18 CONSTRUCTION

18.1 Introduction

Per the 2021 *CEQR Technical Manual*, construction activities, although temporary, may sometimes result in significant adverse impacts. Construction duration, a critical measure to determine a project's potential for adverse impacts, is categorized as short-term (less than 24 months) and long-term (24 months or more). For construction activities not related to in-ground disturbance, short-term construction generally does not warrant a detailed construction analysis. However, consideration of several factors – including the location and setting of the project in relation to surrounding uses, and the intensity of construction activities – may indicate that a project's construction activities, even if short-term, warrant analysis in additional areas such as transportation, hazardous materials, historic and cultural resources, noise, and air quality.

As discussed in Chapter 1, "Project Description," the Proposed Actions would facilitate the development of two projected development sites in the Proposed Rezoning Area that are owned by the Applicant. Projected Development Site 1 (1460 Sheridan Boulevard) includes Block 3017, Lot 74, and Projected Development Site 2 (1480 Sheridan Boulevard) includes Block 3017, Lot 29. Projected Development Sites 1 and 2 are separated by three intervening tax lots that comprise Potential Development Site A (Block 3017, Lots 60, 65 and 68). Projected Development Sites 1 and 2 are currently developed with industrial buildings, and Potential Development Site A is developed with an approximately 26,353 gross square foot (gsf), three-story hotel and an approximately 16,398 gsf, one-story industrial building that is currently vacant. Potential Development Site A is not owned by the Applicant, and there is no specific development proposal for this site.

Approval of the Proposed Actions would facilitate the "Proposed Development," which would comprise three new buildings across the two Projected Development Sites. Building 1 would be constructed on Projected Development Site 1 and Buildings 2 and 3 would be constructed on Projected Development Site 2. Construction would last approximately 36 months and would involve construction on multiple development sites on the same block; therefore, a construction assessment is warranted. Potential Development Site A is not

under the Applicant's control, and the effects of project-generated construction of Potential Development Site A were not analyzed for transportation, air quality, or noise because there is no specific development proposal for this site.

This chapter describes the City, state, and federal regulations and policies that govern construction, followed by the conceptual construction schedule assumed for analysis, and the types of activities likely to occur during construction. The types of construction equipment are also discussed, along with the projected number of workers and truck deliveries. Based on these assumptions, the potential impacts from construction activities are identified and assessed for significant adverse impacts per CEQR criteria. In technical areas where significant adverse impacts are identified, potential measures to mitigate the impacts are discussed in Chapter 19, "Mitigation."

For each of the various technical areas presented below, appropriate construction analysis years were selected to represent reasonable worst-case conditions relevant to that technical area, which could occur at different times for different analyses. For example, the noisiest part of construction may not be at the same time as the heaviest construction traffic.

18.2 Principal Conclusions

No significant adverse construction impacts would occur in relation to historic and cultural resources, hazardous materials, open space, air quality and noise; however, construction of the Proposed Actions has the potential to result in significant adverse traffic impacts. With approval of the Proposed Actions, existing structures on Lots 29 and 74 would be demolished and three buildings would be constructed on two development sites within the Rezoning Area. Altogether, it is projected that construction activities would occur in one phase over a period of 36 months, with construction of the three buildings running concurrently without gaps. Potentially significant adverse traffic impacts could occur at five intersection approaches/lane groups as a result of construction activities associated with the Proposed Development.

Transportation

The peak number of trips generated by construction of the Proposed Actions is expected to occur in the first quarter of 2027 (eighth quarter of construction [Q8]). During this peak quarter, project-generated construction would generate an average of approximately 350 workers and 90 truck deliveries per day. Therefore, Q8 was selected to assess the construction transportation conditions to identify any potentially significant adverse impacts to traffic, transit, pedestrians and parking in the study area.

Traffic

Construction of the Proposed Development would generate a maximum of approximately 277 and 196 Passenger Car Equivalent (PCE) vehicle trips during the weekday AM (6:00 AM – 7:00 AM) and PM (3:00 PM – 4:00 PM) construction peak hours, respectively. Traffic conditions were evaluated for these two peak hours at five intersections in the general vicinity of the projected development sites, where the net increase in vehicle trips due to construction of the Proposed Development would exceed the CEQR threshold for conducting detailed traffic analysis. The capacity analyses indicate that the following three intersection approaches/lane groups in the study area could experience potentially

significant adverse traffic impacts in at least one peak hour as a result of construction activities associated with the Proposed Development:

- The northbound left-turn at the Sheridan Boulevard and Edgewater Road intersection, opposite East 172nd Street, during the weekday PM construction peak hour.
- The northbound left-turn at the Sheridan Boulevard and Edgewater Road intersection, opposite Jennings Street, during the weekday AM and PM construction peak hours.
- The southbound left-turn at the Westchester Avenue and Whitlock Avenue intersection during the weekday PM construction peak hour.

Chapter 19, "Mitigation," discusses potential measures to mitigate these potentially significant adverse traffic impacts.

Transit

The Proposed Rezoning Area is currently served by four New York City Transit (NYCT)/MTA bus routes, which include the Bx4, Bx4A, Bx27, and Bx35. The Proposed Rezoning Area is also served by three NYCT/MTA subway lines, which include the No. 6 Subway Line at the Whitlock Avenue Station, and the No. 2 and 5 Subway Lines at the Freeman Street and 174th Street Stations. The maximum peak hour subway/rail and bus trip generation during construction would be below the CEQR threshold for conducting detailed analyses of transit conditions. Therefore, the Proposed Actions would not result in potentially significant adverse transit impacts during construction.

Pedestrians

Construction of the Proposed Actions would generate a maximum of approximately 280 construction worker pedestrian trips during the weekday AM (6:00 AM – 7:00 AM) and PM (3:00 PM – 4:00 PM) construction peak hours. Pedestrian trips would be concentrated along the site's frontage along Edgewater Road and pedestrian facilities connecting the site to study area parking and transit facilities. The net increase in trips on pedestrian elements due to project-generated construction is below the CEQR threshold for conducting detailed analyses of pedestrian conditions. Therefore, the Proposed Actions would not result in potentially significant adverse pedestrian impacts during construction.

Parking

Construction of the Proposed Development would generate a maximum parking demand of approximately 234 spaces during the weekday midday period. The operational parking analysis conducted for the Proposed Development indicates that in the No-Action Condition, the available on- and off-street public parking within ½-mile of the projected development sites would be at approximately 94 percent utilization with approximately 407 available spaces during the weekday midday period. Furthermore, temporary on-street parking prohibitions during construction are not expected to significantly reduce available on-street parking in the vicinity of the projected development sites. Therefore, the Proposed Actions would not result in a potential public parking shortfall in the area during construction.

Air Quality

Detailed air quality modeling was completed to assess whether emissions during the construction stage would have the potential to result in significant adverse air quality impacts during construction. The worst-case construction-generated air effects would occur during construction months 10 through 17. Dispersion modeling of construction-related air emissions for both on-site and off-site sources determined that the annual-average NO_2 and 24-hour and annual $PM_{2.5}$ concentrations and 24-hour PM_{10} concentration would be below the corresponding NAAQS and de minimis thresholds at the sensitive receptors during peak construction. Construction-related emissions would be reduced outside of the peak construction periods, and would similarly be below the NAAQS and de minimis thresholds; therefore, the Proposed Actions would not result in significant adverse construction impacts in the area of air quality.

Noise

Project-generated construction may increase noise levels by more than the CEQR screening threshold of 3 dBA or more, thus the analysis assumed a uniform worst-case condition. The highest increase in noise levels would be experienced at the existing hotel on Potential Development Site A, where noise is projected to increase by up to 19.4 dBA for one quarter and noise increases of 15 dBA or more would not occur for 12 consecutive months at this worst-case receptor. During all other quarters of construction, noise levels would be increased by less than 15 dBA over ambient conditions at all the study area's other receptors of concern. Project-generated construction does not have the potential to result in maximum quarterly noise levels exceeding the impact thresholds of 15 dBA over four quarters or 20 dBA over one quarter. Accordingly, there would be no significant adverse construction impact in the area of noise.

Other Technical Areas

Construction activities have the potential to affect other technical areas such as land use and public policy, socioeconomics, community facilities and services, open space, historic and cultural resources, natural resources, hazardous materials, neighborhood character, and infrastructure. For the Proposed Development, a preliminary analysis of construction effects was warranted for land use and public policy, socioeconomics, community facilities and services, open space, historic and cultural resources, natural resources, hazardous materials, and neighborhood character.

Land Use and Public Policy

Construction of the Proposed Development would not affect existing land uses of the surrounding area. The Proposed Actions would allow the construction of three mixed-use buildings and publicly accessible open spaces on Projected Development Sites 1 and 2. Construction of these buildings would not alter the surrounding land uses or have the potential to conflict with public policies. The nearby sensitive receptors include residences along Sheridan Boulevard, Starlight Park, Daniel Boone Playground, Fannie Mae Hamer High School, and P.S. X811.

Construction staging for Projected Development Sites 1 and 2 would not extend on to surrounding or other nearby lots. The Proposed Actions would allow the development of new, affordable housing that would be consistent with multiple citywide and local public

policies. Therefore, the construction effects on land use and public policy would not result in a significant adverse construction impact.

Socioeconomic Conditions

Development on Projected Development Sites 1 and 2 would displace an existing automobile mechanic training facility on Projected Development Site 1 and a public parking facility, accessory office buildings, and a garage on Projected Development Site 2. Construction would not begin until after these businesses have left the property. The Proposed Development would also support the community by providing temporary construction jobs on the development sites. Throughout construction, construction workers would be expected to use some of the neighborhood's existing retail and services, such as eating and drinking establishments and convenience retail. Therefore, the construction effects on socioeconomic conditions would not result in a significant adverse construction impact.

Community Facilities and Services

Construction of the Proposed Development would not affect a community facility or service. The development sites are not adjacent to a community facility and project-generated construction would not affect nearby community facilities' ability to operate. Additionally, construction of the Proposed Development would not affect access to any community facilities or affect their service areas. Therefore, the construction effects on community facilities and services would not result in a significant adverse construction impact.

Open Space

Construction of Projected Development Site 1 would occur adjacent to Starlight Park – a public park under the jurisdiction of the NYC Department of Parks and Recreation. Public open space along the northern lot line of Projected Development Site 1 – from Sheridan Boulevard to the proposed shore public walkway – would also be provided. Along this open area, a new pedestrian connection would be created along Projected Development Site 1's northern lot line to Starlight Park. This new direct connection would create an entry into the Proposed Rezoning Area's proposed open space network, allowing for continuous public access from Starlight Park to the proposed shore public walkway. Refer to Chapter 5, "Open Space," for an updated description of the proposed connection to Starlight Park.~~Consultation with NYC Parks regarding the design of this pedestrian connection is ongoing, and final design will require approval from NYC Parks. Additional details will be provided in the Final EIS.~~

Project-generated construction would not cause Starlight Park's soccer field, basketball courts, playground, or the Bronx River House to close and these resources are anticipated to remain open throughout construction. Construction staging would only occur on the development sites and would not impact the park's storage area or other areas farther north. Construction activities would occur for more than 24 months and would be considered "long-term;" however, the construction of the Projected Development would not directly affect access to or use of Starlight Park.

As each building opens, project-generated open space would concurrently open around each building. The open space ratio (OSR) would decrease 0.12 percent when Building 1 opens and 0.19 percent when Building 2 opens. The OSR would be temporarily reduced, but not by more than one percent – the CEQR impact threshold – during construction.

When construction completes, 1.38 acres of open space would be developed and open to the public. This project-generated open space would not be available for construction staging after the open spaces have been developed and opened to the public. Therefore, the construction effects on open space resources would not result in a significant adverse construction impact.

Historic and Cultural Resources

As described in Chapter 7, "Historic and Cultural Resources." Project-generated construction would not result in the physical alteration or disturbance of a historic architectural or archaeological resource because there are no historic resources on or adjacent to the development sites. However, two historic resources are within 400 feet of the Projected Development Sites. One S/NR eligible resource – the Amtrak Northeast Corridor Line Bascule Bridge – is located less than 90 feet from Project Development Site 2. The Proposed Development would be required to comply with *Technical Policy and Procedure Notice (TPPN) #10/88 Procedures for the Avoidance of Damage to Historic Structures*, issued by the New York City Department of Buildings. With this underlying protection measure in place, construction resulting from the Proposed Actions would not result in significant adverse construction impact in the area of historic and cultural resources.

Natural Resources

As described in Chapter 9, "Natural Resources," the upland portions of the development sites are highly disturbed and unlikely to provide habitat for rare or endangered species. Overgrowth vegetation has proliferated on the development sites near the waterfront. This overgrowth consists of invasive species, except for one non-endangered native species (Eastern Cottonwood). Existing overgrowth vegetation along the shoreline would be removed as part of project-generated construction. During the interior fitout stages, newly planted native and non-invasive vegetation – trees, shrubs, and low-lying vegetation – would be planted, offering new habitat for wildlife in the surrounding area.

Construction activities along the waterfront would result in temporary disturbances to the Bronx River. The effects of in-water and shoreline construction activities would be minimized through the permitting process, which requires oversight by multiple agencies such as the New York State Department of Environmental Conservation (NYSDEC) and the United States Army Corp of Engineers (USACE). In-water construction would be avoided during the spring when alewife/blueback herring migrate along the Bronx River to spawn. Therefore, the construction effects on natural resources would not result in a significant adverse construction impact.

Hazardous Materials

An assessment of existing hazardous materials conditions at the site and mitigation measures related to potential impacts is provided in Chapter 10, "Hazardous Materials." The Applicant is actively seeking to enroll Projected Development Sites 1 and 2 into the Brownfield Cleanup Program (BCP). If accepted in the BCP, the Brownfield Cleanup Agreement (BCA) would provide regulatory oversight from the New York State Department of Environmental Conservation (NYSDEC) and would preclude the potential for significant adverse hazardous materials impacts during project-generated construction.

Additionally, a hazardous materials E-Designation would be mapped across the Rezoning Area on both projected and potential development sites. The E-Designation would require approval of a construction health and safety plan by the NYC Office of Environmental Remediation (OER) prior to obtaining NYC Buildings Department (DOB) permits for new development that requires soil disturbance. If the Applicant is not accepted or withdraws from the voluntary BCP, the E-Designation on the development sites would preclude significant adverse hazardous materials impacts because certain hazardous materials remediation requirements would continue to be in place.

With protections provided by the BCP and E-Designations, project-generated construction would not result in a significant adverse construction impact in the area of hazardous materials.

