

## CHAPTER 24: MITIGATION

### 24.1 Overview

The City Environmental Quality Review (CEQR) procedures require reasonable and workable mitigation measures for areas that have potentially significant adverse impacts resulting from a proposed action. For the Proposed Action, the areas found to have the potential for significant adverse impacts are traffic, transit, pedestrians, hazardous materials, noise, and historic resources. As detailed in the relevant chapters of this document, mitigation measures, management controls or zoning requirements would ameliorate the potentially significant adverse impacts to acceptable levels for all areas except historic resources. No mitigation is available for the significant adverse impact to one historic resource, as described in Chapter 25, “Unavoidable Significant Adverse Impacts.”

### 24.2 Measures Used To Avoid Significant Impacts

#### 24.2.1 Hazardous Materials

Potential hazardous materials present within the study area include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, pesticides, herbicides, cyanide, asbestos-containing material (ACM), lead-based paint (LBP), and polychlorinated biphenyl (PCB)-containing equipment. During construction these materials would be managed or isolated to protect public health and the environment. Specifically, NYCDEP has developed recommendations based upon their review of the Phase II Environmental Site Investigation that was submitted for the Homeport Site. EDC will implement these recommendations, as discussed below, thus avoiding significant adverse impacts from hazardous materials as a result of the Proposed Action.

- Due to soil and groundwater contamination detected at the site as well as known impacts to the groundwater, Remedial Action Plans (RAPs) would be prepared for the development site and submitted to NYCDEP for review and approval. The RAPs would describe how all excavated soils and fill materials would be removed from the site and properly disposed of in accordance with all applicable NYSDEC regulations at an off-site disposal/recycling facility. Excavated soils, which would temporarily stockpiled on-site, will be covered with polyethylene sheeting (or protected by other means acceptable to NYCDEP) while disposal options are determined. The contractor retained to complete the work will maintain dust suppression during the excavation and grading activities at the site. Note that additional testing of the soils may be required by the disposal and/or recycling facility.
- As a result of elevated concentrations of VOCs, SVOCs, and heavy metals exceeding NYSDEC guidance levels, a site-specific Construction Health and Safety Plan (CHASP) will be prepared on the basis of worker exposure to these contaminants during construction. The CHASP will specify that the contractor must maintain dust suppression during the excavation and grading activities at the site. The CHASP will be submitted to NYCDEP for review and approval. Soil disturbance will not occur without NYCDEP’s written approval of the site-specific CHASP.

**NEW STAPLETON WATERFRONT DEVELOPMENT PLAN**  
**FINAL ENVIRONMENTAL IMPACT STATEMENT**

---

- An appropriate vapor barrier (ranging in thickness from ten thousandths of one inch (ten mil) thick poly sheeting to a 60 mil thick spray application), which would sustain long-term exposure to petroleum constituents, will be incorporated into the design plan for the proposed structure. In conjunction with the appropriate vapor barrier, an active sub-slab depressurization system (SSD system) will be used in buildings with a basement slab or slab-on-grade foundation. The conceptual design of the vapor barrier and SSD system along with the manufacturers' specifications will be submitted to NYCDEP for review and approval.
- If any tanks (USTs or ASTs including dispensers, piping, and fill-ports) are unearthed during excavation activities they will be removed/closed in accordance with all applicable NYSDEC regulations. If any petroleum-impacted soils (which display petroleum odors and/or staining) are encountered during the excavation/grading activities, the impacted soils will be removed and properly disposed of in accordance with all NYSDEC regulations.
- Two feet of clean fill/top soil will be imported from an approved facility/source and graded across all landscaped/grass-covered areas of the site that are not capped with concrete/asphalt. The clean fill/top soil will be segregated at the source/facility, have qualified environmental personnel collect representative samples at a frequency of one sample for every 250 cubic yards, analyze the samples for TCL VOCs, SVOCs, Pesticides/PCBs and TAL metals by a NYSDOH Environmental Laboratory Approval Program-certified laboratory, compare to TAGM 4046 Recommended Soil Clean-up Objectives, and receive NYCDEP written approval to use the clean fill/top soil. Upon receipt of NYCDEP's written approval, the clean fill/top soil may be transported to the site for grading. The clean fill/top soil will not be comprised of any construction and demolition debris. Prior to importing and grading the two foot clean fill/top soil cap, a highly visible demarcation membrane/barrier (such as an orange plastic construction fence, etc.) will be installed beneath the two foot clean fill/top soil cap.
- Upon completion of the construction activities, a Closure Report certified by a professional engineer will be submitted to NYCDEP. This report will need to demonstrate that all remediation activities have been properly implemented. At a minimum, the report will need to include all transportation manifests, disposal/recycling certificates from the soil excavation process, proof of importing/grading two feet of certified clean fill/top soil that meets TAGM at any proposed landscaped or grass covered areas (uncapped) at the site, and proof of vapor barrier/active sub-slab depressurization system installation in accordance with manufacturers' specifications.
- In order to ensure that the Proposed Action would result in no significant adverse public health impacts from potential hazardous materials, at development parcels to be disposed of by the City, a Restrictive Declaration, or other NYCDEP-approved institutional control, will be required of the developer.

