



City Environmental Quality Review

ENVIRONMENTAL ASSESSMENT STATEMENT (EAS) SHORT FORM

FOR UNLISTED ACTIONS ONLY • Please fill out and submit to the appropriate agency ([see instructions](#))

Part I: GENERAL INFORMATION

1. Does the Action Exceed Any Type I Threshold in 6 NYCRR Part 617.4 or 43 RCNY §6-15(A) (Executive Order 91 of 1977, as amended)? YES NO

If "yes," STOP and complete the [FULL EAS FORM](#).

2. Project Name 2835 Veterans Road West

3. Reference Numbers

CEQR REFERENCE NUMBER (to be assigned by lead agency)
18DCP187R

BSA REFERENCE NUMBER (if applicable)

ULURP REFERENCE NUMBER (if applicable)
N180313ZCR

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

4a. Lead Agency Information

NAME OF LEAD AGENCY

New York City Planning Commission

NAME OF LEAD AGENCY CONTACT PERSON

Olga Abinader, Director

Environmental Assessment and Review Division

New York City Department of City Planning

4b. Applicant Information

NAME OF APPLICANT

Block 7469, LLC

NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON

Phillip L. Rampulla

Rampulla Associates Architects, LLP

ADDRESS 120 Broadway, 31st Floor

ADDRESS 155 3rd Street

CITY New York

STATE NY

ZIP 10271

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5. Project Description

The applicant, Block 7469, LLC, is seeking a special permit, zoning authorizations, and zoning certifications (the proposed actions) to facilitate the development of a new approximately 99,864 gross square foot (gsf) development with two buildings, containing retail, office, and parking uses on the project site located at 2835 Veterans Road West in Staten Island (Block 7469, Lots 115, 120, 125, 136, and 150, tentative Lot 115); see Page 1a, Project Description.

Project Location

BOROUGH Staten Island

COMMUNITY DISTRICT(S) 3

STREET ADDRESS 2835 Veterans Road West

TAX BLOCK(S) AND LOT(S) Block 7469, Lots 115, 120, 125, 136, and 150, tentative Lot 115

ZIP CODE 10309

DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS The project site is located on the southern side of Veterans Road West to the east of Tyrellan Avenue

EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY M1-1, SRD

ZONING SECTIONAL MAP NUMBER 32d

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

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

CITY MAP AMENDMENT

ZONING CERTIFICATION

CONCESSION

ZONING MAP AMENDMENT

ZONING AUTHORIZATION

UDAAP

ZONING TEXT AMENDMENT

ACQUISITION—REAL PROPERTY

REVOCABLE CONSENT

SITE SELECTION—PUBLIC FACILITY

DISPOSITION—REAL PROPERTY

FRANCHISE

HOUSING PLAN & PROJECT

OTHER, explain:

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

SPECIFY AFFECTED SECTIONS OF THE ZONING RESOLUTION 74-922, 107-64, 107-65, 107-68, 36-592, 36-596, 56-597

Board of Standards and Appeals: YES NO

VARIANCE (use)

VARIANCE (bulk)

Project Description

INTRODUCTION

The project applicant, Block 7469 LLC, is seeking a special permit, zoning authorizations, and zoning certifications (the proposed actions) to facilitate the development of a new approximately 99,864 gross square foot (gsf) development with two buildings, containing retail, office, and parking uses on the project site located at 2835 Veterans Road West in Staten Island (Block 7469, Lots 115, 120, 125, 136, and 150, tentative lot 115; see **Figure 1**). The project site, which is located in an M1-1 zoning district and the Special South Richmond Development District (SRD), is currently wooded and undeveloped.

The proposed project would construct two buildings set in a parking lot on the project site. Building A would be at the rear of the lot away from the Veteran Road West frontage and would follow the curvature of the zoning lot line; Building B would be at the approximate center of the site (see **Figure 6**). The proposed project would include 65,074 gsf of Use Group (UG) 6/10A commercial uses (including retail establishments larger than 10,000 square feet) and 34,791 gsf of parking, storage, and mechanical space. The proposed project is expected to be completed and occupied by 2021.

PROPOSED ACTIONS

The actions necessary to facilitate the proposed project are:

- A special permit pursuant to Section 74-922 to allow retail establishments larger than 10,000 square feet in a manufacturing district.
- Authorization pursuant to Section 107-64 to allow the proposed tree removal.
- Authorization pursuant to Section 107-65 to allow proposed modifications of existing topography.
- Authorization pursuant to Section 107-68 to modify group parking facility and access regulations.
- Certification pursuant to Section 36-592 for cross access connections.
- Certification pursuant to Section 36-596 such that no connection is required, relocation of a previously certified connection, and voluntary connections.

Approval of these discretionary actions is subject to City Environmental Quality Review (CEQR), for which this Environmental Assessment Statement (EAS) has been prepared. The New York City Department of City Planning (DCP) is serving as lead agency on behalf of the City Planning Commission (CPC). In addition, the proposed project requires a freshwater wetland permit from the New York State Department of Environmental Conservation (NYSDEC); the permit application has been submitted and NYSDEC Technical and Permit staff has deemed it to be complete with the exception of a CEQR decision. Upon completion of the CEQR process, the NYSDEC Technical review will be deemed complete and a Notice of Complete Application is expected to be issued. The wetland permit will then be put out for a 30-day public comment period. Following the public comment period, review of any public comments received, and final review by NYSDEC Permit and Technical staff, the NYSDEC freshwater wetland permit is expected to be issued.

PURPOSE AND NEED

The applicant's goal for the proposed project is to provide for a new retail destination and bank on a vacant and underutilized property, which would serve the residential populations in the Charleston neighborhood and other nearby areas of Staten Island. In particular, the applicant intends to provide for a larger retail space in Building A. As the M1-1 district limits some commercial uses (e.g., supermarkets and department stores) to 10,000 sf per

establishment, the special permit pursuant to ZR Sec. 74-922 to permit a retail establishment containing more than 10,000 sf is required.

FRAMEWORK FOR ANALYSIS

This document has been prepared in accordance with the guidelines presented in the *CEQR Technical Manual*. For the technical attachments to the EAS, the analysis generally includes descriptions of existing conditions, conditions in the future without the proposed project (the No Action scenario) and the conditions in the future with the proposed project (the With Action scenario). For each relevant technical area, the incremental difference between the No Action scenario and the With Action scenario is analyzed to determine the potential environmental effects of the proposed project.

EXISTING CONDITIONS

The analysis framework begins with an assessment of existing conditions on the project site and in the respective relevant study areas because these can be most directly measured and observed. The assessment of existing conditions does not represent the condition against which the proposed project is measured, but serves as a starting point for the projection of future conditions with and without the proposed project and the analysis of project impacts. As noted above, in the existing condition, the project site is wooded and undeveloped.

NO ACTION CONDITION

The No Action condition describes a future baseline condition to which the changes that are expected to result from the proposed project are compared. For each technical analysis, approved or designated development projects within the appropriate study area that are likely to be completed by the 2021 analysis year are considered.

In the No Action scenario, the applicant is expected to develop a 9,000 gsf commercial development that would include three one-story buildings located along the Veterans Road West frontage and in the center of the project site each containing 3,000 gsf of UG 6/10A commercial uses (see **Figure 7**). These buildings are expected to be drive-through retail facilities. The No Action development would also include 30 parking spaces. This No Action development would serve the applicant's goal of providing new retail uses on the project site, which would otherwise remain a vacant and underutilized property, and does not require discretionary approvals. The No Action development would comply with the applicable M1-1 and SRD regulations. In particular, the project site is subject to the SRD's special tree preservation, landscaping, and topography regulations. The No Action development has been designed to include a limited development area on the project site (smaller than the proposed project's development area), with the southern and eastern ends of the project site remaining unimproved. Within the limited development area, grading changes on the project site would not exceed two feet, in compliance with SRD regulations.

WITH ACTION CONDITION

In the future with the proposed project, the project site would be redeveloped with two buildings containing approximately 99,864 gsf of UG 6 and 10A retail uses, including establishments larger than 10,000 sf. Building A would be a two-story building containing 53,176 gsf of UG 6/10A retail, 9,000 gsf of UG 6 office use, and 34,690 gsf of parking, storage, and mechanical space. Building B would be a one-story 2,998 gsf building containing a UG 6 bank (with a drive-through ATM). As required by zoning, the development would include 226 parking spaces. The proposed FAR of 0.34 would be below the maximum permitted FAR of 1.0; however, additional development would not be feasible, given parking requirements.

Table 1 shows a comparison of the No Action and With Action scenarios. The proposed project is expected to be completed and occupied by 2021.

Table 1

Comparison of No Action and With Action Conditions

	Residential GSF	Dwelling Units	Community Facility GSF	Commercial GSF	Parking	Overall Building GSF
No Action:	0	0	0	9,000	30	9,000
With Action:	0	0	0	99,864	226	99,864
Increment:	0	0	0	90,864	196	90,864

Note: GSF: Gross Square Feet
Source: Block 7469 LLC

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

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

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

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

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

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

State or Federal Actions/Approvals/Funding: YES NO If "yes," specify: New York State Department of Environmental Conservation (DEC) Freshwater Wetland Adjacent Area Permit

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

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

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

Physical Setting (both developed and undeveloped areas)

Total directly affected area (sq. ft.): 194,429 sf Waterbody area (sq. ft) and type: 0
 Roads, buildings, and other paved surfaces (sq. ft.): 0 Other, describe (sq. ft.): Undeveloped land: 194,429 sf

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

SIZE OF PROJECT TO BE DEVELOPED (gross square feet): 99,864
 NUMBER OF BUILDINGS: 2 GROSS FLOOR AREA OF EACH BUILDING (sq. ft.): 96,866 gsf (Building A) and 2,998 gsf (Building B)
 HEIGHT OF EACH BUILDING (ft.): 40 ft (Building A) and 18 ft (Building B) NUMBER OF STORIES OF EACH BUILDING: 2 (Building A) and 1 (Building B)

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:
 The total square feet not owned or controlled by the applicant:

Does the proposed project involve in-ground excavation or subsurface disturbance, including, but not limited to foundation work, pilings, utility lines, or grading? YES NO
 If "yes," indicate the estimated area and volume dimensions of subsurface permanent and temporary disturbance (if known):
 AREA OF TEMPORARY DISTURBANCE: TBD sq. ft. (width x length) VOLUME OF DISTURBANCE: TBD cubic ft. (width x length x depth)
 AREA OF PERMANENT DISTURBANCE: TBD sq. ft. (width x length)

Description of Proposed Uses (please complete the following information as appropriate)

	Residential	Commercial	Community Facility	Industrial/Manufacturing
Size (in gross sq. ft.)	0	99,864 gsf	0	0
Type (e.g., retail, office, school)	0 units	Office, Retail	0	0

Does the proposed project increase the population of residents and/or on-site workers? YES NO
 If "yes," please specify: NUMBER OF ADDITIONAL RESIDENTS: 0 NUMBER OF ADDITIONAL WORKERS: 250
 Provide a brief explanation of how these numbers were determined: Worker calculation assumes 1 worker per 400 gsf of commercial space.

Does the proposed project create new open space? YES NO If "yes," specify size of project-created open space: sq. ft.

Has a No-Action scenario been defined for this project that differs from the existing condition? YES NO
 If "yes," see [Chapter 2](#), "Establishing the Analysis Framework" and describe briefly: See Attachment A, Project Description

9. Analysis Year [CEQR Technical Manual Chapter 2](#)

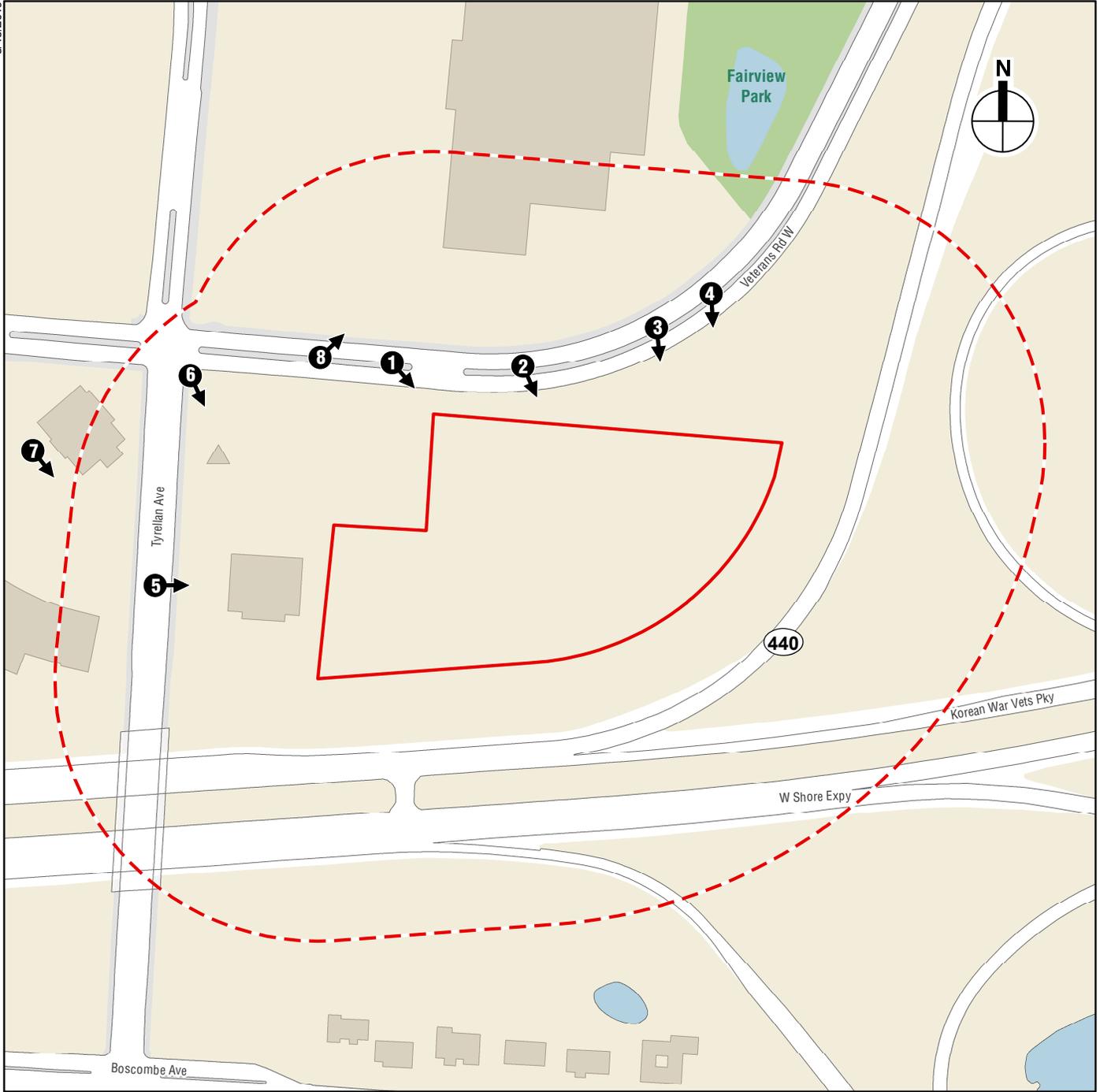
ANTICIPATED BUILD YEAR (date the project would be completed and operational): 2021

ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS: 24

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

BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:

10. Predominant Land Use in the Vicinity of the Project (check all that apply) RESIDENTIAL MANUFACTURING COMMERCIAL PARK/FOREST/OPEN SPACE OTHER, specify:



0 200 FEET

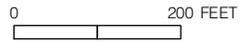
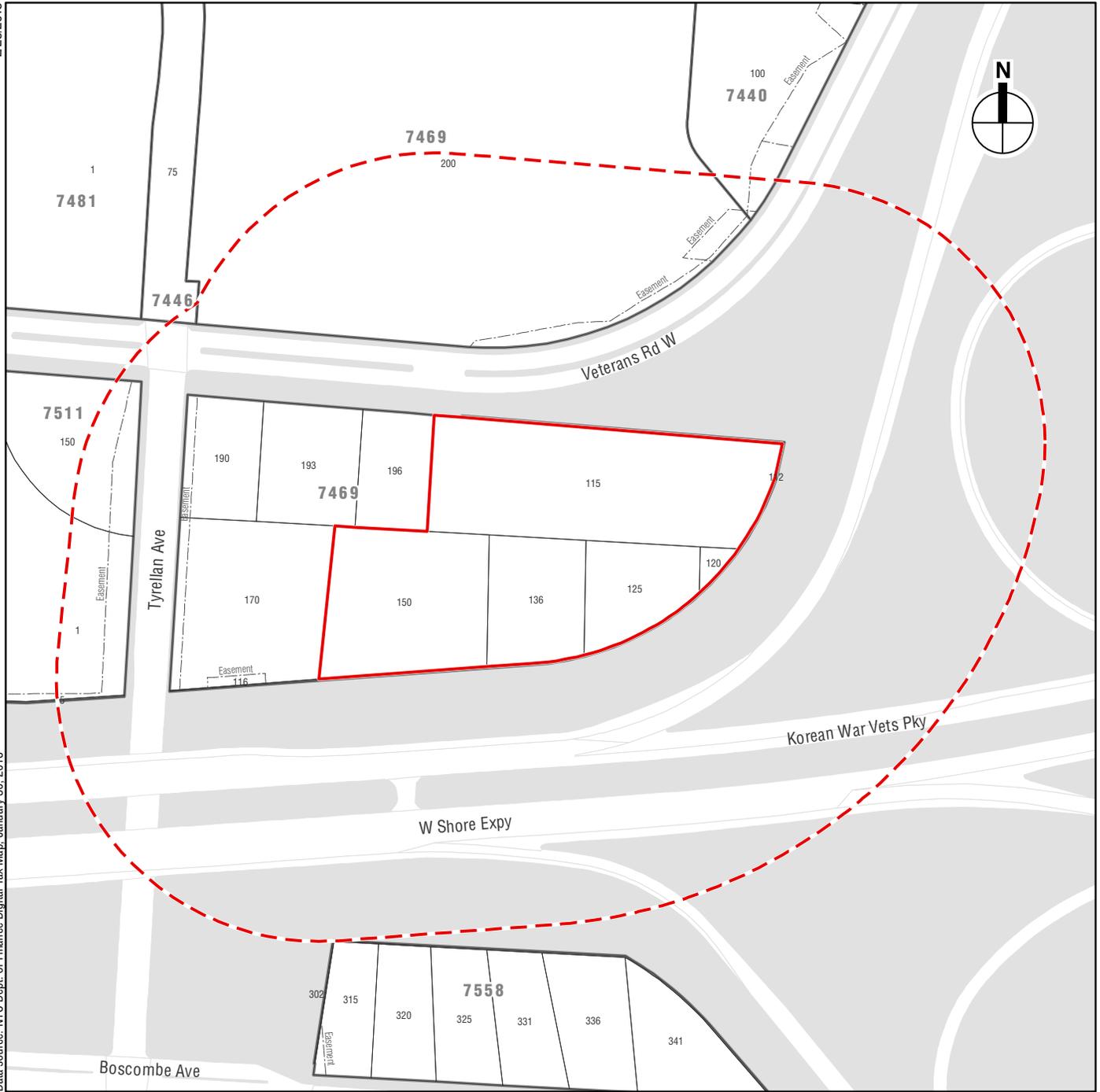
Project Site
 Study Area Boundary (400-foot perimeter)

Photograph View Direction and Reference Number

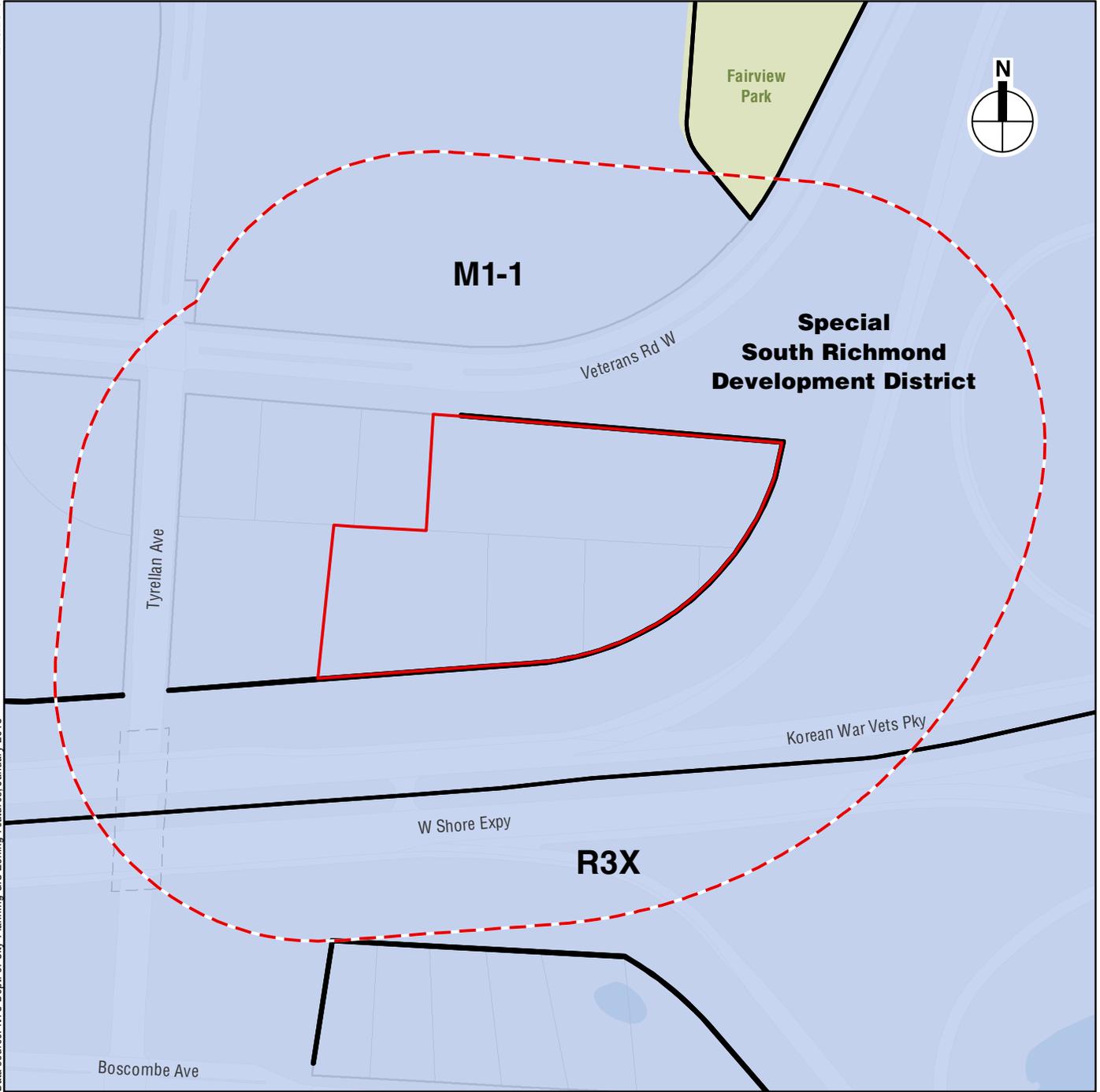


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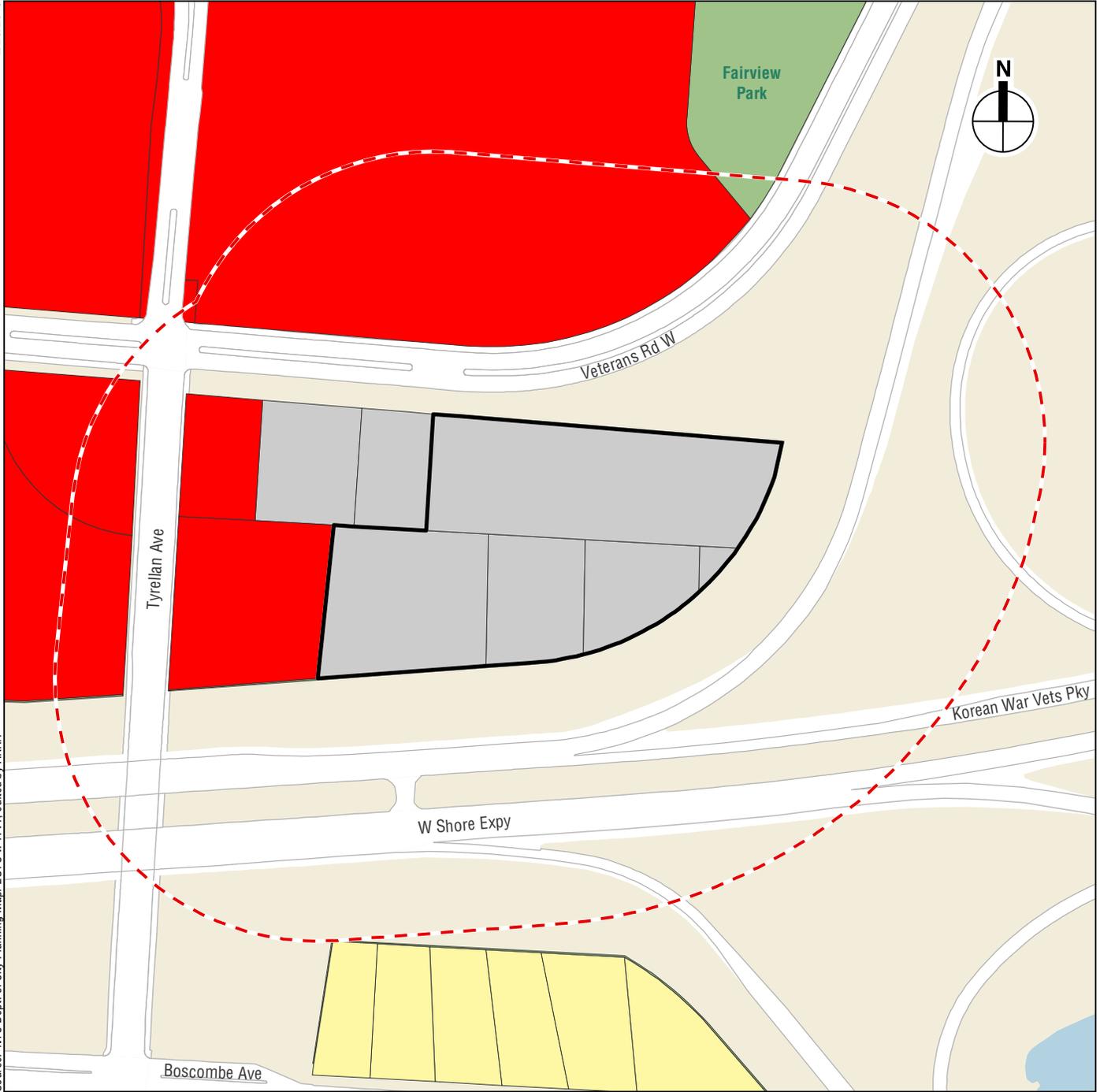
Data source: NYC Dept. of Finance Digital Tax Map, January 30, 2018



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



- Project Site
- Study Area Boundary (400-foot perimeter)
- Zoning District Boundaries
- Special South Richmond Development District



- Project Site
- Study Area Boundary (400-foot perimeter)
- Commercial and Office Buildings
- Open Space and Outdoor Recreation
- Residential
- Vacant Land



1



2



3



4



5



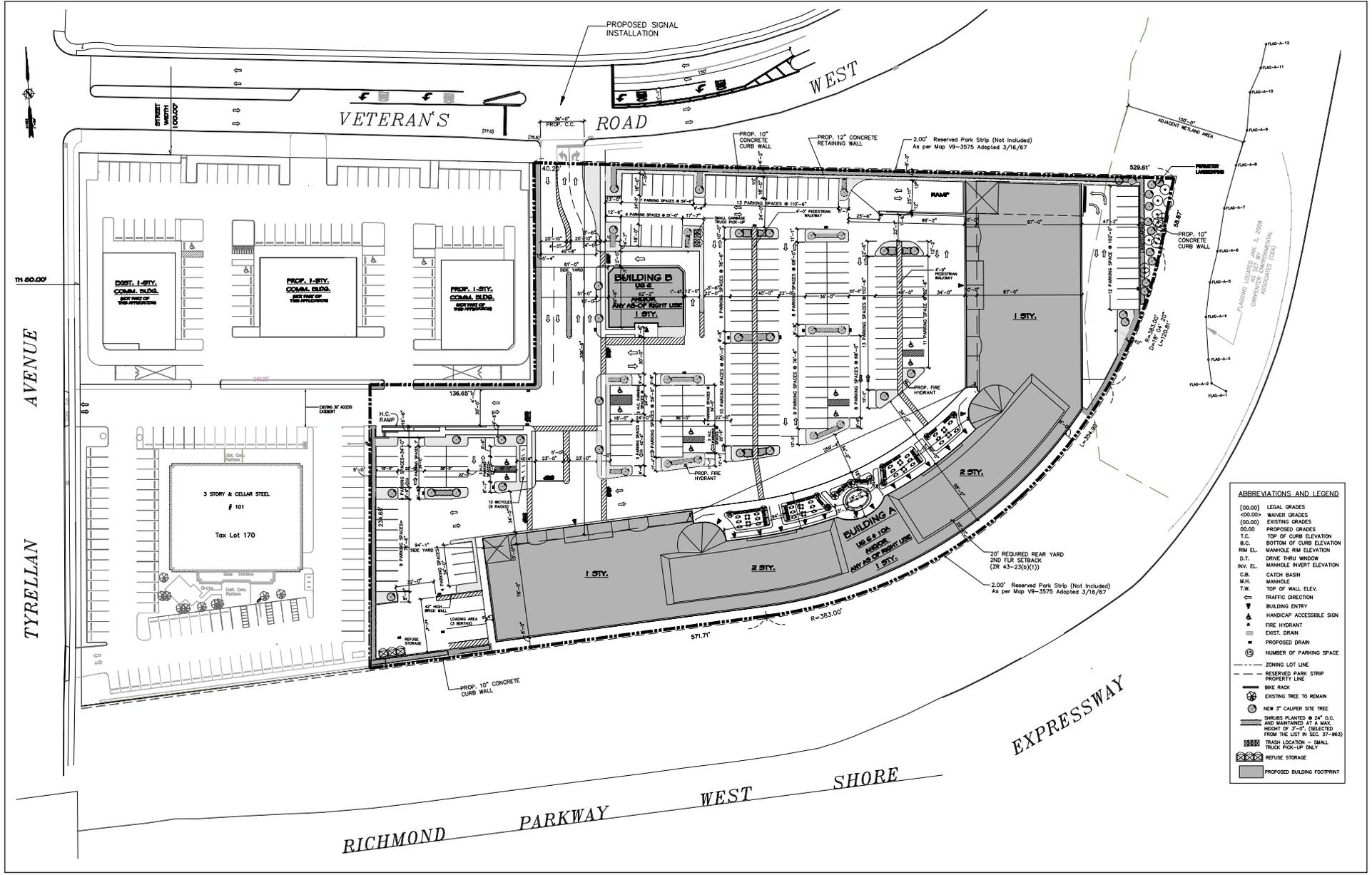
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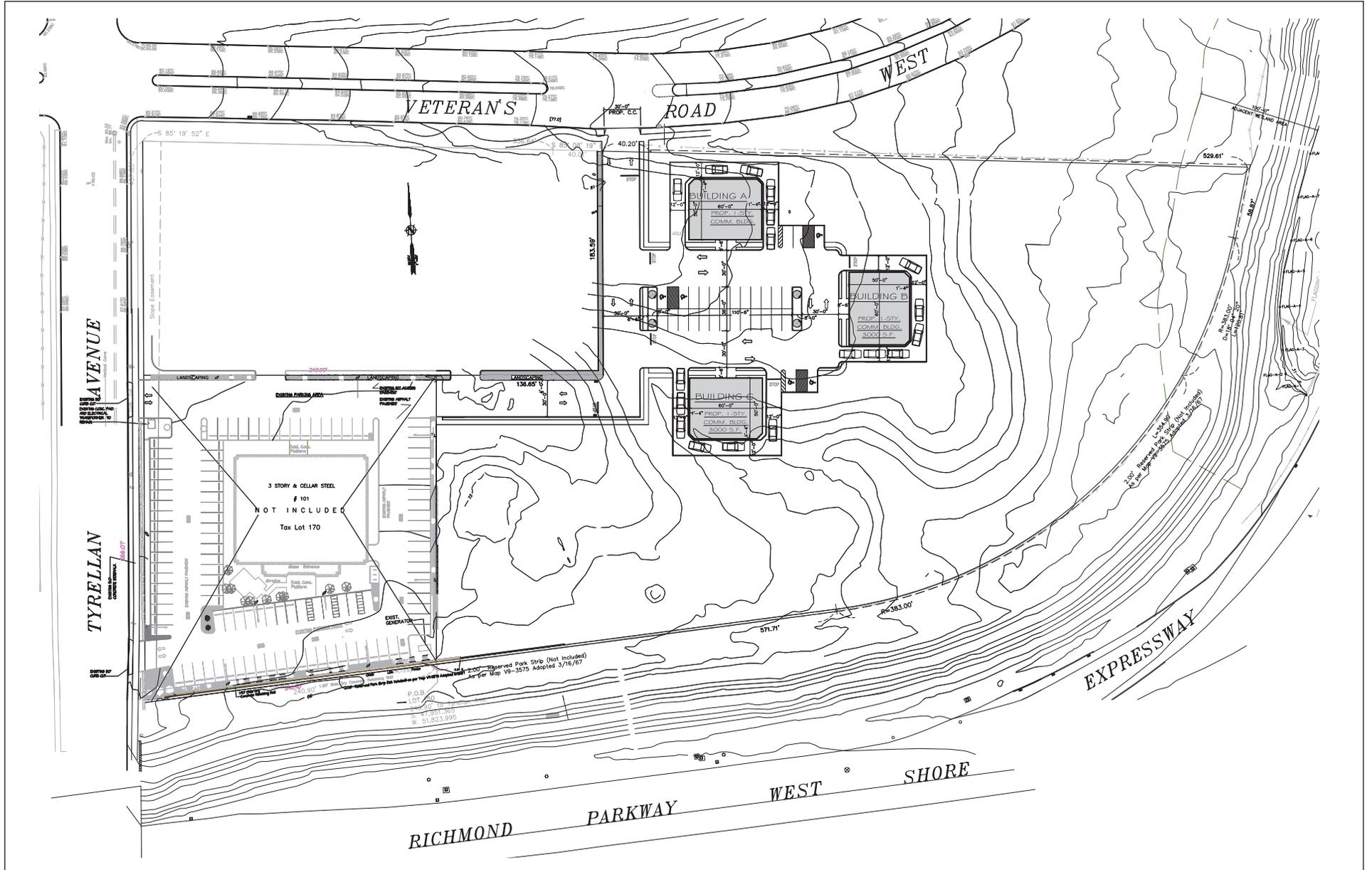
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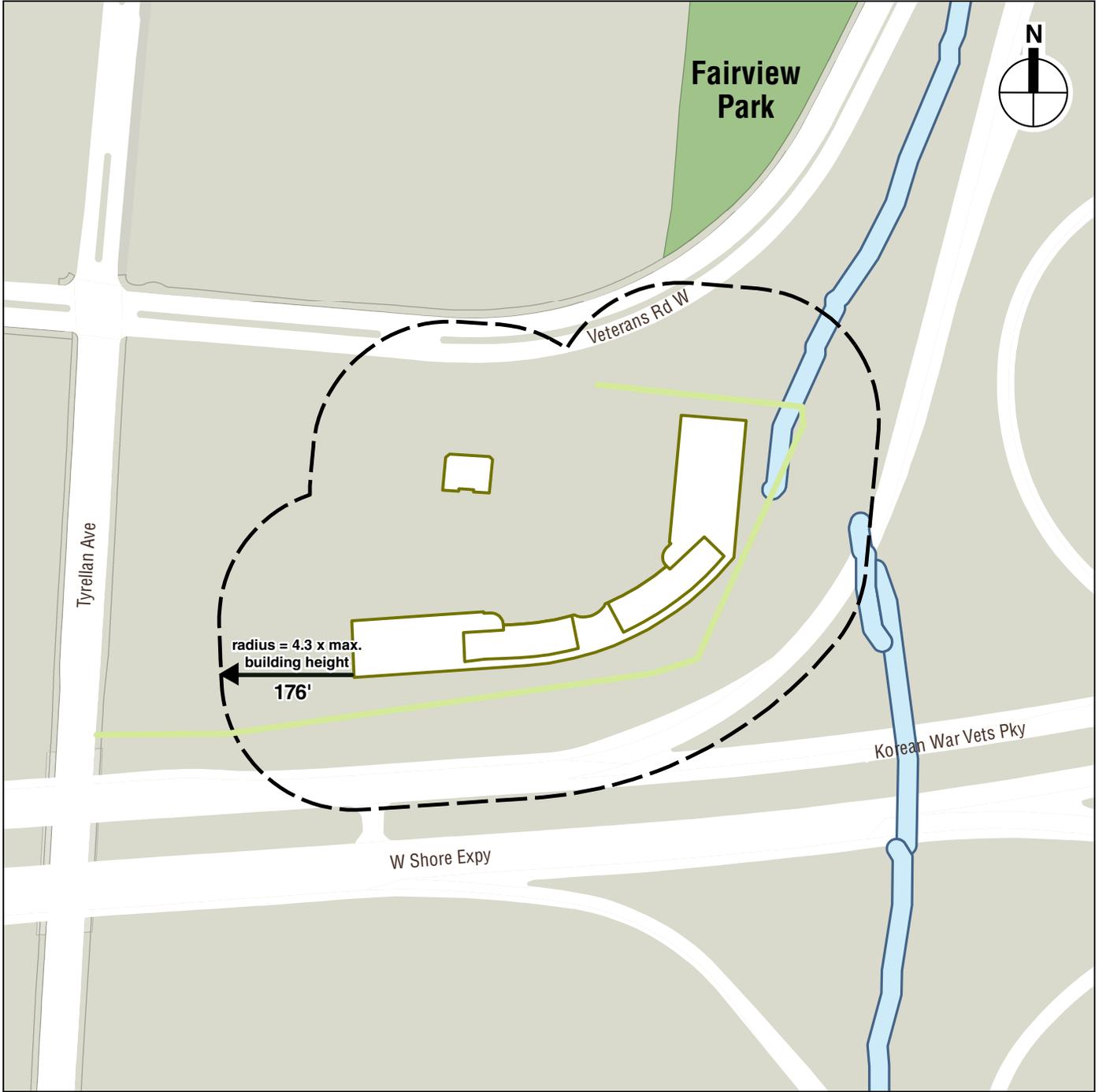
8



FOR ILLUSTRATIVE PURPOSES ONLY



FOR ILLUSTRATIVE PURPOSES ONLY



-  Proposed Development
-  Tier 1: Longest shadow study area polygon
-  Publicly-Accessible Open Space
-  Park Strip
-  USFWS Mapped Wetlands

0 300 FEET

Part II: TECHNICAL ANALYSIS

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

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

	YES	NO
1. LAND USE, ZONING, AND PUBLIC POLICY: CEQR Technical Manual Chapter 4		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Is there the potential to affect an applicable public policy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) If “yes,” to (a), (b), and/or (c), complete a preliminary assessment and attach.		
(e) Is the project a large, publicly sponsored project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If “yes,” complete a PlaNYC assessment and attach.		
(f) Is any part of the directly affected area within the City’s Waterfront Revitalization Program boundaries ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If “yes,” complete the Consistency Assessment Form . See Appendix A		
2. SOCIOECONOMIC CONDITIONS: CEQR Technical Manual Chapter 5		
(a) Would the proposed project:		
o Generate a net increase of 200 or more residential units?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Generate a net increase of 200,000 or more square feet of commercial space?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Directly displace more than 500 residents?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Directly displace more than 100 employees?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Affect conditions in a specific industry?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. COMMUNITY FACILITIES: CEQR Technical Manual Chapter 6		
(a) Direct Effects		
o Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, hospitals and other health care facilities, day care centers, police stations, or fire stations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Indirect Effects		
o Child Care Centers: Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Libraries: Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Public Schools: Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Health Care Facilities and Fire/Police Protection: Would the project result in the introduction of a sizeable new neighborhood?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. OPEN SPACE: CEQR Technical Manual Chapter 7		
(a) Would the proposed project change or eliminate existing open space?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Is the project located within an under-served area in the Bronx , Brooklyn , Manhattan , Queens , or Staten Island ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If “yes,” would the proposed project generate more than 50 additional residents or 125 additional employees?	<input type="checkbox"/>	<input type="checkbox"/>
(c) Is the project located within a well-served area in the Bronx , Brooklyn , Manhattan , Queens , or Staten Island ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If “yes,” would the proposed project generate more than 350 additional residents or 750 additional employees?	<input type="checkbox"/>	<input type="checkbox"/>
(d) If the project is located in an area that is neither under-served nor well-served, would it generate more than 200 additional residents or 500 additional employees?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	YES	NO
5. SHADOWS: CEQR Technical Manual Chapter 8		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. HISTORIC AND CULTURAL RESOURCES: CEQR Technical Manual Chapter 9		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State or National Register Historic District? (See the GIS System for Archaeology and National Register to confirm)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archeological resources. See Attachment B, Historic and Cultural Resources		
7. URBAN DESIGN AND VISUAL RESOURCES: CEQR Technical Manual Chapter 10		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. NATURAL RESOURCES: CEQR Technical Manual Chapter 11		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources.		
(b) Is any part of the directly affected area within the Jamaica Bay Watershed ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," complete the Jamaica Bay Watershed Form , and submit according to its instructions .		
9. HAZARDOUS MATERIALS: CEQR Technical Manual Chapter 12		
(a) Would the proposed project allow commercial or residential uses in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in Appendix 1 (including nonconforming uses)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (e.g., gas stations, oil storage facilities, heating oil storage)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury or lead-based paint?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(h) Has a Phase I Environmental Site Assessment been performed for the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify:	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. WATER AND SEWER INFRASTRUCTURE: CEQR Technical Manual Chapter 13		
(a) Would the project result in water demand of more than one million gallons per day?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If the proposed project located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 square feet or more of commercial space in Manhattan, or at least 400 residential units or 150,000 square feet or more of commercial space in the Bronx, Brooklyn, Staten Island, or Queens?	<input type="checkbox"/>	<input type="checkbox"/>
(c) If the proposed project located in a separately sewered area , would it result in the same or greater development than the amounts listed in Table 13-1 in Chapter 13 ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Would the proposed project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drainage areas , including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it	<input type="checkbox"/>	<input type="checkbox"/>

	YES	NO
involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	<input type="checkbox"/>	<input type="checkbox"/>
(f) Would the proposed project be located in an area that is partially sewerd or currently unsewerd?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or generate contaminated stormwater in a separate storm sewer system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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): 19,750		
o Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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): 21.6 billion		
(b) Would the proposed project affect the transmission or generation of energy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. TRANSPORTATION: CEQR Technical Manual Chapter 16		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) If "yes," conduct the screening analyses, attach appropriate back up data as needed for each stage and answer the following questions:		
o Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? <i>**It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 of Chapter 16 for more information.</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	<input type="checkbox"/>	<input type="checkbox"/>
o Would the proposed project result in more than 200 pedestrian trips per project peak hour?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	<input type="checkbox"/>	<input type="checkbox"/>
14. AIR QUALITY: CEQR Technical Manual Chapter 17		
(a) <i>Mobile Sources:</i> Would the proposed project result in the conditions outlined in Section 210 in Chapter 17 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) <i>Stationary Sources:</i> Would the proposed project result in the conditions outlined in Section 220 in Chapter 17 ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," would the proposed project exceed the thresholds in Figure 17-3, Stationary Source Screen Graph in Chapter 17 ? (Attach graph as needed) See Attachment F	<input type="checkbox"/>	<input type="checkbox"/>
(c) Does the proposed project involve multiple buildings on the project site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) Does the proposed project require federal approvals, support, licensing, or permits subject to conformity requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15. GREENHOUSE GAS EMISSIONS: CEQR Technical Manual Chapter 18		
(a) Is the proposed project a city capital project or a power generation plant?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project fundamentally change the City's solid waste management system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) If "yes" to any of the above, would the project require a GHG emissions assessment based on the guidance in Chapter 18 ?	<input type="checkbox"/>	<input type="checkbox"/>
16. NOISE: CEQR Technical Manual Chapter 19		
(a) Would the proposed project generate or reroute vehicular traffic?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of site to that rail line?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17. PUBLIC HEALTH: CEQR Technical Manual Chapter 20		

	YES	NO
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality; Hazardous Materials; Noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20 , "Public Health." Attach a preliminary analysis, if necessary.		
18. NEIGHBORHOOD CHARACTER: CEQR Technical Manual Chapter 21		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If "yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21 , "Neighborhood Character." Attach a preliminary analysis, if necessary.		
19. CONSTRUCTION: CEQR Technical Manual Chapter 22		
(a) Would the project's construction activities involve:		
o Construction activities lasting longer than two years?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Construction activities within a Central Business District or along an arterial highway or major thoroughfare?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Closing, narrowing, or otherwise impeding traffic, transit, or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o The operation of several pieces of diesel equipment in a single location at peak construction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Closure of a community facility or disruption in its services?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Activities within 400 feet of a historic or cultural resource?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Disturbance of a site containing or adjacent to a site containing natural resources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last for more than two years overall?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22 , "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination.		
See Page 9a, Additional Technical Information for EAS Part II		

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

Alex Lieber, AICP
Technical Director, AKRF, Inc.

DATE

August 21, 2019

SIGNATURE



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



CITY PLANNING COMMISSION
CITY OF NEW YORK

OFFICE OF THE CHAIR

January 8, 2020

REVISED CONDITIONAL NEGATIVE DECLARATION

Project Identification

CEQR No. 18DCP178R

ULURP Nos. N180309RAR, N180310RAR,
N180311RAR, N180312ZCR, N180313ZCR,
N180308ZSR

SEQRA Classification: Unlisted

Lead Agency

City Planning Commission
120 Broadway, 31st Floor
New York, NY 10271
Contact: Olga Abinader
(212) 720-3493

Name, Description and Location of Proposal

2835 & 2845 Veterans Road West

The applicant, Block 7469, LLC, is seeking a special permit, zoning authorizations, and zoning certifications (the proposed actions) to facilitate the development of a new approximately 99,864 gross square foot (gsf) development with two buildings, containing retail, office, and parking uses on the project located at 2835 Veterans Road West in Staten Island (Block 7469, Lots 115, 120, 125, 136, and 150, tentative Lot 115). The actions necessary to facilitate the proposed project are: a special permit pursuant to Section 74-922 to allow retail establishments larger than 10,000 gross square feet in a manufacturing district, authorization pursuant to Section 107-64 to allow the proposed tree removal, authorization pursuant to Section 107-65 to allow proposed modifications of existing topography, authorization pursuant to Section 107-68 to modify group parking facility and access regulations, certification pursuant to Section 36-592 for cross access connections, certification pursuant to Section 36-596 such that no connection is required, relocation of a previously certified connection, and voluntary connections. The EAS analyzes the project as proposed. The analysis year for the Proposed Actions is 2021.

Statement of No Significant Effect:

The Environmental Assessment and Review Division of the Department of City Planning, on behalf of the City Planning Commission, has completed its technical review of the Environmental Assessment Statement, dated August 21, 2019, prepared in connection with the ULURP Application (Nos. N180309RAR, N180310RAR, N180311RAR, N180312ZCR, N180313ZCR, N180308ZSR). The City Planning Commission has determined that the proposed action will have no significant effect on the quality of the environment, once it is modified as follows:

The applicant will enter into a Restrictive Declaration (RD) to ensure the implementation of mitigation relating to transportation and natural resources which would avoid the potential for any significant adverse impacts. The applicant would be responsible for the design, required approvals, and implementation of the mitigation measures. The mitigation measures are as follows:

- **Transportation**

The applicant will perform the following mitigation in consultation with DOT:

- i. Perform compensatory mitigation within the northeastern portion of the Subject Property as depicted on the Proposed Site Plan, Figure 6 of the EAS. Compensatory mitigation in the Site Plan includes installation of a traffic signal at the project driveway and Veterans Road West, which would modify the existing median to create a new westbound left-turn bay.
- ii. Route 440 Westbound Off-Ramp and Veterans Road West:
 1. Reconfigure the northbound approach from one 23-foot moving lane to one 11-foot left-turn lane and one 12-foot through/right-turn lane
 2. Increase the cycle length from 90 seconds to 120 seconds
 3. Remove the northbound/southbound split phase
 4. Create permitted/protected eastbound, westbound, northbound, and southbound left-turn phases
 5. Increase the length of the westbound left turn lane 130 feet, in order to prevent queued vehicles from spilling back to the adjacent lane.
- iii. Veterans Road West and Tyrellan Avenue/Bricktown Way:
 1. Reconfigure the eastbound approach from one 10-foot through lane, one 14-foot shared through/right-turn lane, and one 14-foot median to one 12-foot left-turn lane, one 10-foot through lane and one 14-foot shared through/right-turn lane
 2. Reconfigure the westbound approach from two 12-foot shared lanes and one 12-foot median to one 10-foot left-turn lane, one 11-foot left-turn/through shared lane and one 11-foot shared through/right-turn lane
- iv. Tyrellan Avenue and Boscombe Avenue:
 1. Add a protected eastbound left-turn phase with a southbound right-turn overlap.
- v. Route 440 Eastbound Ramps/Church Driveway and Boscombe Avenue:
 1. Traffic monitoring will be performed at this location in consultation with DOT. The scope of the monitoring will be submitted to DOT for review and approval prior to undertaking any monitoring.

- vi. Tyrellan Avenue and the Project Driveway:
 - 1. Install a no left-turn restriction at the westbound approach of the Tyrellan Avenue and Project Driveway intersection (101 Tyrellan Avenue).

- vii. Southern Curb Cut at 101 Tyrellan Avenue:
 - 1. Prior to the opening of the proposed project, an Automatic Traffic Recorder (ATR) and Turning Movement Count (TMC) will be deployed across the southern driveway to count exiting traffic for a period consistent with the CEQR Technical. Then, six months after the opening and occupancy of the proposed project, an ATR and TMC count will again be deployed to count exiting traffic at the southern driveway. The two sets of data will be averaged and compared. At DOT's discretion, a "No Left Turn" sign will be installed on Tyrellan Avenue across from the southern curb cut to prohibit left turns.

- **Natural Resources**

- i. Compensatory mitigation is proposed within the northeastern portion of the subject property and is depicted on Figure C-7 of the EAS. The focus of the wetland mitigation design is to improve onsite habitat for resident and migrating wildlife species through the provision of freshwater wetland adjacent area habitat. Improving these areas will provide both habitat, food and cover for area wildlife, and serve to enhance the subject area by providing for more diverse flora and fauna.
- ii. Prior to the initiation of any construction activities on the site, haybales and silt fencing, a stabilized construction entrance, and temporary stockpile areas will be erected along the proposed construction envelope, as noted above. With these controls in place, sediment laden runoff will be prevented directly entering the wetlands throughout the duration of the construction activities. Regular inspection will be carried out to check the condition of sediment and erosion controls on the site.

Supporting Statement:

The above determination is based on an environmental assessment which finds that:

1. The applicant is entering a Restrictive Declaration to ensure the implementation of mitigation relating to transportation and natural resources which would avoid the potential for any significant adverse impacts related thereto.
2. Analysis related to land use, zoning, and public policy is included in the EAS. The assessment concludes that the proposed project would be compatible with existing land uses and planned developments in the surrounding community, and that the proposed actions would not result in any significant adverse impacts to land use, zoning, or public policy according to the 2014 CEQR Technical Manual No other significant adverse effects on the environment which would require an Environmental Impact Statement are foreseeable.

It is fully agreed and understood that if the foregoing conditions, modification, and alterations are not fully incorporated into the proposed action, this Revised Conditional Negative Declaration shall become null and void. In such event, the applicant shall be required to prepare a Draft Environmental Impact Statement before proceeding further with said proposal.

This Revised Conditional Negative Declaration has been prepared in accordance with Article 8 of the Environmental Conservation Law 6NYCRR part 617.

I, the Undersigned, as the applicant or authorized representative for this proposal, hereby affix my signature in acceptance of the above conditions to the proposed action.



Signature of Applicant or Authorized Representative

Date: 01/08/2020



Name of Applicant or Authorized Representative

Date: 01/08/2020



Olga Abinader, Director
Environmental Assessment and Review Division
Department of City Planning

Date: 01/08/2020



Marisa Lago, Chair
City Planning Commission

Date: 01/08/2020

Additional Technical Information for EAS Part II

LAND USE, ZONING, AND PUBLIC POLICY

See Attachment A.

SOCIOECONOMIC CONDITIONS

According to the *City Environmental Quality Review (CEQR) Technical Manual*, a socioeconomic assessment should be conducted if a project may reasonably be expected to create substantial socioeconomic changes within the area affected by the project that would not occur in the absence of the project. Projects that would trigger a CEQR analysis include the following:

- Direct displacement of 500 or more residents or more than 100 employees.
- Direct displacement of a business that is uniquely significant because its products or services are dependent on its location; it is the subject of other regulations or publicly adopted plans aimed at its preservation because of its type or location; or it serves a population that is uniquely dependent on its services, in its particular location.
- The development of 200 residential units or more or 200,000 square feet (sf) or more of commercial use that is markedly different from existing uses, development, and activities in the neighborhood. This type of development may lead to indirect residential or business displacement, respectively.
- The development of 200,000 sf or more of retail on a single development site, creating the potential to draw a substantial amount of sales from existing businesses within the study area. This type of development may lead to indirect business displacement due to market saturation.
- Impacts on a specific industry; for example, if a substantial number of residents or workers depend on the goods or services provided by the specific affected business, or if it would result in the loss or diminution of a certain product or service that is important within the City.

The proposed project, which is limited to construction of two new commercial buildings totaling 99,864 gross square feet (gsf) on a site that is currently undeveloped, would not exceed any of analysis thresholds described above. Therefore, the proposed project would not result in significant adverse socioeconomic impacts, and further analysis is not warranted.

COMMUNITY FACILITIES AND SERVICES

The proposed project would not displace any community facilities. In addition, the proposed project does not include any residential development; therefore, it would not result in any increase in demand for community facilities and services (i.e., schools, child care facilities, and libraries). The proposed project would also not introduce a sizable new neighborhood warranting an assessment of police/fire protection services or health care facilities. Overall, the proposed project would not result in any significant adverse impacts to community facilities and services and no further analysis is warranted.

OPEN SPACE

Open space is defined as publicly or privately owned land that is publicly accessible and operates, functions, or is available for leisure, play or sport, or set aside for the protection and/or enhancement of the natural environment. The *CEQR Technical Manual* recommends conducting an open space assessment for projects that would result in the physical loss of, or limit access to, an open space, change the use of an open space so that it no longer serves the same user population, or affect the usefulness of public open space due to pollution or shadows. An open space assessment may also be necessary for projects that would generate enough new residents or workers to noticeably diminish the capacity of an area's open spaces to serve the future population.

The proposed project would not directly affect any open space: although the project site contains undeveloped natural areas, it is entirely privately owned and not accessible to the public, and does not contain any recreational amenities. The proposed project is in a designated area of Staten Island that is considered neither “underserved” nor “well-served” by open space; therefore, the threshold for assessment is the introduction of 200 residents or 500 employees. The proposed project would not exceed this analysis threshold, and, therefore, no further analysis is warranted.

SHADOWS

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

At a maximum height of approximately 41 feet above grade, the proposed project would not result in a structure greater than 50 feet. However, the project site is surrounded on three sides by a mapped 2-foot wide park strip controlled by the New York City Department of Parks & Recreation (NYC Parks). The project site is also across the street from Fairview Park, a sunlight-sensitive resource, and located adjacent to a wetland that could potentially be sensitive to a reduction in direct sunlight. A preliminary shadow screening assessment will determine if any new shadow originating from the proposed project could be cast on a sunlight-sensitive resource. If the possibility of new shadow falling on a sunlight-sensitive resource cannot be ruled out, a detailed shadow analysis is required to determine the extent and duration of the incremental shadow resulting from the proposed project on sunlight-sensitive resources.

DEFINITIONS AND METHODOLOGY

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

Definitions

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

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

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

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

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

A significant adverse shadow impact occurs when the incremental shadow added by a proposed project falls on a sunlight-sensitive resource and substantially reduces or completely eliminates direct sunlight, thereby significantly altering the public’s

use of the resource or threatening the viability of vegetation or other resources. Each case must be considered on its own merits based on the extent and duration of new shadow and an analysis of the resource's sensitivity to reduced sunlight.

Methodology

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

If the second tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a third tier of screening analysis further refines the area that could be reached by new shadow by determining the maximum extent of shadow on four representative analysis days.

If the third tier of analysis does not eliminate the possibility of new shadows on sunlight-sensitive resources, a detailed shadow analysis is required to determine the extent and duration of the incremental shadow resulting from the development facilitated by the proposed actions. The detailed analysis provides the data needed to assess the shadow impacts. The effects of the new shadows on the sunlight-sensitive resources are described, and their degree of significance is considered. The results of the analysis and assessment are documented with graphics, a table of incremental shadow durations, and narrative text.

TIER 1 PRELIMINARY SCREENING ASSESSMENT

A base map was developed using Geographic Information Systems (GIS)¹ showing the location of the project site and the surrounding street layout (see **Figure 8**). In coordination with the land use assessment (see Attachment A, "Land Use, Zoning, and Public Policy"), potential sunlight-sensitive resources were identified and shown on the map. To perform a conservative analysis, the shadows assessment considers a hypothetical structure occupying the entire volume of the permitted building envelope on the project site; this represents the largest possible building on the project site with the proposed project, which would be subject to a site plan approval which establishes the location, maximum floor area, and building footprint of the proposed development, and the configuration and number of parking spaces. The proposed development would therefore be limited to the building footprints and floor area shown on the authorized site plan and the layout and maximum number of parking spaces.

For the Tier 1 assessment, the longest shadow cast throughout the year by the proposed commercial development is calculated, and, using this length as the radius, a perimeter is drawn around the project site. Anything outside this perimeter could never be affected by new shadow, while anything inside the perimeter needs additional assessment.

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

The proposed project would reach a maximum height of 41 feet tall and could cast shadows up to 4.3 times as long, or 176 feet. Using this length as radii, a perimeter is drawn around the proposed building footprint (see **Figure 8**). Fairview Park, a publicly accessible open space, is located outside of the longest shadow study area and could not be cast in new shadow by the proposed maximum development. The mapped wetlands adjacent to the project site are shaded by riparian vegetation and are not sensitive to sunlight. The NYC Parks strip adjacent to the project site is a 2-foot wide buffer between the project site and the West Shore Expressway right-of-way. The purpose of the park strip is to prevent access directly from the project site onto the highway network. It allows for neither public utilization nor significant support of vegetation, and is not considered a sunlight-sensitive resource. Therefore, no sunlight-sensitive resources are within the longest shadow study area and the proposed project would not result in a significant shadow impact.

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

HISTORIC AND CULTURAL RESOURCES

See Attachment B.

