13 MITIGATION

13.1 Introduction

According to the 2020 *CEQR Technical Manual*, where significant adverse impacts are identified, mitigation to reduce or eliminate the impacts to the fullest extent practicable is developed and evaluated. In addition, in the absence of a commitment to mitigation or when no feasible mitigation measures can be identified, a reasoned elaboration as to why mitigation is not practicable should be put forth, and the potential for unmitigated or unmitigable significant adverse impacts must be disclosed.

As presented in the previous chapters of this ~~Draft~~ Final Environmental Impact Statement (~~DEIS~~FEIS), the Proposed Actions have the potential to result in significant adverse impacts to active open space, ~~and~~ transportation, and construction traffic and noise. Potential mitigation measures and commitments for each of these technical areas are identified below. ~~Measures to further mitigate adverse impacts will be evaluated between the DEIS and Final Environmental Impact Statement (FEIS). Therefore, the FEIS will include more complete information and commitments on all practicable mitigation measures to be implemented with the Proposed Actions.~~

13.2 Principal Conclusions

Open Space

In the With-Action Condition, the Study Area's active open space ratio (OSR) would ~~decrease by 12.10 percent and~~ result in a significant adverse open space impact to active open space. Between the No-Action and With-Action conditions, the active OSR would decrease from 0.37 to 0.33 acres per 1,000 residents, a reduction of 12.10 percent. The Open Space Study Area is extremely lacking in active open space, and the With-Action active OSR would be well below the City's planning goal of 2.00 acres of active open space per 1,000 residents. Per the *CEQR Technical Manual*, in areas that are extremely lacking in open space, a decrease in the OSR as small as one percent may be significant. Because the Open Space Study Area is extremely lacking in active open space, a change in the active OSR by more than one percent was used

as the threshold for the active open space analysis. In both the No-Action and With-Action conditions, the passive OSR would be more than 1.5 the City's planning goal of 0.5 acres of passive open space per 1,000 residents, and therefore a larger degree of change in the passive OSR can be tolerated within the Open Space Study Area than compared to the active OSR.

Potential mitigation measures ~~are currently being~~ have been explored by the Applicant in consultation with the Department of City Planning (DCP) – the Lead Agency – and the New York City Department of Parks and Recreation (NYC Parks). ~~The potential mitigation measures will be refined between DEIS and the FEIS. The mitigation measures will reflect the nature and scope of the open space impacts, taking into account the quantitative and qualitative assessments in Chapter 3, "Open Space." The *CEQR Technical Manual* lists potential mitigation measures for open space impacts. These measures may include, but are not limited to: creating new open space within the study area; funding for improvements, renovation, or maintenance at existing local parks and/or playgrounds; or improving open spaces to increase their utility or capacity to meet identified open space needs in the area, such as through the provision of additional active open space facilities. Although the mitigation measures being considered would increase the acreage and usability of active recreation resources for the additional population introduced by the Proposed Actions, opportunities to fully mitigate the significant adverse open space impact within the Study Area are very limited. As a consequence, the Proposed Actions' significant adverse open space impact may not be completely eliminated and, as a result, an unavoidable significant adverse open space impact would occur.~~The significant adverse impact to open space could be partially mitigated by the provision of an active open space between proposed buildings 2 and 3. This space would accommodate an approximately 5,700-square-foot (sf) (0.13-acre) publicly-accessible active open space. Under the conceptual mitigation plan, this proposed new open space would contain an approximately 1,275 sf turf (for activities such as yoga), a walking loop, and adult exercise equipment. The proposed open space would also include supplemental amenities such as landscaping, seating, and a terrace. Illustrative plans of this active open space mitigation are provided in Appendix A.

The proposed active open space mitigation would generate approximately one pedestrian trip during peak hours, and would not have the potential to result in new or additional significant adverse transportation impacts.

The proposed on-site mitigation would be required to be in place and open to the public prior to the issuance of a Temporary Certificate of Occupancy (TCO) for the third and final building constructed on Projected Development Site 1 (the Applicant's site). This mitigation requirement would be memorialized through a restrictive declaration that would be tied to the Applicant's site with the adoption of the Proposed Actions. The restrictive declaration would be enforced by the NYC Department of Buildings, the agency responsible for issuing TCOs. The Proposed Actions would reduce the active OSR by more than one percent with the occupation of 225 or more project-generated dwelling units. Therefore, there may be a temporary unmitigated active open space impact that would be partially mitigated after the opening of the proposed on-site publicly accessible active open space. In addition to the on-site improvements, active park and playground improvements in the Open Space Study Area may be examined in consultation with the Department of City Planning – the Lead Agency – and the New York City Department of Parks and Recreation (NYC Parks), which would expand the partial mitigation.

Transportation

In the With-Action Condition, the Proposed Actions would result in potentially significant adverse traffic impacts as detailed below. No potentially significant adverse impacts were identified for pedestrians, transit, parking and vehicular and pedestrian safety.

Traffic

As discussed in Chapter 5, "Transportation," the Proposed Actions would result in potentially significant adverse traffic impacts during one or more peak hours at ~~five~~ four study area intersections. Specifically, there would be the potential for significant adverse traffic impacts at ~~four~~ three intersections during the weekday AM peak hour, ~~four~~ three intersections during the weekday midday peak hour, three intersections during the weekday PM peak hour and four intersections during the Saturday midday peak hour (see Table 13-1).

Table 13-1: Summary of Potentially Significant Adverse Traffic Impacts due to the Proposed Actions

ID	Intersection Name (Street Direction)	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Midday Peak Hour
1	Richmond Terrace (EB/WB) & Jersey Street (NB/SB)	(1) WB Left-Turn (2) WB Through/Right-Turn	(1) WB Through/Right-Turn	(1) WB Through/Right-Turn	(1) WB Through/Right-Turn
2	Richmond Terrace (EB/WB) & Westervelt Avenue (NB)	(1) EB Approach	-	-	(1) EB Approach
6	Richmond Terrace (NB/SB) & Wall Street/Empire Mall Driveway (EB/WB)	(1) WB Approach	(1) WB Approach (2) NB Right-Turn	(1) WB Approach (2) NB Right-Turn	(1) WB Approach (2) NB Right-Turn
7	Victory Boulevard (EB/WB) & Bay Street (NB/SB)	-	(1) NB Left-Turn (2) NB Through/Right-Turn (3) SB Left-Turn/Through	(1) NB Left-Turn	(1) NB Through/Right-Turn (2) SB Left-Turn/Through

Notes:
Abbreviations: EB: Eastbound; WB: Westbound; NB: Northbound; and SB: Southbound.
1. Table was revised for the FEIS to remove the potentially significant adverse traffic impacts at Intersection No. 11.

The potentially significant adverse traffic impacts at ~~ten~~ eight (~~10~~8) out of the ~~twenty-four~~twenty (~~24~~20) impacted intersection approaches/lane groups (combined for all peak hours) could be mitigated with readily implementable traffic engineering measures, including the modification of traffic signal timings ~~and the installation of All-Way STOP Control (AWSC)~~. At the intersection approaches/lane groups where no readily available measures have been identified to mitigate the potentially significant adverse traffic impacts, the impacts would remain unmitigated in the future with the Proposed Project. However, as part of the *Bay Street Rezoning and Related Actions FEIS*, the City committed to a Traffic Monitoring Plan, which includes the intersection of Bay Street and Victory Boulevard. Therefore, this intersection will be monitored in the future as changes to the area's traffic network arise over time. ~~such measures will be explored between the DEIS and FEIS. These additional mitigation measures would be subject to review and approval by the New York City Department of Transportation (NYCDOT). In the event NYCDOT determines such mitigation measures to be feasible, the FEIS will be updated to reflect that previously identified unmitigated significant adverse impacts could be mitigated. In the absence of such determination by NYCDOT, the impacts would remain unmitigated.~~

~~Furthermore, implementation of the recommended mitigation measures is subject to review and approval by NYCDOT, and these mitigation measures will be further evaluated between the DEIS and FEIS in consultation with the Lead Agency and NYCDOT.~~

~~Air Quality~~

~~The Proposed Actions would result in a significant adverse air quality impact from mobile sources (traffic) at the intersection of St. Marks Place and Hamilton Avenue. At this~~

~~intersection, concentrations of $PM_{2.5}$ would have the potential to exceed National Ambient Air Quality Standards (NAAQS) and CEQR *de minimis* thresholds.~~

~~The intersection of St. Marks Place and Hamilton Avenue would experience a significant adverse traffic impact that would be fully mitigated with the installation of an all-way STOP control. This transportation mitigation would significantly reduce the delay times and improve the level of service at this intersection. With implementation of this traffic mitigation, the maximum annual incremental concentration of $PM_{2.5}$ would be significantly lower than the With Action condition, and would not exceed NAAQS or CEQR *de minimis* thresholds. Therefore, the implementation of the traffic mitigations measures would fully mitigate the significant adverse air quality impact.~~

Construction

Traffic

As discussed in Chapter 11, "Construction," construction of the Proposed Project could result in potentially significant adverse traffic impacts during at least one of the weekday AM (6:00 AM – 7:00 AM) or PM (3:00 PM – 4:00 PM) construction peak hours at five study area intersections. Specifically, there would be the potential for significant adverse traffic impacts at three intersections during the weekday AM construction peak hour and four intersections during the weekday PM construction peak hour (see Table 13-2).

