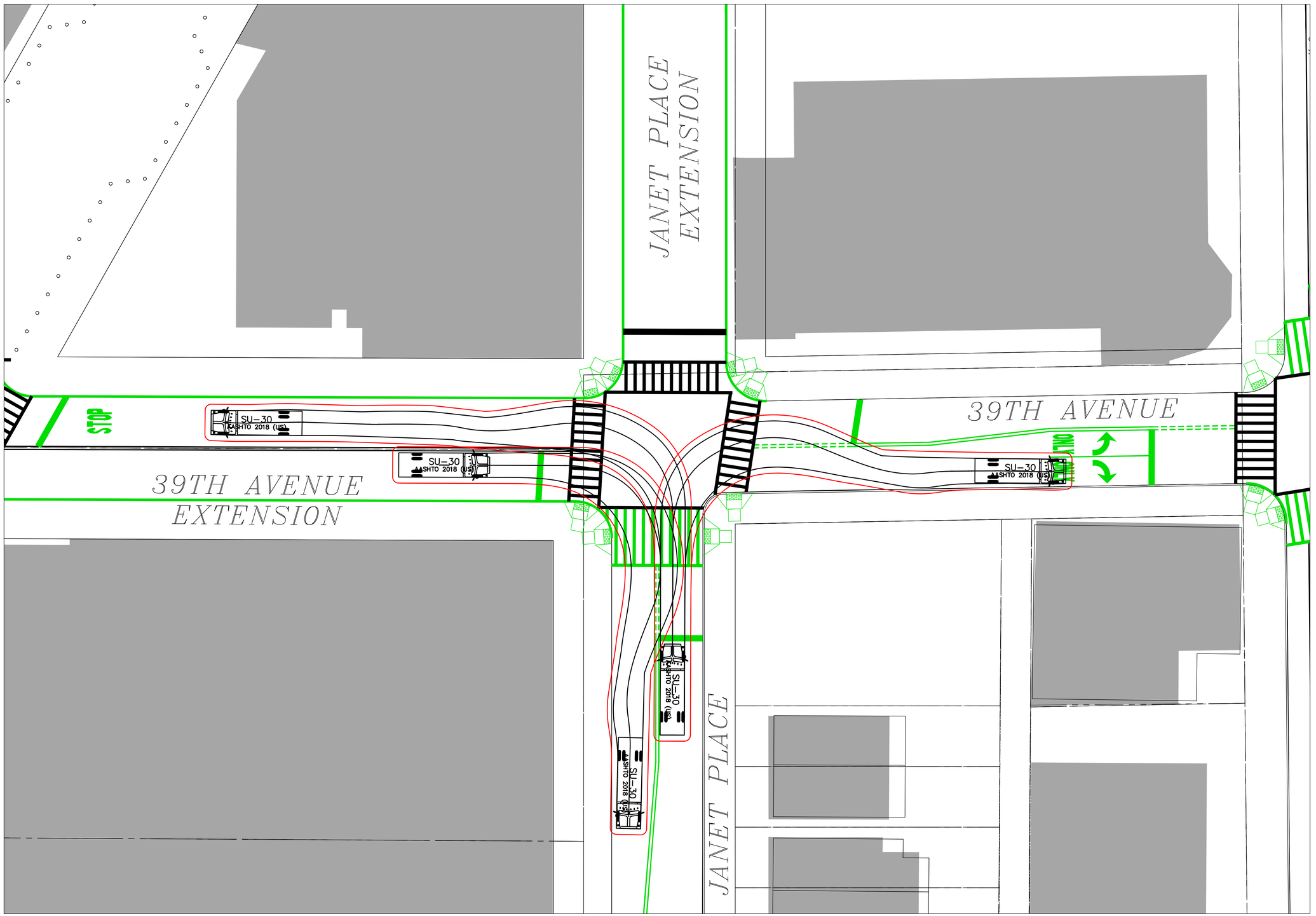

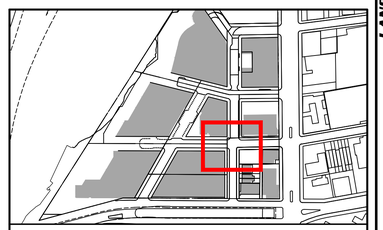

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
2 OF 2

SCALE: 1 INCH = 10 FEET

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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & JANET PLACE

Project No.	170551501
Date	12/10/2019
Drawn By	NST
Checked By	BMW

Drawing No.
TC-12B

Sheet 12B of 32

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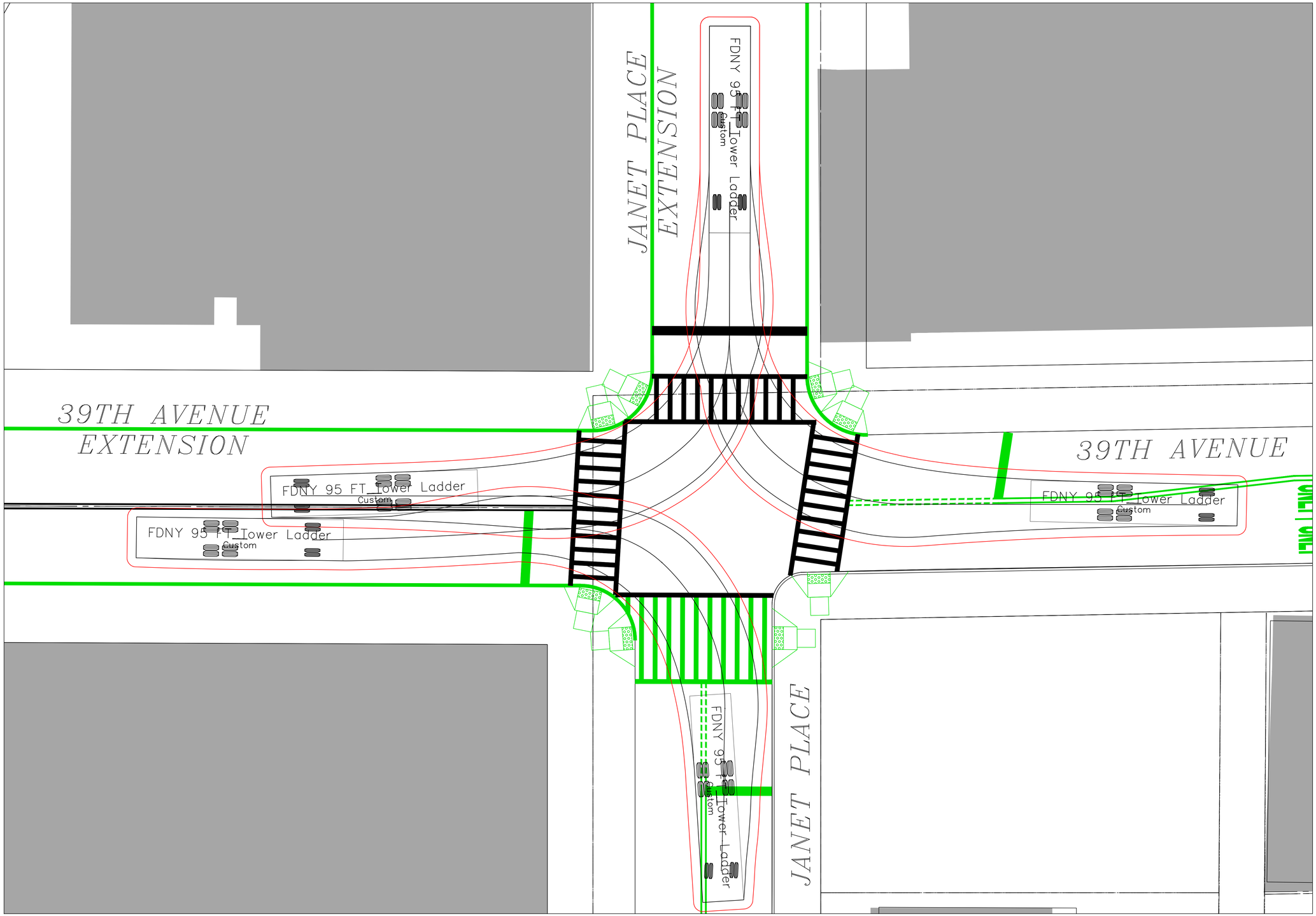

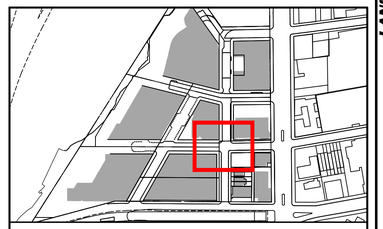

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FIRE TRUCK
1 OF 1

10 0 2 4 10

SCALE: 1 INCH = 10 FEET

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Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & JANET PLACE

Project No.	Drawing No.
170551501	TC-13
Date: 12/10/2019	
Drawn By: NST	
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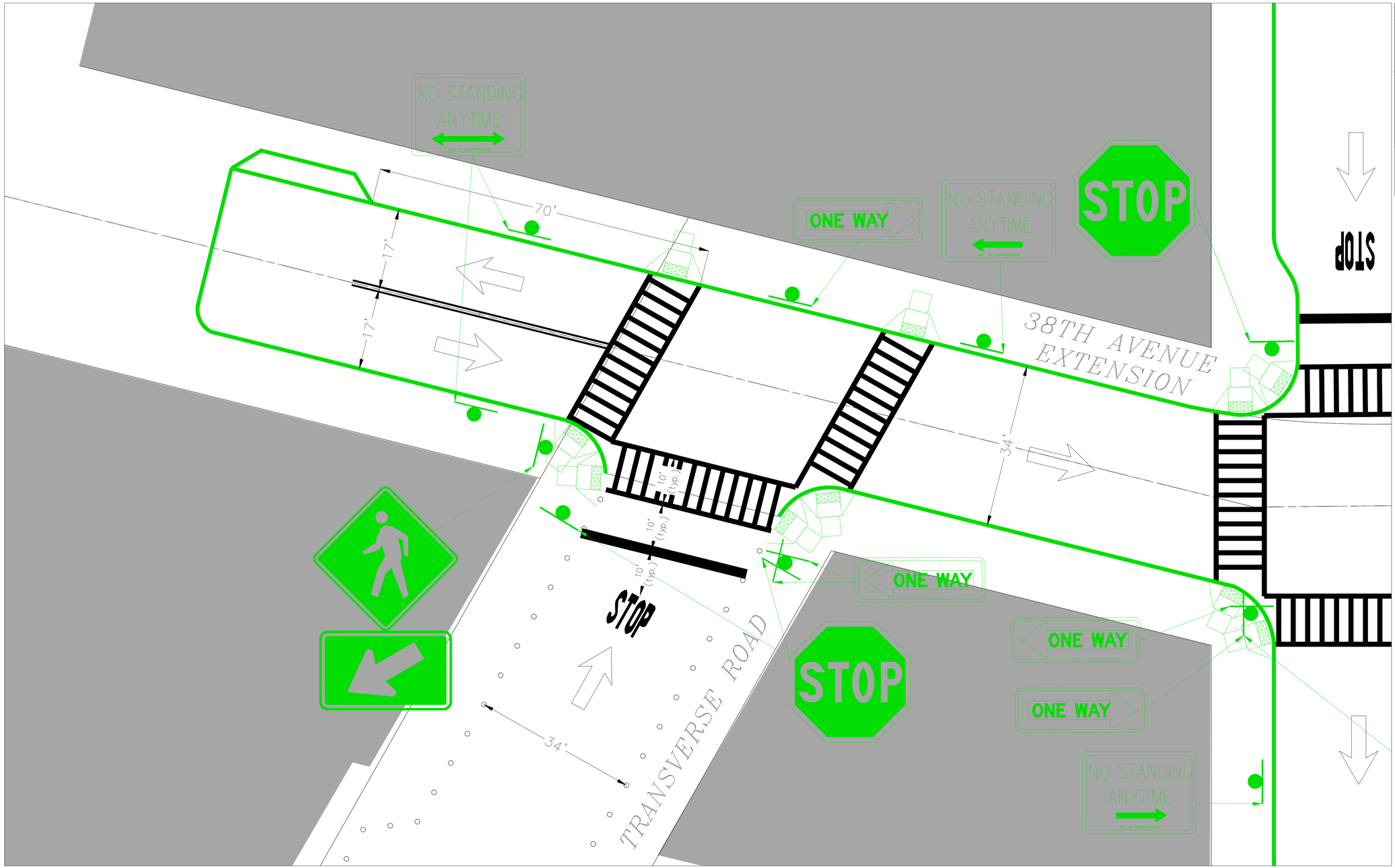

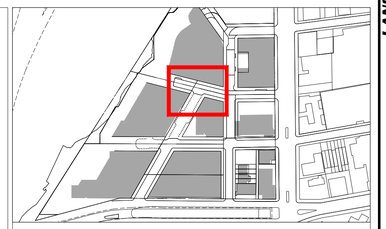

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FUTURE WITH ACTION

NOTE: INTERSECTION WOULD NOT EXIST IN THE NO ACTION CONDITION.

SCALE: 1 INCH = 10 FEET

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Drawing Title
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38TH AVENUE & TRANSVERSE ROAD

Project No.	Drawing No.
170551501	TC-14
Date: 12/10/2019	
Drawn By: NST	
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Sheet 14 of 32	

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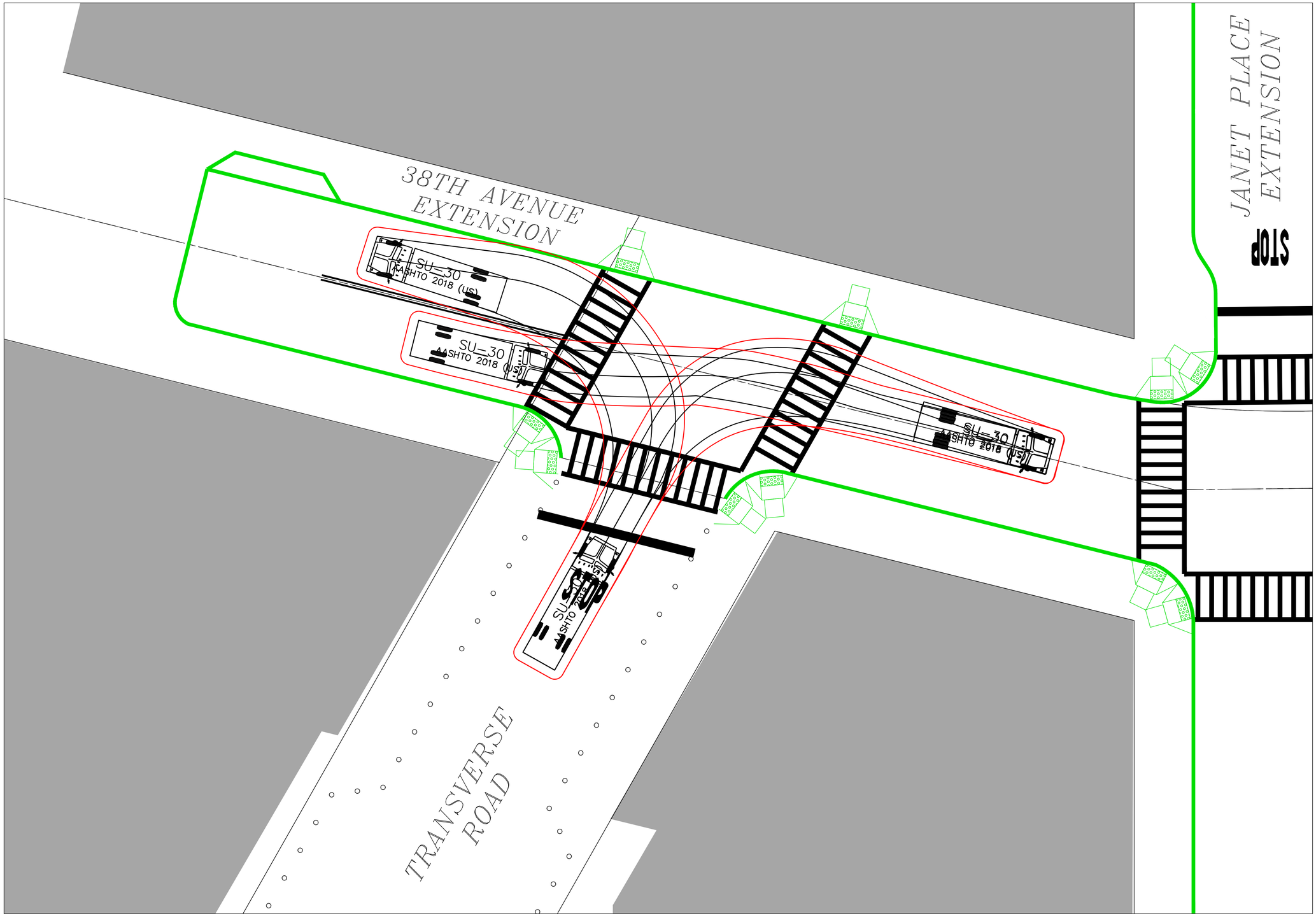

PROJECT LOCATION MAP
SCALE: 1" = 300'
SOURCE:

SU-30
1 OF 1

10 0 2 4 10
SCALE: 1 INCH = 10 FEET

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QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
38TH AVENUE & TRANSVERSE ROAD

Project No.	Drawing No.
170551501	TC-15
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	Sheet 15 of 32