URBAN DESIGN AND VISUAL RESOURCES

According to the methodologies of the *CEQR Technical Manual*, a preliminary assessment of urban design and visual resources is appropriate when there is the potential for a pedestrian to observe, from the street level, a physical alteration beyond that allowed by existing zoning, including: (1) projects that permit the modification of yard, height, and setback requirements; and (2) projects that result in an increase in built floor area beyond what would be allowed “as of right” or in the future without the proposed project. The proposed project requires a special permit to allow retail establishments with UG 6 and UG 10A uses in excess of 10,000 square feet in an M1-1 district as well as several authorizations and certifications.

The project site is a wooded and undeveloped parcel that has never been improved with any sort of structure (see **Figures 5a and 5b** of the EAS). The project site is located between Veterans Road West and a Korean War Veterans Parkway onramp. Veterans Road West is a wide road that carries two-way traffic in four travel lanes, with traffic separated by a narrow landscaped median. Veterans Road West intersects with Tyrellan Avenue west of the project site in the study area. Tyrellan Avenue extends north-south through the study area, and also carries four lanes of traffic; two lanes in each direction. North of Veterans Road West this street has a narrow landscaped median. The Korean War Veterans Parkway onramp is located southeast of the project site and carries two lanes of traffic.

The study area contains undeveloped land and recently constructed office buildings and shopping centers with little street pedestrian activity. Directly west of the project site is a three-story office building (101 Tyrellan Avenue) constructed in 2003 (see **photograph 5 of Figure 5c** of the EAS). This building has a boxy form and a contemporary design, and is surrounded by paved parking lots on all four sides. Two curb cuts on Tyrellan Avenue provide vehicular access to the parking lots. Directly north of this building, at the southeast corner of Veterans Road West and Tyrellan Avenue, is a one-story brick bank (see **photograph 6 of Figure 5c** of the EAS). This building was built in 2014, has paved parking to the south and east of it, and one curb cut which provides access to and from Veterans Road West.

The remainder of the developed parcels in the study area consist of recently constructed shopping centers, including big box retail establishments with associated large paved parking lots. One of the shopping centers, South Shore Commons, is south of Veterans Road West and west of Tyrellan Avenue, and includes a one-story building with a large curved footprint that houses a variety of different stores as well as a separate one-story commercial building housing a restaurant closer to the intersection of Veterans Road West and Tyrellan Avenue (see **photograph 7 of Figure 5d** of the EAS). Curb cuts on Tyrellan Avenue and Veterans Road West provide vehicular access into the shopping center. The shopping center north of Veterans Road West and east of Tyrellan Avenue includes a large one-story building housing a Home Depot with a very large footprint and a smaller Petco store attached to the south (see **photograph 8 of Figure 5d** of the EAS). This retail complex is accessed via curb cuts on Tyrellan Avenue and Bricktown Way. Large and tall signs mounted on brick piers or posts advertise the names of the shopping centers and stores in the study area (see **photograph 6 of Figure 5c** of the EAS).

As the project site is an undeveloped parcel and the study area is largely developed with modern shopping centers, there are no visual resources on the project site or in the study area.

The proposed actions would not affect the zoning regulations regarding yard, height, and setback, and allowable bulk, and the proposed project would comply with the applicable zoning regulations in these areas (in particular, the built FAR of the proposed project would be 0.34, which is below the maximum permitted FAR of 1.0). Therefore, the proposed actions would not result in a change on the project site beyond what is permitted by existing zoning. Furthermore, as discussed on page 1a, “Project Description,” absent the proposed actions the applicant would construct a commercial development that does not require any discretionary approvals. Both the No Action development and the proposed project would consist of free-standing and attached retail buildings set within a parking lot. The proposed actions would result in a development that is consistent with the urban design of the study area, which is developed with commercial buildings, including office and retail uses, set within large paved parking lots. As described above, the buildings in the study area vary in terms of size and footprint, with a number having large footprints, in particular the large South Shore Commons and Home Depot buildings. The proposed curb cut on Veterans Road West would also occur in the No Action development and would be consistent with the urban design of the study area, which has a number of curb cuts on the streets that provide access in

and out of the commercial properties including on Veterans Road West. Therefore, as the proposed project would comply with applicable zoning regulations regarding bulk, height and setback, and yards, and would result in a development of an urban design character compatible with the study area, no further analysis of the proposed project's effects on urban design is warranted. In addition, as there are no visual resources in the study area, no further analysis of the proposed project's effects on visual resources is warranted.

NATURAL RESOURCES

See Attachment C.

HAZARDOUS MATERIALS

See Attachment D.

WATER AND SEWER INFRASTRUCTURE

According to the *CEQR Technical Manual*, a water and sewer infrastructure analysis is warranted for projects that exceed certain development thresholds, or projects that increase density or change drainage conditions on a large site (i.e., developments that involve changes to sites five acres or larger where the amount of impervious surface would increase). For the project site, which is located in a separately sewered area in a manufacturing zoning district, the relevant development threshold is 100,000 square feet (sf) of commercial space.¹ Developments that would result in an exceptionally large demand for water (more than one million gallons per day [gpd]) or that are in an area that experiences low water pressure require an analysis of the water supply system.

With approximately 99,864 total gsf, assuming all of the space is retail space, the proposed project would generate demand for approximately 40,944 gallons per day, which would not represent an exceptionally large incremental demand for water. The proposed project would also not exceed the development thresholds warranting analysis of sewer infrastructure. In addition, the proposed project would include a stormwater management system to convey all stormwater originating from the site to the wetland area along Mill Creek, or to drywells, therefore the proposed project would not result in any increase in stormwater discharges to the sewer system (see Attachment C, "Natural Resources"). Therefore, the proposed project would not result in any significant adverse impacts to water and sewer infrastructure, and no further analysis is warranted.

SOLID WASTE AND SANITATION SERVICES

The *CEQR Technical Manual* states that few projects generate substantial amounts of solid waste (50 tons a week or more) that would result in a significant adverse impact. Based on Table 14-1 in the *CEQR Technical Manual*, the Proposed Project would generate approximately 19,750 pounds per week of solid waste, well under the 50 tons per week threshold that CEQR defines as requiring further analysis. Therefore, the proposed project would not result in any significant adverse impacts to solid waste and sanitation services, and no further analysis is required.

ENERGY

According to the *CEQR Technical Manual*, a detailed assessment of energy impacts is only required for projects that would significantly affect the transmission or generation of energy or that would result in substantial consumption of energy. The proposed project is not expected to generate a substantial new demand for energy and would not affect the transmission or generation of energy. Therefore, the proposed project would not result in significant adverse impacts to energy supply or consumption, and no further analysis is warranted.

TRANSPORTATION

See Attachment E.

AIR QUALITY

See Attachment F.

¹ See Table 13-1 of the *CEQR Technical Manual*.

GREENHOUSE GAS EMISSIONS

According to the *CEQR Technical Manual*, a greenhouse gas (GHG) emissions analysis is appropriate for: City capital projects subject to environmental review; projects that involve power generation; regulations and other actions that fundamentally change the City's solid waste management system by changing solid waste transport mode, distances, or disposal technologies; and projects conducting an EIS that would result in development of 350,000 square feet or greater. The proposed project would result in a commercial development with approximately 99,864 gsf of retail space, approximately 90,864 gsf larger than the retail development that will be constructed on the project site in the No Action condition, and would therefore not exceed the development threshold warranting a GHG analysis. The proposed project would also not include any City capital improvements, power generation, or changes to the City's solid waste management system. Therefore, the proposed project would not be expected to result in any significant impacts related to GHG emissions, and no further analysis is necessary.

NOISE

According to the guidelines established in the *CEQR Technical Manual*, a noise assessment considers whether a proposed action would generate any mobile or stationary source noise, or be located in an area with high ambient noise levels. A noise analysis examines an action for its potential effects on sensitive noise receptors (which can be both indoors or outdoors), and the effects on the interior noise levels of residential, community facility and retail uses.

As discussed in Attachment E, "Transportation," as compared to the No Action development, the proposed project would result in incremental vehicle trips exceeding 50 peak hour trips at several intersections near the project site. In terms of mobile sources, a screening assessment was performed to determine if the number of vehicle trips generated by the proposed project at these intersections would result in a doubling of noise passenger car equivalents (Noise PCEs); according to the *CEQR Technical Manual*, a doubling of Noise PCEs would be necessary to cause a 3 dBA increase in noise levels. The screening analysis finds that the proposed project would not result in a doubling of Noise PCEs at any noise-sensitive receptors. Therefore, in accordance with *CEQR Technical Manual* guidelines, it is not expected that the proposed project would generate sufficient traffic to have the potential to cause a significant adverse impact (i.e., it would not have the potential to cause a 3 dBA increase in noise levels), and further analysis is not warranted.

The proposed project's mechanical system (i.e., heating, ventilation, and air conditioning systems) would be designed to meet all applicable noise regulations (i.e., Subchapter 5, §24-227 of the New York City Noise Control Code and the New York City Department of Buildings Code) to avoid producing levels that would result in a significant increase in ambient noise levels. Therefore, no significant adverse impacts from stationary sources would occur with the proposed project. In addition, the proposed project would not introduce a sensitive receptor, based on CEQR guidelines. Therefore, there would be no potential for significant adverse noise impacts and no further assessment is warranted.

PUBLIC HEALTH

The proposed project would not result in any significant unmitigated adverse impacts to air quality, water quality, hazardous materials, noise, or any other CEQR analysis area. Therefore, the proposed project would not result in any significant adverse impacts to public health, and no further analysis is necessary.

NEIGHBORHOOD CHARACTER

According to the *CEQR Technical Manual*, neighborhood character is defined as an amalgam of various elements that give neighborhoods their distinct "personality." These elements may include a neighborhood's land use, urban design and visual resources, historic resources, socioeconomics, transportation, and noise. As explained above and in the attachments to this EAS, the proposed project would not result in any significant adverse impacts in the areas of analysis that contribute to a neighborhood's character. Therefore, the proposed project would not result in significant adverse impacts to neighborhood character, and further analysis is not warranted.

CONSTRUCTION

The activities associated with the construction of the new commercial development would be expected to result in conditions typical of construction projects in New York City, over a period of approximately 24 months. Construction activities would be carried out in accordance with New York City laws and regulations, which allow construction activities between 7:00 AM and 6:00 PM on weekdays. If work is required outside of normal hours, necessary approvals would be obtained from the appropriate agencies (i.e., the New York City Department of Buildings and New York City

Department of Environmental Protection). All necessary measures would be implemented to ensure adherence to the New York City Air Pollution Control Code regulating construction-related dust emissions and the New York City Noise Control Code regulating construction noise. If needed, Maintenance and Protection of Traffic plans would be developed for any curb-lane and/or sidewalk closures. Approval of these plans and implementation of all temporary closures during construction would be coordinated with the New York City Department of Transportation's Office of Construction Mitigation and Coordination.

In addition, measures to protect natural resources on the project site, such as erosion and sediment control devices, would be implemented during construction in accordance with the applicable State regulations (see Attachment C, "Natural Resources"). Overall, through implementation of the measures described above, adverse effects associated with the construction activities would be minimized. Accordingly, the proposed project would not result in significant adverse construction impacts, and no further analysis is required.

A. INTRODUCTION

As described on Page 1a of the EAS, “Project Description,” the proposed project would result in the development of a commercial center totaling approximately 99,864 gross square feet (gsf) at 2835 Veterans Road West (Block 7469, Lots 115, 120, 125, 136, and 150, tentative Lot 115; the “project site”) in the Charleston neighborhood of Staten Island. To facilitate the proposed project, Block 7469 LLC (“the applicant”) is seeking a special permit, zoning authorizations, and zoning certifications.

This attachment assesses the potential impacts of the proposed project on land use, zoning, and public policy on the project site and in the surrounding study area. The assessment concludes that the proposed project would be compatible with existing land uses and planned developments in the surrounding community, and that the proposed actions would not result in any significant adverse impacts to land use, zoning, or public policy.

B. METHODOLOGY

The project site is located in the Charleston neighborhood of Staten Island in Community District 3. This analysis of land use, zoning, and public policy examines the area within 400 feet of the project site—the area in which, according to the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, the proposed project could reasonably be expected to cause potential effects. The land use study area is generally bound by the midpoint between Veterans Road West and Bricktown Way to the north, the West Shore Expressway to the east, Korean War Veterans Parkway to the south, and Tyrellan Avenue to the west (see Figure 4 of the EAS).

The analysis begins by considering existing conditions in the study area in terms of land use, zoning, and public policy. The analysis then projects land use, zoning, and public policy in the future without the proposed project in the 2021 analysis year by identifying developments and potential policy changes expected to occur within that time frame. Probable impacts of the proposed project are then identified by comparing conditions with the proposed project to those projected conditions without the proposed project.

C. EXISTING CONDITIONS**LAND USE***PROJECT SITE*

The project site is an unimproved parcel located at 2835 Veterans Road West (Block 7469, Lots 115, 120, 125, 136, and 150; tentative Lot 115). The project site is currently wooded and undeveloped, having never been improved with any sort of structure, and is located between Veterans Road West and a Korean War Veterans Parkway onramp. The site is owned by the applicant, Block 7469 LLC.

STUDY AREA

The 400-foot study area primarily contains retail and commercial uses, including “big box” retailers, with a park at the northeastern edge of the study area (see Figure 4 of the EAS). To the west of the project site along Tyrellan Avenue are a partially completed shopping center (which currently contains a standalone bank, with another parcel that is under construction) and a three-story office building. The area west of Tyrellan Avenue contains a similar shopping center that features both larger chain retailers (such as Modell’s Sporting Goods) and local retail facilities. The area along Veterans Road West to the north of the project site contains the Bricktown Centre, a shopping center that includes large-scale retail facilities (Home Depot, Petco, and Target) with a large accessory parking lot. The study area to the south and east of the project site contains wooded areas at the edge of the highway interchange between the West Shore Expressway and the Korean War Veterans Parkway. To the south of the Korean War Veterans Parkway, just outside of the study area, is a residential neighborhood along Boscombe Avenue.

ZONING

PROJECT SITE

The project site is located in an M1-1 zoning district, which is mapped in the area north of the Korean War Veterans Parkway (see Figure 3 of the EAS). The M1-1 zoning district is a low-density manufacturing district that typically includes light industrial uses. M1 districts are generally used as buffers between heavy manufacturing districts (M2 or M3) and commercial or residential areas. The M1-1 district permits commercial uses, including office, hotel, and most retail uses, with some restrictions on size of establishments. The M1-1 district also allows light industrial uses in Use Groups 16 and 17 that comply with stringent performance standards, and some community facilities. The floor to area ratio (FAR) in an M1-1 district is 1.0 for commercial and manufacturing uses and 2.4 for community facility uses (Use Group 4 only).

The project site is also located in the Special South Richmond Development District (SRD). The SRD was created in 1975 during a period of rapid development, with the intention of managing the rate of growth, ensuring that public infrastructure kept pace with new development, and preserving natural and recreational areas. In particular, the SRD applies special tree preservation, landscaping, and topography regulations intended to avoid destruction of natural resources that define the community. The SRD District Plan also establishes a network of public open spaces by creating Designated Open Spaces (DOS) which must be left in a natural state, as well as public parks and waterfront esplanades. Residential growth in the area is controlled by special minimum lot, yard, and required open space regulations.

STUDY AREA

In addition to the M1-1 district and the SRD described above, the study area contains an R3X district south of the Korean War Veterans Parkway. The R3X districts are contextual residential district that are mapped extensively in lower-density neighborhoods, and permit only one- and two-family detached homes on lots that must be at least 35 feet wide.

Table A-1 summarizes the zoning districts in the study area, and Figure 3 of the EAS shows their location.

Table A-1
Zoning Districts in the Study Area

Zoning District	Maximum FAR ¹	Uses/Zone Type
M1-1	1.0 commercial and manufacturing 2.4 community facility ²	Low-density light industrial district with permitted commercial uses.
R3X	0.6 residential 1.0 community facility	Low-density contextual residential district
<p>Notes: ¹ Floor area ratio (FAR) is a measure of density establishing the amount of development allowed in proportion to the base lot area. For example, a lot of 10,000 square feet with a FAR of 1 has an allowable building area of 10,000 square feet. The same lot with an FAR of 10 has an allowable building area of 100,000 square feet. ² Use Group 4 only. Source: <i>New York City Zoning Resolution</i></p>		

PUBLIC POLICY

WATERFRONT REVITALIZATION PROGRAM

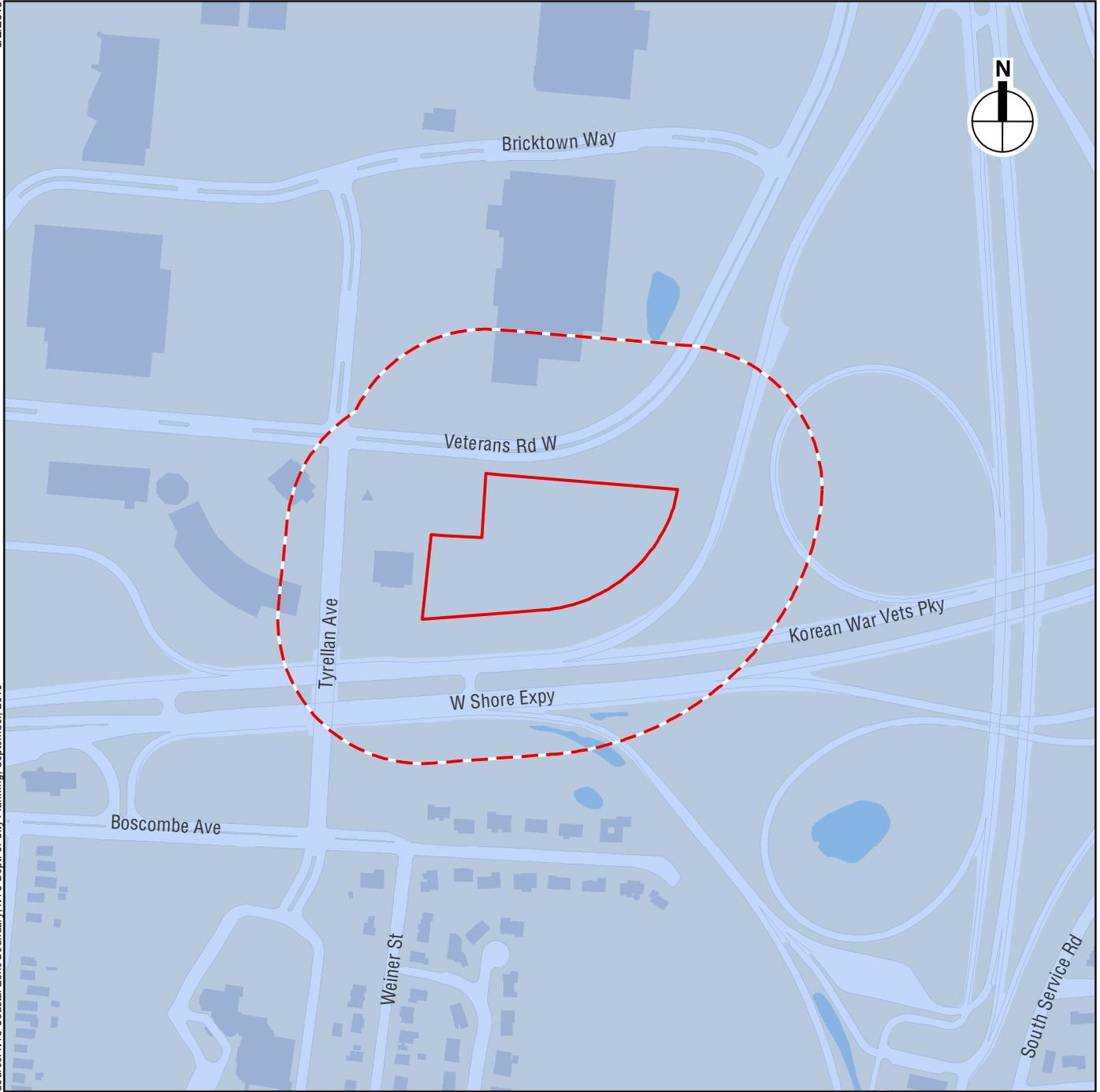
As shown on **Figure A-1**, the project site and the study area are located within the boundaries of New York City’s Coastal Zone. The WRP is the City’s principal Coastal Zone management tool and establishes a broad range of public policies for the City’s coastal areas. A local WRP, such as New York City’s, is subject to approval by the New York State Department of State (NYS DOS) with the concurrence of the United States Department of Commerce pursuant to applicable State and federal law, including the Waterfront Revitalization of Coastal Areas and Inland Waterways Act and the Federal Coastal Zone Management Act. The WRP was originally adopted by the City of New York in 1982, revised in 2002, and revised again in 2013. The most recent revisions were approved by the City Council in 2013 and adopted by NYSDOS (with the concurrence of the U.S. Department of Commerce) in 2016.

The guiding principle of the WRP is to maximize the benefits derived from economic development, environmental conservation, and public use of the waterfront, while minimizing the conflicts among these objectives. The recent revisions include incorporation of climate change and sea level rise considerations to increase the resiliency of the waterfront area, promotion of waterfront industrial development, as well as commercial and recreational waterborne activities, increased restoration of ecologically significant areas, and best practices for the design of waterfront open spaces. In addition, as part of the WRP revisions, the Coastal Zone boundary has been extended further inland in many locations to reflect alterations to Federal Emergency Management Agency (FEMA) flood zone maps. All proposed actions subject to CEQR, the Uniform Land Use Review Procedure (ULURP), or other City, State, or federal agency discretionary actions that are situated within New York City’s designated Coastal Zone boundary must be reviewed and assessed for their consistency with the WRP. An assessment of proposed project’s consistency with applicable WRP policies is warranted, and is included below (see Section F, “Waterfront Revitalization Program”).

There are no other public policies applicable to the project site and study area.

3/2/2018

Source: NYC Coastal Zone Boundary, NYC Dept. of City Planning, September, 2016



- Project Site
- Study Area Boundary (400-foot perimeter)
- Coastal Zone Boundary



2835 VETERANS ROAD WEST

NYC Coastal Zone Boundary
Figure A-1

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

LAND USE

PROJECT SITE

Absent the proposed actions, the applicant is expected to develop a 9,000-gsf commercial development that does not require discretionary approvals. The No Action development would include three one-story buildings located along the Veterans Road West frontage and in the center of the project site each containing 3,000 gsf of Use Group 6/10A commercial uses. These buildings are expected to be drive-through retail facilities. The No Action development would also include 30 parking spaces. The development area would be limited, and the southern and eastern ends of the project site would remain unimproved. The No Action development would comply with the applicable M1-1 and SRD regulations: in particular, with the limited development area, grading changes on the project site would not exceed two feet, in compliance with SRD regulations.

STUDY AREA

As noted above, the property immediately to the west of the project site contains a partially completed shopping center; a bank has already been constructed along the Tyrellan Avenue frontage, and two additional retail buildings are expected to be constructed along the Veterans Road West frontage (the land has been cleared and is currently surrounded by construction fencing). This project would continue the current land use and development trend within the study area with primarily retail facilities along Veterans Road West.

ZONING AND PUBLIC POLICY

No changes to zoning or public policy applicable to the project site and study area are expected to be implemented by the 2021 build year.

E. PROBABLE IMPACTS OF THE PROPOSED PROJECT

LAND USE

PROJECT SITE

With the proposed actions, which include a special permit, certifications, and authorizations, the applicant would construct a shopping center similar to the No Action development: however, unlike the No Action development, the proposed development would occupy the full project site. The proposed project would include two new buildings set in a parking lot containing a total of approximately 99,864 gsf of commercial space. Building A would be at the rear of the lot away from the Veteran Road West frontage and would follow the curvature of the zoning lot line; Building B would be at the approximate center of the site. The proposed project would include approximately 65,074 gsf of UG 6/10A commercial uses (including retail establishments larger than 10,000 square feet) and 34,791 gsf of parking, storage, and mechanical space. The parking lot would contain 182 spaces, and an additional 44 spaces would be provided in a garage located in the cellar of Building A. The proposed project is expected to be completed and occupied by 2021.

STUDY AREA

The proposed actions would only result in the proposed shopping center on the project site as described above and would not affect development on any other site within the study area. The proposed project would be similar to the No Action development and the other shopping centers located along Veterans Road West, which all contain a variety of retail facilities set within parking

lots, and would continue the trend of commercial development along this corridor. Overall, the proposed project would not result in any significant adverse impacts to land use in the study area.

ZONING

The proposed project would not alter the zoning regulations applicable to the project site, which would remain zoned M1-1. The proposed project requires a special permit pursuant to ZR Section 74-922 to allow retail establishments with UG 6 and 10A uses in excess of 10,000 zsf in an M1-1 district, contrary to the existing regulations of ZR Section 42-12. The proposed actions would also require authorizations pursuant to the SRD related to tree removal, modification of topography, and parking (ZR 107-64, 107-65, and 107-68) and certifications related to cross access connections (ZR 36-592 and 36-596). In meeting the findings of the special permit, authorizations, and certifications, the proposed project would be designed so as to be compatible with other land uses in the surrounding area and to be consistent with the SRD, subject to the review and approval of the CPC. The proposed project would conform with all other applicable zoning regulations, including regulations relating to bulk, height and setback, yards, and the provision of accessory parking spaces (of the 226 parking spaces would be provided, nine more than the minimum 217 parking spaces required by zoning).

Overall, the proposed actions would facilitate development on a currently vacant lot with a retail project consistent with the zoning and retail character of the study area, and would not affect zoning regulations applicable to any other site within the study area. Therefore, there would be no significant adverse impact to zoning as a result of the proposed actions.

PUBLIC POLICY

The proposed project would not result in any changes to public policies affecting the project site or the study area. In accordance with the City's WRP and the federal Coastal Zone Management Act, the proposed project was reviewed for its consistency with the City's WRP policies: see below for the WRP consistency assessment, which concludes that the proposed project would be consistent with the policies of the WRP. Overall, the proposed project would not result in any significant adverse impacts to public policy governing the project site or the study area.

F. WATERFRONT REVITALIZATION PROGRAM

The proposed project is located within the City's Coastal Zone Boundary and therefore, the proposed project is subject to review for consistency with the policies of the 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 Assessment Form lists the WRP policies and indicates whether the Proposed Actions would promote or hinder a particular policy, or if that policy would not be applicable (see **Appendix 1**). This section provides additional information for the policies that have been checked "promote" or "hinder" in the WRP Consistency Assessment Form.

In a determination dated August 22, 2018 (WRP #17-031), the DCP Waterfront Open Space Division found that, based on the information provided below, the proposed project is consistent with the WRP policies.

CONSISTENCY OF THE PROPOSED PROJECT WITH WATERFRONT REVITALIZATION PROGRAM POLICIES

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

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

The proposed project would provide for a new retail destination and bank on a vacant and underutilized property which would serve the residential populations in the Charleston neighborhood and other nearby areas of Staten Island. The project site is located in the inland area near major roadways (including the West Shore Expressway and the Korean War Veterans Parkway). The proposed commercial development would be similar to the No Action development and the other shopping centers located along Veterans Road West, which all contain a variety of retail facilities set within parking lots, and would continue the trend of commercial development along this corridor. Therefore, the proposed project is consistent with Policy 1.1.

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

The proposed project would be developed in the Charleston neighborhood of Staten Island, a developed area of the coastal zone, and is located near major roadways. As the project site is currently undeveloped vacant land, the proposed project would include appropriate infrastructure improvements to support commercial development. In particular, the proposed project would include a stormwater management system that would maintain the pre-development flow of water to the adjacent Mill Creek and freshwater wetland adjacent area and direct any additional stormwater flows to drywells. As discussed in Attachment E, "Transportation," the proposed project would include mitigation measures and improvements to the surrounding streets to provide for efficient vehicular access and circulation, and would not result in any significant adverse traffic impacts. The proposed project will be served by the City's water and sewer system (the existing water main and sanitary sewer at the intersection of Veterans Road West and Tyrellan Avenue will be extended to front the property). Therefore, the proposed project is consistent with Policy 1.3.

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.

See response to WRP policy 6.2.

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

Policy 4.4: Identify, remediate and restore ecological functions within Recognized Ecological Complexes.

The project site is not located within a Recognized Ecological Complex. The project site is located adjacent to a WRP-mapped Recognized Ecological Complex, the "Charleston Woods/Kreischer Hill" parkland. The project site contains habitat similar to Charleston Woods, specifically a mixed oak forest dominated by pin oak, white oak, sassafras, red maple, quaking aspen, pin cherry, arrowwood, greenbriars, goldenrod species, and others. The project site is separated from Charleston Woods by Veterans Road West, which limits the habitat connectivity between these two forests except for those mobile species, principally birds. Mill Creek runs from this parkland

and along the edge of the undeveloped parcel within which the project site is located. The project site is located approximately 45 feet west of Mill Creek and NYSDEC freshwater wetland AR-27. As detailed in Attachment C “Natural Resources,” no significant adverse impacts to Mill Creek or the NYSDEC freshwater wetland would occur as a result of the proposed project. Further, it is expected that construction of the proposed project would not significantly, adversely affect the ecological functions and values of Charleston Woods owing to these factors.

Policy 4.5: Protect and restore tidal and freshwater wetlands.

The proposed project will not result in the net loss of tidal or freshwater wetlands. With the proposed project, disturbance to approximately 0.19 acres of on-site regulated NYSDEC freshwater wetland 100-foot adjacent area associated with the NYSDEC freshwater wetland AR-27 would occur. The disturbances to the regulated NYSDEC freshwater wetland 100-foot adjacent area was minimized to the maximum extent possible when designing the site plan. The proposed project will create a resilient vegetative buffer between the wetland and the proposed commercial building in order to protect the nearby wetland's character, quality, values, and functions. The development has been designed to preserve the hydrologic balance within the wetland and between the wetland and surrounding upland area. It is expected that construction of the proposed project would not significantly, adversely affect the adjacent freshwater wetland.

Policy 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.

The proposed project will create a resilient upland vegetative buffer between the wetland and the proposed commercial building in order to protect the nearby wetland's character, quality, values, and functions. In addition to a 2,641-square foot (0.06 acre) planting area within the eastern portion of the subject property consisting of native tree and shrub species, a 400-foot-long, 5-foot wide hedgerow (0.046 acres) is proposed along the northern property boundary. The focus of the vegetative buffer design is to improve onsite habitat for resident and migrating wildlife species through the provision of freshwater wetland adjacent area habitat. Improving these areas will provide both habitat, food and cover for area wildlife, and serve to enhance the subject area by providing for more diverse flora and fauna.

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

Policy 5.1: Manage direct or indirect discharges to waterbodies.

With the proposed project, coverage under a NYSDEC SPDES GP-0-15-002 will be required. In accordance with the NYSDEC SPDES GP-0-15-002, a SWPPP consisting of both temporary erosion and sediment controls and post-construction stormwater management practices will be prepared. Water quantity and quality treatment will be designed to meet the NYSDEC design criteria and treat stormwater runoff from the proposed project.

In accordance with the NYSDEC SPDES GP-0-15-002 and freshwater wetland permit standards, the pre-development flow of water to Mill Creek and NYSDEC freshwater wetland AR-27 adjacent area will be maintained. All stormwater originating from the site and directed to the freshwater wetland will flow over or through a minimum 45-foot wide vegetated area prior to reaching the wetland and subsequently Mill Creek. Any additional post-development stormwater flows will be directed to drywells.

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

The sediment control devices required under the NYSDEC SPDES GP-0-15-002, which will consist of haybales and silt fencing, a stabilized construction entrance, and temporary stockpile areas, will prevent runoff from directly entering the wetlands or Mill Creek throughout the duration of the construction activities. All stormwater originating from the site and directed to the freshwater wetland will flow over or through a minimum 45-foot wide vegetated area prior to reaching the wetland and subsequently Mill Creek. All erosion and sediment control devices will be designed and installed in accordance with New York State Standards and Specifications for Erosion and Sediment Control.

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

The proposed project does not entail the excavation or placement of fill in navigable waters, marshes, tidal marshes or wetlands. The proposed project will entail grading the upland project site including 0.19 acres of NYSDEC freshwater wetland adjacent area. During site grading activities, the nearby freshwater wetland and Mill Creek will be protected through installation and implementation of erosion and sediment control devices in accordance with New York State Standards and Specifications for Erosion and Sediment Control and NYSDEC SPDES GP-0-15-002.

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

The flow of groundwater would not be altered within the vicinity of the structures as groundwater is deeper than 20 feet bgs. Stormwater runoff generated by the proposed project would be directed to the drywells and infiltrated, providing necessary ground water recharge. Further, the NYSDEC freshwater wetland AR-27 and Mill Creek will be protected through installation and implementation of erosion and sediment control devices in accordance with New York State Standards and Specifications for Erosion and Sediment Control and NYSDEC SPDES GP-0-15-002.

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

The proposed project does not entail discharge of stormwater to the NYC sewer system. All stormwater will be maintained on site or directed to NYSDEC freshwater wetland AR-27 to maintain the hydrological balance of the wetland. No in-water ecological strategies are proposed to improve water quality as Mill Creek is not located on the project site.

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

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

The project site is part of a larger parcel that is crossed by Mill Creek and contains a FEMA FIRM 100-year floodplain (Zone AE) including a designated "floodway." The effective FIRM indicates that the base flood water surface elevation of Mill Creek along the reach of this watercourse adjacent to the project site is between 41.3 and 41.5 feet NGVD29.¹ The Preliminary FIRM

¹ FEMA. 2007. Flood Insurance Study, City of New York. Flood Insurance Study Number 360497V00A.

indicates that the base flood water surface elevation of Mill Creek along the reach of this watercourse adjacent to the project is between 40.2 and 40.4 feet NAVD88.² Encroachment on floodplains, such as structures and fill, reduces flood-carrying capacity, increases flood heights and velocities, and increases flood hazards in areas beyond the encroachment itself.

The project site is not located within the 100-year floodplain (Zone AE), as shown in Figures C-2 and C-3 in Attachment C, “Natural Resources.” Under Policy 6, the primary goal for projects in coastal areas is to reduce risks posed by current and future coastal hazards, particularly major storms that are likely to increase due to climate change and sea level rise. The proposed project would redevelop the project site with a commercial center. The project site is not within the FEMA 100-year or 500-year floodplains and would not be susceptible to flooding under current conditions. The proposed project would meet the requirements of the applicable regulations intended to reduce risks of damage from current and future coastal hazards, and would be consistent with Policy 6.1.

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

The proposed project’s first floor is located approximately 75 feet above sea level (NGVD29) and the cellar floor is located approximately 60 feet above sea level (NGVD29). It is not located in the current Preliminary FIRM 100-year or 500-year floodplains. The proposed project is expected to have an extended lifespan: for the purposes of an assessment of the potential effects of climate change and sea level rise (SLR), projections of SLR by 2100 were considered using an SLR planning tool provided by DCP. Based on NPCC projections, the base flood elevations for New York City may rise between 0.5 feet (low projection) and 6.25 feet (high projection) by 2100. Even with the anticipated rise in sea level, the proposed project would not be within the NPCC projected FEMA 100-year and 500-year flood plains, as mapped by DCP’s Flood Hazard Mapper for the 90th percentile SLR projection by the 2100s. Therefore the project site would not be potentially susceptible to flooding in the future in 2100 as a result of sea level rise. Consistent with the objectives of this policy, the proposed project would minimize the impacts of flooding on the proposed development, and the proposed development would also meet the requirements of the Building Code. Therefore, the proposed project is consistent with Policy 6.2.

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

Policy 7.1: Manage solid waste material, hazardous wastes, toxic pollutants, substances hazardous to the environment, and the unenclosed storage of industrial materials to protect public health, control pollution, and prevent degradation of coastal ecosystems.

Policy 7.2: Prevent and remediate discharge of petroleum products.

Policy 7.3: Transport solid waste and hazardous materials and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.

As described in Attachment D, “Hazardous Materials,” a potential for hazardous material conditions on the project site was evaluated in an October 2007 *Phase I Environmental Site Assessment* (ESA)

² FEMA. 2013. Preliminary Flood Insurance Study, City of New York. Flood Insurance Study Number 360497V000B.

conducted by CEA Engineers, P.C. for a larger property that included the project site. The Phase I ESA identified no Recognized Environmental Conditions (RECs), defined as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property.” Based on the findings of the Phase I ESA, there is no significant potential for subsurface contamination to be present. As such, no special measures or procedures would need to be incorporated into the proposed project to avoid impacts, rather the potential for impacts would be avoided by performing excavation/construction in accordance with applicable regulatory requirements, e.g., properly disposing of any excess soil; reporting to New York State Department of Environmental Conservation (NYSDEC) any signs of a petroleum spill (and removing and registering all encountered tanks); and following NYC Department of Environmental Protection requirements should dewatering be required. Therefore, the proposed project is consistent with these Policies. *

A. INTRODUCTION

According to the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, a historic resources assessment is required if there is the potential to affect either historic archaeological or architectural resources. Actions that could potentially affect archaeological resources that typically require an assessment are those that involve ground disturbance, or below-ground construction and excavation. Actions that trigger an historic architectural resources assessment include new construction, demolition, or significant alteration to any historic building, structure, or object; a change in scale, visual prominence, or visual context of any historic building, structure, object or landscape feature; construction, including but not limited to excavation, vibration, subsidence, dewatering, and the possibility of falling objects that could damage a historic resource; additions to or significant removal, grading, or replanting of significant historic landscape features; screening or elimination of publicly accessible views of a historic resource; and the introduction of significant new shadows or significant lengthening of the duration of existing shadows over a historic landscape or on a historic structure with sunlight-dependent features.

This analysis has been prepared in accordance with the *CEQR Technical Manual*. In addition to the proposed actions by the New York City Department of City Planning (DCP) and the New York City Planning Commission (CPC), the proposed project would require permits from the New York State Department of Conservation (NYSDEC). Therefore, this analysis has been prepared in accordance with CEQR, the New York State Environmental Quality Review Act (SEQRA), and Section 14.09 of the New York State Historic Preservation Act (NYSHPA). As described below, the proposed project would not result in significant adverse impacts on historic and cultural resources.

B. ARCHAEOLOGICAL RESOURCES

The study area for archaeological resources includes those areas that could be disturbed by subsurface disturbance, or the project site itself. As described in the *CEQR Technical Manual*, an assessment of archaeological resources is required for projects or actions that would result in in-ground disturbance. Since the proposed project requires excavation, the New York City Landmarks Preservation Commission (LPC) and the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) were contacted for their preliminary determination as to the potential for archeological sensitivity within the project site. In a comment letter dated January 2, 2013, OPRHP determined that the project site was potentially archaeologically sensitive and requested that a Phase 1 Archaeological Investigation of the project site be prepared (see **Appendix B**).

In urban areas, Phase 1 Investigations are typically divided into two components, a Phase 1A Archaeological Documentary Study and Phase 1B archaeological testing. The Phase 1A study involves extensive documentary research to identify areas of precontact or historic period archaeological sensitivity on a project site and the Phase 1B Archaeological Investigation involves subsurface testing to determine the presence or absence of archaeological resources within the areas of sensitivity identified in the Phase 1A.

A Phase 1A study of the project site was completed in March 2016 by Historical Perspectives, Inc. (HPI).¹ The Phase 1A concluded that it was likely that the project site was the site of Native American activity during the precontact period. The project site was determined to have experienced little disturbance with the exception of areas that had been graded/cleared and where dumping had occurred along the western side of the site. The site was determined to have no historic period archaeological sensitivity due to the fact that the site was undeveloped throughout the historic period. The Phase 1A study recommended a Phase 1B archaeological investigation to determine the presence or absence of precontact archaeological resources on the project site.

HPI prepared a Phase 1B Testing Protocol in April 2016 that described the proposed testing strategy designed to confirm the presence or absence of archaeological resources on the project site.² In a comment letter dated April 26, 2016, OPRHP concurred with the conclusions and recommendations of the Phase 1A study and concurred with the proposed testing strategy outlined in the Phase 1B testing protocol (see **Appendix B**).

HPI completed a final report summarizing the Phase 1B Archaeological Investigation of the project site in May 2016.³ The Phase 1B Archaeological Investigation involved the excavation of 57 shovel test pits (STPs) at a 15-meter interval across the project site. STPs were excavated to the depth of sterile subsoil predating the human occupation of the area. None of the STPs were found to contain precontact archaeological resources nor did any suggest that artifacts or features were likely to be present within the project site. The Phase 1B Archaeological Investigation concluded that the project site does not contain intact archaeological resources or archaeological sites and no additional archaeological analysis was recommended. In a comment letter dated May 19, 2016, OPRHP concurred with the conclusions and recommendations of the Phase 1B Archaeological Investigation and determined that the proposed project would have no impact on cultural resources, including archaeological resources (see **Appendix B**). In a comment letter issued on June 13, 2016, LPC concurred with the conclusions and recommendations of both the Phase 1A study and the Phase 1B Archaeological Investigation and determined that there were no further archaeological concerns regarding the project site (see **Appendix B**).

As determined with the completion of the Phase 1A study and the Phase 1B Archaeological Investigation and the concurrence of LPC and OPRHP on the final reports describing those investigations, the proposed project will not result in significant adverse impacts on archaeological resources and no further analysis is required regarding archaeological resources.

C. ARCHITECTURAL RESOURCES

Architectural resources include properties that are eligible for or have been designated (or are calendared for consideration) as New York City Landmarks, Interior Landmarks or Scenic Landmarks; properties that are listed or eligible for listing on the New York State or National

¹ HPI (March 2016): “Phase IA Archaeological Documentary Study: Tyrellan Avenue Development, Block 7469, Lots 115, 120, 125, 136, and 150, Staten Island, Richmond County, New York, NYSOPRHP # 13PR00027.” Prepared for: Tyrellan Holdings, LLC; Staten Island, NY.

² HPI (April 8, 2016): “Tyrellan Avenue Development, Block 7469, Lots 115, 120, 125, 136, and 150, Staten Island, Richmond County, New York, NYSOPRHP # 13PR00027; Phase 1B Archaeological Field Testing Protocol.”

³ HPI (March 2016): “Phase IB Archaeological Field Investigation: Tyrellan Avenue Development, Block 7469, Lots 115, 120, 125, 136, and 150, Staten Island, Richmond County, New York, NYSOPRHP # 13PR00027.” Prepared for: Block 7469, LLC; Staten Island, NY.

Register of Historic Places (S/NR, S/NR-eligible); and properties that are within a designated or eligible New York City, New York State, or National Register Historic District (“known architectural resources”). Study areas for architectural resources are determined based on the area of potential effect for construction period impacts, as well as the larger area in which there may be visual or contextual impacts. The *CEQR Technical Manual* sets the guidelines for the study area as being typically within an approximately 400-foot radius of the project site. The study area was evaluated to determine if there are any known architectural resources. In addition, a survey was conducted of the study area to identify if there are any previously undesignated properties that appear to meet S/NR or NYCL eligibility criteria (“potential architectural resources”).

The project site does not contain any known or potential architectural resources. The project site is currently wooded and undeveloped, having never been improved with any sort of structure (see Figures 5a and 5b of the EAS). In addition, there are no known architectural resources or potential architectural resources in the study area. The study area, including properties adjacent to the project site, are either undeveloped or are developed with recently constructed office buildings and shopping centers (see Figures 5c and 5d of the EAS). As such, there are no architectural resources on or in proximity to the project site that could be affected by the proposed project, and the proposed project would have no adverse impact on architectural resources. *

A. INTRODUCTION

According to the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, a natural resource is defined 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. As the project site contains and is located adjacent to natural resources, the proposed project has the potential to adversely impact natural resources and, therefore, an assessment of the proposed project on natural resources is appropriate. The purpose of this assessment is to evaluate the potential impacts of the proposed project on natural resources within and adjacent to the project site.

The proposed project entails construction of two commercial buildings and associated parking areas within the approximately 196,429 square foot (4.51 acre) project site. This assessment describes:

- The regulatory programs that protect wetlands, wildlife, threatened or endangered species, aquatic, and terrestrial resources, or other natural resources within the project site;
- The current condition of the natural resources within the project site, including groundwater, floodplains, aquatic resources, wetlands, terrestrial resources and threatened or endangered species and species of special concern;
- The natural resources within the project site, including groundwater, floodplains, aquatic resources, wetlands, terrestrial resources and threatened or endangered species and species of special concern in the future under the No Action condition;
- The potential impacts of the proposed project on the natural resources within the project site, including groundwater, floodplains, aquatic resources, wetlands, terrestrial resources and threatened or endangered species and species of special concern; and
- The measures that would be developed, as necessary, to mitigate and/or reduce any of the proposed project's potential adverse impacts on natural resources.

Evaluations for vegetation and wildlife were conducted on October 15, 2012, October 25, 2012 and May 22, 2013 to identify onsite vegetation and wildlife. The wetland boundary for New York State Department of Environmental (NYSDEC) regulated freshwater wetland AR-27 was delineated by Carpenter Environmental Associates, Inc. (CEA), on January 3, 2008 and confirmed by NYSDEC on June 2, 2008. A subsequent site visit was performed September 20, 2018 by Capital Environmental Consultants, Inc. and determined no significant changes to wildlife, vegetation or regulated wetland adjacent area had occurred since previous investigations. This assessment concludes that the proposed project would not result in any significant adverse environmental impacts to natural resources.

B. METHODOLOGY

STUDY AREA

The proposed project entails construction of two commercial buildings and associated parking areas within the approximately 196,429 square foot (4.51 acre) parcel located between Veteran's Road West and Richmond Parkway, Staten Island, New York 10309 (Block 7469, Lots 115, 120, 125, 136, and 150; tentative Lot 115). The project site currently consists of vacant, wooded uplands. The property is bordered by Veteran's Road West to the north, an on ramp to the West Shore Expressway to the east, Richmond Parkway to the south, and by commercial and office buildings to the west.

The study area was limited by development to the north, west and south. The study area extended east to the New York State Department of Environmental Conservation (NYSDEC) freshwater wetland boundary located between the project site and the West Shore Expressway.

EXISTING CONDITIONS

Carpenter Environmental Associates, Inc., conducted a natural resource inventory including wildlife and vegetative identification and enumeration point stations. A total of 15 sample points were situated along 5 transects mapped throughout the property, as depicted on **Figure C-1**. The transect method is based on the 1987 Corps of Engineers Wetland Delineation Manual and the *CEQR Technical Manual*.¹

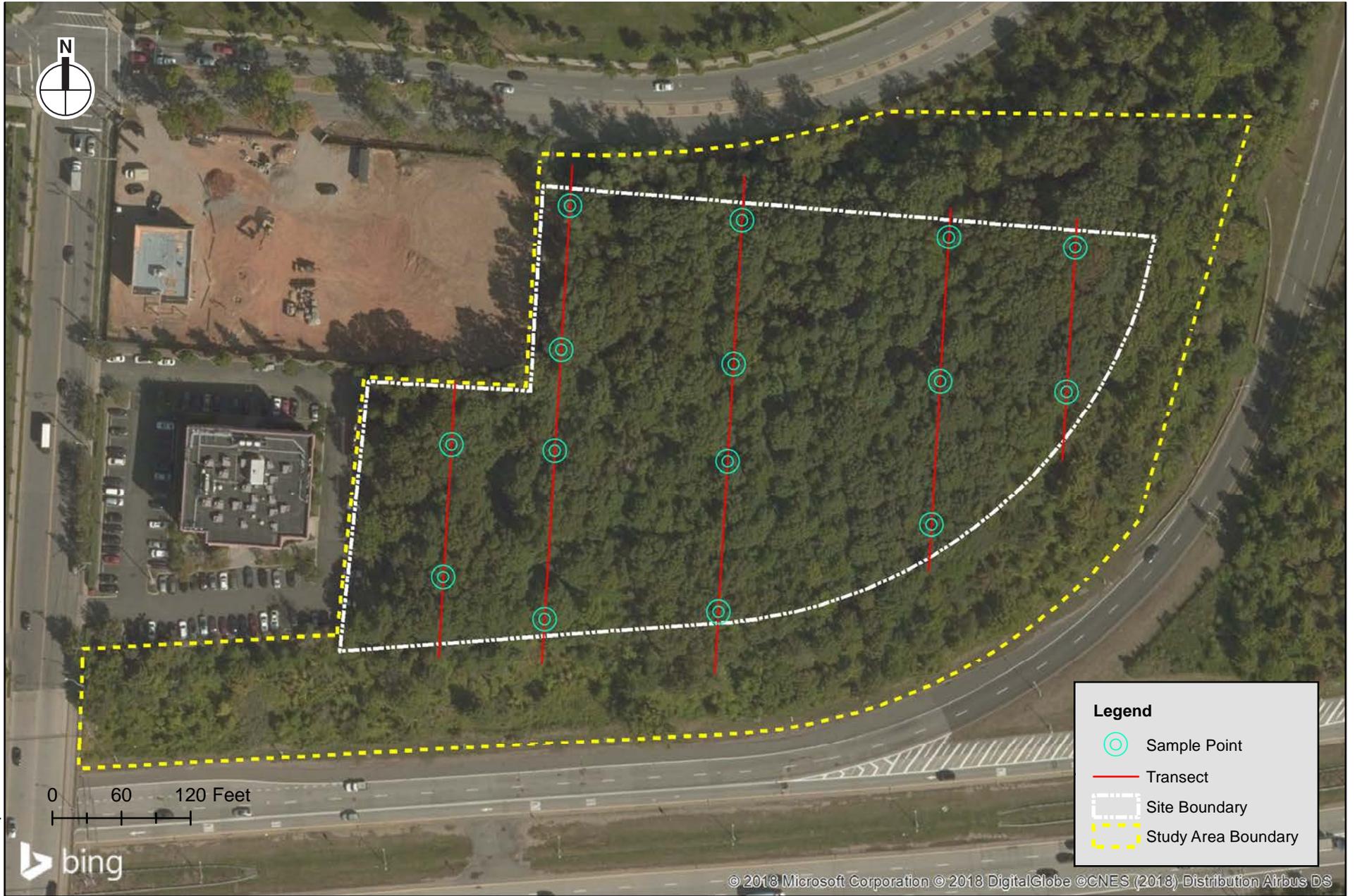
At each sample point, tree, shrub, and herbaceous vegetation and wildlife were identified and documented. In addition to the sample points, CEA conducted general surveys of each distinct vegetative community to ensure a thorough examination of all vegetative species present onsite. Evaluations for vegetation and wildlife were conducted on October 15, 2012, October 25, 2012 and May 22, 2013 to identify onsite vegetation and wildlife. A subsequent site visit was performed September 20, 2018 by Capital Environmental Consultants, Inc. and determined no significant changes to wildlife, vegetation or regulated wetland adjacent area had occurred since the previous investigations. The NRI was performed in accordance with the scoping document submitted by CEA to the New York City (NYC) Department of City Planning (DCP) on October 25, 2012 (see **Appendix C**). A complete listing of vegetative and wildlife species identified at the site can be found in **Tables C-1 and C-2** later in the attachment, respectively.

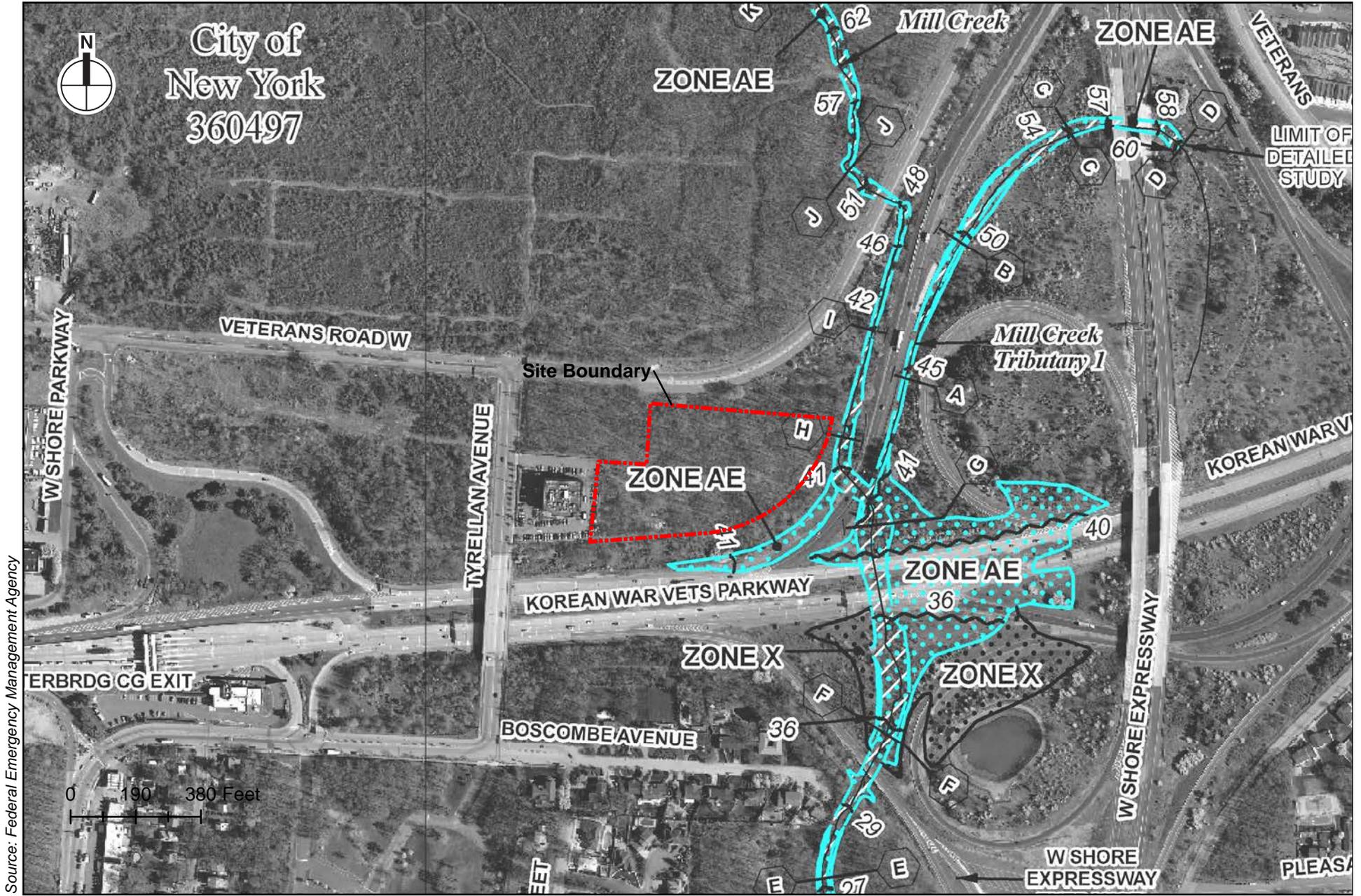
Additional information on existing conditions was summarized from information sources such as:

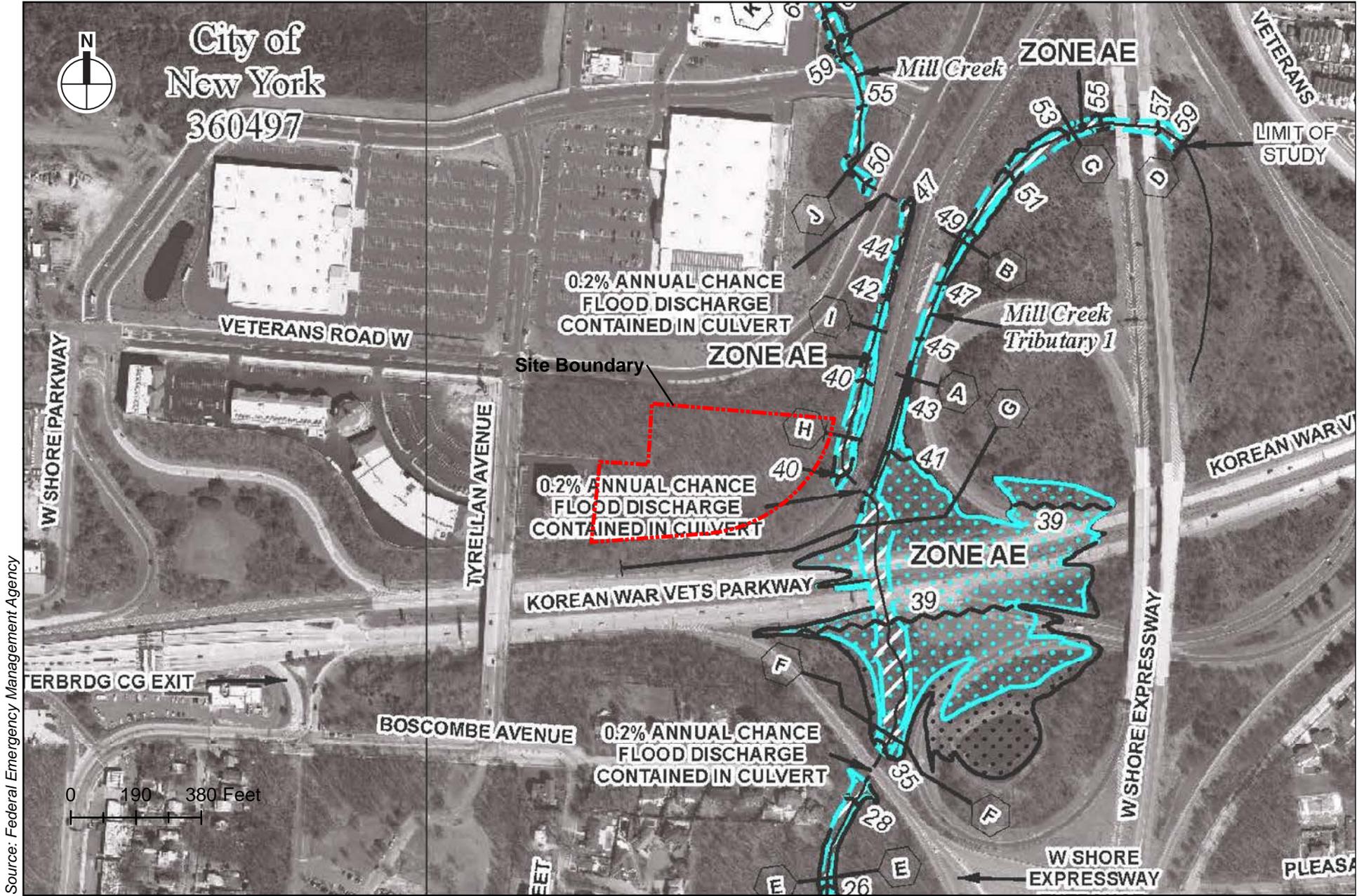
- United States Geological Survey (USGS) — topographic map for the Arthur Kill quadrangle;
- U.S. Army Corps of Engineers (USACE) 1987 Wetlands Delineation Manual, 2012 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, and Northcentral-Northeast 2012 Final Regional Wetland Plant List;
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRMs) and Revised Preliminary FIRMs (**Figures C-2 and C-3**);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) National Cooperative Soil Survey, Plant Fact Sheets, and NRCS New York City (NYC) Reconnaissance Soil Survey (RSS) map;

¹ Environmental Laboratory. (1987). Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

Source: Capital Environmental Consultants, Inc.







Source: Federal Emergency Management Agency

- NYSDEC Environmental Resource mapper (ERM) (**Figure C-4**), 1987 Freshwater Wetland Maps, 1974 Tidal Wetland Maps, Infrared aerials, Critical Environmental Areas, Natural Heritage Program (NHP) Ecological Communities of New York State Online Conservation Guide and New York Nature Explorer, Breeding Bird Atlas (2000–2005), Herpetological Atlas Project, Open Space Conservation Plan, List of protected fish and wildlife (6 NYCRR Part 182), and List of protected plants and trees (6 NYCRR Part 193);
- New York State Department of State (DOS) Significant Coastal Fish and Wildlife Habitats (SCFWHs); and
- New York City’s Zoning Maps.

