Chapter 17: Construction

A. INTRODUCTION

This chapter describes the preliminary construction plans for the Proposed Project and assesses the potential for the Proposed Actions to result in significant adverse construction impacts in accordance with the 2020 *City Environmental Quality Review* (CEQR) *Technical Manual*. Construction impacts, although temporary, can include noticeable and disruptive effects from an action that is associated with construction or could induce construction. Determination of the significance of construction impacts and the need for mitigation are generally based on the duration and magnitude of the impacts. Construction impacts are usually important when construction activity could affect traffic conditions, hazardous materials, archaeological resources, the integrity of historic resources, community noise patterns, and/or air quality conditions.

As described in Chapter 1, “Project Description,” the Proposed Actions would facilitate a new development resulting in an incremental (net) increase compared to No-Action conditions of approximately 735 affordable dwelling units (DUs), including 621 income-restricted housing units and 114 affordable independent residences for seniors (AIRS), 33,995 gsf of community facility uses, approximately 1.94 acres of publicly accessible open space, and a net decrease of 104 accessory parking spaces (the “Proposed Project”). New development would be spread across six new buildings on the Stevenson Commons site. Construction of the Proposed Project is expected to begin in the second quarter of 2021 with all components complete and operational by early 2028.

In addition to describing the construction plans for the Proposed Project, this chapter provides a discussion of the governmental coordination and oversight related to construction, a conceptual construction schedule, activities likely to occur during construction, the types of equipment that are expected to be used, construction logistics (e.g., site access points and potential staging area locations), and construction workers and truck delivery estimates. Based on this information, potential impacts from construction activities are assessed with respect to transportation, air quality, noise and vibration, land use and neighborhood character, socioeconomic conditions, community facilities, open space, historic and cultural resources, and hazardous materials.

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 can occur at different times for different analyses. For example, the noisiest part of the construction may not be at the same time as the heaviest construction traffic. Therefore, the analysis periods differ for different technical analyses. Where appropriate, the analysis accounted for the effects of those components of the project that would be completed and operational during the selected construction analysis years.

B. PRINCIPAL CONCLUSIONS

Transportation

Peak construction conditions during the fourth quarter (Q4) of 2026 were considered for the analysis of potential transportation (traffic, transit, pedestrian, and parking) impacts during construction. Based on the anticipated numbers of vehicle trips from construction trucks and construction workers, and operational trips from completed portions of the Proposed Project, incremental vehicle trips during the 2026 Q4 peak construction period are expected to be less than the incremental peak hour trips that would be generated during the weekday AM and PM peak hours with full build-out of the Proposed Project. In addition, there is typically less overall traffic on the study area street network during the 6:00 AM to 7:00 AM and 3:00 PM to 4:00 PM construction peak hours than during the analyzed 7:45 AM to 8:45 AM and 4:30 PM to 5:30 PM operational peak hours.

Construction traffic conditions were evaluated during the 2026 Q4 construction AM and PM peak hours at ten intersections (seven signalized and three unsignalized) in the traffic study area where construction vehicle trips would exceed the 50-trips/hour *CEQR Technical Manual* analysis threshold in one or both construction peak hours. As summarized in Tables 17-1 and 17-2, construction traffic impact analysis indicates the potential for significant adverse impacts at ~~two~~ one lane group~~s~~ at ~~two~~ one intersection~~s~~ in the weekday AM construction peak hour, and ~~six~~ three lane groups at ~~four~~ three intersections in the weekday PM construction peak hour. Chapter 18, "Mitigation," discusses potential measures to mitigate these significant adverse traffic impacts.

TABLE 17-1
Number of Impacted Intersections and Lane Groups by Peak Hour

	Construction Peak Hour	
	Weekday AM	**Weekday PM**
Impacted Lane Groups	~~2~~1	~~6~~3
Impacted Intersections	~~2~~1	~~4~~3

Note: This table has been updated for the FEIS.

TABLE 17-2
Summary of Significantly Impacted Intersections

Intersection		Construction Peak Hour	
Location	**Control**	**Weekday AM**	**Weekday PM**
Bruckner Boulevard EB (EB) & White Plains Road (NB/SB)	Signalized	X	X
Bruckner Boulevard WB (WB) & White Plains Road (NB/SB)	Signalized	~~X~~ --	X
Lafayette Avenue (EB/WB) & White Plains Road (NB/SB)	Signalized	--	X
~~Story Avenue (EB/WB) & White Plains Road (NB/SB)~~	~~Signalized~~	~~--~~	~~X~~
	Total	~~2~~1	~~4~~3

Note: This table has been updated for the FEIS.