PROJECT NO. 170551501

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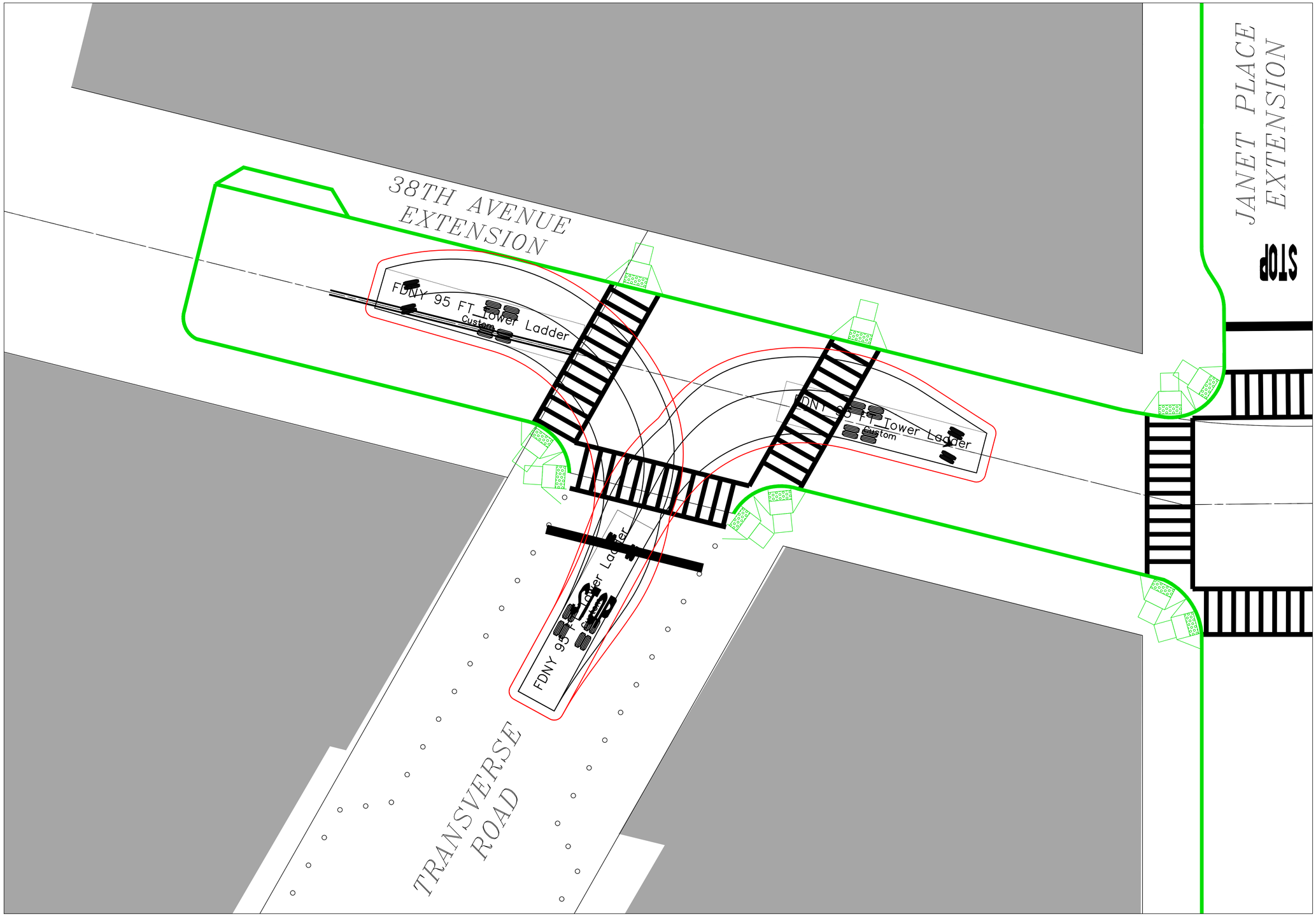

PROJECT LOCATION MAP
SCALE: 1" = 300'
SOURCE:

FIRE TRUCK
1 OF 1

SCALE: 1 INCH = 10 FEET

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Drawing Title
MANEUVERABILITY ASSESSMENT
38TH AVENUE & TRANSVERSE ROAD

Project No.	Drawing No.
170551501	TC-16
Date: 12/10/2019	
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PROJECT NO. 170551501

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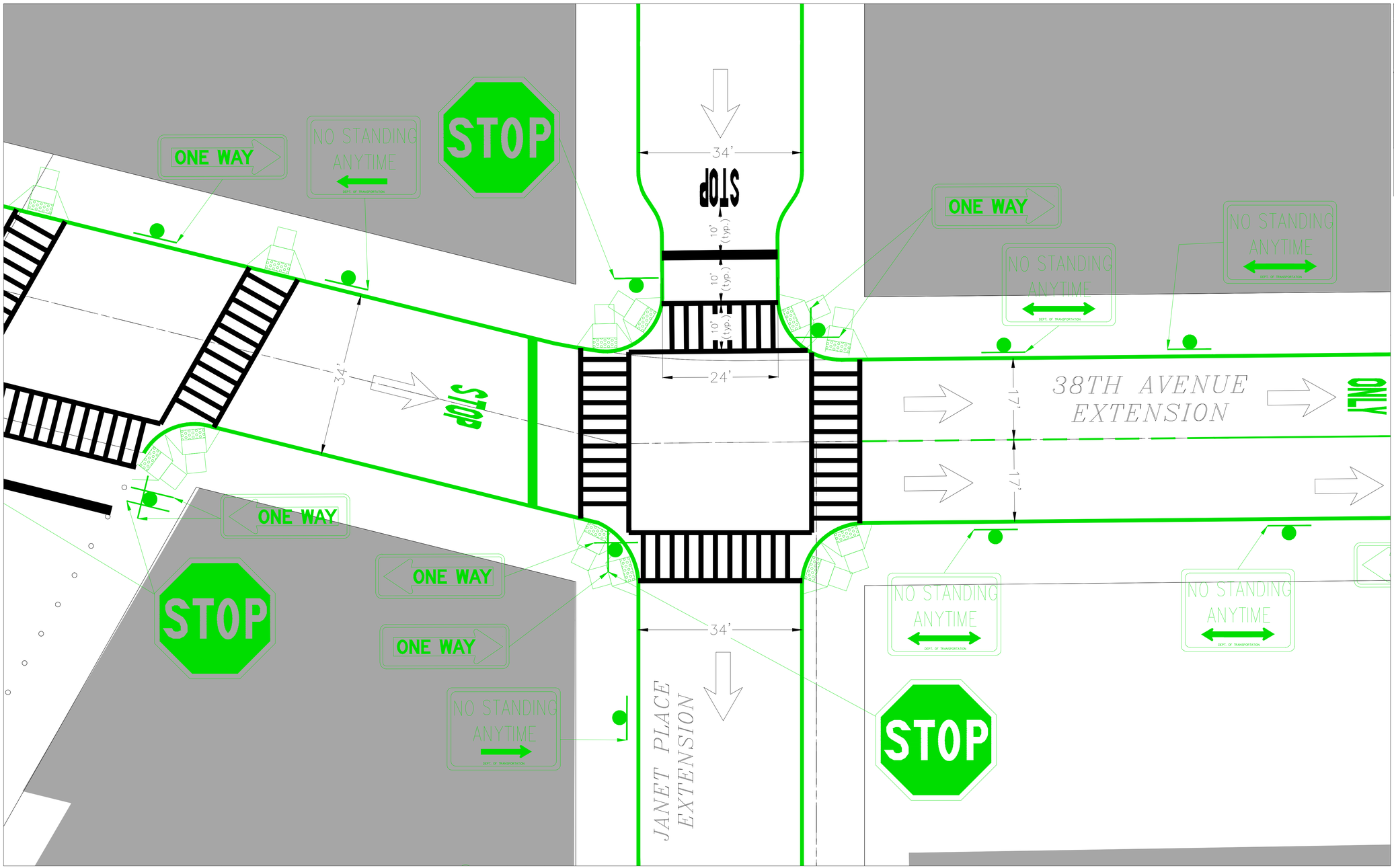

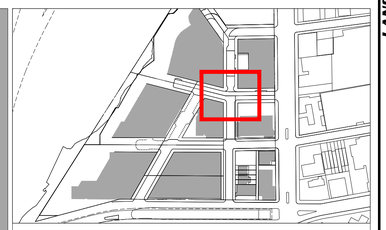

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FUTURE WITH ACTION*

NOTE: INTERSECTION WOULD NOT EXIST IN THE NO ACTION CONDITION.

*THE ALL-WAY "STOP" CONTROL PROPOSED AS PART OF THE WITH ACTION CONDITION DOES NOT SATISFY THE AWSC WARRANT CRITERIA.

10 0 2 4 10
SCALE: 1 INCH = 10 FEET

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QUEENS FLUSHING NEW YORK

Drawing Title
PROPOSED TRAFFIC IMPROVEMENTS
38TH AVENUE & JANET PLACE

Project No.	Drawing No.
170551501	TC-17
Date: 12/10/2019	
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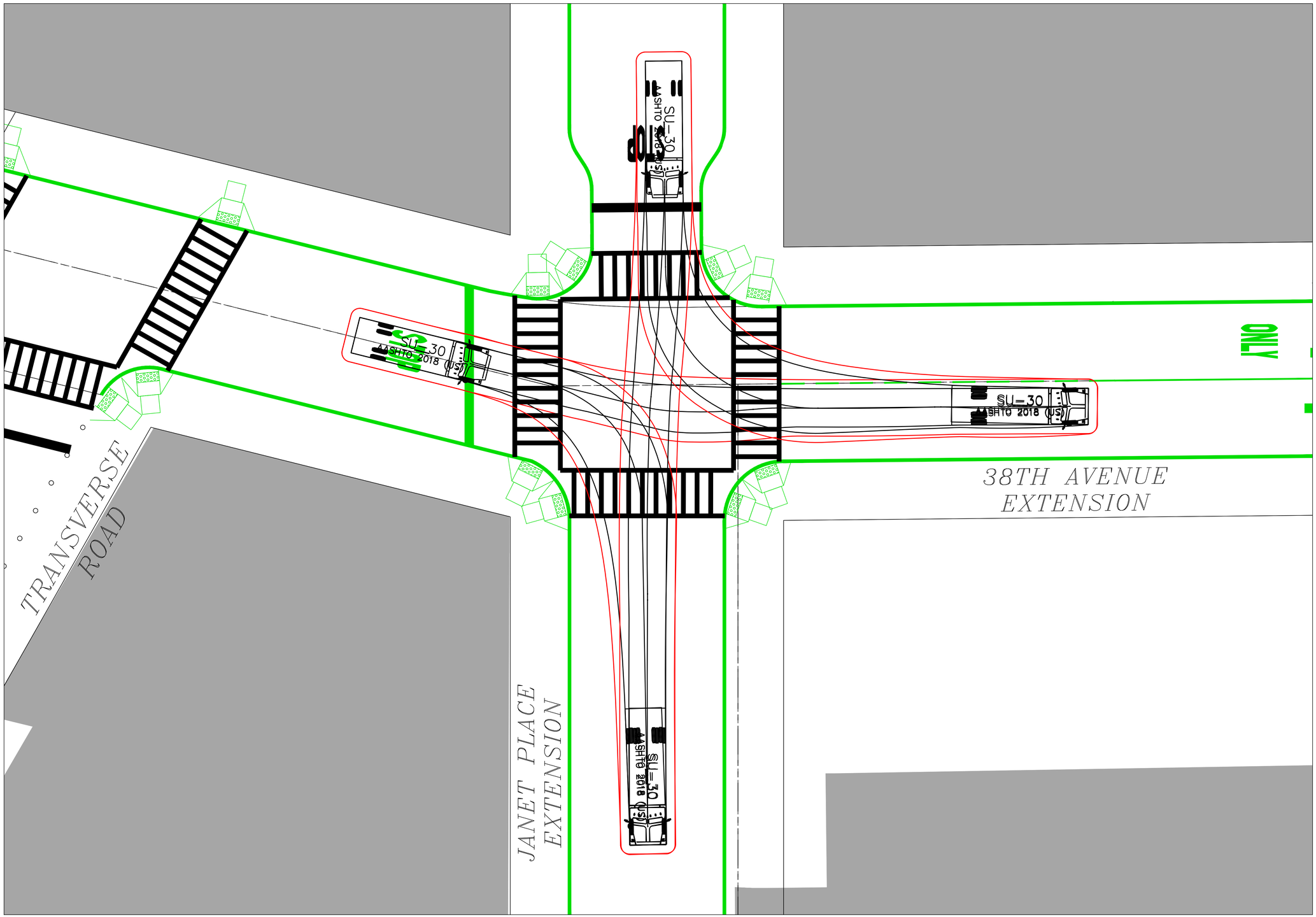
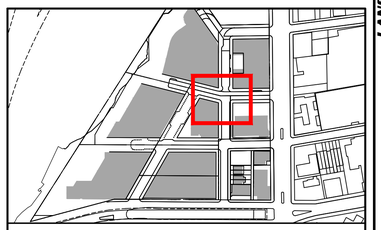
PROJECT NO. 170551501





PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
1 OF 1

SCALE: 1 INCH = 10 FEET

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Drawing Title
MANEUVERABILITY ASSESSMENT
38TH AVENUE & JANET PLACE

Project No.	Drawing No.
170551501	TC-18
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
	Sheet 18 of 32

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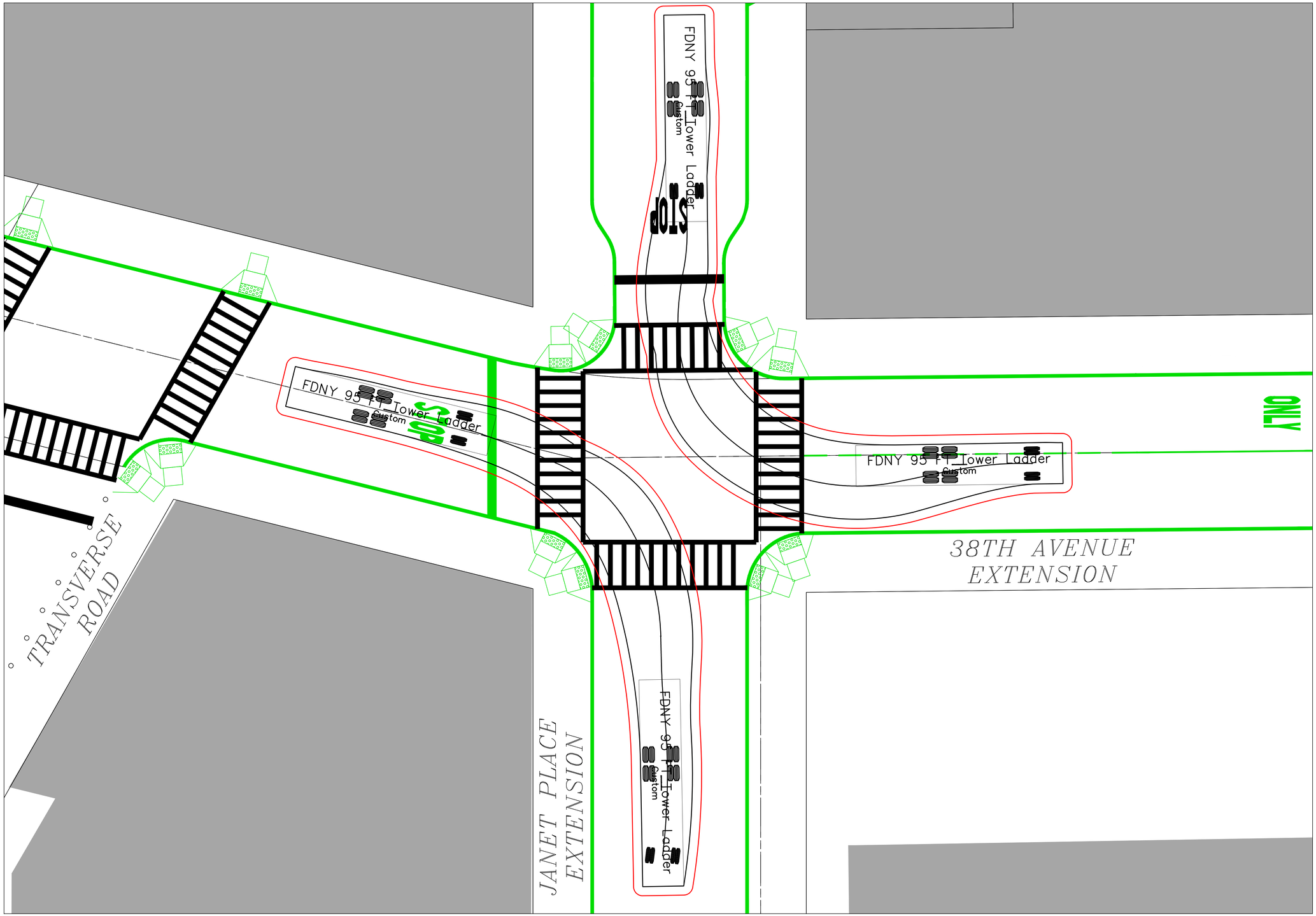
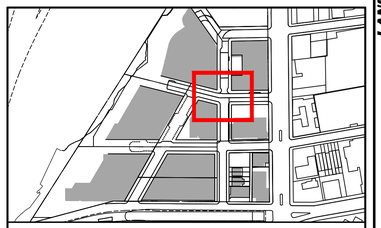
PROJECT NO. 170551501





PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FIRE TRUCK
1 OF 1

SCALE: 1 INCH = 10 FEET

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Drawing Title
MANEUVERABILITY ASSESSMENT
38TH AVENUE & JANET PLACE

Project No.	Drawing No.
170551501	TC-19
Date: 12/10/2019	
Drawn By: NST	
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PROJECT NO. 170551501