Potential impacts to natural resources from the proposed project were assessed by considering the existing and expected future natural resources at the project site and the potential changes to these natural resources that would occur as a result of the proposed project.

NYC ZONING

Based on the New York City Planning Commission Zoning Map 32-d, the project site is zoned M1-1. This district is designed to provide for manufacturing, commercial and some community facilities.

The project site is mapped within the NYC Special South Richmond Development District (SRD). The SRD was created in 1975 during a period of rapid development, with the intention of managing the rate of growth, ensuring that public infrastructure kept pace with new development, and preserving natural and recreational areas. In particular, the SRD applies special tree preservation, landscaping, and topography regulations intended to avoid destruction of natural resources that define the community. Development within the SRD should maintain the general goals of the SRD including, but not limited to, to avoid destruction of irreplaceable natural and recreational resources such as lakes, ponds, watercourses, beaches and natural vegetation and to maintain the natural ecological balance of the area with minimum disruption of natural topography, trees, lakes and other natural features.

C. EXISTING CONDITIONS

In accordance with the *CEQR Technical Manual*, this section describes the following existing natural resources within the study areas on the basis of existing information and the results of the reconnaissance field survey: groundwater, floodplains, surface waters, wetlands, vegetation and ecological communities, wildlife, and threatened, endangered, and special concern species.

GROUNDWATER

Groundwater is first encountered greater than 20 feet below ground surface (bgs) throughout upland portions of the proposed project site.² Fluctuations in groundwater levels can occur due to variations in season, rainfall, snowmelt, surface infiltration, temperature, construction activities, pumping of dewatering systems, leakage from utilities and other factors. Groundwater in Staten Island is not used as a source of potable water (the municipal water supply uses upstate reservoirs).

² Drywell Percolation Test, Veterans Road West Block 7469 Lots 115, 120, 125, 136 and 150, prepared by Gaspare Rosario Santoro M.S.C.E., P.E., P.P., Consulting Engineer/Planner, March 31, 2016 through April 1, 2016.

Source: NYSDEC Environmental Resource Mapper



Revised 9/26/2018 - per DEP comments.

FLOODPLAINS

FEMA Flood Insurance Rate maps (FIRMs) are official maps of a community on which FEMA has delineated both the special hazard areas and, for insurance purposes, the risk premium zones applicable to the community. The land area covered by the floodwaters of the base flood is the Special Flood Hazard Area (SFHA). A base flood is the flood having a one percent chance of being equaled or exceeded in any given year. This is the regulatory standard also referred to as the 100-year flood. Most floods fall into three major categories: riverine flooding, coastal flooding, and shallow flooding.

No floodplains are located on the project site, as depicted on **Figure C-2**. A floodway area associated with Mill Creek is located adjacent to the proposed project site, immediately south and east. The floodway is the channel of a stream plus any adjacent flood plain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights. The project site is approximately 45 feet east and 80 feet north of the mapped SHFA floodway depicted on **Figure C-2**.

In June 2013, FEMA released Preliminary FIRMs (revised December 5, 2013) that replaced the ABFE maps for areas in New York City, including Staten Island (**Figure C-3**).³ The floodway remains east of the project area and no floodplains are located on the project site.

AQUATIC RESOURCES

Mill Creek, a watercourse regulated by the USACE and NYSDEC, is located east of the project site (**Figures C-4 and C-5**, respectively). USACE classifies the watercourse as R2UBH (Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded). Title 6 of the New York Code of Rules and Regulations (NYCRR) Part 701 includes classifications for surface waters and groundwater. The NYSDEC classification of the watercourse is C. The best usage for class C fresh surface waters is fishing. Class C waters are suitable for fish, shellfish and wildlife propagation and survival and for primary and secondary contact recreation, although other factors may limit the use for these purposes.

WETLANDS

No wetlands are located on the project site. The wetland boundary for NYSDEC regulated freshwater wetland AR-27 associated with Mill Creek is located east and significantly down slope of the project site. The wetland boundary was delineated by CEA, on January 3, 2008 and confirmed by NYSDEC on June 2, 2008. Around each mapped NYSDEC freshwater wetland is a protected 100-foot buffer (regulated freshwater wetland adjacent area). Approximately 8,060 square feet (0.19 acres) of NYSDEC regulated freshwater wetland adjacent area is contained within the project site. The Site Survey, prepared by Rogers Surveying, PLLC., dated May 31, 2007 (rev. 8/11/2016) depicts the current conditions on the project site as well as the confirmed NYSDEC wetland line (**Figure C-6**).

³ The City of New York has reviewed FEMA's updated Preliminary FIRMs, and filed an appeal released January 2015, noting some errors. In October 2016, FEMA announced that it agreed with the City's findings, and that it would work with the City to revise the 2015 Preliminary FIRMs and issue new maps in the coming years that better reflect current flood risk. Until the new flood maps are issued, flood insurance rates in New York City will continue to be based on the 2007 Effective FIRMs.


U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands



August 16, 2017

Wetlands

-  Estuarine and Marine Deepwater
-  Estuarine and Marine Wetland

-  Freshwater Emergent Wetland
-  Freshwater Forested/Shrub Wetland
-  Freshwater Pond

-  Lake
-  Other
-  Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Source: FWS National Wetland Inventory

The detailed wetland delineation was conducted on the project site in accordance with both the USACE as well as the NYSDEC guidelines.^{4,5} The USACE Wetland Delineation Manual (Environmental Laboratory, 1987) was used to delineate federal wetlands pursuant to the USACE.⁴ The NYSDEC Freshwater Wetland Delineation Manual (1995) was used to delineate state wetlands.

As recommended in the guidelines, available data on the site were obtained from US Geological Survey quadrangle maps, U.S. Fish and Wildlife Service National Wetlands Inventory Maps (NWI), NYSDEC Freshwater and Tidal Wetland Maps, aerial imagery, and other relevant sources.^{6,7,8}

NYSDEC freshwater wetland permit application 2-6405-00626/00001 for the project has been reviewed by NYSDEC Technical and Permit staff and deemed to be complete with the exception of a SEQR/CEQR decision.⁹ Upon receipt of a CEQR Negative Declaration, the NYSDEC technical review will be deemed complete and a Notice of Complete Application will be issued by NYSDEC. The wetland permit will then be put out for a 30-day public comment period. Following the public comment period, review of any public comments received, and final review by NYSDEC Permit and Technical staff, the NYSDEC freshwater wetland permit will be issued.

TERRESTRIAL RESOURCES

VEGETATION AND ECOLOGICAL COMMUNITIES

A natural resource inventory was conducted that included wildlife and vegetative identification and enumeration point stations. A total of 15 sample points were situated along 5 transects mapped throughout the property, as depicted on **Figure C-1**. At each sample point, tree, shrub, and herbaceous vegetation were identified and documented. In addition to the sample points, CEA conducted general surveys of each distinct vegetative community to ensure a thorough examination of all vegetative species present onsite. Site evaluations for vegetation were conducted by CEA on October 15, 2012, October 25, 2012 and May 22, 2013. CEA also contacted NYS Natural Heritage Program (NHP) for a list of vegetative species of concern which have been reported in the area.

One terrestrial ecological community was identified onsite based on the classification system outlined in the *Ecological Communities of New York State* (Edinger *et al.* 2002). The vegetation found onsite most closely resembles a Mixed Oak Forest with codominance of red oak (*Quercus rubra*), white oak (*Quercus alba*), sassafras (*Sassafras albidum*), quaking aspen (*Populus tremuloides*) and pignut hickory (*Carya glabra*). Provided below is a description of the ecological community and an inventory of the vegetative species observed within the community during site surveys. A complete listing of vegetative species identified at the site by CEA can be found in **Table C-1**.

⁴ Environmental Laboratory. (1987). Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

⁵ New York State Department of Environmental Conservation. 1995. Freshwater Wetlands Delineation Manual.

⁶ USGS 7.5 Min. Quadrangle Map – Arthur Kill; NY-NJ; 1975.

⁷ United States Fish and Wildlife Service — National Wetlands Inventory; Wetlands Mapper; <http://www.fws.gov/wetlands/data/Mapper.html>.

⁸ New York State Department of Environmental Conservation; Online Environmental Resource Mapper; <http://www.dec.ny.gov/gis/erm/>.

⁹ DCP is the CEQR lead agency for this project.

A Mixed Oak Forest is a hardwood forest that occurs on well-drained soil, dominated by a variety of oaks; typically red oak (*Quercus rubra*) and white oak (*Quercus alba*). Co-dominant trees include sassafras, quaking aspen and pignut hickory. This community is found throughout the sites entirety.

The tree stratum included, but was not limited to, American beech (*Fagus grandifolia*), pignut hickory, pin cherry (*Prunus pensylvanica*), pin oak (*Quercus palustris*), quaking aspen, red maple (*Acer rubrum*), red oak, sassafras, sweet gum (*Liquidambar styraciflua*), tree-of-heaven (*Ailanthus altissima*) and white oak.

The shrub/sapling stratum was sparse and dominated by saplings. Shrubs included, but were not limited to, maple-leaf arrow-wood (*Viburnum acerfolium*) and multiflora rose (*Rosa multiflora*). Saplings included, but were not limited to pignut hickory, red oak, sassafras, sweet gum and white oak.

The herbaceous stratum included, but was not limited to, cinquefoil (*Potentilla pensylvanica*), common red raspberry (*Rubus idaeus*), goldenrod (*Solidago spp.*), greenbrier (*Smilax rotundifolia*), white snakeroot (*Ageratina altissima*), ground ivy (*Glechoma hederaceae*), Japanese honeysuckle (*Lonicera japonica*), wintergreen (*Pyrola americana*), and saplings of red oak, sassafras, sweet gum, American beech, red maple and white oak.

The woody vine stratum included summer grape (*Vitis argentifolia*) and greenbrier.

UNIQUE, RARE AND/OR ENDANGERED, THREATENED, AND SPECIAL CONCERN – VEGETATION

The NYSDEC Natural Heritage Program (NHP) and the United States Fish and Wildlife Service (USFWS) were contacted by CEA in November of 2012 and again by Capital Environmental Consultants, Inc. (Capital) in March of 2018 concerning the presence of rare or state-listed plants that may be present within or adjacent to the project area.^{10,11} NHP's records indicate six state-listed species found within the vicinity of the project area: rose-pink (*Sabatia angularis*), scirpus-like rush (*Juncus scirpoides*), willow oak (*Quercus phellos*), fringed boneset (*Eupatorium torreyanum*), Torrey's mountain-mint (*Pycnanthemum torrei*), and Virginia pine (*Pinus virginiana*). The USFWS did not identify any federally listed endangered and threatened plant species and candidate species on the project site.¹²

Rose-pink (Sabatia angularis)—State-listed Endangered Species

The NHP report indicated rose-pink was identified within the vicinity of the project site (approximately 0.5-mile radius), within a grassy cloverleaf with channelized streams with very grassy margins. The project site was surveyed for rose-pink by CEA during the NRI site visits. Rose-pink habitat, similar to that noted by NHP, is not present on the subject property. Rose-pink was not observed on the project site.

Scirpus-like rush (Juncus scirpoides)—State-listed Endangered Species

The NHP report indicated scirpus-like rush was identified within the vicinity of the project site (approximately 0.5-mile radius), within the grassy cloverleaf with channelized streams with grassy margins. The project site was surveyed for scirpus-like rush by CEA during the NRI site visits.

¹⁰ NYSDEC NY Natural Heritage Program. Letter to Kelly Wood. November 29, 2012.

¹¹ NYSDEC NY Natural Heritage Program. Letter to Kelly DeGuzman. March 28, 2018.

¹² USFWS. Information, Planning, and Conservation System (IPAC). Trusted Resources List. Accessed August 24, 2017.

Scirpus-like rush habitat, similar to that found noted by NHP, is not present on the subject property. Scirpus-like rush was not observed on the project site.

Willow oak (Quercus phellos)—State-listed Endangered Species

The NHP report indicated willow oak was identified within the vicinity of the project site (approximately 0.5-mile radius), within a floodplain forest and woods along slopes to a creek. The project site was surveyed for willow oak by CEA during the NRI site visits. Willow oak was not observed on the project site.

Fringed Boneset (Eupatorium torreyanum)—State-listed Threatened Species

The NHP report indicated fringed boneset was identified within the vicinity of the project site (approximately 0.5-mile radius), within three specific areas. Sandy dry and sandy wet openings in a dense shrubland; an open, dry oak woods with a high percentage of open, unvegetated sand; and on the edge of a wooded area in the vegetated corridor between two roads. The project site was surveyed for fringed boneset by CEA during the NRI site visits. Fringed boneset habitat, similar to that noted by NHP, is not present on the subject property. Fringed boneset was not observed on the project site.

Torrey's mountain-mint (Pycnanthemum torrei)—State-listed Endangered Species

The NHP report indicated Torrey's mountain-mint was identified within the vicinity of the project site (approximately 0.5-mile radius), along a vegetated roadside about 4-6 feet wide, backed by a berm with trees. According to NHP, Torrey's mountain-mint "has been found in dry, open habitats, including red cedar barrens, rocky summits, trails, and roadsides" (NHP 2007). The project site was surveyed for Torrey's mountain-mint by CEA during the NRI site visits. Torrey's mountain-mint habitat, similar to that noted by NHP, is not present on the subject property. Torrey's mountain-mint was not observed on the project site.

Virginia pine (Pinus virginiana) – State-listed Endangered Species

The NHP report indicated Virginia pine was identified within the vicinity of the project site (approximately 0.5-mile radius), within an upland forest in a clearing along a horse trail and in another area, within dense vegetation. The project site was surveyed for Virginia pine by CEA during the NRI site visits. Virginia pine was not observed on the project site.

The NHP also provided historical records (c.1869-1889) for American Ipecac (*Euphorbia ipecacuamhae*), soapwort gentian (*Gentiana saponaria*), and whorled mountain-mint (*Pycnanthemum verticillatum* var. *verticillatum*). None of these plants were identified during site vegetation surveys during the natural resource inventory. **Table C-1** lists the observed species of vegetation identified during the natural resource inventory.

Table C-1
Observed Vegetation Species

Common name (Scientific name)	
Trees	
American Beech (<i>Fagus grandifolia</i>)	Red Oak (<i>Quercus rubra</i>)
Pignut Hickory (<i>Carya glabra</i>)	Sassafras (<i>Sassafras albidum</i>)
Pin Cherry (<i>Prunus pensylvanica</i>)	Sweet Gum (<i>Liquidambar styraciflua</i>)
Pin Oak (<i>Quercus palustris</i>)	Tree of Heaven (<i>Ailanthus altissima</i>)
Quaking Aspen (<i>Populus tremuloides</i>)	White Oak (<i>Quercus alba</i>)
Red Maple (<i>Acer rubrum</i>)	
Shrubs	
American Holly (<i>Ilex opaca</i>)	Multiflora Rose (<i>Rosa multiflora</i>)
Maple-leaf Arrow-wood (<i>Viburnum acerfolium</i>)	
Herbs	
Cinquefoil (<i>Potentilla pensylvanica</i>)	Greenbrier (<i>Smilax rotundifolia</i>)
Common Red Raspberry (<i>Rubus idaeus</i>)	White Snakeroot (<i>Ageratina altissima</i>)
Goldenrod (<i>Solidago spp.</i>)	Wintergreen (<i>Pyrola americana</i>)
Vines	
Ground Ivy (<i>Glechoma hederaceae</i>)	Summer Grape (<i>Vitis argentifolia</i>)
Japanese Honeysuckle (<i>Lonicera japonica</i>)	
Ferns	
Sensitive Fern (<i>Onoclea sensibilis</i>)	
Grasses/Sedges/Rushes	
Bladder Sedge (<i>Carex intumescens</i>)	Soft Rush (<i>Juncus effusus</i>)
Source: CEA	

WILDLIFE

Prior to initiating field efforts, CEA performed a literature search to identify wildlife species common to the area that might be expected to utilize the subject property.^{13,14,15} NYSNHP and the USFWS were also contacted for a listing of wildlife species of concern which have been reported within the area. CEA performed a wildlife survey of the subject property focusing on the presence/absence of avian, mammalian, reptilian, and amphibian species. The assessment was conducted in conjunction with vegetation identification using the same transects and sampling protocols. Survey methods included direct and indirect observations (i.e. tracks, droppings, hair, feathers, etc.). Visual observations using binoculars, spotting scopes and detailed inspections under logs, forest floor litter, and rocks were conducted. Audible indicators were used to identify both avian and amphibian species when present. All observations were identified by staff scientists and recorded. CEA conducted surveys to identify wildlife on October 15, 2012, October 25, 2012 and May 22, 2013.

¹³ NYSDEC New York Nature Explorer; County – Richmond.

¹⁴ NYSDEC Breeding Bird Atlas 2000–2005; Block 5548B Summary.

<http://www.dec.ny.gov/cfm/xtapps/bba/index.cfm?RequestTimeout=250>.

¹⁵ Blanchard III, Peter P., Kerlinger Ph.D., Paul; The Trust for Public Land and The New York City Audubon Society; An Islanded Nature- Natural Area Conservation and Restoration in Western Staten Island, including the Harbor Herons Region; 2001

The ecological community that exists on the project site provides habitat for a variety of wildlife. Based on the location, environmental characteristics, and site surveys, the following wildlife species inhabit or are expected to inhabit the aforementioned ecological community:

- White-tailed deer (*Odocoileus virginianus*) were observed during the October 2012 site visits. A white-tailed buck was observed between the C and D transects.
- Smaller mammals observed on site include the following: eastern gray squirrels (*Sciurus carolinensis*) and the house mouse (*Mus musculus*). Other mammals which should be expected to be present based on the ecological characteristics of the project site include woodchucks (*Marmota monax*), striped skunk (*Mephitis mephitis*), raccoons (*Procyon lotor*), meadow vole (*Microtus pennsylvanicus*), deer mouse (*Peromyscus spp.*) and various other species of mice, voles and shrews (*Sorex spp.*).
- Smaller passerine and piciforme species of birds observed on the project site include the blue jay (*Cyanocitta cristata*), black-capped chickadee (*Poecile atricapilla*), American robin (*Turdus migratorius*), downy woodpecker (*Picoides pubescens*), song sparrow (*Melospiza melodia*), gray catbird (*Dumetella carolinensis*), hairy woodpecker (*Picoides villosus*), northern mockingbird (*Mimus polyglottos*), and cedar waxwing (*Bombycilla cedrorum*).
- Other common bird species that could potentially use the site include flycatchers, sparrows, starlings, thrushes, goldfinches, meadowlark, warblers, and grackles to name a few. Other common species to New York State may also utilize the project site for various reasons, including foraging and breeding, but due to the dense nature of the interior vegetation and hanging greenbrier, it is not likely.
- No reptile species were observed on the subject property during the site visits.

All of the dominant species at the site are considered to be highly mobile and generally adaptable to the existing suburban setting of the region. The observed wildlife population densities at the project site are considered to be in the low to normal range. This is attributable to the size, isolated nature, proximity to major roadways and predominantly low quality, dense vegetation on the site which limits the diversity and value of the onsite wildlife habitat. Most bird activity occurred on the adjacent lot to the northeast along the edge of Veterans Road West, which is not included as part of this project. The bird species found in this area were moving back and forth between landscape planting areas on the Home Depot parcel and a small disturbed area (tree blow-down/construction path) just beyond the boundaries of the subject property immediately adjacent to the roadway on Veterans Road West, near the intersection with Tyrellan Avenue.

Table C-2 provides a complete listing of the wildlife species identified on the subject property. No federal or state-listed rare plant or animal species, habitats or significant natural communities were identified on the project site by staff biologists.

Table C-2
Observed Wildlife Species

Common name (Scientific name)	
Mammals	
Eastern Gray Squirrel (<i>Sciurus carolinensis</i>)	White-tailed Deer (<i>Odocoileus virginianus</i>)
House Mouse (<i>Mus musculus</i>)	
Birds	
American Robin (<i>Turdus migratorius</i>)	Gray Catbird (<i>Dumetella carolinensis</i>)
Black-capped Chickadee (<i>Poecile atricapilla</i>)	Hairy Woodpecker (<i>Picoides villosus</i>)
Blue Jay (<i>Cyanocitta cristata</i>)	Northern Mockingbird (<i>Mimus polyglottos</i>)
Cedar Waxwing (<i>Bombycilla cedrorum</i>)	Song Sparrow (<i>Melospiza melodia</i>)
Downy Woodpecker (<i>Picoides pubescens</i>)	Red-tailed Hawk* (<i>Buteo jamaicensis</i>)
Insects/Butterflies/Arachnids	
Orb Weaving Spiders (<i>Araneidae spp.</i>)	Wood Tick; American Dog Tick (<i>Dermacentor variabilis</i>)
Field Cricket (<i>Gryllus spp.</i>)	
Note: *Species identified flying over site	
Source: CEA	

PROTECTED HABITATS, NATURAL COMMUNITIES OR ANIMAL SPECIES

Correspondence between NYSNHP and CEA in November of 2012 and Capital in March of 2018 indicated that the State-listed endangered eastern mud turtle (*Kinosternon subrubrum*) has been found within 0.5 miles of the project site. The NHP also indicated that the comet darner (*Anax longipes*), not a State or Federally listed species, but which is considered rare by the NYSNHP, was identified near Comet Pond. Comet Pond is not within or adjacent to the project site. No suitable habitat for the comet darner, such as ponds with floating and emergent vegetation, was present on or near the project site.

The USFWS IPaC identified one threatened bird species, piping plover (*Charadrius melodus*), and one endangered bird species, roseate tern (*Sterna dougallii*).¹⁶

Eastern Mud Turtle (Kinosternon subrubrum)—State-listed Special Concern Species

The NHP report indicated the eastern mud turtle was identified within 0.5 miles from the subject property. According to NYSDEC, eastern mud turtles prefer shallow, soft bottomed, slow moving water with abundant vegetation.¹⁷ The project site was surveyed for eastern mud turtles by CEA during the NRI site visits. The subject property does not contain suitable habitat for the eastern mud turtle. CEA conducted surveys to identify wildlife on October 15, 2012, October 25, 2012 and May 22, 2013. No eastern mud turtles, listed as an endangered species by the NYSDEC, were identified onsite.

¹⁶ USFWS. Information, Planning, and Conservation System (IPAC). Trusted Resources List. Accessed August 24, 2017.

¹⁷ NYSDEC; Eastern Mud Turtle Fact Sheet; Available from: <http://www.dec.ny.gov/animals/7152.html>.

Piping plover (Charadrius melodus)—Federally Threatened Species

No piping plovers were observed or identified on or adjacent to the project site during NRI field visits. Piping plovers are shorebirds that arrive at breeding grounds in New York around early to mid-March. Breeding grounds are typically grassless, dry, sandy beaches or in areas that have been filled with dredged sand, above the high tide mark.¹⁸ Within New York, this species breeds on Long Island's sandy beaches, from Queens to the Hamptons, in the eastern bays and in the harbors of northern Suffolk County, although a single pair was also recorded in 1984 at Sandy Pond, Lake Ontario in Oswego County.¹⁹ Continued human pressures such as coastal development, recreational activities, and disturbance by off-road vehicles have reduced the available suitable breeding habitat for these birds.²⁰ CEA conducted surveys to identify wildlife on October 15, 2012, October 25, 2012 and May 22, 2013. No suitable breeding habitat, such as grassless, dry, sandy beaches, for the piping plover was present on or near the project site.

Roseate tern (Sterna dougallii)—Federally Endangered Species

In New York, roseate terns are always found nesting with common terns.²¹ The nest may be only a depression in sand, shell or gravel, and may be lined with bits of grass and other debris.²² It is usually placed in dense grass clumps, or even under boulders or rip-rap.²³ In New York, this species breeds only at a few Long Island colonies. Threats to roseate tern populations include vegetational changes on the breeding areas, competition with gulls for suitable nesting areas, and predation.²⁴ CEA conducted surveys to identify wildlife on October 15, 2012, October 25, 2012 and May 22, 2013. No suitable habitat for the roseate tern was present on or near the project site.

SOILS

The soils on the project site have been identified using the soil classifications of the USDA Natural Resources Conservation Service (NRCS) and are described below. The site is underlain by one predominant soil type: Boonton loam.

Soil types

The soil is described as areas of ground moraine. Soils are derived from red coarse-loamy till derived from sedimentary rock.²⁵

Soil characteristics are described in **Table C-3**. This information has been compiled from data available from the *USDA NRCS Web Soil Survey*.

¹⁸ NYSDEC; *Piping Plover Fact Sheet*; Available from: <http://www.dec.ny.gov/animals/7086.html>

¹⁹ NYSDEC; *Piping Plover Fact Sheet*; Available from: <http://www.dec.ny.gov/animals/7086.html>

²⁰ NYSDEC; *Piping Plover Fact Sheet*; Available from: <http://www.dec.ny.gov/animals/7086.html>

²¹ NYSDEC; *Roseate Tern Fact Sheet*; Available <http://www.dec.ny.gov/animals/7084.html>

²² NYSDEC; *Roseate Tern Fact Sheet*; Available <http://www.dec.ny.gov/animals/7084.html>

²³ NYSDEC; *Roseate Tern Fact Sheet*; Available <http://www.dec.ny.gov/animals/7084.html>

²⁴ NYSDEC; *Roseate Tern Fact Sheet*; Available <http://www.dec.ny.gov/animals/7084.html>

²⁵ USDA. NRCS. Web Soil Survey. National Cooperative Soil Survey. Map Unit Description: Boonton loam, moderately well drained, 0 to 3 percent slopes.

Table C-3
Soil Characteristics

Soil Series	Hydrologic Group ¹	Permeability	Erosion Hazard	Drainage Class
Boonton loam	C/D	Very low to moderately low	Slight to moderate	Moderately well drained
Note: ¹ Hydrologic groups are used to estimate runoff from precipitation; they range from high infiltration (A) to low infiltration (D).				

TOPOGRAPHY

The site slopes down from Veterans Road West to the south-southeastern portion of the site. The site's frontage along the Korean War Veterans parkway (formerly the Richmond Parkway) represents the lowest elevation. The existing highest point is located along the frontage of Veterans Road West at elevation 80 feet and the lowest point is at elevation 50. There is a 30-foot grade elevation change between the frontage of Veteran’s Road West and the southern portion of the site.

The USDA NCRS classifies the onsite slopes as ranging between 3 and 15 percent and the slopes of the surrounding areas to the south and east between 35 and 60 percent. Refer to **Figure C-6** for current site grades.

D. FUTURE WITHOUT THE PROPOSED PROJECT

The future without the proposed action condition (the No Action scenario) assesses the effects on the site’s natural resources without the project. In the No Action scenario, the applicant is expected to develop three one-story buildings located along the Veterans Road West frontage and in the center of the project site. These buildings are expected to be drive-through retail facilities. The development area would be limited, and the southern and eastern ends of the project site would remain unimproved. Grading changes on the project site would not exceed two feet, in compliance with SRD regulations.

As discussed in Attachment A, “Land Use, Zoning, and Public Policy,” the property immediately to the west of the project site contains a partially completed shopping center; a bank has already been constructed along the Tyrellan Avenue frontage, and two additional retail buildings are expected to be constructed along the Veterans Road West frontage (the land has been cleared and is currently surrounded by construction fencing).

GROUNDWATER

Groundwater in Staten Island is not used as a source of potable water (the municipal water supply uses upstate reservoirs) and as such the groundwater onsite will not be used as a source of drinking water. No subsurface intrusion into the existing groundwater is anticipated from the No Action development’s structure foundations. The flow of groundwater would not be altered within the vicinity of the structures as groundwater is deeper than 20 feet bgs.

FLOODPLAINS

As stated above, floodplains are not present on or within the project site. The channel and floodway of Mill Creek located south and east of the proposed project site will not be disturbed or encroached upon by the No Action development.

AQUATIC RESOURCES

With the No Action scenario, coverage under a NYSDEC State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002) would be required. In accordance with the NYSDEC SPDES GP-0-15-002, a Stormwater Pollution Prevention Plan (SWPPP) consisting of both temporary erosion and sediment controls and post-construction stormwater management practices would be prepared. Water quantity and quality treatment would be designed to meet the NYSDEC design criteria and treat stormwater runoff from the proposed project.

The sediment control devices, which would consist of haybales and silt fencing, a stabilized construction entrance, and temporary stockpile areas, would prevent runoff from directly entering the wetlands throughout the duration of the construction activities. All erosion and sediment control devices will be designed and installed in accordance with New York State Standards and Specifications for Erosion and Sediment Control.

The No Action development would be located over 300 feet from the NYSDEC freshwater wetland and further yet from Mill Creek. The pre-development flow of water to Mill Creek and the NYSDEC freshwater wetland adjacent area would not be impacted.

Due to coverage under the NYSDEC SPDES GP-0-15-002 and the significant setback from the wetland and waterbody, the No Action development is not anticipated to affect the hydrological balance or water quality of the NYSDEC freshwater wetland or Mill Creek.

WETLANDS

With the No Action scenario, the development would be located over 300 feet from the NYSDEC freshwater wetland and outside of the 100-foot NYSDEC regulated freshwater wetland adjacent area (i.e. the entire 8,060 square feet (0.19 acres) of NYSDEC regulated freshwater wetland adjacent area contained within the project site would be preserved). For the reasons described above in “Aquatic Resources,” the NYSDEC freshwater wetland and associated adjacent area would not be affected with the No Action scenario. In addition, the No Action scenario would not require a NYSDEC freshwater wetland permit and, therefore, the 21 trees and 186 shrubs that are proposed to be planted along the northern boundary and within the northeastern portion of the property with the proposed project (described below) would not be planted and the area would not be deed restricted and preserved into perpetuity.

TERRESTRIAL RESOURCES

VEGETATION AND ECOLOGICAL COMMUNITIES

With the No Action scenario, approximately 1.20 acres of Mixed Oak Forest would be directly affected. Approximately 210 trees greater than 6 inches diameter were identified on the 1.20-acre portion of the site. Tree protection measures would be implemented to save trees that exist near the limits of disturbance of the No Action development. No trees in healthy condition beyond the limits of the No Action development would be disturbed.

A total of 25 trees would be planted within the No Action scenario development area. Native species would be used for revegetating the portions of the project site where possible.

With the No Action scenario, approximately 3.31 acres of the Mixed Oak Forest would not be affected. The remaining 3.31-acre portion of the project site and the surrounding undisturbed areas

(Fairview Park and Clay Pit Ponds Park to the north) provide ample habitat for similar vegetative species and ecological communities.

WILDLIFE

Under the No Action scenario, the movement of most of the wildlife that may use this portion of the site would be altered. However, it will not significantly affect the wildlife's access to adjacent forested and wetland areas. Nearby commercial buildings, Veteran's Road West and the Korean War Veteran's Parkway limit the site connectivity to other local and ecologically rich woodlands such as Fairview Park and Clay Pit Ponds Park to the north. Due to the mix of urban landscape that borders the northern and eastern edges of the site, the overall diversity of wildlife in the area is expected to be in the low to normal range and dominated by generalist species capable of tolerating human contact.

SOILS

With the No Action scenario, soils within the development area will be paved or constructed on. Construction vehicle traffic within the areas proposed for plant cover including, but not limited to, the landscaping border and parking lot islands, would be avoided to the extent practical. Where not practical, suitable substrate (topsoil) may be imported and minimally compacted to support plant growth and prevent erosion. All disturbed areas would be stabilized (i.e. plant cover, asphalt, concrete) prior to the end of construction and would prevent erosion of the site's soils. Further, stormwater runoff generated by the No Action scenario would be directed to the drywells and infiltrated, providing necessary ground water recharge.

TOPOGRAPHY

With the No Action scenario, the entire site would not be graded by more than 2 feet of cut or fill except as permitted within the building foundations, driveways or utilities for the proposed building or in order to meet the legal mapped grades of Veterans Road West.

E. FUTURE WITH THE PROPOSED PROJECT

GROUNDWATER

Groundwater in Staten Island is not used as a source of potable water (the municipal water supply uses upstate reservoirs) and as such the groundwater onsite will not be used as a source of drinking water. As with the No Action development, no subsurface intrusion into the existing groundwater is anticipated from the proposed structure foundations. Therefore, no significant adverse impacts to groundwater would occur as a result of the proposed project.

FLOODPLAINS

As stated above, floodplains are not present on or within the project site. The channel and floodway of Mill Creek located south and east of the proposed project site will not be disturbed or encroached upon. Therefore, no significant adverse impacts to floodplains would occur as a result of the proposed project.

AQUATIC RESOURCES

With the proposed project, coverage under a NYSDEC SPDES GP-0-15-002 will be required. In accordance with the NYSDEC SPDES GP-0-15- 002, a SWPPP consisting of both temporary

erosion and sediment controls and post-construction stormwater management practices will be prepared. Water quantity and quality treatment would be designed to meet the NYSDEC design criteria and treat stormwater runoff from the proposed project.

In accordance with the NYSDEC SPDES GP-0-15- 002 and freshwater wetland permit standards, the pre-development flow of water to Mill Creek and the NYSDEC freshwater wetland adjacent area will be maintained. All stormwater originating from the site and directed to the freshwater wetland will flow over or through vegetated areas a minimum of 45 feet wide prior to reaching the wetland and subsequently Mill Creek. Any additional post-development stormwater flows will be directed to drywells. In addition, the sediment control devices, which will consist of haybales and silt fencing, a stabilized construction entrance, and temporary stockpile areas, will prevent runoff from directly entering the wetlands throughout the duration of the construction activities. All erosion and sediment control devices will be designed and installed in accordance with New York State Standards and Specifications for Erosion and Sediment Control. Therefore, no significant adverse impacts to Mill Creek would occur as a result of the proposed project.

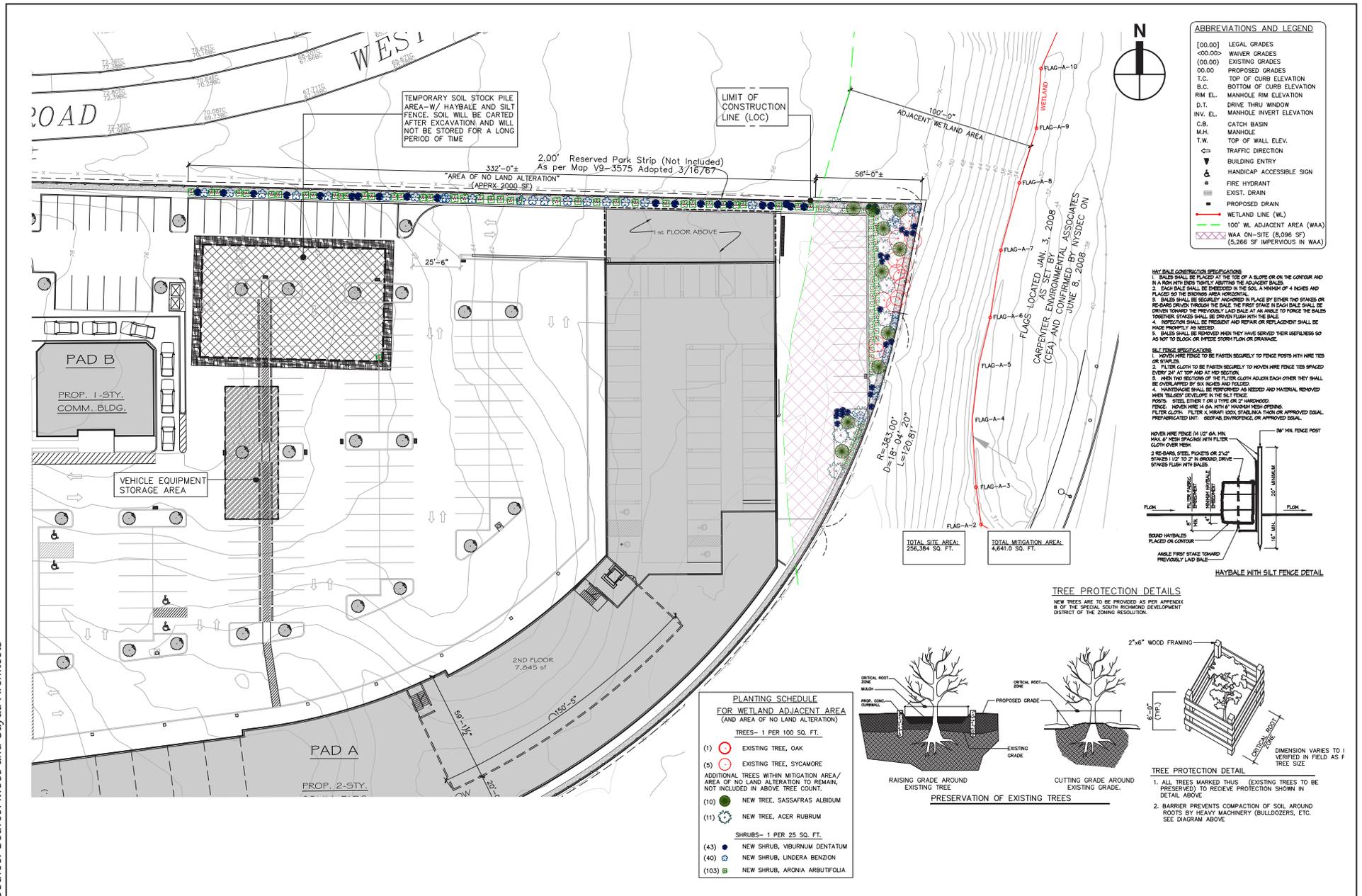
WETLANDS

The proposed project will ensure that the NYSDEC freshwater wetland and its benefits would be preserved, both during construction, and upon operation of the commercial facilities through implementation of proper stormwater management practices, sediment and erosion controls, and compensatory mitigation. No fill or any other disturbance would occur within the wetland.

With the proposed project, disturbance to approximately 8,060 square feet (0.19 acres) of on-site regulated NYSDEC freshwater wetland 100-foot adjacent area associated with the NYSDEC freshwater wetland AR-27 would occur. Approximately 5,266 square feet (0.12 acres) of the disturbance to the freshwater wetland adjacent area would contain impervious surfaces (i.e. curb and asphalt). The remaining onsite freshwater wetland adjacent area would be planted and preserved as described below. The disturbances to the regulated NYSDEC freshwater wetland 100-foot adjacent area was minimized to the maximum extent possible when designing the site plan. The minimal intrusion, depicted on Figure 6 of the EAS, is unavoidable. The proposed project cannot be reduced or modified to allow greater setback from the wetland boundary as decreasing or shifting the building would not allow for the required amount of parking spaces: under the applicable M1-1 district regulations, one parking space is required for every 300 zoning square feet of floor area, therefore 217 spaces are required (the proposed project includes 226 parking spaces, of which 182 spaces would be provided in the parking lot and 44 spaces would be provided in a garage located in the cellar of Building A). Due to the zoning district's parking requirements and the steep topography of the site, extending into the wetland adjacent area is unavoidable.

Compensatory mitigation is proposed within the northeastern portion of the subject property and is depicted on **Figure C-7**. The focus of the wetland mitigation design is to improve onsite habitat for resident and migrating wildlife species through the provision of freshwater wetland adjacent area habitat. Improving these areas will provide both habitat, food and cover for area wildlife, and serve to enhance the subject area by providing for more diverse flora and fauna.

The proposed project will create a resilient vegetative buffer between the wetland and the proposed commercial building in order to protect the nearby wetland's character, quality, values, and functions. In addition to a 2,641-square-foot (0.06 acre) planting area within the eastern portion of the subject property consisting of native tree and shrub species, a 400-foot-long, 5-foot wide hedgerow (0.046 acres) is proposed along the northern property boundary.



Mitigation Plan
Figure C-7

The tree and shrub species selected for the landscape plantings will provide food and shelter for wildlife. Tree species to be planted at a density of 1 per 100 square feet include red maple and sassafras. Shrub species to be planted at a density of 1 per 25 square feet include red chokeberry (*Aronia arbutifolia*), arrow-wood and spicebush (*Lindera benzoin*).

A total of 21 trees will be planted including 11 red maple and 10 sassafras. A total of 186 shrubs will be planted including 103 red chokeberry, 43 arrow-wood and 40 spicebush. The mitigative plantings will serve to enhance the subject area providing for more diverse flora and fauna. The mitigation area will also preserve existing tree species.

Prior to the initiation of any excavation activities on the site, haybales and silt fencing, a stabilized construction entrance, and temporary stockpile areas will be erected along the proposed construction envelope, as noted above. With these controls in place, sediment laden runoff will be prevented directly entering the wetlands throughout the duration of the construction activities. Regular inspection will be carried out to check the condition of sediment and erosion controls on the site.

In order to ensure the survival of the designed mitigation scheme, a maintenance program has been incorporated into the mitigation plan. The landowner will monitor the plantings for the first two consecutive growing seasons. At that time, the landowner will conduct an assessment of the planting zone, including survival rates. An observed survival rate of 90 percent (19 trees, including those preserved, and 168 shrubs) or more will be considered a successful planting. If greater than 10 percent mortality has occurred, replanting will be required and undertaken by the applicant to attain initial planting densities.

Once established, natural succession will be allowed to occur. The natural, passive establishment of local species will further enhance the plant diversity of these mitigative plantings. At this time, the landowner will remove any silt fences from the mitigation area. The cumulative buffer hedgerow and planting area would be protected in perpetuity by deed restriction and will not be subject to future development. Therefore, no significant adverse impacts to wetlands would occur as a result of the proposed project.

TERRESTRIAL RESOURCES

VEGETATION AND ECOLOGICAL COMMUNITIES

With the proposed project, approximately 4.45 acres of the 4.51-acre Mixed Oak Forest would be directly affected. Approximately 615 trees greater than 6 inches diameter were identified on this 4.51-acre site and approximately 609 are anticipated to be removed with the proposed project. Tree protection measures would be implemented to save trees that exist near the limits of disturbance on the boundaries of the development. No trees in healthy condition beyond the field-identified limits of disturbance would be disturbed. Construction crews would be notified to exclude all equipment from these protected areas. If necessary, trees would be protected by tree wells in fill areas, and retaining walls in cut areas.

A total of 60 trees and 186 shrubs are proposed to be planted throughout the 4.51-acre site, broken down as follows. To compensate for the minimal disturbance to the freshwater wetland adjacent area a total of 21 trees and 186 shrubs are proposed to be planted along the northern boundary and within the northeastern portion of the property, as depicted on **Figure C-7**. In addition to the wetland adjacent area mitigation, 39 trees are proposed to be planted within the 4.45-acre development area (see Figure 2 of the EAS).

Native species would be used for mitigation purposes and for revegetating the portions of the project site where possible. This preference is based on native plant adaptability to local climatic conditions, including temperature, precipitation and length of the growing season. In addition to their value as hardy plantings, some of the native plant species are berry and seed-bearing trees and shrubs that would offer songbirds and mammals seasonal food sources incidental to their use as landscape plantings as well as provide good nesting habitat for many birds and arboreal mammals.

The remaining portion of the project site and the surrounding undisturbed areas (Fairview Park and Clay Pit Ponds Park to the north) provide habitat for similar vegetative species and ecological communities. Thus, the removal of this ecological community and associated trees from the project site would not result in a significant adverse impact to this community type within this portion of Staten Island.

No species of plants identified on the project site are listed as endangered or threatened by Federal or State government, thus no significant adverse impacts to threatened or endangered plant species are anticipated.

WILDLIFE

The loss of the onsite forested uplands and freshwater wetland adjacent area will alter the movement of most of the wildlife that may use the project site, however, it will not significantly impact the wildlife's access to adjacent forested and wetland areas. Although it will result in the loss of habitat for those individuals that currently use the site, no significant adverse impacts to wildlife are anticipated. Nearby commercial buildings, Veteran's Road West and Korean War Veteran's Parkway limit the site connectivity to other local and ecologically rich woodlands such as Fairview Park and Clay Pit Ponds Park to the north. Due to the mix of urban landscape that borders the northern and eastern edges of the site, the overall diversity of wildlife in the area is expected to be in the low to normal range and dominated by generalist species capable of tolerating human contact. Such species include small mammals like gray squirrel, raccoon, opossum, deer mouse, and woodchuck.

In general, as a project site is developed and habitat is reduced, some species would relocate to similar forested habitats off-site. The composition of the wildlife population near the project site may be altered immediately adjacent to developed areas, as species able to adapt to a suburban environment (such as raccoons, opossum, woodchucks, mice, songbirds, etc.) would have a greater ecological advantage in comparison to species that are less tolerant of human activity. An indirect and unavoidable impact of wildlife dispersal could be increased by competitive interactions with other individuals of the same species on adjacent properties. It is not anticipated that there would be a loss of species from the area or significant impacts to existing populations.

Many native plant species selected for mitigation use may also be beneficial to indigenous wildlife, especially birds, by providing wildlife benefits such as nesting, cover, and food. The introduced plantings will likely be used for foraging by wildlife and many of the shrub species chosen for landscaping would provide habitat for songbirds and other avian species. Trees that are planted would mature in the long-term and would provide roosting and nesting opportunities for birds that are adaptable to urban conditions. Low-growing shrub plantings provide cover for ground-nesting birds. With these measures in place, no significant adverse impacts to wildlife would occur with the proposed project.

No species of wildlife listed as threatened or endangered were observed on the project site, thus no significant adverse impacts to threatened or endangered wildlife species are anticipated.

SOILS

As stated above, under “Wetlands,” a number of erosion and sediment control measures would be implemented to protect off-site waterbodies from siltation that could occur as part of the proposed project. Haybales and silt fencing, a stabilized construction entrance, and temporary stockpile areas will be erected along the proposed construction envelope in order to prevent sediment laden runoff from directly entering the wetlands or running offsite throughout the duration of the construction activities. Regular inspection will be carried out to check the condition of sediment and erosion controls on the site.

The haybales and silt fencing will also serve to provide a visual limit of disturbance and will reduce encroachment into the areas of no disturbance. Additional runoff generated by impermeable surfaces such as the parking lots and roofs would be collected by a new storm sewer system, consisting of zipper drains, catch basins, drywells and bioswales. With these measures in place, no significant adverse impacts to soil would occur with the proposed project.

TOPOGRAPHY

With the proposed project, the entire site would be re-graded by more than 2 feet of cut and fill. Due to the site’s irregular topography there is 33,827 C.Y. of cut required and 23,600 C.Y. of fill required.²⁶ There is 10,227 net C.Y. of fill to be removed. Such modification of topography is necessary in order to facilitate storm water flow from the parking area into the proposed internal catch basins, bioswales and zipper drains and the desire to have a smooth transition of grade between the two buildings and the parking lot. Further, the parking lot must be pitched ¼ of an inch per foot to ensure adequate flow to the stormwater systems. The greatest gradient change is from the northeast end of the parking lot to a catch basin located in the northwest.

As stated above, under “Aquatic Resources,” the pre-development flow of water to Mill Creek and the NYSDEC freshwater wetland adjacent area will be maintained and any additional post-development stormwater flows are directed to drywells. With these measures in place, no significant adverse impacts due to the change in topography would occur with the proposed project. *

²⁶ Approximately 410 C.Y. of fill will be required within the NYSDEC freshwater wetland adjacent area.

A. INTRODUCTION

This attachment presents the findings of the hazardous materials assessment and assesses potential areas of concern that could pose a hazard to workers, the community, and/or the environment as a result of the proposed project. The proposed project would result in the development of a currently wooded site with two commercial buildings and associated driveways, parking, etc.

The potential for hazardous material conditions was evaluated based on a previous environmental investigation: an October 2007 *Phase I Environmental Site Assessment* (ESA) conducted by CEA Engineers, P.C. for a larger property that included the project site (see **Appendix D**). The hazardous materials assessment concluded that no significant adverse impacts related to hazardous materials would be expected to occur either during or following the construction of the proposed project, provided certain protocols are followed.

B. EXISTING CONDITIONS

TOPOGRAPHY AND SUBSURFACE CONDITIONS

Based on U.S. Geological Survey mapping, the project site is approximately 50 to 90 feet above mean sea level with a gentle slope to the southeast. Groundwater would be expected to flow to the west towards the Arthur Kill, the nearest major water body, less than one mile to the west. Groundwater in Staten Island is not used a potable source of water.

PHASE I ESA

Conducted in accordance with the American Society of Testing Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (E1527-05), the Phase I ESA included a review of available records; a site reconnaissance; interviews with a site representative; a review of aerial photographs and City Directories; and an evaluation of regulatory database listings for the site and nearby properties. It was noted that Sanborn Fire Insurance Maps were not available for the project site or study area. It identified no Recognized Environmental Conditions (RECs), defined as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property”.

The Phase I ESA identified no prior development or uses of the project site. Although properties along the Arthur Kill (such as the Port Mobil Terminal), were identified in regulatory databases as having had releases, etc., these would not be expected to have affected the project site, as any releases from these properties would be likely to migrate towards the Arthur Kill rather than towards the project site. There were no active-status petroleum spills at or within half a mile of the project site.

C. THE FUTURE WITHOUT THE PROPOSED PROJECT

Absent the proposed actions, the applicant would develop a 9,000-gsf commercial structure with drive-through uses (the No Action development). No specific hazardous materials conditions requiring action would be anticipated.

D. THE FUTURE WITH THE PROPOSED PROJECT

In the future with the proposed project, two larger new buildings (with retail, office, and parking uses totaling 99,864 gross square feet) would be constructed on the project site. Although this would require some excavation of the project site, based on the findings of the Phase I ESA, there is no significant potential for subsurface contamination to be present. As such, no special measures or procedures would need to be incorporated into the proposed project to avoid impacts, rather (as with the No Action development), the potential for impacts would be avoided by performing excavation/construction in accordance with applicable regulatory requirements, e.g., properly disposing of any excess soil; reporting to New York State Department of Environmental Conservation (NYSDEC) any signs of a petroleum spill (and removing and registering all encountered tanks); and following NYC Department of Environmental Protection requirements should dewatering be required.

In summary, no significant adverse impacts related to hazardous materials would be expected to occur as a result of the proposed project. *

A. INTRODUCTION

As discussed in Attachment A, “Project Description,” the project applicant, Block 7469 LLC, is seeking a special permit, zoning authorizations, and zoning certifications (the proposed actions) to facilitate the development of a new approximately 99,864 gross square foot (gsf) development with two buildings, containing retail, office, and parking uses on the project site located at 2835 Veterans Road West in Staten Island (Block 7469, Lots 115, 120, 125, 136, 150, and tentative lot 115). The project site, which is located in an M1-1 zoning district and the Special South Richmond Development District (SRD), is currently wooded and undeveloped.

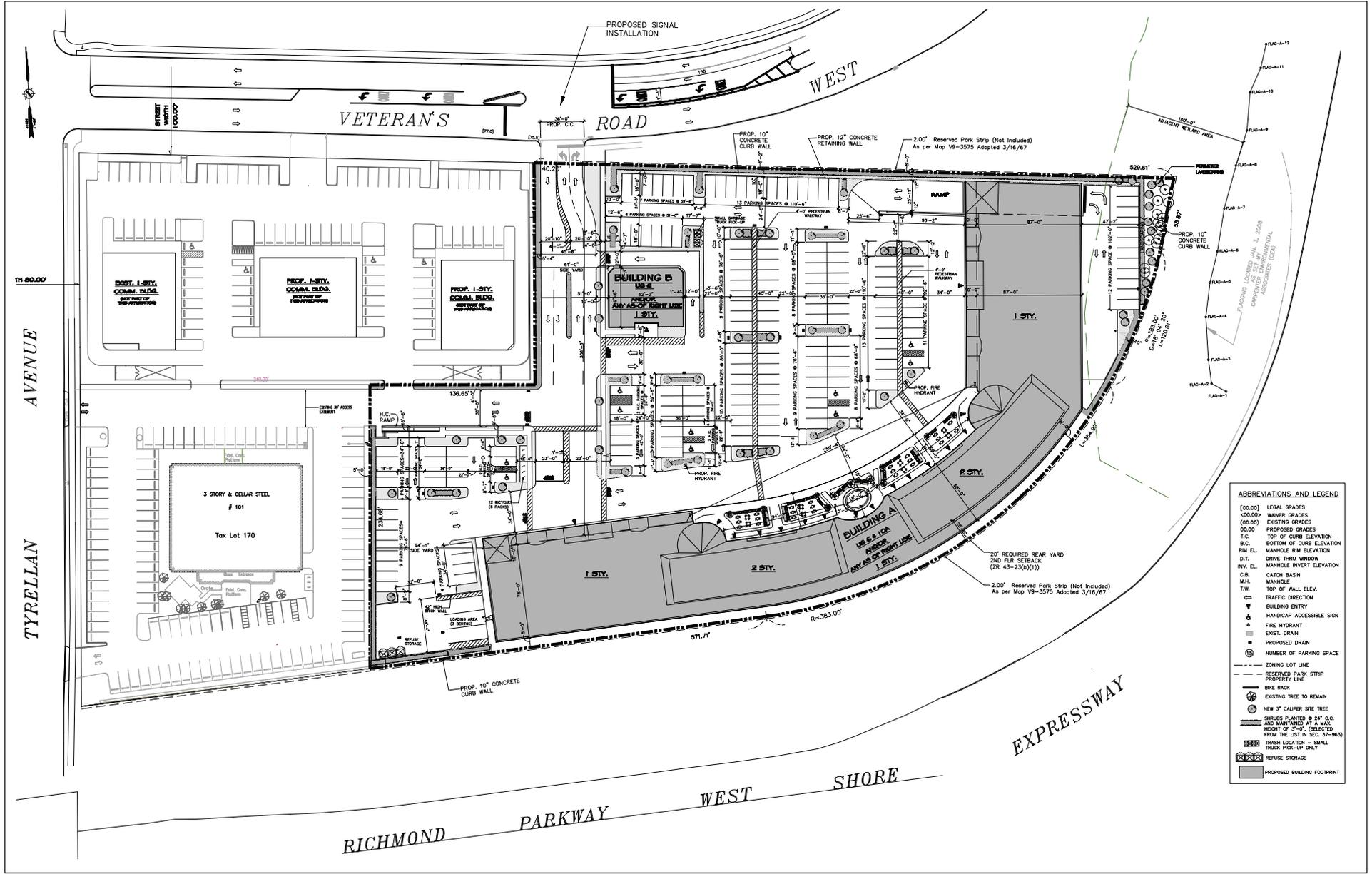
The proposed project would include 65,074 gsf of UG 6/10A commercial uses (including retail establishments larger than 10,000 square feet) and 34,791 gsf of parking, storage, and mechanical space. The proposed project is expected to be completed and occupied by 2021.

Figure E-1 provides an illustration of the site plan for the proposed project. As part of the proposed project, there would be two vehicular access/egress locations (the Project Driveways): a signalized entrance/exit with all movements permitted on Veterans Road West and an unsignalized entrance/exit with all movements permitted on Tyrellan Avenue.

As detailed below, the proposed project would include mitigation measures at the Route 440 Westbound Off-Ramp and Veterans Road West, Veterans Road West and Bricktown Way/Tyrellan Avenue, Tyrellan Avenue and Boscombe Avenue, Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue, Veterans Road West and Project Driveway, and Tyrellan Avenue and Project Driveway intersections. The analysis results show that, with the proposed mitigation measures in place, no significant adverse transportation-related impacts would occur as a result of the proposed project. In addition, the proposed project parking supply and utilization analysis shows that there would not be any significant adverse parking impacts.

B. PRELIMINARY ANALYSIS METHODOLOGY

The *CEQR Technical Manual* describes a two-tier screening procedure for the preparation of a “preliminary analysis” to determine if quantified analyses of transportation conditions are warranted. As discussed below, the preliminary analysis begins with a trip generation analysis (Level 1) to estimate the volume of person and vehicle trips attributable to the proposed project. According to the *CEQR Technical Manual*, if the proposed project is expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (Level 2) are performed to estimate the incremental trips that could be incurred at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the proposed project would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a pedestrian



ABBREVIATIONS AND LEGEND

- [00.00] LEGAL GRADES
- <00.00> WAVER GRADES
- (00.00) EXISTING GRADES
- 00.00 PROPOSED GRADES
- T.C. TOP OF CURB ELEVATION
- B.C. BOTTOM OF CURB ELEVATION
- R.M. EL. MANHOLE RIM ELEVATION
- S.T. DRIVE THRU WINDOW
- INV. EL. MANHOLE INVERT ELEVATION
- C.B. CATCH BASIN
- M.H. MANHOLE
- T.W. TOP OF WALL ELEV.
- TRAFFIC DIRECTION
- ⬇ BUILDING ENTRY
- ♿ HANDICAP ACCESSIBLE SIGN
- FIRE HYDRANT
- ▬ EXIST. DRAIN
- ▬ PROPOSED DRAIN
- Ⓟ NUMBER OF PARKING SPACE
- - - ZONING LOT LINE
- - - RESERVED PARK STRIP
- - - PROPERTY LINE
- ⊗ BIKE RACK
- ⊗ EXISTING TREE TO REMAIN
- ⊗ NEW 3" CALIPER SITE TREE
- ⊗ SHRUBS RELATED TO 3" CALIPER AND MAINTAINED AT A MAX. HEIGHT OF 3'-0". (SELECTED FROM THE LIST IN SEC. 37-96.3)
- ⊗ TRASH LOCATION - SMALL TRUCK PICK-UP ONLY
- ⊗ REFUSE STORAGE
- ▭ PROPOSED BUILDING FOOTPRINT

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element, then further quantified analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, parking, and vehicular and pedestrian safety.

C. LEVEL 1 SCREENING ASSESSMENT

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

BACKGROUND

In the future No Action scenario, the project site could be redeveloped as-of-right (AOR) to include approximately 9,000 gsf of local retail space. **Table E-1** provides a comparison of the development program assumptions under the future No Action and With Action conditions.

Table E-1

Future No Action and With Action Development Program Assumptions

Components	Future No Action (AOR)	Future With Action	Increment
Local Retail (gsf)	9,000	2,898	-6,102
Destination Retail (gsf)	0	52,176	52,176
Office (gsf)	0	9,000	9,000
Total (gsf)	9,000	64,074	55,074

TRANSPORTATION PLANNING ASSUMPTIONS

Trip generation factors for the proposed project were developed based on information from the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, U.S. Census Data, and other approved Environmental Assessment Statements (EASs) and Environmental Impact Statements (EISs)—as summarized in **Table E-2**.