Neighborhood Character

Project-generated construction would not significantly affect neighborhood character. The development sites are in an urban area with a mix of uses. The development sites – heavily disturbed former industrial sites – are separated from the upland portions of the neighborhood by Sheridan Boulevard. Construction-generated noise would temporarily increase noise conditions near the development sites, typical of new development; however, project-generated construction noise would not exceed CEQR impact criteria. Additionally, roadways would not be closed during the construction period, which is not expected to result in a change in travel patterns through the neighborhood. Therefore, the construction effects on neighborhood character would not result in a significant adverse construction impact.

18.3 Methodology

This construction assessment follows the guidelines set forth in the *CEQR Technical Manual* and the Final Scope of Work. In the With-Action Condition, the Applicant would construct one building on Projected Development Site 1 and two buildings on Projected Development Site 2. Construction is expected to commence in 2025 and will occur in one phase. Construction of Building 1 on Projected Development Site 1 would begin first, followed by the construction of Building 2 on Projected Development Site 2. Construction of Building 3 on Projected Development Site 2 would commence in 2026. Assuming some concurrent construction and approximately 24 months of construction per each building, the Proposed Development would be complete and fully occupied in 2028 (the "Build Year").

Construction on Potential Development Site A, if redeveloped, would begin in 2028, and would take approximately 30 months to complete. Both the projected and potential development sites would be completed and fully occupied by 2031.

Construction resulting from the Proposed Actions is projected to last up to 36 months. Therefore, because construction activities would cumulatively exceed a two year period and would involve the simultaneous construction of multiple buildings, an assessment of the potential for construction activities to result in adverse environmental effects was warranted to examine the potential construction effects in the areas of historic and cultural resources, hazardous materials, natural resources, open space, transportation, air quality, and noise.

18.4 General Construction Oversight and Practices

Regulatory Agencies and Oversight

Compliance with New York City construction regulations is required regardless of the length of the construction period. In addition to the regulatory requirements, applicants must coordinate with New York City, New York State, and occasionally federal agencies to ensure that effects of construction are reasonably minimized.

New York City Air Pollution Control Code

All projects, whether or not subject to the requirements of CEQR, are required to comply with the New York City Air Pollution Control Code, which regulates fugitive dust under Section 1402.2-9.11, "Preventing Particulate Matter from Becoming Air-Borne; Spraying of Asbestos Prohibited; Spraying of Insulating Material and Demolition Regulated" (Title 24 of the Administrative Code of the City of New York, Chapter 1, Subchapter 6, Section 24-146).

New York City Asbestos Control Program

The purpose of the New York City Asbestos Control Program is to protect public health and the environment by minimizing the emission of asbestos fibers into the air when buildings or structures with asbestos-containing material are renovated, altered, repaired, or demolished by ensuring that asbestos-containing material is handled appropriately and by individuals qualified to do so. The program includes specific procedures that must be followed to control the handling of asbestos during construction. In instances where demolition of an existing building could result in the release of asbestos, all applicable rules and regulations would be followed.

Required Permits from the New York City Department of Transportation's Office of Construction Mitigation and Coordination

Before permits can be issued by the New York City Department of Transportation (NYCDOT) for general construction activity, sidewalk construction, canopy permits, traffic, bicycle detour, and pedestrian access plans must be approved by the DOT Office of Construction Mitigation and Coordination (OCMC). Among other matters, the OCMC-approved pedestrian access plans will identify the extent that any sidewalks and/or crosswalks would be closed or narrowed to allow for construction-related activity and describe how pedestrian access to adjacent land uses and intersections will be maintained.

New York City Noise Control Code

The New York City Noise Control Code, as amended by Local Law 113 of 2005, defines "unreasonable and prohibited noise standards and decibel levels" for the City of New York. The New York City Noise Control Code, Section 24-219, contains rules that prescribe "noise mitigation strategies, methods, procedures, and technology that shall be used at construction sites" when certain construction devices or activities occur. Additionally, the New York City Noise Control Code requires construction activities to occur between 7 AM and 6 PM Monday through Friday. Construction activities occurring outside the permitted days/hours would require an After Hours Variance from the Department of Buildings (DOB).

New York City Procedure for the Avoidance of Damage to Historic Structures

Regulations for the protection of historic structures are found in "Technical Policy and Procedure Notice (TPPN) #10/88, Procedures for the Avoidance of Damage to Historic Structures Resulting from Adjacent Construction When Subject to Controlled Inspection by Section 27-724 and for Any Existing Structure Designated by the Commissioner," issued by DOB. There is one S/NR eligible resource, the Amtrak Northeast Corridor Line Bascule Bridge, located less than 90 feet from Project Development Site 2. Construction will be required to comply with the regulations set forth in TPPN #10/88.

General Construction Practices

Hours of Work

Construction activities will adhere to New York City laws and regulations, which generally permit construction work to begin at 7:00 AM on weekdays, with workers arriving to prepare work areas between 6:00 AM and 7:00 AM. Construction activities would typically cease around 3:30 PM, but on occasion can be extended to finish specific tasks, such as finishing a concrete pour of a floor deck. In the case of an extended workday, construction activities would continue until about 6:00 PM and would only include the workers involved in the task requiring additional work time.

Occasionally, Saturday or overtime hours may be required to complete time-sensitive tasks. A permit from DOB and approval of a noise mitigation plan from the NYC Department of Environmental Protection (DEP) may be required for weekend work. The New York City Noise Control Code limits construction to weekdays between the hours of 7:00 AM and 6:00 PM and sets noise limits for specific pieces of construction equipment. Construction activities occurring after hours may be permitted only to accommodate: (i) emergency conditions; (ii) public safety; (iii) construction projects by or on behalf of city agencies; (iv) construction activities with minimal noise impacts; and (v) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. Similar to an extended workday during the week, only the workers and equipment needed to complete the specific task during weekend work are required. The typical weekend workday would be on Saturday from 7:00 AM to 5:00 PM, and the level of activity for any weekend work would be less than a normal workday.

Deliveries and Access

The construction site would be fenced off and access would be limited to construction-related activities. Both workers and trucks that are not needed on the construction site would not be granted entry. Additionally, aside from the required workers on site, both security guards and flaggers may be posted as necessary. Security guards may patrol the Project Area after hours and over the weekends to deter unauthorized access. Access points to construction areas would be locked and closed after hours. Dedicated flaggers will be assigned to the work area during deliveries and debris removal as needed.

Material deliveries to the construction site would be controlled and scheduled, with both workers and trucks required to pass through security points. Flaggers would be posted at each of the entry gates to assist delivery schedules and provide traffic aid when trucks enter and exit the on-street traffic streams.

Rodent Control

Construction contracts may include provisions for a rodent control program. Before the start of construction, the contractor would survey and bait the appropriate areas and provide for proper site sanitation as necessary. During construction, the contractor would carry out a maintenance program as necessary and signage on all baiting areas would be posted to protect the community along with coordination with appropriate public agencies. Additionally, only Environmental Protection Agency (EPA) and New York State Department of Environmental Conservation (DEC) registered rodenticides would be permitted. A rodent control program would be required to be implemented in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

18.5 Construction Logistics

Approval of the Proposed Actions would allow the Proposed Development. Building 1 would be developed as a 24-story 263,862-gsf building and would contain approximately 304 affordable dwelling units (DUs). The building would contain up to 5,000 gsf of ground floor retail and no accessory parking. Buildings 2 and 3 would be developed with two 24-story buildings totaling 602,155 gsf and would contain approximately 666 affordable DUs. The buildings would include 16,229 gsf of retail space and 100 accessory parking spaces reserved for residents of the Proposed Development.

Potential Development Site A is not under control of the Applicant and there is no specific development proposal for this site. As such, detailed analyses of the effects of project-generated construction on Potential Development Site A on transportation, air quality, or noise were not undertaken.

Construction Site Plan

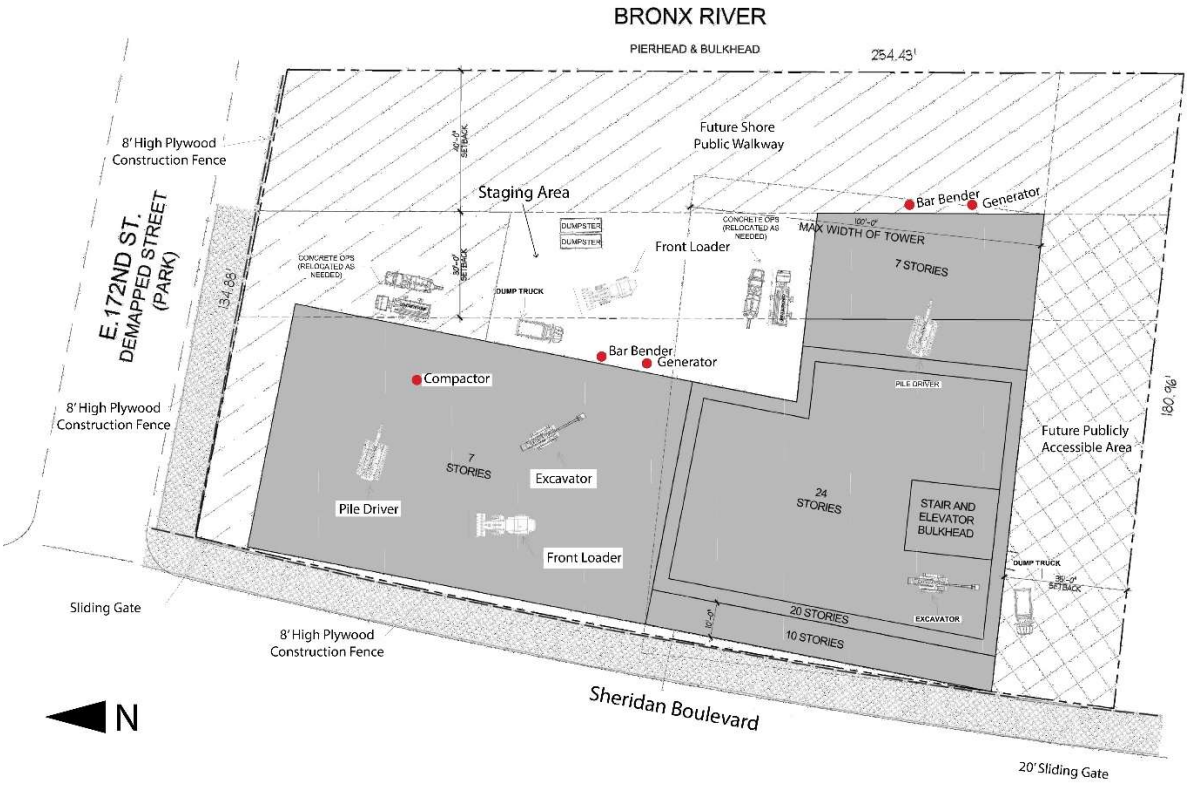
Projected Development Site 1 Staging Areas

Staging, receiving, and other secondary construction activities would occur on Projected Development Site 1 including in the additional open space and publicly accessible~~upland connection~~ areas (PAA). As shown in Figure 18-1, staging would be located east of the intersection of East 172nd Street and the Sheridan Boulevard service road (Edgewater Road), across from the Starlight Park storage area in the area fronting the future Shore Public Walkway. The staging area would be available throughout the duration of the construction period.

Access to the site for construction vehicles would be from the north and south ends of Projected Development Site 1, from the Sheridan Boulevard service road. Flaggers would be stationed at these access points. Construction workers would access the site via a separate secure turnstile at the south gate.

Within the site, the additional open space and ~~upland connection~~publicly accessible areas provide room to maneuver equipment and materials for efficient construction operations. The open space and ~~upland connection~~PAA would be developed in the final construction phases. An 8 foot construction fence would surround the site in accordance with NYC DOB requirements.

Figure 18-1: Illustrative Construction Site Plan – Projected Development Site 1*_



*Note: This graphic was updated for the FEIS.

Projected Development Site 2 Staging Areas

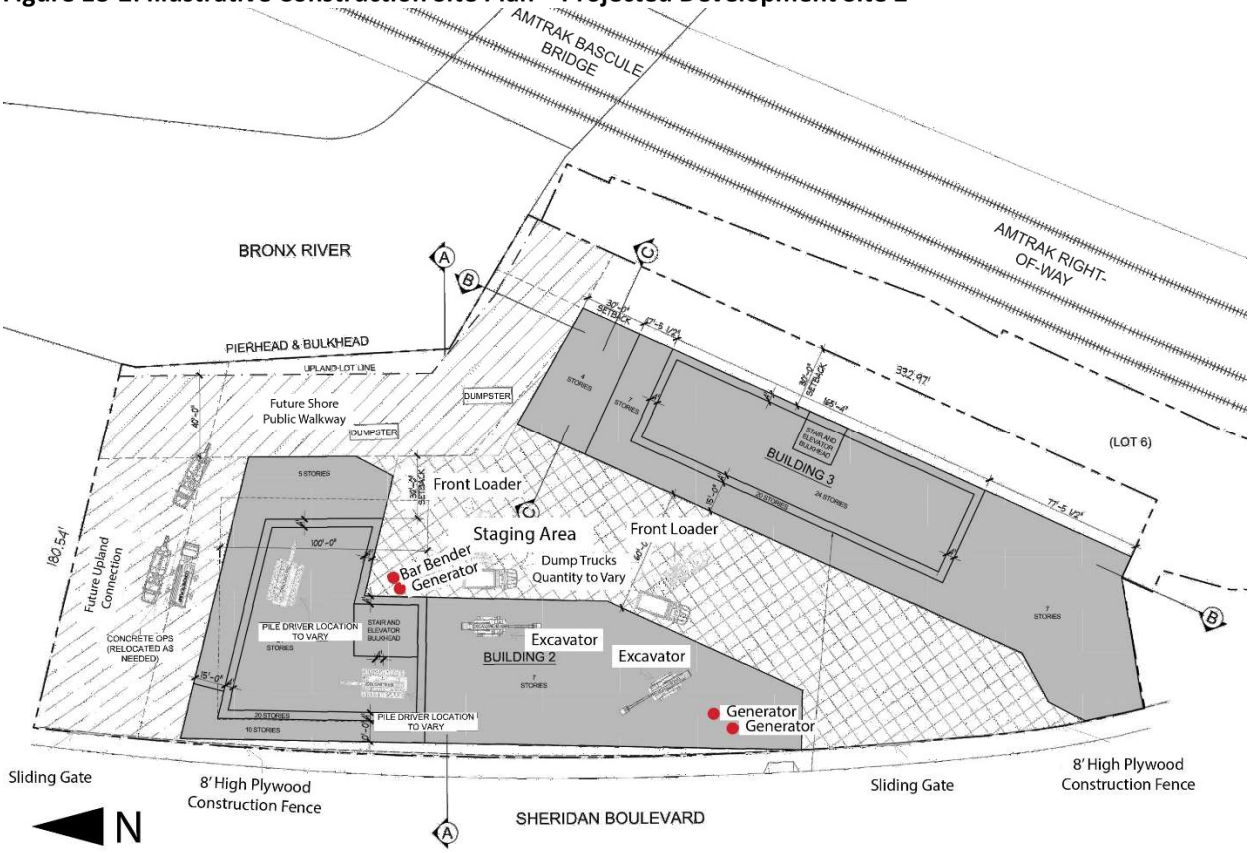
Staging, receiving, and other secondary construction activities would occur on Projected Development Site 2 and in the additional open space and upland connection areas that would be developed on this site. As shown in Figure 18-2, a staging area would be located near the intersection of Jennings Street and the Sheridan Boulevard service road.