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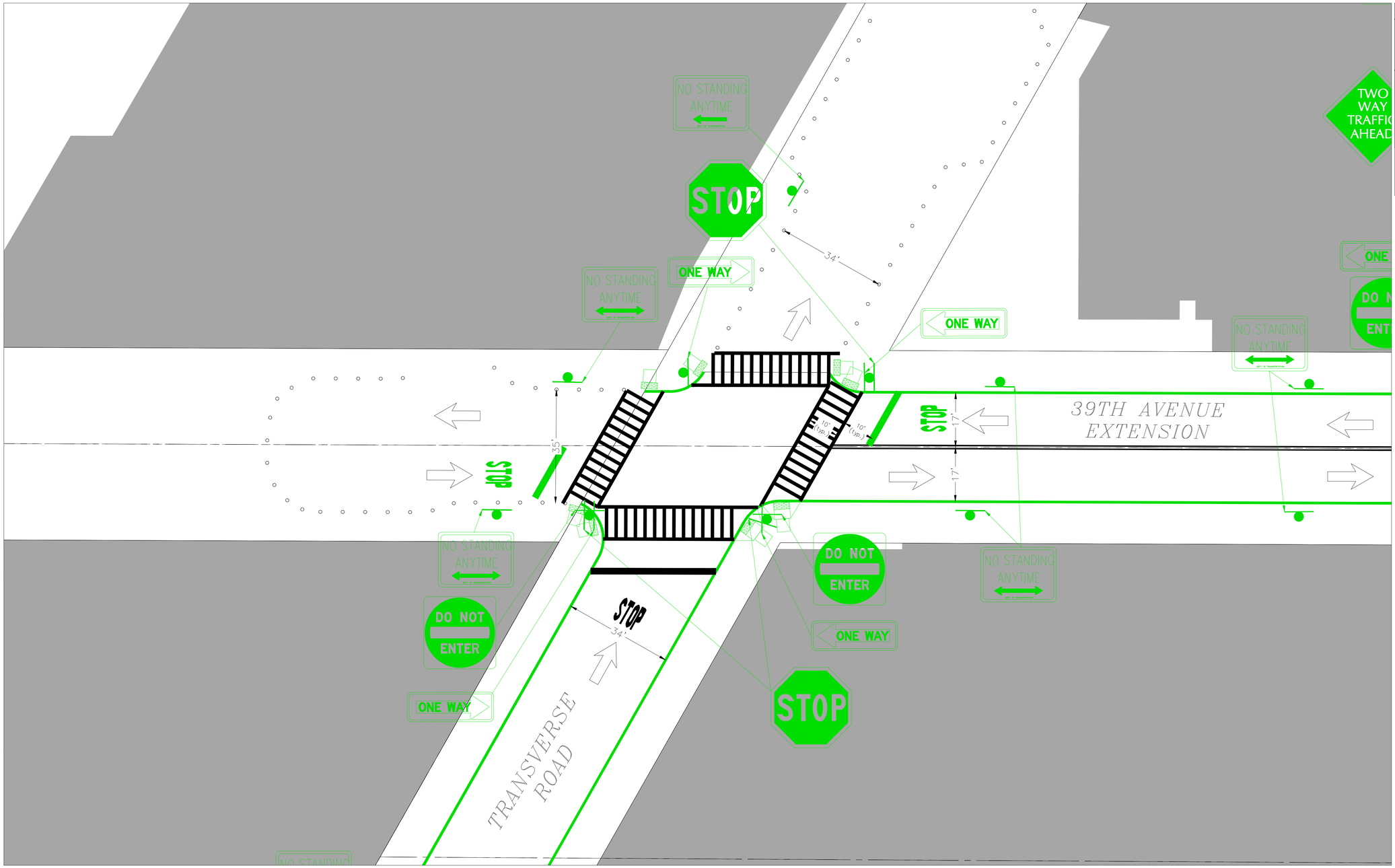

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FUTURE WITH ACTION

NOTE: INTERSECTION WOULD NOT EXIST IN THE NO ACTION CONDITION.

SCALE: 1 INCH = 15 FEET

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Drawing Title
PROPOSED TRAFFIC IMPROVEMENTS
39TH AVENUE & TRANSVERSE ROAD

Project No.	Drawing No.
170551501	TC-20
Date: 12/10/2019	
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Sheet 20 of 32

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PROJECT NO. 170551501

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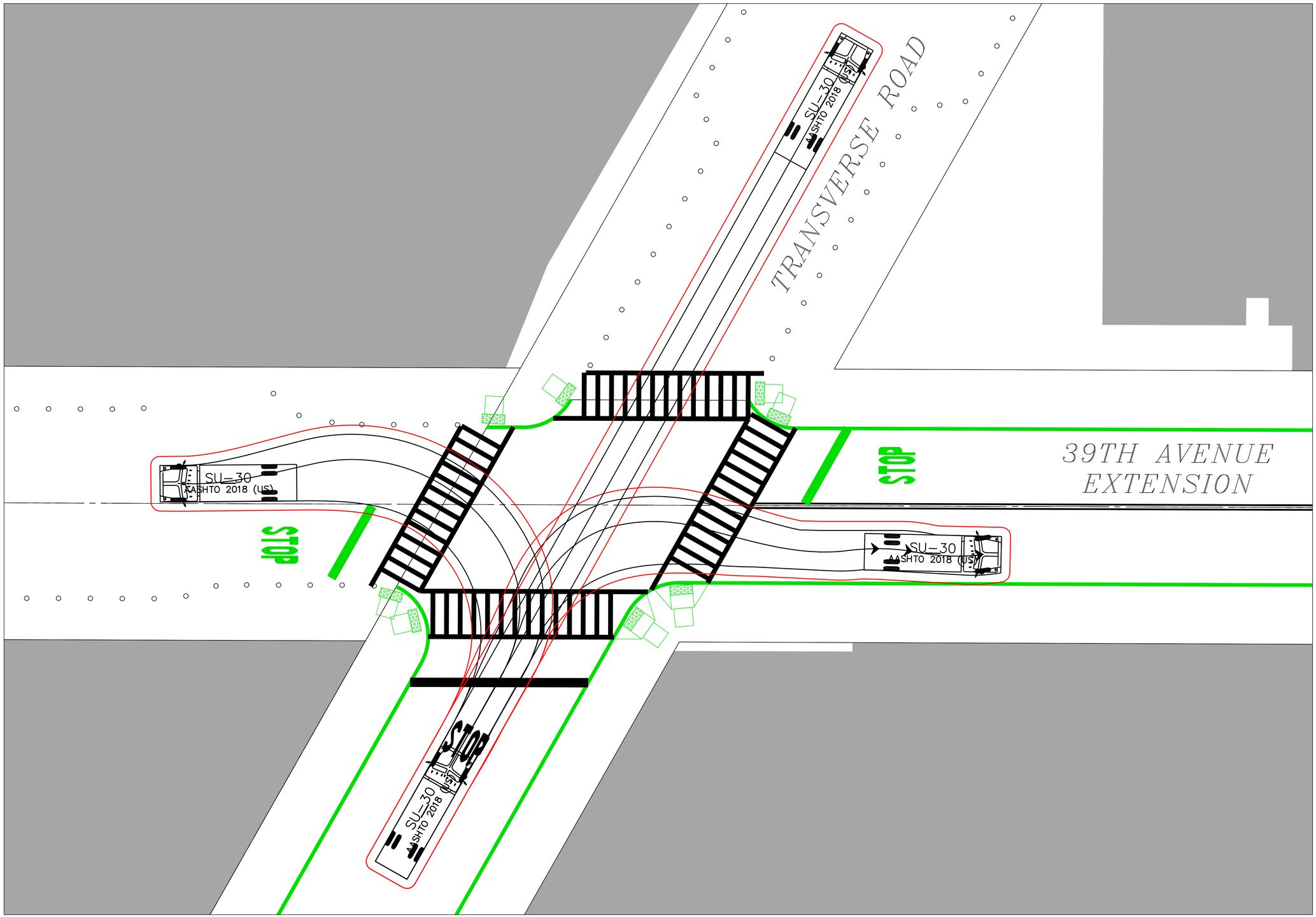

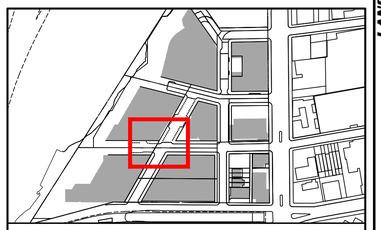

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
1 OF 2

10 0 2 4 10

SCALE: 1 INCH = 10 FEET

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Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & TRANSVERSE ROAD

Project No.	Drawing No.
170551501	TC-21A
Date: 12/10/2019	
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Checked By: BMW	
Sheet 21A of 32	

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PROJECT NO. 170551501

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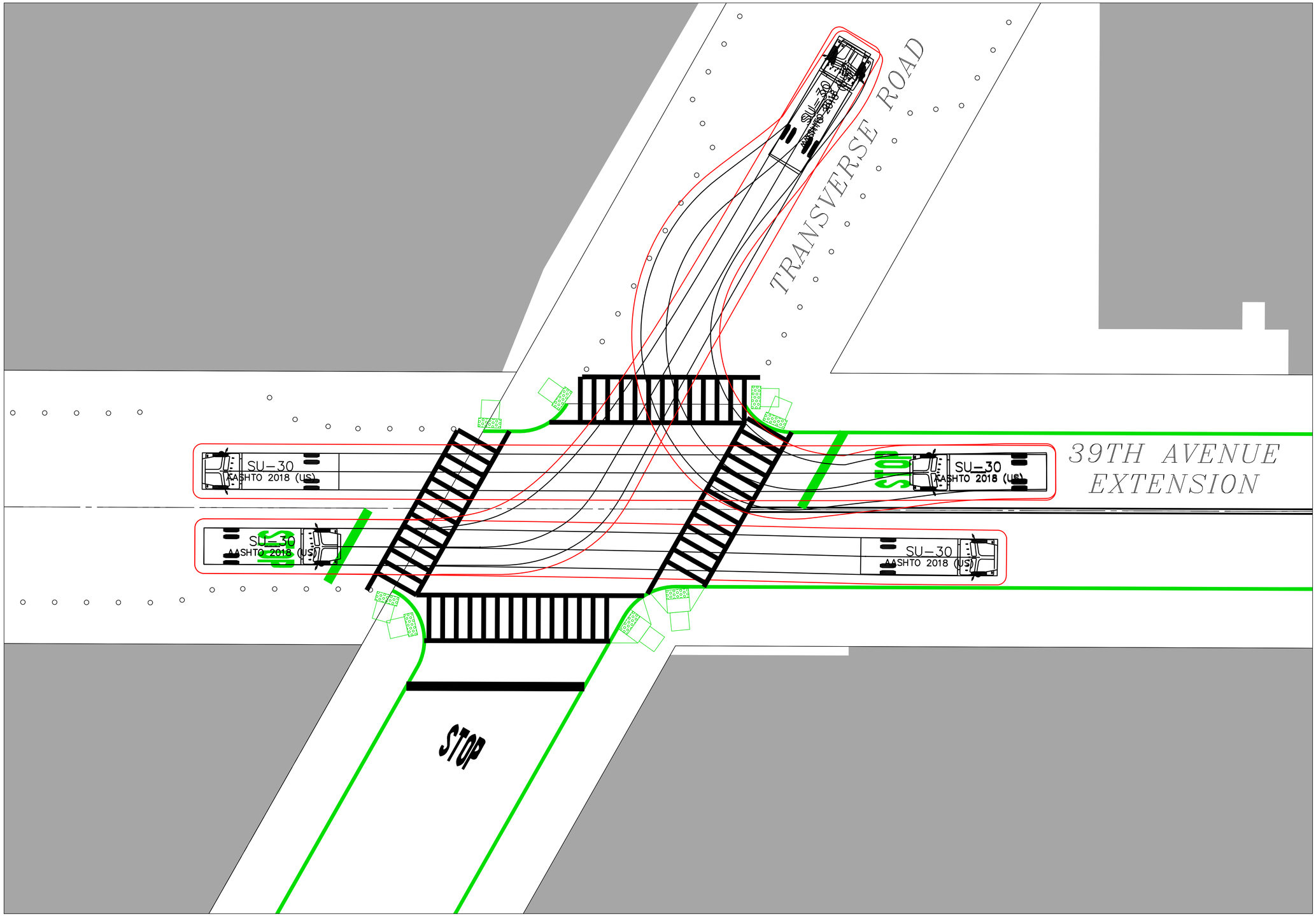

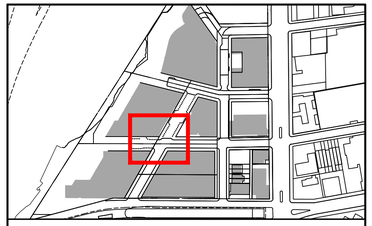

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
2 OF 2

SCALE: 1 INCH = 10 FEET

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Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & TRANSVERSE ROAD

Project No.	Drawing No.
170551501	TC-21B
Date: 12/10/2019	
Drawn By: NST	
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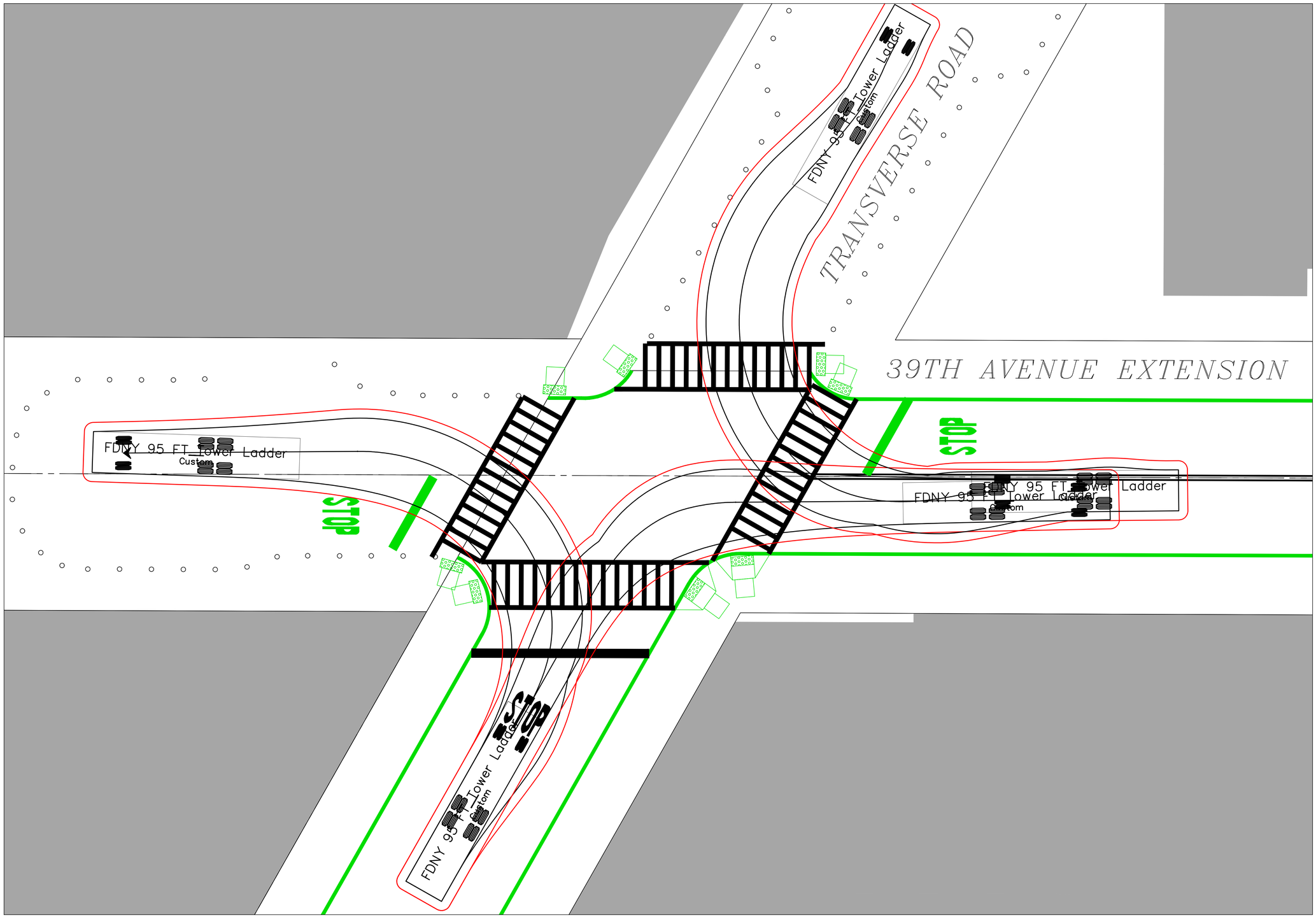

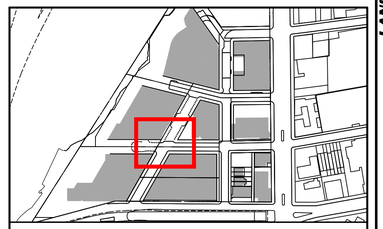

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FIRE TRUCK
1 OF 1

SCALE: 1 INCH = 15 FEET

WARNING:
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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & TRANSVERSE ROAD

Project No.	Drawing No.
170551501	TC-22
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
Sheet 22 of 32	