Table E-2
Trip Generation Factors

Land Use	Destination Retail				Local Retail				Office			
Total Daily Person Trip	(1) Weekday 78.2 Trips / KSF		(1) Saturday 92.5 Trips / KSF		(1) Weekday 205.0 Trips / KSF		(1) Saturday 240.0 Trips / KSF		(1) Weekday 18.0 Trips / KSF		(1) Saturday 3.9 Trips / KSF	
	Trip Linkage 0%				25%				25%			
Net Daily Person Trip	Weekday 78.2 Trips / KSF		Saturday 92.5 Trips / KSF		Weekday 153.75 Trips / Seat		Saturday 180.0 Trips / Seat		Weekday 18.0 Trips / KSF		Saturday 3.9 Trips / KSF	
	AM	MD	PM	Saturday	AM	MD	PM	Saturday	AM	MD	PM	Saturday
Temporal	(1)				(1)				(1)			
	3%	9%	9%	11%	3%	19%	10%	10%	12%	15%	14%	17%
Direction	(3)				(2)				(2)			
	In	62%	54%	52%	54%	50%	50%	50%	50%	93%	46%	3%
Out	38%	46%	48%	46%	50%	50%	50%	50%	7%	54%	97%	54%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(3)				(4)				(5)			
	Auto	95.1%			95.1%			83.0%				
Taxi	1.5%			1.5%			1.0%					
SI Railroad	0.0%			0.0%			3.0%					
Bus	2.4%			2.4%			10.0%					
Walk	1.0%			1.0%			3.0%					
Total	100%			100%			100%					
Vehicle Occupancy	(4)				(3)				(5)			
	AM	MD	PM	Saturday	AM	MD	PM	Saturday	AM	MD	PM	Saturday
Auto	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.07	1.07	1.07	1.07
Taxi	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.40	1.40	1.40	1.40
Daily Delivery Trip Generation Rate	(1) Weekday 0.35 Delivery Trips / KSF		(1) Saturday 0.04 Delivery Trips / KSF		(1) Weekday 0.35 Delivery Trips / KSF		(1) Saturday 0.04 Delivery Trips / KSF		(1) Weekday 0.32 Delivery Trips / KSF		(1) Saturday 0.01 Delivery Trips / KSF	
	AM	MD	PM	Saturday	AM	MD	PM	Saturday	AM	MD	PM	Saturday
Delivery Temporal	(1)				(1)				(1)			
	8%	11%	2%	11%	8%	11%	2%	11%	10%	11%	2%	11%
Delivery Direction	(1)				(1)				(1)			
	In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Sources/Notes:												
(1) CEQR Technical Manual												
(2) New Stapleton Waterfront Development FEIS (2005)												
(3) Charleston Mixed-Use Development FEIS (2013); 1.2 percent of SI Railroad trips for retail land uses shifted to bus per NYCDOT recommendation												
(4) Assumed the same as Retail based on local traffic characteristics												
(5) U.S. Census American Community Survey (ACS) 2006–2010 Reverse Journey-to-Work Data, Tracts 198, 208.01, 208.03, 226, 228, 244.01 and 248.												

DESTINATION RETAIL

The daily person trip generation rates and temporal distribution for the destination retail component are from the *CEQR Technical Manual*. The directional distributions, modal splits and vehicle occupancies are from the 2013 *Charleston Mixed-Use Development Final Environmental Impact Statement (FEIS)*. The daily delivery trip rate and temporal and directional distributions are from the *CEQR Technical Manual*.

LOCAL RETAIL

The daily person trip generation rates and temporal distributions for the local retail use are from the *CEQR Technical Manual*. Consistent with assumptions typically accepted by City agencies for the purposes of environmental review, a 25-percent linked trip credit was applied to the local retail trip generation estimates. The directional distributions are from the 2005 *New Stapleton Waterfront Development FEIS*. The modal splits and vehicle occupancies for the destination retail use discussed above were used for the local retail component based on local traffic characteristics. The daily delivery trip rate and temporal and directional distributions are from the *CEQR Technical Manual*.

OFFICE

The daily person trip generation rates and temporal distribution for the office component are from the *CEQR Technical Manual*. The directional distributions are from the 2005 *New Stapleton Waterfront Development FEIS*. Modal splits and vehicle occupancies are based on the U.S. Census ACS reverse journey-to-work data. The daily delivery trip rate and temporal and directional distributions are from the *CEQR Technical Manual*.

Travel demand projections were prepared for each of the No Action and With Action conditions for the weekday AM, midday, and PM peak hours. The resulting trip increments (proposed project trips minus No Action trips) were compared with the applicable *CEQR Technical Manual* screening thresholds to determine if additional quantified analyses were warranted. The transportation planning assumptions used in calculating the trip estimates are described below and detailed in **Table E-2**. These assumptions are based on travel demand factors from established and published sources, including the *CEQR Technical Manual*, U.S. Census data, and other approved studies, including the *New Stapleton Waterfront Development FEIS* and the *Charleston Mixed-Use Development FEIS*.

TRAVEL DEMAND ANALYSIS RESULTS

As summarized in **Table E-3**, the No Action development is estimated to generate approximately 40, 262, 140, and 162 person trips during the weekday AM, midday, PM, and Saturday peak hours, respectively. Approximately 28, 176, 96, and 110 vehicle trips would be generated during the same respective peak hours.

Table E-3
Trip Generation Summary: Future No Action Condition

Peak Hour	In/Out	Person Trips						Vehicle Trips			
		Auto	Taxi	SI Rail	Bus	Walk	Total	Auto	Taxi	Delivery	Total
AM	In	20	0	0	0	0	20	14	0	0	14
	Out	20	0	0	0	0	20	14	0	0	14
	Total	40	0	0	0	0	40	28	0	0	28
Midday	In	125	2	0	3	1	131	86	2	0	88
	Out	125	2	0	3	1	131	86	2	0	88
	Total	250	4	0	6	2	262	172	4	0	176
PM	In	66	1	0	2	1	70	46	2	0	48
	Out	66	1	0	2	1	70	46	2	0	48
	Total	132	2	0	4	2	140	92	4	0	96
Saturday	In	77	1	0	2	1	81	53	2	0	55
	Out	77	1	0	2	1	81	53	2	0	55
	Total	154	2	0	4	2	162	106	4	0	110

As summarized in **Table E-4**, the With Action development is estimated to generate approximately 153, 475, 435, and 588 person trips during the weekday AM, midday, PM, and Saturday peak hours, respectively. Approximately 109, 329, 296, and 399 vehicle trips would be generated during the same respective time periods.

As summarized in **Table E-5**, the net incremental trips subject to CEQR impact analyses would therefore be 113, 213, 295, and 426 person trips and 81, 153, 200, and 289 vehicle trips during the weekday AM, midday, PM, and Saturday peak hours, respectively.

Table E-4

Trip Generation Summary: Future With Action Condition

Peak Hour	In/Out	Person Trips						Vehicle Trips			
		Auto	Taxi	SI Rail	Bus	Walk	Total	Auto	Taxi	Delivery	Total
AM	In	93	1	0	4	2	100	68	2	1	71
	Out	51	1	0	1	0	53	35	2	1	38
	Total	144	2	0	5	2	153	103	4	2	109
Midday	In	238	4	0	7	2	251	166	6	1	173
	Out	213	4	0	6	2	224	149	6	1	156
	Total	450	8	0	13	4	475	315	12	2	329
PM	In	204	3	0	6	2	215	141	4	0	145
	Out	207	3	0	7	3	220	147	4	0	151
	Total	411	6	0	13	5	435	288	8	0	296
Saturday	In	300	4	0	8	3	315	207	6	0	213
	Out	260	4	0	7	2	273	180	6	0	186
	Total	560	8	0	15	5	588	387	12	0	399

Table E-5

Trip Generation Summary: Net Incremental Trips

Peak Hour	In/Out	Person Trips						Vehicle Trips			
		Auto	Taxi	SI Rail	Bus	Walk	Total	Auto	Taxi	Delivery	Total
AM	In	73	1	0	4	2	80	54	2	1	57
	Out	31	1	0	1	0	33	21	2	1	24
	Total	104	2	0	5	2	113	75	4	2	81
Midday	In	113	2	0	4	1	120	80	4	1	85
	Out	87	2	0	3	1	93	63	4	1	68
	Total	200	4	0	7	2	213	143	8	2	153
PM	In	138	2	0	4	1	145	95	2	0	97
	Out	141	2	0	5	2	150	101	2	0	103
	Total	279	4	0	9	3	295	196	4	0	200
Saturday	In	223	3	0	6	2	234	154	4	0	158
	Out	183	3	0	5	1	192	127	4	0	131
	Total	406	6	0	11	3	426	281	8	0	289

LEVEL 1 SCREENING

As per the criteria established in the *CEQR Technical Manual*, a quantified transportation analysis may be warranted if the proposed project is expected to result in 50 or more vehicle trips, 200 or more transit trips (200 or more peak hour transit riders at any given subway station or 50 or more peak hour bus trips on a particular route in one direction), and/or 200 or more pedestrian trips during a given peak hour.

TRAFFIC

As shown in **Table E-5**, the net incremental trips generated by the proposed project would be 81, 153, 200, and 289 vehicle trips during the weekday AM, midday, PM, and Saturday peak hours, respectively. Since the incremental vehicle trips would be greater than 50 vehicles, a Level 2 screening assessment (presented in the section below) was conducted to establish a recommended study area for quantified traffic analysis.

TRANSIT

As detailed in **Table E-5**, the net incremental trips generated by the proposed project would be 5, 7, 9, and 11 person trips by bus during each of the weekday AM, midday, and PM, and Saturday peak hours. Since these incremental bus trips do not exceed the *CEQR Technical Manual* analysis threshold of 50 or more peak hour bus riders on a bus route in a single direction, a detailed bus line-haul analysis is not warranted and the proposed project is not expected to result in any significant adverse bus line-haul impacts. Since the incremental Staten Island Railroad trips do not exceed the *CEQR Technical Manual* analysis threshold of 200 peak hour trips made by subway, a detailed analysis is not warranted and the proposed project is not expected to result in any significant adverse rail impacts.

PEDESTRIANS

For the proposed project, all auto trips are expected to park on site, and all taxi trips would be dropped off and picked up within the project site, adjacent to store entrances. Person trips associated with autos and taxis would therefore not traverse the pedestrian elements surrounding the project site. The remaining 7, 9, 12, and 14 pedestrian walk trips during the weekday AM, midday, and PM, and Saturday peak hours, respectively, would be below the *CEQR Technical Manual* threshold of 200 peak hour pedestrian trips; therefore, no further analysis of pedestrian conditions is warranted and the proposed project is not expected to result in any significant adverse pedestrian impacts.

LEVEL 2 SCREENING ASSESSMENT

As part of the Level 2 screening assessment, project-generated trips were assigned to roadways and intersections in the study area. Further quantified analyses to assess the potential impacts of the proposed project on the transportation system may be warranted for intersections identified to incur 50 or more peak hour vehicle trips.

SITE ACCESS AND EGRESS

Access to the project site would be primarily via a new signalized intersection at Veterans Road West, just east of the intersection of Veterans Road West and Bricktown Way/Tyrellan Avenue, permitting all traffic movements. A second unsignalized entrance would provide access to Tyrellan Avenue from the western boundary of the project site, permitting all traffic movements.

TRAFFIC

The projected vehicle trips were assigned to area intersections based on the most likely travel routes to and from the project site, prevailing travel patterns, commuter origin-destination (O-D) summaries from the census data, the configuration of the roadway network, and the anticipated locations of site access and egress. Auto trips were assigned to parking provided on the project site. Taxi trips were assigned to enter the project site and drop-off/pick-up along the project site's internal roadway. All delivery trips were assigned via New York City Department of Transportation (NYCDOT) designated truck routes.

Destination and Local Retail

The proposed project's destination retail component is anticipated to draw both regional and local customers. Based on previously approved studies in the surrounding area and 2010 census population data, approximately 25 percent of total vehicle trips were projected to originate outside

the immediate 2–3 mile radius of the project site. Trips originating within Staten Island outside the three-mile radius were assumed to use the West Shore Expressway and Korean War Veterans Parkway to access the project site. The trip distribution patterns for the approximate 75 percent Staten Island vehicle trips were based on 2010 U.S. Census population data for trips originating within a three-mile radius. The proposed project’s local retail component trips were all assumed to originate within a 2–3 mile radius and were distributed based on the 2010 U.S. Census population data.

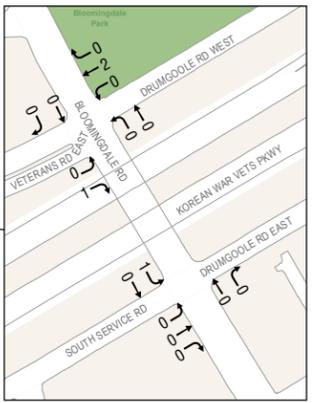
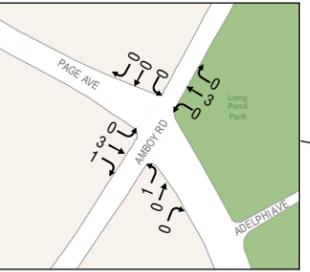
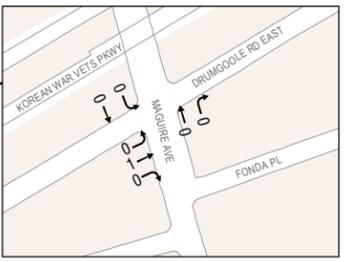
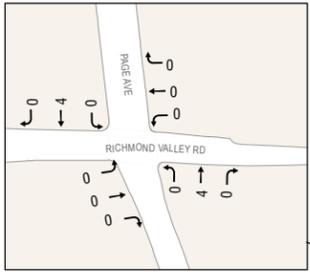
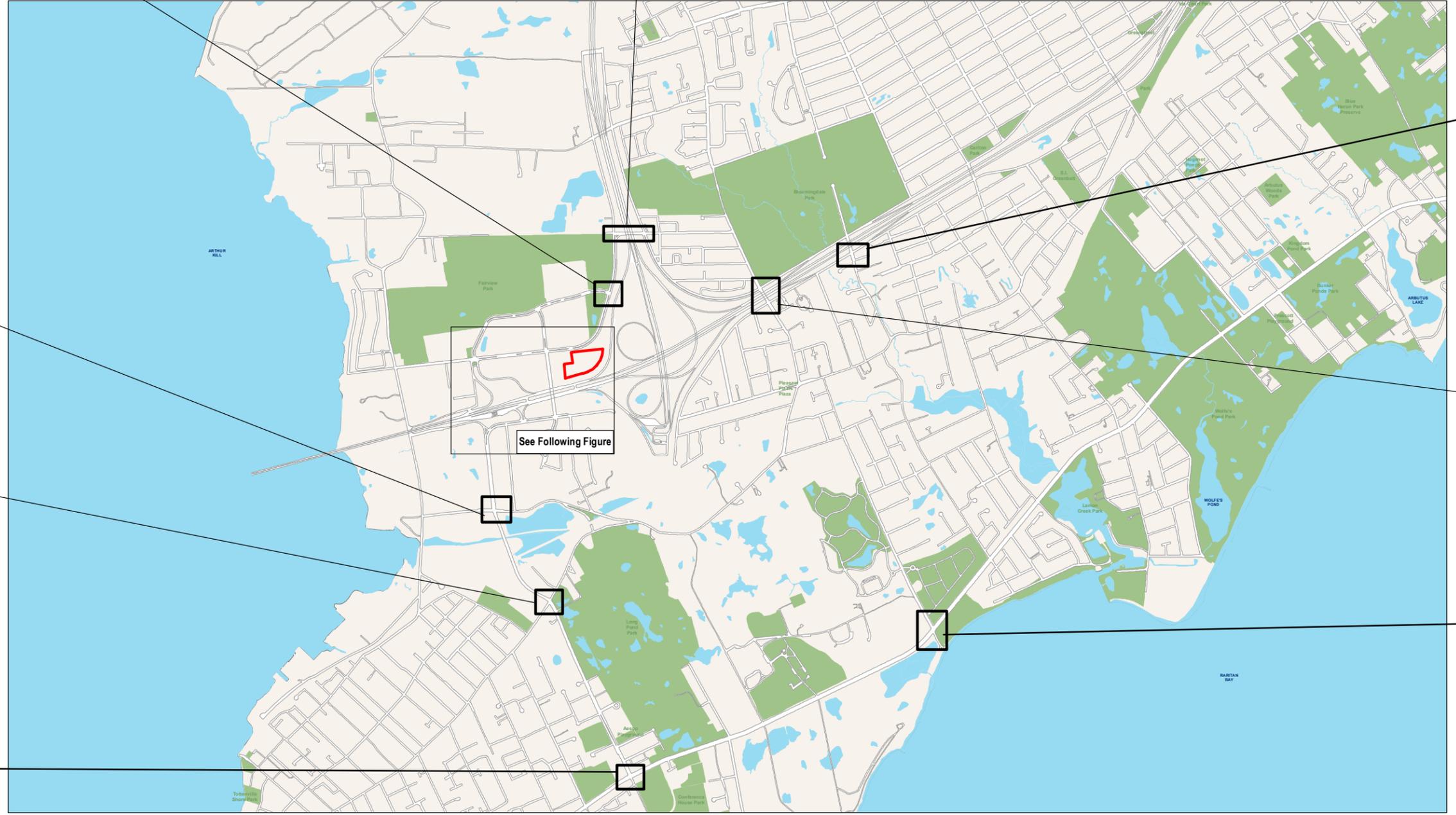
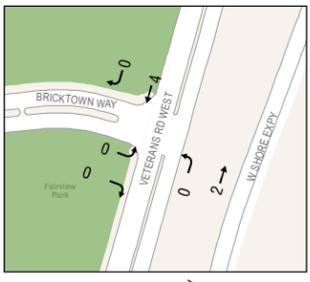
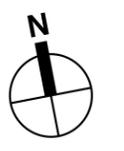
Overall, destination retail vehicle trips generated by the proposed project were distributed to the study area streets/roadways in the following manner: approximately 39, 48, and 13 percent of project-generated trips were assumed to approach the site from the north, east, and south/west, respectively. Approximately 29, 49, and 22 percent of local retail project-generated trips were assumed to approach the site from the north, east, and south/west, respectively. Departing trips were assigned along the same routes as arrivals.

Office

The trip generation patterns for the proposed project’s office use were based on commuter O-D summaries from census data. Based on the census data, approximately 20 percent of office vehicle trips would originate from outside of Staten Island, approximately 15 percent from New Jersey and 5 percent from Brooklyn, Long Island and areas north of Staten Island. Of the trips originating within Staten Island, approximately 53 percent would originate from the north, 16 percent from the east and 11 percent from the south/west.

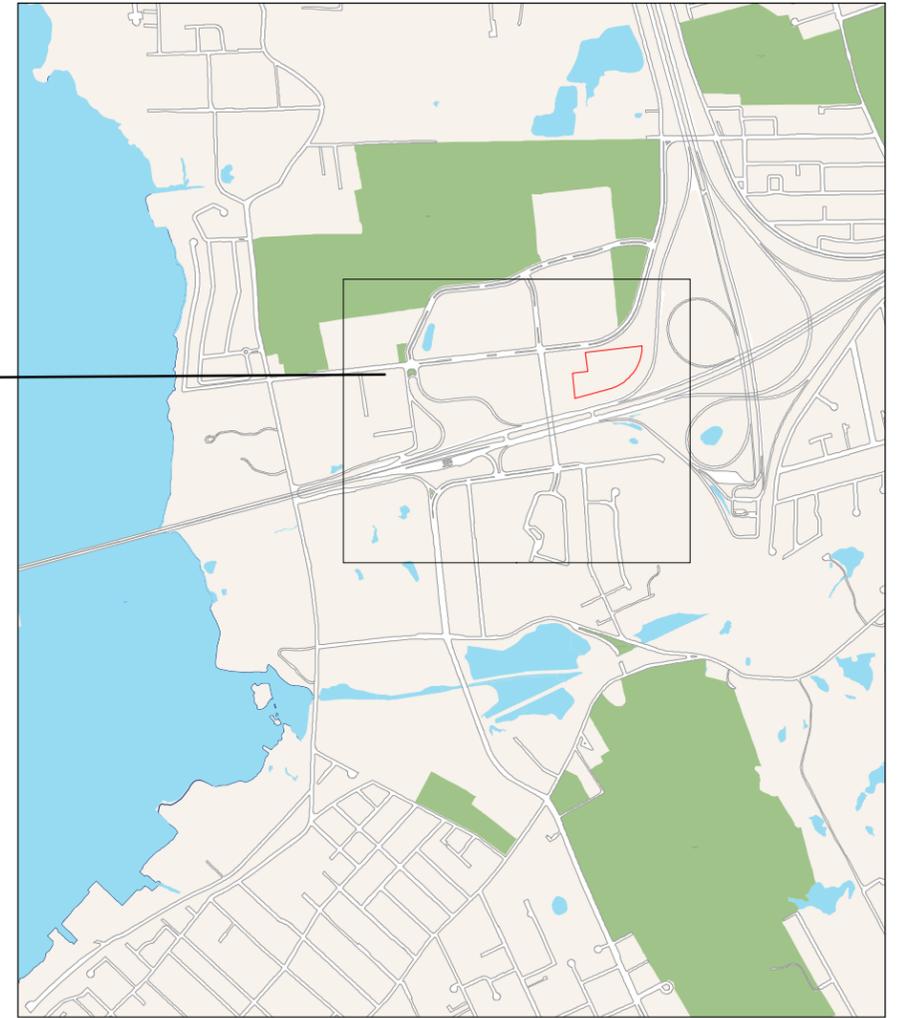
Summary

As shown in **Figures E-2 to E-9**, as-of-right generated and project-generated vehicle trips to and from the project site were assigned to the area’s street network based on the travel patterns described above. As shown in **Figures E-10 through E-13** and summarized in **Table E-6**, seven intersections are expected to incur greater than 50 net incremental vehicle trips. These seven intersections comprising the traffic study area have been recommended for analysis. The recommended traffic analysis locations are shown in **Figure E-14**.



 Project Site

No Action Project Generated Vehicle Trips
Weekday AM Peak Hour
Figure E-2a



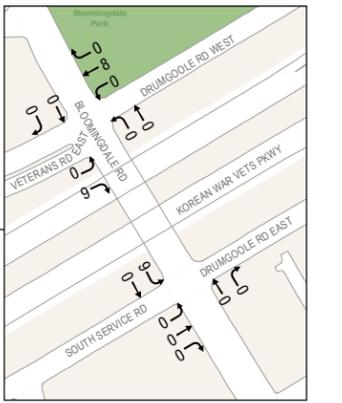
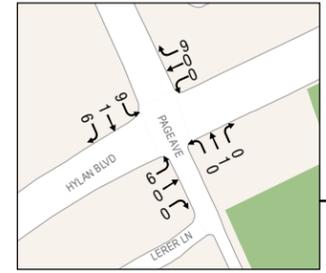
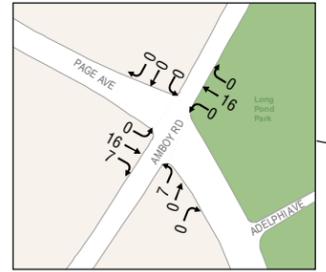
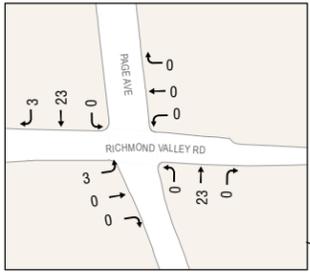
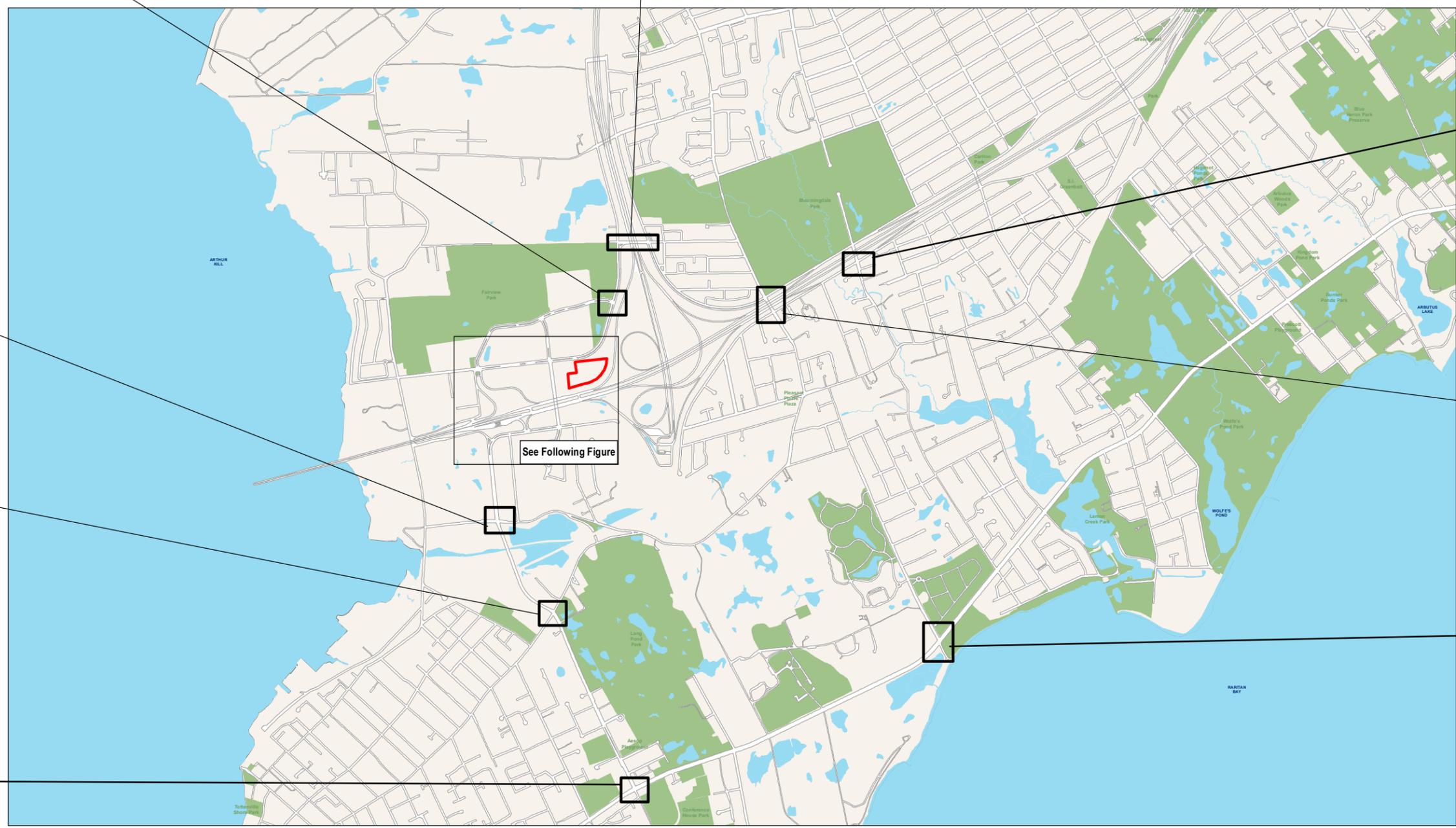
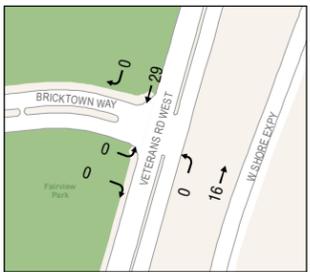
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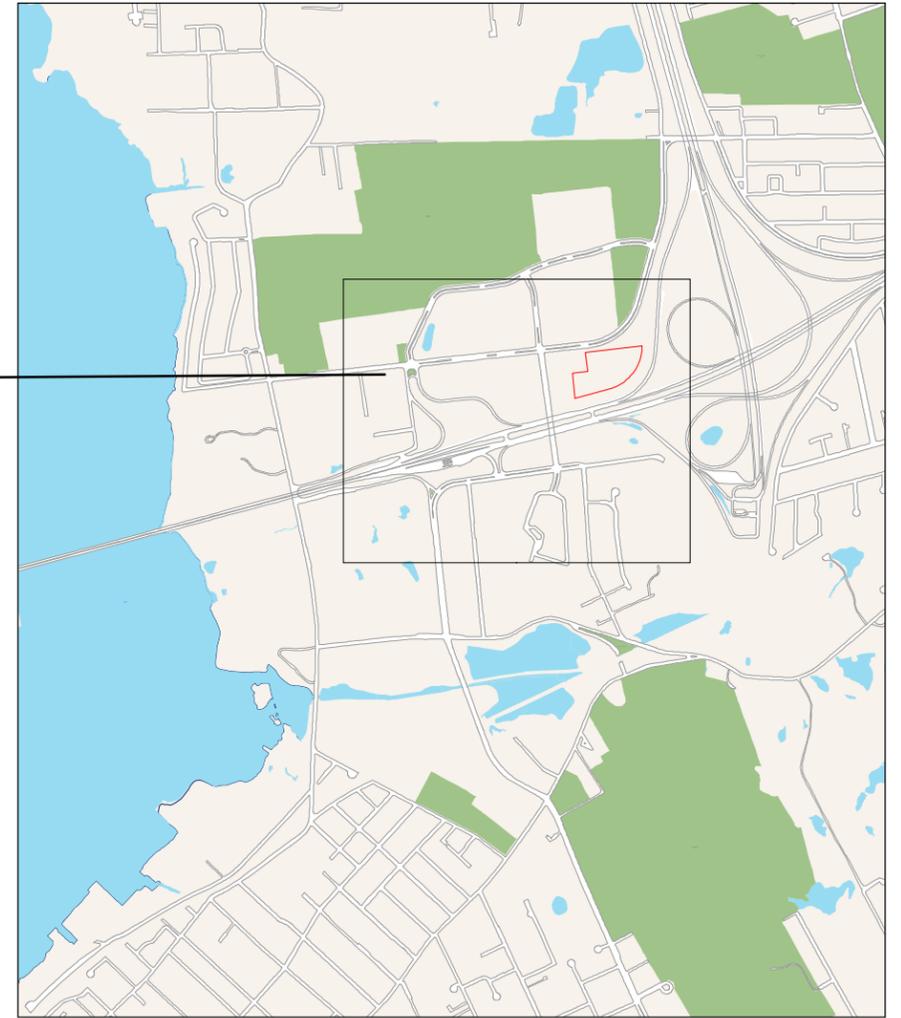
 Project Site

2835 VETERANS ROAD WEST

No Action Project Generated Vehicle Trips
Weekday AM Peak Hour
Figure E-2b



 Project Site



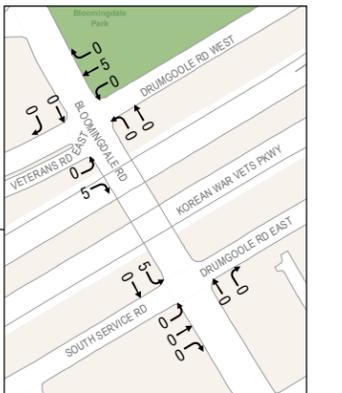
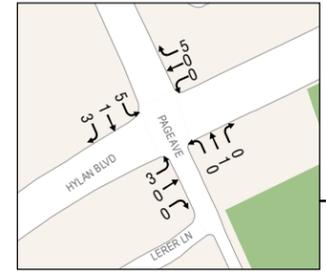
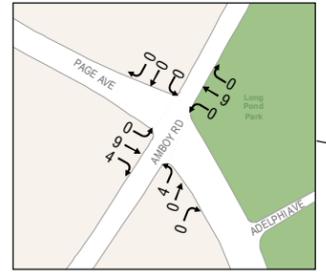
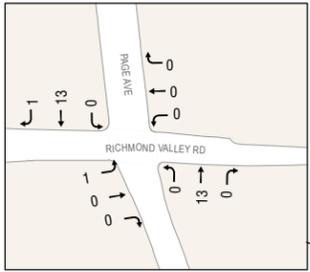
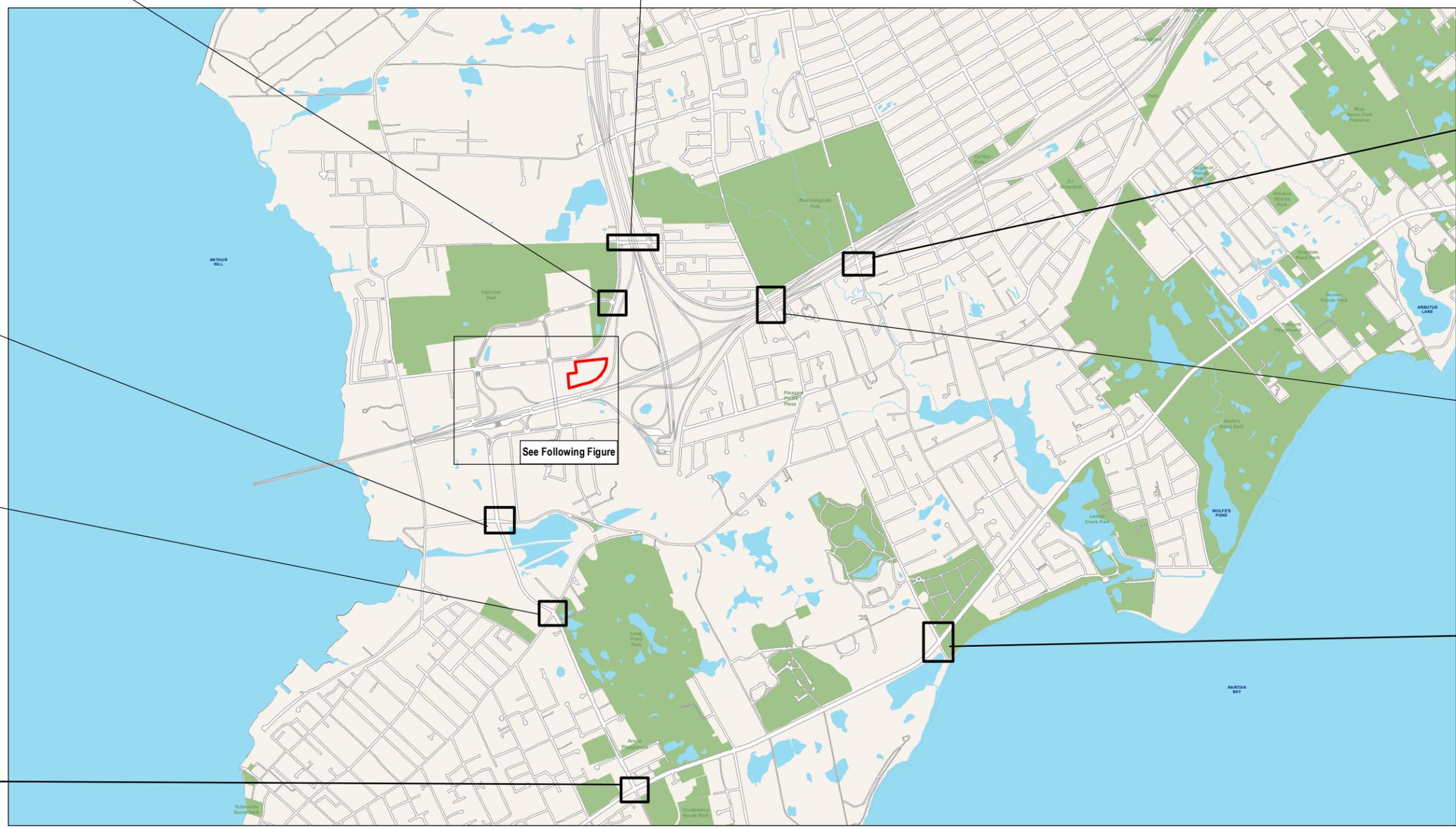
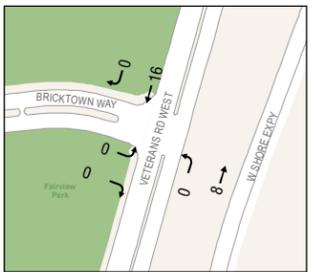
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 Project Site

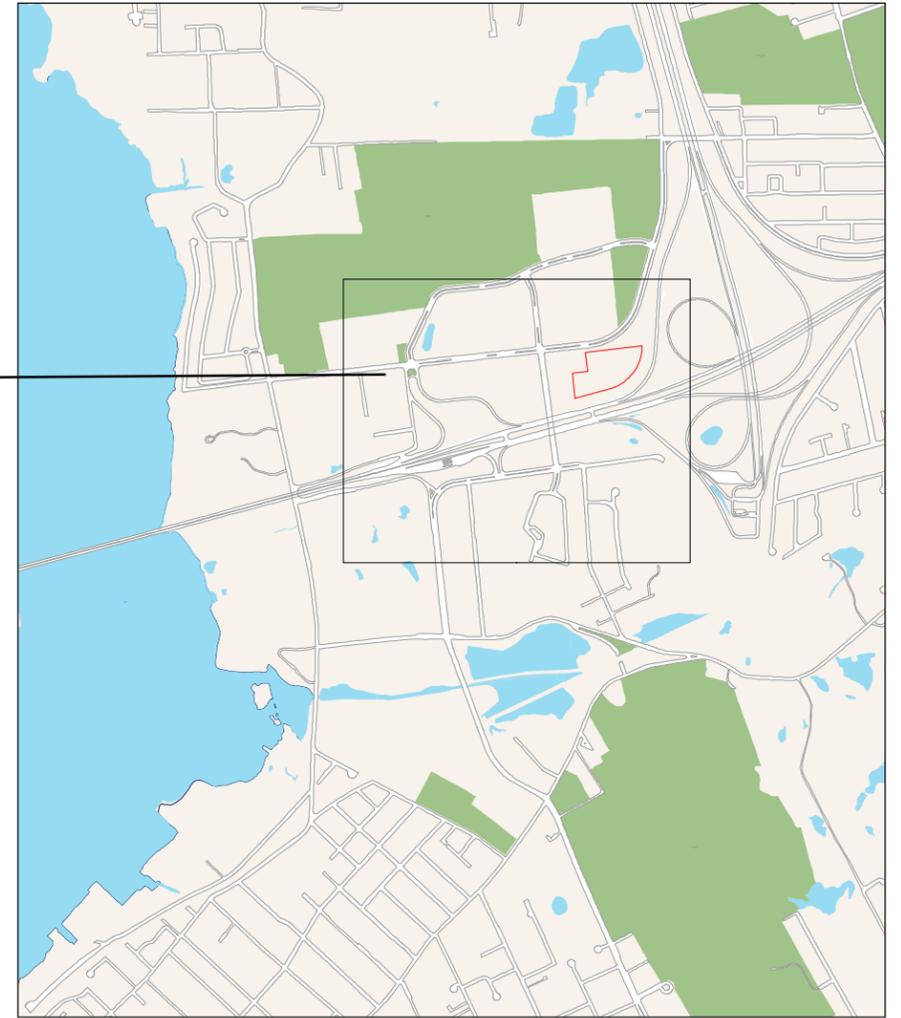
2835 VETERANS ROAD WEST

No Action Project Generated Vehicle Trips
Weekday Midday Peak Hour
Figure E-3b



 Project Site

No Action Project Generated Vehicle Trips
Weekday PM Peak Hour
Figure E-4a



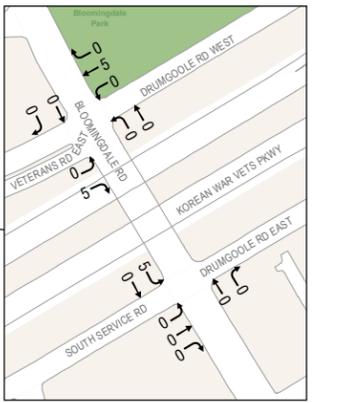
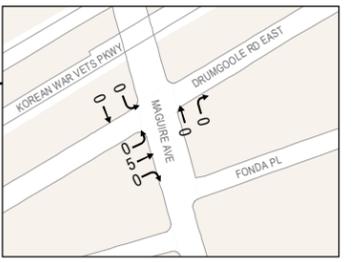
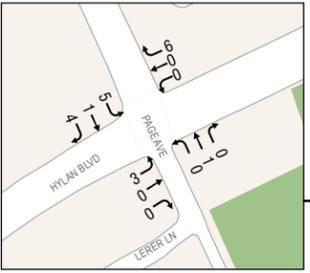
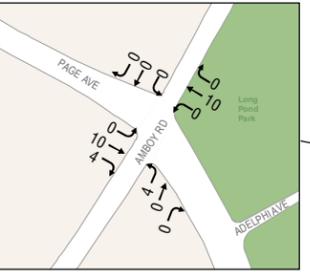
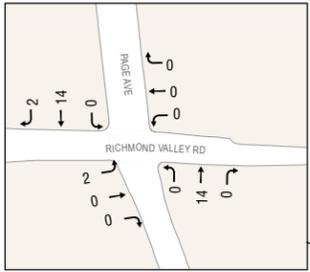
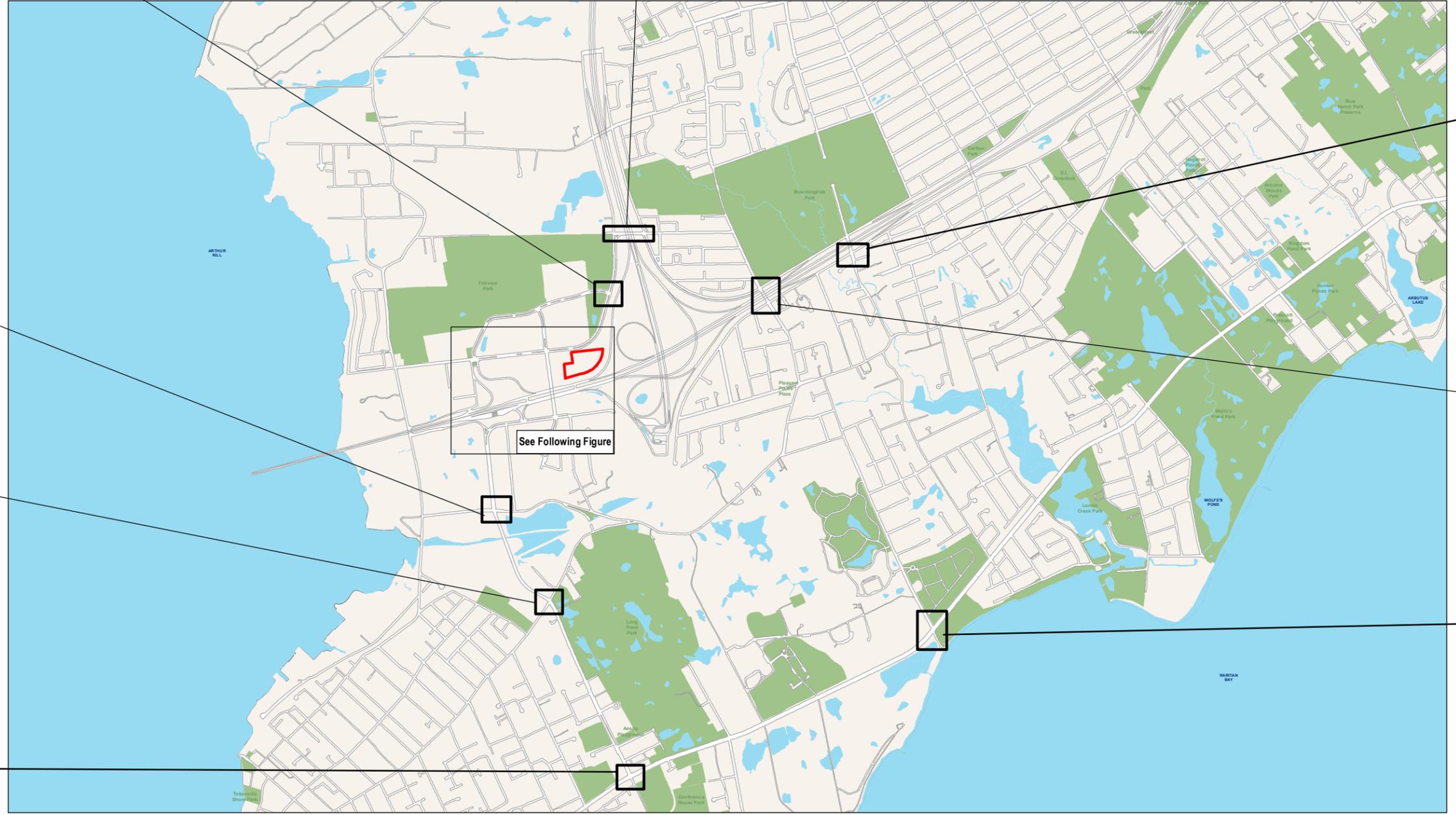
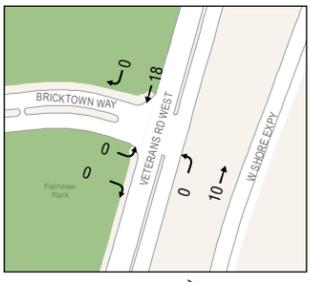
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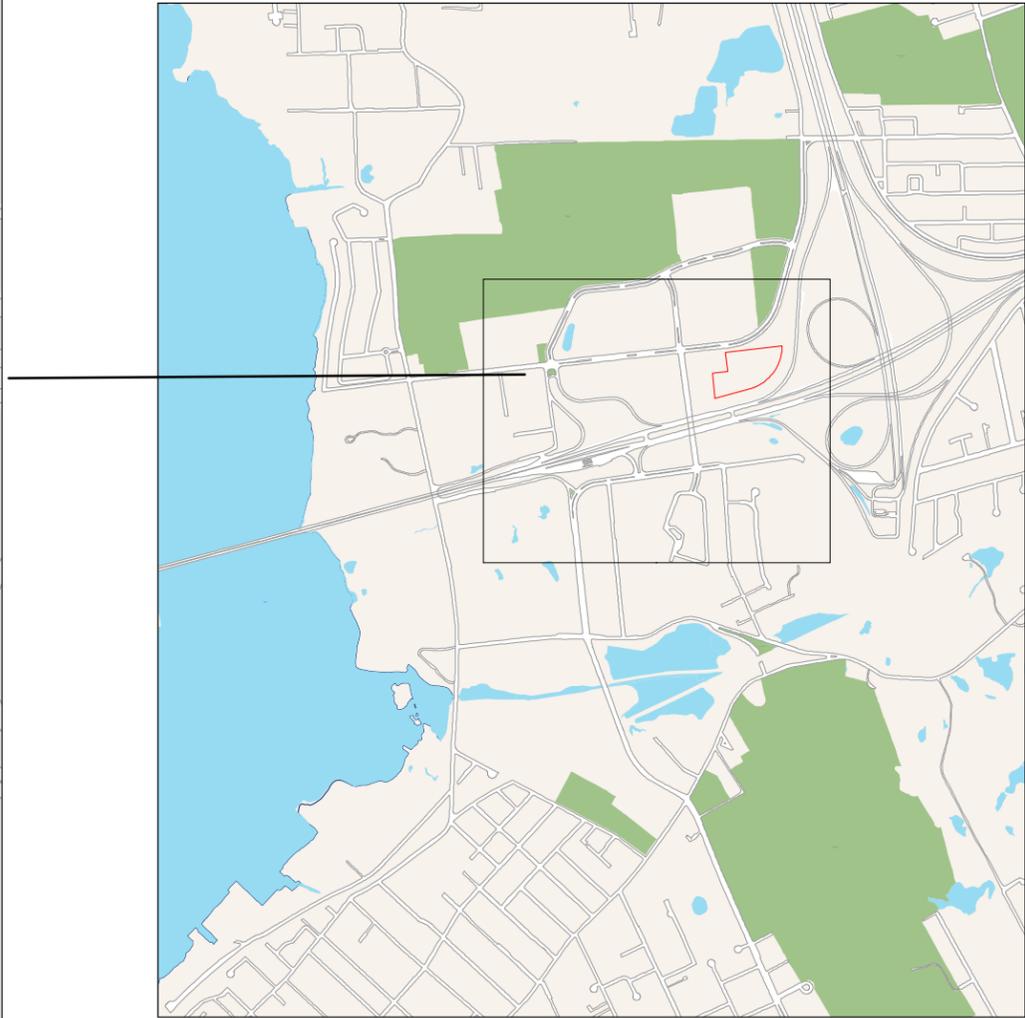
Project Site

2835 VETERANS ROAD WEST

No Action Project Generated Vehicle Trips
Weekday PM Peak Hour
Figure E-4b



 Project Site



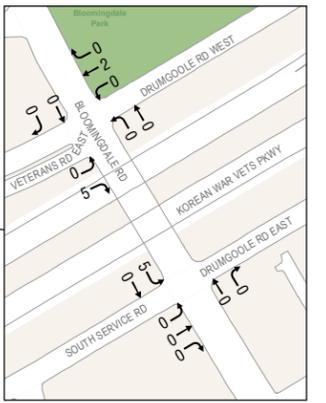
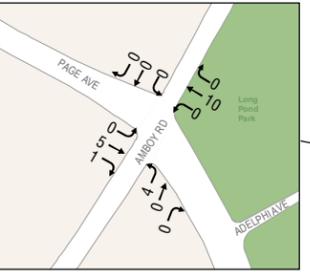
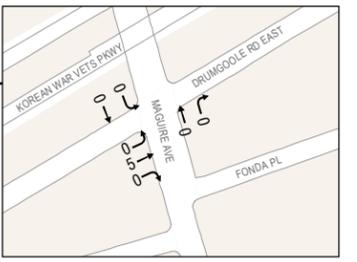
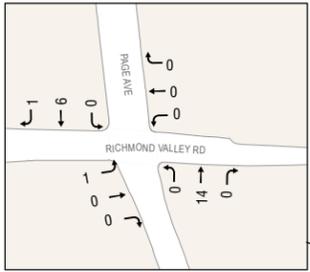
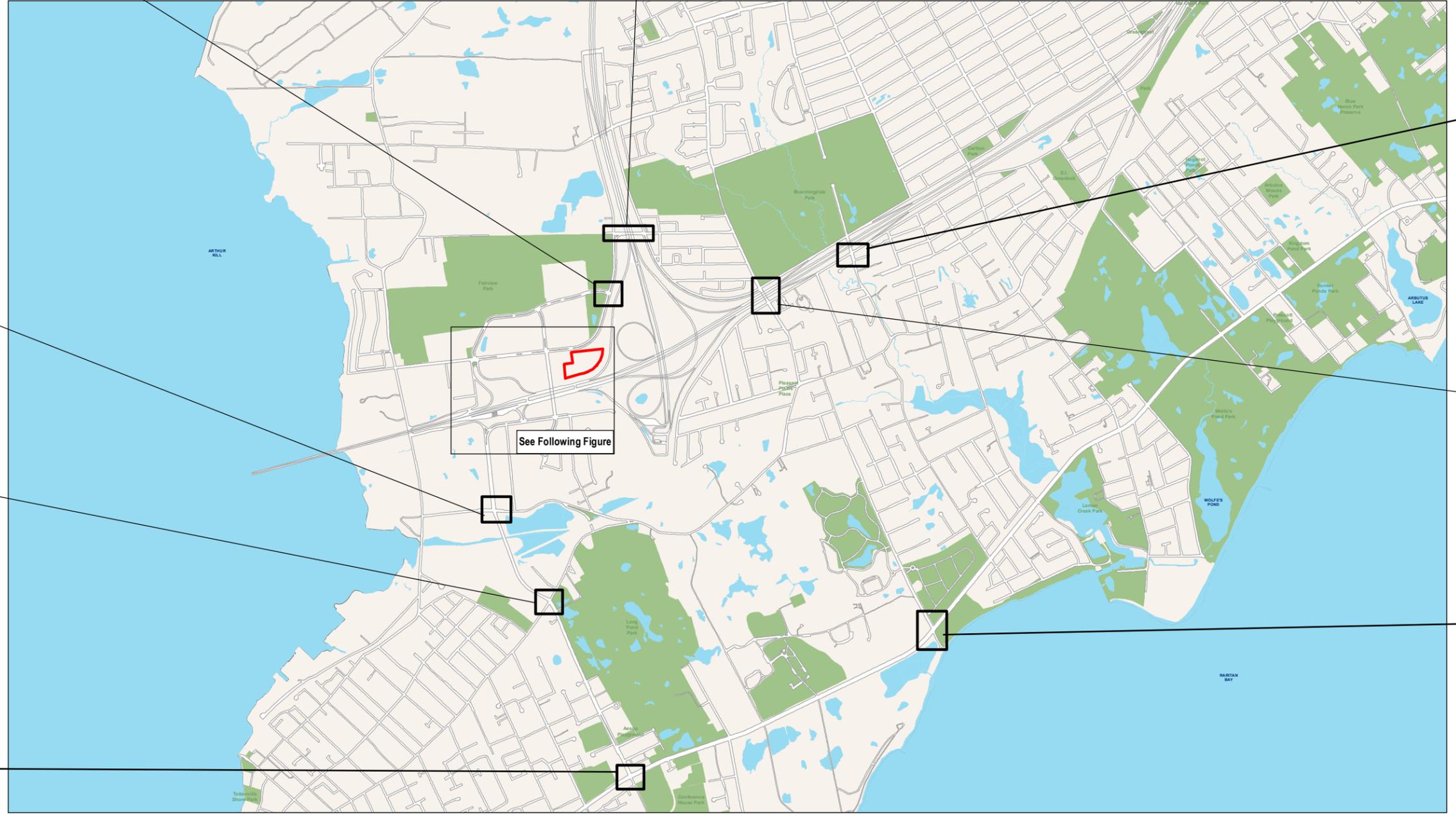
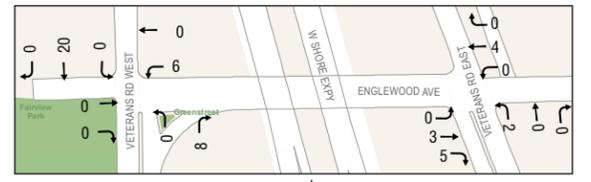
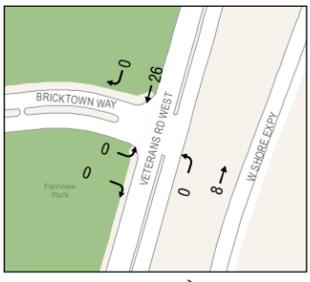
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Project Site

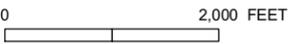
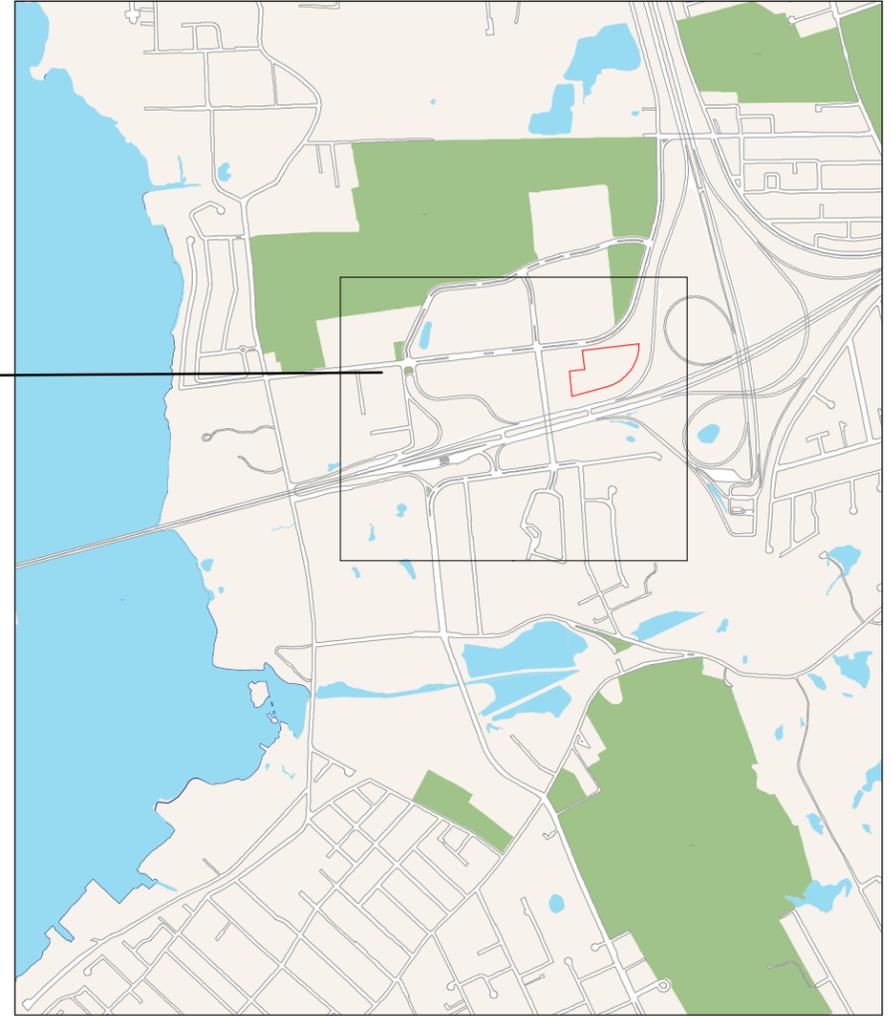
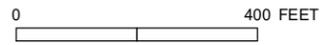
2835 VETERANS ROAD WEST

No Action Project Generated Vehicle Trips
Saturday Peak Hour
Figure E-5b



 Project Site

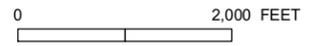
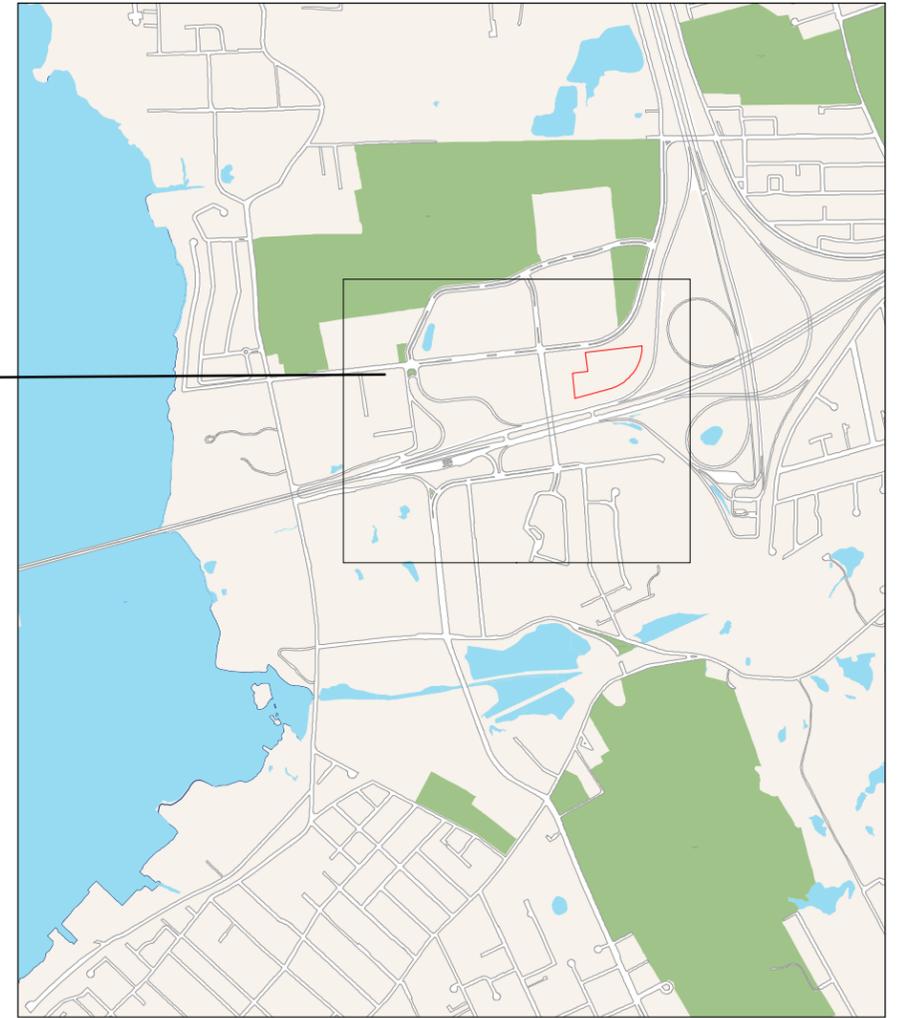
With Action Project Generated Vehicle Trips
Weekday AM Peak Hour
Figure E-6a