**NEW STAPLETON WATERFRONT DEVELOPMENT PLAN  
FINAL ENVIRONMENTAL IMPACT STATEMENT**

---

EDC has entered into a Memorandum of Understanding (MOU) with NYCDEP to bind its successors and assigns to performing the necessary remediation. Accordingly, the necessary remediation will be identified through a RAP after the reuse/development program is established and prior to renovation and construction activities. The MOU is an effective means for ensuring that any potential hazardous materials issues found on the disposition parcels will be adequately addressed in order to mitigate potential adverse health impacts from the reuse/development program. In addition to the above, any transfer of the Homeport property, or portions thereof, to another City agency will bind that entity to the identified remediation measures discussed above.

The proposed rezoning also would not result in significant adverse impacts on development sites identified with the potential to contain hazardous materials. No significant adverse hazardous materials impacts are anticipated as a result of the zoning map amendments because (E) Designations will be placed on the Zoning Map for all tax lots containing the potential to result in hazardous materials contamination. Refer to Table 12-5 in Chapter 12 for a complete list of tax lots that will be mapped with an (E) Designation for hazardous materials. The (E) Designation will require that the fee owner of an (E) designated site conduct a testing and sampling protocol, and management where appropriate, to the satisfaction of the DEP before the issuance of a building permit by the Department of Buildings (pursuant to Section 11-15 of the Zoning Resolution-Environmental Requirements). The (E) Designation also includes mandatory construction-related health and safety plans which must also be approved by the DEP.

#### ***24.2.2 Traffic and Parking***

##### Traffic

Of the 16 intersections analyzed, five intersections would be significantly impacted during the weekday AM and Saturday midday peak hours, six during the weekday midday peak hour, and eight during the weekday PM peak hour. The detailed evaluation of mitigation measures indicated that all significant impacts could be fully mitigated by standard traffic engineering improvements such as the installation of traffic signals, signal phasing and timing modifications, parking prohibitions, and lane re-striping. These measures represent the standard range of traffic capacity improvements that have been proposed and implemented for numerous projects in the City. Mitigation measures would involve installing traffic signals at three unsignalized intersections along Bay Street. A preliminary signal warrant analysis indicated that vehicular and/or pedestrian warrants would be satisfied at all three intersections. Mitigation measures for each location are described below, with additional detail provided in Appendix C.

##### *Signalized Intersections*

Along the Bay Street corridor, four of the eight signalized intersections analyzed would be significantly impacted during at least one peak hour. Following is a description of the mitigation measures for each.

*Bay Street and Victory Boulevard:* Mitigation measures for all peak hours analyzed would involve: 1) prohibiting parking northbound (one space would be lost along the east curb of Bay Street) and shifting the centerline of this approach one foot to the west to

**NEW STAPLETON WATERFRONT DEVELOPMENT PLAN**  
**FINAL ENVIRONMENTAL IMPACT STATEMENT**

---

provide one ten-foot wide left turn lane, one 13-foot wide through lane, and one ten -foot wide and one 11-foot wide southbound receiving lane; 2) shifting the centerline of southbound Bay Street 2.5-feet to the east and re-striping southbound Bay Street to provide one 16-foot wide right turn lane, one 11-foot wide left-through lane, one 11-foot wide through lane, and two 10.5-foot wide northbound receiving lanes; and 3) shifting the centerline of eastbound Victory Boulevard four feet to the north to provide one 14-foot wide left turn lane and one ten-foot wide through-right lane. Mitigation measures for the weekday and Saturday midday peak hours would also involve signal timing modifications to provide a northbound lag phase.

*Bay Street and Hannah Street:* Mitigation measures needed for all four peak hours would include: 1) signal timing modifications to provide a southbound lead phase; 2) shifting the centerline of southbound Bay Street three feet to the east to provide two 14-foot wide left turn lanes, two ten-foot wide through lanes, one 10.5-foot wide right turn lane, and reducing the northbound receiving lane widths from 11 feet and 25 feet to ten feet and 23 feet, respectively; and 3) shifting the centerline of westbound Hannah Street four feet to the north to provide one 11-foot wide westbound lane and two ten-foot wide eastbound receiving lanes.