PROJECT NO. 170551501

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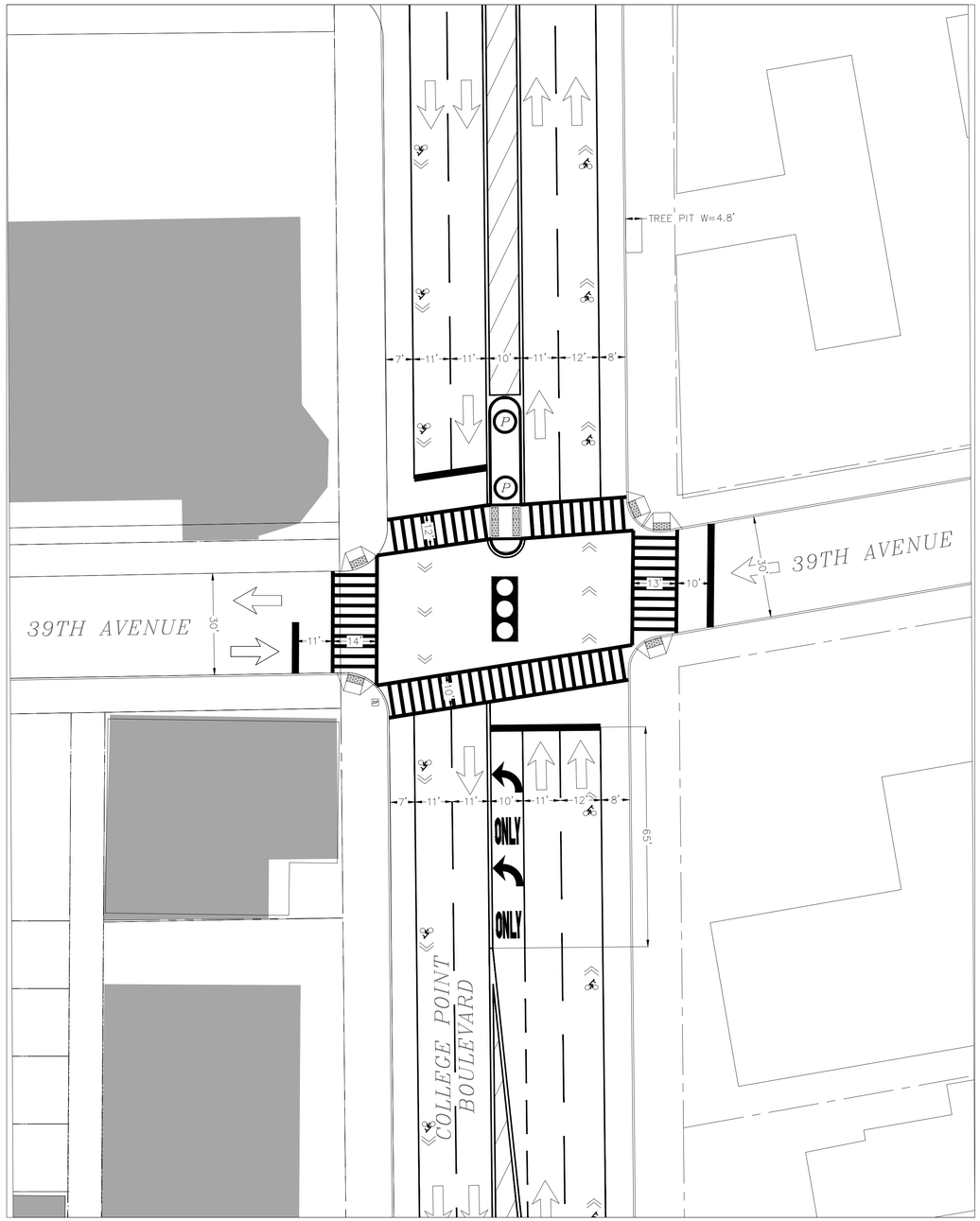

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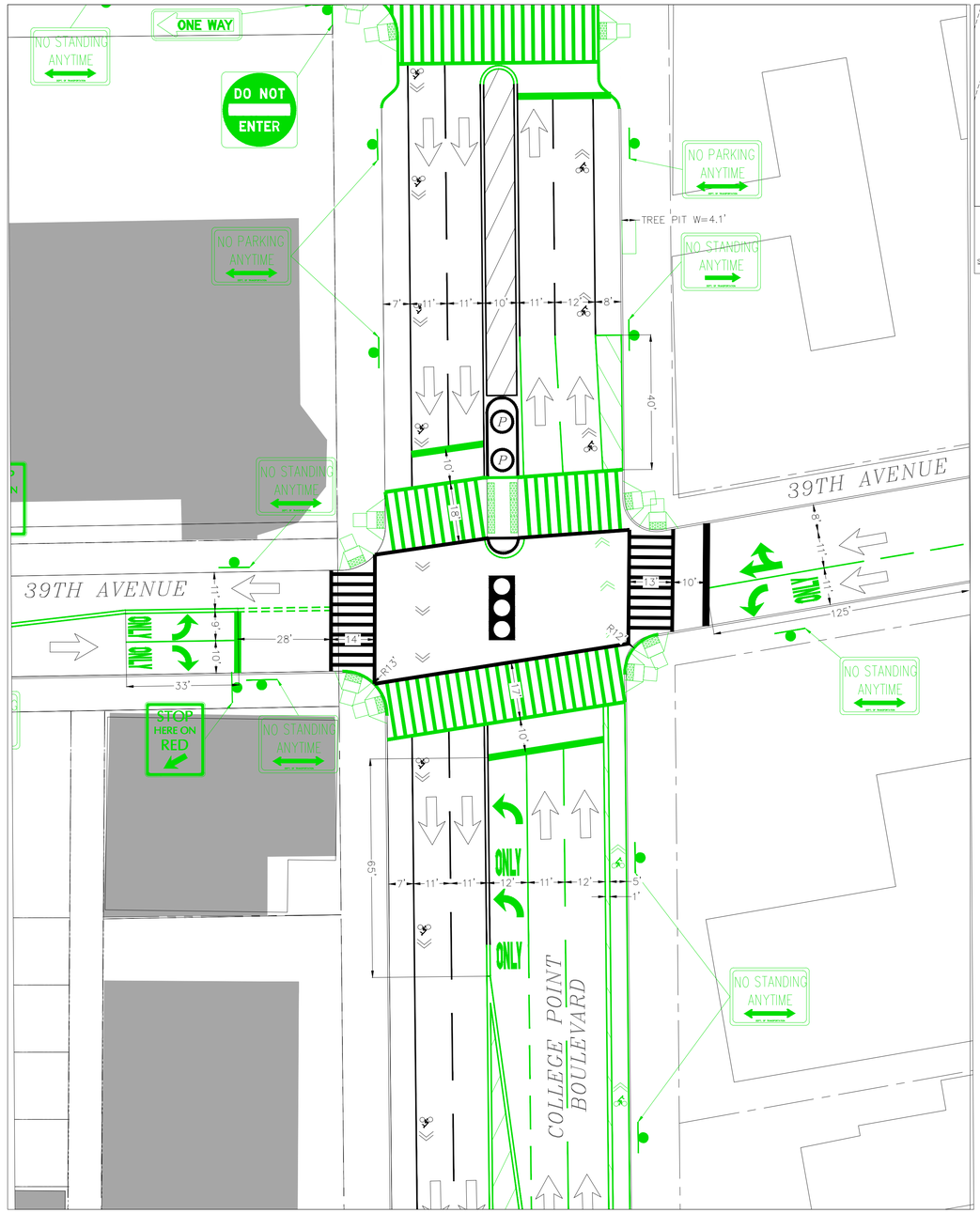

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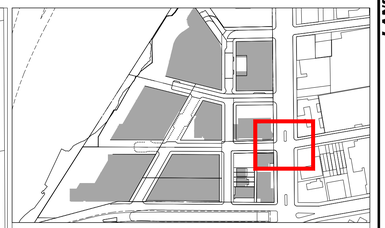

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

NOTE: ALL EXISTING PEDESTRIAN RAMPS AT DISTURBED CORNERS WILL BE UPGRADED TO COMPLY WITH ADA STANDARDS.

20 0 5 10 20

SCALE: 1 INCH = 20 FEET

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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
PROPOSED TRAFFIC IMPROVEMENTS
39TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	170551501
Date	12/10/2019
Drawn By	NST
Checked By	BMW

Drawing No. TC-23

Sheet 23 of 32

LANGAN PROJECT NO. 170551501

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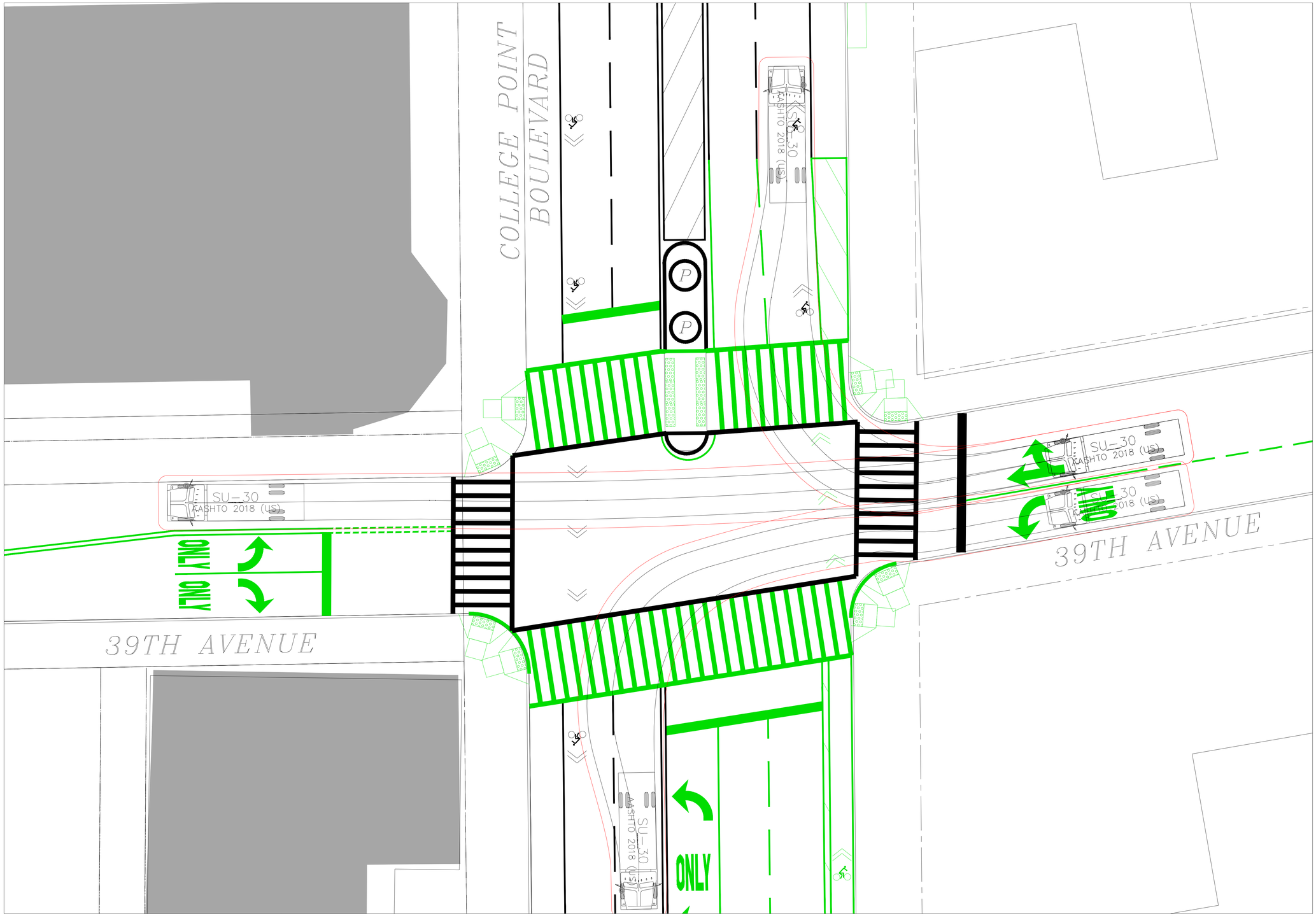

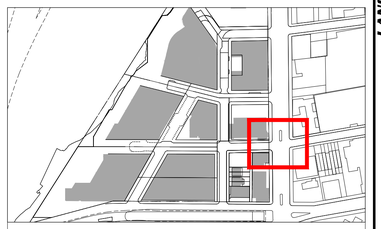

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
1 OF 3

SCALE: 1 INCH = 10 FEET

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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

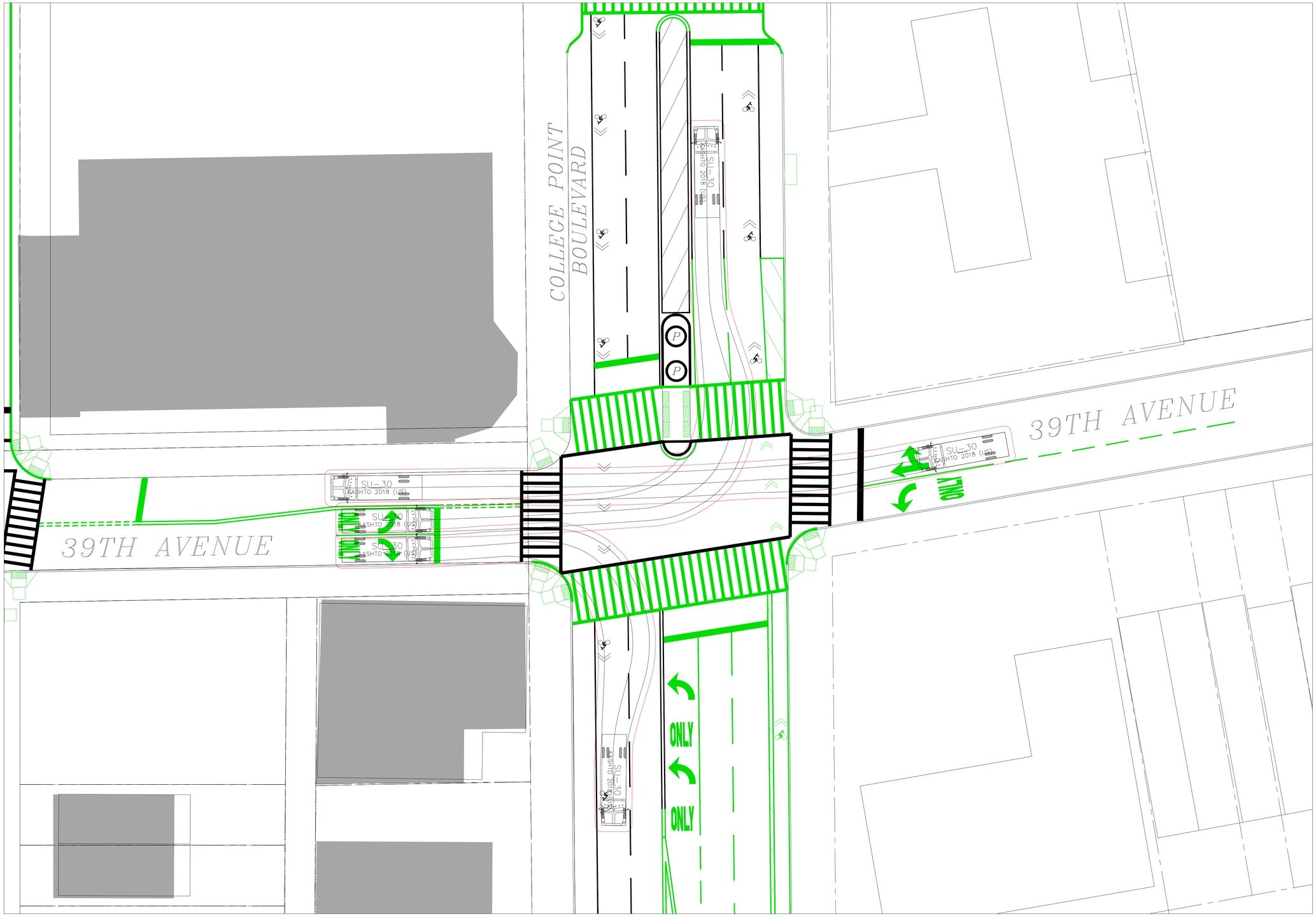
Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & COLLEGE POINT BOULEVARD

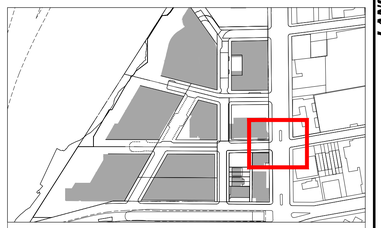
Project No.	Drawing No.
170551501	TC-24A
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
Sheet 24A of 32	

Filename: \\langan.com\data\NYC\data5\170551501\Project Data\CADD\01\2D-DesignFiles\Traffic\170551501-K-TC0101.dwg Date: 12/10/2019 Time: 14:13 User: ntortorella Style Table: Langan.stb Layout: 24A