Staging would predominantly be located within Projected Development Site 2 on the future upland connection and additional open space areas. These staging areas would be available throughout the construction period for Buildings 2 and 3. Like Projected Development Site 1, circulation would be available for construction vehicles to maneuver around the buildings, thereby allowing for efficient construction operations.

Access to the site for construction vehicles would be from the Sheridan Boulevard service road turning into the site at the future visual corridor along the site's northern lot line, and from the area between Buildings 2 and 3. Flaggers would assist vehicles onto the Sheridan Boulevard service road to the site. An 8 foot construction fence would surround the site in accordance with NYC DOB requirements.

Construction logistics for each stage of construction for Projected Development Site 1 and 2 are provided in Appendix I1.

Figure 18-2: Illustrative Construction Site Plan – Projected Development Site 2



Sidewalk Lanes and Closures

Sidewalks would be closed or protected during the construction period for varying lengths of time, and on-street parking would be temporarily displaced to accommodate temporary pedestrian pathways in the adjacent parking lanes. Traffic and bicycle lanes would not be narrowed or closed during the construction period. NYCDOT's OCMC will review and approve all Maintenance and Protection of Traffic (MPT) plans, which will identify any planned sidewalk or parking lane closures, as well as staging areas for all construction activities. The MPT plans will be prepared and submitted for OCMC review and approval at a later stage of development, once detailed logistics plans are developed for each construction site. Additionally, coordination with NYCDOT would be necessary to determine the appropriate measures to ensure pedestrian safety surrounding the construction site, including any potential deployment of Traffic Enforcement Agents (TEAs), if needed.

Depending on the stage of construction, truck movements would generally occur between 6:00 AM and 3:00 PM. No rerouting of traffic is anticipated during construction activities and all moving lanes on streets are expected to be available to traffic at all times. Traffic and bicycle lanes would not be narrowed or closed during any point of construction. Due to construction activities, there would be temporary closing of on-street parking and sidewalks along the Sheridan Boulevard service road in front of the development sites, but pedestrian circulation and access would be maintained via a temporary sidewalk in the parking lane.

Nearby Sensitive Receptors

Buildings 1, 2 and 3 would each individually be constructed over a duration classified as "short-term" per CEQR. Cumulatively however, the start of construction for each building would be staggered and three proposed buildings would be constructed concurrently in overlapping phases, resulting in a cumulative construction duration would be classified as "long-term" per CEQR.

Potential Development Site A is located between Projected Development Sites 1 and 2. Potential Development Site A, if redeveloped, would not occur concurrently with construction on the projected development sites. Therefore, the existing hotel on Potential Development Site A is a sensitive receptor.

On the projected development sites, the buildings would not be occupied by tenants until construction activities are complete, therefore there would be no potential for significant adverse construction impacts from project-generated construction on project-generated receptors.

The nearest existing sensitive receptors to the Proposed Rezoning Area are summarized in Table 18-1.

Table 18-1: Nearest Sensitive Receptors by Direction for the Proposed Rezoning Area

Direction	Nearest Sensitive Receptor	Approx. Distance from Nearest Proposed Receptor	Description
North	Starlight Park	< 5 feet	17.06-acre neighborhood park with passive and active recreational uses.
West	Compass Residences	190 feet	Six-building mixed-use development
	Fannie Lou Hamer Freedom HS	226 feet	478-seat high school
	PS X811	440 feet	650-seat elementary school
South	Starlight Park "South Subarea"	140 feet	Public parkland between the west bank of the Bronx River and the Amtrak right-of-way. Contains walking and bike paths, bench seating, and vegetation.
East	Bronx River[1]	< 5 feet	23-mile-long river that runs south from Westchester County and empties into the East River
	Starlight Park "East Subarea"	80 feet	Public parkland on the east bank of the Bronx River. Contains walking and bike paths, bench seating, and vegetation.
Receptors within the Proposed Rezoning Area	1440 Sheridan Boulevard (Potential Development Site A)	90 feet	Hotel

1. The Bronx River is a natural resource, and is not considered a sensitive receptor for CEQR air quality and noise analyses.

Buildings 1, 2 and 3 would be located at least 190 feet from sensitive receptors across Sheridan Boulevard. Project-generated construction would be located at least 90 feet from the nearest sensitive receptor, the existing hotel on Potential Site A. Construction activities on Projected Development Site 1 would occasionally be adjacent to Starlight Park's inaccessible storage area. Building 3 would be constructed adjacent to Lots 6 and

28; however, these lots are occupied with industrial uses that are not sensitive receptors per CEQR.

Buildings 1, 2 and 3 would be constructed at least 40 feet from the edge of the Bronx River. Project-generated construction would adhere to best construction practices and applicable laws and regulations, including any conditions required by the US Army Corp of Engineers (USACE) or New York State Department of Environmental Conservation (NYSDEC) as a condition of a joint application permit.

The proposed publicly accessible open spaces would be completed in the final construction phase as part of the interior fit-out stage. Exterior construction activities would be transient during this time, such as to complete landscaping activities. Fitout in Buildings 1, 2 and 3 would largely be performed with handheld tools, smaller machinery, and manual labor. However, earthwork and site grading for the publicly accessible open spaces would occur during demolition, excavation, dewatering, and foundation. The open space would be used for construction staging during the superstructure and envelope and façade stages.

Primary Construction Stages

Excavation and Foundation

Projected Development Site 1 (Block 3017, Lot 74) is currently improved with a one-story, approximately 14,000-gsf automobile mechanic training facility. Projected Development Site 2 (Block 3017, Lot 29) contains an open parking facility and four connected one-story accessory office buildings and one garage totaling approximately 25,197 gsf of building area.

In the With-Action Condition, the existing buildings on Projected Development Sites 1 and 2 would be demolished. Once demolition is complete, sheeting would be installed to hold back soil around the excavation area, and excavators would then be used to remove soil to the appropriate depth. Below-grade elements and foundations would then be built for Buildings 1, 2, and 3.

Equipment that would be used during the foundation stage includes bar benders, compactors, excavators, front end loaders, generators, pumps, impact pile drivers, and dumpsters. During this construction stage, construction vehicles would include dump trucks, flatbed trucks, and concrete mix and pump trucks. These trucks would assist the excavation and foundation process through the removal of excavated soil and demolished materials.

The foundations would not be waterproofed until a slab-on-grade is built after excavation is complete, creating the potential for water to accumulate in the excavated area. Water collected in the excavation area during construction would be removed as necessary using a dewatering pump. If dewatering is required, it would be performed in accordance with the New York City Department of Environmental Protection (DEP) sewer use requirements. Testing would be required to protect against contaminated groundwater before it can be discharged into the existing sewer system.

Superstructure

The superstructure of a building includes the building's framework such as beams, slabs, and columns. Construction of the building's interior structure, or core, would include elevator shafts, vertical risers for mechanical, electrical and plumbing systems, electrical

and mechanical rooms, core stairs, and restroom areas. A crane would likely be used during the superstructure stage to lift structural components, façade elements, and other large materials. Superstructure construction activities would typically also require the use of bar benders, concrete mixer trucks, man lifts, and dumpsters.

Envelope and Façade

The superstructure stage would overlap with construction activity on the building envelope and façade. During this stage of construction, the exterior façade would be installed. Prefabricated façade elements would arrive on trucks. These elements would be lifted into place for attachment to the superstructure. Envelope and façade construction activates would typically require a crane, man lifts, and dumpsters.

Interior Fit-Out

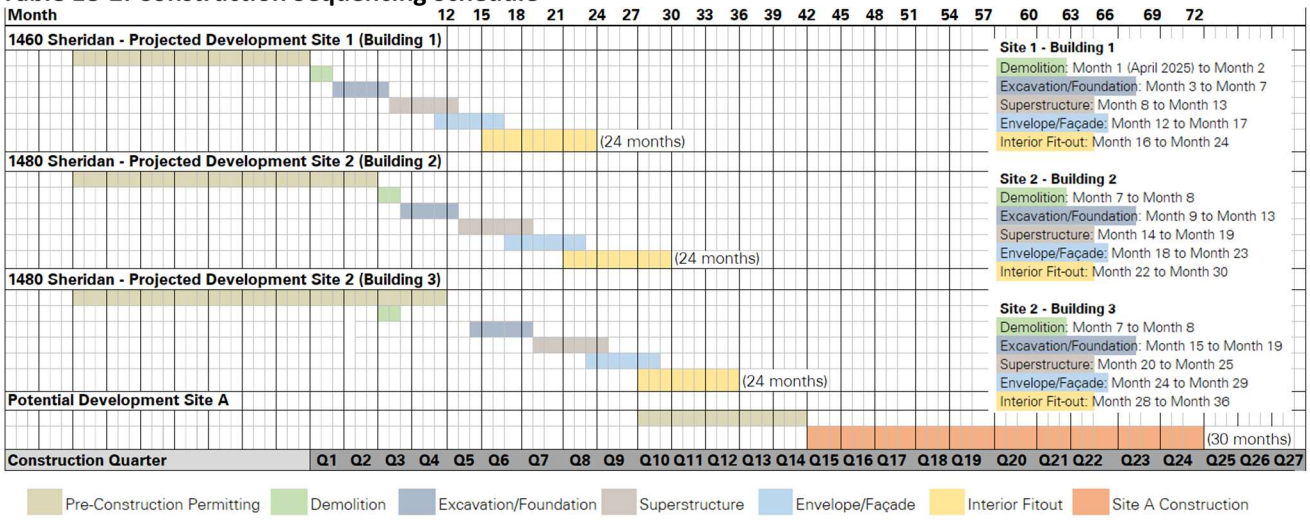
This final stage of construction would include the construction of interior partitions, installation of lighting fixtures, interior finishes (such as flooring, painting, cabinetry, etc.), and mechanical and electrical work, such as the installation of elevators and lobby finishes. Final cleanup, building system (e.g., electrical system, fire alarm, plumbing, etc.) testing, and inspections would also be part of this stage of construction.

Equipment used during interiors and finishing would generally include man lifts and dumpsters, as well as a variety of small hand-held tools. Interior fit-out activities would mostly be limited to the interior of the building, and generally would not require the use of diesel machinery. The interior fit-out stage would generate significantly less heavy duty diesel vehicle trips to the construction site than the excavation and superstructure phases. The use of heavy machinery would also be minimal during this construction stage, thereby limiting the noise and air effects on the surroundings.

Construction Sequencing and Staging

The construction schedule is presented below in Table 18-2 and reflects the Applicant's schedule of construction activities at the site, as well as an assumption of the construction activities that would occur on Potential Development Site A, which is not under control of the Applicant.

Table 18-2: Construction Sequencing Schedule



Construction activities for Projected Development Sites 1 and 2 would occur in one phase. Altogether, it is projected that construction activities would occur over a period of 36 months, with construction of the three buildings running concurrently without gaps. Buildings 1, 2 and 3 would be constructed over an approximately 36-month period, respectively. It is anticipated that Buildings 1, 2, and 3 would be constructed concurrently, followed by the construction of Potential Development Site A, if redeveloped.

Demolition, Excavation, Dewatering, and Foundation

As shown in Table 18-2, demolition, excavation, dewatering, and foundation for Buildings 1 would occur over an approximately seven-month period, beginning with the demolition of the existing structures on Projected Development Site 1. The equipment used during this stage would remain in the Proposed Rezoning Area to be redeployed in support of the stage's activities on Projected Development Site 2. Activities related to the demolition, excavation, dewatering, and foundation for Buildings 2 and 3 would also occur over approximately seven months each. The excavation and foundation activities for Building 3 would not occur until after Building 2 finished its excavation and foundation phase of construction; thus, Building 3 would have a gap in construction between demolition (Month 8) and excavation and foundation (Month 15). Construction during this stage would be limited to on-the-ground activities, and the change in topography to the west would minimize the available direct sightlines between the construction area and surrounding sensitive receptors farther upland, thereby limiting the typical construction noise effects.

Site grading, including for the proposed privately-owned publicly accessible open space, would be undertaken as a part of this stage. For the construction of Building 1, construction materials would be staged where the project-generated open space and ~~upland connection~~publicly accessible areas are planned on Projected Development Site 1. For Buildings 2 and 3, construction materials would be staged within the project-generated open spaces, including the proposed visual corridor along the lot's northern side lot line and in the area between Building 2 and Building 3.

Superstructure

Immediately following the completion of excavation and foundation, the superstructure stage for each building would commence. Construction of the superstructure for Buildings 1, 2, and 3 would each occur over a six month period, respectively. During this stage, direct sightlines between construction work and residences on the lower levels of the Compass Residences would become available as the superstructure exceeds the elevation of the ground floor retail and Compass Residences' parking garage.

Envelope and Façade

Construction of the envelope and façade of each proposed building would each occur over six-month periods. For each building, construction of the envelope and façade would partially overlap with the superstructure stage. Envelope and façade construction would commence after four months of each building's superstructure stage. Construction of the envelope and façade of Building 2 would not commence until the completion of the envelope and face of Building 1. Similarly, construction of the envelope and façade of Building 3 would not commence until the completion of Building 2's envelope and façade. The equipment used in this stage would remain in the Proposed Rezoning Area to be redeployed for the construction of Buildings 2 and 3.