Table 13-2: Summary of Potentially Significant Adverse Traffic Impacts due to Construction

ID	Intersection Name (Street Direction)	Weekday AM Construction Peak Hour	Weekday PM Construction Peak Hour
1	Richmond Terrace (EB/WB) & Jersey Street (NB/SB)	(1) EB Through/Right-Turn	(1) WB Through/Right-Turn
2	Richmond Terrace (EB/WB) & Westervelt Avenue (NB)	(1) EB Approach	-
3	Richmond Terrace (NB/SB) & Nicholas Street/Parking Garage Driveway (EB/WB)	-	(1) WB Approach
6	Richmond Terrace (NB/SB) & Wall Street/Empire Mall Driveway (EB/WB)	(1) WB Approach	(1) WB Approach (2) NB Right-Turn
7	Victory Boulevard (EB/WB) & Bay Street (NB/SB)	-	(1) SB Left-Turn/Through

Notes:
Abbreviations: EB: Eastbound; WB: Westbound; NB: Northbound; and SB: Southbound.

The potentially significant adverse traffic impacts at five (5) out of the eight (8) impacted intersection approaches/lane groups (combined for the weekday AM and PM construction peak hours) could be mitigated with readily implementable traffic signal timing modifications. At the intersection approaches/lane groups where no readily available measures have been identified to mitigate the potentially significant adverse traffic impacts, the impacts would remain unmitigated in the future during construction of the Proposed Project.~~such measures will be explored between the DEIS and FEIS. These additional mitigation measures would be subject to review and approval by NYCDOT. In the event NYCDOT determines such mitigation measures to be feasible, the FEIS will be updated to reflect that previously identified unmitigated significant adverse impacts could be mitigated. In the absence of such determination by NYCDOT, the impacts would continue to remain unmitigated.~~

~~Furthermore, implementation of the recommended mitigation measures is subject to review and approval by NYCDOT, and these mitigation measures will be further evaluated between the DEIS and FEIS in consultation with the Lead Agency and NYCDOT.~~

Noise

As described in Chapter 11, "Construction," the Proposed Actions have the potential to result in a temporary significant adverse construction-period noise impact because of the duration and magnitude of the projected construction-period noise levels. Significant adverse construction noise impacts were identified where project-generated construction has the potential to exceed CEQR impact criteria at up to ~~20~~10 properties.

Through a restrictive declaration that would be tied to the Applicant's site, the Applicant has committed to implementing certain controls that exceed the noise control measures required by the New York City Noise Control Code. These measures include using auger drills in lieu of impact pile drivers, ~~and~~ using ventilation fans that would not exceed a noise sound power level of 91-dBA (equivalent to the sound pressure level of 59 dBA at a distance of 50 feet), using generators that would not exceed a capacity of 25 kilovolt amps (KVA), and constructing a 15-foot-tall construction barrier that would extend along the full perimeter of the site except along Projected Development Site 1's frontage to Richmond Terrace, where an 8-foot-tall construction barrier would be placed. However, even with these measures, elevated construction-period noise levels are predicted to occur at certain locations.

~~Additional measures, as feasible, to avoid potential significant adverse noise impacts will be explored between the draft and final EIS in consultation with DCP. If additional path control mitigation measures are not able to be implemented because they are not feasible and practicable mitigation, there would be significant adverse construction period noise impacts that would remain unmitigated.~~

The Proposed Actions would generate temporary unmitigated significant adverse construction noise impacts at the multi-family residences at 185 St. Marks Place [Castleton Park Apartments – South Tower], 36 Hamilton Avenue, and 60 Hamilton Avenue. Project-generated construction noise would also result in unmitigated construction noise impacts at the commercial office buildings at 140 Richmond Terrace and 51 Stuyvesant Place, which is a vacant city-owned building.

The Proposed Actions would cause a temporary significant adverse construction noise impact at northern and eastern façades of the one- and two-family residences at 41 Hamilton Avenue, 47 Hamilton Avenue, 53 Hamilton Avenue, and 59 Hamilton Avenue, and at the eastern façade of 199 St. Marks Place. At these impacted façades, the Applicant would offer to make available at no cost for the purchase and installation of one window AC per unit at residences that do not already have alternative means of ventilation. The mitigation measures would be implemented prior to the start of construction. With through-window AC units in place, the project-generated construction noise is projected to cause a temporary exceedance of the CEQR-recommended interior noise level of 45-dBA at these properties, and therefore these properties would be partially mitigated.

Lastly, Castleton Apartments South Playground is predicted to experience a significant adverse construction noise impact. No practical and feasible mitigation measures have been identified that could be implemented at this private outdoor playground to reduce noise levels below the 55 dBA $L_{10(1)}$ guideline or eliminate project-generated construction noise impacts. Although the *CEQR Technical Manual*'s 55 dBA $L_{10(1)}$ guideline is a worthwhile goal for outdoor areas requiring serenity and quiet, this relatively low noise level is typically not achieved in parks and open space areas in New York City. Based on *CEQR Technical Manual* guidance, the Proposed Actions would result in a temporary unmitigated significant adverse impact to this private playground.

13.3 Open Space

As discussed in Chapter 3, "Open Space," in the With-Action Condition, the active OSR within the Study Area would decrease by 12.1 percent (0.04 points, from 0.37 to 0.33 acres per 1,000 residents), and would be below the *CEQR Technical Manual* open space ratio guideline of 2.00 acres of active open space per 1,000 residents. The Proposed Actions would reduce the OSR by more than one percent in an area that is extremely lacking in active open space. Accordingly, the Proposed Actions would result in a significant adverse indirect residential open space impact to the Study Area's active open space.

To avoid the significant adverse indirect residential open space impact, the acreage of active open space created in the With-Action Condition would need to increase by approximately 0.~~40~~ 63 acres (~~8~~ 12 percent of the Study Area's No-Action active open space acreage) to avoid reducing the active OSR by more than one percent. Alternatively, the number of dwelling units that could be developed on the projected development sites would have to be reduced to ~~444~~224 dwelling units, which would represent an approximately ~~50~~ 75 percent decrease (~~453~~ 673 fewer dwelling units) from the With-Action Condition of 897 dwelling units.

Just beyond the Study Area are two significant active open space resources: Lyons Pool and Stapleton Waterfront Esplanade. Further, the Tompkinsville Esplanade is a planned waterfront open space that is being led by the New York City Economic Development Corporation. The Tompkinsville Esplanade would consist of a new quarter-mile long public waterfront open space between Lighthouse Plaza and the Stapleton Waterfront Esplanade, allowing for a continuous greenway between the Staten Island Ferry Terminal and the Clifton neighborhood. Independent of the Proposed Actions, the Tompkinsville Esplanade would provide additional passive and active open space in the Study Area, and is being designed with input from NYC Parks.