PROJECT NO. 170551501

LANGAN





PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
2 OF 3

SCALE: 1 INCH = 15 FEET

WARNING:
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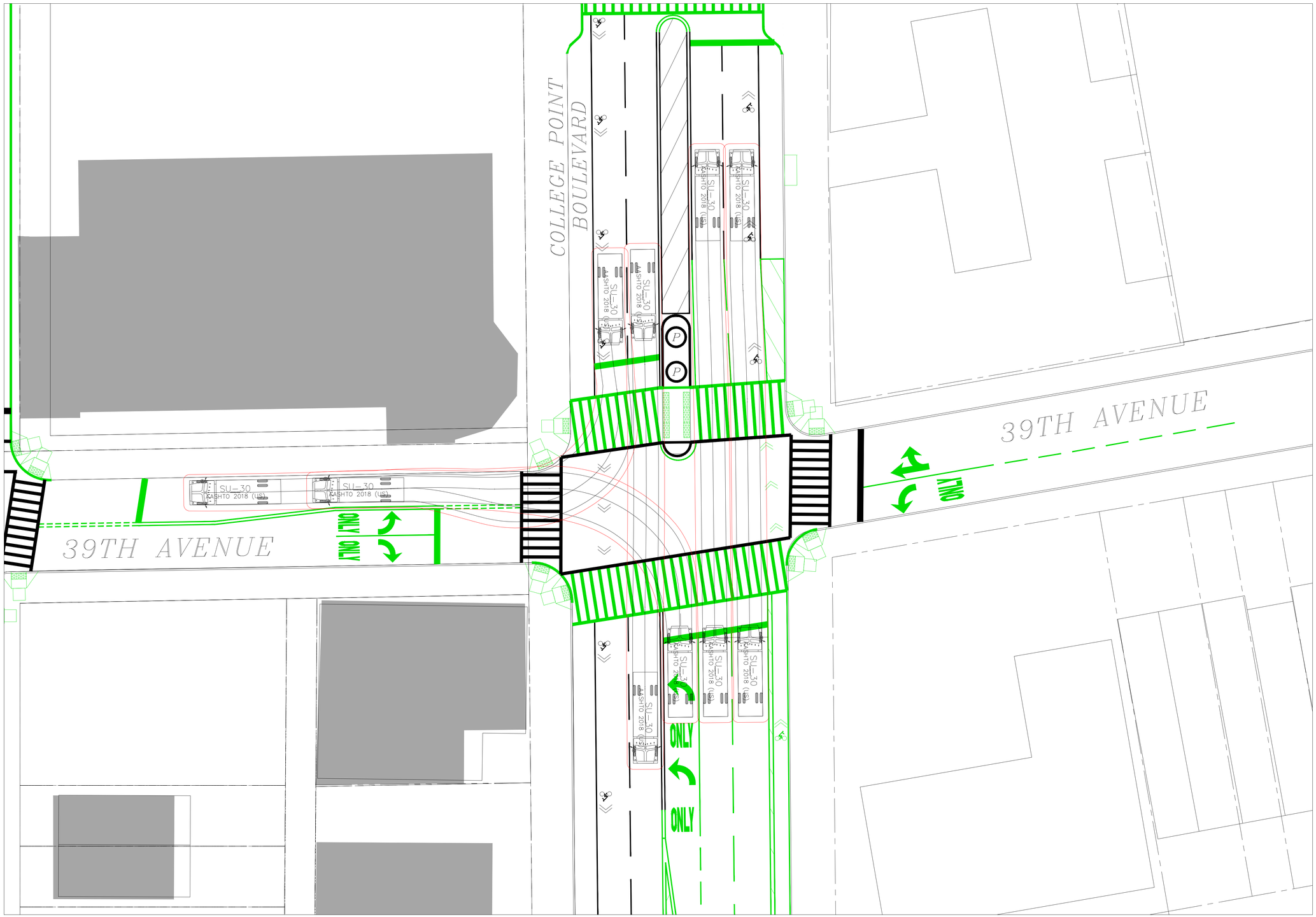
Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

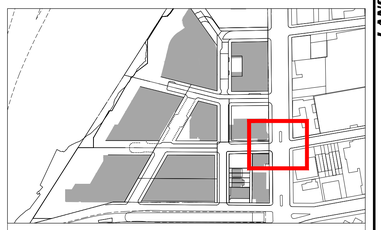
Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-24B
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
Sheet 24B of 32	

Filename: \\langan.com\data\NYC\data5\170551501\Project Data\CAD\01\2D-DesignFiles\Traffic\170551501-K-TC0101.dwg Date: 12/10/2019 Time: 14:13 User: ntortorella Style Table: Langan.stb Layout: 24B

LANGAN
PROJECT NO. 170551501





PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
3 OF 3

SCALE: 1 INCH = 15 FEET

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Project
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QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-24C
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	

Sheet 24C of 32

Filename: \\langan.com\data\NYC\data5\170551501\Project Data\CAD\01\2D-DesignFiles\Traffic\170551501-K-TC0101.dwg Date: 12/10/2019 Time: 14:13 User: ntortorella Style Table: Langan.stb Layout: 24C

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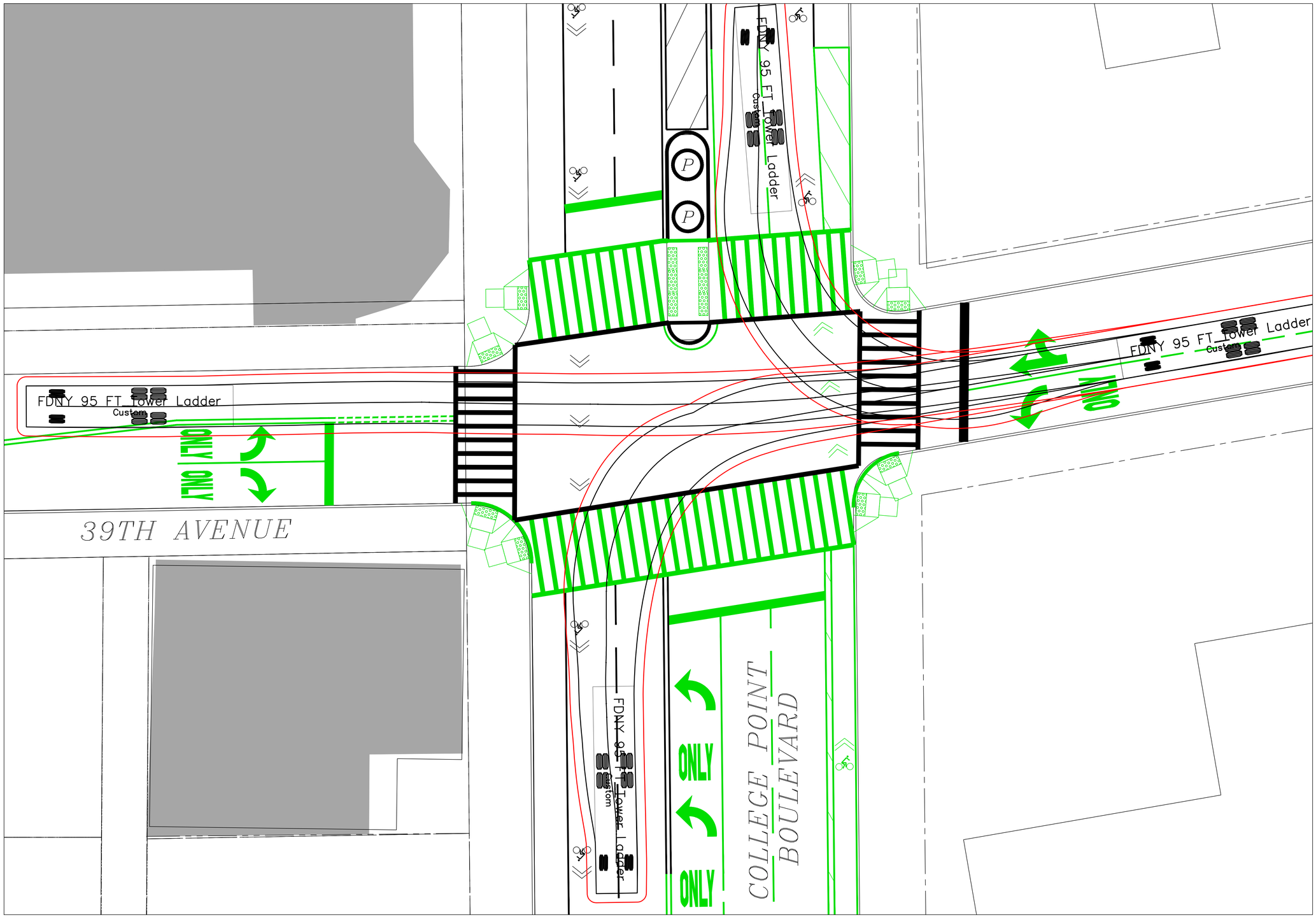
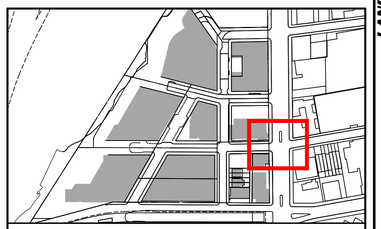
PROJECT NO. 170551501





PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FIRE TRUCK
1 OF 3

15 0 3 6 15

SCALE: 1 INCH = 15 FEET

WARNING:
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Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-25A
Date: 12/10/2019	
Drawn By: NST	
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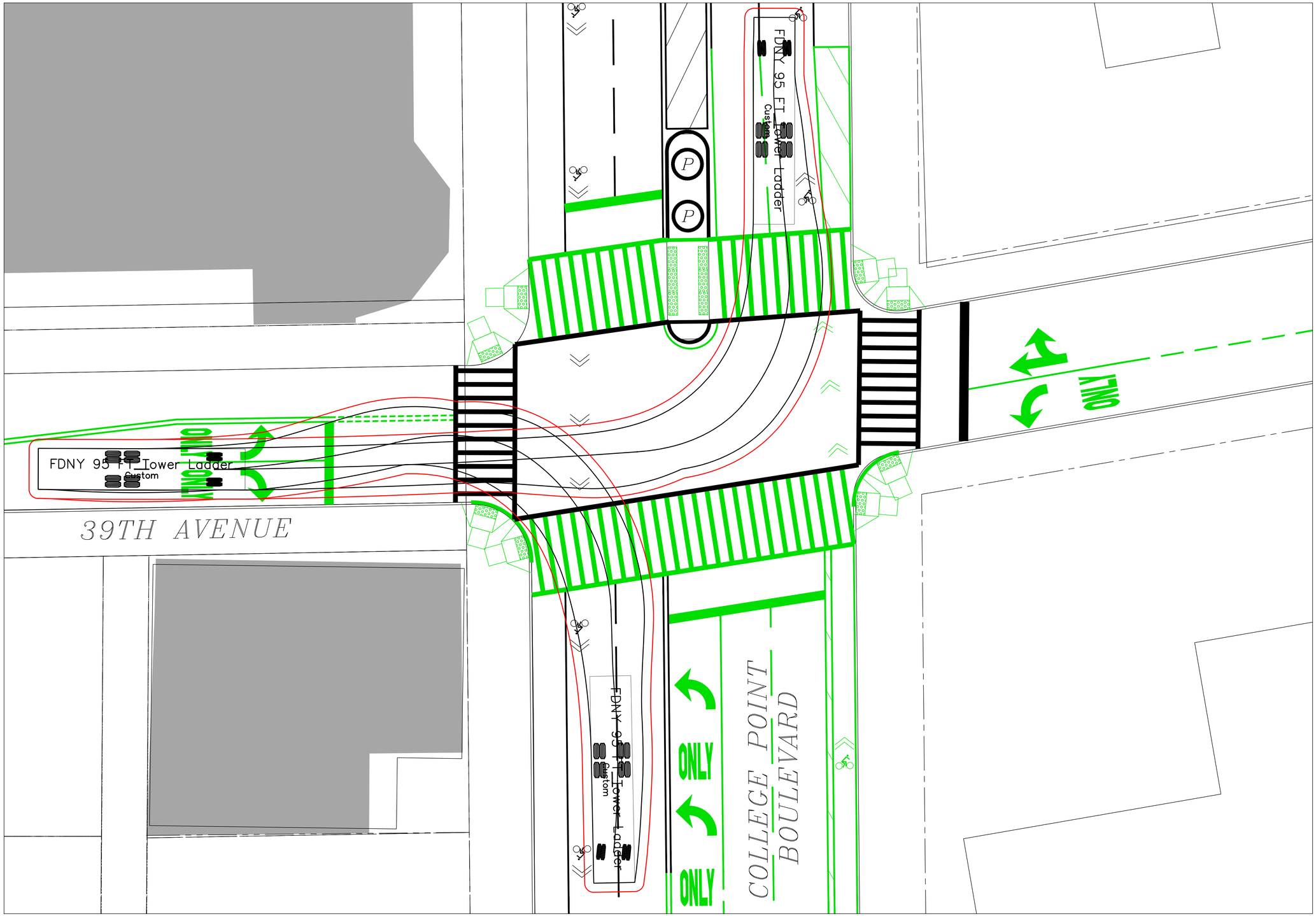

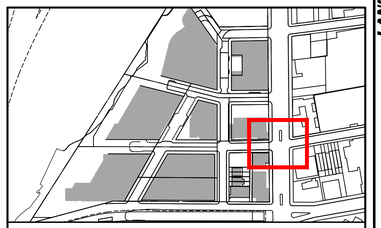

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FIRE TRUCK 2 OF 3

SCALE: 1 INCH = 15 FEET

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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-25B
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	Sheet 25B of 32

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PROJECT NO. 170551501

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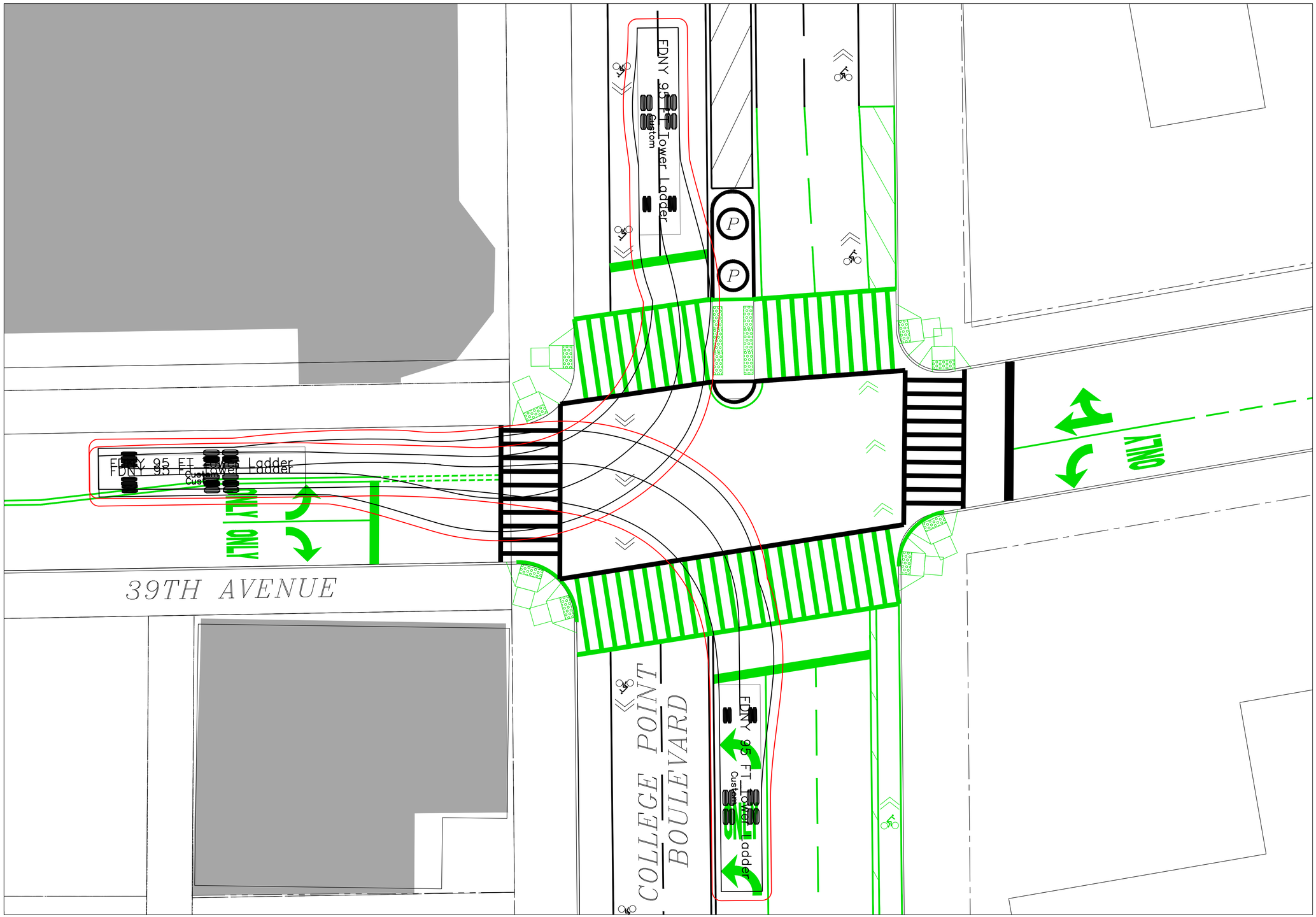

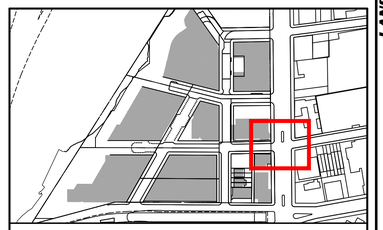

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

LANGAN

PROJECT NO. 170551501

FIRE TRUCK
3 OF 3

15 0 3 6 15

SCALE: 1 INCH = 15 FEET

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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
39TH AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-25C
Date: 12/10/2019	
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	Sheet 25C of 32