Interior Fit-Out

Lastly, the interior fit-out of Buildings 1, 2, and 3 would occur over a 9-month period. The interior fit-out stage would require the least amount of heavy machinery. The construction work would mostly comprise of work that can be completed with smaller machinery or handheld tools for tasks such as painting, assembling cabinetry, or affixing finishes. Within all three buildings, interior fit-out activities would partially overlap with the envelope and façade stage. Interior fit-out activities would commence after two months of the envelope and façade stage for Building 1, 2 and 3, respectively, overlapping with the envelope and façade stage for a period of two months for each building. The project-generated open space on Projected Development Sites 1 and 2 would be completed and accessible to the public after the completion of Buildings 1, 2, and 3.

18.6 Preliminary Assessment

Land Use and Public Policy

The Proposed Actions would allow the construction of three mixed-use buildings with public open spaces on Projected Development Sites 1 and 2. If Potential Development Site A is redeveloped, the site would likely be developed into a mixed-use building containing ground floor retail and residential space above. Construction resulting from the Proposed Actions would not require a change to surrounding land uses. Construction at each development site would not extend on to adjoining sites.

Construction of the Proposed Development would not alter or change public policies. The Proposed Actions would allow the development of new, affordable housing that would be consistent with multiple public policies such as *OneNYC 2050; Housing New York 2.0; Rebuild, Renew, Reinvent: A Blueprint for New York City's Economic Recovery; Where We Live NYC*; FRESH; and the NYC Waterfront Revitalization Program (WRP). Further, the Proposed Actions would support local policy goals in the *Southern Boulevard Neighborhood Study.* Accordingly, the Proposed Actions do not have the potential to result in a significant adverse construction impact in the area of land use and public policy, and no further analysis is warranted.

Socioeconomic Conditions

Development on Projected Development Sites 1 and 2 would not result in the direct displacement of a residential use and would not displace residents, but would displace an existing automobile mechanic training facility on Projected Development Site 1 and a public parking facility, accessory office buildings, and a garage on Projected Development Site 2. If redeveloped, the hotel on Potential Development Site A could be displaced. As described in Chapter 3, "Socioeconomic Conditions," the displacement of these uses would not result in significant adverse socioeconomic conditions impacts.

Project-generated construction would begin after these businesses have vacated the properties. Project-generated construction would adhere to the underlying NYC construction regulations to protect nearby residences and businesses.

Construction of the Proposed Development would support the local community by providing construction jobs for more than two years. The Bureau of Labor Statistics (BLS)

indicates that construction workers in New York earn $60,410 on average per year.[1] Therefore, construction of the Proposed Development would provide temporary construction jobs to the community. Throughout construction, construction workers would be expected to use some of the neighborhood's existing retail and services, such as eating and drinking establishments and convenience and convenience retail. Accordingly, the Proposed Actions do not have the potential to result in a significant adverse construction impact in the area of socioeconomic conditions, and no further analysis is warranted.

Community Facilities and Services

Construction of the Proposed Development would not affect a community facility or service. West of the development sites and across Sheridan Boulevard are two public schools: Fannie Lou Hamer High School and P.S. X811. These schools would continue to operate while the Proposed Development is constructed. Other community facilities nearby would continue to operate during construction of the Proposed Development, and access to and the operation of any community facilities or services in the area would not be altered because of the Proposed Actions. Accordingly, the Proposed Actions do not have the potential to result in a significant adverse construction impact in the area of community facilities and services, and no further analysis is warranted.

Open Space

Projected Development Site 1 is adjacent to Starlight Park, an open space resource. The northern lot line of Projected Development Site 1 is adjacent to the park's inaccessible storage area. This storage area is a "back of office" fenced lot that is used for staging for horticulture work, storage, extra parking during large events, and emergency and maintenance access for motorized boats into the Bronx River. This emergency boat launch is also used for the removal of the floating docks at Starlight Park.

The shore public walkway on Projected Development Site 1 would connect to Starlight Park via a proposed additional open space along the site's northern lot line and a pedestrian connection from Sheridan Boulevard to Starlight Park is proposed. This new connection would create an entry into the Proposed Rezoning Area's proposed open space network, allowing for continuous public access from Starlight Park to the proposed shore public walkway. The design of this pedestrian connection is not yet finalized, as further consultation with NYC Parks is ongoing.

Construction activities on this site would occur for 24 months; however, project-generated construction would not directly affect access to or use of Starlight Park. Starlight Park's soccer field, basketball courts, playground, and the Bronx River House would be at least 300 feet away from project-generated construction activities and would continue to operate during construction of the Proposed Development. Similarly, project-generated construction would not alter access to Starlight Park or other open space resources.

Access to the development sites during construction would occur from Sheridan Boulevard's service road (Edgewater Road) and would not alter existing traffic routes to Starlight Park or other nearby open space resources. Additionally, staging of construction equipment would only occur on the development sites and would not alter the use or

[1] https://www.bls.gov/oes/current/oes472061.htm

operation of the park's storage area or other areas farther north. Therefore, the Proposed Actions do not have the potential to result in a significant adverse construction impact in the area of open space.

As part of construction, 1.38 acres of public open space would be developed. These privately owned open spaces would be open to the public after construction is complete on each site. Once in use as an open space resource, the project-generated open spaces would not be available for construction staging and would remain open to the public upon construction completion. Therefore, the construction effects on the project-generated open space would not result in a significant adverse construction impacts, and no further assessment is warranted.

Temporary Reduction in OSR during Construction

Building 1 would the first project-generated building to open, introducing 857 additional residents and 0.41 acres of additional open space to the area. The Open Space Study Area's open space ratio (OSR) – the amount of acres of open space open to the public per 1,000 residents – would be reduced by 0.12 percent compared to the No-Action Condition with the completion of Building 1. When Building 2 opens, an additional 973 residents would be introduced to the Study Area. Assuming half of Projected Development Site 2's open space opens concurrently with Building 2, an additional 0.49 acres of open space would be introduced, resulting in an OSR decrease of 0.19 percent compared to the No-Action Condition. As project-generated buildings open during the construction, the Study Area's decrease in the OSR would continue to be less than one percent, the CEQR open space impact criterion.

Historic and Cultural Resources

Project-generated construction would not result in the physical alteration or disturbance of a historic architectural or archaeological resource because there are no historic resources on or adjacent to the development sites. However, one S/NR eligible resource – the Amtrak Northeast Corridor Line Bascule Bridge – is located less than 90 feet from Project Development Site 2. The Proposed Development would be required to comply with *TPPN #10/88 Procedures for the Avoidance of Damage to Historic Structures*, issued by the New York City Department of Buildings. All construction on Projected Development Site 2 would comply with TPPN #10/88. With this underlying protection measure in place, project-generated construction would not result in significant adverse impacts related to historic and cultural resources.

Natural Resources

As described in Chapter 9, "Natural Resources," the upland portions of the development sites are highly disturbed and unlikely to provide habitat for rare or endangered species. Overgrowth vegetation has proliferated on the development sites near the waterfront. This overgrowth consists of invasive species, except for one non-endangered native species (Eastern Cottonwood). Existing overgrowth vegetation along the shoreline would be removed as part of project-generated construction. During the interior fitout stages, newly planted native and non-invasive vegetation – trees, shrubs, and low-lying vegetation – would be planted, offering new habitat for wildlife in the surrounding area.

Construction activities along the waterfront would result in temporary disturbances to the Bronx River. The effects of in-water and shoreline construction activities would be

minimized through the permitting process, which requires oversight by multiple agencies such as the New York State Department of Environmental Conservation (NYSDEC) and the United States Army Corp of Engineers (USACE). In-water construction during would be avoided during the spring when alewife/blueback herring migrate along the Bronx River to spawn. Therefore, the construction effects on natural resources would not result in a significant adverse construction impact.

Hazardous Materials

As described in Chapter 10, "Hazardous Materials," an E-Designation would be placed on the development sites. The E-Designations would preclude the potential for significant adverse hazardous materials impacts during construction on these sites. If warranted, the appropriate remedial measures would be defined and enforced by the Mayor's Office of Environmental Remediation (OER) prior to the start of construction. Accordingly, with the proposed E-Designation in place, significant adverse construction impacts related to hazardous materials would be precluded, and no further assessment of construction with regard to hazardous materials is warranted.

The Applicant is applying to enroll the projected development sites in the Brownfield Cleanup Program (BCP) administered by NYSDEC. The BPC program also requires remedial measures that would preclude impacts during construction. ~~The status of the BCP application will be updated between the DEIS and FEIS.~~

With the inclusion of the measures required by the BCP and E-Designations, construction resulting from the Proposed Actions would not result in significant adverse impacts related to hazardous materials and no further analysis is warranted.

Neighborhood Character

Construction of the Proposed Development would not significantly affect neighborhood character. The development sites – heavily disturbed former industrial sites – are separated from the upland portions of the neighborhood by Sheridan Boulevard. Construction-generated noise and air emissions would temporarily increase during construction, and would be typical of new development in an urban area. Project-generated construction noise or air emissions would not exceed CEQR impact criteria in these technical areas. Public access would continue to be available to Starlight Park throughout the construction period from existing access points.

Additionally, construction vehicle access to the development sites would be from Edgewater Road, the Sheridan Boulevard service road. Project-generated construction is not expected to narrow, reconfigure, or close travel lanes on the neighborhood's key through streets. Accordingly, the Proposed Actions do not have the potential to result in significant adverse construction impacts in the area of neighborhood character, and no further analysis is warranted.

18.7 Detailed Assessment

Per *CEQR Technical Manual* guidelines, a construction assessment evaluates the temporary effects of construction activities on open space, historic and cultural resources, hazardous materials, transportation, air quality, and noise. The cumulative construction period would be approximately 36 months during which three large buildings would be

constructed concurrently. The preliminary assessment indicated significant adverse construction impacts would not occur in the areas of open space, historic and cultural resources, and hazardous materials. Therefore, this detailed construction assessment analyzed the construction effects in the area of transportation, air quality, and noise. The demolition, excavation and foundation phase was selected as the worst-case conditions for construction effects because the three buildings would be constructed concurrently in a concentrated area with heavy construction equipment. Construction activities in subsequent phases would be classified as short-term per CEQR.

Transportation

The analysis of construction transportation conditions assesses the potential for significant adverse impacts to traffic, transit, pedestrians and parking in the study area during construction, as a result of the Proposed Actions. The analysis is based on a study of peak worker and truck trips on a quarter-by-quarter basis, taking into account worker modal splits, vehicle occupancy and trip distribution, truck Passenger Car Equivalents (PCEs) and arrival/departure patterns. Therefore, the quarter with the highest estimated construction trip generation was selected for analysis.

Construction Trip Generation

The estimated average number of daily workers and material deliveries for each quarter of construction are shown in Table 18-3. The average number of workers on-site per day would be approximately 168, with the peak reaching an average of approximately 350 workers per day in the eighth quarter of construction (Q8). The average number of truck deliveries per day would be approximately 50, with the peak reaching an average of approximately 90 deliveries per day in Q8.

Table 18-3: Average Number of Daily Workers and Truck Deliveries by Quarter

Quarter	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Peak	Average
Workers	20	20	63	70	137	220	280	350	250	300	150	150	350	168
Trucks	20	20	63	70	57	90	70	90	40	40	20	20	90	50

Source: Newman Design

Peak Daily Worker Trips and Truck Deliveries

The daily worker and truck trip projections in the peak quarter were used as the basis to estimate peak hour construction trips. As shown in Table 18-3, construction of the Proposed Development would generate the highest number of daily trips in Q8, with an average of approximately 350 workers and 90 truck deliveries per day.

Construction Worker Modal Split and Vehicle Occupancy

The construction worker modal split was obtained from the 2000 U.S. Census Bureau Reverse Journey-to-Work (RJTW) data for the construction and excavation industry for Bronx County Census Tracts 54, 56, 123, 153, 155, 157 and 161, per direction from NYCDOT. Modal splits of 72.3 percent by auto, 0.0 percent by taxi, 13.1 percent by subway, 7.3 percent by bus, 7.3 percent by ferry/railroad, and 0.0 percent by bike/walk. An average vehicle occupancy of 1.08 persons per vehicle is expected for construction workers commuting to/from the projected development sites.

Traffic

Peak Hour Construction Vehicle Trips

The majority of construction activities at the projected development sites would occur from 7:00 AM to 3:30 PM. While construction truck trips would occur throughout the day (with more trips during the early morning period) and most trucks would remain in the area for short durations, construction workers would commute during the hours before and after the work shift. For analysis purposes, each truck delivery was assumed to result in two trips during the same hour (one "in" and one "out"), whereas each worker vehicle was assumed to arrive near the work shift start hour and depart near the work shift end hour.

The estimated daily vehicle trips for Q8 were distributed throughout the workday based on the projected work shift allocations and conventional arrival/departure patterns for construction workers and trucks. For construction workers, the majority (approximately 80 percent) of the arrival and departure trips would take place during the hour before and after each work shift, respectively. Construction truck deliveries typically peak during the hour before each shift (25 percent), overlapping with construction worker arrival traffic. The hourly trip projections for the peak construction quarter (Q8) for the Proposed Development are shown in Table 18-4. As shown, the construction-generated peak hour vehicle trips would total approximately 277 and 196 PCEs in the weekday AM (6:00 AM – 7:00 AM) and PM (3:00 PM – 4:00 PM) construction peak hours, respectively. The construction-generated vehicle trips (in PCEs) would exceed the *CEQR Technical Manual* screening threshold of 50 peak hour vehicle trips during both the weekday AM and PM construction peak hours.

Table 18-4: Average Number of Daily Workers and Truck Deliveries by Quarter

	Auto Trips			Truck Trips			Total Vehicle Trips			Total PCE Trips		
Hour	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
6:00AM - 7:00 AM	187	0	187	23	23	45	210	23	232	232	45	277
7:00AM - 8:00 AM	47	0	47	9	9	18	56	9	65	65	18	83
8:00AM - 9:00 AM	0	0	0	9	9	18	9	9	18	18	18	36
9:00AM - 10:00 AM	0	0	0	9	9	18	9	9	18	18	18	36
10:00AM - 11:00 AM	0	0	0	9	9	18	9	9	18	18	18	36
11:00AM - 12:00 PM	0	0	0	9	9	18	9	9	18	18	18	36
12:00PM - 1:00 PM	0	0	0	9	9	18	9	9	18	18	18	36
1:00PM - 2:00 PM	0	0	0	5	5	9	5	5	9	9	9	18
2:00PM - 3:00 PM	0	12	12	5	5	9	5	16	21	9	21	30
3:00PM - 4:00 PM	0	187	187	2	2	5	2	190	192	5	192	196
4:00PM - 5:00 PM	0	35	35	2	2	5	2	37	40	5	40	44
Total	**234**	**234**	**468**	**90**	**90**	**180**	**324**	**324**	**648**	**414**	**414**	**828**

1. Hourly construction worker and truck trips were derived from an estimated quarterly average number of construction workers and truck deliveries per day, with construction workers and truck deliveries each resulting in two daily trips (one "in" and one "out").
2. In and Out volumes may not sum to total due to rounding.