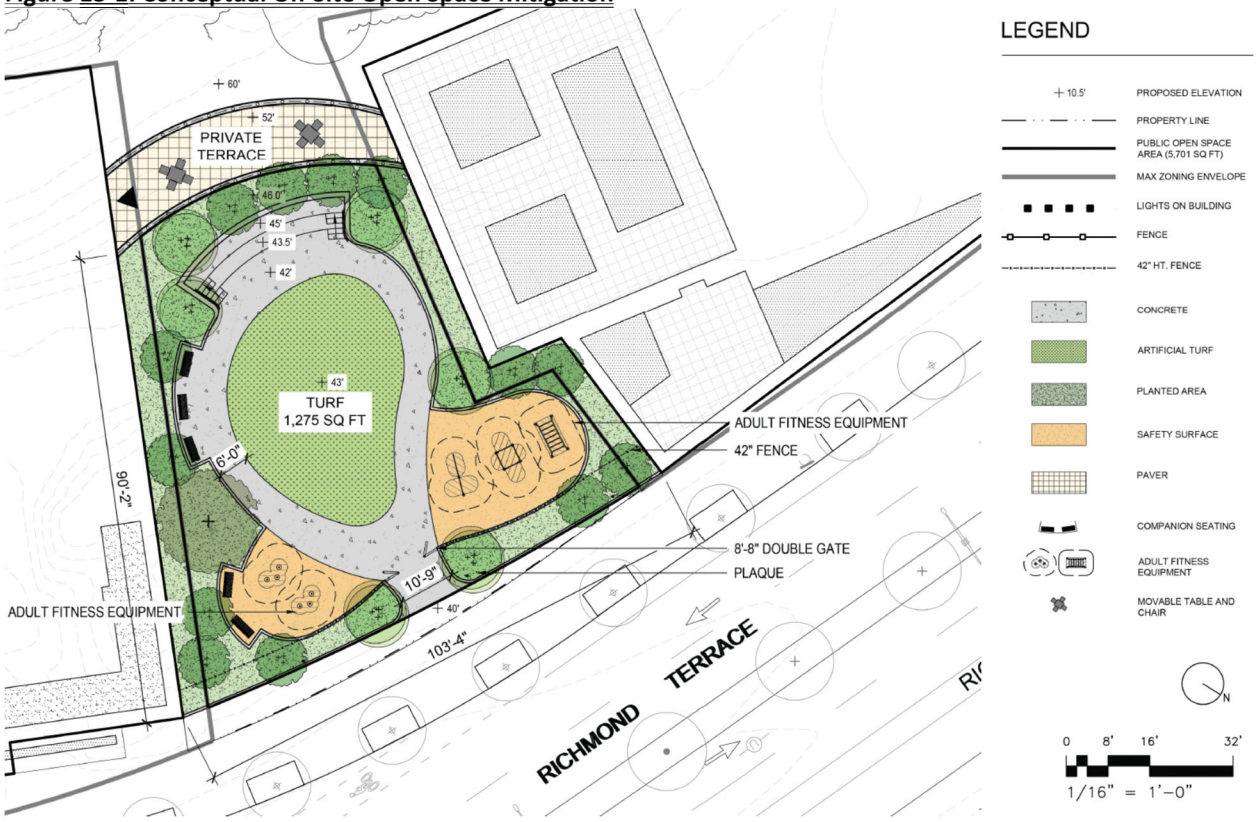
Across the borough, Staten Island is home to more than 170 parks totaling approximately 12,300 acres—more than one-third of the borough's total land area. These open space resources include both passive and active resources. ~~Just beyond the Study Area, there are publicly accessible open spaces with active recreational uses such as Stapleton Waterfront Esplanade and Lyons Pool.~~ Other regional open spaces beyond the Study Area that project-generated users would be expected to use include: Snug Harbor Cultural Center, an approximately 83-acre cultural center; and Goodhue Park, an approximately ~~38~~26-acre park~~,~~; ~~and Clove Lake Park, an approximately 193-acre park.~~

Potential mitigation measures for the ~~identified~~ significant adverse residential active open space impact ~~are currently being~~have been explored by the Applicant in consultation with DCP – the Lead Agency – and NYC Parks. The ~~potential~~ proposed mitigation measures ~~will be refined between the DEIS and the FEIS, and will~~ reflect the nature and scope of the open space impacts, taking into account the quantitative and qualitative assessments in Chapter 3, "Open Space." ~~The *CEQR Technical Manual* lists potential mitigation measures for open space impacts. These measures may include, but are not limited to, creating new open space within the Study Area; funding for improvements, renovation, or maintenance at existing local parks and/or playgrounds; or improving open spaces to increase their utility or capacity to meet identified open space needs in the area, such as through the provision of additional active open space facilities. Although the mitigation measures being considered would increase the amount and usability of passive and active recreation resources for the additional population introduced by the Proposed Actions, opportunities to create new publicly accessible open space resources in the Study Area to fully mitigate the identified significant adverse open space impact are very limited. As a consequence, the Proposed Actions' significant adverse open~~

~~space impact may not be completely eliminated and, as a result, the significant adverse impact may not be fully mitigated.~~

The significant adverse active open space impact could be partially mitigated by the provision of an active open space between proposed buildings 2 and 3, which would accommodate an approximately 5,700-sf (0.13-acre) publicly-accessible active open space. Under the conceptual mitigation plan, this proposed new open space would contain an approximately 1,275 sf turf (for activities such as yoga), a walking loop, and adult exercise equipment. The proposed active open space mitigation would also include supplemental amenities such as landscaping and a terrace, as conceptually shown in Figure 13-1~~Figure 13-1~~.

Figure 13-1: Conceptual On-Site Open Space Mitigation



For illustrative purposes only.
Source: Starr Whitehouse Landscape Architects and Planners

Relative to the No-Action Condition, in the With-Action Condition, the active OSR would decrease by 0.04 points (from 0.37 to 0.33), or 12.1 percent. With this partial mitigation in place, the Study Area's change OSR would decrease by 0.03 points (from 0.37 to 0.34), or 9.79 percent. With the proposed mitigation, the active open space impact would not be fully mitigated because the active OSR would still be reduced by more than one percent in the mitigated condition.

Per Chapter 7 (Open Space) Sections 311 and 410 of the *CEQR Technical Manual,* the goals for open space ratios are often not feasible for many areas of the City and consequently, the ratios do not constitute an absolute impact threshold. The Rezoning Area is in St. George, a highly urbanized area of Staten Island.

The Proposed Actions would result in an active OSR reduction of more than one percent after the issuance of a TCO for more than 224 dwelling units on Projected Development Site 1. The

Proposed Actions would reduce the active OSR by more than one percent with the occupation of 225 project-generated dwelling units. The proposed on-site mitigation would be required to be in place and open to the public prior to the issuance of a TCO for the third and final building constructed on the Applicant's site. Therefore, there may be a temporary unmitigated active open space impact that would be partially mitigated after the opening of the proposed on-site publicly accessible active open space.

13.4 Transportation

Traffic

As discussed in Chapter 5, "Transportation," the Proposed Actions would result in potentially significant adverse traffic impacts during one or more peak hours at ~~five~~ four study area intersections. Specifically, there would be the potential for significant adverse traffic impacts at ~~four~~ three intersections during the weekday AM peak hour, ~~four~~ three intersections during the weekday midday peak hour, three intersections during the weekday PM peak hour and four intersections during the Saturday midday peak hour (see Table 13-1). In total, the Proposed Actions would result in potentially significant adverse traffic impacts during one or more peak hours at ~~ten~~ eight (~~10~~8) intersection approaches/lane groups in the study area, summarized as follows:

- The westbound left-turn of Richmond Terrace at Jersey Street during the weekday AM peak hour.
- The westbound through-right movement of Richmond Terrace at Jersey Street during the weekday AM, midday, PM and Saturday midday peak hours.
- The eastbound approach of Richmond Terrace at Westervelt Avenue during the weekday AM and Saturday midday peak hours.
- The westbound approach of the Empire Mall Driveway at Richmond Terrace during the weekday AM, midday, PM and Saturday midday peak hours.
- The northbound right-turn of Richmond Terrace at Wall Street/Empire Mall Driveway during the weekday midday, PM and Saturday midday peak hours.
- The northbound left-turn of Bay Street at Victory Boulevard during the weekday midday and PM peak hours.
- The northbound through-right movement of Bay Street at Victory Boulevard during the weekday midday and Saturday midday peak hours.
- The southbound left-through movement of Bay Street at Victory Boulevard during the weekday midday and Saturday midday peak hours.

~~- The eastbound approach of Hamilton Avenue at St. Marks Place during the weekday AM and midday peak hours.~~

~~- The westbound approach of Hamilton Avenue at St. Marks Place during the weekday AM and midday peak hours.~~

As discussed below and summarized in Table 13-3 to Table 13-6, the potentially significant adverse traffic impacts at ~~ten~~ eight (~~10~~8) out of the ~~twenty-four~~twenty (~~24~~20) impacted intersection approaches/lane groups (combined for all peak hours) could be mitigated with readily implementable traffic engineering measures, including the modification of traffic signal

timings and the installation of AWSC. The Applicant will notify DOT a minimum of six months prior to the anticipated building occupancy.

At the intersection approaches/lane groups where no readily available measures have been identified to mitigate the potentially significant adverse traffic impacts, the impacts would remain unmitigated in the future with the Proposed Project.such measures will be explored between the DEIS and FEIS. These additional mitigation measures would be subject to review and approval by NYCDOT. In the event NYCDOT determines such mitigation measures to be feasible, the FEIS will be updated to reflect that previously identified unmitigated significant adverse impacts could be mitigated. In the absence of such determination by NYCDOT, the impacts would remain unmitigated. Table 13-7 to Table 13-10 summarize the volume-to-capacity (v/c) ratios, delays and Levels of Service (LOS) for the impacted intersections in the With-Action with Mitigation Condition and compares them to the No-Action and With-Action conditions for the weekday AM, midday, PM and Saturday midday peak hours, respectively. Per *CEQR Technical Manual* guidelines, a potentially significant adverse traffic impact is considered to be mitigated when the LOS in the With-Action with Mitigation Condition, as compared to the No-Action Condition, does not exceed the significant impact criteria discussed in Chapter 5, "Transportation."