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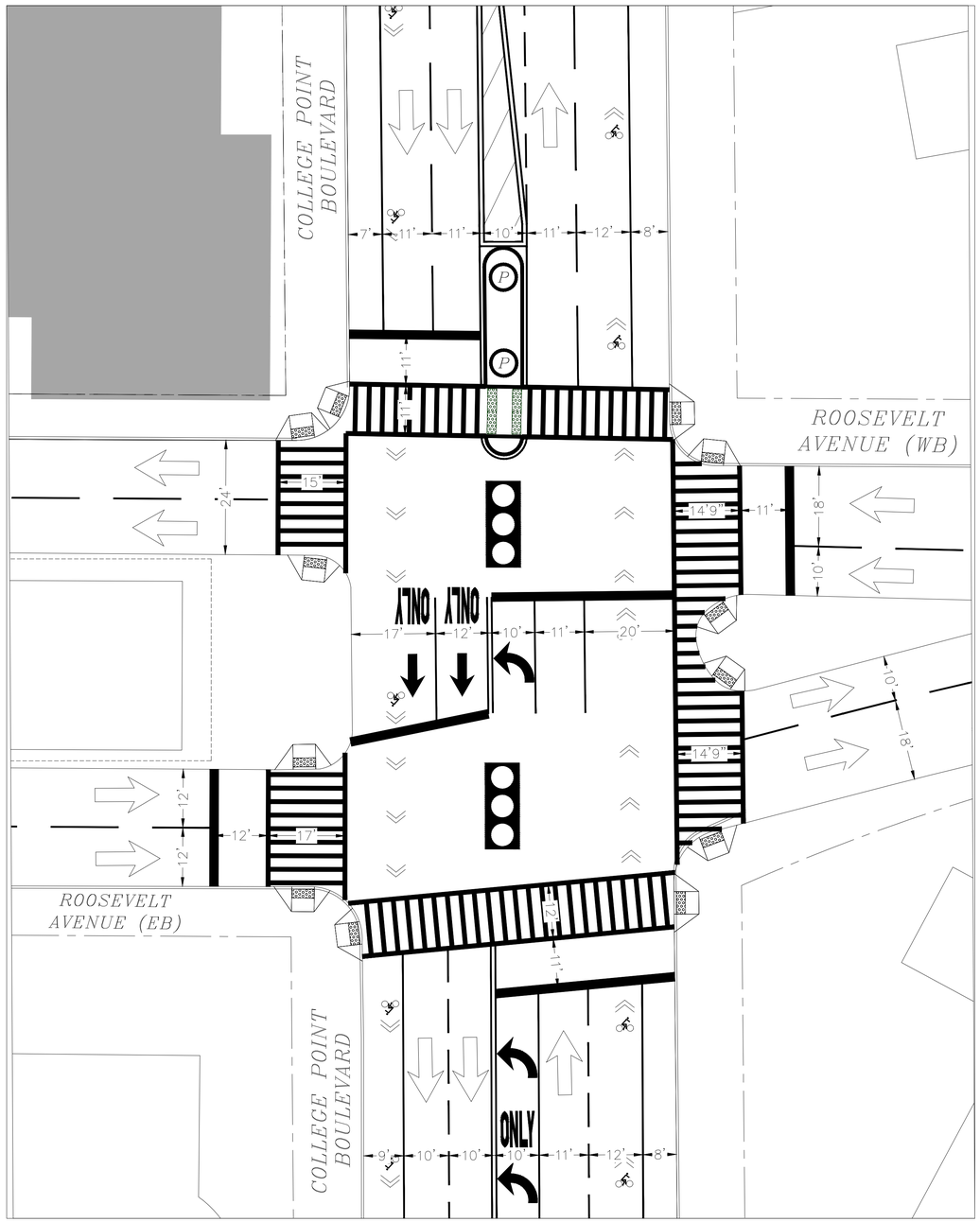

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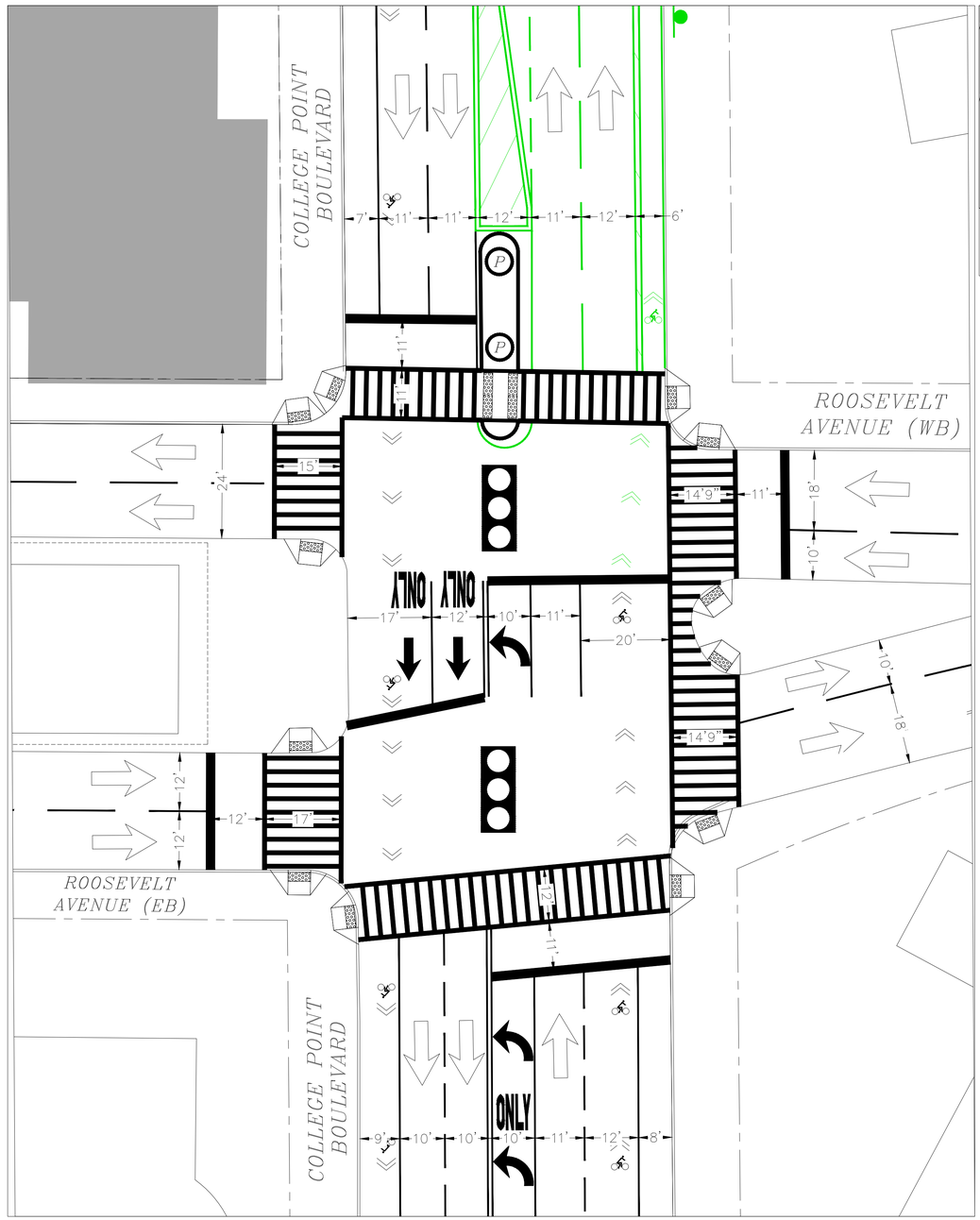

FUTURE WITH ACTION

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

NOTE: ALL EXISTING PEDESTRIAN RAMPS AT DISTURBED CORNERS WILL BE UPGRADED TO COMPLY WITH ADA STANDARDS.

SCALE: 1 INCH = 15 FEET

WARNING:
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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
PROPOSED TRAFFIC IMPROVEMENTS
ROOSEVELT AVENUE & COLLEGE POINT BOULEVARD

Project No.	170551501
Date	12/10/2019
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Drawing No. TC-26

Sheet 26 of 32

LANGAN PROJECT NO. 170551501

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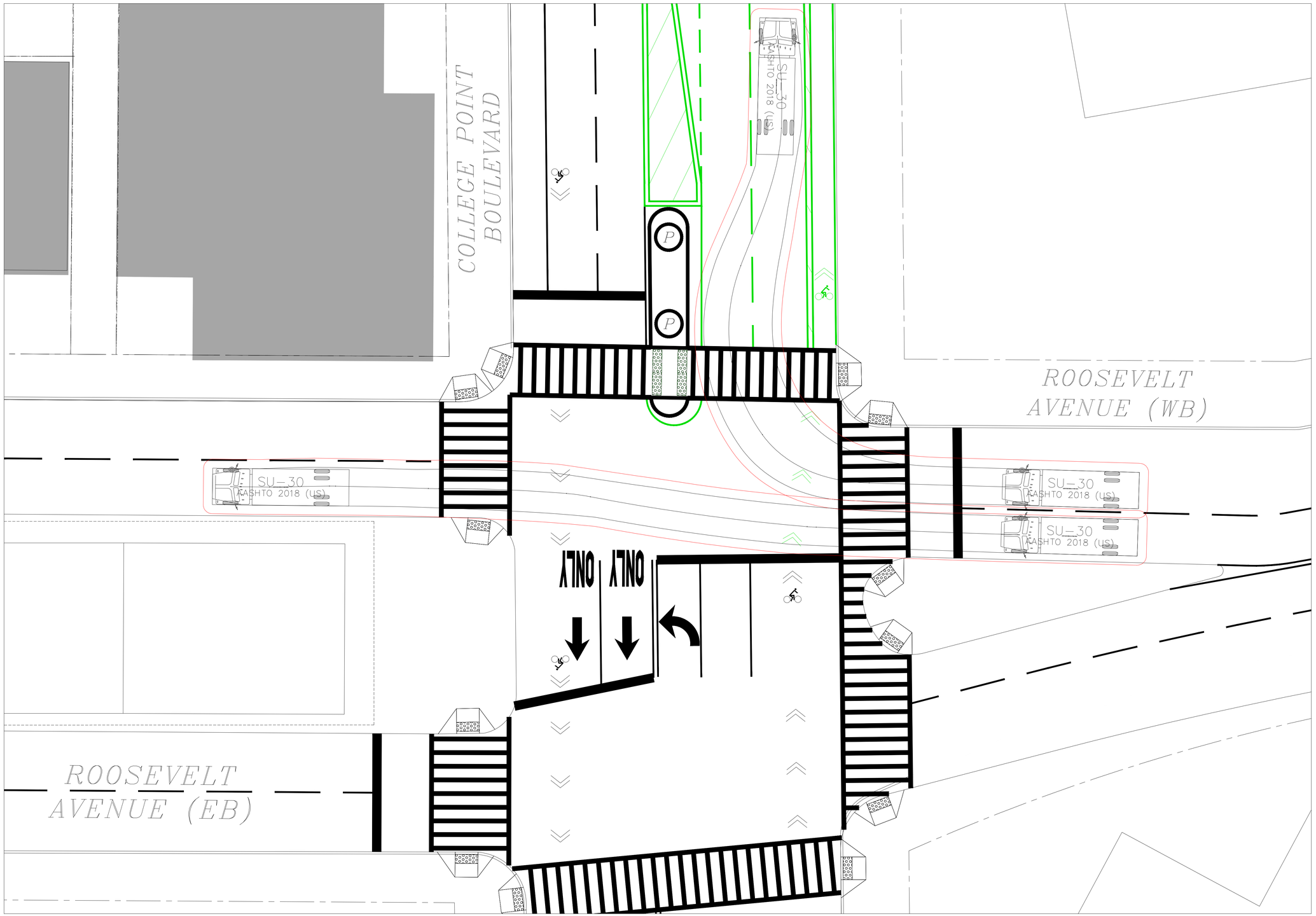

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
1 OF 1

SCALE: 1 INCH = 10 FEET

WARNING:
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Project
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QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
ROOSEVELT AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-27
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
Sheet 27 of 32	

Filename: \\langan.com\data\NYC\data5\170551501\Project Data\CAD\01\2D-DesignFiles\Traffic\170551501-K-TC0101.dwg Date: 12/10/2019 Time: 14:14 User: ntortorella Style Table: Langan.stb Layout: 27

PROJECT NO. 170551501

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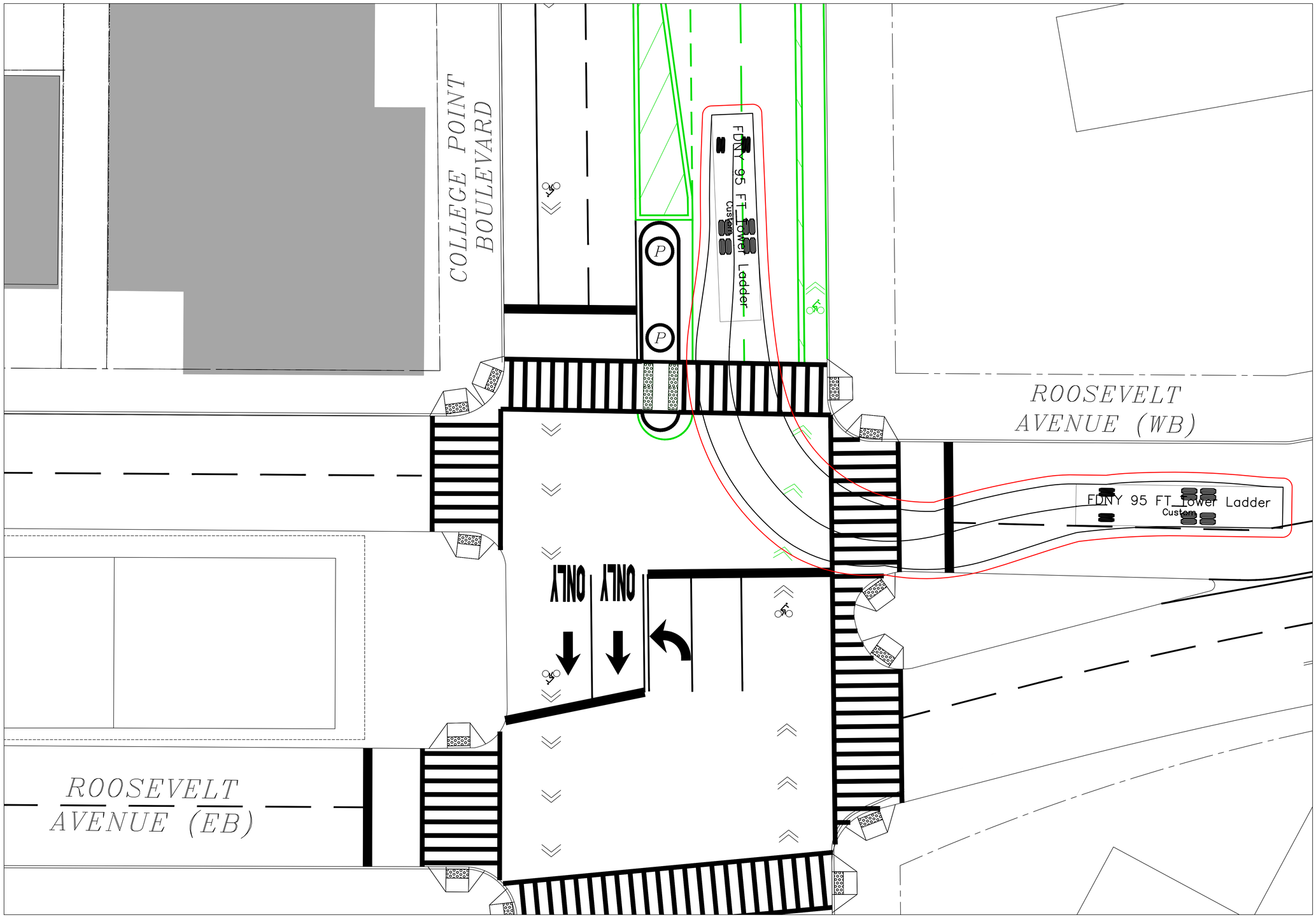

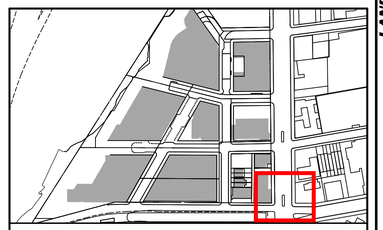

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FIRE TRUCK
1 OF 1

10 0 2 4 10

SCALE: 1 INCH = 10 FEET

WARNING:
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DRAFT CONCEPTUAL

Date	Description	No.
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Project
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Drawing Title
MANEUVERABILITY ASSESSMENT
ROOSEVELT AVENUE & COLLEGE POINT BOULEVARD

Project No.	Drawing No.
170551501	TC-28
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
	Sheet 28 of 32

PROJECT NO. 170551501

Filename: \\langan.com\data\NYC\data5\170551501\Project Data\CAD\01\2D-DesignFiles\Traffic\170551501-K-TC0101.dwg Date: 12/10/2019 Time: 14:14 User: ntortorella Style Table: Langan.stb Layout: 28