The construction-generated vehicle trips (in PCEs) were assigned to the study area intersections to determine which locations would experience trips exceeding the *CEQR Technical Manual* threshold for conducting detailed traffic analysis. The construction worker vehicle trips were conservatively assigned to the east curb of Edgewater Road, at the site frontage, based on 2012-2016 U.S. Census Bureau RJTW Origin/Destination (O/D) data. The construction truck delivery trips were also assigned to the projected development sites' construction driveways located along the east curb of Edgewater Road via designated truck routes in the area. Using these distribution patterns, the total construction-generated vehicle trips were assigned to the study area intersections for the

weekday AM and PM construction peak hours (see Appendix I2 – Figures I2-1 and I2-2). Based on these assignments, the following five study area intersections could experience 50 or more peak hour vehicle trips, and were selected for detailed traffic analysis:

1. Sheridan Boulevard and East 173rd Street;
2. Sheridan Boulevard, Edgewater Road and East 172nd Street;
3. Sheridan Boulevard, Edgewater Road and Jennings Street;
4. Edgewater Road and Westchester Avenue, and;
5. Whitlock Avenue and Westchester Avenue.

Existing Conditions (2022)

Existing traffic volumes for the construction study area intersections were established based on Turning Movement Counts (TMC) and Automatic Traffic Recorder (ATR) data collected at the study area intersections as part of the operational traffic analysis (see Chapter 12, "Transportation"). Based on a comparison of 7:15 – 8:15 AM and 4:15 – 5:15 PM peak hour operational volumes to the early morning and afternoon traffic levels based on the ATR counts, the 6:00 AM – 7:00 AM weekday morning and 3:00 – 4:00 PM weekday afternoon construction peak hour volumes were determined for the five intersections.

The Existing Conditions traffic volumes for the weekday AM and PM construction peak hours are shown in Appendix I2 – Figures I2-3 and I2-4, respectively. The Existing Conditions intersection capacity results – including v/c ratios, delays and LOS for the construction study intersections – are shown in Table 18-5.

Table 18-5: Existing Conditions – LOS Summary

						Weekday AM			Weekday PM		
ID	Intersection Name	Control	Street Name	Direction	Lane Group	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	Sheridan Boulevard & East 173rd Street	Signal	Sheridan Boulevard	NB	T/T	0.21	1.9	A	0.58	2.3	A
				SB	T/T/T	0.31	2.1	A	0.48	10.5	B
				Overall Intersection		-	*2.0*	*A*	-	*6.8*	*A*
2A	Sheridan Boulevard & Edgewater Road (at East 172nd Street)	Signal	Edgewater Road	WB	LR	0.25	5.1	A	0.21	5.1	A
			Sheridan Boulevard	NB	T/T	0.19	6.4	A	0.59	8.3	A
				SB	T/T/T	0.36	7.4	A	0.60	14.5	B
				Overall Intersection		-	*7.1*	*A*	-	*11.9*	*B*
2B	Sheridan Boulevard & Edgewater Road (at East 172nd Street)	Signal	Edgewater Road	NB	L	0.29	51.0	D	0.25	53.1	D
					T	0.20	23.1	C	0.38	28.5	C
				Overall Intersection		-	*25.6*	*C*	-	*32.0*	*C*
3A	Sheridan Boulevard & Edgewater Road (at Jennings Street)	Signal	Edgewater Road	WB	LR	0.49	12.4	B	0.68	29.1	C
			Sheridan Boulevard	NB	T/T	0.18	6.7	A	0.55	20.4	C
				SB	T/T/T	0.38	7.9	A	0.56	8.2	A
				Overall Intersection		-	*7.9*	*A*	-	*13.9*	*B*
3B	Sheridan Boulevard & Edgewater Road (at Jennings Street)	Signal	Edgewater Road	NB	L	0.61	51.7	D	0.80	94.0	F
					R	0.13	2.9	A	0.26	11.3	B
				Overall Intersection		-	*23.7*	*C*	-	*37.5*	*D*
4	Westchester Avenue & Edgewater Road/ NB Sheridan Expressway Off-Ramp	Signal	Westchester Avenue	EB	LT/T	0.39	5.0	A	1.02	42.2	D
				WB	T/T	0.50	25.8	C	0.59	27.2	C
					R	0.08	21.0	C	0.17	22.0	C
			NB Sheridan Expy Off-Ramp	NB	LTR	0.46	25.1	C	0.89	47.1	D
				Overall Intersection		-	*17.8*	*B*	-	*38.0*	*D*
5	Westchester Avenue & Whitlock Avenue	Signal	Westchester Avenue	EB	T/TR	0.38	23.3	C	0.76	31.3	C
				WB	LT/T	0.51	6.6	A	0.59	14.7	B
			Whitlock Avenue	SB	L	0.25	21.0	C	0.91	47.6	D
					T/TR	0.51	23.8	C	0.59	25.4	C
				Overall Intersection		-	*16.9*	*B*	-	*28.7*	*C*

Note: Shading denotes an approach/lane group that operates at congested levels per *CEQR Technical Manual* criteria (i.e. worse than LOS D).

Of the 20 total intersection approaches/lane groups in the construction study area, only the northbound left-turn at the Sheridan Boulevard and Edgewater Road intersection, opposite Jennings Street, operates worse than LOS D in at least one peak hour (LOS F with an average delay of 94.0 seconds during the weekday PM construction peak hour).

No-Action Condition (2027)

As discussed in Chapter 12, "Transportation," changes to traffic signal timings and roadway configurations on Westchester Avenue are being implemented by NYCDOT as part of the *Westchester Avenue, Southern Boulevard to Whitlock Avenue Safety Improvement Project (SIP)*. At the direction of the New York City Department of City Planning (DCP) and NYCDOT, in the No-Action Condition, changes to the travel lane and curbside parking geometries were incorporated into the capacity analyses at Westchester Avenue's intersections with Edgewater Road and Whitlock Avenue. In addition, changes

to the traffic signal timings at the intersection of Westchester Avenue and Whitlock Avenue were incorporated into the No-Action Condition capacity analyses.

Additionally, NYCDOT restriped the northbound Sheridan Expressway Off-Ramp (to Westchester Avenue) to delineate separate left-turn and through/right-turn lanes. This improvement was implemented as of October 2022, and was incorporated into the capacity analyses beginning with the No-Action Condition. It was not incorporated into the Existing Conditions capacity analyses because data collection for the Construction Transportation analysis discussed herein was completed in June 2022, prior to NYCDOT changing the travel lane configuration.

It is assumed that the peak construction quarter resulting from the Proposed Actions (Q8) would occur in 2027. A compounded annual background growth rate of 0.25 percent for the Bronx was applied to the Existing Conditions traffic volumes for five years (2022 through 2027). In addition to background growth, the No-Build Development Projects identified in Chapter 12, "Transportation," were included as part of the No-Action Condition. The No-Action Condition traffic volumes for the weekday AM and PM construction peak hours were projected by layering the background growth and trips generated by the No-Build Development Projects on top of the Existing Conditions traffic volumes.

The No-Action Condition traffic volumes for the weekday AM and PM construction peak hours are shown in Appendix I2 – Figures I2-5 and I2-6, respectively. The No-Action Condition intersection capacity results – including v/c ratios, delays and LOS for the construction study intersections – are shown in Table 18-6.

Table 18-6: No-Action Condition – LOS Summary

						Weekday AM			Weekday PM		
ID	Intersection Name	Control	Street Name	Direction	Lane Group	v/c ratio	Delay (sec)	LOS	v/c ratio	Delay (sec)	LOS
1	Sheridan Boulevard & East 173rd Street	Signal	Sheridan Boulevard	NB	T/T	0.21	1.9	A	0.59	2.3	A
				SB	T/T/T	0.31	2.1	A	0.48	10.6	B
				Overall Intersection		-	*2.0*	*A*	-	*6.9*	*A*
2A	Sheridan Boulevard & Edgewater Road (at East 172nd Street)	Signal	Edgewater Road	WB	LR	0.25	5.1	A	0.21	5.1	A
			Sheridan Boulevard	NB	T/T	0.19	6.4	A	0.59	8.3	A
				SB	T/T/T	0.37	7.4	A	0.61	14.5	B
				Overall Intersection		-	*7.2*	*A*	-	*12.0*	*B*
2B	Sheridan Boulevard & Edgewater Road (at East 172nd Street)	Signal	Edgewater Road	NB	L	0.29	51.0	D	0.25	52.8	D
					T	0.20	23.1	C	0.39	28.7	C
				Overall Intersection		-	*25.6*	*C*	-	*32.0*	*C*
3A	Sheridan Boulevard & Edgewater Road (at Jennings Street)	Signal	Edgewater Road	WB	LR	0.49	12.4	B	0.70	29.7	C
			Sheridan Boulevard	NB	T/T	0.19	6.7	A	0.56	20.5	C
				SB	T/T/T	0.38	8.0	A	0.57	8.2	A
				Overall Intersection		-	*8.0*	*A*	-	*13.9*	*B*
3B	Sheridan Boulevard & Edgewater Road (at Jennings Street)	Signal	Edgewater Road	NB	L	0.61	52.1	D	0.82	96.0	F
					R	0.13	2.9	A	0.27	11.4	B
				Overall Intersection		-	*23.9*	*C*	-	*38.1*	*D*
4	Westchester Avenue & Edgewater Road/ NB Sheridan Expressway Off-Ramp	Signal	Westchester Avenue	EB	LT/T	0.42	9.1	A	1.03	45.9	D
				WB	T/T	0.51	25.9	C	0.60	27.4	C
					R	0.09	21.0	C	0.18	22.1	C
			NB Sheridan Expy Off-Ramp	NB	L	0.26	21.7	C	0.10	19.8	B
					TR	0.21	21.1	C	0.84	42.7	D
				Overall Intersection		-	*18.4*	*B*	-	*38.6*	*D*
5	Westchester Avenue & Whitlock Avenue	Signal	Westchester Avenue	EB	T/TR	0.34	20.2	C	0.70	27.3	C
				WB	LT/T	0.52	8.7	A	0.63	7.9	A
			Whitlock Avenue	SB	L	0.37	27.1	C	1.09	97.4	F
					T/TR	0.65	31.2	C	0.72	32.6	C
				Overall Intersection		-	*19.9*	*B*	-	*37.4*	*D*

Note: Shading denotes an approach/lane group that operates at congested levels per *CEQR Technical Manual* criteria (i.e. worse than LOS D).

In summary, of the 21 total intersection approaches/lane groups in the study area, 2 are projected to operate worse than LOS D in at least one peak hour, namely:

- The northbound left-turn at the Sheridan Boulevard and Edgewater Road intersection, opposite Jennings Street (LOS F with an average delay of 96.0 seconds during the weekday PM peak hour); and
- The southbound left-turn at the Westchester Avenue and Whitlock Avenue intersection (LOS F with an average delay of 97.4 seconds during the weekday PM peak hour).

With-Action Condition (2027)

In the With-Action Condition, the construction-generated peak hour vehicle trips (see Table 18-4) were assigned to the study area intersections as described previously (see section *Peak Hour Construction Vehicle Trips*). The construction-generated vehicle trip assignments are shown in Appendix I2 – Figures I2-7 and I2-8 for the weekday AM and PM construction peak hours, respectively. The With-Action Condition traffic volumes were projected by layering the construction-generated vehicle trip assignments on to the No-Action Condition traffic volumes.

The With-Action Condition traffic volumes are shown in Appendix I2 – Figures I2-9 and I2-10 for the weekday AM and PM construction peak hours, respectively. The intersection capacity analysis results for the No-Action and With-Action Conditions, – including v/c ratios, delays and LOS for the construction study intersections – are shown in Table 18-7.

Table 18-7: No-Action vs. With-Action Condition – LOS Summary

						Weekday AM						Weekday PM					
						No-Action			With-Action			No-Action			With-Action		
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	Sheridan Boulevard & East 173rd Street	Signal	Sheridan Boulevard	NB	T/T	0.21	1.9	A	0.22	1.9	A	0.59	2.3	A	0.65	3.4	A
				SB	T/T/T	0.31	2.1	A	0.33	2.1	A	0.48	10.6	B	0.48	10.6	B
				Overall Intersection		-	*2.0*	*A*	-	*2.1*	*A*	-	*6.9*	*A*	-	*7.2*	*A*
2A	Sheridan Boulevard & Edgewater Road (at East 172nd Street)	Signal	Edgewater Road	WB	LR	0.25	5.1	A	0.22	3.8	A	0.21	5.1	A	0.39	10.3	B
			Sheridan Boulevard	NB	T/T	0.19	6.4	A	0.20	7.2	A	0.59	8.3	A	0.59	8.3	A
				SB	T/T/T	0.37	7.4	A	0.40	8.6	A	0.61	14.5	B	0.61	14.5	B
				Overall Intersection		-	*7.2*	*A*	-	*8.2*	*A*	-	*12.0*	*B*	-	*12.0*	*B*
2B	Sheridan Boulevard & Edgewater Road (at East 172nd Street)	Signal	Edgewater Road	NB	L	0.29	51.0	D	0.26	48.3	D	0.25	52.8	D	0.46	60.5	E
					T	0.20	23.1	C	0.23	22.9	C	0.39	28.7	C	0.62	35.9	D
				Overall Intersection		-	*25.6*	*C*	-	*25.6*	*C*	-	*32.0*	*C*	-	*39.7*	*D*
3A	Sheridan Boulevard & Edgewater Road (at Jennings Street)	Signal	Edgewater Road	WB	LR	0.49	12.4	B	0.58	15.1	B	0.70	29.7	C	0.93	32.9	C
			Sheridan Boulevard	NB	T/T	0.19	6.7	A	0.19	6.7	A	0.56	20.5	C	0.56	20.5	C
				SB	T/T/T	0.38	8.0	A	0.40	8.2	A	0.57	8.2	A	0.58	8.9	A
				Overall Intersection		-	*8.0*	*A*	-	*8.3*	*A*	-	*13.9*	*B*	-	*14.7*	*B*
3B	Sheridan Boulevard & Edgewater Road (at Jennings Street)	Signal	Edgewater Road	NB	L	0.61	52.1	D	0.73	61.4	E	0.82	96.0	F	1.10	162.9	F
					R	0.13	2.9	A	0.22	3.2	A	0.27	11.4	B	0.34	12.3	B
				Overall Intersection		-	*23.9*	*C*	-	*22.0*	*C*	-	*38.1*	*D*	-	*60.3*	*E*
4	Westchester Avenue & Edgewater Road/ NB Sheridan Expressway Off-Ramp	Signal	Westchester Avenue	EB	LT/T	0.42	9.1	A	0.53	13.6	B	1.03	45.9	D	1.04	46.8	D
				WB	T/T	0.51	25.9	C	0.51	25.9	C	0.60	27.4	C	0.60	27.4	C
					R	0.09	21.0	C	0.51	28.4	C	0.18	22.1	C	0.43	26.8	C
			NB Sheridan Expy Off-Ramp	NB	L	0.26	21.7	C	0.27	21.9	C	0.10	19.8	B	0.11	19.8	B
					TR	0.21	21.1	C	0.32	22.7	C	0.84	42.7	D	0.81	40.0	D
				Overall Intersection		-	*18.4*	*B*	-	*21.0*	*C*	-	*38.6*	*D*	-	*38.9*	*D*
5	Westchester Avenue & Whitlock Avenue	Signal	Westchester Avenue	EB	T/TR	0.34	20.2	C	0.35	20.3	C	0.70	27.3	C	0.70	27.3	C
				WB	LT/T	0.52	8.7	A	0.52	8.7	A	0.63	7.9	A	0.63	7.9	A
			Whitlock Avenue	SB	L	0.37	27.1	C	0.55	31.3	C	1.09	97.4	F	1.13	111.7	F
					T/TR	0.65	31.2	C	0.65	31.3	C	0.72	32.6	C	0.74	33.6	C
				Overall Intersection		-	*19.9*	*B*	-	*20.8*	*C*	-	*37.4*	*D*	-	*40.5*	*D*

Note: Shading denotes a potentially significant adverse traffic impact during construction per *CEQR Technical Manual* criteria.