Implementation of the recommended mitigation measures is subject to review and approval by NYCDOT, and these measures will be further evaluated between the DEIS and FEIS in consultation with the Lead Agency and NYCDOT.

Richmond Terrace and Jersey Street

In the weekday AM peak hour, the potentially significant adverse traffic impacts to the westbound left-turn and westbound through-right movement could be mitigated as follows:

- Shift four (4) seconds from the eastbound phase, four (4) seconds from the northbound/ southbound left-turn phase and one (1) second from the northbound/southbound phase to the eastbound/westbound phase.

In the weekday midday, PM and Saturday midday peak hours, the potentially significant adverse traffic impact to the westbound through-right movement could be mitigated as follows:

- Shift one (1) second from the northbound/southbound phase to the eastbound/ westbound phase.

In the weekday AM peak hour, the potentially significant adverse traffic impacts would remain unmitigated in the future with the Proposed Project. Measures to mitigate these potentially significant adverse impacts will be explored between the DEIS and FEIS, and would be subject to review and approval by NYCDOT. In the event NYCDOT determines such mitigation measures to be feasible, the FEIS will be updated to reflect that previously identified unmitigated significant adverse impacts could be mitigated. In the absence of feasible mitigation measures, the impacts would continue to remain unmitigated in the weekday AM peak hour.

Richmond Terrace and Westervelt Avenue

In the weekday AM and Saturday midday peak hours, the potentially significant adverse traffic impact to the eastbound approach could be mitigated as follows:

- Shift one (1) second from the northbound phase to the eastbound/westbound phase.

Richmond Terrace and Wall Street/Empire Mall Driveway

In the weekday AM peak hour, the potentially significant adverse traffic impact to the westbound approach could be mitigated as follows:

- Shift one (1) second from the northbound/southbound phase to the westbound phase.

In the weekday midday, PM and Saturday midday peak hours, the potentially significant adverse traffic impacts would remain unmitigated in the future with the Proposed Project. ~~Measures to mitigate these potentially significant adverse impacts will be explored between the DEIS and FEIS, and would be subject to review and approval by NYCDOT. In the event NYCDOT determines such mitigation measures to be feasible, the FEIS will be updated to reflect that previously-identified unmitigated significant adverse impacts could be mitigated. In the absence of feasible mitigation measures, the impacts would continue to remain unmitigated in the weekday midday, PM and Saturday midday peak hours.~~

Victory Boulevard and Bay Street

In the weekday midday, PM and Saturday midday peak hours, the potentially significant adverse traffic impacts would remain unmitigated in the future with the Proposed Project. ~~Measures to mitigate these potentially significant adverse impacts will be explored between the DEIS and FEIS, and would be subject to review and approval by NYCDOT. In the event NYCDOT determines such mitigation measures to be feasible, the FEIS will be updated to reflect that previously identified unmitigated significant adverse impacts could be mitigated. In the absence of feasible mitigation measures, the impacts would continue to remain unmitigated in the weekday midday, PM and Saturday midday peak hours.~~However, as part of the *Bay Street Rezoning and Related Actions FEIS*, the City committed to a Traffic Monitoring Plan, which includes the intersection of Bay Street and Victory Boulevard.

~~***Hamilton Avenue and St. Marks Place***~~

~~In the weekday AM and midday peak hours, the potentially significant adverse traffic impacts to the eastbound and westbound approaches could be mitigated by installing All-Way STOP Control (AWSC) at this location.~~

Table 13-3: Summary of Recommended Traffic Mitigation Measures – Weekday AM Peak Hour

ID	Intersection Name	No-Action Signal Timing	Recommended Mitigation Measures	Recommended Signal Timing
1	Richmond Terrace & Jersey Street	EB/WB: Green = 51 s NB/SB Left-Turns: Green = 10 s NB/SB: Green = 29 s EB: Green = 10 s	(1) Shift 4 seconds from the EB phase, 4 seconds from the NB Left-Turn/SB Left-Turn phase and 1 second from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 60 s NB/SB Left-Turns: Green = 6 s NB/SB: Green = 28 s EB: Green = 6 s
2	Richmond Terrace & Westervelt Avenue	EB/WB: Green = 73 s NB: Green = 37 s	(1) Shift 1 second from the NB phase to the EB/WB phase.	EB/WB: Green = 74 s NB: Green = 36 s
6	Richmond Terrace & Wall Street/Empire Mall Driveway	NB/SB: Green = 68 s WB: Green = 8 s EB/WB: Green = 29 s	(1) Shift 1 second from the NB/SB phase to the WB phase.	NB/SB: Green = 67 s WB: Green = 9 s EB/WB: Green = 29 s

Notes:
Abbreviations: EB: Eastbound; WB: Westbound; NB: Northbound; SB Southbound.
1. Table was revised for the FEIS to remove proposed mitigation measures for Intersection No. 11. In addition, proposed mitigation measures have been revised between the DEIS and FEIS for Intersection No. 1.

Table 13-4: Summary of Recommended Traffic Mitigation Measures – Weekday Midday Peak Hour

ID	Intersection Name	No-Action Signal Timing	Recommended Mitigation Measures	Recommended Signal Timing
1	Richmond Terrace & Jersey Street	EB/WB: Green = 58 s NB/SB Left-Turns: Green = 6 s NB/SB: Green = 30 s EB: Green = 6 s	(1) Shift 1 second from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 59 s NB/SB Left-Turns: Green = 6 s NB/SB: Green = 29 s EB: Green = 6 s
6	Richmond Terrace & Wall Street/Empire Mall Driveway	NB/SB: Green = 63 s WB: Green = 13 s EB/WB: Green = 29 s	Unmitigable.	-
7	Victory Boulevard & Bay Street	NB/SB: Green = 26 s EB/SB Right-Turn: Green = 20 s WB: Green = 22 s East/West Crosswalk LPI: Walk = 7 s	Unmitigable.	-

Notes:
Abbreviations: EB: Eastbound; WB: Westbound; NB: Northbound; SB Southbound; LPI: Lead Pedestrian Interval
1. Table was revised for the FEIS to remove proposed mitigation measures for Intersection No. 11.

Table 13-5: Summary of Recommended Traffic Mitigation Measures – Weekday PM Peak Hour

ID	Intersection Name	No-Action Signal Timing	Recommended Mitigation Measures	Recommended Signal Timing
1	Richmond Terrace & Jersey Street	EB/WB: Green = 58 s NB/SB Left-Turns: Green = 6 s NB/SB: Green = 30 s EB: Green = 6 s	(1) Shift 1 second from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 59 s NB/SB Left-Turns: Green = 6 s NB/SB: Green = 29 s EB: Green = 6 s
6	Richmond Terrace & Wall Street/Empire Mall Driveway	NB/SB: Green = 63 s WB: Green = 13 s EB/WB: Green = 29 s	Unmitigable.	-
7	Victory Boulevard & Bay Street	NB/SB: Green = 56 s EB/SB Right-Turn: Green = 20 s WB: Green = 22 s East/West Crosswalk LPI: Walk = 7 s	Unmitigable.	-

Notes:
Abbreviations: EB: Eastbound; WB: Westbound; NB: Northbound; SB Southbound; LPI: Lead Pedestrian Interval
1. Table was revised for the FEIS to remove proposed mitigation measures for Intersection No. 11.

Table 13-6: Summary of Recommended Traffic Mitigation Measures – Saturday Midday Peak Hour

ID	Intersection Name	No-Action Signal Timing	Recommended Mitigation Measures	Recommended Signal Timing
1	Richmond Terrace & Jersey Street	EB/WB: Green = 35 s NB/SB Left-Turns: Green = 6 s NB/SB: Green = 23 s EB: Green = 6 s	(1) Shift 1 second from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 36 s NB/SB Left-Turns: Green = 6 s NB/SB: Green = 22 s EB: Green = 6 s
2	Richmond Terrace & Westervelt Avenue	EB/WB: Green = 48 s NB: Green = 32 s	(1) Shift 1 second from the NB phase to the EB/WB phase.	EB/WB: Green = 49 s NB: Green = 31 s
6	Richmond Terrace & Wall Street/Empire Mall Driveway	NB/SB: Green = 40 s WB: Green = 6 s EB/WB: Green = 29 s	Unmitigable.	-
7	Victory Boulevard & Bay Street	NB/SB: Green = 26 s EB/SB Right-Turn: Green = 20 s WB: Green = 22 s East/West Crosswalk LPI: Walk = 7 s	Unmitigable.	-

Notes:
Abbreviations: EB: Eastbound; WB: Westbound; NB: Northbound; SB: Southbound; LPI: Lead Pedestrian Interval
1. Table was revised for the FEIS to remove proposed mitigation measures for Intersection No. 11.