*Bay Street and Canal Street:* Mitigation measures needed for the weekday PM peak hour include: 1) signal timing modifications; and 2) shifting the centerline of northbound Bay Street three feet to the west to provide one 16-foot wide northbound through-right lane and two ten-foot wide southbound receiving lanes. These measures would remain in place during all periods since they include re-striping lanes.

*Bay Street and Broad Street:* Mitigation measures needed for the midday and PM peak hours would include: 1) signal timing modifications; and 2) shifting the centerline of northbound Bay Street one foot to the west to provide one 16-foot wide northbound left-through lane and one 20-foot wide southbound receiving lane. These measures would remain in place during all periods since they include re-striping lanes.

*Bay Street and Vanderbilt Avenue:* Mitigation measures for the weekday PM peak hour would include: 1) prohibiting parking eastbound (along the south curb of Vanderbilt Avenue) and re-striping this approach to provide one 11-foot wide left turn lane and one ten-foot wide right turn lane; 2) shifting the centerline of northbound Bay Street six feet to the west to provide one 13-foot wide left-through lane and one 12-foot wide through lane; 3) shifting the centerline of southbound Bay Street three feet to the west to provide one ten-foot wide right turn lane, one ten-foot wide through lane, and two 11-foot wide northbound receiving lanes; and 4) signal timing modifications. The two centerline shifts can be accommodated with a smooth transition. These measures are needed to mitigate only PM peak hour impacts but would remain in place during all periods since they include re-striping lanes.

*Bay Street and Hylan Boulevard:* Mitigation measures for all four peak hours would involve: 1) prohibiting parking eastbound (along the south curb of Hylan Boulevard) and shifting the centerline of this approach 1.5 feet to the north to provide one 10.5-foot wide

**NEW STAPLETON WATERFRONT DEVELOPMENT PLAN**  
**FINAL ENVIRONMENTAL IMPACT STATEMENT**

---

left turn lane and one 10.5-foot wide through-right lane; 2) re-striping the westbound receiving lane of Hylan Boulevard to 18 feet wide from its existing 19.5 foot width; and 3) signal timing modifications to eliminate the eastbound lead phase and allocating this time to other movements.

*Unsignalized Intersections*

Significant traffic impacts would occur at two intersections during all peak hours analyzed. All significantly impacted locations could be mitigated using standard traffic engineering measures. Mitigation measures are described below for each intersection.

*Bay Street and Wave Street:* Mitigation measures would include installing a traffic signal. A preliminary signal warrant analysis indicates that the peak hour warrant is satisfied at this intersection.

*Bay Street and Water Street:* Mitigation measures would include installing a traffic signal. A preliminary signal warrant analysis indicates that the peak hour warrant is satisfied at this intersection. During all peak hours analyzed, mitigation measures would also involve: 1) prohibiting parking southbound (along the west curb of Bay Street) to provide a 15-foot wide through-right lane; 2) shifting the centerline of northbound Bay Street nine feet to the west to provide one ten-foot wide left-through lane, one ten-foot wide through lane, and one 14-foot wide receiving lane in the southbound direction; and 3) shifting the centerline of southbound Bay Street eight feet to the west to provide two ten-foot wide receiving lanes in the northbound direction and one 15-foot wide through-right lane in the southbound direction.

*Bay and Prospect Street:* The pedestrian analysis presented in Chapter 18, “Transit and Pedestrians”, indicates that significant pedestrian impacts would occur at this intersection; however, significant traffic impacts are not expected. Mitigation measures presented in Chapter 18 indicate that these significant pedestrian impacts would be mitigated by installing a traffic signal. A preliminary signal warrant analysis indicates that the pedestrian volume warrant is satisfied at this intersection.

Each of the traffic engineering improvements described above would require approval of the NYCDOT. These improvements fall within the range of typical measures employed by NYCDOT in improving traffic conditions in all parts of the City.

Parking

The implementation of parking prohibitions to help mitigate significant traffic impacts would result in a loss of curbside parking spaces at the following locations:

- Northbound Bay Street (east curb) approaching Edgewater/Front Streets -- nine spaces, all peak hours analyzed.
- Southbound Bay Street (west curb) approaching Water Street -- seven spaces, all peak hours analyzed.