In the With-Action Condition, 3 of the 21 total intersection approaches/lane groups in the study area could experience potentially significant adverse traffic impacts during at least one peak hour as a result of construction activities associated with the Proposed Development, namely:

- The northbound left-turn at the Sheridan Boulevard and Edgewater Road intersection, opposite East 172nd Street, which would:
  - Drop from LOS D to LOS E with an average delay of 60.5 seconds during the weekday PM construction peak hour, an increase of 7.7 seconds relative to the No-Action Condition.
- The northbound left-turn at the Sheridan Boulevard and Edgewater Road intersection, opposite Jennings Street, which would:
  - Drop from LOS D to LOS E with an average delay of 61.4 seconds during the weekday AM construction peak hour, an increase of 9.3 seconds relative to the No-Action Condition.
  - Continue to operate at LOS F with an average delay of 162.9 seconds during the weekday PM construction peak hour, an increase of 66.9 seconds relative to the No-Action Condition.
- The southbound left-turn at the Westchester Avenue and Whitlock Avenue intersection, which would:
  - Continue to operate at LOS F with an average delay of 111.7 seconds during the weekday PM construction peak hour, an increase of 14.3 seconds relative to the No-Action Condition.

Chapter 19, "Mitigation," discusses potential measures to mitigate these potentially significant adverse traffic impacts.

Transit

The peak number of average daily workers on-site during the construction of the Proposed Development would occur in Q8, when there would be approximately 350 construction workers per day (see Table 18-3). Approximately 80 percent of the construction worker arrival and departure trips would take place during the weekday AM and PM construction peak hours. Furthermore, approximately 28 percent of the daily construction workers are expected to commute via public transit. Therefore, the Proposed Development's construction activity is expected to generate a maximum of approximately 78 average transit trips during the weekday AM and PM construction peak hours.

Due to the availability of multiple NYCT/MTA bus routes and subway lines near the Proposed Rezoning Area, this level of peak hour transit trip generation is not expected to exceed the *CEQR Technical Manual* screening thresholds of 200 peak hour subway trips or 50 peak hour bus trips in one direction on a single route. Therefore, the Proposed Actions would not result in significant adverse transit impacts during construction.

Pedestrians

The peak number of average daily workers on-site during project-generated construction would occur in Q8, when there would be approximately 350 construction workers per day (see Table 18-3). Approximately 80 percent of the construction worker arrival and departure trips would take place during the weekday AM and PM construction peak hours, respectively. Therefore, project-generated construction would generate a maximum of approximately 280 average pedestrian trips (approximately 202 and 78 auto and transit trips, respectively) during the weekday AM and PM construction peak hours.

Pedestrian trips generated by construction of the Proposed Development would be concentrated along the site's frontage along Edgewater Road and pedestrian facilities connecting the site to study area transit facilities. Construction worker pedestrian trips were assigned to sidewalks, corners, and crosswalks near the Proposed Development based on mode as discussed in Chapter 12, "Transportation."

Based on these distribution patterns, the construction-generated pedestrian trips were assigned to the study area pedestrian facilities for the weekday AM and PM construction peak hours (see Appendix I2 – Figures I2-11 and I2-12). Based on these assignments, no pedestrian elements are expected to experience more than 200 construction-generated pedestrian trips in either of the peak hours. Therefore, no further analysis is warranted and the Proposed Actions would not result in potentially significant adverse pedestrian impacts during construction.

Parking

The peak number of average daily workers on-site during project-generated construction would occur in Q8, when there would be approximately 350 construction workers per day (see Table 18-3). Approximately 72.3 percent of construction workers are expected to commute to/from the projected development sites via private autos, with an average vehicle occupancy of approximately 1.08 persons per vehicle. Therefore, the Proposed Development's construction activity is expected to generate a maximum parking demand of approximately 234 spaces during the weekday midday period.

According to the operational parking analysis conducted for the Proposed Actions (see Chapter 12, "Transportation"), in the No-Action Condition, the available on- and off-street public parking within ½-mile of the projected development sites is projected to operate at approximately 94 percent utilization with approximately 407 available spaces during the weekday midday period. This available parking would be able to accommodate the construction-generated parking demand of 234 spaces. Furthermore, temporary on-street parking prohibitions during construction are not expected to significantly reduce available on-street parking near the projected development sites. Therefore, the Proposed Actions would not result in a potential public parking shortfall in the area during construction.

Air Quality

Emissions from on-site construction equipment and on-road construction-related vehicles, as well as dust generated from construction activities, have the potential to affect air quality. The analysis of construction-related air quality emissions includes a quantitative analysis of the above mentioned emissions, where applicable. The preliminary assessment indicated a detailed quantitative air quality assessment was warranted to determine if the construction of Buildings 1, 2 and 3 would result in significant adverse air quality impacts during construction.

Methodology

In general, much of the heavy equipment used in construction is powered by diesel engines that have the potential to produce relatively high levels of nitrogen oxides (NO_x) and particulate matter (PM). Fugitive dust generated by construction activities is also a source of PM. Gasoline engines produce relatively high levels of carbon monoxide (CO). EPA's fuel standards (Title 40, Part 80 of the Code of Federal Regulations [CFR]) require

that diesel fuel used in nonroad engines be ultra-low-sulfur diesel fuel (ULSD). Because ULSD fuel would be used for all diesel engines used in construction, sulfur oxides (SO_x) emitted during construction activities would be negligible, and an assessment of the resultant sulfur dioxide (SO_2) did not warrant detailed assessment.

Worst-case construction-related emissions were estimated throughout the construction on Projected Development Sites 1 and 2 to determine the construction period that constitutes the worst-case period of emissions for the pollutants of concern (PM, CO, nitrogen dioxide [NO_2]). An annual work-day average of 8 hours was assumed. $PM_{2.5}$ was selected to determine the worst-case short-term emissions period because the ratio of $PM_{2.5}$ emissions to the criteria thresholds is higher compared to other pollutants (NO_2 and CO), and is therefore the pollutant indicative of worst-case air quality emissions during construction. All NO_x emissions were assumed to be converted to NO_2 as a conservative approach. Generally, emission patterns of NO_2 would follow that of $PM_{2.5}$ emissions, because their emission rates are related to the capacity and operation of diesel engines. CO emissions may have a different pattern than $PM_{2.5}$, but generally would also be highest during periods when the most construction activity would occur.

Because the proposed construction consists of three sites with overlapping construction periods, an emissions profile was generated for each of the three proposed buildings to determine the construction periods with the highest potential to affect air quality.

Worst-case short-term construction air quality emissions were identified based on the peak day average emissions of $PM_{2.5}$, the location of construction activities. The inputs modeled the predicted annual and 24-hour concentrations of $PM_{2.5}$, 24-hour concentration of PM_{10}, and one-hour and eight-hour concentrations of CO, and annual concentrations of NO_2.

For annual concentrations, the emissions factors were calculated for each month to determine the worst-case 12-month period, which was then selected for detailed dispersion modeling to represent the construction period's worst-case conditions. The pollutants of concern from construction activities during the worst-case months were then analyzed in an air dispersion model to predict the highest resulting concentrations at the surrounding sensitive receptors. If adverse construction air quality impacts can be ruled out during the worst-case periods of construction, it can be concluded that construction air quality effects would be less during construction periods when emissions are lower, and would similarly not result in significant adverse construction air quality impacts.

Emissions Factors

Engine Emissions

The sizes, types, and number of units of construction equipment were estimated based on the construction activity schedule in Appendix I3. Emission factors for NO_X, CO, PM_{10} and $PM_{2.5}$ from on-site construction engines were developed using the NONROAD module in the US EPA MOVES3 emission model. With respect to trucks, emission rates for NO_X, CO, PM_{10} and $PM_{2.5}$ for truck engines were also developed using the MOVES3 emission model.

Fugitive Dust

Fugitive dust emissions from construction operations (e.g., excavation, grading, and transferring of excavated materials into dump trucks) were calculated based on EPA

procedures delineated in AP-42 Table 13.2.3-1[2]. As discussed above in "Emissions Control Measures," all necessary measures would be implemented following the New York City Air Pollution Control Code's regulations on construction-related dust emissions.

Fugitive dust emissions from re-entrainment generated by on-site and off-site vehicles were calculated based on EPA procedures delineated in AP-42 Tables 13.2.2-1 and 13.2.1-2, respectively[3]. A control factor of 95% (based on watering) was applied to on-site fugitive dust emission calculations.

Emission Control Measures

Construction activities have the potential to affect air quality from diesel emissions. Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes as described below.

Idling Restrictions

In addition to adhering to the local law restricting unnecessary idling on roadways, on-site vehicle idle time will also be restricted to three minutes for all equipment and vehicles that do not require their engines to operate a function such as loading, unloading, or processing device (e.g., concrete mixing trucks), or as otherwise required for the proper operation of the engine.

Use of Newer Equipment

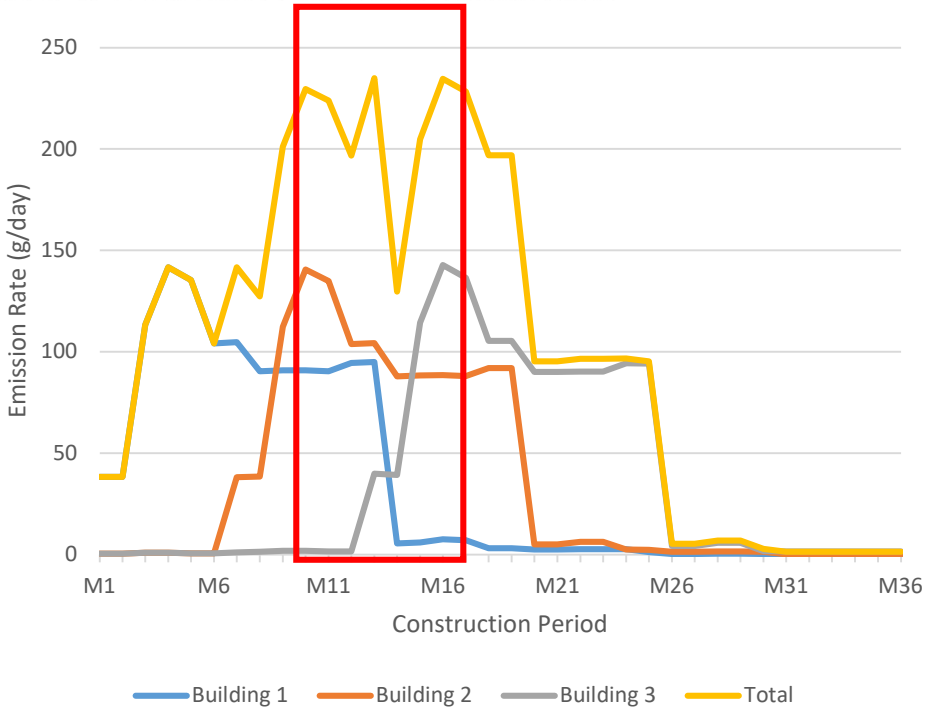
Use of Newer Equipment – EPA's Tier 1 through 4 standards for nonroad engines regulate the emission of criteria pollutants from new engines, including PM, CO, NOx, and hydrocarbons (HC). All non-road construction equipment with a power rating of 50 horsepower (hp) or greater would meet at least the Tier 3 emissions standard to the extent practicable. Tier 3 NOx emissions range from 40 to 60 percent lower than Tier 1 emissions, and the emissions are considerably lower than uncontrolled engines. All non-road engines rated less than 50 hp would meet at least the Tier 2 emissions standard.[4]

Analysis Periods

The resulting emission factors were used for the emissions and dispersion analyses. A $PM_{2.5}$ emissions profile was developed by multiplying the emission rates for each piece of equipment by the number of engines, the work hours per day, and fraction of the day each engine would be expected to work during each month of construction. The resulting overall $PM_{2.5}$ emission profiles is presented in Figure 18-3.

[2] AP-42, Fifth Edition, Volume I, Chapter 13: Miscellaneous Sources, Section 13.2.3 Heavy Construction Operations
[3] AP-42, Fifth Edition, Volume I, Chapter 13: Miscellaneous Sources, Sections 13.2.1 Paved Roads and 13.2.2 Unpaved Roads
[4] 40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, § 60.4202

Figure 18-3: Overall PM2.5 Construction Emission Profile



As shown in Figure 18-3, based on the $PM_{2.5}$ construction emissions profile, Months 10 through 17 would be the short-term period with the highest project-wide emissions.