Table 13-7: LOS Comparison Summary – Weekday AM Peak Hour

						No-Action			With-Action			With-Action with Mitigation		
ID	Intersection Name	Control	Street Name	Direction	Lane Group	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	Richmond Terrace & Jersey Street	Signal	Richmond Terrace	EB	L	0.00	18.5	B	0.00	19.3	B	0.00	15.4	B
					TR	1.06	74.6	E	1.07	77.5	E	0.99	51.9	D
				WB	L	0.62	61.2	E	0.82	94.5	F	0.64	52.9	D
					TR	0.97	60.1	E	1.01	69.3	E	0.86	36.5	D
			Jersey Street	NB	L	0.09	25.1	C	0.10	25.2	C	0.11	28.7	C
					TR	0.24	38.4	D	0.27	39.0	D	0.28	40.0	D
				SB	L	0.00	24.2	C	0.00	24.2	C	0.00	27.5	C
					TR	0.00	34.5	C	0.00	34.5	C	0.00	35.3	D
				Overall Intersection		-	*66.1*	*E*	-	*71.7*	*E*	-	*45.1*	*D*
2	Richmond Terrace & Westervelt Avenue	Signal	Richmond Terrace	EB	TR	1.14	91.7	F	1.16	100.3	F	1.15	93.4	F
				WB	LT	0.56	16.2	B	0.58	16.7	B	0.57	16.0	B
			Westervelt Avenue	NB	LR	0.34	34.1	C	0.37	34.7	C	0.38	35.7	D
				Overall Intersection		-	*62.1*	*E*	-	*66.7*	*E*	-	*62.6*	*E*
6	Wall Street & Richmond Terrace	Signal	Wall Street	EB	LTR	0.57	46.8	D	0.60	48.3	D	0.60	48.3	D
			Empire Mall Driveway	WB	LR	0.97	77.7	E	1.00	85.8	F	0.96	75.8	E
			Richmond Terrace	NB	T	0.27	13.7	B	0.28	13.8	B	0.29	14.4	B
					R	0.39	16.1	B	0.42	16.8	B	0.43	17.5	B
				SB	LT	0.59	13.0	B	0.64	13.9	B	0.65	14.8	B
				Overall Intersection		-	*28.7*	*C*	-	*30.2*	*C*	-	*29.0*	*C*

Notes:

~~1. Two-Way STOP-Control~~

~~2. All-Way STOP-Control~~

~~3. Intersection delay and LOS information are not provided by HCS.~~

~~4~~1. ~~Shading denotes an unmitigable potentially significant adverse traffic impact.~~Table was revised for the FEIS to remove Level of Service metrics for Intersection No. 11. In addition, the Level of Service metrics have changed between the DEIS and FEIS for Intersection No. 1.

Table 13-8: LOS Comparison Summary – Weekday Midday Peak Hour

						No-Action			With-Action			With-Action with Mitigation		
ID	Intersection Name	Control	Street Name	Direction	Lane Group	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	Richmond Terrace & Jersey Street	Signal	Richmond Terrace	EB	L	0.01	25.2	C	0.01	25.3	C	0.01	25.5	C
					TR	0.73	23.9	C	0.75	24.8	C	0.74	23.7	C
				WB	L	0.25	20.3	C	0.29	21.5	C	0.27	20.6	C
					TR	1.11	95.8	F	1.13	104.6	F	1.12	96.2	F
			Jersey Street	NB	L	0.18	28.4	C	0.18	28.4	C	0.19	29.1	C
					TR	0.32	39.6	D	0.39	41.1	D	0.40	42.3	D
				SB	L	0.00	26.1	C	0.00	26.2	C	0.00	26.9	C
					TR	0.00	33.8	C	0.00	33.8	C	0.00	34.5	C
				Overall Intersection		-	*59.9*	*E*	-	*64.4*	*E*	-	*60.0*	*E*
6	Wall Street & Richmond Terrace	Signal	Wall Street	EB	LTR	0.40	41.6	D	0.41	42.2	D	0.41	42.2	D
			Empire Mall Driveway	WB	LR	1.26	170.7	F	1.28	178.9	F	1.28	178.9	F
			Richmond Terrace	NB	T	0.38	17.5	B	0.42	18.1	B	0.42	18.1	B
					R	1.04	85.8	F	1.06	92.0	F	1.06	92.0	F
				SB	LT	0.65	24.0	C	0.70	25.6	C	0.70	25.6	C
				Overall Intersection		-	*70.9*	*E*	-	*72.5*	*E*	-	*72.5*	*E*
7	Victory Boulevard & Bay Street	Signal	Victory Boulevard	EB	L	0.60	39.5	D	0.60	39.5	D	0.60	39.5	D
					LT	0.62	40.0	D	0.62	40.0	D	0.62	40.0	D
				WB	LTR	0.18	27.9	C	0.18	27.9	C	0.18	27.9	C
			Bay Street	NB	L	1.89	474.6	F	1.90	479.9	F	1.90	479.9	F
					TR	1.13	107.1	F	1.21	136.4	F	1.21	136.4	F
				SB	LT	1.27	161.1	F	1.38	209.4	F	1.38	209.4	F
					R	0.68	19.7	B	0.69	19.7	B	0.69	19.7	B
				Overall Intersection		-	*122.5*	*F*	-	*149.6*	*F*	-	*149.6*	*F*

Notes:

~~1. Two-Way STOP-Control~~

~~2. All-Way STOP-Control~~

~~3. Intersection delay and LOS information are not provided by HCS.~~

~~4~~1. Shading denotes an unmitigable potentially significant adverse traffic impact.

2. Table was revised for the FEIS to remove Level of Service metrics for Intersection No. 11.

Table 13-9: LOS Comparison Summary – Weekday PM Peak Hour

						No-Action			With-Action			With-Action with Mitigation		
ID	Intersection Name	Control	Street Name	Direction	Lane Group	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	Richmond Terrace & Jersey Street	Signal	Richmond Terrace	EB	L	0.01	25.4	C	0.01	25.4	C	0.01	25.5	C
					TR	0.84	30.0	C	0.86	32.0	C	0.85	30.3	C
				WB	L	0.37	24.0	C	0.44	26.7	C	0.41	25.1	C
					TR	1.14	103.7	F	1.15	109.6	F	1.13	101.1	F
			Jersey Street	NB	L	0.18	28.3	C	0.18	28.3	C	0.18	29.0	C
					TR	0.26	37.9	D	0.31	39.1	D	0.33	40.1	D
				SB	L	0.00	26.1	C	0.00	26.2	C	0.00	26.8	C
					TR	0.00	33.8	C	0.00	33.8	C	0.00	34.5	C
				Overall Intersection		-	*65.6*	*E*	-	*68.8*	*E*	-	*64.1*	*E*
6	Wall Street & Richmond Terrace	Signal	Wall Street	EB	LTR	0.40	41.5	D	0.42	42.1	D	0.42	42.1	D
			Empire Mall Driveway	WB	LR	1.21	149.9	F	1.23	158.5	F	1.23	158.5	F
			Richmond Terrace	NB	T	0.34	17.1	B	0.38	17.6	B	0.38	17.6	B
					R	1.00	71.9	E	1.09	101.7	F	1.09	101.7	F
				SB	LT	0.76	27.9	C	0.72	29.0	C	0.72	29.0	C
				Overall Intersection		-	*63.3*	*E*	-	*69.4*	*E*	-	*69.4*	*E*
7	Victory Boulevard & Bay Street	Signal	Victory Boulevard	EB	L	0.88	80.5	F	0.88	80.5	F	0.88	80.5	F
					LT	0.94	92.5	F	0.94	92.5	F	0.94	92.5	F
				WB	LTR	0.16	42.5	D	0.16	42.5	D	0.16	42.5	D
			Bay Street	NB	L	1.94	496.3	F	2.14	587.8	F	2.14	587.8	F
					TR	0.73	29.2	C	0.77	31.0	C	0.77	31.0	C
				SB	LT	0.87	36.4	D	0.90	38.4	D	0.90	38.4	D
					R	0.65	15.3	B	0.65	15.3	B	0.65	15.3	B
				Overall Intersection		-	*58.2*	*E*	-	*62.9*	*E*	-	*62.9*	*E*

Notes:
~~1. Two-Way STOP-Control~~
~~2. All-Way STOP-Control~~
~~3. Intersection delay and LOS information are not provided by HCS.~~
~~4~~1. Shading denotes an unmitigable potentially significant adverse traffic impact.
2. Table was revised for the FEIS to remove Level of Service metrics for Intersection No. 11.