 Project Site

2835 VETERANS ROAD WEST

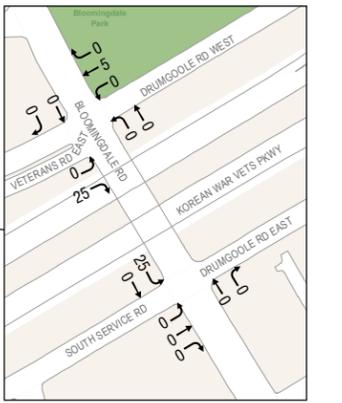
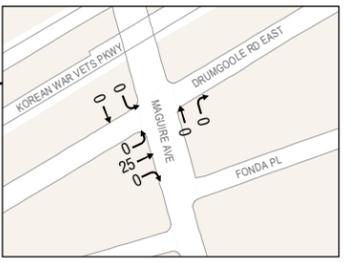
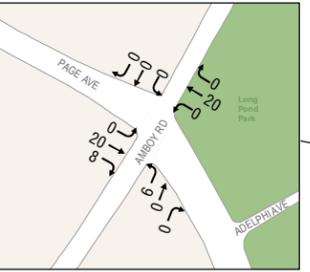
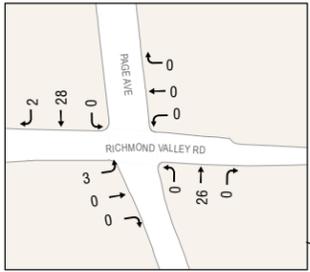
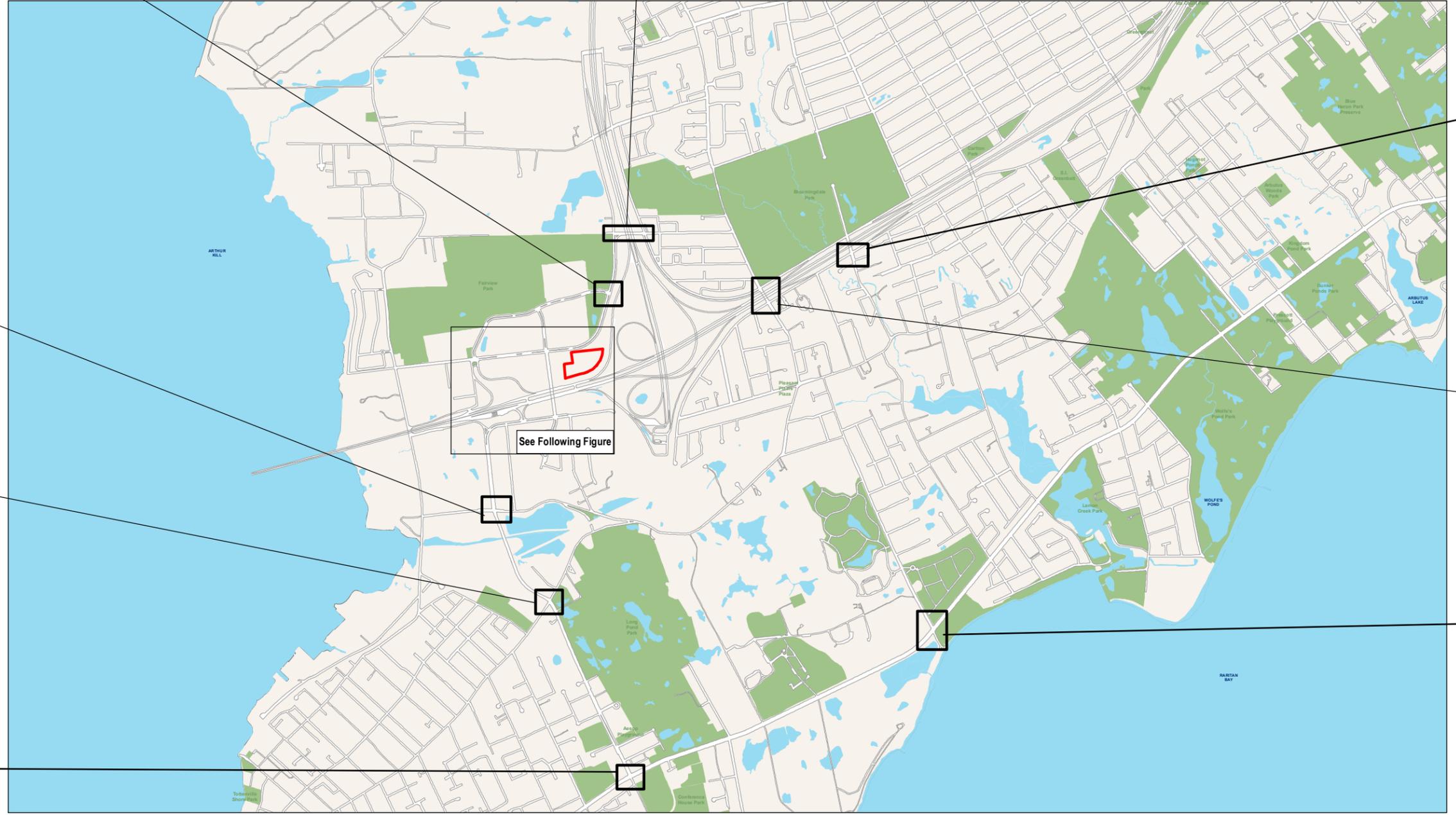
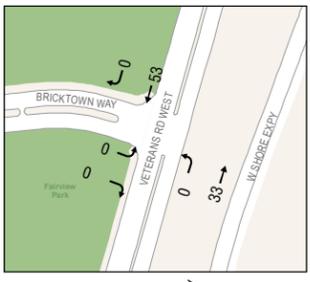
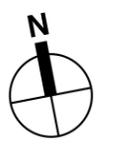
With Action Project Generated Vehicle Trips
 Weekday AM Peak Hour
 Figure E-6b



 Project Site

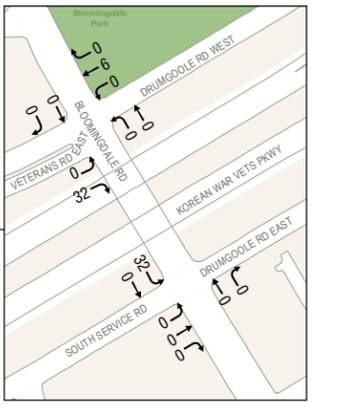
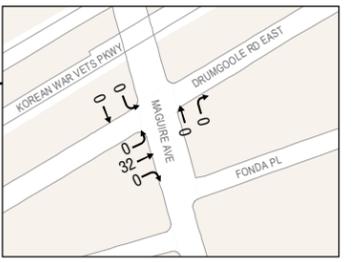
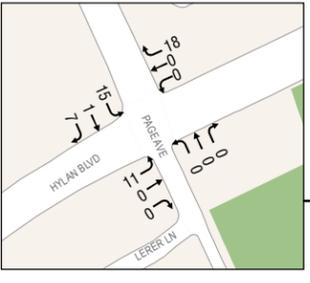
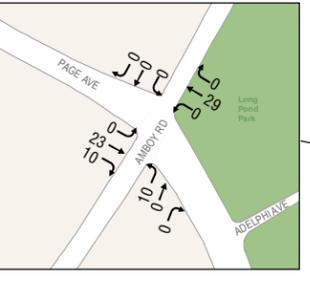
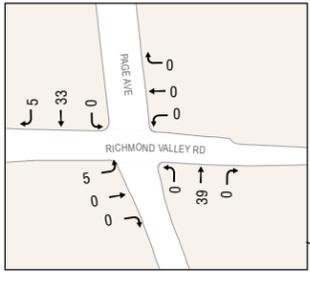
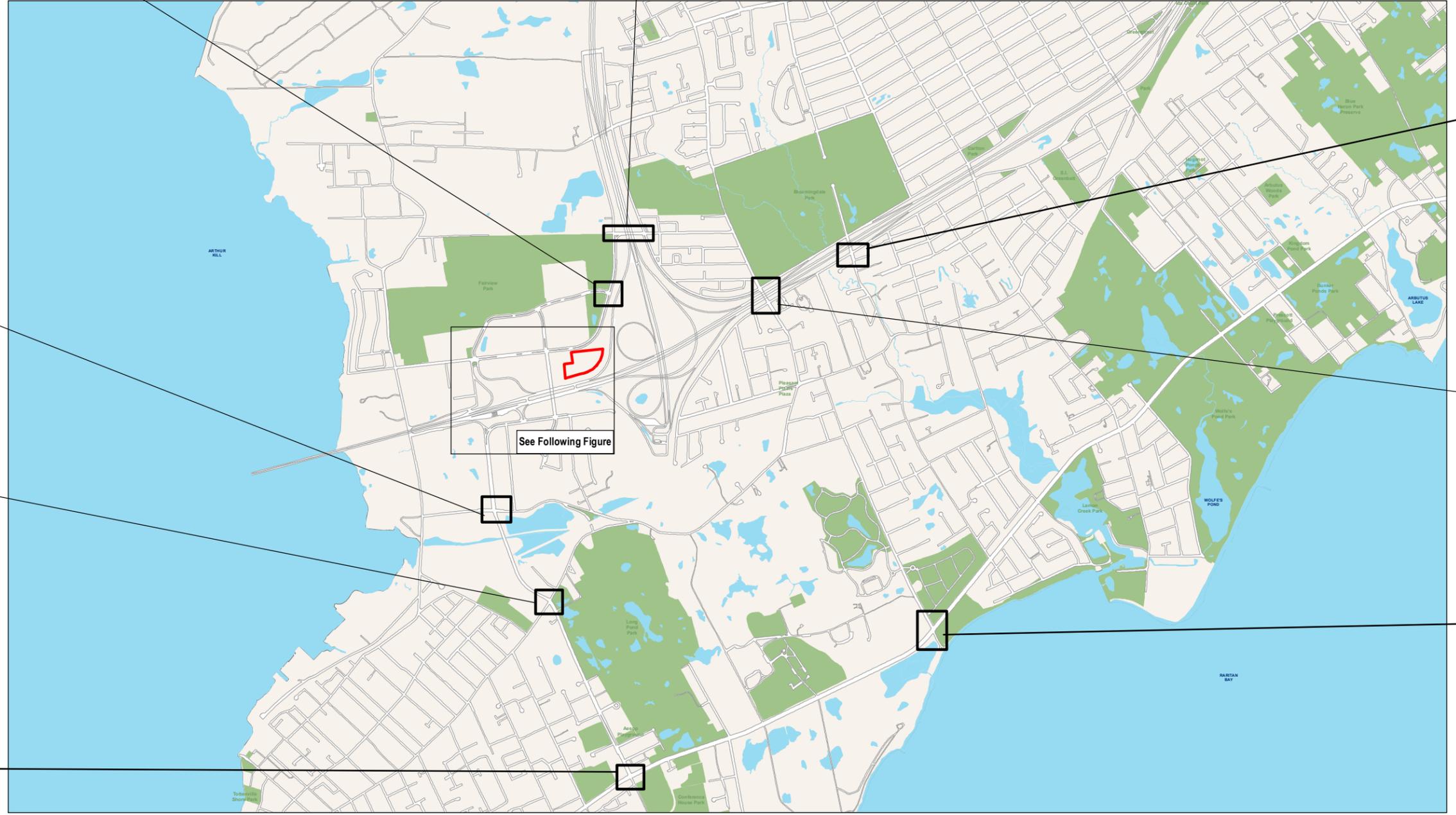
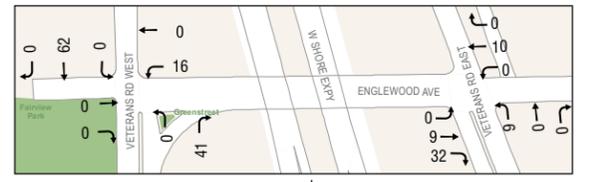
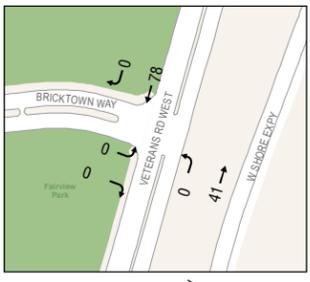
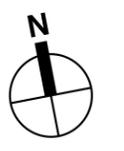
2835 VETERANS ROAD WEST

With Action Project Generated Vehicle Trips
 Weekday Midday Peak Hour
 Figure E-7b



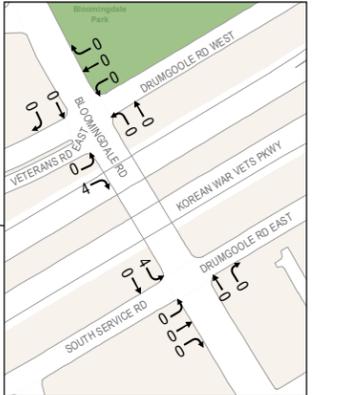
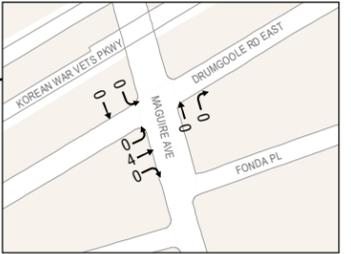
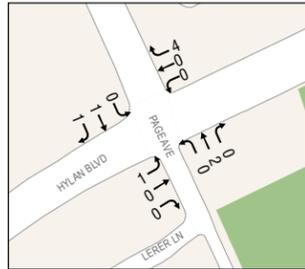
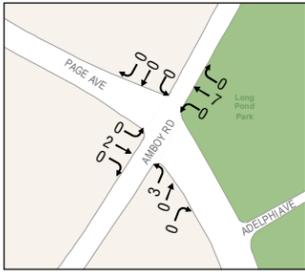
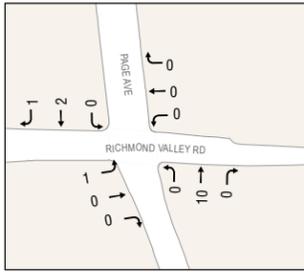
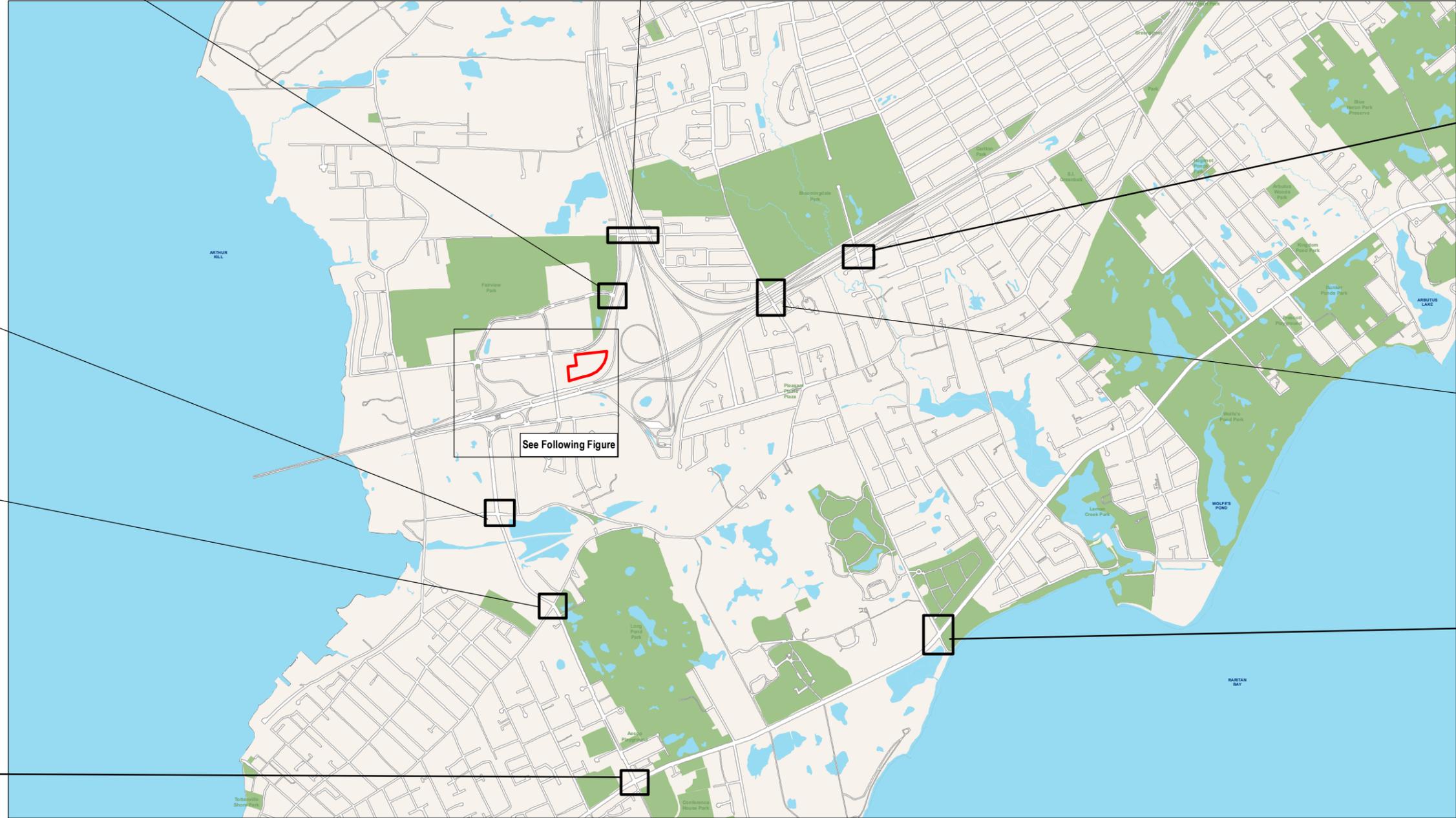
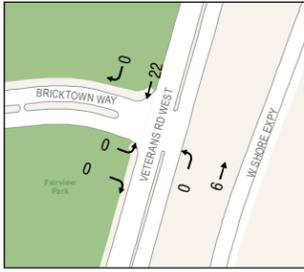
 Project Site

With Action Project Generated Vehicle Trips
Weekday PM Peak Hour
Figure E-8a

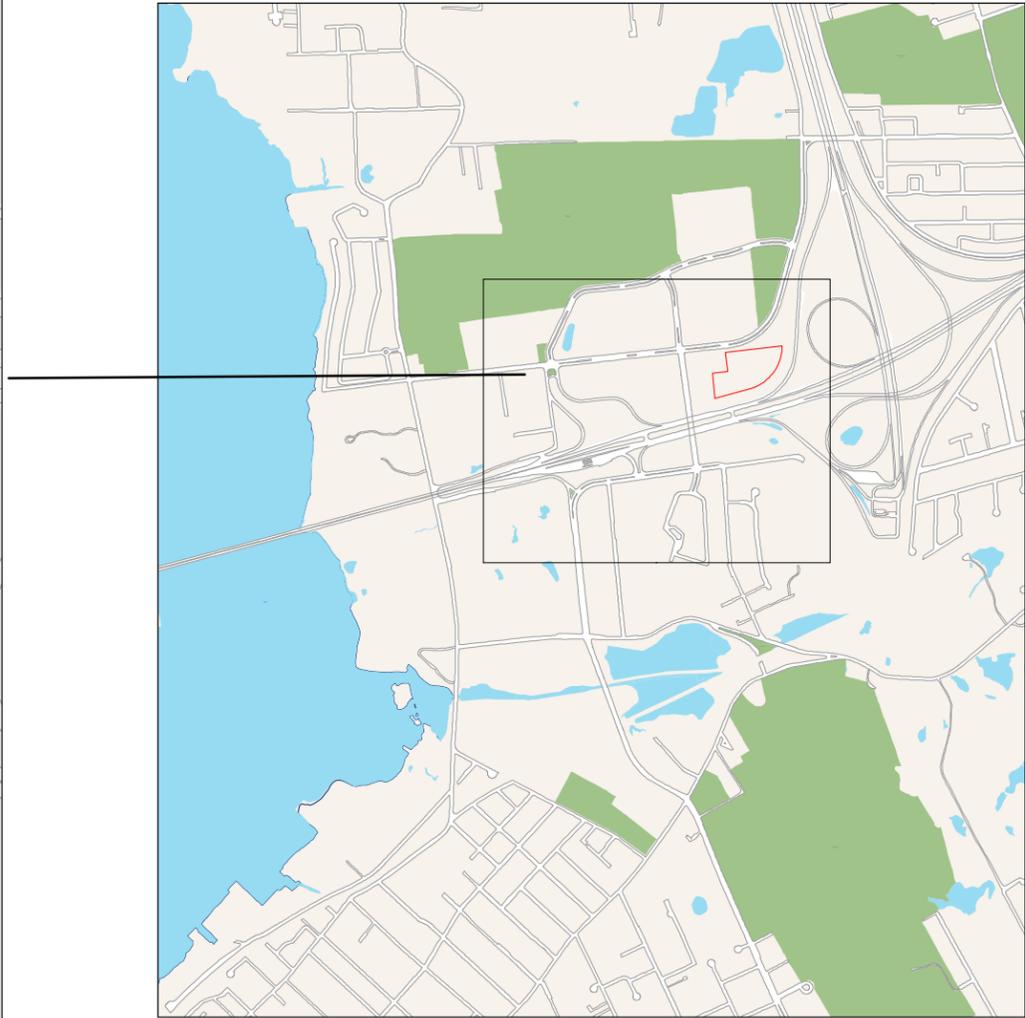


 Project Site

With Action Project Generated Vehicle Trips
Saturday Peak Hour
Figure E-9a



 Project Site



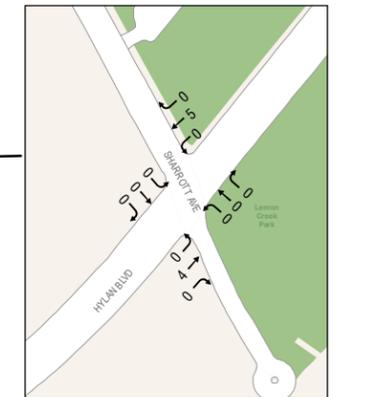
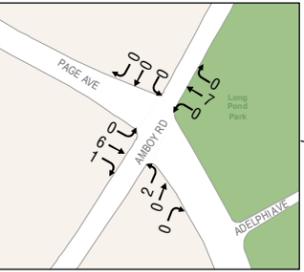
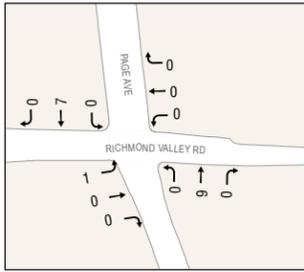
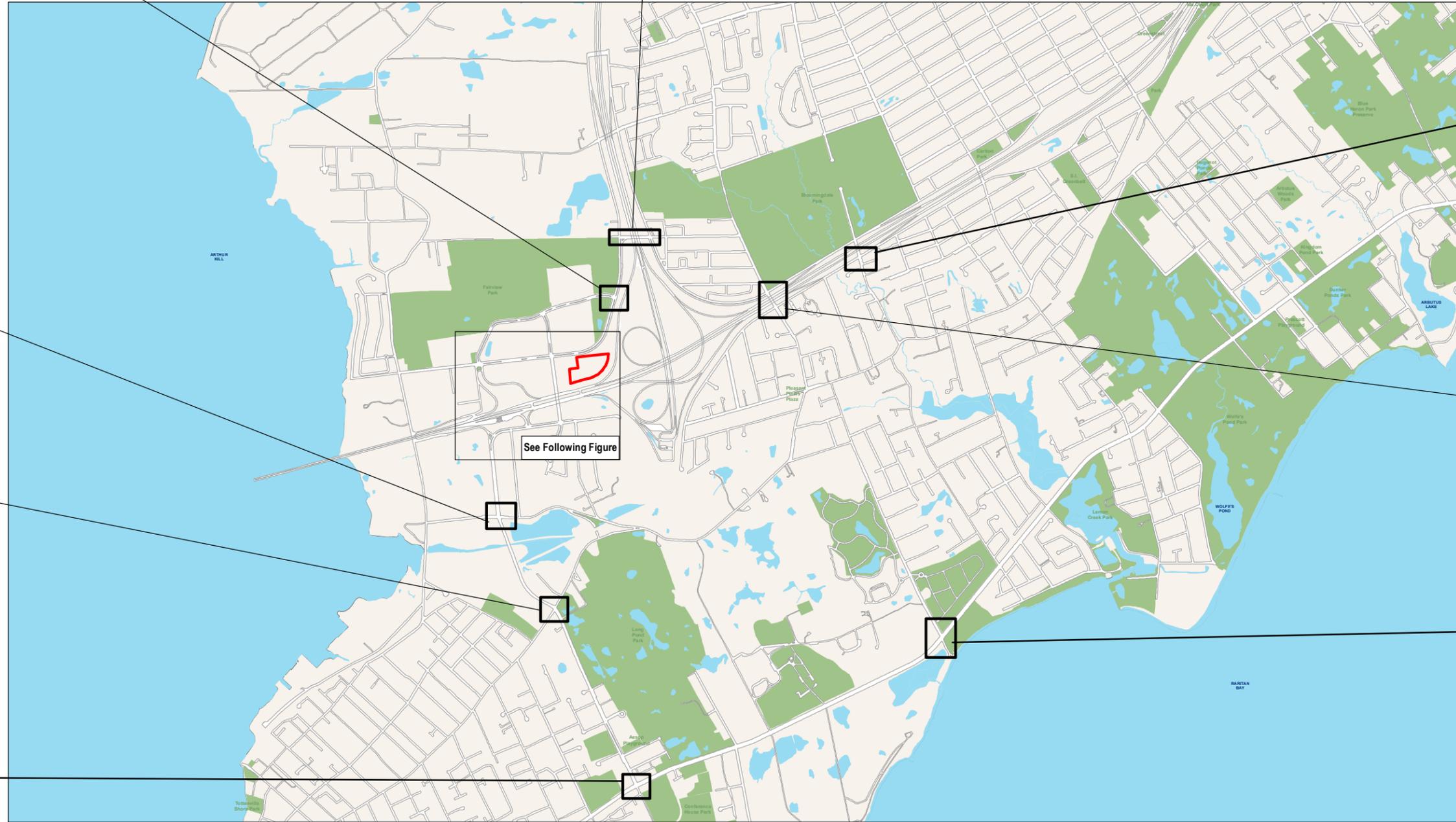
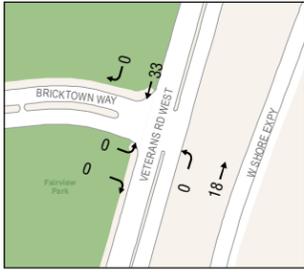
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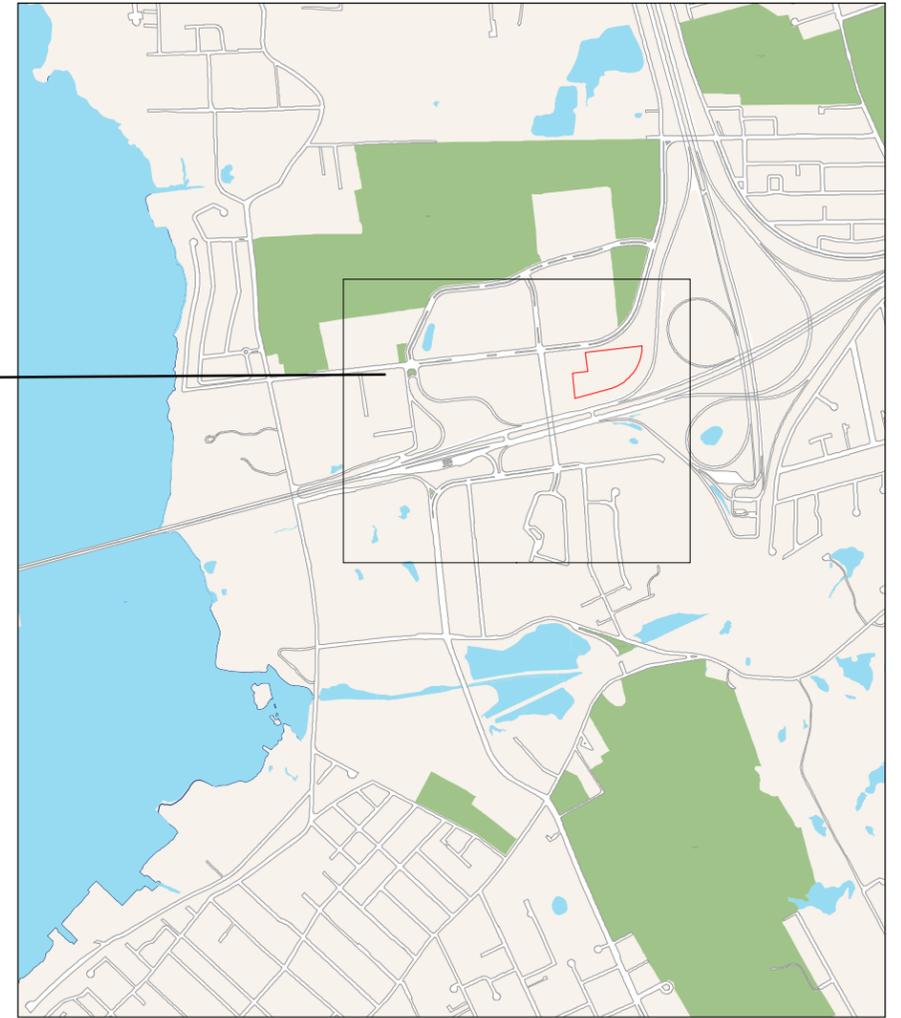
 Project Site

2835 VETERANS ROAD WEST

With Action Incremental Vehicle Trips
Weekday AM Peak Hour
Figure E-10b



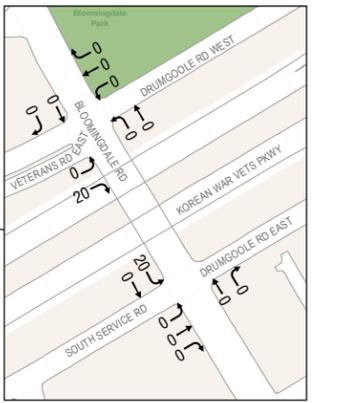
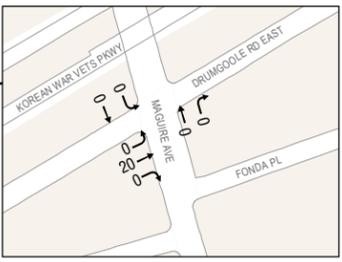
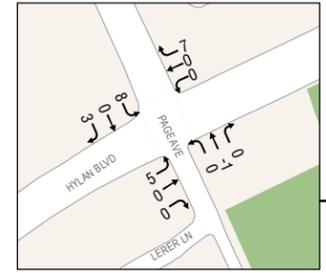
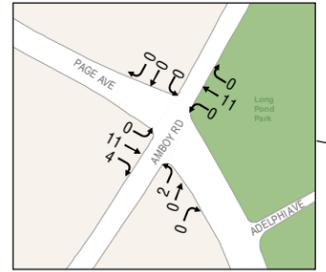
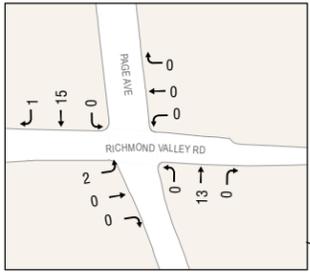
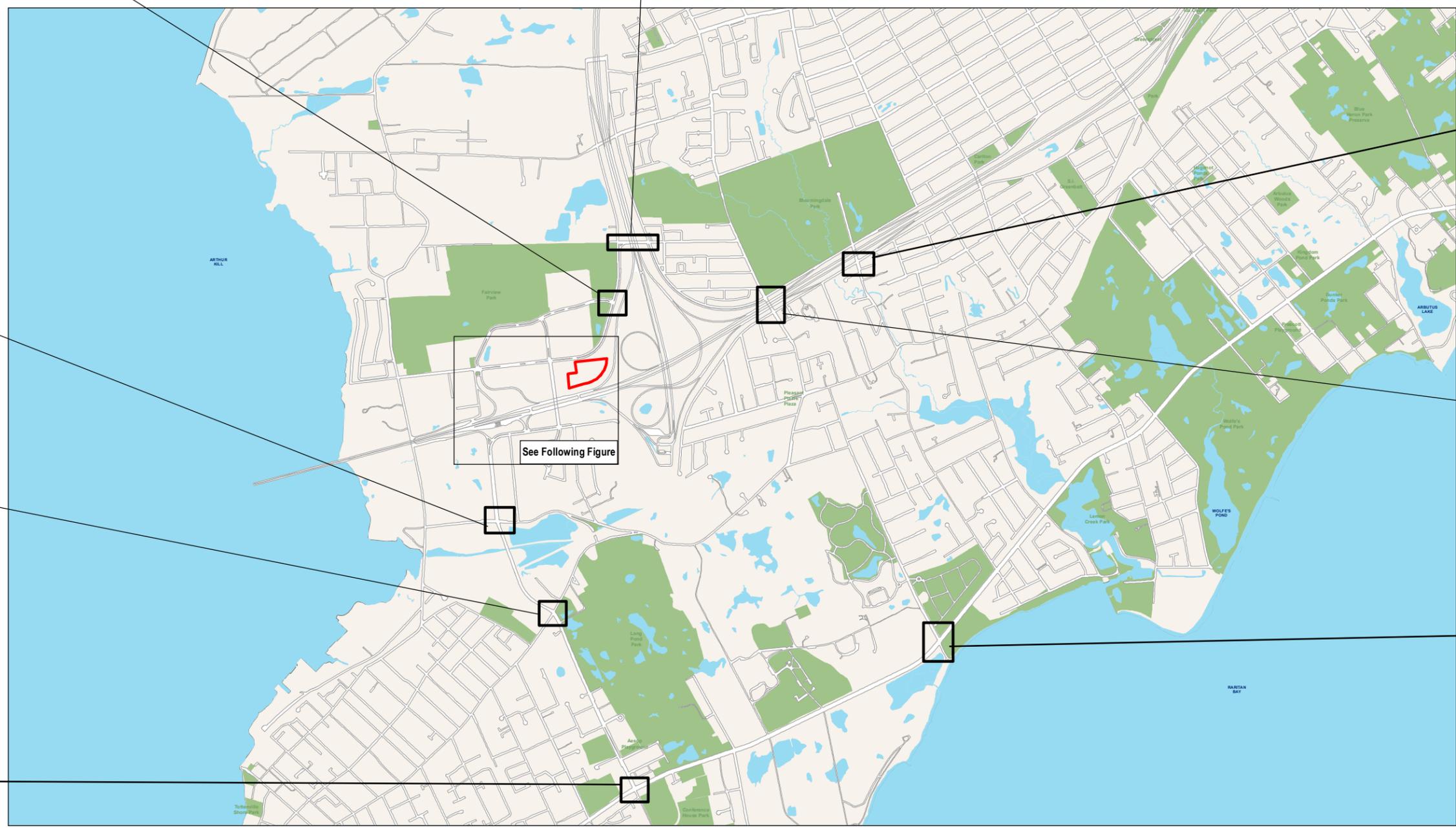
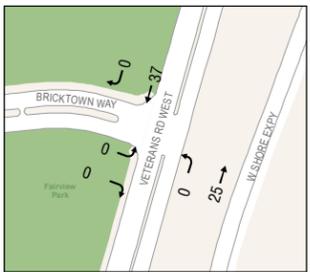
 Project Site



Project Site

2835 VETERANS ROAD WEST

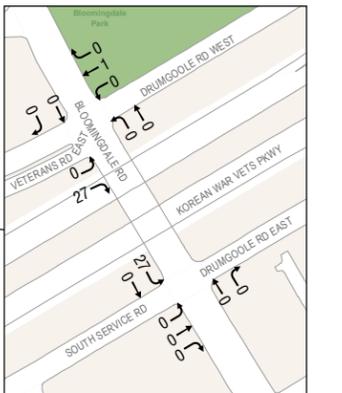
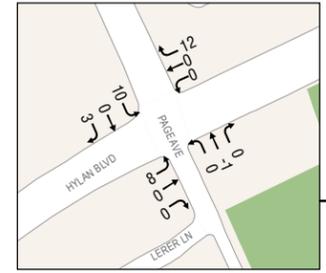
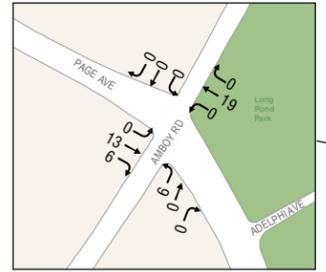
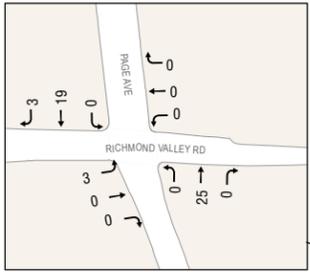
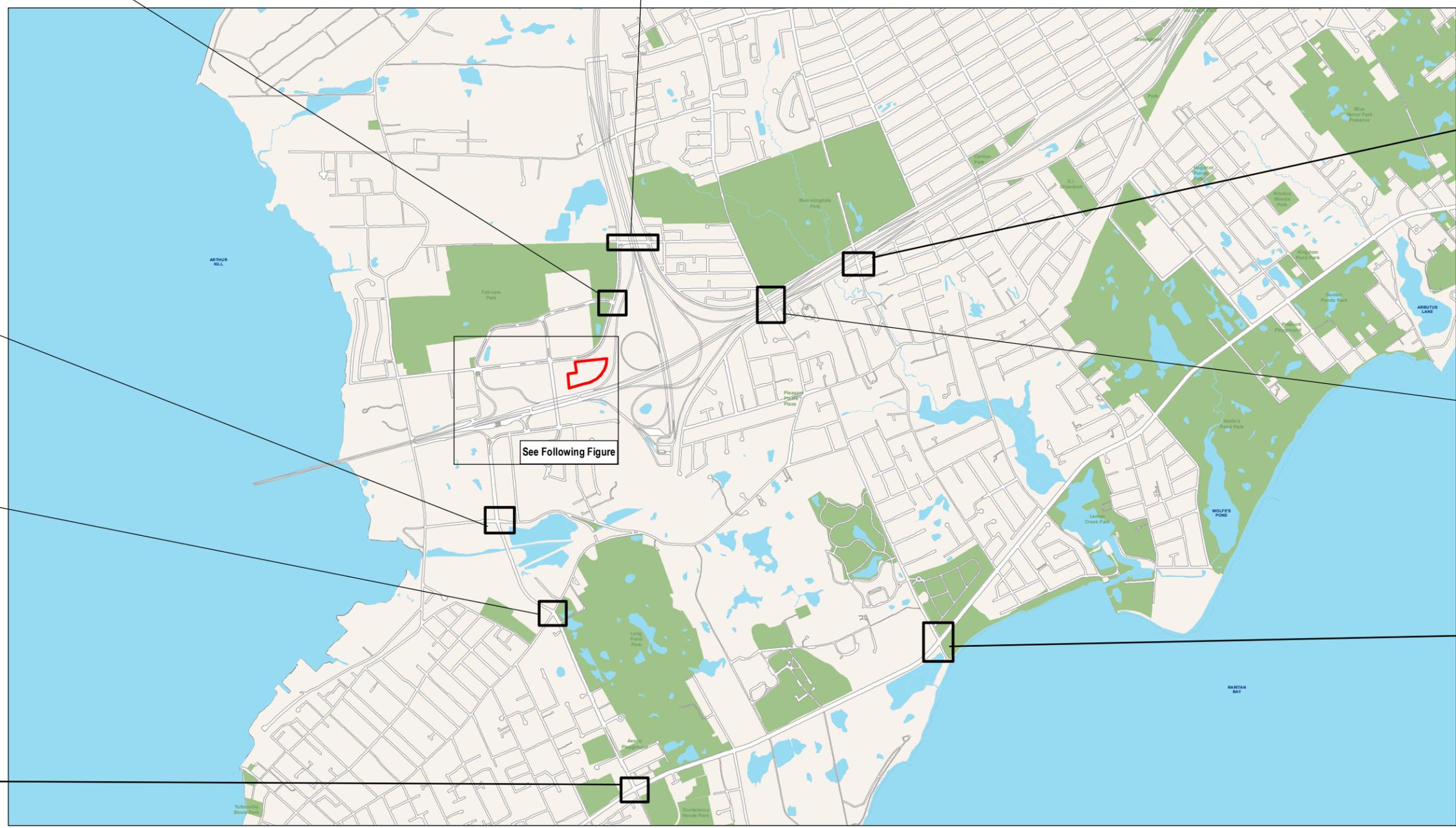
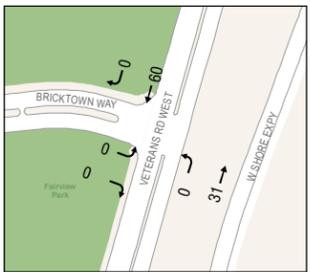
With Action Incremental Vehicle Trips
 Weekday Midday Peak Hour
Figure E-11b



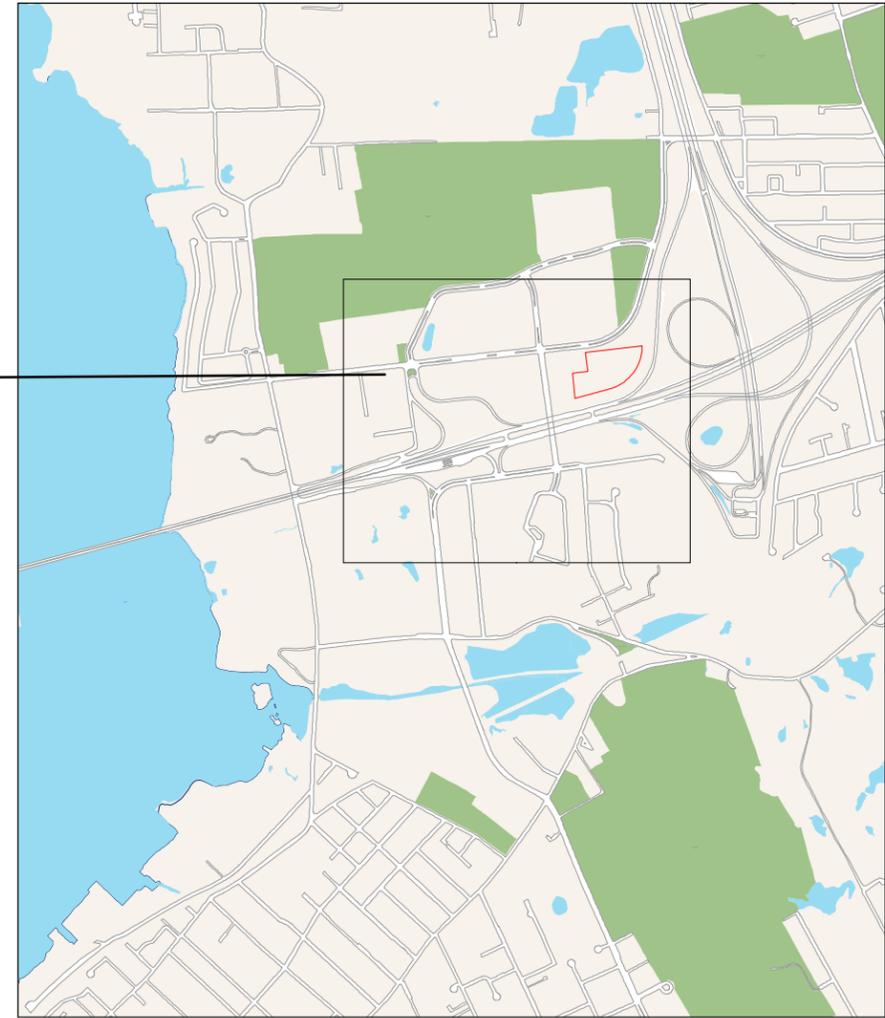
 Project Site

2835 VETERANS ROAD WEST

With Action Incremental Vehicle Trips
Weekday PM Peak Hour
Figure E-12a



 Project Site



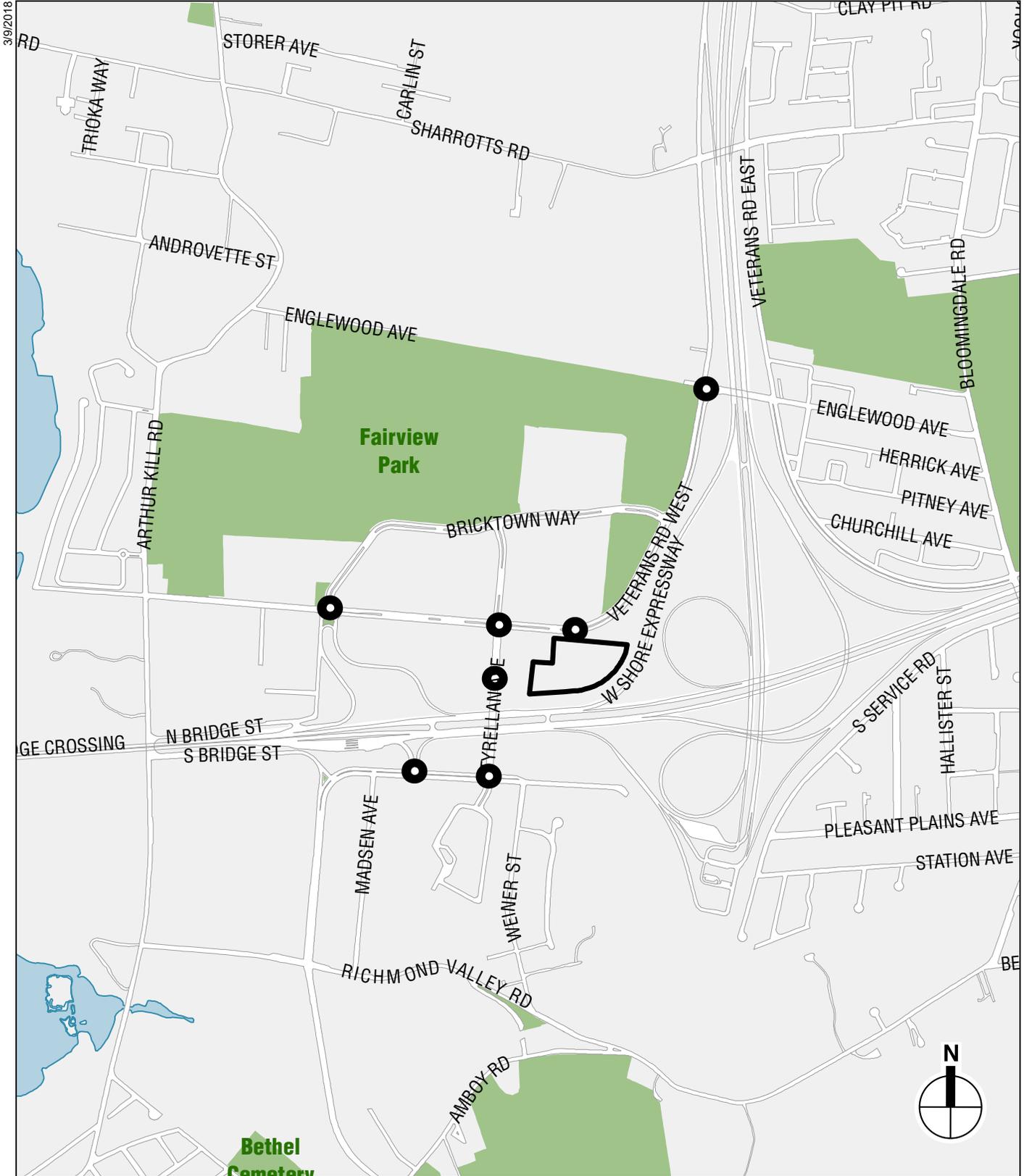
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 Project Site

2835 VETERANS ROAD WEST

With Action Incremental Vehicle Trips
Saturday Peak Hour
Figure E-13b



-  Project Site
-  Recommended Traffic Analysis Location

2835 VETERANS ROAD WEST

Recommended Traffic Analysis Locations
Figure E-14

Table E-6

Traffic Level 2 Screening Analysis Results—Recommended Analysis Locations

Intersection	Incremental Vehicle Trips				Recommended Analysis Locations
	Weekday AM	Weekday Midday	Weekday PM	Saturday	
Route 440 Westbound Off-Ramp and Veterans Road West	20	39	46	69	✓
Page Avenue and South Bridge Street	13	18	31	48	
Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue	28	56	81	112	✓
Page Avenue and Richmond Valley Road	13	18	31	48	
Page Avenue and Amboy Road	11	16	28	42	
Page Avenue and Hylan Boulevard	8	13	21	30	
Veteran Road West and Englewood Avenue	28	51	62	92	✓
Veterans Road East and Englewood Avenue	10	17	28	38	
Veterans Road West and Bricktown Way ¹	28	51	62	92	
Veterans Road West and Bricktown Way/Tyrellan Avenue	20	39	46	69	✓
Bloomingtondale Road and Veterans Road East	6	13	21	26	
Bloomingtondale Road and Drumgoole Road East	5	16	21	26	
Maguire Avenue and Drumgoole Road East	5	16	21	26	
Tyrellan Avenue and Boscombe Avenue	33	63	92	128	✓
Sharrott Avenue and Hylan Boulevard	7	10	14	22	
Tyrellan Avenue and Project Driveway	33	63	108	128	✓
Veterans Road West and Project Driveway	48	90	92	161	✓

Notes:
 Intersections with fewer than 20 incremental vehicle trips in all peak hours are not shown in this table.
 ✓ denotes intersections recommended for the detailed traffic analysis.
 (1) Incremental vehicle trips are all through movements at this intersection, therefore it is not recommended for analysis.

D. TRANSPORTATION ANALYSIS METHODOLOGIES

TRAFFIC OPERATIONS

The operation of all of the signalized intersections and unsignalized intersections in the study area were assessed using methodologies presented in the *2000 Highway Capacity Manual (HCM)* using Synchro 10 software. The *HCM* procedure evaluates the levels of service (LOS) for signalized and unsignalized intersections using average stop control delay, in seconds per vehicle, as described below.

SIGNALIZED INTERSECTIONS

The average control delay per vehicle is the basis for LOS determination for individual lane groups (grouping of movements in one or more travel lanes), the approaches, and the overall intersection. The levels of service are defined in **Table E-7**.

Table E-7

LOS Criteria for Signalized Intersections

LOS	Average Control Delay
A	≤ 10.0 seconds
B	>10.0 and ≤ 20.0 seconds
C	>20.0 and ≤ 35.0 seconds
D	>35.0 and ≤ 55.0 seconds
E	>55.0 and ≤ 80.0 seconds
F	>80.0 seconds

Source: Transportation Research Board. *Highway Capacity Manual*, 2000.

Although the *HCM* methodology calculates a volume-to-capacity (v/c) ratio, there is no strict relationship between v/c ratios and LOS as defined in the *HCM*. A high v/c ratio indicates substantial

traffic passing through an intersection, but a high v/c ratio combined with low average delay actually represents the most efficient condition in terms of traffic engineering standards, where an approach or the whole intersection processes traffic close to its theoretical maximum capacity with minimal delay. However, very high v/c ratios—especially those approaching or greater than 1.0—are often correlated with a deteriorated LOS. Other important variables affecting delay include cycle length, progression, and green time. LOS A and B indicate good operating conditions with minimal delay. At LOS C, the number of vehicles stopping is higher, but congestion is still fairly light. LOS D describes a condition where congestion levels are more noticeable and individual cycle failures (a condition where motorists may have to wait for more than one green phase to clear the intersection) can occur. Conditions at LOS E and F reflect poor service levels, and cycle breakdowns are frequent. The *HCM* methodology also provides for a summary of the total intersection operating conditions. The analysis chooses the two critical movements (the worst case from each roadway) and calculates a summary critical v/c ratio. The overall intersection delay, which determines the intersection’s LOS, is based on a weighted average of control delays of the individual lane groups. Within New York City, the midpoint of LOS D (45 seconds of delay) is generally considered as the threshold between acceptable and unacceptable operations.

Significant Impact Criteria

According to the criteria presented in the *CEQR Technical Manual*, impacts are considered significant and require examination of mitigation if they result in an increase in the With Action condition of 5 or more seconds of delay in a lane group over No Action levels beyond mid-LOS D. For No Action LOS E, a 4-second increase in delay is considered significant. For No Action LOS F, a 3-second increase in delay is considered significant. In addition, impacts are considered significant if levels of service deteriorate from acceptable A, B, or C in the No Action condition to marginally unacceptable LOS D (a delay in excess of 45 seconds, the midpoint of LOS D), or unacceptable LOS E or F in the With Action condition.

UN SIGNALIZED INTERSECTIONS

For unsignalized intersections, the average control delay is defined as the total elapsed time from which a vehicle stops at the end of the queue until the vehicle departs from the stop line. This includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The average control delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. The LOS criteria for unsignalized intersections are summarized in **Table E-8**.

Table E-8
LOS Criteria for Unsignalized Intersections

LOS	Average Control Delay
A	≤ 10.0 seconds
B	> 10.0 and ≤ 15.0 seconds
C	> 15.0 and ≤ 25.0 seconds
D	> 25.0 and ≤ 35.0 seconds
E	> 35.0 and ≤ 50.0 seconds
F	> 50.0 seconds

Source: Transportation Research Board. *Highway Capacity Manual*, 2000.

The LOS thresholds for unsignalized intersections are different from those for signalized intersections. The primary reason is that drivers expect different levels of performance from different

types of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection; hence, the corresponding control delays are higher at a signalized intersection than at an unsignalized intersection for the same LOS. In addition, certain driver behavioral considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized intersections. For these reasons, the corresponding delay thresholds for unsignalized intersections are lower than those of signalized intersections. As with signalized intersections, within New York City, the midpoint of LOS D (30 seconds of delay) is generally perceived as the threshold between acceptable and unacceptable operations.

Significant Impact Criteria

The same sliding scale of significant delays described for signalized intersections applies for unsignalized intersections. For the minor street to trigger significant impacts, at least 90 passenger car equivalents (PCE) must be identified in the With Action condition in any peak hour.

Vehicular and Pedestrian Safety Evaluation An evaluation of vehicular and pedestrian safety is necessary for locations within the traffic and pedestrian study areas that have been identified as high accident locations, where 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes occurred in any consecutive 12 months of the most recent 3-year period for which data are available. For these locations, accident trends are identified to determine whether projected vehicular and pedestrian traffic would further impact safety at these locations. The determination of potential significant safety impacts depends on the type of area where the project site is located, traffic volumes, accident types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety are identified and coordinated with NYCDOT.

PARKING CONDITIONS ASSESSMENT

The parking analysis identifies the extent to which off-street parking is available and utilized under existing and future conditions. It takes into consideration anticipated changes in area parking supply and provides a comparison of parking needs versus availability to determine if a parking shortfall is likely to result from parking displacement attributable to or additional demand generated by a proposed project. Typically, this analysis encompasses a study area within ¼ mile of the project site. If the analysis concludes a shortfall in parking within the ¼-mile study area, the study area could sometimes be extended to ½ mile to identify additional parking supply.

For proposed projects located in Manhattan or other central business district (CBD) areas, the inability of the proposed project or the surrounding area to accommodate the project's future parking demand is considered a parking shortfall, but is generally not considered significant due to the magnitude of available alternative modes of transportation. For other areas in New York City, a parking shortfall that exceeds more than half the available on-street and off-street parking spaces within ¼ mile of the project site may be considered significant. Additional factors, such as the availability and extent of transit in the area, proximity of the project to such transit, and patterns of automobile usage by area residents, could be considered to determine the significance of the identified parking shortfall. In some cases, if there is adequate parking supply within ½ mile of the project site, the projected parking shortfall may also not necessarily be considered significant.

E. TRAFFIC

2017 EXISTING CONDITIONS

ROADWAY NETWORK

The traffic study area encompasses six signalized intersections and one unsignalized intersection. The study area primarily encompasses intersections along Veterans Road West, Tyrellan Avenue, and Boscombe Avenue in Staten Island. These main vehicular access routes to the site within the study area are discussed below.

Veterans Road West extends from Arthur Kill Road to the west to Woodrow Road to the north and serves as a major roadway connecting the surrounding roadway network to the nearby Korean War Veterans Parkway and West Shore Expressway. Between Woodrow Road and Englewood Avenue, Veterans Road West operates as a one-way southbound roadway with three travel lanes. From Englewood Avenue to Bricktown Way, the roadway operates as a two-way roadway transitioning from northbound/southbound to eastbound/westbound. The roadway accommodates two moving lanes in the northbound direction and three moving lanes in the southbound direction until it transitions to two moving lanes at the intersection with Tyrellan Avenue. Between Bricktown Way and Arthur Kill Road the roadway operates with one moving lane in each direction. The S74, S78, and S84 bus routes operate along Veterans Road West.

Tyrellan Avenue is a two-way north/south roadway that connects Veterans Road West and Bricktown Centre to the north and extends to Boscombe Avenue to the south. It generally operates with two moving lanes in each direction.

Boscombe Avenue is a two-way east/west roadway that connects Page Avenue to the west and extends to a dead-end east of Werner Street at the southern edge of the study area. It generally operates with two moving lanes in each direction.

TRAFFIC CONDITIONS

Existing traffic volumes for the study area intersections were established based on field counts (including manual turning movement counts and Automatic Traffic Recorder [ATR] counts) conducted from May 12 to May 25, 2017. Based on discussions with the New York City Department of Transportation (DCP), traffic volumes that were collected and used in the *Riverside Galleria Draft Environmental Impact Statement (DEIS)* from June 2016 were used at intersections that overlapped between the two projects. Based on the 2017 collected data, adjustments were made to those volumes in consultation with DCP to account for traffic growth in the area between 2016 and 2017.

These traffic counts were used along with observations of traffic conditions to develop balanced 2017 existing traffic volume networks for the weekday AM, midday, and PM peak hours, as well as the Saturday peak hour, which are generally 7:45 AM to 8:45 AM, 12:45 PM to 1:45 PM, 4:30 PM to 5:30 PM and 1:00 PM to 2:00 PM, respectively.

Inventories of roadway geometry, traffic controls, bus stops, and parking regulations/activities were recorded to provide appropriate inputs for the operational analyses. Official signal timings were also obtained from NYCDOT for use in the analysis of the study area signalized intersections. **Figures E-15 through E-18** show the 2017 existing traffic volumes for the weekday AM, midday, PM, and Saturday peak hours, respectively.



 Project Site

2835 VETERANS ROAD WEST



2017 Existing Traffic Volumes
Saturday Peak Hour
Figure E-18

LEVELS OF SERVICE

Tables E-9 and E-10 presents the service conditions for existing traffic study area intersections. The analysis results indicate that most of the study area’s intersection approaches/lane groups operate acceptably—at mid-LOS D (delays of 45 seconds per vehicle [spv] or less for signalized intersections and 30 spv or less for unsignalized intersections) or better for the analysis peak hours. Approaches/lane groups operating at worse than mid-LOS D and those with v/c ratios of 0.90 or greater are listed below.