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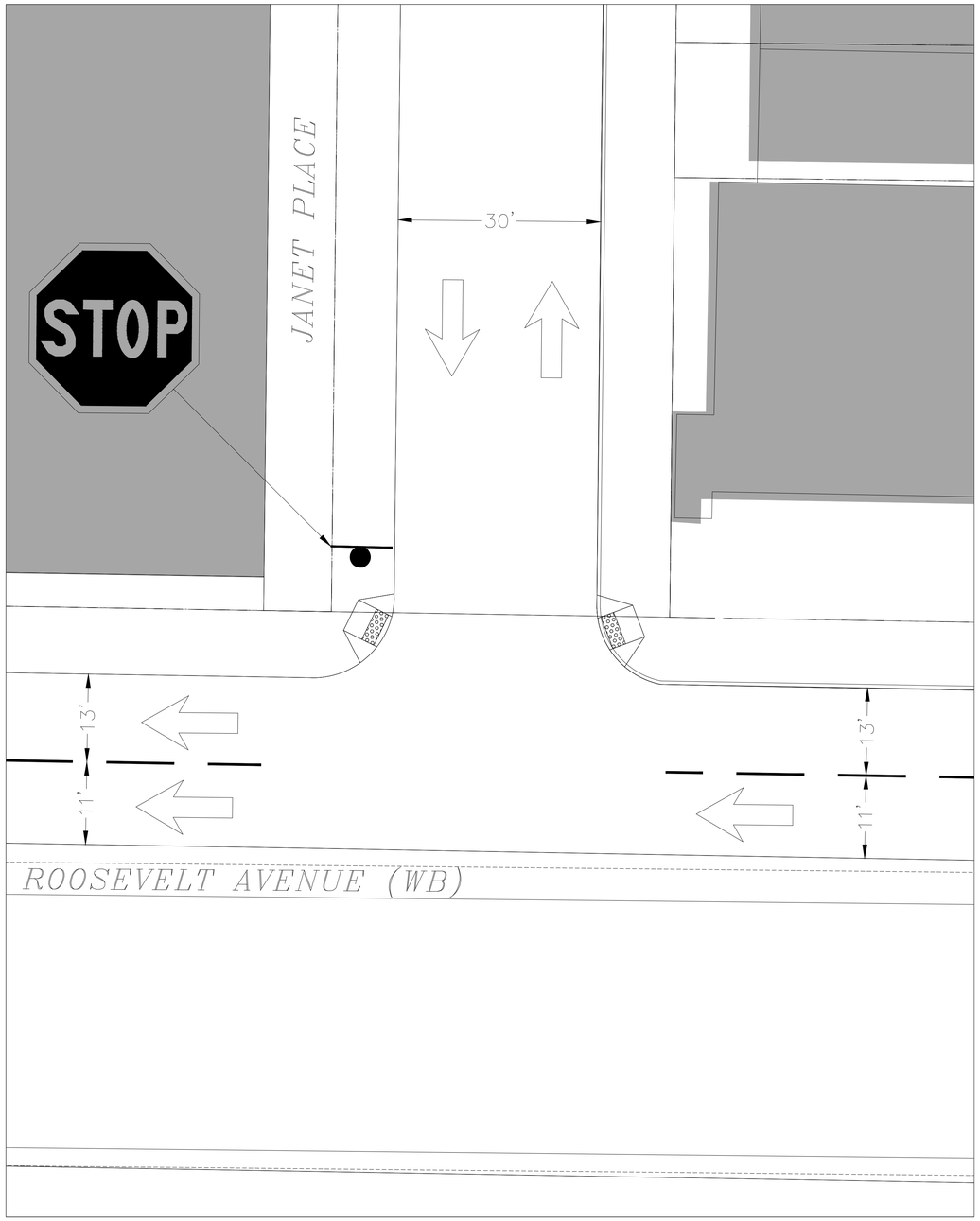
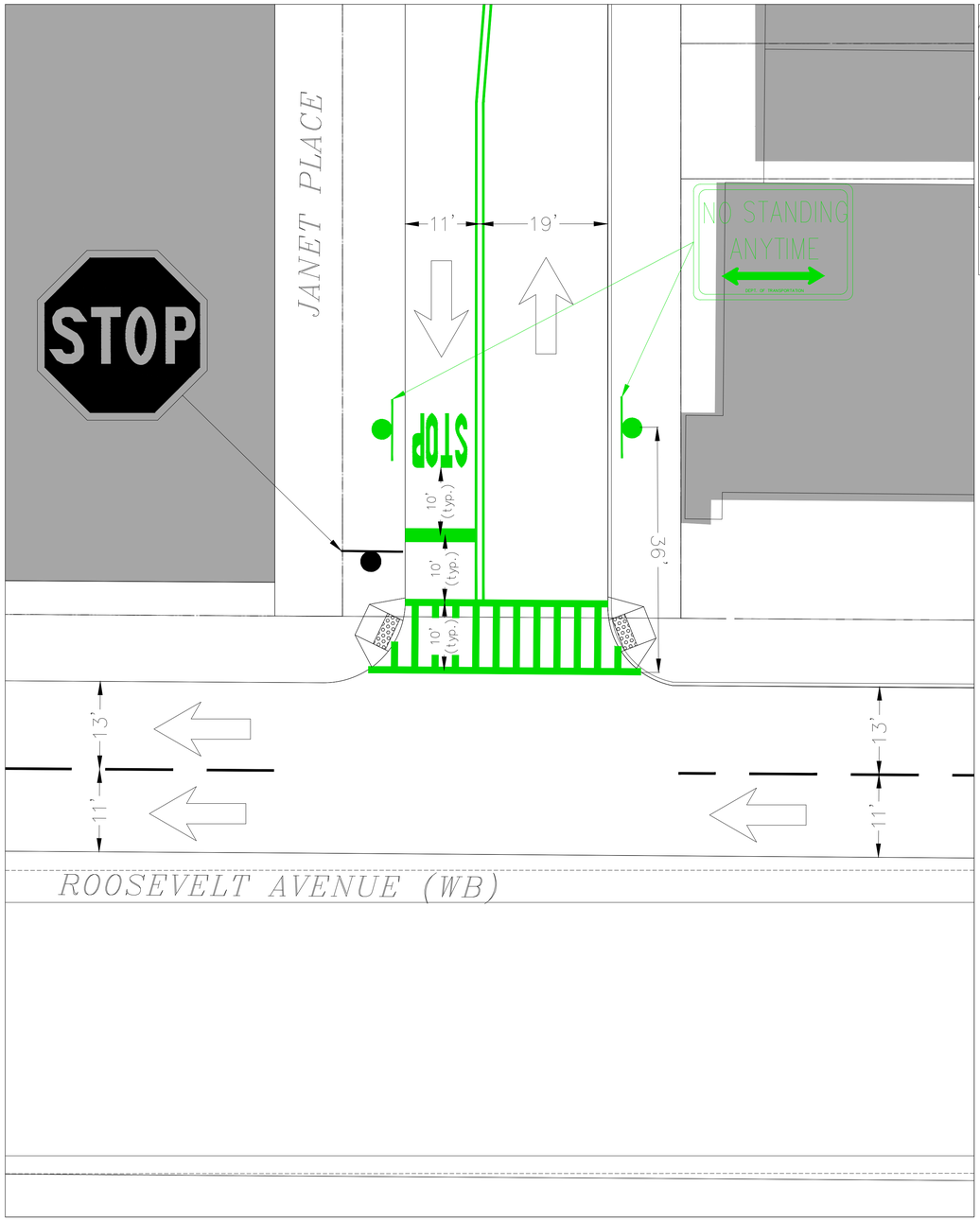
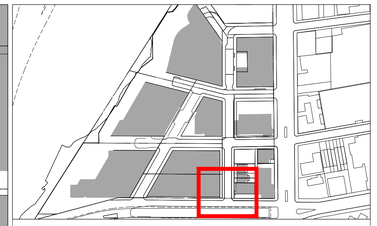


FUTURE NO ACTION



FUTURE WITH ACTION



PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

NOTE: ALL EXISTING PEDESTRIAN RAMPS AT DISTURBED CORNERS WILL BE UPGRADED TO COMPLY WITH ADA STANDARDS.

SCALE: 1 INCH = 10 FEET

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DRAFT CONCEPTUAL

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SIGNATURE DATE SIGNED
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STATE LIC. No. XXXXX

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New York, NY 10001
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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
PROPOSED TRAFFIC IMPROVEMENTS
JANET PLACE & ROOSEVELT AVENUE

Project No. 170551501
Date 12/10/2019
Drawn By NST
Checked By BMW

Drawing No. TC-29
Sheet 29 of 32

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PROJECT NO. 170551501

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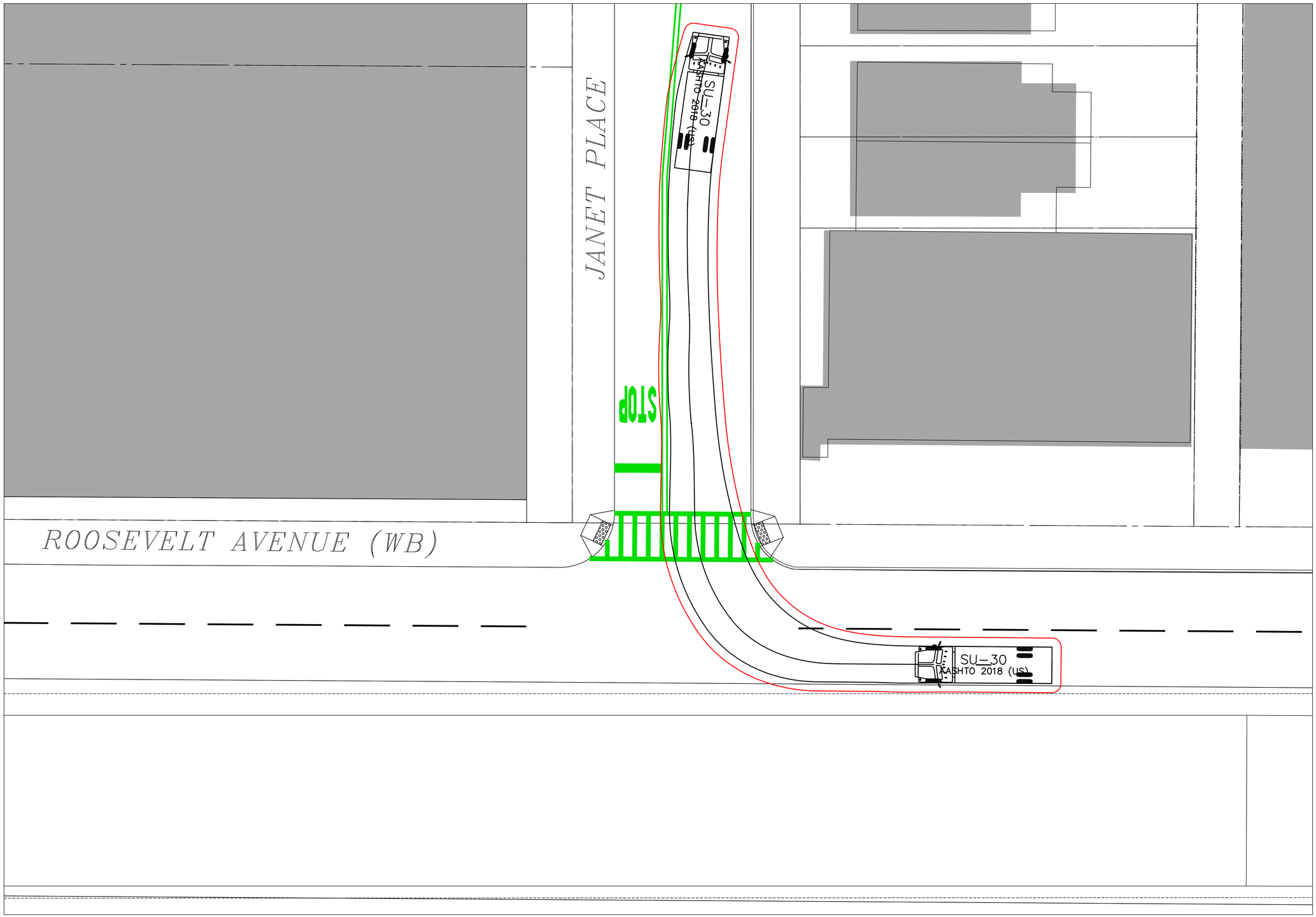
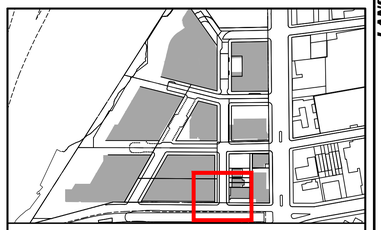
Filename: \\langan.com\data\NYC\data5\170551501\Project Data\CAD\01\2D-DesignFiles\Traffic\170551501-K-TC0101.dwg Date: 12/10/2019 Time: 14:14 User: ntortorella Style Table: Langan.stb Layout: 29





PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

SU-30
1 OF 1

10 0 2 4 10

SCALE: 1 INCH = 10 FEET

WARNING:
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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
JANET PLACE & ROOSEVELT AVENUE

Project No.	Drawing No.
170551501	TC-30
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
Sheet 30 of 32	

LANGAN
PROJECT NO. 170551501

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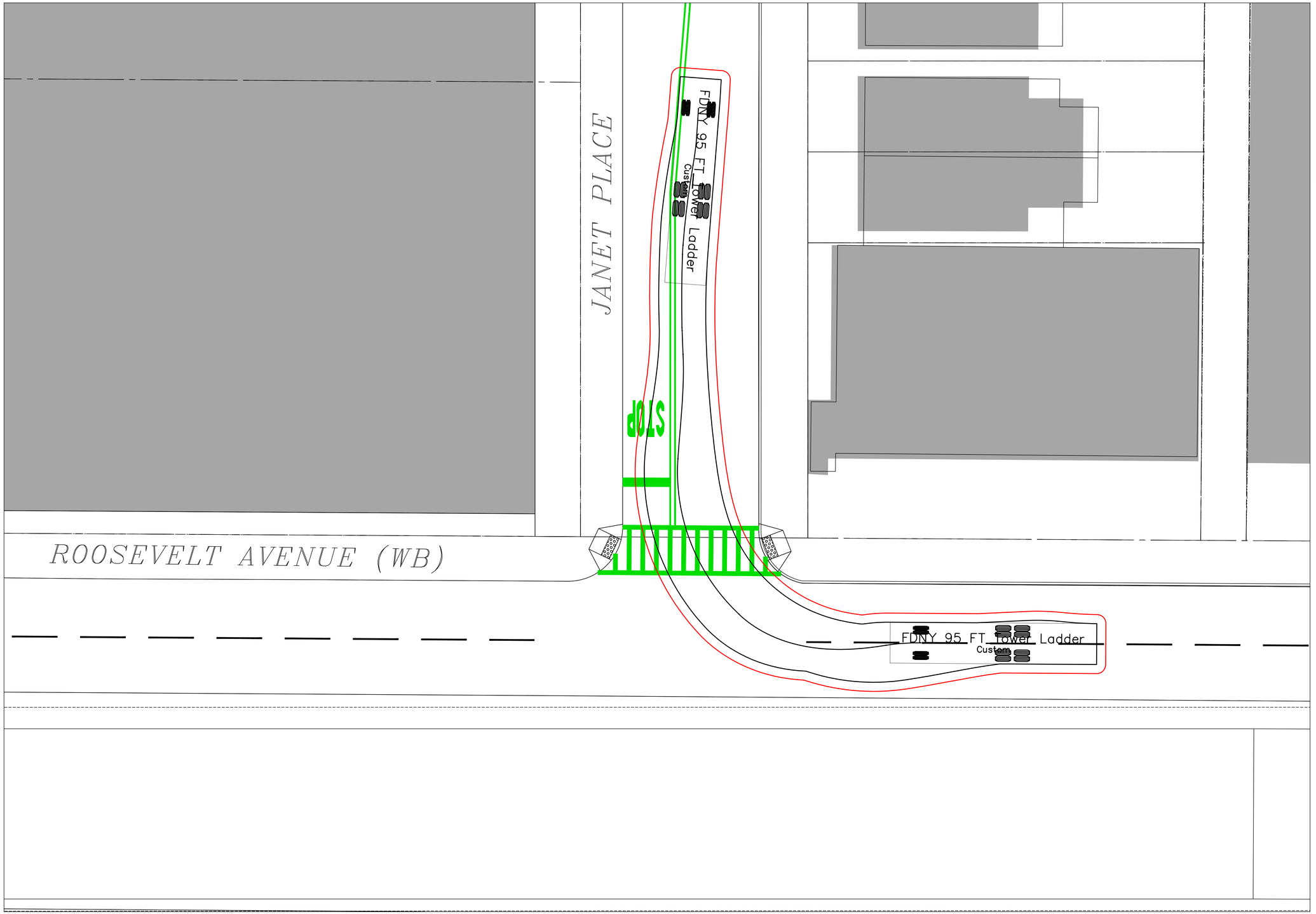

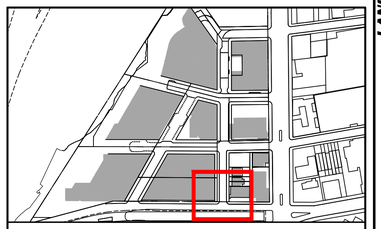

PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:

FIRE TRUCK
1 OF 1

SCALE: 1 INCH = 10 FEET

WARNING:
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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
MANEUVERABILITY ASSESSMENT
JANET PLACE & ROOSEVELT AVENUE

Project No.	Drawing No.
170551501	TC-31
Date: 12/10/2019	
Drawn By: NST	
Checked By: BMW	
Sheet 31 of 32	

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PROJECT NO. 170551501

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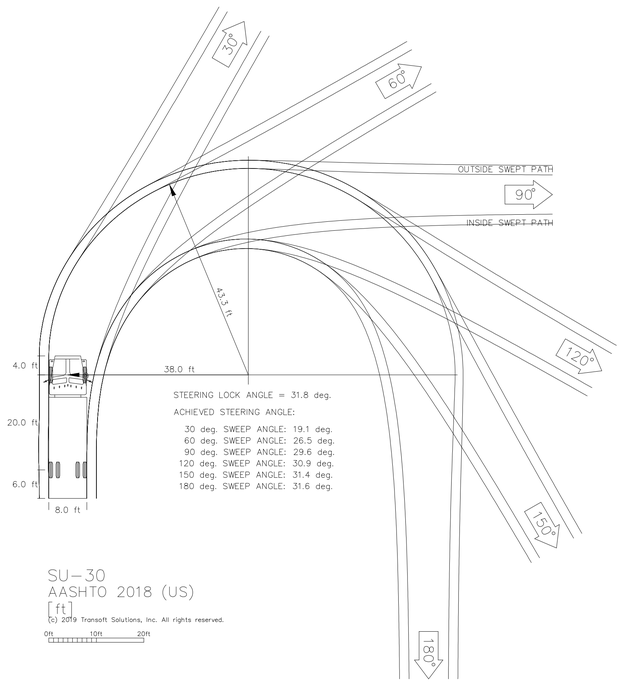

STEERING LOCK ANGLE = 31.8 deg.

ACHIEVED STEERING ANGLE:

30 deg. SWEEP ANGLE: 19.1 deg.
60 deg. SWEEP ANGLE: 26.5 deg.
90 deg. SWEEP ANGLE: 29.6 deg.
120 deg. SWEEP ANGLE: 30.9 deg.
150 deg. SWEEP ANGLE: 31.4 deg.
180 deg. SWEEP ANGLE: 31.6 deg.