**NEW STAPLETON WATERFRONT DEVELOPMENT PLAN  
FINAL ENVIRONMENTAL IMPACT STATEMENT**

---

- Eastbound Vanderbilt Avenue (south curb) approaching Bay Street – three spaces, all peak hours analyzed.
- Eastbound Hylan Boulevard (south curb) approaching Bay Street – four spaces, all peak hours.
- Northbound Bay Street (east curb) approaching Victory Boulevard – one space, all peak hours analyzed.

Overall, 24 curb spaces would be lost within the study area corridor during all peak hours analyzed. Lost delivery spaces for trucks along Bay Street could be made up on the side streets if necessary. The loss of parking is not considered a significant adverse impact under CEQR.

### ***24.2.3 Transit and Pedestrians***

It is anticipated that the S51/S81 and S76 bus routes would have significant adverse impacts during the weekday PM and Saturday Midday peak periods as a result of the Proposed Action. No other significant adverse bus impacts would occur. The pedestrian analysis for the Proposed Action reveals that three unsignalized intersections evaluated along Bay Street are projected to have significant adverse impacts during all periods. Following is a description of the mitigation measures for these impacts.

#### Transit

The S51/S81 and S76 bus routes would have significant adverse impacts as a result of the Proposed Action during the weekday PM and Saturday Midday peak periods. According to the *CEQR Technical Manual* and NYCT guidelines, additional bus service is recommended along routes when passenger volumes are projected to exceed the maximum capacity at the maximum load point. The NYCT general policy is to provide additional bus service where demand warrants increased service, taking into account financial and operational constraints. Capacity shortfalls identified on the S51/S81 route could be met by adding one northbound bus trip during the weekday PM peak hour and adding two northbound and two southbound bus trips during the Saturday Midday peak period. Capacity shortfalls identified on the S76 route could be met by adding one northbound and one southbound bus trip during the Saturday Midday peak period. No other significant adverse bus impacts would occur as a result of the Proposed Action.

#### Pedestrians

The north and south crosswalks at the three unsignalized intersections on Bay Street are projected to have significant adverse impacts as a result of the Proposed Action during all periods. These crosswalks could be mitigated by installing a traffic signal at each location. A preliminary signal warrant analysis indicated that signal warrants would be satisfied at these three impacted unsignalized intersections.

### ***24.2.4 Noise***

While not strictly considered a mitigation measure, but to avoid the potential for noise impacts, as part of the proposed rezoning (E) Designations for noise will be placed on the New York City Zoning Map for the following Projected and Potential Development Site

**NEW STAPLETON WATERFRONT DEVELOPMENT PLAN**  
**FINAL ENVIRONMENTAL IMPACT STATEMENT**

---

properties in order to achieve a 35 dBA reduction: Block 489, Lot 25; Block 490, Lots 26 and 37; Block 491, Lots 32, 37, 41, 42, and 46; Block 492, Lots 29 and 31; and Block 493, Lot 12. To ensure an acceptable interior noise environment, the future residential uses developed on the Project Area parcels listed above will be required to provide a closed window condition with a 35 dBA window/wall noise level attenuation. In order to maintain a closed-window condition, an alternate means of ventilation would need to be provided.

In addition, to avoid the potential for noise impacts, (E) Designations for noise will be placed on the following Project Area parcels in order to achieve a reduction of 30 dBA: Block 490, Lots 24 and 45; Block 491, Lot 29; and Block 494, Lots 18, 19, and 21. Again, a closed-window condition along with an alternate means of ventilation must be provided.

Acoustical windows and doors with significant sound-reducing capabilities must be utilized. For example, a double-glazed window with ¼-inch glass panels and a 2¼-inch airspace in the middle is necessary to obtain a 35 dBA reduction in noise levels; a solid core door of 1¾-inch wood with a drop seal threshold is needed to achieve a reduction of 35 dBA.

To avoid secondary noise from HVAC systems, only those characterized by low noise emissions will be utilized for development associated with the Proposed Action. In general, the noise levels introduced by the proposed ventilation system must be at least ten dBA below the non-ventilated level, to avoid a significant increase in the building's total noise level. Basic HVAC units must be installed on building rooftops as far away from the interior space as possible, and ventilation air ducted to the desired location. In order to reduce the noise generated by fans, the air ducts must be lined with fiberglass insulation.

### **24.3 Conclusion**

As detailed above and in relevant chapters of this document, mitigation measures, management controls or zoning requirements would be implemented to ameliorate potentially significant adverse impacts to acceptable levels for traffic, transit, pedestrians, hazardous materials and noise.