During the 2026 Q4 peak construction period, transit demand from construction workers on the Development Site would not meet the 200 trips/hour *CEQR Technical Manual* analysis threshold for a detailed subway analysis, nor the 50 trips/hour/direction analysis threshold for a detailed bus analysis during the AM and PM construction peak hours, and few if any operational transit trips would occur during these periods. Therefore, significant adverse impacts to subway and bus services are not expected to occur during the 2026 Q4 peak construction period.

Similarly, during the 2026 Q4 peak construction period, pedestrian demand from construction workers on the Development Site (both walk-only trips and trips to/from area transit services) would not meet the 200 trips/hour *CEQR Technical Manual* analysis threshold for a detailed pedestrian analysis in either the weekday AM or PM construction peak hours, and few if any operational pedestrian trips would occur during these periods. Significant adverse pedestrian impacts are therefore not expected to occur during the 2026 Q4 peak construction period. During construction, where sidewalk closures are required, adequate protection or temporary sidewalks would be provided in accordance with New York City Department of Transportation Office of Construction Mitigation and Coordination (DOT-OCMC) requirements.

Incremental parking demand from both the construction workers and the completed buildings on the Development Site (Buildings B3, B4, B5, and B6) would total approximately 242 spaces during the 2026 Q4 peak construction period. As it is assumed that there would be 251 parking spaces provided on-site during the 2026 Q4 peak construction period, the site-generated parking demand would be fully accommodated on-site. Therefore, the Proposed Actions are not expected to result in significant adverse parking impacts during the 2026 Q4 peak construction period.

Air Quality

An emissions reduction program would be implemented for the Proposed Project to minimize the effects of construction activities on the surrounding community. Measures would include dust suppression measures, use of ultra-low sulfur diesel (ULSD) fuel, idling restrictions, diesel equipment reduction, the utilization of newer equipment (i.e., equipment meeting at least the U.S. Environmental Protection Agency's [EPA] Tier 3 emission standard), and best available tailpipe reduction technologies. With the implementation of these emission reduction measures, the dispersion modeling analysis of construction-related air emissions for both non-road and on-road sources determined that particulate matter ($PM_{2.5}$ and PM_{10}), annual-average nitrogen dioxide (NO_2), and carbon monoxide (CO) concentrations would be below their corresponding *de minimis* thresholds or National Air Quality Ambient Standards (NAAQS), respectively. Therefore, construction of the Proposed Project would not result in significant adverse air quality impacts due to construction sources.

Noise

Based on the construction predicted to occur at the Development Site, noise resulting from construction is expected to exceed the *City Environmental Quality Review (CEQR) Technical Manual* noise impact thresholds as well as result in "objectionable" and "very objectionable" noise level increases at some receptors. Twelve time periods were analyzed over the course of the Proposed Project's assumed construction schedule. Receptors where noise level increases were predicted to exceed the construction noise evaluation thresholds for extended durations were identified. The noise analysis results show that the predicted noise levels would exceed the *CEQR Technical Manual* construction noise impact criteria at numerous receptors adjacent to the Development Site as well as the proposed building B3, which would be completed and occupied while construction of the remaining proposed buildings would occur adjacent. The noise analysis examined the reasonable worst-case peak hourly noise levels that would result from construction in a specific month selected for analysis, and consequently is conservative in predicting significant increases in noise levels. Typically, the loudest hourly noise level during each month of construction would not persist throughout the entire month.

Other Technical Areas

Land Use and Neighborhood Character

Construction activities would affect land use within the Project Area but would not alter surrounding land uses. As is typical with construction projects, during periods of peak construction activity there would be some disruption, predominantly noise, to the nearby area. These disruptions would be temporary in nature and would have limited effects on land uses within the surrounding area, particularly as most construction activities would take place within the Project Area or within portions of sidewalks, curbs, and travel lanes of public streets immediately adjacent to the site. Overall, while the construction at the Project Area would be evident to the local community, the temporary nature of construction would not result in significant or long-term adverse impacts on local land use patterns or the character of the nearby area.

Socioeconomic Conditions

Construction activities could temporarily affect pedestrian and vehicular access. However, lane and/or sidewalk closures would not obstruct entrances to any existing businesses, and businesses are not expected to be significantly affected by any temporary reductions in the amount of pedestrian foot traffic or vehicular delays that could occur as a result of construction activities. Overall, construction activities associated with the Proposed Actions would not result in any significant adverse impacts on surrounding businesses.