Table E-9
2017 Existing Conditions Level of Service Analysis
Signalized Intersections

Intersection	Weekday AM				Weekday Midday				Weekday PM				Saturday			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Signalized Intersections																
Route 440 Westbound Off-Ramp and Veterans Road West																
Eastbound	L	0.21	23.0	C	L	0.37	26.7	C	L	0.47	29.5	C	L	0.67	39.9	D
	TR	0.71	34.7	C	TR	0.73	34.9	C	TR	0.92	52.2	D	TR	0.85	43.3	D
Westbound	L	1.02	101.7	F	L	1.05	105.2	F	L	1.05	107.6	F	L	1.05	98.9	F
	T	0.73	45.7	D	T	0.87	54	D	T	0.93	63.1	E	T	1.04	86.5	F
Northbound	R	0.01	20.1	C	R	0.01	20.1	C	R	0.01	20.1	C	R	0.02	20.1	C
	LT	0.24	26.3	C	LT	0.28	26.8	C	LT	0.32	27.4	C	LT	0.43	29.3	C
Southbound	R	0.29	27.4	C	R	0.21	26.0	C	R	0.28	27.0	C	R	0.30	27.4	C
	L	0.02	27.4	C	L	0.05	27.8	C	L	0.05	27.8	C	L	0.09	28.2	C
	TR	0.21	29.8	C	TR	0.35	32.1	C	TR	0.37	32.4	C	TR	0.46	34.4	C
Route 440 EB Ramps/Church Driveway and Boscombe Avenue																
Eastbound	L	1.03	72.6	E	L	0.88	43.7	D	L	1.05	77.6	E	L	1.01	67.7	E
	TR	0.19	4.2	A	TR	0.26	4.9	A	TR	0.24	4.8	A	TR	0.31	4.3	A
Westbound	LT	0.74	49.8	D	LT	0.79	53.6	D	LT	0.91	66.9	E	LT	0.77	49.1	D
	R	0.12	25.9	C	R	0.53	33.0	C	R	0.53	33.1	C	R	0.53	28.3	C
Northbound	LTR	0.60	78.9	E	LTR	0.44	70.6	E	LTR	0.43	68.9	E	LTR	0.00	0.0	A
	LT	0.60	59.8	E	LT	0.37	49.3	D	LT	0.31	48.0	D	LT	0.23	48.6	D
Southbound	R	0.19	11.2	B	R	0.13	10.2	B	R	0.24	11.3	B	R	0.20	12.3	B
Veterans Road West and Englewood Avenue																
Eastbound	TR	0.02	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B
	L	0.51	16.3	B	L	0.48	15.8	B	L	0.52	16.4	B	L	0.72	22.2	C
Westbound	LT	0.52	16.7	B	LT	0.48	15.8	B	LT	0.53	16.8	B	LT	0.75	24.3	C
	L	0.00	0.0	A	L	0.00	0.0	A	L	0.02	12.7	B	L	0.02	11.7	B
Northbound	R	0.12	11.2	B	R	0.26	12.4	B	R	0.35	32	C	R	0.32	24.1	C
	LTR	0.26	11.8	B	LTR	0.23	11.5	B	LTR	0.35	12.4	B	LTR	0.34	12.3	B
Veterans Road West and Bricktown Way/Tyrellan Avenue																
Eastbound	LTR	0.29	32.4	C	LTR	0.57	30.3	C	LTR	0.57	32.8	C	LTR	0.65	34.4	C
	LTR	0.76	37.3	D	LTR	0.65	33.6	C	LTR	0.71	35.4	D	LTR	0.77	37.4	D
Northbound	LTR	0.44	21.2	C	LTR	0.98	31.0	C	LTR	0.90	28.2	C	LTR	1.05	36.3	D
	LTR	0.22	22.8	C	LTR	0.67	30.3	C	LTR	0.59	28.2	C	LTR	0.71	31.2	C
Tyrellan Avenue and Boscombe Avenue																
Eastbound	LTR	0.33	14.3	B	LTR	0.33	14.3	B	LTR	0.30	13.9	B	LTR	0.37	14.6	B
	LTR	0.12	12.3	B	LTR	0.08	11.9	B	LTR	0.07	11.8	B	LTR	0.13	12.4	B
Westbound	LTR	0.06	17.4	B	LTR	0.02	17.0	B	LTR	0.02	16.9	B	LTR	0.02	16.9	B
	LT	0.17	16.9	B	LT	0.24	25.2	C	LT	0.19	23.8	C	LT	0.22	24.3	C
Northbound																
	R	0.28	54.2	D	R	0.53	91.9	F	R	0.50	86.5	F	R	0.57	89.5	F
Notes: L = Left Turn, T = Through, R = Right Turn, LOS = Level of Service																

Table E-10
2017 Existing Conditions Level of Service Analysis
Unsignalized Intersections

Intersection	Weekday AM				Weekday Midday				Weekday PM				Saturday			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Unsignalized Intersections																
Tyrellan Avenue and Project Driveway																
Westbound	LR	0.01	9.3	A	LR	0.02	12.3	B	LR	0.03	11.5	B	LR	0.01	9.8	A
	T	0.13	0.0	A	T	0.16	0.0	A	T	0.16	0.0	A	T	0.19	0.0	A
Northbound	TR	0.07	0.0	A	TR	0.08	0.0	A	TR	0.08	0.0	A	TR	0.10	0.0	A
	LT	0.01	0.6	A	LT	0.00	0.2	A	LT	0.00	0.2	A	LT	0.00	0.0	A
Southbound	T	0.19	0.0	A	T	0.34	0.0	A	T	0.34	0.0	A	T	0.38	0.0	A
Notes: L = Left Turn, T = Through, R = Right Turn, LOS = Level of Service																

Veterans Road West

- Westbound left turn at the Route 440 Westbound Off-Ramp and Veterans Road West intersection operates at LOS F with a v/c ratio of 1.02 and a delay of 101.7 seconds per vehicle

- (spv) in the AM peak hour, LOS F with a v/c ratio of 1.05 and a delay of 105.2 spv in the Midday peak hour, LOS F with a v/c ratio of 1.05 and a delay of 107.6 spv in the PM peak hour, and LOS F with a v/c ratio of 1.05 and a delay of 98.9 spv in the Saturday peak hour;
- Eastbound through-right at the Route 440 Westbound Off-Ramp and Veterans Road West intersection operates at LOS D with a v/c ratio of 0.92 and a delay of 52.2 spv in the PM peak hour, and
 - Westbound through at the Route 440 Westbound Off-Ramp and Veterans Road West intersection operates at LOS D with a v/c ratio of 0.73 and a delay of 45.7 spv in the AM peak hour, LOS D with a v/c ratio of 0.87 and a delay of 54.0 spv in the Midday peak hour, LOS E with a v/c ratio of 0.93 and a delay of 63.1 spv in the PM peak hour, and LOS F with a v/c ratio of 1.04 and a delay of 86.5 spv in the Saturday peak hour,

Boscombe Avenue

- Eastbound left turn at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection operates at LOS E with a v/c ratio of 1.03 and a delay of 72.6 spv in the AM peak hour, LOS E with a v/c ratio of 1.05 and a delay of 77.6 spv in the PM peak hour, and LOS E with a v/c ratio of 1.01 and a delay of 67.7 spv in the Saturday peak hour, and
- Westbound left-through at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection operates at LOS D with a v/c ratio of 0.74 and a delay of 49.8 spv in the AM peak hour, LOS D with a v/c ratio of 0.79 and a delay of 53.6 spv in the Midday peak hour, LOS E with a v/c ratio of 0.91 and a delay of 66.9 spv in the PM peak hour, and LOS D with a v/c ratio of 0.77 and a delay of 49.1 spv in the Saturday peak hour.

Route 440 Eastbound Ramps / Church Driveway

- Northbound approach at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection operates at LOS E with a v/c ratio of 0.60 and a delay of 78.9 spv in the AM peak hour, LOS E with a v/c ratio of 0.44 and a delay of 70.6 spv in the Midday peak hour, and LOS E with a v/c ratio of 0.43 and a delay of 68.9 spv in the PM peak hour, and
- Southbound left-through at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection operates at LOS E with a v/c ratio of 0.60 and a delay of 59.8 spv in the AM peak hour, LOS D with a v/c ratio of 0.37 and a delay of 49.3 spv in the Midday peak hour, LOS D with a v/c ratio of 0.31 and a delay of 48.0 spv in the PM peak hour, and LOS D with a v/c ratio of 0.23 and a delay of 48.6 spv in the Saturday peak hour.

Tyrellan Avenue

- Southbound right turn at the Tyrellan Avenue and Boscombe Avenue intersection operates at LOS D with a v/c ratio of 0.28 and a delay of 54.2 spv in the AM peak hour, LOS F with a v/c ratio of 0.53 and a delay of 91.9 spv in the Midday peak hour, LOS F with a v/c ratio of 0.50 and a delay of 86.5 spv in the PM peak hour, LOS F with a v/c ratio of 0.57 and a delay of 89.5 spv in the Saturday peak hour.

THE FUTURE WITHOUT THE PROPOSED PROJECT

The No Action condition was developed by increasing existing (2017) traffic levels by the expected growth in overall travel through and within the study area. As per *CEQR* guidelines, an annual background growth rate of 1.00 percent was assumed for each year from 2017 to 2021. In addition, a total of eight development projects expected to occur in the No Action condition (No

2835 Veterans Road West

Build projects) were identified in coordination with DCP as being planned for the study area (see **Figure E-19**). Person and vehicle trips generated by the projects, which include trips associated with the as-of-right project on the project site, were then determined and incorporated into the No Action condition traffic analysis. **Table E-11** summarizes the projects that were accounted for in this future 2021 baseline. Traffic mitigation from the *Charleston Mixed Use FEIS* (2013) was assumed to be implemented at the intersections of Route 440 Westbound Off-Ramp and Veterans Road West and Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue, consisting of the following mitigation measures:

Route 440 Westbound Off-Ramp and Veterans Road West

- PM Peak Hour: Reallocate 7 seconds of green time from the northbound phase to the eastbound/westbound phase.

Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue

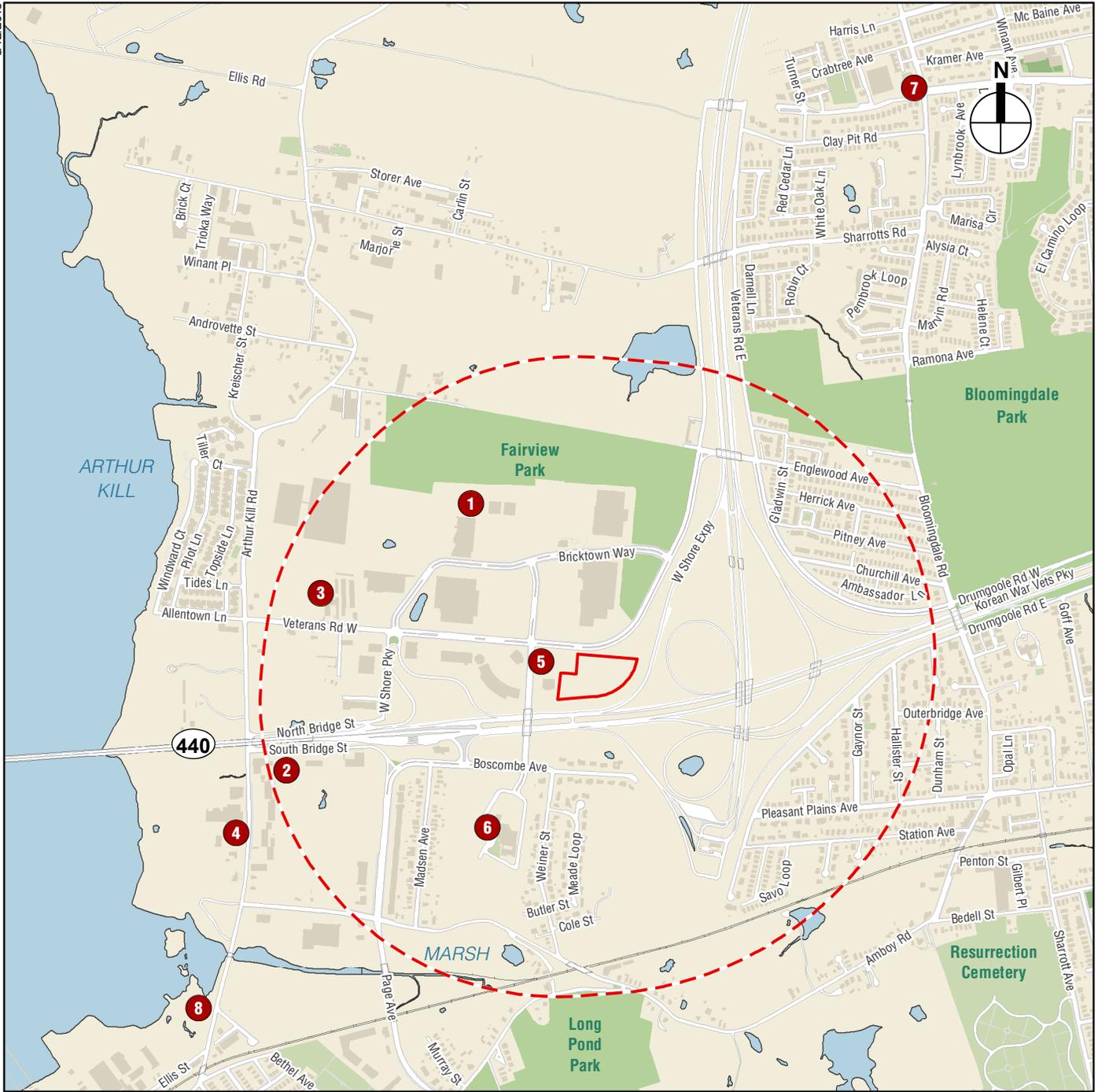
- Midday Peak Hour: Reallocate 1 second of green time from the eastbound phase to the eastbound/westbound phase.

Table E-11
No Build Projects Expected to be Complete by 2021

Map Ref. No. ¹	Project Name/ Address	Development Program	Transportation Assumptions	Status/ Build Year ²
Development Projects Within ½-Mile				
1	Charleston Mixed-Use Development (Fairview Park)	195,000 gsf retail, 15,000 gsf library, 23 acres open space	Transportation assumptions from <i>Charleston Mixed Use FEIS</i> (2013)	56,000 gsf of retail completed fall of 2015. Remaining development program expected to be completed by 2019
2	4830 Arthur Kill Road	14,674 gsf office	Transportation assumptions from <i>CEQR Technical Manual, New Stapleton Waterfront Development Project FEIS</i> (2005), and U.S. Census Bureau American Community Survey 2006–2010 Reverse Journey to Work estimates	Under Construction
3	3040 Veterans Road West	51,020 gsf retail	Transportation assumptions from <i>CEQR Technical Manual</i> and <i>Charleston Mixed Use FEIS</i> (2013)	2018
4	4885-4895 Arthur Kill Road	11,707 gsf retail	See project site 3, above	Under Construction
5	2875 Veterans Road West	16,251 gsf retail	See project site 3, above	Under Construction
6	200 Boscombe Avenue	70 residential units	Transportation assumptions from <i>CEQR Technical Manual, Charleston Mixed-Use FEIS</i> (2013), and U.S. Census Bureau American Community Survey 2010–2014 Journey to Work estimates	Under Construction
7	P.S. 62R (Crabtree) – Staten Island Block 7092, Lots 39 and 75	67,000 gsf primary school (444 seats, 34 staff)	Transportation assumptions from <i>P.S. 62R FEIS</i> (2011), no trips through study area	Completed – Phased enrollment through 2020
8	5077 Arthur Kill Road	13,223 gsf warehouse	Transportation assumptions from Staten Island Marine Development Travel Demand Analysis Memorandum (2015)	2021
Notes:				
¹ See Figure E-19 .				
² Projects that are currently under construction are assumed to be complete by 2021; projects for which an expected date of completion is not available are assumed to be complete by the Proposed Project's Build year of 2021.				
Sources: DCP; NYC Dept. of Buildings.				

TRAFFIC OPERATIONS

The No Action condition traffic volumes are shown in **Figures E-20 through E-23** for the weekday AM, Midday, PM, and Saturday peak hours. **Tables E-12 and E-13** present a comparison of the Existing and the No Action level of service conditions at the traffic study area intersections. The analysis results indicate that, for the analysis peak hours in 2021 No Action condition, most of the



- Project Site
- Study Area Boundary (Half-mile perimeter)
- 1 No Build Project

0 1,000 FEET

study area's intersection approaches/lane groups continue to operate at the same LOS as existing conditions or within acceptable levels—at mid-LOS D (delays of 45 spv or less for signalized intersections and 30 spv or less for unsignalized intersections) or better except:

Veterans Road West

- Eastbound left at the Route 440 Westbound Off-Ramp and Veterans Road West intersection would deteriorate to LOS F with a v/c ratio of 1.31 and a delay of 204.8 spv during the Saturday peak hour,
- Eastbound through-right at the Route 440 Westbound Off-Ramp and Veterans Road West intersection would deteriorate to LOS F with a v/c ratio of 1.41 and a delay of 229.3 spv during the Midday peak hour, to LOS F with a v/c ratio of 1.64 and a delay of 326.7 spv during the PM peak hour, and to LOS F with a v/c ratio of 2.22 and a delay of 588.5 spv during the Saturday peak hour,
- Westbound left at the Route 440 Westbound Off-Ramp and Veterans Road West intersection would deteriorate to LOS F with a v/c ratio of 1.35 and a delay of 223.8 spv during the AM peak hour, to LOS F with a v/c ratio of 2.33 and a delay of 652.9 spv during the Midday peak hour, and to LOS F with a v/c ratio of 1.10 and a delay of 104.9 spv during the PM peak hour; and
- Westbound through at the Route 440 Westbound Off-Ramp and Veterans Road West intersection would deteriorate to LOS D with a v/c ratio of 0.83 and a delay of 53.3 spv during the AM peak hour, to LOS F with a v/c ratio of 1.09 and a delay of 99.7 spv during the Midday peak hour, and to LOS F with a v/c ratio of 1.30 and a delay of 177.5 spv during the Saturday peak hour.

Boscombe Avenue

- Eastbound left at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection would deteriorate to LOS F with a v/c ratio of 1.11 and a delay of 98.5 spv during the AM peak hour, to LOS E with a v/c ratio of 0.99 and a delay of 62.7 spv during the Midday peak hour, to LOS F with a v/c ratio of 1.15 and a delay of 115.1 spv during the PM peak hour, and to LOS F with a v/c ratio of 1.11 and a delay of 99.2 spv during the Saturday peak hour;
- Westbound left-through at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection would deteriorate to LOS E with a v/c ratio of 0.91 and a delay of 66.2 spv during the Midday peak hour, to LOS F with a v/c ratio of 1.04 and a delay of 95.7 spv during the PM peak hour, and to LOS E with a v/c ratio of 0.90 and a delay of 61.7 spv during the Saturday peak hour, and

Westbound right at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection would deteriorate to LOS F with a v/c ratio of 1.08 and a delay of 98.5 spv during the Midday peak hour, to LOS F with a v/c ratio of 1.06 and a delay of 92.6 spv during the PM peak hour, and to LOS F with a v/c ratio of 1.08 and a delay of 89.8 spv during the Saturday peak hour.

Route 440 Westbound Off-Ramp

- Northbound left-through at the Route 440 Westbound Off-Ramp & Veterans Road West intersection will deteriorate to LOS D with a v/c ratio of 0.76 and a delay of 48.1 spv during the PM peak hour.

2835 Veterans Road West

Route 440 Eastbound Ramps / Church Driveway

- Northbound approach at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection would deteriorate to LOS F with a v/c ratio of 0.62 and a delay of 82.5 spv during the AM peak hour; and
- Southbound left-through at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection would deteriorate to LOS F with a v/c ratio of 0.70 and a delay of 66.4 spv during the AM peak hour.

Tyrellan Avenue

- Southbound right at the Tyrellan Avenue and Boscombe Avenue intersection would deteriorate to LOS F with a v/c ratio of 0.93 and a delay of 121.7 spv during the Midday peak hour, to LOS F with a v/c ratio of 0.80 and a delay of 104.6 spv during the PM peak hour, and to LOS F with a v/c ratio of 1.20 and a delay of 177.3 spv during the Saturday peak hour;
- Northbound approach at the Veterans Road West and Bricktown Way/Tyrellan Avenue intersection would deteriorate to LOS E with a v/c ratio of 2.33 and a delay of 65.5 spv during the Saturday peak hour, and
- Southbound approach at the Veterans Road West and Bricktown Way/Tyrellan Avenue intersection would deteriorate to LOS D with a v/c ratio of 0.97 and a delay of 53.6 spv during the Saturday peak hour.

Table E-12
Existing and 2021 No Action Conditions Level of Service Analysis
Signalized Intersections

Intersection	Weekday AM												Weekday Midday												Weekday PM												Saturday											
	Existing				No Action				Existing				No Action				Existing				No Action				Existing				No Action																			
	Lane	v/c	Delay	LOS	Lane	v/c	Delay	LOS	Lane	v/c	Delay	LOS	Lane	v/c	Delay	LOS	Lane	v/c	Delay	LOS	Lane	v/c	Delay	LOS	Lane	v/c	Delay	LOS	Lane	v/c	Delay	LOS																
Route 440 Westbound Off-Ramp and Veterans Road West																																																
Eastbound	L	0.21	23.0	C	L	0.31	25.1	C	L	0.37	26.7	C	L	0.69	41.9	D	L	0.47	29.5	C	L	0.57	27.5	C	L	0.67	39.9	D	L	1.31	204.8	F																
Westbound	TR	0.71	34.7	F	TR	0.81	40.6	F	TR	0.73	34.9	F	TR	1.41	229.3	F	TR	0.92	52.2	D	TR	1.64	326.7	F	TR	0.85	43.3	D	TR	2.22	588.5	F																
Northbound	T	0.73	45.7	D	T	0.83	53.3	D	T	0.87	54.0	D	T	1.09	99.7	F	T	0.93	63.1	E	T	0.91	45.6	D	T	1.04	86.5	F	T	1.30	177.5	F																
Southbound	R	0.01	20.1	C	R	0.01	20.1	C	R	0.01	20.1	C	R	0.01	20.1	C	R	0.01	15.7	B	R	0.02	20.1	C	R	0.02	20.1	C	R	0.40	29.2	C																
	LT	0.24	26.3	C	LT	0.35	28.1	C	LT	0.28	26.8	C	LT	0.52	31.2	C	LT	0.32	27.4	C	LT	0.76	48.1	D	LT	0.43	29.3	C	LT	0.76	39.8	D																
	R	0.29	27.4	C	R	0.33	28.1	C	R	0.31	27.6	C	R	0.31	27.6	C	R	0.28	27.0	C	R	0.50	37.8	D	R	0.30	27.4	C	R	0.40	29.2	C																
	L	0.02	27.4	C	L	0.02	27.4	C	L	0.05	27.8	C	L	0.05	27.8	C	L	0.05	27.8	C	L	0.05	27.8	C	L	0.09	28.2	C	L	0.10	28.4	C																
	TR	0.21	29.6	C	TR	0.27	30.7	C	TR	0.35	32.1	C	TR	0.53	36.3	D	TR	0.37	32.4	C	TR	0.56	37.0	D	TR	0.46	34.4	C	TR	0.72	43.4	D																
Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue																																																
Eastbound	L	1.03	72.6	E	L	1.11	98.5	F	L	0.88	43.7	D	L	0.99	62.7	E	L	1.05	77.6	E	L	1.15	115.1	F	L	1.01	67.7	E	L	1.11	99.2	F																
Westbound	TR	0.19	4.2	A	TR	0.21	4.3	A	TR	0.26	4.9	A	TR	0.32	5.3	A	TR	0.24	4.8	A	TR	0.29	5.0	A	TR	0.31	4.3	A	TR	0.37	4.8	A																
Northbound	LT	0.74	49.8	D	LT	0.80	53.5	D	LT	0.79	53.6	D	LT	0.91	66.2	E	LT	0.91	66.9	E	LT	1.04	95.7	F	LT	0.77	49.1	D	LT	0.90	61.7	E																
Southbound	R	0.12	25.9	C	R	0.32	29.0	C	R	0.53	33.0	C	R	1.06	98.5	F	R	0.53	33.1	C	R	1.06	92.6	F	R	0.53	28.3	C	R	1.08	89.8	F																
	LTR	0.60	78.9	E	LTR	0.62	82.5	F	LTR	0.44	70.6	E	LTR	0.44	70.6	E	LTR	0.43	68.9	E	LTR	0.43	68.9	E	LTR	0.00	0.0	A	LTR	0.00	0.0	A																
	LT	0.60	59.8	E	LT	0.70	66.4	E	LT	0.50	53.5	D	LT	0.50	53.5	D	LT	0.31	48.0	D	LT	0.43	51.1	D	LT	0.23	48.6	D	LT	0.40	52.2	D																
	R	0.19	11.2	B	R	0.20	11.4	B	R	0.13	10.2	B	R	0.14	10.8	B	R	0.24	11.3	B	R	0.26	11.5	B	R	0.20	12.3	B	R	0.22	12.4	B																
Veterans Road West and Englewood Avenue																																																
Eastbound	TR	0.02	10.3	B	TR	0.02	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B																
Westbound	L	0.51	16.3	B	L	0.55	17.1	B	L	0.48	15.8	B	L	0.56	17.4	B	L	0.52	16.4	B	L	0.57	17.6	B	L	0.72	22.2	C	L	0.81	27.6	C																
Northbound	LT	0.52	16.7	B	LT	0.58	18.1	B	LT	0.48	15.8	B	LT	0.56	17.4	B	LT	0.53	16.8	B	LT	0.60	18.6	B	LT	0.75	24.3	C	LT	0.86	31.9	C																
Southbound	R	0.12	11.2	B	R	0.15	11.3	B	R	0.26	12.4	B	R	0.30	13.0	B	R	0.35	13.2	C	R	0.43	14.1	C	R	0.32	14.1	C	R	0.41	20.5	C																
	LTR	0.26	11.8	B	LTR	0.32	12.2	B	LTR	0.23	11.5	B	LTR	0.33	12.2	B	LTR	0.35	12.4	B	LTR	0.45	13.3	B	LTR	0.34	12.3	B	LTR	0.48	13.6	B																
Veterans Road West and Bricktown Way/Tyrellan Avenue																																																
Eastbound	LTR	0.29	32.4	C	LTR	0.36	32.9	C	LTR	0.57	30.3	C	LTR	0.95	36.9	D	LTR	0.57	32.8	C	LTR	0.76	36.0	D	LTR	0.65	34.4	C	LTR	1.10	37.1	D																
Westbound	LTR	0.76	37.3	C	LTR	0.83	41.0	D	LTR	0.65	33.6	C	LTR	0.74	36.4	D	LTR	0.71	35.4	D	LTR	0.80	39.0	D	LTR	0.77	37.4	D	LTR	0.88	44.0	D																
Northbound	LTR	0.44	21.2	C	LTR	0.50	21.7	C	LTR	0.98	31.0	C	LTR	1.88	42.1	D	LTR	0.90	28.2	C	LTR	1.63	35.7	D	LTR	1.05	36.3	D	LTR	2.33	65.5	E																
Southbound	LTR	0.22	22.6	C	LTR	0.29	23.6	C	LTR	0.67	30.3	C	LTR	0.89	42.0	D	LTR	0.59	28.2	C	LTR	0.61	35.4	D	LTR	0.71	31.2	C	LTR	0.97	53.6	D																
Tyrellan Avenue and Boscombe Avenue																																																
Eastbound	LTR	0.33	14.3	B	LTR	0.42	15.7	B	LTR	0.33	14.3	B	LTR	0.10	12.1	B	LTR	0.30	13.9	B	LTR	0.37	14.7	B	LTR	0.33	14.3	B	LTR	0.49	16.3	B																
Westbound	LTR	0.12	12.3	B	LTR	0.13	12.3	B	LTR	0.08	11.9	B	LTR	0.10	12.1	B	LTR	0.07	11.8	B	LTR	0.12	12.3	B	LTR	0.12	12.3	B	LTR	0.15	12.6	B																
Northbound	LTR	0.06	17.4	B	LTR	0.06	17.4	B	LTR	0.02	17.0	B	LTR	0.02	17.0	B	LTR	0.02	16.9	B	LTR	0.02	16.9	B	LTR	0.06	17.4	B	LTR	0.02	17.0	B																
Southbound	LT	0.17	16.9	B	LT	0.22	19.9	B	LT	0.24	25.2	C	LT	0.30	25.5	C	LT	0.19	23.8	C	LT	0.27	24.6	C	LT	0.17	16.9	B	LT	0.29	24.2	C																
	R	0.28	54.2	D	R	0.36	53.6	D	R	0.53	91.9	F	R	0.93	121.7	F	R	0.50	86.5	F	R	0.80	104.6	F	R	0.28	54.2	C	R	1.20	177.3	F																

Notes: L = Left Turn, T = Through, R = Right Turn, LOS = Level of Service

Table E-13
Existing and 2021 No Action Conditions Level of Service Analysis
Unsignalized Intersections

Intersection	Weekday AM								Weekday Midday								Weekday PM								Saturday											
	Existing				No Action				Existing				No Action				Existing				No Action				Existing				No Action							
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS				
Veterans Road West and Project Driveway																																				
Eastbound	Intersection does not exist in Existing Conditions								Intersection does not exist in Existing Conditions								Intersection does not exist in Existing Conditions								Intersection does not exist in Existing Conditions											
Westbound	Intersection does not exist in Existing Conditions								Intersection does not exist in Existing Conditions								Intersection does not exist in Existing Conditions								Intersection does not exist in Existing Conditions											
Northbound	Intersection does not exist in Existing Conditions								Intersection does not exist in Existing Conditions								Intersection does not exist in Existing Conditions								Intersection does not exist in Existing Conditions											
Tyrellan Avenue and Project Driveway																																				
Westbound	LR	0.01	9.3	A	LR	0.05	13.5	B	LR	0.02	12.3	B	LR	0.32	20.0	C	LR	0.03	11.5	B	LR	0.26	19.4	C	LR	0.01	9.8	A	LR	0.33	23.8	C				
Northbound	T	0.13	0.0	A	T	0.14	0.0	A	T	0.16	0.0	A	T	0.19	0.0	A	T	0.16	0.0	A	T	0.19	0.0	A	T	0.19	0.0	A	T	0.19	0.0	A	T	0.22	0.0	A
Southbound	TR	0.07	0.0	A	TR	0.08	0.0	A	TR	0.08	0.0	A	TR	0.12	0.0	A	TR	0.08	0.0	A	TR	0.11	0.0	A	TR	0.10	0.0	A	TR	0.10	0.0	A	TR	0.14	0.0	A
	LT	0.01	0.6	A	LT	0.01	0.5	A	LT	0.00	0.2	A	LT	0.00	0.2	A	LT	0.00	0.2	A	LT	0.00	0.2	A	LT	0.00	0.0	A	LT	0.00	0.0	A	LT	0.00	0.0	A
	T	0.19	0.0	A	T	0.23	0.0	A	T	0.34	0.0	A	T	0.45	0.0	A	T	0.34	0.0	A	T	0.47	0.0	A	T	0.38	0.0	A	T	0.55	0.0	A	T	0.55	0.0	A

Notes: L = Left Turn, T = Through, R = Right Turn, LOS = Level of Service

THE FUTURE WITH THE PROPOSED ACTION

Overall, the 2021 completion of the proposed project would result in approximately 81, 153, 200, and 289 incremental vehicle trips during the weekday AM, midday, PM, and Saturday peak hours, respectively. The related peak hour traffic assignments are discussed above in Section D, “Level 2 Screening Assessment,” and the incremental peak hour trips resulting from the proposed project are shown in **Figures E-10 to E-13**.

TRAFFIC OPERATIONS

As part of the proposed project, a traffic signal would be installed at the Veterans Road West and the Project Driveway intersection. Similar to the adjacent Tyrellan Avenue and Veterans Road West traffic signal, the Project Driveway traffic signal would operate with three phases to allow an eastbound phase, a westbound phase with a protected westbound left turn into the Project Driveway, and a northbound phase exiting the Project Driveway. The westbound approach on Veterans Road West would also be restriped from one 12-foot shared left-turn/through lane, one 12-foot through lane and one 10-foot median to one 11-foot left-turning pocket (150-feet in length) and two 11-foot through lanes.

The With Action condition traffic volumes are shown in **Figures E-24 to E-27** for the weekday AM, Midday, PM, and Saturday peak hours. **Tables E-14 and E-15** show the comparison of traffic levels of service for the No Action and With Action conditions. Based on the criteria presented in the *CEQR Technical Manual* and discussed previously in Section E, “Transportation Analysis Methodologies,” the following lane groups would deteriorate in level of service:

Veterans Road West

- Westbound left at the Route 440 Westbound Off-Ramp and Veterans Road West intersection would deteriorate within LOS F (from a v/c ratio of 2.33 and a delay of 652.9 spv to a v/c ratio of 2.41 and a delay of 685.9 spv) during the Midday peak hour, and from LOS D to LOS F (from a v/c ratio of 0.90 and a delay of 49.0 spv to a v/c ratio of 1.11 and a delay of 117.3 spv) during the PM peak hour, increases in delay of more than three and five seconds, respectively. These increases in delay constitute significant adverse impacts.
- Westbound through at the Route 440 Westbound Off-Ramp and Veterans Road West intersection would deteriorate from LOS D to LOS E (from a v/c ratio of 0.91 and a delay of 45.6 spv to a v/c ratio of 1.14 and a delay of 115.1 spv) during the PM peak hour, and within LOS F, from a v/c ratio of 1.08 and a delay of 82.1 spv to a v/c ratio of 1.10 and a delay of



Project Site

0 1,000 FEET



Project Site

0 1,000 FEET

2835 Veterans Road West

88.3 spv during the Saturday peak hour, an increase in delay of more than five and three seconds, respectively. These increases in delay constitute significant adverse impacts.

- Eastbound through-right at the Route 440 Westbound Off-Ramp and Veterans Road West intersection would deteriorate within LOS F (from a v/c ratio of 1.41 and a delay of 229.3 spv to a v/c ratio of 1.42 and a delay of 232.7 spv) during the Midday peak hour, within LOS F (from a v/c ratio of 1.64 and a delay of 326.7 spv to a v/c ratio of 2.07 and a delay of 522.1 spv) during the PM peak hour, and within LOS F (from a v/c ratio of 2.22 and a delay of 588.5 spv to a v/c ratio of 2.24 and a delay of 598.8 spv) during the Saturday peak hour, increases in delay of more than three seconds. These increases in delay constitute significant adverse impacts.
- Eastbound left at the Route 440 Westbound Off-Ramp & Veterans Road West intersection would deteriorate from LOS C to LOS D (from a v/c ratio of 0.57 and a delay of 27.5 spv to a v/c ratio of 0.81 and a delay of 53.9 spv) during the PM peak hour, and within LOS F (from a v/c ratio of 1.31 and a delay of 204.8 spv to a v/c ratio of 1.35 and a delay of 220.7 spv) during the Saturday peak hour, increases in delay of more than five and three seconds, respectively. These increases in delay constitute significant adverse impacts.
- Eastbound approach at the Veterans Road West and Bricktown Way/Tyrellan Avenue intersection would deteriorate within LOS D, from a v/c ratio of 1.10 and a delay of 37.1 spv to a v/c ratio of 1.10 and a delay of 45.5 spv in the Saturday peak hour, an increase in delay of more than five seconds. This increase in delay constitutes a significant adverse impact.

Boscombe Avenue

- Westbound left-through at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection would deteriorate within LOS F (from a v/c ratio of 1.04 and a delay of 95.7 spv to a v/c ratio of 1.08 and a delay of 107.4 spv during the PM peak hour), and within LOS E (from a v/c ratio of 0.90 and a delay of 61.7 spv to a v/c ratio of 0.94 and a delay of 69.3 spv) during the Saturday peak hour, increases in delay of more than three and four seconds, respectively. These increases in delay constitute significant adverse impacts.
- Westbound right at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue intersection would deteriorate within LOS F (from a v/c ratio of 1.08 and a delay of 98.5 spv to a v/c ratio of 1.15 and a delay of 124.3 spv) during the Midday peak hour, within LOS F (from a v/c ratio of 1.06 and a delay of 92.6 spv to a v/c ratio of 1.15 and a delay of 124.8 spv) during the PM peak hour, and within LOS F (from a v/c ratio of 1.08 and a delay of 89.8 spv to a v/c ratio of 1.17 and a delay of 124.8 spv) during the Saturday peak hour, increases in delay of more than three seconds. These increases in delay constitute significant adverse impacts.

Tyrellan Avenue

- Southbound right at the Tyrellan Avenue and Boscombe Avenue intersection would deteriorate within LOS F (from a v/c ratio of 1.20 and a delay of 177.3 spv to a v/c ratio of 1.36 and a delay of 239.1 spv) during the Saturday peak hour, an increase in delay of more than three seconds. This increase in delay constitutes a significant adverse impact.

Project Driveway at Tyrellan Avenue

- Westbound left/right at the Tyrellan Avenue and Project Driveway intersection would deteriorate from LOS C to LOS E (from a v/c ratio of 0.33 and a delay of 23.8 spv to a v/c ratio of 0.74 and a delay of 49.2 spv during the Saturday peak hour, an increase in delay of

more than five seconds. Since the lane group with a deteriorated level of service is a private driveway, this does not constitute a significant adverse impact.

Table E-14
2021 No Action and With Action Conditions Level of Service Analysis
Signalized Intersections

Intersection	Weekday AM												Weekday Midday												Weekday PM												Saturday											
	No Action				With Action				No Action				With Action				No Action				With Action				No Action				With Action																			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS																
Route 440 Westbound Off-Ramp and Veterans Road West																																																
Eastbound	L	0.31	25.1	C	L	0.31	25.1	C	L	0.69	41.9	D	L	0.69	41.9	D	L	0.57	27.5	C	L	0.81	53.9	D+	L	1.31	204.8	F	L	1.36	220.7	F+																
Westbound	TR	0.81	40.8	D	TR	0.81	40.8	D	TR	1.41	229.3	F	TR	1.42	232.7	F	TR	1.64	326.7	F	TR	2.07	522.1	F+	TR	2.22	588.5	F	TR	2.24	586.8	F+																
Northbound	L	1.35	222.8	F	L	1.35	222.4	F	L	2.33	652.9	F	L	2.42	685.9	F+	L	0.90	49.0	D	L	1.11	104.9	F	L	1.10	104.9	F	L	1.11	108.1	F																
Southbound	L	0.83	53.3	D	L	0.83	52.2	D	L	1.09	99.7	F	L	1.09	98.0	F	L	0.91	45.6	D	L	1.14	115.1	F+	L	1.30	177.5	F	L	1.32	186.9	F+																
Eastbound	TR	0.01	20.1	C	TR	0.01	20.1	C	TR	0.01	20.1	C	TR	0.01	20.1	C	TR	0.01	15.7	B	TR	0.01	20.1	C	TR	0.02	20.1	C	TR	0.02	20.1	C																
Westbound	LT	0.35	28.1	C	LT	0.35	28.1	C	LT	0.52	31.2	C	LT	0.52	31.2	C	LT	0.76	48.1	D	LT	0.55	31.2	C	LT	0.76	39.8	D	LT	0.76	39.8	D																
Northbound	R	0.33	28.1	C	R	0.38	29.0	C	R	0.31	27.8	C	R	0.41	29.5	C	R	0.50	37.8	D	R	0.46	30.5	C	R	0.40	29.2	C	R	0.55	32.6	C																
Southbound	L	0.02	27.4	C	L	0.02	27.4	C	L	0.05	27.8	C	L	0.05	27.8	C	L	0.05	27.8	C	L	0.05	27.8	C	L	0.10	28.4	C	L	0.10	28.4	C																
Westbound	TR	0.27	30.7	C	TR	0.27	30.7	C	TR	0.53	36.3	D	TR	0.53	36.3	D	TR	0.26	37.0	D	TR	0.56	37.0	D	TR	0.72	43.4	D	TR	0.72	43.4	D																
Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue																																																
Eastbound	L	1.11	98.5	F	L	1.11	98.5	F	L	0.99	62.7	D	L	0.99	62.7	D	L	1.15	115.1	F	L	1.15	115.1	F	L	1.11	99.2	F	L	1.11	99.2	F																
Westbound	TR	0.21	4.3	A	TR	0.22	4.4	A	TR	0.31	5.2	A	TR	0.32	5.3	A	TR	0.29	5.0	A	TR	0.30	5.1	A	TR	0.37	4.8	A	TR	0.39	5.0	A																
Northbound	LT	0.80	53.5	D	LT	0.81	54.4	D	LT	0.91	66.2	E	LT	0.93	69.0	E	LT	1.04	95.7	F	LT	1.08	107.4	F+	LT	0.90	61.7	E	LT	0.94	69.3	E+																
Southbound	R	0.32	29.0	C	R	0.35	29.5	C	R	1.08	98.5	F	R	1.15	124.3	F	R	1.06	92.6	F	R	1.15	124.8	F+	R	1.08	89.8	F	R	1.17	124.8	F+																
Eastbound	LTR	0.62	82.5	F	LTR	0.62	82.5	F	LTR	0.44	70.6	E	LTR	0.44	70.6	E	LTR	0.43	68.9	E	LTR	0.43	68.9	E	LTR	0.00	0.0	A	LTR	0.00	0.0	A																
Westbound	LT	0.70	66.4	E	LT	0.71	67.2	E	LT	0.50	53.5	D	LT	0.51	53.8	D	LT	0.43	51.1	D	LT	0.43	51.1	D	LT	0.40	52.2	D	LT	0.40	52.2	D																
Northbound	R	0.20	11.4	B	R	0.20	11.4	B	R	0.14	10.8	B	R	0.14	10.8	B	R	0.26	11.5	B	R	0.26	11.5	B	R	0.22	12.4	B	R	0.22	12.4	B																
Southbound	LTR	0.02	10.3	B	LTR	0.02	10.3	B	LTR	0.01	10.3	B	LTR	0.01	10.3	B	LTR	0.01	10.3	B	LTR	0.01	10.3	B	LTR	0.01	10.3	B	LTR	0.01	10.3	B																
Eastbound	L	0.55	17.1	B	L	0.55	17.2	B	L	0.56	17.4	B	L	0.56	17.4	B	L	0.57	17.6	B	L	0.57	17.7	B	L	0.81	27.6	C	L	0.82	28.1	C																
Westbound	TR	0.83	41.0	D	TR	0.83	42.7	D	TR	0.74	36.4	D	TR	0.74	36.4	D	TR	0.80	18.6	B	TR	0.81	18.7	B	TR	0.86	31.9	C	TR	0.86	32.5	C																
Northbound	L	0.00	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A	L	0.03	11.9	B	L	0.03	12.1	B	L	0.03	10.9	B	L	0.03	11.6	B																
Southbound	R	0.15	11.3	B	R	0.15	11.4	B	R	0.33	13.2	B	R	0.34	13.3	B	R	0.43	27.2	C	R	0.45	31.2	C	R	0.41	20.5	C	R	0.43	24.3	C																
Eastbound	LTR	0.32	12.2	B	LTR	0.33	12.3	B	LTR	0.33	13.2	B	LTR	0.34	13.3	B	LTR	0.45	33.3	C	LTR	0.47	31.5	C	LTR	0.48	33.6	C	LTR	0.51	33.9	C																
Veterans Road West and Englewood Avenue																																																
Eastbound	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B																
Westbound	L	0.55	17.1	B	L	0.55	17.2	B	L	0.56	17.4	B	L	0.56	17.4	B	L	0.57	17.6	B	L	0.57	17.7	B	L	0.81	27.6	C	L	0.82	28.1	C																
Northbound	LT	0.80	53.5	D	LT	0.81	54.4	D	LT	0.91	66.2	E	LT	0.93	69.0	E	LT	1.04	95.7	F	LT	1.08	107.4	F+	LT	0.90	61.7	E	LT	0.94	69.3	E+																
Southbound	R	0.32	29.0	C	R	0.35	29.5	C	R	1.08	98.5	F	R	1.15	124.3	F	R	1.06	92.6	F	R	1.15	124.8	F+	R	1.08	89.8	F	R	1.17	124.8	F+																
Eastbound	LTR	0.62	82.5	F	LTR	0.62	82.5	F	LTR	0.44	70.6	E	LTR	0.44	70.6	E	LTR	0.43	68.9	E	LTR	0.43	68.9	E	LTR	0.00	0.0	A	LTR	0.00	0.0	A																
Westbound	LT	0.70	66.4	E	LT	0.71	67.2	E	LT	0.50	53.5	D	LT	0.51	53.8	D	LT	0.43	51.1	D	LT	0.43	51.1	D	LT	0.40	52.2	D	LT	0.40	52.2	D																
Northbound	R	0.20	11.4	B	R	0.20	11.4	B	R	0.14	10.8	B	R	0.14	10.8	B	R	0.26	11.5	B	R	0.26	11.5	B	R	0.22	12.4	B	R	0.22	12.4	B																
Southbound	LTR	0.02	10.3	B	LTR	0.02	10.3	B	LTR	0.01	10.3	B	LTR	0.01	10.3	B	LTR	0.01	10.3	B	LTR	0.01	10.3	B	LTR	0.01	10.3	B	LTR	0.01	10.3	B																
Veterans Road West and Bricktown Way/Tyrellan Avenue																																																
Eastbound	LTR	0.36	32.9	C	LTR	0.38	33.8	C	LTR	0.95	36.9	D	LTR	0.95	39.3	D	LTR	0.76	36.0	C	LTR	0.82	35.6	D	LTR	1.10	37.1	D	LTR	1.10	45.5	D+																
Westbound	LTR	0.83	41.0	D	LTR	0.83	42.7	D	LTR	0.74	36.4	D	LTR	0.74	36.4	D	LTR	0.80	18.6	B	LTR	0.81	18.7	B	LTR	0.86	31.9	C	LTR	0.86	32.5	C																
Northbound	LTR	0.50	21.7	C	LTR	0.50	22.7	C	LTR	1.88	42.1	D	LTR	1.88	35.2	D	LTR	1.63	35.7	D	LTR	1.63	35.6	D	LTR	2.33	65.5	D	LTR	2.33	65.0	E																
Southbound	LTR	0.29	23.6	C	LTR	0.29	23.6	C	LTR	0.89	42.0	D	LTR	0.89	42.0	D	LTR	0.81	35.4	D	LTR	0.81	35.4	D	LTR	0.97	53.6	D	LTR	0.97	53.6	D																
Tyrellan Avenue and Boscombe Avenue																																																
Eastbound	LTR	0.42	15.7	B	LTR	0.29	13.7	B	LTR	0.42	15.4	B	LTR	0.43	15.6	B	LTR	0.37	14.7	B	LTR	0.39	14.9	B	LTR	0.49	16.3	B	LTR	0.90	16.9	B																
Westbound	LTR	0.13	12.3	B	LTR	0.13	12.4	B	LTR	0.10	12.1	B	LTR	0.10	12.1	B	LTR	0.08	11.9	B	LTR	0.08	11.9	B	LTR	0.15	12.6	B	LTR	0.15	12.7	B																
Northbound	LTR	0.06	17.4	B	LTR	0.06	17.4	B	LTR	0.02	17.0	B	LTR	0.02	17.0	B	LTR	0.02	16.9	B	LTR	0.02	17.0	B	LTR	0.02	17.0	B	LTR	0.02	17.0	B																
Southbound	LT	0.22	19.9	B	LT	0.22	18.5	B	LT	0.30	25.5	C	LT	0.31	15.4	B	LT	0.27	24.6	C	LT	0.29	24.2	C	LT	0.29	24.2	C	LT	0.30	24.1	C																
Eastbound	R	0.36	53.6	D	R	0.37	46.1	D	R	0.93	121.7	F	R	1.02	92.0	F	R	0.80	104.6	F	R	0.91	102.7	F	R	1.20	177.3	F	R	1.36	239.1	F+																
Veterans Road West and Project Driveway																																																
Eastbound	TR	0.15	22.9	C	TR	0.15	22.9	C	TR	0.34	24.4	C	TR	0.34	24.4	C	TR	0.37	23.0	C	TR	0.37	23.0	C	TR	0.38	23.2	C	TR	0.38	23.2	C																
Westbound	TR	0.05	22.6	C	TR	0.05	22.6	C	TR	0.13	23.5	C	TR	0.13	23.5	C	TR	0.11	23.1	C	TR	0.11	23.1	C	TR	0.17	23.9	C	TR	0.17	23.9	C																
Northbound	TR	0.63	30.1	C	TR	0.63	30.1	C	TR	0.57	28.9	C	TR	0.57	28.9	C	TR	0.70</																														

2835 Veterans Road West

comparison of No Action, With Action, and With Action Mitigation level of service results in **Tables E-18** and **E-19**, all impacts can be fully mitigated.

Route 440 Westbound Off-Ramp and Veterans Road West

The proposed project would require (1) reconfiguring the northbound approach from one 23-foot moving lane to one 11-foot left-turn lane and one 12-foot through/right-turn lane, (2) increasing the cycle length from 90 seconds to 120 seconds, (3) removing the northbound/southbound split phase, (4) creating permitted/protected eastbound, westbound, northbound, and southbound left-turn phases, and (5) increasing the length of the westbound left turn lane 130 feet, in order to prevent queued vehicles from spilling back to the adjacent lane.

Veterans Road West and Tyrellan Avenue/Bricktown Way

The proposed project would require (1) reconfiguring the eastbound approach from one 10-foot through lane, one 14-foot shared through/right-turn lane, and one 14-foot median to one 12-foot left-turn lane, one 10-foot through lane and one 14-foot shared through/right-turn lane, (2) reconfiguring striping the westbound approach from two 12-foot shared lanes and one 12-foot median to one 10-foot left-turn lane, one 11-foot left-turn/through shared lane and one 11-foot shared through/right-turn lane.

Tyrellan Avenue and Boscombe Avenue

The proposed project would require the addition of a protected eastbound left-turn phase with a southbound right-turn overlap (see **Table E-16** for proposed signal retiming).

Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue

The proposed project would require (1) a 1 second shift of green time at the Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue from the eastbound left-turn phase to the eastbound/westbound phase in the PM and Saturday peak hours, (2) a reconfiguration of the westbound approach from one 11-foot through lane, one 12-foot right turn lane, and one 4-foot median to one 12-foot shared left/throughlane, one 14-foot right turn lane, and one 1-foot centerline (3) a reconfiguration of the eastbound approach from one 12-foot left-turn lane and one 21-foot shared through/right-turn lane with parking to one 13-foot left-turn lane and one 20-foot through lane with parking.

Tyrellan Avenue and Project Driveway

The proposed project would require the installation of a no left-turn restriction at the westbound approach of the Tyrellan Avenue and Project Driveway intersection (101 Tyrellan Avenue). All traffic using the Project Driveway at 101 Tyrellan Avenue to make a westbound left-turn exiting onto Tyrellan Avenue will be redirected to use the Veterans Road West and Project Driveway. Furthermore, based on discussions with NYCDOT, the uncontrolled midblock left-turn on Veterans Road West at the adjacent bank's driveway will be removed and a 4-foot continuous raised median on Veterans Road West between Tyrellan Avenue and the Project Driveway will cause traffic entering the bank's driveway from Veterans Road West to be redirected to use the Proposed Project's Driveway.

Monitoring Plan

A pre- and post-opening monitoring plan is proposed. Prior to the opening of the proposed project, an Automatic Traffic Recorder (ATR) and Turning Movement Count (TMC) will be deployed across the 101 Tyrellan Avenue southern driveway to count exiting traffic for a period consistent with the CEQR Technical Manual. Then, six months after the opening of the proposed project, an ATR and TMC count will again be deployed to count exiting traffic at the southern driveway. The two sets of data will be averaged and compared. At NYCDOT's discretion, a "No Left Turn" sign will be installed

The 2021 With Action traffic volumes with these mitigation measures are shown in **Figures E-28 to E-31**.



Project Site

0 1,000 FEET



Project Site

0 1,000 FEET

2021 With Action With Mitigation Condition Traffic Volumes
Weekday PM Peak Hour
Figure E-30

Table E-16

Proposed Mitigation Measures – Signal Timing

Intersection	No Action Signal Timing	Recommended Signal Timing
Weekday AM Peak Hour		
Route 440 Westbound Off-Ramp and Veterans Road West ¹	Phase A: EB/WB Green = 30 s Phase B: NB Green = 25 s Phase C: SB Green = 20 s	Phase A: EB/WB Green = 46 s Phase B: NBL/SBL Green = 6 s Phase C: NB/SB Green = 39 s Phase D: EBL/WBL Green = 9 s
Tyrellan Avenue and Boscombe Avenue ¹	Phase A: EB/WB Green = 45 s Phase B: NB/SB Green = 35 s	Phase A: EBL/SBR Green = 11s Phase B: EB/WB Green = 28 s Phase C: NB/SB Green = 36 s
Weekday Midday Peak Hour		
Route 440 Westbound Off-Ramp and Veterans Road West	Phase A: EB/WB Green = 30 s Phase B: NB Green = 25 s Phase C: SB Green = 20 s	Phase A: EB/WB Green = 46 s Phase B: NBL/SBL Green = 6 s Phase C: NB/SB Green = 39 s Phase D: EBL/WBL Green = 9 s
Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue	Phase A: EB/WB Green = 35 s Phase B ³ : NB/SB Green = 16 s Phase C: EB/SBR Green = 54 s	Phase A: EB/WB Green = 35 s Phase B ³ : NB/SB Green = 18 s Phase C: EB/SBR Green = 52 s
Tyrellan Avenue and Boscombe Avenue	Phase A: EB/WB Green = 45 s Phase B: NB/SB Green = 35 s	Phase A: EBL/SBR Green = 10 s Phase B: EB/WB Green = 28 s Phase C: NB/SB Green = 37 s
Weekday PM Peak Hour		
Route 440 Westbound Off-Ramp and Veterans Road West	Phase A: EB/WB Green = 30 s Phase B: NB Green = 25 s Phase C: SB Green = 20 s	Phase A: EB/WB Green = 46 s Phase B: NBL/SBL Green = 6 s Phase C: NB/SB Green = 39 s Phase D: EBL/WBL Green = 9 s
Tyrellan Avenue and Boscombe Avenue ²	Phase A: EB/WB Green = 45 s Phase B: NB/SB Green = 35 s	Phase A: EBL/SBR Green = 10 s Phase B: EB/WB Green = 28 s Phase C: NB/SB Green = 37 s
Route 440 Ramps and Boscombe Avenue	Phase A: EB/WB Green = 35 s Phase B ³ : NB/SB Green = 16 s Phase C: EB/SBR Green = 54 s	Phase A: EB/WB Green = 36 s Phase B ³ : NB/SB Green = 16 s Phase C: EB/SBR Green = 53 s
Saturday Peak Hour		
Route 440 Westbound Off-Ramp and Veterans Road West	Phase A: EB/WB Green = 30 s Phase B: NB Green = 25 s Phase C: SB Green = 20 s	Phase A: EB/WB Green = 41 s Phase B: NBL/SBL Green = 6 s Phase C: NB/SB Green = 45 s Phase D: EBL/WBL Green = 8 s
Tyrellan Avenue and Boscombe Avenue	Phase A: EB/WB Green = 45 s Phase B: NB/SB Green = 35 s	Phase A: EBL/SBR Green = 10 s Phase B: EB/WB Green = 28 s Phase C: NB/SB Green = 37 s
Route 440 Ramps and Boscombe Avenue	Phase A: EB/WB Green = 35 s Phase B ³ : NB/SB Green = 16 s Phase C: EB/SBR Green = 54 s	Phase A: EB/WB Green = 36 s Phase B ³ : NB/SB Green = 16 s Phase C: EB/SBR Green = 53 s

Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left; T = Through; R = Right.
⁽¹⁾ Mitigation measures not required for the weekday AM peak hour.
⁽²⁾ Mitigation measures not required for the weekday PM peak hour.
⁽³⁾ If NB approach doesn't get called, WBR will operate with SB phase during Phase B.

Table E-17

Proposed Mitigation Measures – Lane Reconfiguration*

Intersection	Existing Geometry	Proposed Geometry
Route 440 Westbound Off-Ramp and Veterans Road West	NB approach: one 23-foot moving lane	NB approach: one 11-foot left-turn lane and one 12-foot through/right-turn lane WB approach: left turn bay length increased from 75-feet to 130-feet.
Veterans Road West and Bricktown Way/Tyrellan Avenue	EB approach: two 12-foot shared lanes and one 14-foot median WB approach: two 12-foot shared lanes and one 12-foot median	EB approach: one 12-foot left-turn lane, one 10-foot through lane and one 14-foot shared through/right-turn lane WB approach: one 10-foot left-turn lane, one 11-foot shared left-turn/through lane and one 11-foot shared through/right-turn lane.
Route 440 Eastbound Off-Ramp / Church Driveway and Boscombe Avenue	EB approach: one 12-foot left-turn lane and one 21-foot shared through/right-turn lane with parking WB approach: one 11-foot through lane, one 12-foot right turn lane, and one 4-foot median	EB approach: one 13-foot left-turn lane and one 20-foot through lane with parking WB approach: one 12-foot shared left/through lane, one 14-foot right turn lane, and one foot centerline

Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound
* In addition to the mitigation measures described in this table, to support the proposed mitigation, and in consultation with NYCDOT, the proposed project would require the installation of a no left-turn restriction at the westbound approach of the Tyrellan Avenue and Project Driveway intersection (the northern driveway for 101 Tyrellan Avenue).