SU-30
AASHTO 2018 (US)
[ft]

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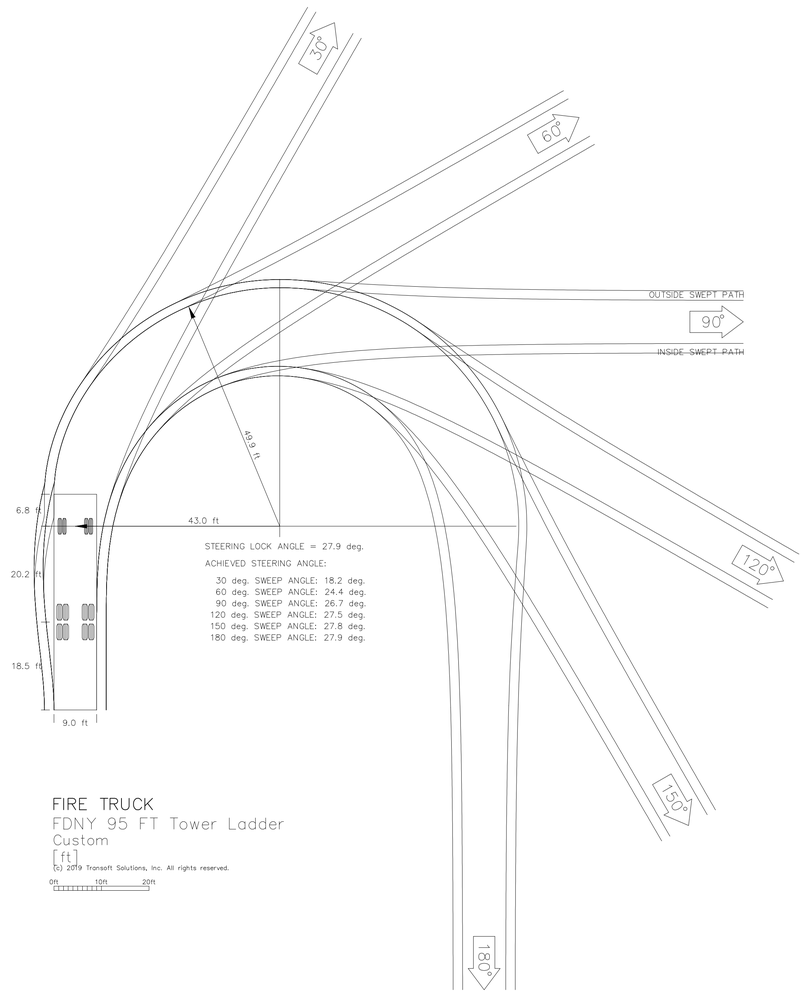
0ft 10ft 20ft



STEERING LOCK ANGLE = 27.9 deg.

ACHIEVED STEERING ANGLE:

30 deg. SWEEP ANGLE: 18.2 deg.
60 deg. SWEEP ANGLE: 24.4 deg.
90 deg. SWEEP ANGLE: 26.7 deg.
120 deg. SWEEP ANGLE: 27.5 deg.
150 deg. SWEEP ANGLE: 27.8 deg.
180 deg. SWEEP ANGLE: 27.9 deg.

FIRE TRUCK
FDNY 95 FT Tower Ladder
Custom
[ft]

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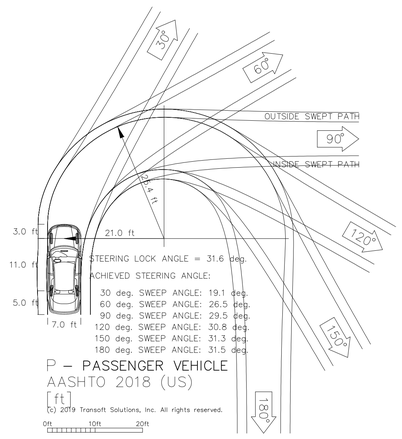
0ft 10ft 20ft



STEERING LOCK ANGLE = 31.6 deg.

ACHIEVED STEERING ANGLE:

30 deg. SWEEP ANGLE: 19.1 deg.
60 deg. SWEEP ANGLE: 26.5 deg.
90 deg. SWEEP ANGLE: 29.5 deg.
120 deg. SWEEP ANGLE: 30.8 deg.
150 deg. SWEEP ANGLE: 31.3 deg.
180 deg. SWEEP ANGLE: 31.5 deg.

P – PASSENGER VEHICLE
AASHTO 2018 (US)
[ft]

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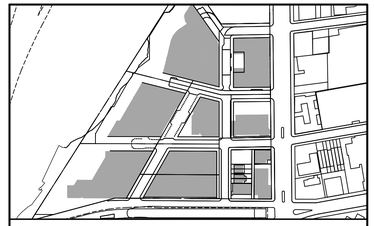
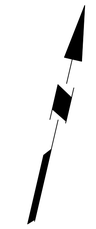
0ft 10ft 20ft



PROJECT LOCATION MAP

SCALE: 1" = 300'

SOURCE:



DRAFT CONCEPTUAL

Date	Description	No.
REVISIONS		

SIGNATURE DATE SIGNED
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Project
SPECIAL FLUSHING WATERFRONT DISTRICT
QUEENS FLUSHING NEW YORK

Drawing Title
TURNING VEHICLE TEMPLATES

Project No. 170551501
Date 12/10/2019
Drawn By NST
Checked By BMW

Drawing No. TC-32
Sheet 32 of 32

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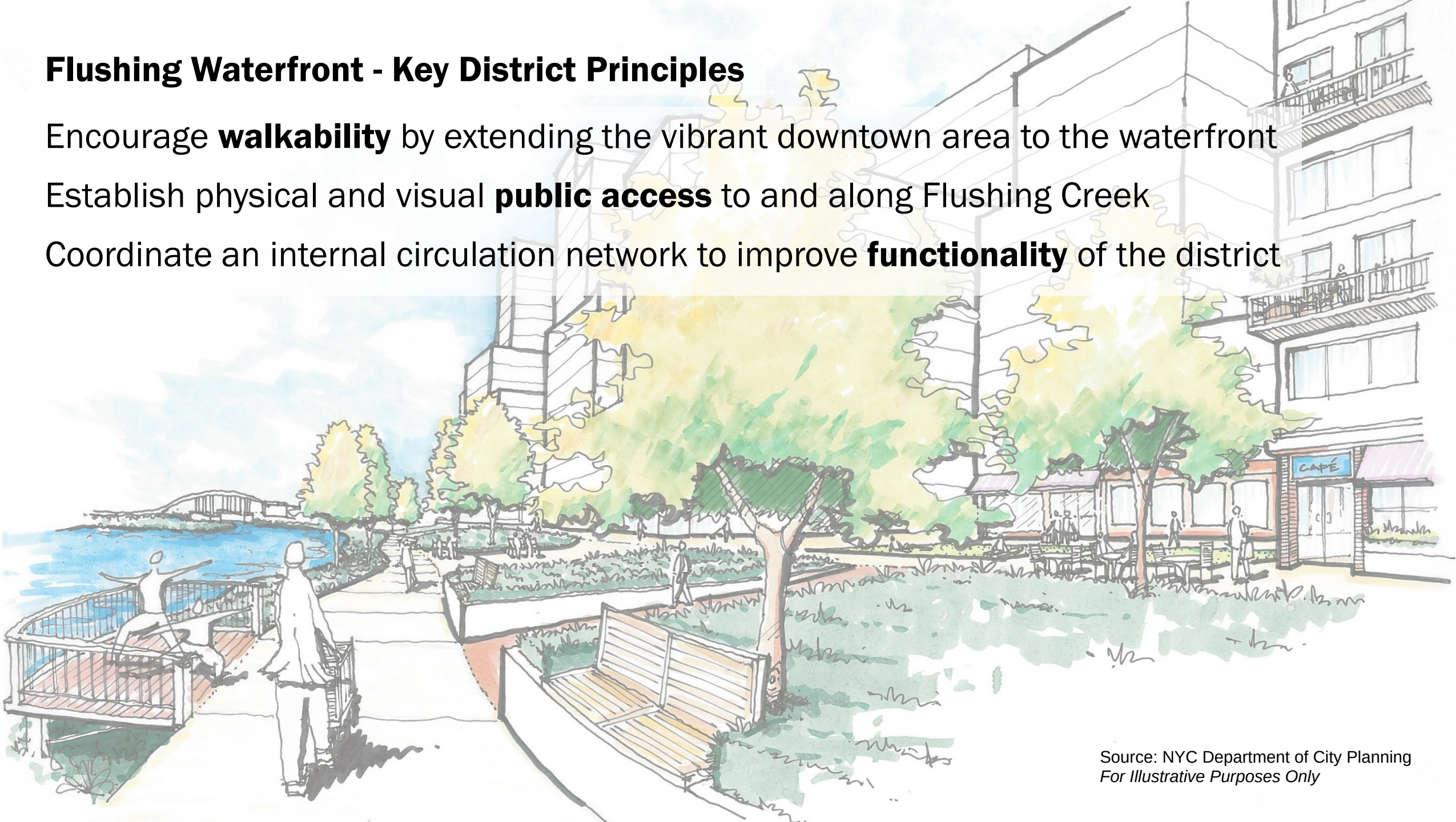
APPENDIX L: WATERFRONT PHASING PROPOSAL

Flushing Waterfront - Key District Principles

Encourage **walkability** by extending the vibrant downtown area to the waterfront

Establish physical and visual **public access** to and along Flushing Creek

Coordinate an internal circulation network to improve **functionality** of the district



Source: NYC Department of City Planning
For Illustrative Purposes Only

Phasing – Full Build-out of Required WPAA

F&T SITE (PARCEL 4)

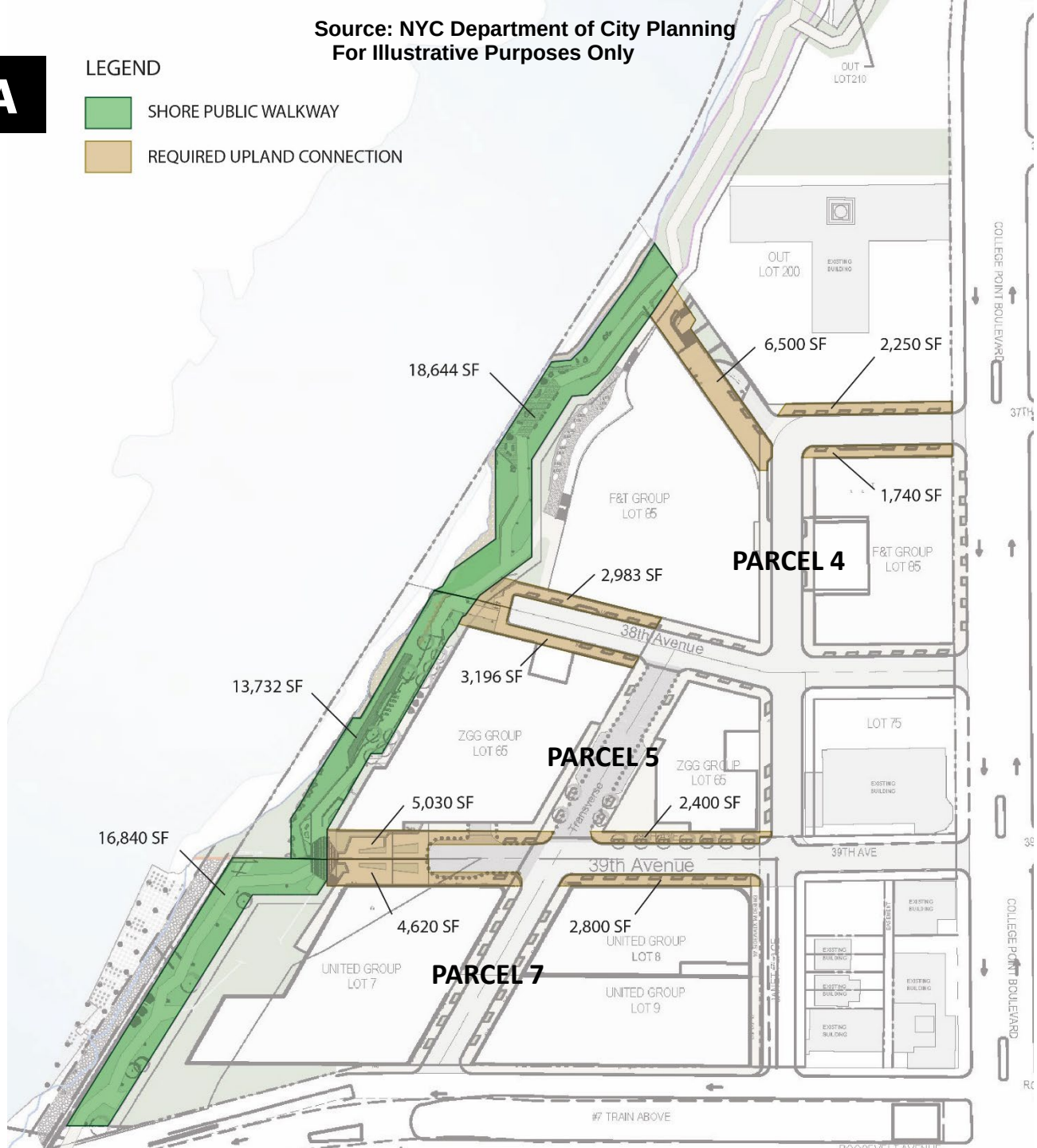
Total Lot Area:	174,501 sf
WPAA Required (15%):	26,175 sf
SPW (40’ wide):	18,644 sf
UC (including sidewalks):	13,473 sf
	32,117 sf

YNG SITE (PARCEL 5)

Total Lot Area:	138,308 sf
WPAA Required (15%):	20,746 sf
SPW (40’ wide):	13,732 sf
UC (including sidewalks):	10,626 sf
	24,358 sf

UNITED SITE (PARCEL 7)

Total Lot Area:	162,595 sf
WPAA Required (15%):	24,389 sf
SPW (40’ wide):	16,840 sf
UC (including sidewalks):	7,420 sf
	24,260 sf



Phasing – Build Out of Upland Sites First

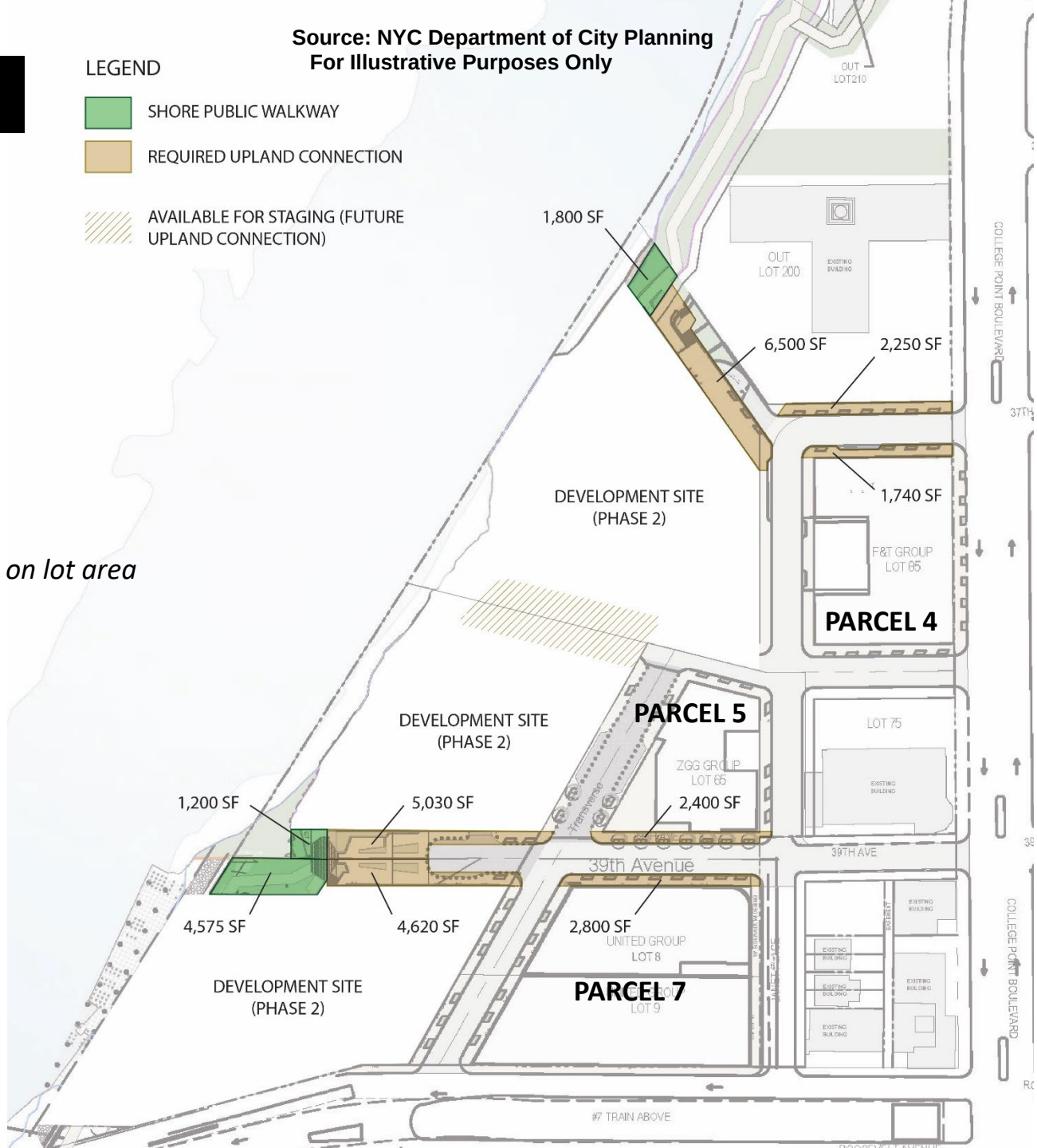
F&T SITE (PARCEL 4)

Upland Lot Area (w/ streets):	62,256 sf
WPAA Required (15%):	9,338 sf
SPW (point access):	1,800 sf
UC (including sidewalks):	10,490 sf
	12,290 sf

YNG SITE (PARCEL 5)

Upland Lot Area (w/ streets):	52,043 sf
WPAA Required (15%):	7,806 sf
SPW (point access):	1,200 sf
UC (including sidewalks):	7,430 sf
	8,630 sf

UNITED SITE (PARCEL 7)

Upland Lot Area (w/ streets):	74,146 sf
WPAA Required (15%):	11,122 sf
SPW (point access):	4,575 sf
UC (including sidewalks):	7,420 sf
	11,995 sf

Based on lot area