Table 13-10: LOS Comparison Summary – Saturday Midday Peak Hour

						No-Action			With-Action			With-Action with Mitigation		
ID	Intersection Name	Control	Street Name	Direction	Lane Group	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	Richmond Terrace & Jersey Street	Signal	Richmond Terrace	EB	L	0.01	18.2	B	0.01	18.0	B	0.01	18.1	B
					TR	0.81	26.7	C	0.83	28.2	C	0.82	26.2	C
				WB	L	0.46	27.7	C	0.56	32.7	C	0.52	29.7	C
					TR	1.11	94.2	F	1.14	104.0	F	1.11	91.1	F
			Jersey Street	NB	L	0.08	18.2	B	0.08	18.2	B	0.09	18.9	B
					TR	0.25	28.4	C	0.31	29.4	C	0.32	30.5	C
				SB	L	0.00	17.5	B	0.00	17.5	B	0.00	18.2	B
					TR	0.00	25.0	C	0.00	25.0	C	0.00	25.7	C
				Overall Intersection		-	*57.1*	*E*	-	*61.9*	*E*	-	*55.3*	*E*
2	Richmond Terrace & Westervelt Avenue	Signal	Richmond Terrace	EB	TR	0.94	36.5	D	0.99	46.2	D	0.97	41.0	D
				WB	LT	0.71	20.3	C	0.73	21.0	C	0.72	19.8	B
			Westervelt Avenue	NB	LR	0.25	21.6	C	0.26	21.9	C	0.27	22.7	C
				Overall Intersection		-	*28.1*	*C*	-	*33.1*	*C*	-	*30.1*	*C*
6	Wall Street & Richmond Terrace	Signal	Wall Street	EB	LTR	0.23	23.5	C	0.24	23.7	C	0.24	23.7	C
			Empire Mall Driveway	WB	LR	1.71	351.7	F	1.74	367.5	F	1.74	367.5	F
			Richmond Terrace	NB	T	0.30	16.5	B	0.34	17.0	B	0.34	17.0	B
					R	1.54	283.0	F	1.59	306.5	F	1.59	306.5	F
				SB	LT	0.81	29.0	C	0.86	33.1	C	0.86	33.1	C
				Overall Intersection		-	*188.3*	*F*	-	*193.3*	*F*	-	*193.3*	*F*
7	Victory Boulevard & Bay Street	Signal	Victory Boulevard	EB	L	0.68	41.9	D	0.68	41.9	D	0.68	41.9	D
					LT	0.73	44.4	D	0.73	44.4	D	0.73	44.4	D
				WB	LTR	0.11	27.0	C	0.11	27.0	C	0.11	27.0	C
			Bay Street	NB	L	1.98	512.4	F	1.98	512.4	F	1.98	512.4	F
					TR	0.97	55.7	E	1.04	74.0	E	1.04	74.0	E
				SB	LT	1.14	110.2	F	1.25	152.5	F	1.25	152.5	F
					R	0.62	16.9	B	0.62	16.9	B	0.62	16.9	B
				Overall Intersection		-	*90.6*	*F*	-	*110.3*	*F*	-	*110.3*	*F*

Notes:
~~1. Two-Way STOP-Control~~

~~2. All-Way STOP Control~~
~~3. Intersection delay and LOS information are not provided by HCS.~~
~~4~~1. Shading denotes an unmitigable potentially significant adverse traffic impact.
2. Table was revised for the FEIS to remove Level of Service metrics for Intersection No. 11.

As noted above in Section 13.3, "Open Space", a significant adverse impact to open space could be partially mitigated by the provision of an approximately 5,700-square-foot (sf) (0.13-acre) publicly-accessible active open space. Based on trip generation parameters published in the *CEQR Technical Manual*, the proposed 5,700 sf of active open space would generate approximately one pedestrian trip during peak hour and would not have the potential to result in new or additional significant adverse transportation impacts.

13.5 ~~Air Quality~~

~~As discussed in Chapter 6, "Air Quality," the Proposed Actions could not rule out significant adverse impacts and therefore would result in a significant adverse air quality impact from mobile sources (traffic) at the intersection of St. Marks Place and Hamilton Avenue. At this intersection, concentrations of $PM_{2.5}$ would have the potential to exceed CEQR *de minimis* thresholds.~~

~~The intersection of St. Marks Place and Hamilton Avenue would experience a significant adverse traffic impact that would be fully mitigated with the installation of an all-way STOP-control. This transportation mitigation would significantly reduce the delay times and increase traffic flows through this intersection. Table 13-11 shows that with this transportation mitigation in place, the air quality conditions would also be fully mitigated as concentrations of $PM_{2.5}$ would be below both NAAQS and *de minimis* thresholds.~~

~~Table 13-11: Mobile Source Air Quality Concentrations – St. Marks Pl and Hamilton Ave~~

~~Pollutant of Concern ($\mu g/m^3$)~~	~~Without Mitigation~~		~~With Mitigation~~		~~CEQR Thresholds~~	
	~~Increment~~	~~With Action~~	~~Increment~~	~~With Action~~	~~De Minimis~~	~~NAAQS~~
~~$PM_{2.5}$ – 24hr~~	~~22.96~~	~~59.94~~	~~-7.68~~	~~29.30~~	~~10.25~~	~~35.00~~
~~$PM_{2.5}$ – Annual~~	~~3.52~~	~~12.51~~	~~-1.53~~	~~7.46~~	~~0.1~~	~~12.00~~

13.6 Construction

Traffic

As discussed in Chapter 11, "Construction," the peak number of trips generated by construction of the Proposed Project is expected to occur in the second quarter of 2023 (seventh quarter of construction [Q7]). During this quarter, construction of the Proposed Project could result in potentially significant adverse traffic impacts during at least one of the weekday AM (6:00 AM – 7:00 AM) or PM (3:00 PM – 4:00 PM) construction peak hours at five study area intersections. Specifically, there would be the potential for significant adverse traffic impacts at three intersections during the weekday AM construction peak hour and four intersections during the weekday PM construction peak hour (see Table 13-2). In total, construction of the Proposed Project could result in eight potentially significant adverse traffic impacts during either construction peak hour at the following seven intersection approaches/lane groups in the study area:

- The eastbound through-right movement of Richmond Terrace at Jersey Street during the weekday AM construction peak hour.

- The westbound through-right movement of Richmond Terrace at Jersey Street during the weekday PM construction peak hour.
- The eastbound approach of Richmond Terrace at Westervelt Avenue during the weekday AM construction peak hour.
- The westbound approach of the Parking Garage Driveway/Nicholas Street at Richmond Terrace during the weekday PM construction peak hour.
- The westbound approach of the Empire Mall Driveway at Richmond Terrace during the weekday AM and PM construction peak hours.
- The northbound right-turn of Richmond Terrace at Wall Street during the weekday PM construction peak hour.
- The southbound left-through movement of Bay Street at Victory Boulevard during the weekday PM construction peak hour.

As discussed below and summarized in Table 13-11 and Table 13-12, the potentially significant adverse traffic impacts at five (5) out of the eight (8) total impacted intersection approaches/lane groups (spanning the weekday AM and PM construction peak hours) could be mitigated with readily implementable traffic signal timing modifications. At the intersection approaches/lane groups where no readily available measures have been identified to mitigate the potentially significant adverse traffic impacts, the impacts would remain unmitigated in the future during construction of the Proposed Project.~~such measures will be explored between the DEIS and FEIS. These additional mitigation measures would be subject to review and approval by NYCDOT. In the event NYCDOT determines such mitigation measures to be feasible, the FEIS will be updated to reflect that previously identified unmitigated significant adverse impacts could be mitigated. In the absence of such determination by NYCDOT, the impacts would continue to remain unmitigated.~~

Table 13-13 and Table 13-14 summarize the v/c ratios, delays and LOS for the impacted intersections in the With-Action with Mitigation Condition and compares them to the Existing, No-Action and With-Action conditions for the weekday AM and PM construction peak hours, respectively. Per *CEQR Technical Manual* guidelines, a potentially significant adverse traffic impact is considered to be mitigated when the LOS in the With-Action with Mitigation Condition, as compared to the No-Action Condition, does not exceed the significant impact criteria discussed in Chapter 5, "Transportation."