Dispersion Modeling

The dispersion of pollutants during the worst-case period was modeled in detail to predict resulting maximum concentration increments from construction activities, and the total concentrations (including background concentrations) that can be expected at sensitive receptors in the surrounding area. Although the modeled results are based on construction scenarios for specific sample periods, conclusions regarding other periods can be derived based on the fact that lower pollutant concentration increments from construction activities would generally be expected during periods with lower construction emissions. However, because the worst-case short-term pollutant concentrations are often indicative of very localized construction activities, similar maximum local concentrations may occur at any stage at various locations, and therefore, would not persist in any single location. Many emission sources would move locations throughout the site as construction work progresses and discrete construction tasks are completed. Overall, the modeled peak construction periods are considered representative of worst-case construction activities.

Dispersion of pollutants during the worst-case short-term and annual periods were modeled using AERMOD version 22112 to predict maximum concentrations from construction activities. The pollutant concentration results were compared to the applicable NAAQS and CEQR *de minimis* criteria.

Source Simulation

All on-site sources were considered as area sources based on the assumption that the sources would move around the site throughout the year. For Building 1, an area source

representing the building's footprint was used based on the construction phase (i.e., superstructure and envelope/façade) during the worst-case construction period. For Buildings 2 and 3, an area source representing the development site was used based on the construction phases (i.e., excavation/foundation) during the worst-case construction period.

Receptor Locations

Receptors (locations in the model where concentrations are predicted) were placed at any sensitive nearby ground-level uses (e.g., publicly accessible open spaces/parks) and elevated locations (e.g., residential windows) for the assessment. None of the projected development sites will be completed and occupied during the worst-case construction periods; therefore, no on-site receptors were considered.

Off-Site Mobile Sources

Because emissions from on-site construction equipment and off-site construction-related heavy vehicles may contribute to concentration increments concurrently, emissions from off-site construction heavy vehicles adjacent to the construction sites were included with the on-site dispersion analysis (in addition to on-site truck and engine activity) to represent local project-related emissions cumulatively.

Meteorological Data

For the refined dispersion analysis, the most recent five years of meteorological data available (2017-2021) from LaGuardia Airport and concurrent upper air data from Brookhaven, New York, were used for the simulation program.

Background Concentrations

Background concentrations were added to modeling results from construction sources to obtain cumulative pollutant concentrations at the receptor locations. The background concentrations used in the analysis were in the statistical format of the NAAQS, which was adopted by New York State as the State standard. The background concentrations were added to the modeling results as follows:

Table 18-8: Pollutant Calculation Methods

Pollutant	Averaging Period	Calculation Method
$PM_{2.5}$	24-Hour	3-year average of 98th percentile for 2018-2020
	Annual	3-year average of annual mean for 2018-2020
PM_{10}	24-Hour	Maximum of the 1st highest values over the past 3 years
NO_2	Annual	Annual average for 2019 (pre-pandemic)
CO	1-Hour	Maximum of the 1st highest values over the past 3 years
	8-Hour	Maximum of the 1st highest values over the past 3 years

The most recent available background values were obtained from the New York State ambient air quality reports for the IS 74 ($PM_{2.5}$), IS 52 (PM_{10} and NO_2) and CCNY (CO) sites.[5]

[5] Department of Environmental Conservation: NYS Ambient Air Quality Reports for 2021.

Construction Air Quality Analysis Results

Maximum predicted concentration increments from the worst-case construction period and maximum cumulative concentrations are presented in Table 18-9. The maximum predicted concentration increments include both construction stationary sources and construction mobile sources.

Table 18-9: Maximum Predicted Pollutant Concentrations – Peak Construction Analysis Period (µg/m3)

Pollutant	Averaging Period	Background	Max. Modeled Increment	*De Minimis* Criteria	Total Concentration	NAAQS
$PM_{2.5}$	24-hour	18.9	0.45	9.40	19.35	35
	Annual	6.7	0.08	0.30	6.78	12
PM_{10}	24-Hour	44	1.19	-	45.19	150
NO_2	Annual	31.7	1.20	-	32.9	100
CO	1-hour	1,852	43.99	-	1,895.99	40,000
	8-hour	1,035	12.41	4,480	1,047.41	10,000

Air Quality Conclusion

Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. These include dust suppression measures, idling restriction, and the use of ULSD. In addition to the required laws and regulations, an emissions reduction program, and utilization of newer equipment would be implemented. In future years, the manufactured emissions for the construction equipment is expected to meet these emissions reduction requirements as there would be an increasing percentage of newer and cleaner engines, irrespective of any project specific commitments.

With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both on-site and off-site sources determined that the annual-average NO_2, 1-hour and 8-hour CO, 24-hour and annual $PM_{2.5}$ concentrations, and 24-hour PM_{10} concentrations would be below their corresponding NAAQS and *de-minimis* thresholds for the time period evaluated; therefore, construction under the Proposed Actions would not result in significant adverse air quality impacts due to construction sources.

Noise

Changes to community noise levels during construction would result from the noise emitted from construction equipment and from vehicles traveling to and from the construction site. Construction-generated noise levels at sensitive receptors vary widely and depend on the stage of construction and the location of the construction activities relative to noise-sensitive receptor locations.

The most significant construction noise sources are expected to result from impact equipment – such as impact pile drivers and tower cranes – as well as truck movements. Noise from construction activities and some construction equipment is regulated by the NYC Noise Control Code and by EPA. The NYC Noise Control Code requires the adoption and implementation of a noise mitigation plan for each construction site, limits construction (absent special approvals) to weekdays between the hours of 7:00 AM and 6:00 PM and sets noise limits for certain specific pieces of construction equipment.

Because of the scope, duration, and location of project-generated construction activities, a quantified construction noise analysis was warranted. The purpose of this analysis was to determine if significant adverse noise impacts would occur during construction, and if so, to examine the feasibility of implementing measures to reduce or eliminate such impacts. Noise levels monitored in support of this ~~D~~EIS were used as the baseline for estimating construction-generated noise level increases.

Methodology

Project-generated construction activities would result in increased noise levels from construction equipment and construction-related vehicles movements (i.e., worker trips, and material and equipment trips) on the surrounding roadways. The effects of each of these noise sources was evaluated. The results show the projected noise levels resulting from construction activities (i.e., noise due to both on-site construction equipment and construction-related vehicle operation), and the total cumulative effects from operations (caused by project-generated vehicular trips) and construction.

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

- The noise emission level of the equipment;
- A usage factor, which accounts for the percentage of time equipment is operating at full power;
- The distance between the piece of equipment and the receptor;
- Topography and ground effects; and
- Shielding (such as by buildings or other noise barriers).

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

- The noise emission levels of the type of vehicle (e.g., auto, light-duty truck, heavy-duty truck, bus, etc.);
- Vehicular speed;
- The distance between the roadway and the receptor;
- Topography and ground effects; and
- Shielding.

Construction noise is regulated by the NYC Noise Control Code (Chapter 24 of the Administrative Code of the City of New York, or Local Law 113), the DEP Notice of Adoption Rules for Citywide Construction Noise Mitigation (also known as Chapter 28), and EPA noise emission standards. These local and federal requirements mandate that:

- Construction equipment and motor vehicles meet specified noise emission standards;
- Construction activities be limited to weekdays between the hours of 7:00 AM and 6:00 PM; and
- Construction materials be handled and transported in such a manner as not to create unnecessary noise.

For weekend and after-hours construction work, permits would be required, as specified in the NYC Noise Control Code. In addition, EPA requirements mandate that certain classifications of construction equipment meet specified noise emission standards.

The *CEQR Technical Manual* states that significant adverse construction impacts in the area of noise would occur "only at sensitive receptors that would be subjected to high construction noise levels for an extensive period of time." To determine the potential for significant adverse impacts caused by project-generated construction activity, the project-generated construction noise was initially compared to the impact criteria outlined in Chapter 19, "Noise." If the construction noise levels exceed the significant adverse impact criteria, then the affected area and the magnitude and the duration of impacts would be also considered to account for the temporary or transient nature of construction noise impact. Therefore, the noise impact criteria described in Chapter 19, Section 410 of the *CEQR Technical Manual* serve as a screening-level threshold for potential construction noise impacts.

If construction of a proposed project would not exceed these criteria at a given receptor, then that receptor would not have the potential to experience a construction noise impact. However, if construction noise would exceed the CEQR noise impact criteria, then further consideration of the intensity and duration of construction noise is warranted at that receptor.

Screening Criteria

The screening level noise impact thresholds for on-site construction activities and onroad construction mobile sources are as follows. Impacts that meet below the threshold would require further analysis.

- If the No-Action noise level is less than 60 dBA $L_{eq(1)}$, the incremental noise level is 5 dBA $L_{eq(1)}$ or greater;
- If the No-Action noise level is between 60 dBA $L_{eq(1)}$ and 62 dBA $L_{eq(1)}$, the resultant $L_{eq(1)}$ is 65 dBA or greater;
- If the No-Action noise level is equal to or greater than 62 dBA $L_{eq(1)}$, or if the analysis period is a nighttime period (defined in the CEQR criteria as being between 10:00 p.m. and 7:00 a.m.), the incremental noise level is 3 dBA $L_{eq(1)}$ or greater.

Significant Adverse Impact Criteria

A significant adverse construction impact related to noise may also occur if a receptor would experience:

- an increase in noise levels of 20 dBA or more over three (3) consecutive months (one quarter); or
- an increase in noise levels of 15 dBA or more over twelve (12) consecutive months (one year or four quarters).

A significant adverse construction impact could also occur if project-generated construction would result in prolonged exposure to levels above 85 dB(A), a noise level that will eventually harm hearing.

While the above criteria is used as a guideline, whether or not significant adverse impacts may be identified by the Lead Agency is on a case-by-case basis depending on the duration and magnitude of noise level and noise level increment.

As discussed below, the presence of window/wall attenuation measures at noise receptor sites, such as double-glazed windows and alternate means of ventilation, were considered when evaluating locations projected to experience significant noise level increases from construction in excess of above impact criteria.

Construction Noise Modeling

Noise from project-generated construction activities were evaluated using the CadnaA model, a computerized model developed for noise prediction and assessment. The model can be used to analyze a variety of noise sources, including stationary sources (e.g., construction equipment, industrial equipment, and power generation equipment) and mobile sources (e.g., roads, highways, railroad lines, busways, airports). The model takes into account the reference sound pressure levels of the noise sources at 50 feet, attenuation with distance, ground contours, reflections from barriers and structures, attenuation due to shielding, and other conditions. The CadnaA model is based on the acoustic propagation standards promulgated in International Standard ISO 9613-2. This standard is currently under review for adoption by the American National Standards Institute (ANSI) as an American Standard. The CadnaA model is a state-of-the-art tool for noise analysis and is approved for construction noise level prediction by the *CEQR Technical Manual*.

Geographic data input into the CadnaA model included site work areas, adjacent building envelopes, the locations of streets, and the locations of sensitive receptors. For each analysis period, the geographic location and operational characteristics—including equipment usage rates (percentage of time operating at full power) for each piece of construction equipment operating at the Projected Development Sites, as well as noise control measures—were input into the model. Noise-reflective and noise-shielding barriers that would be erected on the construction site were considered, as well as shielding from both adjacent buildings and project-generated buildings as they are constructed. The model produced A-weighted $L_{eq(1)}$ noise levels at each receptor location for each analysis period, as well as the contribution from each noise source.

In general, the CadnaA methodology involved the following process:

- Establish noise levels at receptors in the Study Area using the CadnaA model for the development sites across the analysis periods.
- Receptors were either located directly adjacent to the construction site or along streets where construction trucks would pass. Each receptor was placed at a residence or other noise-sensitive use. The receptors in the model are developed to be representative of other noise receptors in the immediate area, and to conservatively predict the noise conditions around the Study Area during construction;
- Input the construction-generated noise sources, as determined by the conceptual construction schedule and equipment schedule;
- Based on the CadnaA model outputs, determine the receptor locations that would experience noise levels that would exceed the significant adverse noise impact threshold criteria during each analysis period; and
- Determine receptor locations with significant adverse construction noise impact based on the intensity and duration of noise level increases above the impact criteria and interior noise levels above the acceptable levels.

On-Site Equipment Noise

The equipment anticipated to be used for each building during the construction of Projected Development Site 1 and Projected Development Site 2 is shown in

Table 18-10. The total active pieces of each equipment at any time were used as the source input for the noise model.

Table 18-10: Typical Construction Equipment Noise Emission Levels (dBA)

Equipment Description	Usage Factor (%)	DEP & FTA Typical L_{max} Noise Level at 50 ft
Bar Bender	20	80
Compactor (ground)	20	80
Concrete Mixer Truck	40	85
Concrete Pump Truck	20	82
Dump Truck	40	84
Excavator	40	85
Front End Loader	40	80
Generator (<25 KVA signs)	50	70
Pumps	50	77
Impact Pile Driver	20	95
Crane	16	85
Dumpster/Rubbish Removal	20	78
Flat Bed Truck	40	84
Man Lift	20	85

Notes: As per Local Law 113 of 2005, §24-228(a)(1) Construction, Exhausts, and other Devices, "Sound, other than impulsive sound, attributable to the source or sources, that exceeds 85 dBA as measured 50 or more feet from the source or sources at a point outside the property line where the source or sources are located or as measured 50 or more feet from the source or sources on a public right-of-way" is prohibited.
Sources: Citywide Construction Noise Mitigation, Chapter 28, Department of Environmental Protection of New York City, 2007. Transit Noise and Vibration Impact Assessment, FTA, 2006

Noise Reduction Measures

Project-generated construction would follow the noise control measures of the NYC Noise Control Code (NYC Noise Code) for construction. Specific noise control measures will be described in a noise mitigation plan that is required under the NYC Noise Code. These measures could include a variety of source and path controls. For source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with the NY regulations:

- The contractor would self-certify that all construction tools and equipment have been maintained to not generate excessive or unnecessary noise and that the noise emissions would not exceed the levels specified in Subchapter 5 of the NYC Noise Control Code and Table 22-1 of the 2021 CEQR Technical Manual.
- As early in the construction period as logistics will allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders, water pumps, bench saws, and table saws (i.e., early electrification) to the extent feasible and practical;

- Where feasible and practical, construction areas would be configured to minimize back-up alarm noise. All trucks would not be allowed to idle more than three minutes in accordance with Title 24, Chapter 1, Subchapter 7, Section 24-163 of the NYC Administrative Code;
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In addition, source controls listed below would be implemented as PCREs beyond New York regulations for the construction of the Proposed Project:

- The Applicant commits to using generator units that emit a Lmax noise level of not more than 70 dBA at a distance of 50 feet. This commitment would be a project component related to the environment (PCRE).