Table E-18
2021 No Action, With Action, and With Action Mitigation Conditions
Level of Service Analysis
Signalized Intersections

Intersection	2021 No Action				2021 With Action				2021 With Action Mitigation			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Weekday AM Peak Hour												
Route 440 Westbound Off-Ramp and Veterans Road West												
Eastbound	L	0.31	25.1	C	L	0.31	25.1	C	L	0.20	19.9	B
	TR	0.81	40.8	D	TR	0.81	40.8	D	TR	0.70	38.4	D
Westbound	L	1.35	223.8	F	L	1.35	222.4	F	L	0.70	36.3	D
	T	0.83	53.3	D	T	0.83	52.2	D	T	0.38	28.4	C
Northbound	R	0.01	20.1	C	R	0.01	20.1	C	R	0.01	22.9	C
	LT	0.35	28.1	C	LT	0.35	28.1	C	LT	0.24	26.5	C
Southbound	R	0.33	28.2	C	R	0.38	29.0	C	R	0.40	33.8	C
	L	0.02	27.4	C	L	0.02	27.4	C	L	0.02	23.7	C
	TR	0.27	30.7	C	TR	0.27	30.7	C	TR	0.18	29.8	C
Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue												
Eastbound	L	1.11	98.5	F	L	1.11	98.5	F	L	1.07	85.6	F
	TR	0.21	4.3	A	TR	0.22	4.4	A	TR	0.23	4.4	A
Westbound	LT	0.80	53.3	D	LT	0.81	54.4	D	LT	0.78	51.8	D
	R	0.32	29.0	C	R	0.35	29.5	C	R	0.32	29.0	C
Northbound	LTR	0.62	82.5	F	LTR	0.62	82.5	F	LTR	0.62	82.5	F
	LT	0.70	66.4	E	LT	0.71	67.2	E	LT	0.71	67.2	E
Southbound	R	0.20	11.4	B	R	0.20	11.4	B	R	0.20	11.4	B
Veterans Road West and Englewood Avenue												
Eastbound	TR	0.02	10.3	B	TR	0.02	10.3	B	TR	0.02	10.3	B
	L	0.55	17.1	B	L	0.55	17.2	B	L	0.55	17.2	B
Northbound	LT	0.58	18.1	B	LT	0.58	18.1	B	LT	0.58	18.1	B
	L	0.00	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A
Southbound	R	0.15	11.3	B	R	0.15	11.4	B	R	0.15	11.4	B
	LTR	0.32	12.2	B	LTR	0.33	12.3	B	LTR	0.33	12.3	B
Veterans Road West and Bricktown Way/Tyrellan Avenue												
Eastbound	LTR	0.36	32.9	C	LTR	0.38	33.8	C	L	0.08	25.8	C
									TR	0.34	28.5	C
Westbound	LTR	0.83	41.0	D	LTR	0.83	24.7	C	L	0.66	24.0	C
									TR	0.63	19.1	B
Northbound	LTR	0.50	21.7	C	LTR	0.50	22.7	C	LTR	0.50	22.2	C
									LTR	0.29	23.6	C
Southbound	LTR	0.29	23.6	C	LTR	0.29	23.6	C	LTR	0.29	23.6	C
Tyrellan Avenue and Boscombe Avenue												
Eastbound	LTR	0.42	15.4	B	LTR	0.29	13.7	B	LTR	0.37	15.3	B
	LTR	0.13	12.3	B	LTR	0.13	12.4	B	LTR	0.20	23.7	C
Northbound	LT	0.06	17.4	B	LT	0.06	17.4	B	LT	0.06	16.1	B
	LT	0.22	19.9	B	LT	0.22	18.5	B	LT	0.21	17.4	B
Southbound	R	0.36	53.6	E	R	0.37	46.1	D	R	0.37	57.1	E
Veterans Road West and Project Driveway												
Eastbound					TR	0.15	22.9	C	TR	0.15	21.6	C
					L	0.05	22.6	C	L	0.07	22.8	C
Westbound					T	0.63	30.1	C	T	0.62	30.0	C
					L	0.00	23.5	C	L	0.08	24.3	C
Northbound					R	0.01	23.5	C	R	0.01	23.5	C
Weekday Midday Peak Hour												
Route 440 Westbound Off-Ramp and Veterans Road West												
Eastbound	L	0.69	41.9	D	L	0.69	41.9	D	L	0.40	23.3	C
	TR	1.41	229.3	F	TR	1.42	232.7	F+	TR	0.85	47.8	D
Westbound	L	2.33	652.9	F	L	2.41	685.9	F+	L	0.84	53.3	D
	T	1.09	99.7	F	T	1.09	98.0	F	T	0.50	30.9	C
Northbound	R	0.01	20.1	C	R	0.01	20.1	C	R	0.01	23.0	C
	LT	0.52	31.2	C	LT	0.52	31.2	C	LT	0.19	25.7	C
Southbound	R	0.31	27.6	C	R	0.41	29.5	C	R	0.65	40.3	D
	L	0.05	27.8	C	L	0.05	27.8	C	L	0.07	25.2	C
	TR	0.53	36.3	D	TR	0.53	36.3	D	TR	0.36	32.9	C
Route 440 Eastbound Ramps and Boscombe Avenue												
Eastbound	L	0.99	62.7	E	L	0.99	62.7	E	L	0.97	60.0	E
	TR	0.32	5.3	A	TR	0.32	5.3	A	TR	0.34	6.2	A
Westbound	LT	0.91	66.2	E	LT	0.93	69.0	E	LT	0.93	68.8	E
	R	1.08	98.5	F	R	1.15	124.3	F+	R	1.06	90.7	F
Northbound	LTR	0.44	70.6	E	LTR	0.44	70.6	E	LTR	0.44	70.6	E
	LT	0.50	53.5	D	LT	0.50	53.8	D	LT	0.46	50.1	D
Southbound	R	0.14	10.8	B	R	0.14	10.8	B	R	0.14	10.3	B
Veterans Road West and Englewood Avenue												
Eastbound	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B
	L	0.56	17.4	B	L	0.56	17.4	B	L	0.56	17.4	B
Westbound	LT	0.56	17.4	B	LT	0.56	17.4	B	LT	0.56	17.4	B
	L	0.00	0.0	A	L	0.00	0.0	A	L	0.00	0.0	A
Northbound	R	0.34	13.2	B	R	0.35	13.3	B	R	0.35	13.4	B
	LTR	0.33	12.2	B	LTR	0.34	12.4	B	LTR	0.34	12.4	B

Table E-18 (cont'd)
2021 No Action, With Action, and With Action Mitigation Conditions
Level of Service Analysis
Signalized Intersections

Intersection	2021 No Action				2021 With Action				2021 With Action Mitigation			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Veterans Road West and Bricktown Way/Tyrellan Avenue												
Eastbound	LTR	0.95	36.9	D	LTR	0.95	39.3	D	L	0.18	27.0	C
Westbound	LTR	0.74	36.4	D	LTR	0.74	19.9	B	TR	0.97	35.9	D
Northbound	LTR	1.88	42.1	D	LTR	1.88	35.2	D	TR	0.68	19.1	B
Southbound	LTR	0.89	42.0	D	LTR	0.89	42.0	D	LTR	1.88	34.6	C
									LTR	0.89	42.0	D
Tyrellan Avenue and Boscombe Avenue												
Eastbound	LTR	0.42	15.4	B	LTR	0.43	15.6	B	LTR	0.43	16.7	B
Westbound	LTR	0.10	12.1	B	LTR	0.10	12.1	B	LTR	0.13	22.7	C
Northbound	LTR	0.02	17.0	B	LTR	0.02	17.0	B	LTR	0.02	15.8	B
Southbound	LT	0.30	25.5	C	LT	0.31	15.4	B	LT	0.29	16.8	B
	R	0.93	121.7	F	R	1.02	92.0	F	R	0.87	35.6	D
Veterans Road West and Project Driveway												
Eastbound	Unsignalized intersection in No Action Condition				TR	0.34	24.4	C	TR	0.34	22.7	C
Westbound					L	0.13	23.5	C	L	0.17	23.9	C
Northbound					T	0.57	28.9	C	T	0.56	28.6	C
					L	0.02	23.7	C	L	0.34	27.7	C
					R	0.08	24.4	C	R	0.08	24.4	C
Weekday PM Peak Hour												
Route 440 Westbound Off-Ramp and Veterans Road West												
Eastbound	L	0.57	27.5	C	L	0.81	53.9	D+	L	0.46	24.5	C
	TR	1.64	326.7	F	TR	2.07	522.1	F+	TR	1.04	83.6	F
Westbound	L	0.90	49.0	D	L	1.11	117.3	F+	L	0.55	23.6	C
	T	0.91	45.6	D	T	1.14	115.1	F+	T	0.52	31.4	C
	R	0.01	15.7	B	R	0.01	20.1	C	R	0.01	22.9	C
Northbound	LT	0.76	48.1	D	LT	0.55	31.9	C	LT	0.28	26.9	C
	R	0.50	37.8	D	R	0.46	30.5	C	R	0.65	40.6	D
Southbound	L	0.05	27.8	C	L	0.05	27.8	C	L	0.07	25.2	C
	TR	0.56	37.0	D	TR	0.56	37.0	D	TR	0.38	33.2	C
Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue												
Eastbound	L	1.15	115.1	F	L	1.15	115.1	F	L	1.14	109.1	F
	TR	0.29	5.0	A	TR	0.30	5.1	A	TR	0.31	5.2	A
Westbound	LT	1.04	95.7	F	LT	1.08	107.4	F+	LT	1.01	85.7	F
	R	1.06	92.6	F	R	1.15	124.8	F+	R	1.06	89.4	F
Northbound	LTR	0.43	68.9	E	LTR	0.43	68.9	E	LTR	0.43	68.9	E
Southbound	LT	0.43	51.1	D	LT	0.43	51.1	D	LT	0.43	51.1	D
	R	0.26	11.5	B	R	0.26	11.5	B	R	0.26	12.0	B
Veterans Road West and Englewood Avenue												
Eastbound	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B
Westbound	L	0.57	17.6	B	L	0.57	17.7	B	L	0.57	17.7	B
	LT	0.60	18.6	B	LT	0.61	18.7	B	LT	0.61	18.7	B
Northbound	L	0.03	11.9	B	L	0.03	12.1	B	L	0.03	10.7	B
	R	0.43	27.2	C	R	0.45	31.2	C	R	0.44	14.8	B
Southbound	LTR	0.45	13.3	B	LTR	0.47	13.5	B	LTR	0.47	13.5	B
Veterans Road West and Bricktown Way/Tyrellan Avenue												
Eastbound	LTR	0.76	36.0	D	LTR	0.82	35.6	D	L	0.16	26.7	C
Westbound	LTR	0.80	39.0	D	LTR	0.81	25.1	C	TR	0.85	36.5	D
Northbound	LTR	1.63	35.7	D	LTR	1.63	35.6	D	L	0.74	28.0	C
Southbound	LTR	0.81	35.4	D	LTR	0.81	35.4	D	TR	0.70	21.7	C
									LTR	1.63	28.5	C
									LTR	0.81	35.4	D
Tyrellan Avenue and Boscombe Avenue												
Eastbound	LTR	0.37	14.7	B	LTR	0.39	14.9	B	LTR	0.39	16.0	B
Westbound	LTR	0.08	11.9	B	LTR	0.08	11.9	B	LTR	0.10	22.4	C
Northbound	LTR	0.02	16.9	B	LTR	0.02	17.0	B	LTR	0.01	15.1	B
Southbound	LT	0.27	24.6	C	LT	0.29	24.2	C	LT	0.26	18.7	B
	R	0.80	104.6	F	R	0.91	102.7	F	R	0.87	40.7	D
Veterans Road West and Project Driveway												
Eastbound	Unsignalized intersection in No Action Condition				TR	0.37	23.0	C	TR	0.37	20.9	C
Westbound					L	0.11	23.3	C	L	0.15	23.7	C
Northbound					T	0.70	31.8	C	T	0.68	31.3	C
					L	0.03	23.7	C	L	0.33	27.7	C
					R	0.02	23.7	C	R	0.02	23.7	C

Table E-18 (cont'd)
2021 No Action, With Action, and With Action Mitigation Conditions
Level of Service Analysis
Signalized Intersections

Intersection	2021 No Action				2021 With Action				2021 With Action Mitigation			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Saturday Peak Hour												
Route 440 Westbound Off-Ramp and Veterans Road West												
Eastbound	L	1.31	204.8	F	L	1.35	220.7	F+	L	0.84	56.5	E
	TR	2.22	588.5	F	TR	2.24	598.8	F+	TR	1.15	126.5	F
Westbound	L	1.10	104.9	F	L	1.11	106.1	F	L	0.65	30.6	C
	T	1.30	177.5	F	T	1.32	186.9	F+	T	0.68	39.8	D
Northbound	R	0.02	20.1	C	R	0.02	20.1	C	R	0.02	26.2	C
	LT	0.76	39.8	D	LT	0.76	39.8	D	LT	0.24	22.8	C
Southbound	R	0.40	29.2	C	R	0.55	32.6	C	R	0.80	43.2	D
	LT	0.10	28.4	C	L	0.10	28.4	C	L	0.17	24.7	C
	TR	0.72	43.4	D	TR	0.72	43.4	D	TR	0.42	29.9	C
Route 440 Eastbound Ramps / Church Driveway and Boscombe Avenue												
Eastbound	L	1.11	99.2	F	L	1.11	99.2	F	L	1.09	94.0	F
	TR	0.37	4.8	A	TR	0.39	5.0	A	TR	0.41	5.1	A
Westbound	LT	0.90	61.7	E	LT	0.94	69.3	E+	LT	0.89	58.9	E
	R	1.08	89.8	F	R	1.17	124.8	F+	R	1.08	89.4	F
Northbound	LTR	0.00	0.0	A	LTR	0.00	0.0	A	LTR	0.00	0.0	A
Southbound	LT	0.40	52.2	D	LT	0.40	52.2	D	LT	0.40	52.2	D
	R	0.22	12.4	B	R	0.22	12.4	B	R	0.22	12.9	B
Veterans Road West and Englewood Avenue												
Eastbound	TR	0.01	10.3	B	TR	0.01	10.3	B	TR	0.01	10.3	B
Westbound	L	0.81	27.6	C	L	0.82	28.1	C	L	0.82	28.1	C
	LT	0.86	31.9	C	LT	0.86	32.5	C	LT	0.86	32.5	C
Northbound	L	0.03	10.9	B	L	0.03	11.3	B	L	0.03	10.7	B
	R	0.41	20.5	B	R	0.43	24.3	C	R	0.43	14.5	B
Southbound	LTR	0.48	13.6	B	LTR	0.51	13.9	B	LTR	0.50	13.9	B
Veterans Road West and Bricktown Way/Tyrellan Avenue												
Eastbound	LTR	1.10	37.1	D	LTR	1.10	45.5	D+	L	0.23	27.7	C
Westbound	LTR	0.88	44.0	D	LTR	0.88	32.6	C	TR	1.12	44.7	D
									L	0.83	35.5	D
Northbound	LTR	2.33	65.5	E	LTR	2.33	65.0	E	TR	0.80	26.1	C
									LTR	2.33	57.0	E
Southbound	LTR	0.97	53.6	D	LTR	0.97	53.6	D	LTR	0.97	53.6	D
Tyrellan Avenue and Boscombe Avenue												
Eastbound	LTR	0.49	16.3	B	LTR	0.90	16.9	B	LTR	0.98	18.2	B
Westbound	LTR	0.15	12.6	B	LTR	0.16	12.7	B	LTR	0.23	24.2	C
Northbound	LTR	0.02	17.0	B	LTR	0.02	17.0	B	LTR	0.02	15.7	B
Southbound	LT	0.29	24.2	C	LT	0.30	24.1	C	LT	0.30	16.9	B
	R	1.20	177.3	F	R	1.36	239.1	F+	R	1.03	45.9	D
Veterans Road West and Project Driveway												
Eastbound					TR	0.38	23.2	C	TR	0.38	21.7	C
Westbound					L	0.17	23.9	C	L	0.21	24.5	C
					T	0.74	33.1	C	T	0.71	32.3	C
Northbound					L	0.03	23.8	C	L	0.40	28.9	C
					R	0.03	23.8	C	R	0.03	23.8	C
Notes: L = Left Turn, T = Through, R = Right Turn, LOS = Level of Service * denotes a significant adverse impact												

Table E-19
2021 No Action, With Action, and With Action Mitigation Conditions Level of Service Analysis
Unsignalized Intersections

Intersection	2021 No Action				2021 With Action				2021 With Action With Mitigation			
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
Weekday AM Peak Hour												
Tyrellan Avenue and Project Driveway												
Westbound	LR	0.05	13.5	B	LR	0.10	14.8	B	LR	0.01	9.5	A
Northbound	T	0.14	0.0	A	T	0.14	0.0	A	T	0.14	0.0	A
Southbound	TR	0.08	0.0	A	TR	0.09	0.0	A	TR	0.09	0.0	A
	LT	0.01	0.5	A	LT	0.01	0.5	A	LT	0.01	0.5	A
	T	0.23	0.0	A	T	0.23	0.0	A	T	0.24	0.0	A
Weekday Midday Peak Hour												
Tyrellan Avenue and Project Driveway												
Westbound	LR	0.32	20.0	C	LR	0.48	24.9	C	LR	0.01	10.0	B
Northbound	T	0.19	0.0	A	T	0.19	0.0	A	T	0.19	0.0	A
Southbound	TR	0.12	0.0	A	TR	0.13	0.0	A	TR	0.13	0.0	A
	LT	0.00	0.2	A	LT	0.00	0.2	A	LT	0.00	0.2	A
	T	0.45	0.0	A	T	0.45	0.0	A	T	0.51	0.0	A
Weekday PM Peak Hour												
Tyrellan Avenue and Project Driveway												
Westbound	LR	0.26	19.4	C	LR	0.52	28.3	D	LR	0.02	10.0	B
Northbound	T	0.19	0.0	A	T	0.19	0.0	A	T	0.19	0.0	A
Southbound	TR	0.11	0.0	A	TR	0.12	0.0	A	TR	0.12	0.0	A
	LT	0.00	0.2	A	LT	0.00	0.2	A	LT	0.00	0.1	A
	T	0.47	0.0	A	T	0.47	0.0	A	T	0.53	0.0	A
Saturday Peak Hour												
Tyrellan Avenue and Project Driveway												
Westbound	LR	0.33	23.8	C	LR	0.74	49.2	E	LR	0.01	10.5	B
Northbound	T	0.22	0.0	A	T	0.22	0.0	A	T	0.23	0.0	A
Southbound	TR	0.14	0.0	A	TR	0.16	0.0	A	TR	0.15	0.0	A
	LT	0.00	0.0	A	LT	0.00	0.0	A	LT	0.00	0.0	A
	T	0.55	0.0	A	T	0.55	0.0	A	T	0.62	0.0	A

Notes: L = Left Turn, T = Through, R = Right Turn, LOS = Level of Service

F. VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

METHODOLOGY

An evaluation of vehicular and pedestrian safety is necessary for locations within the traffic and pedestrian study areas that have been identified as high crash locations, where 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes occurred in any consecutive 12 months of the most recent 3-year period for which data are available. For these locations, crash trends are identified to determine whether projected vehicular and pedestrian traffic would further impact safety at these locations. The determination of potential significant safety impacts depends on the type of area where the project site is located, traffic volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety are identified and coordinated with NYCDOT.

CRASH DATA

Crash data for the study area intersections were obtained from the New York State Department of Transportation (NYSDOT) for the time period between October 1, 2014 and September 30, 2017. The data obtained quantify the total number of reportable crashes (involving fatality, injury, or more than \$1,000 in property damage), fatalities, and injuries during the study period, as well as a yearly breakdown of vehicular crashes with pedestrians and bicycles at each location.

During the October 1, 2014 and September 30, 2017 three-year period, a total of 20 reportable and non-reportable crashes, zero fatalities, 21 injuries, and zero pedestrian/bicyclist-related crashes occurred at the study area intersections. A rolling total of crash data identifies no high crash locations in the 2014 to 2017 period. **Table E-20** depicts total crash characteristics by intersection during the study period, as well as a breakdown of pedestrian and bicycle crashes by year and location.

**Table E-20
Crash Summary**

Intersection		Study Period						Crashes by Year								
North-South Roadway	East-West Roadway	All Accidents by Year				Total Fatalities	Total Injuries	Pedestrian				Bicycle				
		2014	2015	2016	2017			2014	2015	2016	2017	2014	2015	2016	2017	
Veterans Rd West	Englewood Avenue	0	1	3	2	0	10	0	0	0	0	0	0	0	0	0
Tyrellan Ave/ Bricktown Way	Veterans Rd West	0	2	1	1	0	3	0	0	0	0	0	0	0	0	0
Route 440 Westbound Off-Ramp	Veterans Rd West	0	1	0	1	0	3	0	0	0	0	0	0	0	0	0
Tyrellan Avenue	Boscombe Avenue	0	2	1	5	0	5	0	0	0	0	0	0	0	0	0
Rte 440 EB Ramps	Boscombe Avenue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: NYSDOT October 1, 2014 and September 30, 2017 crash data.

G. PARKING ASSESSMENT

The proposed project would include 226 accessory parking spaces, including off-street parking within the project site. In the With Action condition, as shown in **Table E-21**, a maximum of 147 and 183 or 65 percent and 81 percent of accessory parking spaces in the project site would be utilized in the peak weekday and Saturday parking hours, respectively. Because the on-site accessory parking utilization levels are within the proposed project’s parking capacity, a detailed on-street and off-street parking analysis is not warranted, and the proposed project is not expected to result in the potential for a parking shortfall or significant adverse parking impacts.

**Table E-21
Proposed Project Incremental Parking Demand and Utilization**

Hour	Weekday ¹				Saturday ¹			
	In	Out	Parking Demand	Parking Utilization	In	Out	Parking Demand	Parking Utilization
12 AM–01 AM	0	0	0	0%	0	0	9	0%
01 AM–02 AM	0	0	0	0%	0	0	9	0%
02 AM–03 AM	0	0	0	0%	0	0	9	0%
03 AM–04 AM	0	0	0	0%	0	0	0	0%
04 AM–05 AM	0	0	0	0%	0	0	0	0%
05 AM–06 AM	0	0	0	0%	0	0	0	0%
06 AM–07 AM	0	0	0	0%	0	0	0	0%
07 AM–08 AM	27	19	8	4%	25	2	23	10%
08 AM–09 AM	53	25	36	16%	74	41	57	25%
09 AM–10 AM	47	7	76	34%	99	41	116	50%
10 AM–11 AM	78	35	119	53%	88	71	134	58%
11 AM–12 PM	103	75	147	65%	102	81	156	67%
12 PM–01 PM	99	107	139	62%	109	106	160	69%
01 PM–02 PM	246	245	140	62%	157	134	183	79%
02 PM–03 PM	121	126	135	60%	134	129	189	81%
03 PM–04 PM	74	85	124	55%	127	137	180	77%
04 PM–05 PM	106	125	105	46%	109	134	156	65%
05 PM–06 PM	97	117	85	38%	85	113	129	53%
06 PM–07 PM	63	97	51	23%	81	78	132	54%
07 PM–08 PM	24	45	30	13%	86	125	93	37%
08 PM–09 PM	8	16	22	10%	54	53	94	38%
09 PM–10 PM	0	22	0	0%	9	42	61	23%
10 PM–11 PM	0	0	0	0%	0	52	9	0%
11 PM–12 AM	0	0	0	0%	0	0	9	0%
			147	65%			183	81%

Notes:
¹ Based on the temporal and directional distributions from the 2013 *Charleston Mixed-Use Development FEIS and ITE Trip Generation Manual, 9th Edition* (Lane Use Code 820)

*

A. INTRODUCTION

The potential for air quality impacts associated with the proposed project is assessed in this attachment. The proposed project includes the development of two buildings containing retail, office, and parking uses at 2835 Veterans Road West.

With respect to mobile sources, the maximum projected hourly incremental traffic with the proposed project is predicted to exceed the 2014 *City Environmental Quality Review (CEQR) Technical Manual* carbon monoxide (CO) screening threshold of 170 peak hour trips at certain intersections in the study area. The projected hourly incremental traffic is also predicted to exceed the fine particulate matter (PM_{2.5}) emission screening threshold discussed in Chapter 17, Sections 210 and 311 of the *CEQR Technical Manual*. Therefore, a mobile source analysis for these pollutants was performed. The proposed project would also include a surface parking lot and parking garage. Therefore, an analysis was conducted to evaluate potential future pollutant concentrations in the vicinity of the proposed parking facilities.

Since the proposed project would include natural gas-fired heat and hot water systems, a stationary source analysis was conducted to evaluate the potential impact from these sources on air quality. In addition, since the project site is within a manufacturing zoned district, potential effects of stationary source emissions from existing nearby industrial facilities on the proposed project were evaluated, as recommended in the *CEQR Technical Manual*. In addition, a review of major- and large-source permits was performed; this review found no such facilities within 1,000 feet of the project site.

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

B. METHODOLOGY FOR DETERMINING POLLUTANT CONCENTRATIONS

MOBILE SOURCES

INTERSECTION ANALYSIS

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

reasonable worst-case condition, most dispersion analyses predict conservatively high concentrations of pollutants, particularly under adverse meteorological conditions.

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

Vehicle Emissions

Engine Emissions

Vehicular CO and PM engine emission factors were computed using the EPA mobile source emissions model, MOVES2014a.¹ This emissions model is capable of calculating engine, brake wear, and tire wear emission factors for various vehicle types, based on the fuel type (e.g., gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway type and grade, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. The inputs and use of MOVES incorporate the most current guidance available from the New York State Department of Environmental Conservation (NYSDEC).

Vehicle classification data were based on field studies. Appropriate credits were used to accurately reflect the inspection and maintenance program.² County-specific hourly temperature and relative humidity data obtained from NYSDEC were used.

Road Dust

The contribution of re-entrained road dust to PM₁₀ concentrations, as presented in the PM₁₀ SIP, is considered to be significant; therefore, the PM₁₀ estimates include both exhaust and road dust. PM_{2.5} emission rates were determined with fugitive road dust to account for their impacts in local microscale analyses. However, fugitive road dust was not included in the neighborhood scale PM_{2.5} microscale analyses, since the New York City Department of Environmental Protection (DEP) considers it to have an insignificant contribution on that scale. Road dust emission factors were calculated according to the latest procedure delineated by EPA³ and the *CEQR Technical Manual*.

Traffic Data

Traffic data for the mobile source air quality intersection analysis were derived from existing traffic counts, projected future growth in traffic, and other information developed as part of the traffic analysis for the proposed project (see Attachment E, "Transportation"). Traffic data for the No Action and With Action conditions were employed in the respective air quality modeling scenarios. The weekday morning (7:45 to 8:45 AM), midday (12:45 to 1:45 PM), and evening (4:30 to 5:30 PM) peak periods were analyzed as well as the Saturday midday peak hour (1:00 to 2:00 PM). These time periods were selected for the mobile source analysis because they produce

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

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

³ EPA. *Compilations of Air Pollutant Emission Factors AP-42*. Fifth Edition, Volume I: Stationary Point and Area Sources, Ch. 13.2.1. NC. <http://www.epa.gov/ttn/chief/ap42>. January 2011.

the maximum anticipated project-generated traffic and also coincide with the highest No Action condition traffic, and therefore have the greatest potential for significant air quality impacts.

For PM₁₀ and PM_{2.5}, the peak morning, midday, evening, and Saturday peak period traffic volumes were used as a baseline for determining off-peak volumes. Off-peak traffic volumes in the existing condition and in the No Action condition, and off-peak increments from the proposed project, 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 and Saturday 24-hour distributions were used to more accurately simulate traffic patterns over longer periods.

Dispersion Models for Microscale Analyses

Maximum contributions from vehicular emissions to CO concentrations adjacent to each analysis site were calculated using the CAL3QHC model Version 2.0.⁴ The CAL3QHC model employs a Gaussian (normal distribution) dispersion assumption and includes an algorithm for estimating vehicular queue lengths at signalized intersections. CAL3QHC predicts emissions and dispersion of pollutants from idling and moving vehicles. The queuing algorithm includes site-specific traffic parameters, such as signal timing and delay calculations (from the 2000 *Highway Capacity Manual* traffic forecasting model), saturation flow rate, vehicle arrival type, and signal actuation (*i.e.*, pre-timed or actuated signal) characteristics to accurately predict the number of idling vehicles. The CAL3QHC model has been updated with an extended module, CAL3QHCR,⁵ which allows for the incorporation of hourly meteorological data into the modeling, instead of worst-case assumptions regarding meteorological parameters. This refined version of the model, CAL3QHCR, is employed if maximum predicted future CO concentrations are greater than the applicable ambient air quality standards or when *de minimis* thresholds are exceeded using the first level of CAL3QHC modeling.

Maximum contributions from vehicular emissions to PM concentrations adjacent to the analysis site were calculated using the CAL3QHCR model Version 2.0.⁶ This refined version of the model can utilize hourly traffic and meteorology data, and is therefore more appropriate for calculating the 24-hour and annual average concentrations required to address the timescales of the PM NAAQS.

Meteorology

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

⁴ EPA. User's Guide to CAL3QHC, A Modeling Methodology for Predicted Pollutant Concentrations Near Roadway Intersections. EPA454R92006 (revised). September 1995.

⁵ EPA. Addendum to the User's Guide to CAL3QHC Version 2.0 (CAL3QHCR User's Guide). September 1995.

⁶ EPA. User's Guide to CAL3QHC, A Modeling Methodology for Predicted Pollutant Concentrations near Roadway Intersections. EPA454R92006.

Tier I CO Analysis—CAL3QHC

In applying the CAL3QHC model, the wind angle was varied to determine the wind direction resulting in the maximum concentrations at each receptor. Following the EPA guidelines⁷, CAL3QHC computations were performed using a wind speed of 1 meter per second, and the neutral stability class D. The 8-hour average CO concentrations were estimated by multiplying the predicted 1-hour average CO concentrations by a factor of 0.70 to account for persistence of meteorological conditions and fluctuations in traffic volumes. A surface roughness of 3.21 meters was chosen. At each receptor location, concentrations were calculated for all wind directions, and the highest predicted concentration was reported, regardless of frequency of occurrence. These assumptions ensured that worst-case meteorology was used to estimate impacts.

Tier II PM₁₀ and PM_{2.5} Analysis—CAL3QHCR

For computation of PM concentrations, the CAL3QHCR model includes the modeling of hourly concentrations based on hourly traffic data and five years of monitored hourly meteorological data. The data consists of surface data collected at Newark Liberty International Airport and upper air data collected at Brookhaven, New York for the period 2013–2017. All hours were modeled, and the highest predicted concentration for each averaging period is presented.

Analysis Year

The microscale analyses were performed for existing conditions and 2021, the year by which the proposed project is anticipated to be completed. The future analysis performed for both the No Action condition and the With Action condition.

Background Concentrations

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

The background concentrations for the nearest monitored location are presented in **Table F-1**. PM concentrations are based on the latest available three years of monitored data (2015–2017) consistent with the statistical format of the NAAQS. CO concentrations are based on the latest available five years of monitored data (2013–2017). These values were used as the background concentrations for the mobile source analysis.

⁷ *Guidelines for Modeling Carbon Monoxide from Roadway Intersections*, EPA Office of Air Quality Planning and Standards, Publication EPA-454/R-92-005.

Table F-1
Maximum Background Pollutant Concentrations
for Mobile Source Analysis

Pollutant	Average Period	Location	Concentration	NAAQS
CO	1-hour	CCNY, Manhattan	2.3 ppm	35 ppm
	8-hour	CCNY, Manhattan	1.5 ppm	9 ppm
PM ₁₀	24-hour	Division Street, Manhattan	44 µg/m ³	150 µg/m ³
PM _{2.5}	24-hour	Port Richmond, Staten Island	19.3 µg/m ³	35 µg/m ³
Notes:				
PM ₁₀ concentration represents the maximum second-highest monitored concentration from the most recent three years of data.				
CO concentrations represent the maximum second-highest monitored concentrations from the most recent 5 years of data.				
PM _{2.5} concentrations represent the average of the 98th percentile day from the most recent three years of data.				
PM ₁₀ and CO are not measured in Staten Island, so the nearest monitoring locations in New York City were used.				
Source: NYSDEC. <i>New York State Ambient Air Quality Reports</i> (reports for 2013–2017).				

Analysis Site

Intersections in the study area were reviewed for microscale analysis based on the *CEQR Technical Manual* guidance. One intersection was selected for microscale analysis, Veterans Road West and the Project Driveway. This site was selected because it is the location in the study area projected to have the highest levels of project-generated traffic, and, therefore, where the greatest potential for air quality impacts and maximum changes in concentrations would be expected. The potential impacts from vehicle emissions of CO, PM₁₀, and PM_{2.5} were analyzed at this intersection.

Receptor Placement

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

PARKING ANALYSIS

The proposed project would include two parking facilities—182 accessory parking spaces in a surface lot and 44 spaces in a parking garage—with entrances on Veterans Road West and the Project Driveway. Emissions from vehicles using the parking facilities at the proposed project would potentially affect ambient levels of CO and PM at adjacent receptors. An analysis was performed using the methodology delineated in the 2014 *CEQR Technical Manual* to calculate CO and PM pollutant levels.

For the mechanically vented parking garage, the emissions from the outlet vent and their dispersion were analyzed using the methodology defined in the *CEQR Technical Manual*. The CO concentrations were determined for the time periods when overall garage usage would be the greatest, considering the hours when the greatest number of vehicles would enter and (PM concentrations were determined on a 24-hour and annual average basis). Traffic data for the parking analysis were derived from the trip generation analysis described in Attachment E,

“Transportation.” The concentrations within the system were calculated assuming a minimum ventilation rate, based on New York City Building Code requirements of 1.0 cubic foot per minute of fresh air per gross square foot of garage area.

To determine pollutant concentrations, the outlet vent was analyzed as a “virtual point source” using the methodology in EPA’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. The air from the proposed parking garage was conservatively assumed to be vented through a single outlet at a height of approximately 10 feet.

Potential impacts from the proposed parking lot and garage on CO concentrations were assessed at adjacent receptors. The CO concentrations were determined for the weekday PM peak period and the weekend midday peak period, when overall lot usage would be the greatest, considering the hours when the greatest number of vehicles would exit the facility. Departing vehicles were assumed to be operating in a “cold-start” mode, emitting higher levels of CO than arriving vehicles. Emissions from vehicles entering, parking, and exiting the parking lot and garage were estimated using the EPA MOVES mobile source emission model, as referenced in the *CEQR Technical Manual*. For all arriving and departing vehicles an average speed of 5 miles per hour was conservatively assumed for travel within the parking facility. In addition, all departing vehicles were assumed to idle for 1 minute proceeding to the exit. Although specific development plans for the project have not yet been defined, at the minimum, the garage would be designed for a minimum airflow of one cubic foot per minute of fresh air per gross square foot of garage area, based on New York City Building Code requirements. To determine compliance with the NAAQS, CO concentrations were determined for the maximum 8-hour average period.

For the parking lot and parking garage, a “near” receptor was placed on the south side of Veterans Road West closest to the parking lot, and a “far” receptor was placed on the north side of Veterans Road West across the street. In addition, the contribution from each parking facility was added together to determine cumulative effects of the parking facilities. To determine compliance with the NAAQS, CO concentrations were determined for the maximum 1- and 8-hour average periods. A persistence factor of 0.70 was used to convert the calculated 1-hour average maximum concentrations to 8-hour averages, accounting for meteorological variability over the average 8-hour period. Background and on-street CO concentrations were added to the modeling results to obtain the total ambient levels. The 24-hour average PM_{2.5} background concentration was used to determine the *de minimis* criteria threshold. For PM_{2.5}, on-street concentrations were added to the modeling results to obtain cumulative concentrations to be compared the *de minimis* criteria threshold.

STATIONARY SOURCES

HEAT AND HOT WATER SYSTEMS

Stationary source analyses were conducted using the methodology described in the *CEQR Technical Manual* to assess air quality impacts associated with emissions from the proposed project’s heat and hot water systems. Initial screening was prepared using basic project information and applying thresholds defined in the *CEQR Technical Manual*, and further screening was prepared using the EPA AERSCREEN model to evaluate potential 1-hour average sulfur dioxide (SO₂), 1-hour average NO₂ and 24-hour and annual average concentrations of

particulate matter less than 2.5 micrometers in diameter (PM_{2.5}), which are not included in the initial screening procedure.

Potential 1-hour average nitrogen dioxide (NO₂) concentrations, added to representative background concentrations in the area, were compared with the National Ambient Air Quality Standards (NAAQS). Potential 24-hour and annual average incremental concentrations of PM_{2.5} were compared with the PM_{2.5} *de minimis* criteria defined in the *CEQR Technical Manual*:

- Predicted increase of more than half the difference between the background concentration and the 24-hour standard;
- Annual average PM_{2.5} concentration increments which are predicted to be greater than 0.1 µg/m³ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources); or
- Annual average PM_{2.5} concentration increments which are predicted to be greater than 0.3 µg/m³ at a discrete location (elevated or ground level).

Initial Screening Analysis

An initial screening analysis was performed using the methodology described in Chapter 17, Section 322.1 of the *CEQR Technical Manual*. This analysis determines the threshold of development size below which the project would not have a significant adverse impact relative to CO, particulate matter less than 10 micrometers in diameter (PM₁₀), and annual average NO₂ NAAQS levels (see “AERSCREEN Analysis” below for additional standards). The screening is based on the distance from the development to the nearest building of similar or greater height. The screening procedure uses information regarding the type of fuel to be burned, the development type and maximum size, and the exhaust stack height to evaluate whether or not a significant impact is possible.

The proposed project would include two new buildings: Building A would be at the rear of the lot away from the Veteran Road West frontage, and Building B would be at the approximate center of the site. The initial screening for Building A was based on a 96,866-gross square feet (gsf) building, with the nearest receptor of similar or greater height at a distance of 151 feet.⁸ The initial screening for Building B was based on a 2,998-gsf building, with the nearest receptor of similar or greater height at a distance of 75 feet. To evaluate the potential combined air quality impacts of both buildings, a cumulative analysis was performed. The cumulative analysis was based on a 99,864-gsf building which is equivalent to the sum of the gsf for both buildings, with the nearest receptor of a similar or greater height at a distance of 151 feet.

AERSCREEN Analysis

Potential 1-hour average NO₂ and 24-hour and annual average PM_{2.5} impacts from the proposed project’s heat and hot water system’s emissions were evaluated using the latest version of EPA’s AERSCREEN model (version 16216). The AERSCREEN model projects worst-case 1-hour average concentrations downwind from a point, area, or volume source, and longer-period

⁸ For the purposes of analysis, the nearest receptor(s) were placed at the property immediately to the west of the project site, which contains a partially completed shopping center; in the No Action condition, two additional retail buildings are expected to be constructed along the Veterans Road West frontage (see Attachment A, “Land Use, Zoning, and Public Policy”).

averages are estimated by multiplying the 1-hour results by persistence factors established by EPA or provided in the *CEQR Technical Manual*. AERSCREEN generates application-specific worst-case meteorology using representative minimum and maximum ambient air temperatures, and site-specific surface characteristics such as albedo, Bowen ratio, and surface roughness length.⁹ The AERSCREEN model was used to calculate worst-case ambient concentrations of NO₂ and PM_{2.5} from the proposed project downwind of the stack.

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

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

Maximum 1-hour average NO₂ concentrations were estimated using an NO₂ to NO_x ratio of 0.8—the recommended default ambient ratio per EPA guidance.¹⁰

Emission Rates and Stack Parameters

Annual emission rates for heating and hot water systems were calculated based on fuel consumption estimates, using energy intensity estimates based on type of development and size of the buildings as recommended in the *CEQR Technical Manual*, and applying emission factors for oil-fired boilers.¹¹ PM_{2.5} emissions include both the filterable and condensable components. The short-term emission rates (24-hour and shorter) were calculated by scaling the annual emissions to account for a 100-day heating season. The exhaust from the heat and hot water systems was assumed to be vented through a single stack located 3.0 feet above the roof of the buildings.

To calculate exhaust velocity, the fuel consumption of the proposed project was multiplied by EPA’s fuel factor for No. 2 fuel oil,¹² providing the exhaust flow rate at standard temperature; the flow rate was then corrected for the exhaust temperature, and exhaust velocity was calculated based on the stack diameter. Assumptions for stack diameter and exhaust temperature for the proposed systems were obtained from a survey of boiler exhaust data prepared and provided by DEP,¹³ and were used to calculate the exhaust velocity.

⁹ Albedo is the fraction of the total incident solar radiation reflected by the ground surface. The Bowen ratio is the ratio of the sensible heat flux to the latent (evaporative) heat flux. The surface roughness length is related to the height of obstacles to the wind flow and represents the height at which the mean horizontal wind speed is zero based on a logarithmic profile.

¹⁰ EPA. Memorandum: Clarification on the use of AERMOD Dispersion Modeling for Demonstrating Compliance with the NO₂ National Ambient Air Quality Standard. September 30, 2014.

¹¹ EPA. *Compilation of Air Pollutant Emission Factors AP-42*. 5th Ed., V. I, Ch. 1 3. September, 1999.

¹² EPA. *Standards of Performance for New Stationary Sources*. 40 CFR Chapter I Subchapter C Part 60. Appendix A-7, Table 19-2. 2013.

¹³ DEP. *Boiler Database*. Personal communication from Mitchell Wimbish on August 11, 2017.

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

Table F-2
Exhaust Stack Parameters and Emission Rates

Stack Parameter	Building A	Building B	Cumulative Analysis
Stack Height (feet)	38	19	38
Stack Diameter (feet)	2 ⁽¹⁾	0.5 ⁽¹⁾	2 ⁽¹⁾
Exhaust Velocity (meters/second) ⁽¹⁾	0.54	0.27	0.5
Exhaust Temperature (degrees Fahrenheit) ⁽¹⁾	307.8	307.8	307.8
<i>Emission Rate (grams/second)</i>			
NO ₂ (1-hour average)	0.021	0.001	0.022
SO ₂ (1-hour average)	0.0002	0.00001	0.0002
PM _{2.5} (24-hour average)	0.002	0.00007	0.002
PM _{2.5} (Annual average)	0.001	0.00002	0.001
Note:			
¹ Stack parameter assumptions are based on boiler specifications for similar sized systems from DEP Boiler Air Permit Data.			

Background Concentrations

To estimate the maximum projected total 1-hour average NO₂ concentration at a given receptor, the projected concentration increment from the source was added to corresponding background concentration of 112.3 µg/m³. This background level represents the 3-year average (2015–2017) of the annual 98th percentile of the daily-highest 1-hour average NO₂ concentrations (this is the statistical form of the standard) monitored at the nearest NYSDEC background monitoring station—Queens College, Queens. Note that the maximum concentration increment would not necessarily coincide with the maximum background levels, and, therefore, this approach results in a conservatively high estimate. The annual NO₂ background is based on the maximum annual average value measured over the five years (2013–2017), 32.9 µg/m³.

PM_{2.5} impacts are assessed on an incremental basis and compared with the PM_{2.5} *de minimis* criteria. The PM_{2.5} 24-hour average background concentration of 19.3 µg/m³ from the Port Richmond ambient monitoring station was used to establish the *de minimis* value of 7.9 µg/m³ (based on the 98th percentile concentration, averaged over the years 2015–2017).

Receptor Placement

Receptors (locations at which concentrations are projected) generally include operable windows in residential or other buildings, air intakes, and publicly accessible open space locations, as applicable. For Building A, the nearest building of similar or greater height is located at a distance of 151 feet. For Building B, the nearest building of similar or greater height is located at a distance of 75 feet, and a receptor representing a building at a distance of 160 feet was also included. For the cumulative analysis, it was assumed that the nearest building of similar or greater height is located at a distance of 151 feet. Lower receptors were also included at those same distances, and the worst-case ground level concentration was also evaluated.

INDUSTRIAL FACILITIES

Since the proposed project is located within 400 feet of areas zoned for manufacturing and areas identified as “industrial and manufacturing” on the land use maps, the land uses within 400 feet of the project site (study area) were reviewed to identify any facilities with emissions permits or land uses which might include industrial air pollutant emission sources requiring review, as recommended in the *CEQR Technical Manual*. A site visit was conducted on February 27, 2018 to identify potential industrial uses.

Land use maps and aerial photographs were reviewed to identify potential sources of emissions from manufacturing/industrial operations. A search of federal, state, and city compliance and permit data within the study area was conducted using DEP’s Clean Air Tracking System (CATS) database¹⁴ and EPA’s Envirofacts database.¹⁵

The Land Use map (Figure 4 of the EAS) indicates that there are no industrial facilities within 400 feet of the project site, and no permitted sources were identified based on the field survey and a search of DEP’s online permit database.¹⁶ Therefore, no industrial source analysis was required.

MAJOR OR LARGE STATIONARY EMISSIONS SOURCES

A review of existing permitted sources within a 1,000-foot distance from the project site was undertaken using the EPA Envirofacts database and NYSDEC’s permit database.¹⁷ No large or major sources of emissions were identified, therefore, no further analysis was required.

C. POTENTIAL IMPACTS OF THE PROPOSED PROJECT

MOBILE SOURCES

INTERSECTION ANALYSIS

PM₁₀ concentrations with the proposed project were determined using the methodology previously described and used in the No Action condition. **Table F-3** presents the predicted PM₁₀ 24-hour concentrations at the analyzed intersection in the With Action condition. The values shown are the highest predicted concentrations for the modeled receptor location and include background concentrations.

¹⁴ DEP. Clean Air Tracking System database. <https://a826-web01.nyc.gov/DEP.BoilerInformationExt>. Accessed March 14, 2018.

¹⁵ EPA. *Envirofacts Data Warehouse*. <https://www3.epa.gov/enviro/>. Accessed March 14, 2018.

¹⁶ DEP. *NYC DEP CATS Information*. <https://a826-web01.nyc.gov/dep.boilerinformationext>. Accessed April 10, 2018.

¹⁷ NYSDEC. *Access to DEC Air Permits*. <http://www.dec.ny.gov/chemical/32249.html>. Accessed March 14, 2018.

Table F-3
Maximum Predicted 24-Hour Average PM₁₀
With Action Concentration (µg/m³)

Analysis Site	Location	No Action	With Action
1	Veterans Road West and Project Driveway	51.3	53.7
Notes: NAAQS—24-hour average 150 µg/m ³ . Concentrations presented include a background concentration of 44.0 µg/m ³ .			

Using the methodology previously described, maximum predicted 24-hour and annual average PM_{2.5} concentration increments were calculated so that they could be compared with the *de minimis* criteria. Based on this analysis, the maximum predicted localized 24-hour average and neighborhood-scale annual average incremental PM_{2.5} concentrations are presented in **Tables F-4 and F-5**, respectively. Note that PM_{2.5} concentrations in the No Action condition are not presented, since impacts are assessed on an incremental basis. The results show that the annual and daily (24-hour) PM_{2.5} increments are predicted to be below the *de minimis* criteria.

Table F-4
Maximum Predicted 24-Hour Average PM_{2.5}
Incremental Concentration (µg/m³)

Analysis Site	Location	Increment	De Minimis Criterion
1	Veterans Road West and Project Driveway	0.98	7.9
Note: PM _{2.5} <i>de minimis</i> criteria—24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 µg/m ³ .			

Table F-5
Maximum Predicted Annual Average PM_{2.5}
Incremental Concentration (µg/m³)

Analysis Site	Location	Increment	De Minimis Criterion
1	Veterans Road West and Project Driveway	0.095	0.1
Note: PM _{2.5} <i>de minimis</i> criteria—annual (neighborhood scale), 0.1 µg/m ³ .			

Table F-6 shows the maximum projected 8-hour average CO concentration at the intersection analyzed. One-hour values are not presented, 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 value shown is the highest projected concentration. The result indicates that the proposed project would not result in any violations of the 8-hour CO standard. In addition, the maximum increase in 8-hour average CO concentration is very small, and consequently would not result in exceedance of the CEQR *de minimis* CO criteria. Therefore, mobile-source CO emissions with the proposed project would not result in a significant adverse impact on air quality.

Table F-6

Maximum Predicted 8-Hour CO With Action Concentration (ppm)

Analysis Site	Location	Time Period	No-Action	With Action	De Minimis Criterion
1	Veterans Road West and Project Driveway	Saturday midday	1.7	2.0	5.3
Notes: 8-hour standard is 9 ppm. Concentration includes a background concentration of 1.5 ppm.					

Overall, there would be no potential for significant adverse impacts on air quality at intersections from vehicle trips generated by the proposed project.

PARKING FACILITIES

Based on the methodology previously described, the maximum predicted CO and PM concentrations from the proposed parking facilities were determined. Receptors were placed assuming a near side sidewalk receptor on the same side of the street as the proposed parking facilities (5 feet from the edge of the parking facilities) and a far side sidewalk receptor on the opposite side of the street from the parking facility (157 feet from the edge of the parking lot, and 200 feet from the parking garage). For the parking garage, receptors were placed assuming a near side sidewalk along Building A on the same side of the street as the proposed parking garage (5 feet from the edge of the parking lot) and a far side sidewalk receptor on the opposite side of the street from the parking garage (200 feet from the edge of the parking lot).

The maximum predicted eight-hour average CO concentration is 3.6 ppm. This value includes a predicted concentration of 0.01 ppm from the proposed parking lot, 0.01 ppm from the proposed parking garage, an on-street contribution of 2.1 ppm, and a background level of 1.5 ppm. The maximum predicted concentration is substantially below the applicable NAAQS of 9 ppm and the *de minimis* CO criteria of 5.3 ppm.

The maximum predicted 24-hour and annual average PM_{2.5} increments are 0.7 µg/m³ and 0.01 µg/m³, respectively. The maximum predicted PM_{2.5} increments are well below the respective PM_{2.5} *de minimis* criteria of 7.9 µg/m³ for the 24-hour average concentration and 0.3 µg/m³ for the annual concentration. Therefore, the proposed parking lot and garage would not result in any significant adverse air quality impacts.

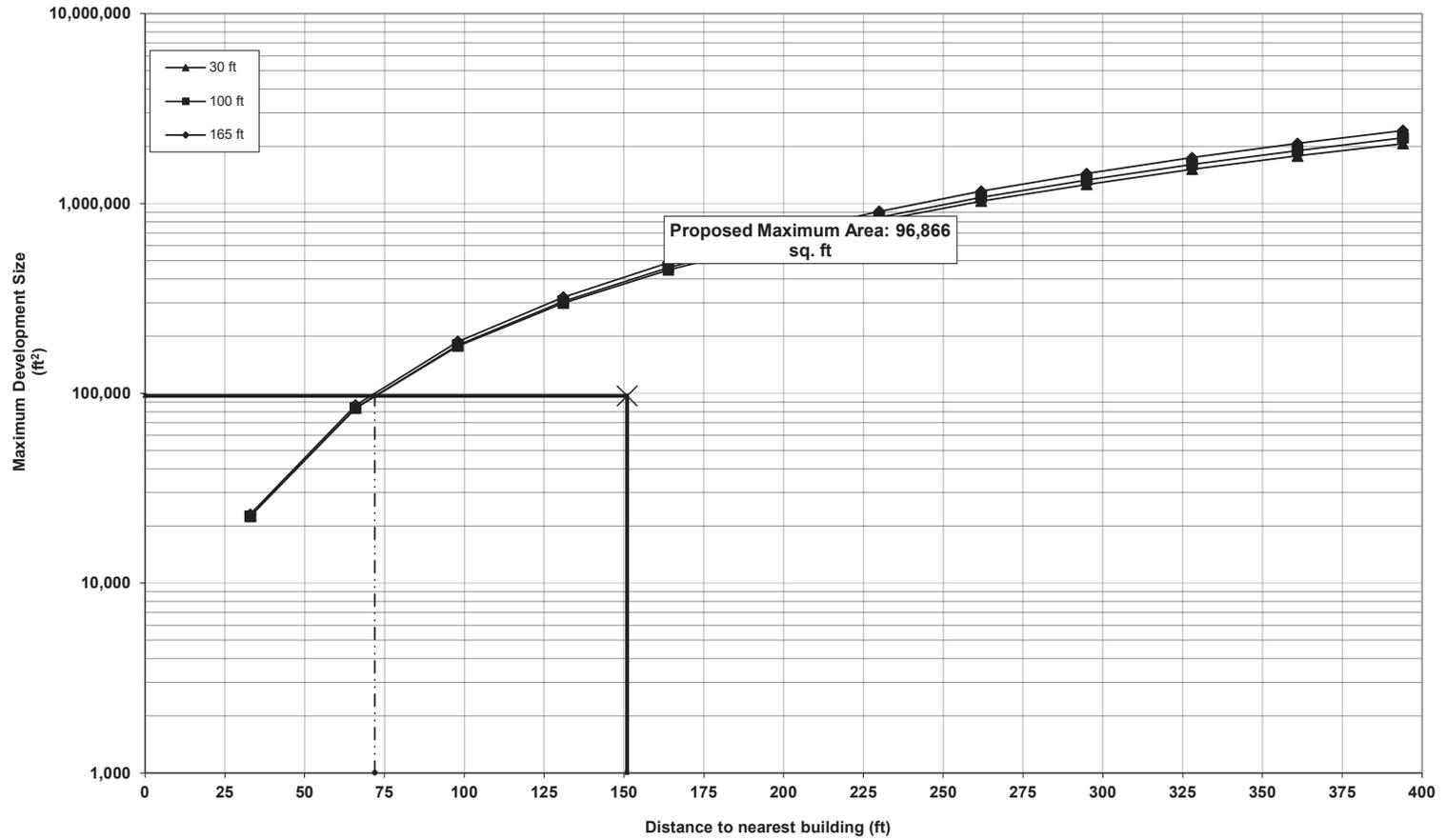
STATIONARY SOURCES

HEAT AND HOT WATER SYSTEMS

The results of the simplified screening analysis are presented in **Figure F-1**. For Building A, the distance below which impacts might occur on buildings of similar height was estimated at 72 feet. For Building B, the distance below which impacts might occur on buildings of similar height was estimated at 33 feet. For the cumulative analysis, the distance below which impacts might occur on buildings of similar height was estimated at 72 feet. For Building A, the distance to the nearest building of similar height would be 151 feet, which is further from the source, indicating that no significant impact is projected. For Building B, the distance to the nearest building of similar height would be 75 feet, which is further from the source, indicating that no significant impact is

HVAC Screening Analysis
 Site: Building A
 Date: 3/14/2018
 Pass

SO₂ BOILER SCREEN
COMMERCIAL AND OTHER NON-RESIDENTIAL DEVELOPMENT - FUEL OIL #2

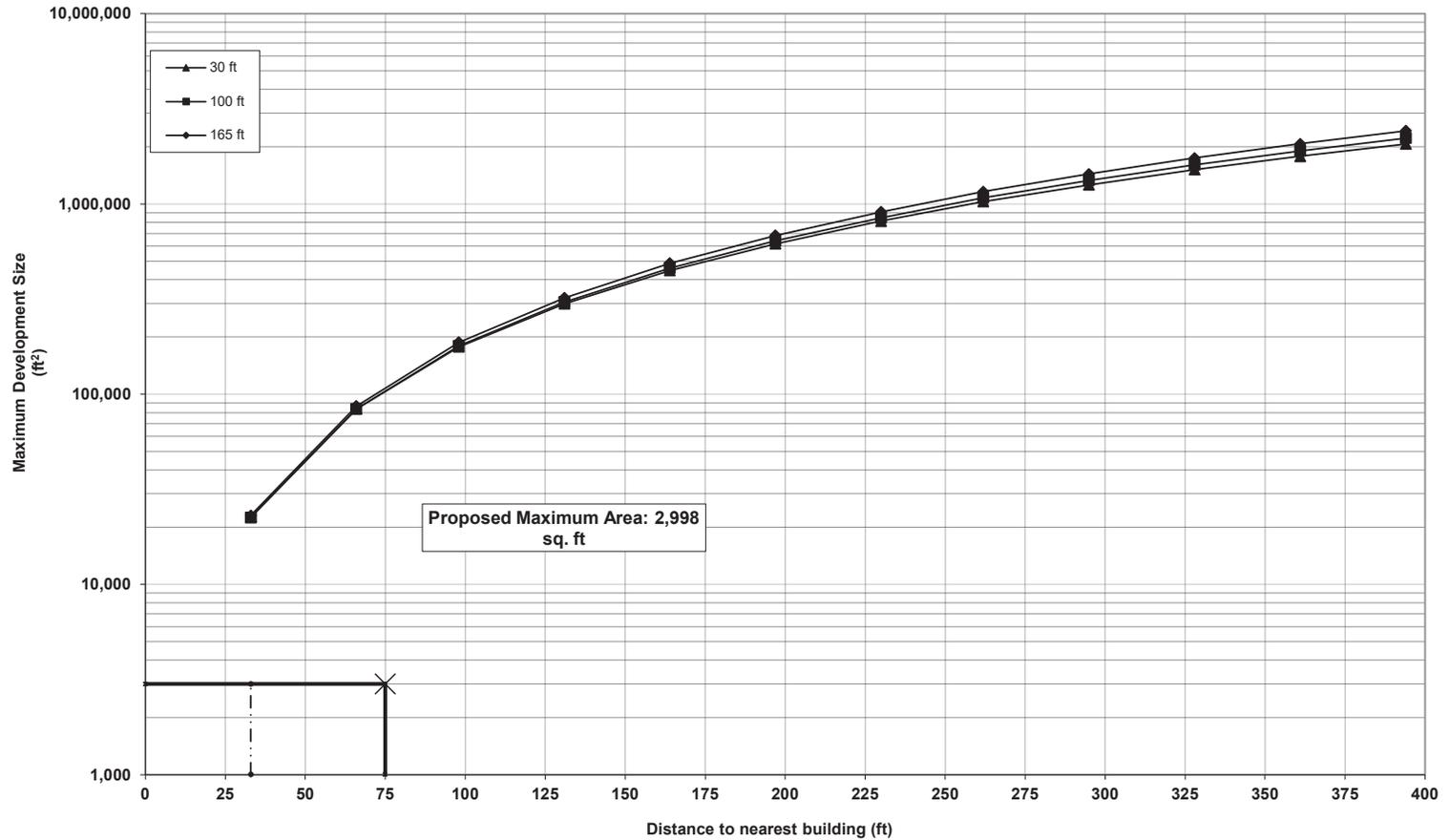


Stack Height: 38 ft
 Distance to Nearest Building of Similar or Greater Height: 151 ft
 Proposed Maximum SQFA: 96,866 sq. ft
 Minimum Allowable Distance to Nearest Building: 72 ft

Notes:

HVAC Screening Analysis
 Site: Building B
 Date: 3/14/2018
 Pass

SO₂ BOILER SCREEN
COMMERCIAL AND OTHER NON-RESIDENTIAL DEVELOPMENT - FUEL OIL #2



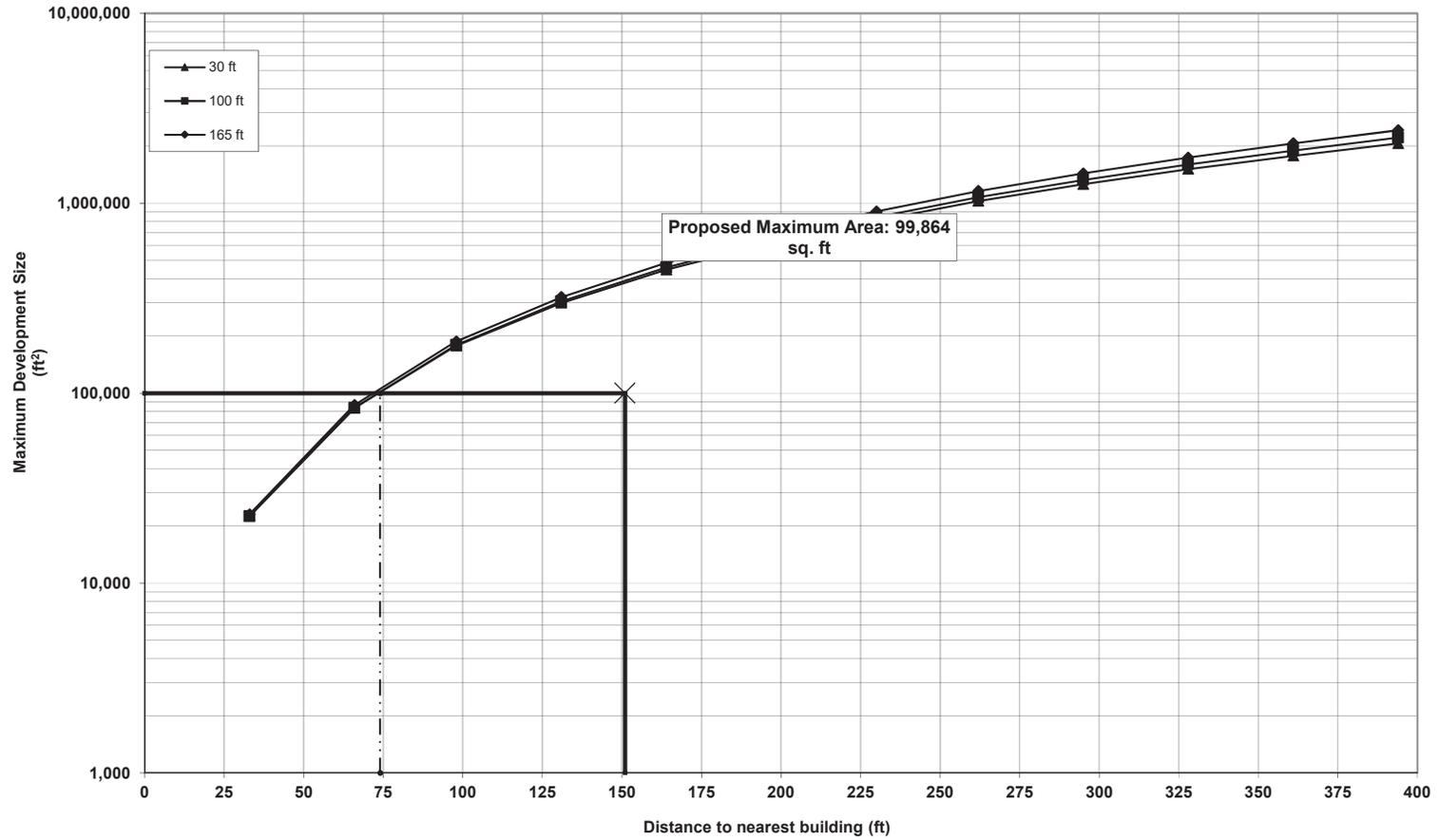
Proposed Maximum Area: 2,998 sq. ft

Stack Height: 19 ft
 Distance to Nearest Building of Similar or Greater Height: 75 ft
 Proposed Maximum SQFA: 2,998 sq. ft
 Minimum Allowable Distance to Nearest Building: 33 ft

Notes:

HVAC Screening Analysis
 Site: Cumulative /
 Date: 3/26/2018
 Pass

SO₂ BOILER SCREEN
COMMERCIAL AND OTHER NON-RESIDENTIAL DEVELOPMENT - FUEL OIL #2



Stack Height: 38 ft
 Distance to Nearest Building of Similar or Greater Height: 151 ft
 Proposed Maximum SQFA: 99,864 sq. ft
 Minimum Allowable Distance to Nearest Building: 74 ft

Notes:

projected. For the cumulative analysis, the distance to the nearest building of similar height would be 151 feet, which is further from the source, indicating that no significant impact is projected.