~~Implementation of the recommended mitigation measures is subject to review and approval by NYCDOT, and these measures will be further evaluated between the DEIS and FEIS in consultation with the Lead Agency and NYCDOT.~~

Richmond Terrace and Jersey Street

In the weekday AM construction peak hour, the potentially significant adverse traffic impact to the eastbound through-right movement could be mitigated as follows:

- Shift three (3) seconds from the northbound/southbound left-turn phase to the eastbound/westbound phase.

In the weekday PM construction peak hour, the potentially significant adverse traffic impact would remain unmitigated in the future during construction of the Proposed Project. ~~Measures to mitigate this potentially significant adverse impact will be explored between the DEIS and FEIS, and would be subject to review and approval by NYCDOT. In the event NYCDOT determines such mitigation measures to be feasible, the FEIS will be updated to reflect that the previously identified unmitigated significant adverse impact could be mitigated. In the~~

~~absence of feasible mitigation measures, the impact would continue to remain unmitigated in the weekday PM construction peak hour.~~

Richmond Terrace and Westervelt Avenue

In the weekday AM construction peak hour, the potentially significant adverse traffic impact to the eastbound approach could be mitigated as follows:

- Shift three (3) seconds from the northbound phase to the eastbound/westbound phase.

Richmond Terrace and Nicholas Street/Parking Garage Driveway

In the weekday PM construction peak hour, the potentially significant adverse traffic impact to the westbound approach could be mitigated as follows:

- Shift two (2) seconds from the northbound/southbound phase to the eastbound/ westbound phase.

Richmond Terrace and Wall Street/Empire Mall Driveway

In the weekday AM construction peak hour, the potentially significant adverse traffic impact to the westbound approach could be mitigated as follows:

- Shift one (1) second from the northbound/southbound phase to the westbound phase.

In the weekday PM construction peak hour, the potentially significant adverse traffic impacts would remain unmitigated in the future during construction of the Proposed Project. ~~Measures to mitigate these potentially significant adverse impacts will be explored between the DEIS and FEIS, and would be subject to review and approval by NYCDOT. In the event NYCDOT determines such mitigation measures to be feasible, the FEIS will be updated to reflect that previously identified unmitigated significant adverse impacts could be mitigated. In the absence of feasible mitigation measures, the impacts would continue to remain unmitigated in the weekday PM construction peak hour.~~

Victory Boulevard and Bay Street

In the weekday PM construction peak hour, the potentially significant adverse traffic impact to the southbound left-through movement could be mitigated as follows:

- Shift three (3) seconds from the eastbound approach/southbound right-turn phase to the northbound/southbound phase.

Table 13-11: Summary of Recommended Traffic Mitigation Measures – Weekday AM Construction Peak Hour

ID	Intersection Name	No-Action Signal Timing	Recommended Mitigation Measures	Recommended Signal Timing
1	Richmond Terrace & Jersey Street	EB/WB: Green = 51 s NB/SB Left-Turns: Green = 10 s NB/SB: Green = 29 s EB: Green = 10 s	(1) Shift 3 seconds from the NB/SB left-turn phase to the EB/WB phase.	EB/WB: Green = 54 s NB/SB Left-Turns: Green = 7 s NB/SB: Green = 29 s EB: Green = 10 s
2	Richmond Terrace & Westervelt Avenue	EB/WB: Green = 73 s NB: Green = 37 s	(1) Shift 3 seconds from the NB phase to the EB/WB phase.	EB/WB: Green = 76 s NB: Green = 34 s
6	Richmond Terrace & Wall Street/Empire Mall Driveway	NB/SB: Green = 68 s WB: Green = 8 s EB/WB: Green = 29 s	(1) Shift 1 second from the NB/SB phase to the WB phase.	NB/SB: Green = 67 s WB: Green = 9 s EB/WB: Green = 29 s

Notes:
Abbreviations: EB: Eastbound; WB: Westbound; NB: Northbound; SB: Southbound.

Table 13-12: Summary of Recommended Traffic Mitigation Measures – Weekday PM Construction Peak Hour

ID	Intersection Name	No-Action Signal Timing	Recommended Mitigation Measures	Recommended Signal Timing
1	Richmond Terrace & Jersey Street	EB/WB: Green = 58 s NB/SB Left-Turns: Green = 6 s NB/SB: Green = 30 s EB: Green = 6 s	Unmitigable.	-
3	Richmond Terrace & Nicholas Street/Parking Garage Driveway	NB/SB: Green = 73 s EB/WB: Green = 37 s	(1) Shift 2 seconds from the NB/SB phase to the EB/WB phase.	NB/SB: Green = 71 s EB/WB: Green = 39 s
6	Richmond Terrace & Wall Street/Empire Mall Driveway	NB/SB: Green = 63 s WB: Green = 13 s EB/WB: Green = 29 s	Unmitigable.	-
7	Victory Boulevard & Bay Street	NB/SB: Green = 26 s EB/SB Right-Turn: Green = 20 s WB: Green = 22 s East/West Crosswalk LPI: Walk = 7 s	(1) Shift 3 seconds from the EB/SB right-turn phase to the NB/SB phase.	NB/SB: Green = 29 s EB/SB Right-Turn: Green = 17 s WB: Green = 22 s East/West Crosswalk LPI: Walk = 7 s

Notes:
Abbreviations: EB: Eastbound; WB: Westbound; NB: Northbound; SB: Southbound; LPI: Lead Pedestrian Interval.

Table 13-13: LOS Comparison Summary – Weekday AM Construction Peak Hour

						Existing			No-Action			With-Action			With-Action with Mitigation		
ID	Intersection Name	Control	Street Name	Direction	Lane Group	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	Richmond Terrace & Jersey Street	Signal	Richmond Terrace	EB	L	0.11	15.2	B	0.00	16.0	B	0.00	16.0	B	0.00	14.4	B
					TR	0.75	26.2	C	0.89	36.8	D	0.98	51.8	D	0.94	40.9	D
				WB	L	0.06	20.8	C	0.22	25.4	C	0.36	34.0	C	0.27	25.9	C
					TR	0.66	32.2	C	0.82	40.1	D	0.83	40.3	D	0.78	35.2	D
			Jersey Street	NB	L	0.08	25.0	C	0.08	25.0	C	0.08	25.0	C	0.09	27.0	C
					TR	0.16	36.9	D	0.21	37.9	D	0.22	38.0	D	0.22	38.0	D
				SB	L	0.02	24.4	C	0.00	24.1	C	0.00	24.1	C	0.00	26.1	C
					TR	0.03	34.9	C	0.00	34.5	C	0.00	34.5	C	0.00	34.5	C
			Overall Intersection			-	*28.3*	*C*	-	*37.5*	*D*	-	*46.1*	*D*	-	*38.2*	*D*
2	Richmond Terrace & Westervelt Avenue	Signal	Richmond Terrace	EB	TR	0.80	21.4	C	0.96	31.4	C	1.06	56.5	E	1.01	41.2	D
				WB	LT	0.34	12.5	B	0.46	14.3	B	0.46	14.3	B	0.44	12.6	B
			Westervelt Avenue	NB	LR	0.28	33.0	C	0.29	33.1	C	0.36	34.6	C	0.39	37.5	D
			Overall Intersection			-	*20.0*	*B*	-	*26.0*	*C*	-	*41.6*	*D*	-	*32.2*	*C*
6	Wall Street & Richmond Terrace	Signal	Wall Street	EB	LTR	0.46	43.3	D	0.45	42.8	D	0.46	43.2	D	0.46	43.2	D
			Empire Mall Driveway	WB	LR	0.03	25.7	C	0.97	76.7	E	0.99	82.2	F	0.95	73.1	E
			Richmond Terrace	NB	T	0.20	13.0	B	0.22	13.1	B	0.27	13.7	B	0.28	14.2	B
					R				0.37	15.8	B	0.37	15.8	B	0.38	16.5	B
				SB	LT	0.31	9.3	A	0.48	11.3	B	0.51	11.7	B	0.51	12.5	B
			Overall Intersection			-	*16.1*	*B*	-	*29.1*	*C*	-	*29.7*	*C*	-	*28.3*	*C*