For path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following construction measures, would be implemented in accordance with NY regulations to the extent feasible and practical:

- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations. Once building foundations are completed, delivery trucks would operate behind construction fences, where possible;
- Noise barriers constructed from plywood or other materials would be installed to provide shielding (e.g., the construction sites would have a minimum eight-foot barrier and, where logistics allow, truck deliveries would take place behind these barriers once building foundations are completed);
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) would be required for certain dominant noise equipment (i.e., generators, jack hammers, pile drivers, and pumps) to the extent feasible and practical, where this analysis indicates there may be a potential for a significant adverse impact. The details to construct portable noise barriers, enclosures, tents, etc., are provided in DEP's Rules for Citywide Construction Noise Mitigation.

Receptor Sites

Noise measurement locations were used to determine the baseline existing noise levels, and 40 receptor locations close to the projected development sites were selected as discrete noise receptor sites for the construction noise analysis. Receptor locations were chosen because of their use and location close to the areas of construction. Figure 18-4 shows the location of the selected receptors.

Baseline noise conditions were established by calibrating the noise model using the noise levels captured from the project's noise reading locations (see Chapter 15, "Noise"). The ambient conditions at the receptors of concern evaluated range from 56.8 dBA to 67.9 dBA.

Figure 18-4: Receptor Locations

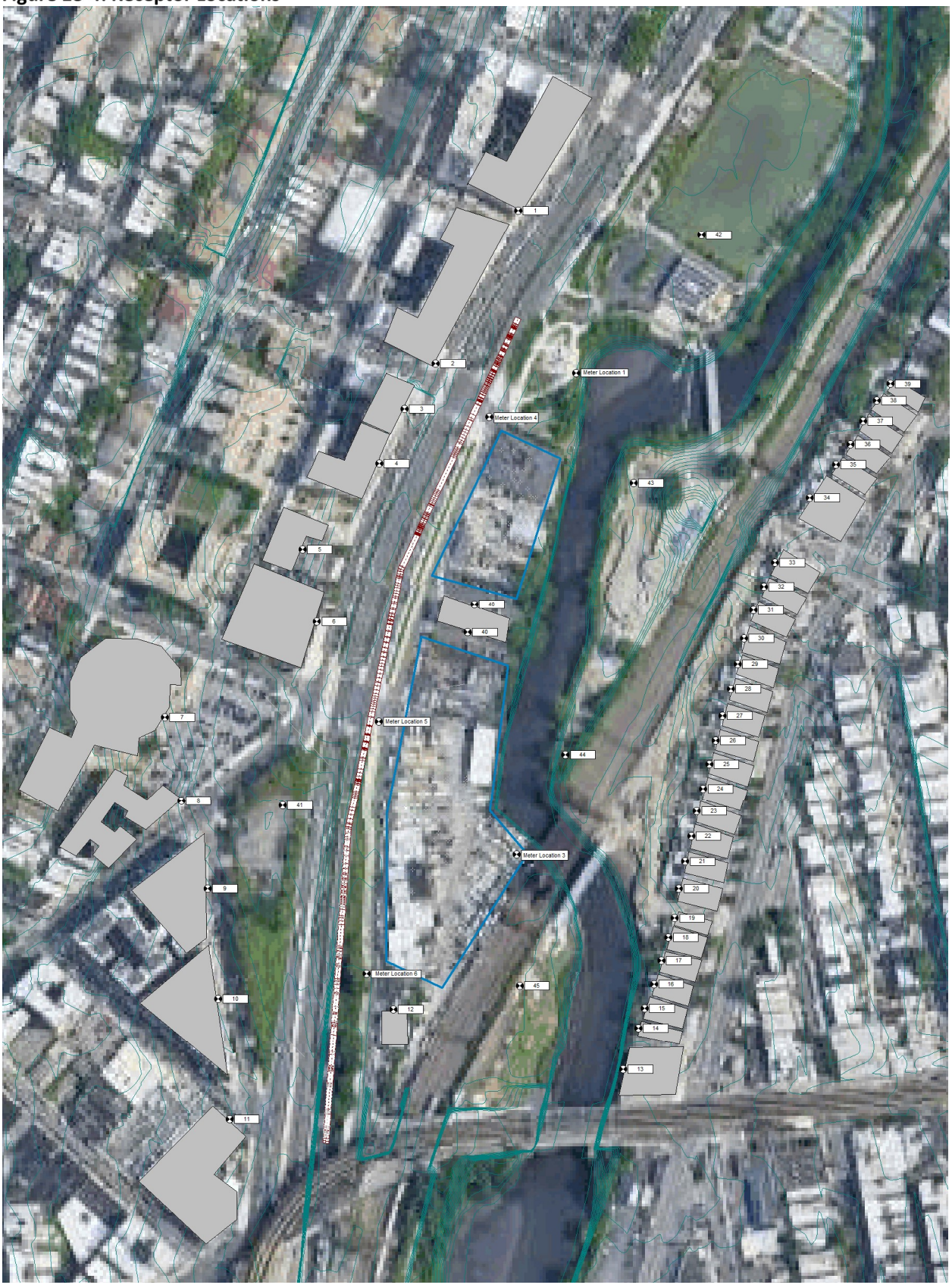


Table 18-11: Noise Receptors by Location and Land Use

Receptor	Location	Land Use
1	1565 West Farms Road	Residential
2	1524 West Farms Road	Residential
3	1501 West Farms Road	Residential/Commercial
4	1481 West Farms Road	Residential
5	1480 Boone Avenue	School
6	1021 Jennings Street	School
7	1434 Longfellow Ave PS X811	School
8	1321 West Farms Road	Residential
9	1347 Boone Avenue	Residential
10	1317 Boone Avenue	Residential
11	1030 Freeman Street	Commercial
12	1476 Sheridan Boulevard	Commercial
13	1209 Bronx River Avenue	Commercial
14	1215 Bronx River Avenue	Residential
15	1217-1219 Bronx River Avenue	Residential/Commercial
16	1221-1223 Bronx River Avenue	Residential
17	1225-1227 Bronx River Avenue	Residential/Commercial
18	1229-1231 Bronx River Avenue	Residential
19	1333 Bronx River Avenue	Residential
20	1237-1239 Bronx River Avenue	Residential
21	1241-1243 Bronx River Avenue	Residential
22	1245-1247 Bronx River Avenue	Residential
23	1249-1251 Bronx River Avenue	Residential
24	1253-1255 Bronx River Avenue	Residential
25	1257-1259 Bronx River Avenue	Residential
26	1261-1263 Bronx River Avenue	Residential
27	1265-1267 Bronx River Avenue	Residential
28	1269-1271 Bronx River Avenue	Residential
29	1273-1275 Bronx River Avenue	Residential
30	1277-1279 Bronx River Avenue	Residential
31	1281-1283 Bronx River Avenue	Residential
32	1285-1287 Bronx River Avenue	Residential
33	1289-1293 Bronx River Avenue	Residential
34	1307-1309 Bronx River Avenue	Commercial
35	1311-1313 Bronx River Avenue	Residential
36	1315-1317 Bronx River Avenue	Residential
37	1319-1321 Bronx River Avenue	Residential
38	1323-1325 Bronx River Avenue	Residential
39	1327-1329 Bronx River Avenue	Residential
40	1440 Sheridan Boulevard	Hotel
41	Daniel Boone Playground	Playground

Receptor	Location	Land Use
42	Starlight Park	Park
43	Starlight Park East Subarea North	Park
44	Starlight Park East Subarea South	Park
45	Starlight Park South Subarea	Park

Each modeled receptor site represents the location of a residence or other noise-sensitive use. Where warranted, multiple building façades and elevations were analyzed. The receptor sites selected for detailed analysis are representative of other noise receptors in the immediate area and are the locations where worst-case project-generated construction noise would occur.

Project-generated noise level increases and noise levels were predicted at each of the representative noise receptor locations. Because noise diminishes as distance increases, the geographic extent of potential construction-generated noise increases can be estimated based on a receptor's distance from construction activities. The receptor locations were determined based on the locations that would experience construction noise levels that may exceed the noise impact threshold criteria. The conceptual construction schedule was used to determine duration of the construction noise levels, the receptors that could experience construction noise levels that exceed the noise impact threshold criteria.

Construction Noise Analysis Results

The construction noise modeling followed the methodology described above. It also incorporated the noise abatement measures for source and path controls that are required to satisfy DEP's Rules for Citywide Construction Noise Mitigation (see Table 18-10). The cumulative noise analyses were performed to determine maximum one-hour equivalent ($L_{eq(1)}$) noise levels that would be expected to occur during each of the excavation/foundation, superstructure, and interior fit-out construction stages of projected development sites. The noise analysis found that project-generated construction noise would have the potential to result in an increase in noise levels that exceed the screening CEQR noise impact threshold criteria during one or more months at several receptor locations, and on one or more floors of some receptor locations. The predicted worst-case, maximum quarterly noise levels would exceed the 3 dBA increase threshold criteria on one or more floors of four receptor locations. These increases are based on a comparison to existing conditions.

The maximum quarterly noise increase at the sensitive receptor sites listed above range up to a maximum noise level of 78.3 dBA and an increment of 19.4 dBA at 1440 Sheridan Boulevard during Q2. This is the only property where the increment exceeds 15 dBA in a construction quarter.

Noise increments are not projected to exceed the impact criteria of 15 dBA over 12 consecutive months or 20 dBA over 3 consecutive months at any sensitive receptor. The construction noise analysis results indicate there would be no receptors where noise levels would exceed 85 dBA, which is the Public Health noise exposure limit. Table 19-7 shows the five receptors that would experience the highest maximum noise increases from project-generated construction by quarter.

Table 18-12: Maximum Quarterly Incremental Noise Levels (dBA) at Representative Worst-Case Receptors

ID	Property	Condition	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
1	1565 W Farms Rd[1]	Projected Sound Level	67.3	70.5	66.9	66.0	65.7	64.5	63.0	61.9	59.3	58.8	58.3	58.3
		Increase Over Ambient	9.3	**12.5**	8.9	8.0	7.7	6.5	5.0	3.9	1.3	0.8	0.3	0.3
2	1524 W Farms Rd[1]	Projected Sound Level	72.7	75.7	72.3	71.1	70.6	69.6	68.4	67.8	66.2	65.7	65.5	65.5
		Increase Over Ambient	8.6	**11.8**	8.3	7.1	6.7	5.9	4.2	3.4	1.8	0.9	0.5	0.5
3	1501 W Farms Rd[1]	Projected Sound Level	73.5	76.1	73.0	71.5	71.3	70.4	68.8	68.1	66.6	65.9	65.5	65.5
		Increase Over Ambient	9.2	**12.3**	8.8	7.8	7.3	6.7	4.8	3.8	2.2	1.2	0.6	0.6
40[2]	1440 Sheridan Blvd	Projected Sound Level	75.2	78.4	73.9	74.5	73.3	75.1	71.7	69.6	69.5	67.0	64.6	64.6
		Increase Over Ambient	16.2	**19.4**	14.9	15.5	14.3	16.1	12.6	10.5	10.4	7.8	5.2	5.2
43	Starlight Park E Subarea	Projected Sound Level	69.2	72.0	69.1	68.4	68.6	66.9	65.6	64.4	60.9	59.9	59.0	59.0
		Increase Over Ambient	10.9	**13.7**	10.8	10.1	10.3	8.6	7.3	6.1	2.6	1.6	0.7	0.7

1 Compass Residences
2 Existing hotel in the Proposed Rezoning Area (Potential Development Site A).
Bolded values represent the maximum projected noise level increase for each representative receptor.
Shaded cells indicate quarters where projected noise levels would exceed 15 dBA.

Most of the receptors in the Study Area are improved with double pane windows while some buildings may have single pane windows. Single pane windows with alternate means of ventilation are estimated to have a minimum attenuation of 25 dBA, and double pane windows with alternate means of ventilation are estimated to have a minimum attenuation of 30 dBA. Receptors with single pane windows and either through-wall or through-window air conditioning units were noted, as this could affect interior noise levels. The Compass Residences – across Sheridan Boulevard from Projected Development Site 1 – were recently constructed with double pane windows, which are estimated to have a minimum attenuation of 30 dBA. Similarly, the existing hotel on Potential Development Site A (1440 Sheridan Boulevard) and Fannie Lou Hamer Freedom High School (1021 Jennings Street) were also observed to be improved with double pane windows.

Based on the maximum estimated quarterly construction noise levels, maximum interior noise levels of approximately 50 dBA would occur where single pane windows are used, and an interior noise level of 45 dBA would occur where double pane windows are used. The construction noise may be audible, however, the project-generated noise would begin to drop after the first five quarters of construction. The analysis details the worst-case scenario for the peak hourly noise levels that would result from construction in each quarter when all equipment is assumed to operate simultaneously and consequently is conservative in predicting significant increases in noise levels. Typically, the loudest hourly noise level during each quarter of construction would not persist throughout the entire quarter. Therefore, actual noise levels would likely be lower than the modeled worst-case conditions.

Project-on-Project Effects

While Projected Development Site 2 will be in construction when Building 1 (Projected Development Site 1) is completed, only Envelope/Façade and Interior Fitout phases will remain on Projected Development Site 2. Building 1 would be tenanted for not more than 12 months (four quarters) before construction activities complete on Projected Development Site 2, and project-on-project construction noise effects would be limited in intensity and duration. Because construction activities would occur more than 400 feet

from Building 1 and the existing hotel on Potential Development Site A would be an intervening building, there would be no potential for significant adverse project-on-project construction impacts from noise.

Noise Conclusion

While the project-generated construction may increase noise levels by more than the CEQR screening threshold, the analysis assumed a uniform worst-case condition. The highest increase in noise levels would be experienced at the existing hotel on Potential Development Site A, where the increase in noise is projected to increase by up to 19.4 dBA for one quarter and noise increases of 15 dBA or more would not occur for 12 consecutive months at this worst-case receptor. During all other quarters of construction, noise levels would be increased by less than 15 dBA over ambient conditions at all the study area's other receptors of concern. Project-generated construction does not have the potential to result in maximum quarterly noise levels exceeding the impact thresholds of 15 dBA over four consecutive quarters or 20 dBA over one quarter. Accordingly, there would be no significant adverse construction impact in the area of noise.