The results of the AERSCREEN analysis for 1-hour average NO₂ and 24-hour and annual average PM_{2.5} are presented in **Table F-7**. No exceedance of critical levels was identified in the AERSCREEN analysis. Overall, based on the two analyses presented, the proposed project's heating and hot water system would not result in any significant adverse air quality impacts.

**Table F-7
Maximum Modeled Pollutant Concentrations (µg/m³)**

Building	Pollutant	Averaging Period	Maximum Modeled Impact	Background	Total Concentration	Criterion
Building A	NO ₂	1-hour	50.1 ⁽¹⁾	112.3	162.3	188 ⁽²⁾
	SO ₂	1-hour	0.7	18.1	18.8	196 ⁽²⁾
	PM _{2.5}	24-hour	4.0	N/A	N/A	7.9 ⁽³⁾
		Annual	0.2	N/A	N/A	0.3 ⁽⁴⁾
Building B	NO ₂	1-hour	8.3 ⁽¹⁾	112.3	120.6	188 ⁽²⁾
	SO ₂	1-hour	0.1	18.1	18.2	196 ⁽²⁾
	PM _{2.5}	24-hour	0.7	N/A	N/A	7.9 ⁽³⁾
		Annual	0.03	N/A	N/A	0.3 ⁽⁴⁾
Cumulative	NO ₂	1-hour	51.7	112.3	164.0	188 ⁽²⁾
	SO ₂	1-hour	0.7	18.1	18.8	196 ⁽²⁾
	PM _{2.5}	24-hour	4.1	N/A	N/A	7.9 ⁽³⁾
		Annual	0.2	N/A	N/A	0.3 ⁽⁴⁾

Notes:
 N/A – Not Applicable
¹ The 1-hour average NO₂ concentration is estimated using NO₂ to NO_x ratio of 0.8 as per EPA guidance.
² NAAQS
³ PM_{2.5} *de minimis* criteria—24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 µg/m³
⁴ PM_{2.5} *de minimis* criteria—annual (discrete receptor)

*

APPENDIX A

Waterfront Revitalization Program – Consistency Assessment Form

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: Block 7469 LLC

Name of Applicant Representative: Philip L. Rampulla, Rampulla Associates Architects, LLP

Address: 155 3rd Street, Staten Island, NY, 10306

Telephone: 718-987-1310 Email: prampulla@rampulla.net

Project site owner (if different than above): Same as above.

B. PROPOSED ACTIVITY

If more space is needed, include as an attachment.

1. Brief description of activity

The project applicant, Block 7469 LLC, is seeking a special permit, zoning authorizations, and zoning certifications (the proposed actions) to facilitate the development of a new approximately 99,864 gross square foot (gsf) development with two buildings, containing retail, office, and parking uses on the project site located at 2835 Veterans Road West in Staten Island (Block 7469, Lots 115, 120, 125, 136, and 150, tentative Lot 115). The project site, which is located in an M1-1 zoning district and the Special South Richmond Development District (SRD), is currently wooded and undeveloped. The proposed project would include 65,074 gsf of Use Group (UG) 6/10A commercial uses (including retail establishments larger than 10,000 square feet) and 34,791 gsf of parking, storage, and mechanical space. The proposed project is expected to be completed and occupied by 2021.

2. Purpose of activity

The applicant's goal for the proposed project is to provide for a new retail destination and bank on a vacant and underutilized property which would serve the residential populations in the Charleston neighborhood and other nearby areas of Staten Island. In particular, the applicant intends to provide for a larger retail space in Building A. As the M1-1 district limits some commercial uses (e.g., supermarkets and department stores) to 10,000 sf per establishment, the special permit pursuant to Zoning Resolution (ZR) Sec. 74-922 to permit a retail establishment containing more than 10,000 sf is required.

C. PROJECT LOCATION

Borough: Staten Island Tax Block/Lot(s): Block 7469, Lots 115, 120, 125, 136, and 150, tent. Lot 115

Street Address: 2835 Veterans Road West, Staten Island, New York, 10309

Name of water body (if located on the waterfront): N/A

D. REQUIRED ACTIONS OR APPROVALS

Check all that apply.

City Actions/Approvals/Funding

City Planning Commission

Yes No

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

Board of Standards and Appeals

Yes No

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

Other City Approvals

- | | |
|--|---|
| <input type="checkbox"/> Legislation | <input type="checkbox"/> Funding for Construction, specify: _____ |
| <input type="checkbox"/> Rulemaking | <input type="checkbox"/> Policy or Plan, specify: _____ |
| <input type="checkbox"/> Construction of Public Facilities | <input type="checkbox"/> Funding of Program, specify: _____ |
| <input type="checkbox"/> 384 (b) (4) Approval | <input type="checkbox"/> Permits, specify: _____ |
| <input type="checkbox"/> Other, explain: _____ | |

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).
 - Significant Maritime and Industrial Area (SMIA) (2.1)
 - Special Natural Waterfront Area (SNWA) (4.1)
 - Priority Maritime Activity Zone (PMAZ) (3.5)
 - Recognized Ecological Complex (REC) (4.4)
 - West Shore Ecologically Sensitive Maritime and Industrial Area (ESMIA) (2.2, 4.2)

F. WRP POLICY ASSESSMENT

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

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

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

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

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

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

G. CERTIFICATION

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

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

Applicant/Agent's Name: Alex Lieber, AICP, AKRF, Inc.

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

Telephone: 646 388 9523 Email: ALieber@akrf.com

Applicant/Agent's Signature: 

Date: 8/21/19

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

APPENDIX B
Historic Resources



New York State Office of Parks, Recreation and Historic Preservation

Historic Preservation Field Services Bureau • Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

www.nysparks.com

Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

January 02, 2013

Kelly Wood
Carpenter Environmental Associates
307 Museum Village Rd.
Monroe, New York 10950

Re: DEC
Tyrellan Ave Development
between Veteran's Rd and W. Shore Expressway
STATEN ISLAND, Richmond County
13PR00027

Dear Ms. Wood:

Thank you for requesting the comments of the Office of Parks, Recreation and Historic Preservation (OPRHP) concerning your project's potential impact/effect upon historic and/or prehistoric cultural resources. Our staff has reviewed the documentation that you provided on your project. Preliminary comments and/or requests for additional information are noted on separate enclosures accompanying this letter. A determination of impact/effect will be provided only after ALL documentation requirements noted on any enclosures have been met. Any questions concerning our preliminary comments and/or requests for additional information should be directed to the appropriate staff person identified on each enclosure.

In cases where a state agency is involved in this undertaking, it is appropriate for that agency to determine whether consultation should take place with OPRHP under Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law. In addition, if there is any federal agency involvement, Advisory Council on Historic Preservation's regulations, "Protection of Historic and Cultural Properties" 36 CFR 800 requires that agency to initiate Section 106 consultation with the State Historic Preservation Officer (SHPO).

When responding, please be sure to refer to the OPRHP Project Review (PR) number noted above.

Sincerely,

Ruth L. Pierpont
Deputy Commissioner for Historic Preservation

Enclosure

ARCHEOLOGY COMMENTS
13PR00027

Based on reported resources, there is an archeological site in or adjacent to your project area. Therefore the Office of Parks, Recreation and Historic Preservation (OPRHP) recommends that a Phase 1 archeological survey is warranted for all portions of the project to involve ground disturbance, unless substantial prior ground disturbance can be documented. If you consider the project area to be disturbed, documentation of the disturbance will need to be reviewed by OPRHP. Examples of disturbance include mining activities and multiple episodes of building construction and demolition.

A Phase 1 survey is designed to determine the presence or absence of archeological sites or other cultural resources in the project's area of potential effect. The OPRHP can provide standards for conducting cultural resource investigations upon request. Cultural resource surveys and survey reports that meet these standards will be accepted and approved by the OPRHP.

Our office does not conduct cultural resources surveys. A 36 CFR 61 qualified archeologist should be retained to conduct the Phase 1 survey. Many archeological consulting firms advertise their availability in the yellow pages. The services of qualified archeologists can also be obtained by contacting local, regional, or statewide professional archeological organizations. Phase 1 surveys can be expected to vary in cost per mile of right-of-way or by the number of acres impacted. We encourage you to contact a number of consulting firms and compare examples of each firm's work to obtain the best product.

Documentation of ground disturbance should include a description of the disturbance with confirming evidence. Confirmation can include current photographs and/or older photographs of the project area which illustrate the disturbance (approximately keyed to a project area map), past maps or site plans that accurately record previous disturbances, or current soil borings that verify past disruptions to the land. Agricultural activity is not considered to be substantial ground disturbance and many sites have been identified in previously cultivated land.

Please also be aware that a Section 233 permit from the New York State Education Department (SED) may be necessary before any archeological survey activities are conducted on State-owned land. If any portion of the project includes the lands of New York State you should contact the SED before initiating survey activities. The SED contact is Christina B. Rieth and she can be reached at (518) 402-5975. Section 233 permits are not required for projects on private lands.

If you have any questions concerning archeology, please contact Douglas Mackey at (518) 237-8643. ext 3291



Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

April 26, 2016

Ms. Kelly Wood
Environmental Scientist
Carpenter Environmental Associates
307 Museum Village Rd.
Monroe, NY 10950

Re: DEC
Tyrellan Ave Development
Borough of Staten Island, Richmond County, NY
13PR00027

Dear Ms. Wood:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). 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 (6NYCRR Part 617).

OPRHP has reviewed the Phase IA archaeological survey report for this project – *Phase IA Archaeological Documentary Study, Tyrellan Avenue Development, Block 7469, Lots 115, 120, 125, 136 and 150, Staten Island, Richmond County, New York* (Historical Perspectives, Inc., March 2016). Based on the information provided, this office concurs with the report's recommendation that a Phase IB archaeological survey should be undertaken of this project area.

We have also received a proposed Phase IB testing protocol (Historical Perspectives, Inc., 8 April 2016). OPRHP concurs with the proposed testing procedures. We request that our human remains discovery protocol (attached) be implemented should suspected evidence of human remains be encountered.

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst - Archaeology Unit
Phone: 518-268-2175
e-mail: philip.perazio@parks.ny.gov

via email only

Attachment

cc: Cece Saunders, HPI; Julie Horn, HPI; Charles Vandrei, DEC

Division for Historic Preservation

P.O. Box 189, Waterford, New York 12188-0189 • (518) 237-8643 • www.nysparks.com

**State Historic Preservation Office/
New York State Office of Parks, Recreation and Historic
Preservation
Human Remains Discovery Protocol
(June 2015)**

In the event that human remains are encountered during construction or archaeological investigations, the New York State Historic Preservation Office (SHPO) recommends that the following protocol is implemented:

- At all times human remains must be treated with the utmost dignity and respect. Should human remains or suspected human remains be encountered, work in the general area of the discovery will stop immediately and the location will be immediately secured and protected from damage and disturbance.
- Human remains or associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be collected or removed until appropriate consultation has taken place and a plan of action has been developed.
- The SHPO, the appropriate Indian Nations, the involved state and federal agencies, the coroner, and local law enforcement will be notified immediately. Requirements of the coroner and local law enforcement will be met. A qualified forensic anthropologist, bioarchaeologist or physical anthropologist will assess the remains *in situ* to help determine if the remains are Native American or non-Native American.
- If human remains are determined to be Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Please note that avoidance is the preferred choice of the SHPO and the Indian Nations. The involved agency will consult SHPO and appropriate Indian Nations to develop a plan of action that is consistent with the Native American Graves Protection and Repatriation Act (NAGPRA) guidance. Photographs of Native American human remains and associated funerary objects should not be taken without consulting with the involved Indian Nations.
- If human remains are determined to be non-Native American, the remains will be left in place and protected from further disturbance until a plan for their avoidance or removal can be generated. Please note that avoidance is the preferred choice of the SHPO. Consultation with the SHPO and other appropriate parties will be required to determine a plan of action.



Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ROSE HARVEY
Commissioner

May 19, 2016

Ms. Kelly Wood
Environmental Scientist
Carpenter Environmental Associates
307 Museum Village Rd.
Monroe, NY 10950

Re: DEC
Tyrellan Ave Development
Borough of Staten Island, Richmond County, NY
13PR00027

Dear Ms. Wood:

Thank you for requesting the comments of the Division for Historic Preservation of the Office of Parks, Recreation and Historic Preservation (OPRHP). We have reviewed the submitted materials in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law). 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 (6NYCRR Part 617).

OPRHP has reviewed the Phase IB archaeological survey report for this project – *Phase IB Archaeological Field Investigation, Tyrellan Avenue Development, Block 7469, Lots 115, 120, 125, 136 and 150, Staten Island, Richmond County, New York* (Historical Perspectives, Inc., May 2016). Based on the information provided, we recommend that the proposed project will have **No Impact** on cultural resources listed or eligible for listing on the State and National Registers of Historic Places. This recommendation pertains only to the Area of Potential Effects (APE) examined during the above-referenced investigation. Should the project design be changed OPRHP recommends further consultation with this office.

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst - Archaeology Unit
Phone: 518-268-2175
e-mail: philip.perazio@parks.ny.gov

via email only

cc: Cece Saunders, HCI; Charles Vandrei, DEC; Julie Horn, HCI

Division for Historic Preservation

P.O. Box 189, Waterford, New York 12188-0189 • (518) 237-8643 • www.nysparks.com

ARCHAEOLOGY

Project number: DEPT. OF ENV. CONSERVATION / SEQRA-R
Project: TYRELLAN AVE DEVELOPMENT
Date received: 6/7/2016

Comments: as indicated below. Properties that are individually LPC designated or in LPC historic districts require permits from the LPC Preservation department. Properties that are S/NR listed or S/NR eligible require consultation with SHPO if there are State or Federal permits or funding required as part of the action.

This document only contains Archaeological review findings. If your request also requires Architecture review, the findings from that review will come in a separate document.

Comments: The LPC is in receipt of the, "Phase 1A Archaeological Documentary Study Tyrellan Ave Development, Block 7469, Lots 115, 120, 125, 136, and 150, Staten Island," and the, "Phase 1B Archaeological Field Investigation Tyrellan Ave Development, Block 7469, Lots 115, 120, 125, 136, and 150, Staten Island," both prepared by Historical Perspectives, Inc. We concur that there are no further archaeological concerns.



6/13/2016

SIGNATURE
Amanda Sutphin, Director of Archaeology

DATE

File Name: 31547_FSO_ALS_06132016.doc

APPENDIX C
Natural Resources

Sender's Phone: 845-781-4844 EXT 323
Sender's Email: g.fleischer@cea-enviro.com

Phone: 845-781-4844
Fax: 845-782-5591

October 25, 2012

Mr. Jonathan Keller
Environmental Assessment and Review Division
NYC Department of City Planning
22 Reade Street
New York, NY 10007-1216

Re: Tyrellan Avenue – Veterans Road West NRI

CEA No. 21242

Dear Mr. Keller:

Carpenter Environmental Associates (CEA) hereby submits this document which sets forth the analyses and methodologies proposed to be used for the Tyrellan Avenue/Veterans Road West site Natural Resource Inventory (NRI). The NRI will include a detailed description of the existing conditions as observed during the vegetation inventory field work in order to demonstrate the type and quality of habitat on site. The purpose of the NRI is to characterize the existing vegetation, soil, and wildlife habitat and use (including potential based on plant communities). As discussed at the October 15th site visit, the NRI will be based on seasonal field visits scheduled for October and November 2012 and May 2013.

Task 1: FOIL Requests

CEA will make a written request to both the New York State Department of Environmental Conservation (NYS DEC) Natural Heritage Program (NHP) and U.S. Fish and Wildlife Service (USFWS) inquiring as to the possible presence of Federal and State listed threatened and endangered species in the area of the project. Copies of the inquiries and subsequent responses from the NYSNHP and USFWS will be included as appendices to the NRI.

Task 2: Vegetation Identification

To enable an accurate assessment of the plant communities existing on site, the natural resource inventory will utilize sample points and transects. A total of 15 sample points located in distinct plant communities will be situated along 5 transects mapped throughout the property.¹ The transect method is based on the 1987 Corps of Engineers

¹ As discussed and illustrated on a site survey during the October 15, 2012 on-site meeting. Transects will be no more than 150 feet apart along the baseline. Sample points will be approximately 100-140 feet apart and placed so as to encompass all potential ecological communities present on the project site.

Wetland Delineation Manual.² At each sample point, tree, sapling/shrub, herbaceous, and woody vine stratum vegetation will be identified. Absolute percent cover and dominant species will be documented.³ In addition to the sample points, CEA will conduct a general survey of each distinct vegetative community to ensure a thorough examination of all vegetative species present onsite. CEA will further characterize the various vegetative cover types identified throughout the project site based on the classification system outlined in the Ecological Communities of New York State.⁴

Task 3: Soils

The New York City Reconnaissance Soil Survey will be used to identify the map unit descriptions of for the project site.⁵ Soil characterization will take place at sampling points along the transects and consist of augured soils (demonstrating horizon boundaries), depth of soil horizons, depth to saturated soils, and moist matrix and redox concentration colors (Munsell Color Chart).^{6,7}

Task 4: Wildlife Identification

CEA will perform a wildlife survey of the subject property; surveys will be conducted for avian, mammalian, reptilian, and amphibian species. The assessment will be conducted in conjunction with vegetation identification, using the same transects and sampling protocols. Visual observations using binoculars, spotting scopes and detailed inspections under logs, forest floor litter, and rocks will be conducted. Audible indicators will be used to identify both avian and amphibian species. All observations will be identified by staff scientists and recorded.

CEA will identify the potential for the various ecological communities to provide habitat for identified wildlife species that inhabit or are expected to inhabit the identified ecological communities that exist on the project site.

Please contact me with any questions or comments regarding the analyses and methodologies proposed for the NRI.

² Environmental Laboratory. (1987). Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

³ U.S. Army Corps of Engineers. 2011. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble, and J.F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

⁴ Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2002. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. (Draft for review). New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

⁵ New York City Soil Survey Staff. 2005. New York City Reconnaissance Soil Survey. United States Department of Agriculture, Natural Resource Conservation Service, Staten Island, NY.

⁶ Munsell Soil Color Chart - Year 2000 Revised Edition; c. 2000; GretagMacbeth, New Windsor, NY.

⁷ Soil Characterization Laboratory. 2003. *Describing and Documenting Soil Conditions*.

Sincerely,

Carpenter Environmental
Associates, Inc.

A handwritten signature in black ink, appearing to read "Greg M. Fleischer". The signature is written in a cursive style with a large initial "G".

Greg M. Fleischer, PWS
Senior Scientist

Cc:
John McLaughlin – NYC DEP
Terrell Esteen – NYC DEP

APPENDIX D
Hazardous Materials

307 Museum Village Road
PO Box 656
Monroe, New York 10950

Phone: 845-781-4844
Fax: 845-782-5591
www.ceaenviro.com

Sender's E-Mail: k.hosea@cea-enviro.com

October 26, 2007

Mr. Ray Masucci
Tyrellan Avenue Holdings, LLC
101 Tyrellan Avenue
Staten Island, New York 10309

Re: Phase I Environmental Site Assessment Report
Tyrellan Avenue, Block 7469, Staten Island, New York
CEA No. 07060

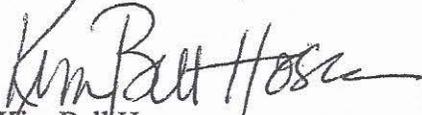
Dear Mr. Masucci:

Attached is one bound copy and one electronic copy (pdf on CD) of the *Phase I Environmental Site Assessment, Tyrellan Avenue Holdings, LLC, (Block 7469) Staten Island, Richmond County, New York 10309*, for your information and use.

Based on CEA's site assessment and review of regulatory database and historical information, no conditions indicative of releases were identified on the subject property; therefore, no further investigation is required.

We appreciate the opportunity to work with you on this project. Please feel free to contact me at 845-781-4844 if you have any questions.

Sincerely,
CEA ENGINEERS, PC


Kim Bell Hosea
Senior Engineer

AKB/

**PHASE I
ENVIRONMENTAL SITE ASSESSMENT
TYRELLAN AVENUE HOLDINGS, LLC
(BLOCK 7469)
STATEN ISLAND, RICHMOND COUNTY, NEW YORK 10309**

Prepared for:

Tyrellan Avenue Holding, LLC
101 Tyrellan Avenue
Staten Island, New York 10309

Prepared by:

CEA Engineers, P.C.
307 Museum Village Road
P.O. Box 656
Monroe, New York 10949

**CEA No. 07060
October 26, 2007**

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(on CD)
- Appendix B: FOIA-FOIL Requests
- Appendix C: Site Photographs

FIGURES

- Figure 1 Site Location Map
- Figure 2 Site and Surrounding Properties

1.0 EXECUTIVE SUMMARY

In October 2007, CEA Engineers, P.C. (CEA) conducted a Phase I Environmental Site Assessment (ESA) of the property located Tyrellan Avenue and Veterans Road West, Richmond County, Staten Island, New York (Block 7469) (subject property) for Tyrellan Avenue Holdings, LLC (Client) in support of property purchase.

The purpose of this assessment was to identify environmental conditions indicative of releases or threatened releases to the environment. CEA conducted the ESA in general accordance with American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, E 1527-05, and EPA's 40 CFR Part 312 "Standards and Practices for All Appropriate Inquiries." CEA understands that the Client will rely on the information contained in this report for the potential acquisition of the subject property.

The site is partially developed. The site contains a 3-story office building constructed in 1999 on the west side of the property along Tyrellan Avenue. The remainder of the property is wooded and undeveloped. Historical documentation shows the site to have been developed since at least 1995 with no listing in the City Directories until 2005.

Based on our review of historical site use documentation, field observations during the site visit, and discussion with property owners, CEA recommends no further investigation.

2.0 ESA INTRODUCTION

In October 2007, CEA Engineers, P.C. (CEA) conducted a Phase I Environmental Site Assessment (ESA) of the property located Tyrellan Avenue and Veterans Road West, Richmond County, Staten Island, New York (Block 7469) (subject property) for Tyrellan Avenue Holdings, LLC (Client) in support of property purchase.

2.1 Purpose

The purpose of a Phase I Environmental Site Assessment (ESA) is to identify, to the extent feasible, past and present environmental conditions indicative of releases or threatened releases on the subject property, in order to meet certain liability protections under the Comprehensive Environmental Response, Compensation, and Liability Act

(CERCLA) when purchasing a property, particularly the "bona fide purchaser defense" criteria. This ESA was performed in accordance the Environmental Protection Agency's (EPA) 40 CFR Part 312, "Standards and Practices for All Appropriate Inquiries" (AAI) and the American Society for Testing and Materials (ASTM) "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-05." Any exceptions to, or deletions from, the proposed regulation or ASTM practice are identified in Section 2.4 of this report.

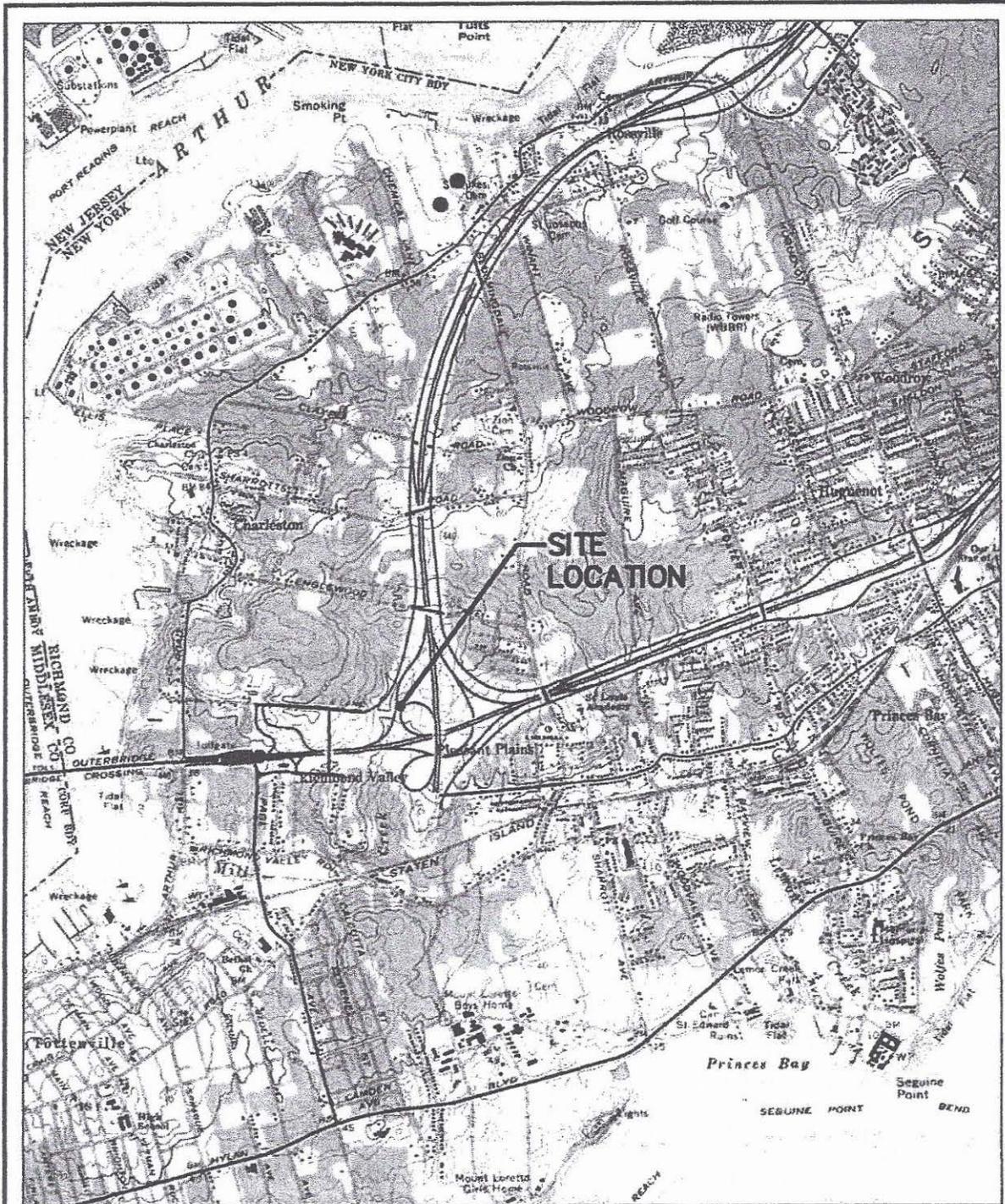
Both the AAI regulations and the ASTM practice provide for collection of site information via records review, site reconnaissance, and interviews with neighbors and local government officials. This report, documenting the findings of the ESA, has been prepared in a manner consistent with the recommended procedures of the AAI regulations and standard practice, unless otherwise noted. The findings and conclusions of this report are based on CEA's professional judgment concerning the significance of the data gathered during the course of the investigation.

2.2 Detailed Scope of Services

CEA prepared a Scope of Services to conduct the ESA at the subject property based on the needs of the client. The assessment was performed in order to aid in the potential acquisition of the subject property.

Activities conducted as part of CEA's ESA included:

1. A site reconnaissance to visually inspect the property and to identify/confirm areas of concern on-site and at adjacent properties.



SOURCE: USGS GEOLOGICAL SURVEY 7.5 MINUTE QUADRANGLE, ARTHUR KILL, NY-NJ, 1966 PHOTOREVISED 1981



SITE LOCATION MAP
 TYRELLAN HOLDINGS
 STATEN ISLAND, NEW YORK

FIGURE 1

DATE: 10/26/2007

SCALE: 1:24000

FILE: 07060-L0C

2. Reviewing an electronic database search of publicly available ASTM standard environmental record sources including federal and state sites of concern (NPL, CERCLIS, RCRA, ERNS, and state priority sites, registered underground storage tank, leaking underground storage tank, and solid waste sites). CEA reviewed the database report for facilities that might impact the property and requested files for review from the appropriate agencies.
3. Interviewing Ms. Karen DiBenedetto and Mr. Ray Massucci, Client, regarding current and historical use of the subject property.
4. Contacting the United States Environmental Protection Agency (USEPA), New York State Department of Conservation (NYSDEC), and the New York City Department of Environmental Protection (NYCDEP) via written requests to identify conditions indicative of past or present releases.
5. Reviewing reasonably available historical sources such as aerial photographs, and City Directory abstracts to 1943 in order to identify conditions indicative of past or present releases.
6. Reviewing reasonably available physical setting sources such as the current USGS Topographic Map for the area and Floodplain information in order to identify site topography and potential contamination migration characteristics.

No media sampling was conducted as part of this ESA.

2.3 Significant Assumptions

For the purposes of this report, CEA has assumed that groundwater generally flows to the west, towards the Arthur Kill.

2.4 Special Terms and Limiting Conditions

The following special terms and limiting conditions applied to the completion of the ESA:

- A title search was not included as part of this ESA.
- No meetings with Federal, State, or local agencies were conducted as part of the ESA

- The site visit was conducted on October 20, 2007; therefore, the information provided in this report may be relied upon until October 20, 2008.

2.5 User Reliance

CEA acknowledges that Tyrellan Avenue Holdings, Inc., and/or its successors, assigns, potential investors, agents, bond rating agencies and existing/potential loan or loan-pool participants, can rely upon the contents of this report, including, without limitation all facts and opinions set forth in such report; also, to reproduce and provide copies of the report to the above entities. The information provided in this report is valid through October 20, 2008.

3.0 SITE DESCRIPTION

3.1 Location and Legal Description

The subject property, Tyrellan Avenue and Veteran's Road West, Staten Island, Richmond County, New York, (Block 7469) consists of a partially developed parcel located in a mixed residential/commercial area of Staten Island. The property is approximately 90% undeveloped.

The property is located in the South Richmond Development District, a special purpose district defined by the New York City Planning Commission. The purpose the designation is to promote the most desirable use of land in the South Richmond area and to conserve the value of land and buildings.

3.2 General Site and Vicinity Characteristics

The area is a mixed residential/commercial area in Staten Island, New York. The properties adjacent to the property are retail shopping areas.

3.3 Current Use of Property

The majority of the site is currently undeveloped and wooded. A three-story office building and associated parking are located on the west side of the property.

3.4 Description of Improvements

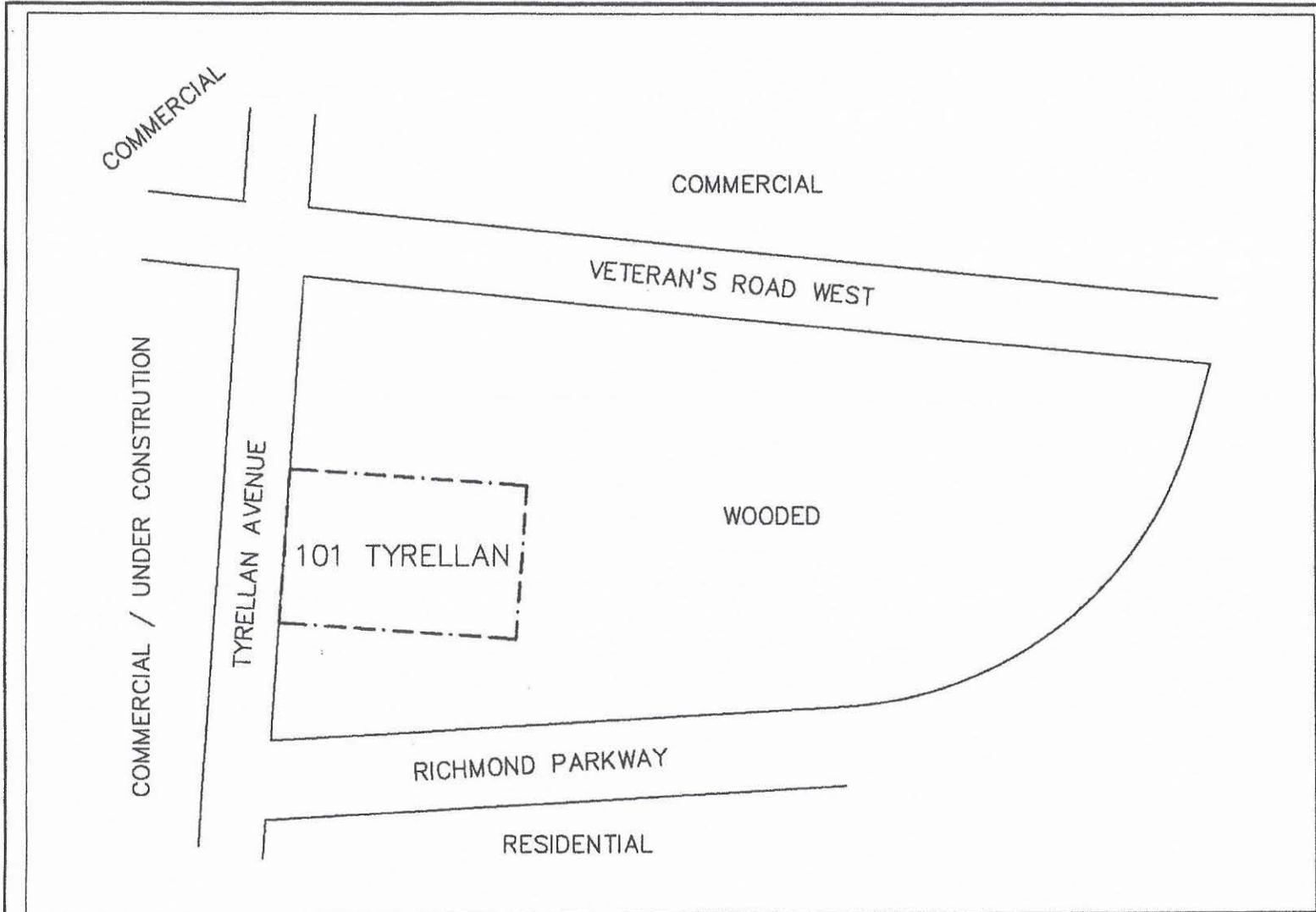
The site contains a three-story, slab-on-grade office building constructed in 1999. Utilities include city water and sewer and electricity. A transformer box located on the southwest boundary of the property was not labeled as PCB containing and is not a concern.

3.5 Current Uses of Adjoining Properties

Adjacent sites include the following:

- North: Veterans Road West, Commercial/Retail shopping area
- East: West Shore Expressway
- South: Richmond Parkway
- West: Tyrellan Avenue, Commercial Retail shopping areas

None of these facilities have been identified as an environmental concern to the subject property. Figure 2 shows the site and surrounding property.



4.0 USER PROVIDED INFORMATION

4.1 Title Records, Environmental Liens, and Activity and Use Limitations

CEA requested any information pertaining to environmental liens or activity and use limitations for the subject property from Tyrellan Avenue Holdings, LLC. Environmental liens or activity and use limitations for the property may be useful in identifying potential areas of concerns associated with the property. No title search was provided or conducted by CEA.

4.2 Specialized Knowledge

CEA inquired as to any specialized knowledge or experiences that the potential purchaser may have that is material to conditions indicative of past or current releases at the subject property. The Client was unaware of any use of the property other than the current use. CEA has also conducted environmental investigations for the property located along the west side of Tyrellan Avenue. No environmental concerns were identified on the adjacent parcel.

5.0 RECORDS REVIEW

CEA contracted with Environmental Data Resources (EDR) to perform a radius profile search of federal and state records to identify possible areas of environmental concern at the subject property and the surrounding area. The EDR report is included as Appendix A (on CD).

5.1 Standard Environmental Records Sources

EDR researched the following databases as specified in the All Applicable Inquiry standard (40 CFR 312.26):

Source	Search Radius
Federal NPL/Proposed NPL site list	1.0 mile
Federal CERCLIS list	0.5 mile
Federal CERCLIS NFRAP list	0.5 mile
RCRA CORRACTS facilities list	1.0 mile

RCRA non-CORRACTS TSD facilities list	0.5 mile
Federal RCRA generators list	property and adjoining properties
Federal ERNS list	property only
State HWS list/NPL	1.0 mile
State HWS list/CERCLIS	0.5 mile
State LF/SWD sites	0.5 mile
State LUST sites	0.5 mile
State UST/AST sites	property and adjacent properties
Registries of Institutional/Engineering Controls	0.5 mile
State Voluntary Cleanup Sites	0.5 mile

This section summarizes the database review findings.

NPL *National Priorities List*

The National Priorities List, also known as the Superfund List, is an Environmental Protection Agency (EPA) listing of over 1,200 uncontrolled or abandoned hazardous waste sites.

No NPL or proposed NPL sites were identified within the 40 CFR 312.26 1.0-mile search radius of the subject property.

CERCLIS *Comprehensive Environmental Response, Compensation, and Liability Act Information System*

CERCLIS contains data on potentially hazardous waste sites that have been reported to the EPA by states, municipalities, private companies, and private citizens, pursuant to CERCLA. These sites either are on or proposed to the NPL and sites that are in the screening and assessment phase for possible inclusion on the NPL.

No CERCLIS list sites were identified within the 40 CFR 312.26 0.5-mile search radius of the subject property:

CERCLIS-NFRAP *CERCLA - No Further Remedial Action Planned*

NFRAP sites have been removed from the CERCLIS list if no contamination was found, contamination was removed quickly without the need for the site to be placed on

the NPL, or the contamination was not serious enough to require Superfund consideration.

The subject property was not identified on the CERCLIS-NFRAP list.

CORRACTS *Corrective Action Report RCRA*

CORRACTS lists hazardous waste handling sites with on-going Resource Conservation and Recovery Act (RCRA) corrective action activity.

One CORRACTS site was identified within the ASTM specified 1.0-mile search radius of the subject property.

The Port Mobil Terminal is located approximately one-mile from the subject property. Groundwater contamination from the stored petroleum products was detected on the property and a groundwater control system implemented and monitored. Studies conducted at the Port Mobil Terminal determined groundwater to be flowing towards the Arthur Kill and away from the subject property.

This facility will not have a negative environmental impact on the subject property.

RCRIS *Resource Conservation and Recovery Information System*

RCRIS includes information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

RCRA TSD

The TSD database includes facilities that treat, store, dispose, transport, or incinerate hazardous waste.

No RCRA TSD sites were identified within the 40 CFR 312.26 0.5-mile search radius of the subject property.

RCRA Generators

The Generators database includes waste generators that create more than 100 kg of hazardous waste per month or meet other RCRA requirements.

RCRA Small Quantity Generators

Facilities that generate more than 100 kg of hazardous waste per month are considered Small Quantity Generators.

There are no registered small quantity generators located adjacent to the subject property.

RCRA Large Quantity Generators

Facilities that generate more than 1,000 kg of hazardous waste or 1 kg of acutely hazardous waste per month are considered Large Quantity Generators (LQG).

There are no registered large quantity generators located adjacent to the subject property.

ERNS *Emergency Response Notification System*

ERNS records and stores information on reported releases of oil and hazardous substances into the environment.

The subject property was not identified on the ERNS list.

SHWS *New York State Hazardous Waste Sites - Inactive Hazardous Waste Disposal Sites in New York*

The SHWS is the state version of the Federal CERCLIS list. These sites may or may not already be listed on the CERCLIS list.

No NYS Hazardous Waste Sites were identified within the 0.5 mile search radius of the subject property.

SWF/LF *Solid Waste Facilities/Landfill Facilities*

These records typically contain an inventory of solid waste disposal facilities or landfills in a particular state.

One SWF/LF site, S.I. Recycling/Rebecca Court, was identified within the 40 CFR 312.26 0.5-mile search radius of the subject property. The site is an inactive transfer station with no violations or corrective actions reported.

This facility did not handle hazardous wastes or materials and is located topographically downgradient of the subject property and is not considered an environmental concern.

NY LTANKS *Leaking Underground Ground Storage Tanks - Spills Information Database*

The Spills Database contains an inventory of reported leaking storage tank incidents.

Two leaking underground storage tank sites (LUSTs) were identified within the 40 CFR 312.26 0.5-mile search radius of the subject property. Files for the two sites have been closed.

AST and UST *Aboveground and Underground Storage Tanks - Petroleum Bulk Storage Database*

The Petroleum Bulk Storage Database contains information on registered underground and aboveground storage tanks.

No registered USTs or aboveground tanks were reported on the subject property.

US ENG CONTROLS *Engineering Control Sites List*

The USEPA Engineering Control Sites list identifies sites with existing registered engineering controls. Engineering controls include caps, building foundations, liners, and treatment methods to limit contaminated media impact to human health and the environment.

No US ENG CONTROLS sites were identified within the 40 CFR 312.26 specified 0.5 mile search radius of the subject property

INST CONTROL *Registry of Institutional Controls*

The NYSDEC INST CONTROL lists environment remediation sites with institutional controls in place.

No INST CONTROL sites were identified within the 40 CFR 312.26 specified 0.5-mile search radius of the subject property.

VCP *Voluntary Cleanup Program Sites*

The NJDEP VCP lists sites being privately remediated for existing contamination.

No VCP sites were identified within the 40 CFR 312.26 specified 0.5 mile search radius of the subject property.

5.2 Additional Environmental Records Sources

In order to better assess the possibility of conditions indicative of releases or discharges that may have impacted the subject property, CEA investigated environmental records in addition to those searched by EDR. Additional records are used to further enhance and supplement the federal and state sources listed in Section 5.1.

Freedom of Information Act (FOIA) requests for all information on potential environmental concerns at the subject property were submitted to the following:

- New York State Department of Environmental Conservation
- United States Environmental Protection Agency (USEPA)

Copies of the submitted FOIA requests are contained in Appendix B. FOIA responses will be forwarded to the Client as received.

5.3 Physical Setting Sources

5.3.1 Surface Topography

CEA reviewed the 1966 (Photorevised 1981) Arthur Kill, N.J.-NAY. 7.5 minute topographic quadrangle map issued by the United States Geological Survey (USGS). According to the topographic map, the subject property is located from approximately 90 feet to 50 feet above mean sea level with a gentle slope to the southeast.

5.3.2 Surface Water

The Arthur Kill is located less than less than 1-mile west of the subject property and is the nearest surface water body to the site. Princess Bay is located slightly over 1-mile and to the south of the subject site. No surface water bodies or wetlands were observed on or adjacent to the subject property.

5.3.3 Groundwater

The property is situated at the intersection of two major highways, severely altering the natural surface of the topography, therefore, surface topography cannot be used to estimate determine groundwater direction. The nearest major water body to the site is the Arthur Kill. Groundwater would be expected to flow to the east towards the Arthur Kill.

5.3.4 Surface Geology & Hydrogeology

Due to the significant development in the area, the soils on the subject property are likely to be classified as Urban Land. This classification consists of areas that have been cut and filled or areas in which more than 85 percent of the surface is covered by paved surfaces or buildings. No hydrologic information was available to determine the depth to groundwater.

5.3.5 Flood Records Review

CEA reviewed the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Panel 127 of 131, 360497 0127 B, Effective Date November 16, 1983, for the area surrounding the subject property. According to this map, the subject property is located in Zone C - Areas of minimal flooding.

5.4 Historical Information

CEA reviewed Aerial Photographs and City Directory listings provided by EDR to determine historical land use at the site and surrounding properties. Sanborn Fire Insurance Maps are not available for the area. Copies of the City Directory listings and aerial photographs are included on the CD included in Appendix A.

Review of the City Directory Abstract showed the site and surrounding properties to have been undeveloped until approximately 2005.

Aerial photographs for 1943, 1954, 1966, 1978, 1984, and 1995, show the property and surrounding properties to be undeveloped.

6.0 SITE RECONNAISSANCE

CEA performed a visual site assessment of the subject property and the surrounding properties on October 20, 2007, to identify conditions indicative of historical or on-going releases of environmental concern. Site photographs taken on the day of the assessment are included as Appendix B to this report.

6.1 Methodology and Limiting Conditions

The site is primarily undeveloped and wooded, with one, three-story office building along the eastern border of the property. No limiting conditions were encountered during the site visit.

6.2 General Site Setting

The subject property is located on the east side of Tyrellan Avenue and is bordered by Veterans Road West to the North, Richmond Parkway to the south, and the West Shore Expressway to the east. The area is mixed residential and commercial/retail.

6.3 Physical Site Observations

The property is primarily wooded with a small parcel developed to contain an office building and parking. No evidence of staining, distressed vegetation, or other physical indicators of past releases were observed during the site visit.

A sand pile was observed approximately 100 feet east of the parking lot boundary and is most likely a remanant of construction. The pile is pure sand and is not considered an environmental concern.

6.4 Hazardous Substances and Petroleum Products

No hazardous substance or petroleum products were observed at the subject property at the time of the site visit.

6.5 Storage Tanks, Containers, and Drums

No drums, containers, or storage tanks were present on the subject property at the time of the site visit.

6.6 PCBs

No PCB containing equipment was observed on the site.

6.7 Adjacent Properties

Properties surrounding the subject property are residential, commercial, and retail. A visual assessment from the perimeter of these adjacent properties revealed no evidence of concerns.

7.0 INTERVIEWS

CEA interviewed the Client regarding current and historical use of the subject property. All interviewed described historical site use as undeveloped.

8.0 FINDINGS AND CONCLUSIONS

CEA has performed this Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 and EPA's Part 312 of the property

located at 101 Tyrellan Avenue, Block 7469, Staten Island, Richmond County, New York. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report. Based on our review of historical site use documentation, field observations during the site visit, and discussion with property owners, CEA identified no indications of releases to the environment and recommends no further investigation.

9.0 REFERENCES

United States Geological Survey, 1966, Photorevised 1981, Arthur Kill N.Y. - N.J., 7.5-minute topographic quadrangle map.

Federal Emergency Management Agency, Flood Insurance Rate Map, City of New York, New York, Bronx, Richmond, New York, Queens, and Kings Counties, Panel 127 of 131, Community Panel No. 360497 0125 B, November 16, 1983.

Environmental Data Resources, Inc., Radius Map with GeoCheck®, Tyrellan Avenue, 101 Tyrellan Avenue, Staten Island, NY 10309, Inquiry Number: 2058988.2s, October 23, 2007.

Environmental Data Resources, Inc., Certified Sanborn Fire Insurance Map Report, October 23, 2007.

Environmental Data Resources, Inc., Aerial Photo Decade Package, October 23, 2007.

Environmental Data Resources, Inc., City Directory Abstract, October 23, 2007.

10.0 QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

CEA is a multi-service environmental science and engineering firm. Founded in 1988, CEA offers years of experience combined with a highly trained staff that enables us to provide technical, regulatory, and managerial expertise necessary to successfully complete projects covering a wide range of environmental issues.

Kim Bell Hosea, Senior Engineer, conducted and managed this ESA/Phase II assessment. Ms. Hosea holds a BS degree in Civil Engineering from The George

Washington University and an MS degree in Technical Communications from the Southern Institute of Technology. Ms. Hosea has been involved in managing, scoping, and conducting environmental site assessments for 20 years.

11.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

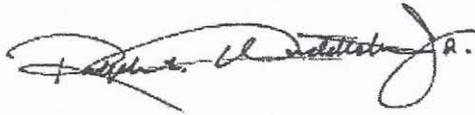
I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312.

I have the specific qualifications based on education, training, and experience to assess the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Kim Bell Hosea
Civil Engineer

Approved by:



Ralph E. Huddleston, Jr.
Senior Vice President

CEA Engineers, P.C.
307 Museum Village Road
P.O. Box 656
Monroe, New York 10949

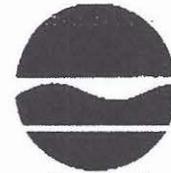
CEA No. 07060
October 26, 2007

APPENDIX A

**EDR Radius Map with GeoCheck
Sanborn Fire Insurance Map Report
City Directory Search
Aerial Photographs**

APPENDIX B
FOIA-FOIL Requests/Responses

New York State Department of Environmental Conservation
Regional Enforcement Coordinator, Region 2, Regional Direction
47-40 21ST Street, Long Island City, NY 11101-5407
Phone: (718) 482-4507 • FAX: (718) 482-6729
Website: www.dec.state.ny.us



Alexander B
Grannis
Commissioner

COMPLETED

Date: October 24, 2007

FOIL # R2-07-1695

Ms. Kim Bell Hosen/Carpenter Env Assoc Inc
845-781-4844
Fax 845-782-5591

RE: 101 Tyrellan Ave in SI

Dear Ms. Hosen:

NYSDEC/Region 2 has reviewed your request for the above referenced records under New York State's Freedom of Information Law (FOIL). Please note that most of our records are filed by number under the names of individuals or corporations. We have no way of locating or retrieving records if they are filed under names or addresses other than those you have provided.

If no records have been located; this does not necessarily mean, and should not be interpreted to mean that there have never been any violations, complaints, claims, investigations or inquiries involving those names or addresses. We cannot make any representations as to whether there are or have been any such violations, complaints, claims, investigations or inquiries.

After a diligent search, no records could be located for the names and/or addresses you provided.

Thank you for your request. If additional information is needed, please call Gloria Silva/FOIL Secretary at (718) 482-4507, or fax your response to me.

Sincerely yours,

Fawzy I Abdelsadek, Ph.D., P.E.
Regional Enforcement Coordinator



07060 MF

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2, 290 Broadway
New York, NY 10007

OCT 22 2007

Ms. Kim Hosea
Carpenter Environmental Associates
307 Museum Village Road
PO Box 656
Monroe, New York 10949

Re: Freedom of Information Request No. 02-RIN-00075-08
Dated: October 10, 2007

Dear Ms. Hosea:

Your request for information has been referred to this branch for response. We have searched the Resource Conservation and Recovery Act (RCRA) files and/or computer database as appropriate to respond to your request. In addition, you may also receive more information from other program areas within this Regional Office.

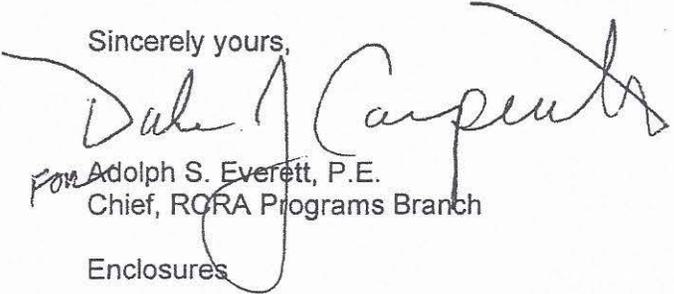
We were unable to find RCRA hazardous waste information concerning the property at 101 Tyrellan Avenue in Staten Island, New York.

If you consider this response to be a denial, you may submit a written appeal to HQ FOIA OPERATIONS STAFF, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20460. The appeal must be made in writing, and must be received within 30 calendar days of the date of this response to receive consideration. The Agency will not consider appeals received after the 30-day limit. The appeal should be marked "Freedom of Information Act Appeal", and should reference the Freedom of Information Request Number of this response.

Also, RCRA information is now available on the World Wide Web as described on the enclosed sheet.

Please include the above referenced request number in any subsequent communication relating to this response.

Sincerely yours,


For Adolph S. Everett, P.E.
Chief, RCRA Programs Branch

Enclosures

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2
290 Broadway
New York, NY 10007-1866



October 24, 2007

Ms. Kim Hosea
Carpenter Environmental Associates
307 Museum Village Road
PO Box 656
Monroe, NY, 10950

RE: Freedom of Information Act Request Number 02-RIN-00075-08

SUBJECT: 101 Tyrellan Avenue in Staten Island, NY

Dear Ms. Hosea:

The subject site is not listed on the CERCLIS or NFRAP lists at the present time.

As of February 15, 1995, CERCLIS no longer includes sites which EPA has assessed and designated "No Further Remedial Action Planned" (NFRAP). A NFRAP designation means, to the best of EPA's knowledge, Superfund has completed its assessment at a site and determined no further steps would be taken to list these sites on the National Priorities List (NPL) unless information is received at a later time indicating this decision was not appropriate. A NFRAP decision does not necessarily mean that there is no hazard associated with a given site; it means only that based upon available information, the location is not judged to be a potential NPL site.

Also, the absence of a facility from the CERCLIS list should not be construed as a determination by the EPA that the facility has not been affected by the presence of any hazardous waste. The absence of a facility from this list means that EPA has not received information indicating that there has been a release or threat of hazardous substances at or from the facility. Therefore, EPA has not performed an assessment at this location to date. As with any parcel of real property, EPA may be called upon to assess the property for a release of hazardous substances should conditions warrant.

In the interest of saving time and paper, I suggest that in the future you identify the specific properties you have an interest in by accessing the following web sites. The information available through these web sites should address any future inquires you may have.

This is the address for the Superfund Information Systems homepage - <http://www.epa.gov/superfund/sites>. From this site you may obtain a list of all sites which are currently on the CERCLIS database and sites archived from CERCLIS. Additionally you can access the RODS database from here as well as download reports or order a variety of site information products on line.

This is the site for the National Response Center maintained by the U.S. Coast Guard - <http://www.nrc.uscg.mil>. From this site you can access information regarding spills which have occurred from 1990 to the present.

This is the site for the National Technical Information Service maintained by the U.S. Department of Commerce - <http://ntis.gov>. From this site you can order subscription datafiles on CD-ROMs and diskettes which allow you to run your own CERCLIS reports.

We do not consider this a denial, but if you do, you have the right to appeal to the Office of Environmental Information, Records, FOIA, and Privacy Branch (2822T), 1200 Pennsylvania Avenue, NW, Washington, DC 20460. The appeal must be in writing, and it must be received at this address no later than 30 calendar days from the date of this letter. The Agency will not consider appeals received after the 30-day limit. The appeal may include as much or as little related information as you wish, as long as it clearly identifies the determination being appealed (including the assigned FOIA number). For quickest possible handling, the appeal letter and its envelope should be marked "Freedom of Information Act Appeal."

This determination applies to Superfund program records, your request has also been assigned to other programs within the Agency for separate replies. Please contact Wanda Calderon, at (212) 637-3668, on any questions concerning your pending request.

Sincerely,



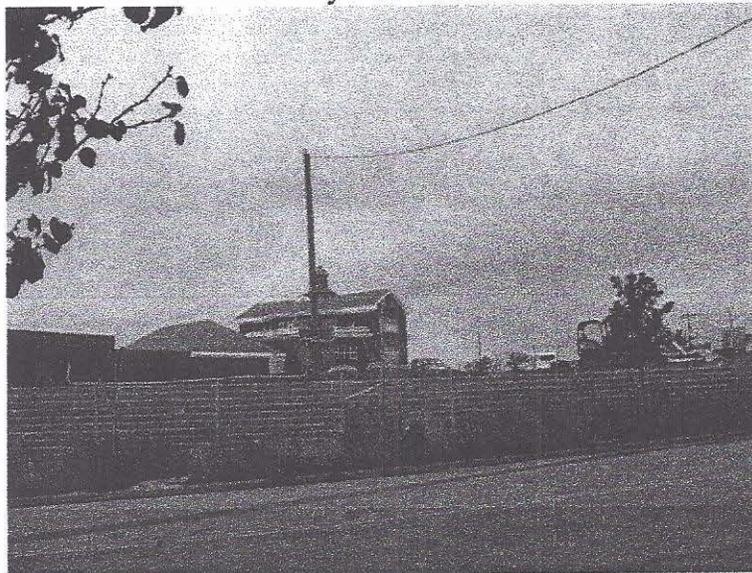
Leslie H. Peterson, Chief
Resource Management/Cost Recovery Section
Emergency and Remedial Response Division

Enclosures

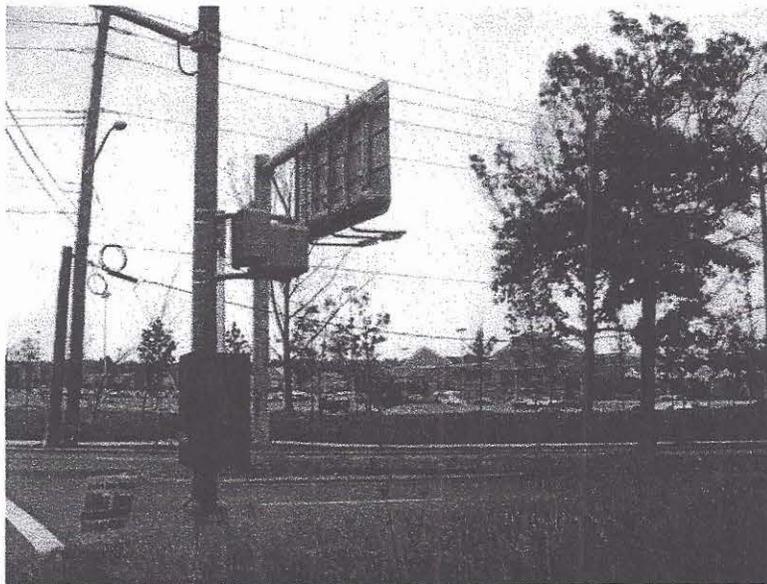
**APPENDIX C
SITE PHOTOS**



101 Tyrellan Avenue



Property to West



Property to North



Undeveloped Portion of Property