Table 13-14: LOS Comparison Summary – Weekday PM Construction Peak Hour

						Existing			No-Action			With-Action			With-Action with Mitigation		
ID	Intersection Name	Control	Street Name	Direction	Lane Group	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	Richmond Terrace & Jersey Street	Signal	Richmond Terrace	EB	L	0.02	16.5	B	0.01	25.4	C	0.01	25.4	C	0.01	25.4	C
					TR	0.52	17.6	B	0.73	23.8	C	0.73	23.8	C	0.73	23.8	C
				WB	L	0.07	16.9	B	0.28	20.9	C	0.42	24.5	C	0.42	24.5	C
					TR	0.84	36.9	D	1.14	107.6	F	1.25	152.4	F	1.25	152.4	F
			Jersey Street	NB	L	0.21	28.8	C	0.22	28.9	C	0.22	28.9	C	0.22	28.9	C
					TR	0.20	37.1	D	0.32	39.6	D	0.32	39.6	D	0.32	39.6	D
				SB	L	0.01	26.2	C	0.00	26.1	C	0.00	26.1	C	0.00	26.1	C
					TR	0.03	34.1	C	0.00	33.8	C	0.00	33.8	C	0.00	33.8	C
			Overall Intersection			-	*29.0*	*C*	-	*65.9*	*E*	-	*89.8*	*F*	-	*89.8*	*F*
3	Nicholas Street & Richmond Terrace	Signal	Nicholas Street	EB	LTR	0.15	30.8	C	0.16	30.8	C	0.17	31.2	C	0.16	29.6	C
			Wheel Driveway	WB	LR	0.08	29.7	C	0.12	30.3	C	0.73	47.5	D	0.69	43.7	D
			Richmond Terrace	NB	UTR	0.29	6.6	A	0.45	7.8	A	0.45	7.8	A	0.46	9.0	A
				SB	LTR	0.25	11.3	B	0.42	13.2	B	0.42	13.2	B	0.43	14.4	B
			Overall Intersection			-	*11.2*	*B*	-	*12.1*	*B*	-	*17.9*	*B*	-	*18.0*	*B*
6	Wall Street & Richmond Terrace	Signal	Wall Street	EB	LTR	0.40	41.7	D	0.41	42.2	D	0.43	42.7	D	0.43	42.7	D
			Empire Mall Driveway	WB	LR	0.02	22.5	C	1.27	175.8	F	1.29	182.8	F	1.29	182.8	F
			Richmond Terrace	NB	T	0.28	16.3	B	0.36	17.3	B	0.36	17.3	B	0.36	17.3	B
					R				1.08	95.9	F	1.09	99.9	F	1.09	99.9	F
				SB	LT	0.27	16.2	B	0.69	25.2	C	0.77	28.7	C	0.77	28.7	C
			Overall Intersection			-	*19.6*	*B*	-	*74.5*	*E*	-	*76.0*	*E*	-	*76.0*	*E*
7	Victory Boulevard & Bay Street	Signal	Victory Boulevard	EB	L	0.22	30.4	C	0.49	35.9	D	0.49	35.9	D	0.57	41.9	D
					LT	0.24	30.6	C	0.50	36.1	D	0.50	36.1	D	0.59	42.3	D
				WB	LTR	0.17	27.9	C	0.18	27.9	C	0.18	27.9	C	0.18	27.9	C
			Bay Street	NB	L	0.92	88.5	F	1.92	490.7	F	1.92	490.7	F	1.92	489.2	F
					TR	0.57	30.2	C	1.03	71.0	E	1.03	71.0	E	0.92	45.3	D
				SB	LT	0.62	31.0	C	1.18	124.8	F	1.29	172.5	F	1.15	110.4	F
					R	0.31	11.5	B	0.68	19.4	B	0.68	19.4	B	0.68	19.3	B
			Overall Intersection			-	*32.7*	*C*	-	*101.3*	*F*	-	*120.8*	*F*	-	*89.5*	*F*

Notes:
1. Shading denotes an unmitigable potentially significant adverse traffic impact.

Noise

As discussed in Chapter 11, "Construction," project-generated construction has the potential to result in significant adverse construction noise impacts at several sensitive receptor sites in the vicinity because of the duration and magnitude of the projected construction-period noise levels. Project-generated construction would comply with the noise control measures of the New York City Noise Control Code. In addition, the Applicant is committed to implementing certain noise reduction measures. These measures include constructing a 15-foot-tall construction barrier that would extend along the full perimeter of the site except along Projected Development Site 1's frontage to Richmond Terrace, where an 8-foot-tall

construction barrier would be placed. The Applicant would also commit to using auger drills in lieu of impact pile drivers, generators that would not exceed a capacity of 25 KVA, and ventilation fans that would not exceed a noise sound power level of 91-dBA (equivalent to the sound pressure level of 59 dBA at a distance of 50 feet).

~~Additional measures, as feasible, to avoid potential significant adverse noise impacts will be explored between the Draft and Final EIS in consultation with DCP. If no feasible and practicable mitigation measures are identified, the construction noise impact would remain unmitigated.~~

Temporary significant adverse construction noise impacts are predicted at three properties where field observations identified the presence of double pane windows and through-wall AC units: Castleton Park Apartments – South Tower (185 St. Marks Place), 36 Hamilton Avenue, and 60 Hamilton Avenue. As a worst-case scenario, interior noise levels at these properties are projected to temporarily exceed the CEQR acceptable noise threshold by up to 9.5 dBA during the project-generated construction period. With through-wall AC units already in place, there are no feasible and practical mitigation measures that would eliminate the temporary significant adverse construction noise impacts at these properties. The Proposed Actions would generate a temporary unmitigated significant adverse construction noise impact at these properties.

Interior noise levels at the one- and two-family residences of 59 Hamilton Avenue and 199 St. Marks Place are predicted to experience temporary significant adverse construction noise impacts and were identified as having window AC units on at least one façade. For the northern and eastern façades at 59 Hamilton Avenue and the eastern façade of 199 St. Marks Place – the façades that are predicted to experience a significant adverse construction noise impact – the Applicant would offer to make available at no cost for the purchase and installation of one window AC per unit at residences that do not already have alternative means of ventilation. The mitigation measures would be implemented prior to the start of construction. With the through-window AC units in place, the façades of these buildings would be expected to provide 25-dBA of window/wall attenuation. Interior noise levels are projected to temporarily exceed the acceptable threshold by less than 3 dBA (up to 2.8 dBA) during worst-case construction activity. Because the 45-dBA CEQR threshold for interior noise would be temporarily exceeded during worst-case conditions with the mitigation in place, these properties would be partially mitigated.

The one- and two-family residences at 41 Hamilton Avenue, 47 Hamilton Avenue, and 53 Hamilton Avenue are predicted to experience temporary significant adverse construction noise impacts. 41 Hamilton Avenue and 53 Hamilton Avenue were identified as having through-window AC units on at least one façade, while no alternate means of ventilation were identified at 47 Hamilton Avenue. At the northern and eastern façades at 41 Hamilton Avenue, 47 Hamilton Avenue, and 53 Hamilton Avenue, the Applicant would offer to make available at no cost for the purchase and installation of one window AC per unit at residences that do not already have alternative means of ventilation. The mitigation measures would be implemented prior to the start of construction. With the window AC units in place, the facades of these buildings would be expected to provide 25-dBA window/wall attenuation. Interior noise levels at 41 Hamilton Avenue, 47 Hamilton Avenue, and 53 Hamilton Avenue are projected to temporarily exceed the 45-dBA acceptable threshold by up to 12.4 dBA during worst-case construction activity. Because the CEQR threshold for interior noise would be temporarily exceeded during worst-case conditions with the mitigation in place, these properties would be partially mitigated.

At 140 Richmond Terrace, project-generated construction is projected to cause a temporary exceedance above the 50-dBA interior noise level that is recommended in the *CEQR Technical*

Manual for commercial office uses by up to 0.1 dBA during only construction quarter 6. This building is improved with double paned windows and rooftop AC units. Therefore, there are no feasible and practical mitigation measures that would eliminate the temporary significant adverse construction noise impacts. The Proposed Actions would generate a temporary unmitigated significant adverse construction noise impact at this property.

At 51 Stuyvesant, project-generated construction is projected to cause a temporary exceedance above the 50-dBA interior noise level that is recommended in the *CEQR Technical Manual* for commercial office uses by up to 3.8 dBA. However, this is a vacant, city-owned office building that is expected to remain vacant for the duration of the project. Accordingly, no mitigation is warranted for this property.

Lastly, Castleton Apartments South Playground is predicted to experience a significant adverse construction noise impact. No practical and feasible mitigation measures have been identified that could be implemented to reduce noise levels at the private outdoor Castleton Apartments South Playground to below the 55 dBA $L_{10(1)}$ guideline and/or eliminate project impacts. Although the *CEQR Technical Manual*'s 55 dBA $L_{10(1)}$ guideline is a worthwhile goal for outdoor areas requiring serenity and quiet, this relatively low noise level is typically not achieved in parks and open space areas in New York City. Based on *CEQR Technical Manual* guidance, the Proposed Actions would result in a temporary unmitigated significant adverse impact to this receptor.