Construction would create direct benefits resulting from expenditures on labor, materials, and services, and indirect benefits created by expenditures by material suppliers, construction workers, and other employees involved in the direct activity. Construction also would contribute to increased tax revenues for the City and State, including those from personal income taxes.

Community Facilities

No community facilities would be directly affected by construction activities for an extended duration. The portions of the Project Area to be developed will be surrounded by construction fencing and barriers that would limit the effects of construction on nearby facilities. Construction workers would not place any burden on public schools and would have minimal, if any, demands on libraries, child care facilities, and health care. Construction of the Proposed Project would not block or restrict access to any facilities in the area, and would not materially affect emergency response times significantly. The NYPD and FDNY emergency services and response times would not be materially affected due to the geographic distribution of the police and fire facilities and their respective coverage areas.

Open Space

There are no publicly accessible open spaces within the Project Area and no public open space resources would be used for staging or other construction activities. As discussed above, there would be no significant adverse air quality impacts on open spaces in the surrounding area taking into account dust control measures and other emission reduction measures incorporated in the Proposed Project. The construction noise analysis (discussed above) showed that, while construction noise could be perceptible at some of the nearby open spaces, the predicted construction noise levels would not rise to the level of a significant impact, and would therefore not result in a major change in the usability of these facilities.

Historic and Cultural Resources

The Project Area does not possess archaeological significance, and therefore, the Proposed Project does not have the potential to result in construction period archaeological impacts. The Proposed Actions would not result in any significant adverse direct impacts to architectural resources as no historic architectural resources are located within the Project Area. Moreover, no architectural resources are located within 90 feet of the Project Area. Therefore, the Proposed Actions would not result in any significant adverse construction-related impacts to historic architectural resources.

Hazardous Materials

An assessment of potential impacts on hazardous materials is described in Chapter 9, “Hazardous Materials.” A Phase II Environmental Site Assessment Work Plan and a Health and Safety Plan (HASP) were prepared and submitted to DEP for review and approval. DEP approved the Phase II Work Plan and HASP, and sampling activities on the Development Site have been conducted in accordance with the approved Work Plan. The Phase II Report along with a Remedial Action Plan (RAP) have been submitted to DEP for review and approval. The RAP incorporates a Construction Health and Safety Plan (CHASP). These plans set out procedures to be followed to avoid the potential for adverse impacts related to the hazardous materials identified by the Phase II investigation as well as other hazardous materials that could be unexpectedly encountered. The Applicant will commit to implementing the remedial activities outlined in the RAP and CHASP, which ~~are anticipated to be~~were approved by DEP~~ in advance of the issuance of the FEIS~~, prior to construction. With adherence to existing standard regulations, there would be no increase in the exposure of people or the environment to hazardous materials associated with construction of the Proposed Project. As such, the Proposed Actions would not result in any significant adverse construction-related impacts to hazardous materials.

C. GOVERNMENTAL COORDINATION AND OVERSIGHT

The governmental oversight of construction in New York City is extensive and involves a number of city, state, and federal agencies. Table 17-3 shows the main agencies involved in construction oversight and each agency’s areas of responsibility. The primary responsibilities lie with New York City agencies. The New York City Department of Buildings (DOB) has the primary responsibility for ensuring that the construction meets the requirements of the New York City Building Code and that buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both construction workers and the public. The areas of responsibility include the enforcement of regulations pertaining to the installation and operation of construction equipment, such as cranes and lifts, sidewalk sheds, and safety netting and scaffolding. The New York City Department of Parks and Recreation (NYC Parks) has oversight on tree protection and tree removal during construction. The New York City Department of Environmental Protection (DEP) enforces the New York City Noise Control Code (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) and the DEP Notice of Adoption Rules for Citywide Construction Noise Mitigation (also known as Chapter 28), approves Remedial Action Plans (RAPs) and Construction Health and Safety Plans (CHASPs), regulates water disposal into the sewer system, and oversees dust control for construction activities. The New York City Fire Department (FDNY) has primary oversight for compliance with the New York City Fire Code and for the installation of tanks containing flammable materials. The New York City Department of

Transportation (NYCDOT) reviews and approves any traffic lane and sidewalk closures. The New York City Landmarks Preservation Commission (LPC) approves studies and testing to prevent loss of archaeological materials and to prevent damage to fragile historic structures.

At the state level, the New York State Department of Environmental Conservation (NYSDEC) regulates discharge of water into rivers and streams, disposal of hazardous materials, and construction, operation, and removal of bulk petroleum and chemical storage tanks. The New York State Department of Labor (NYSDOL) licenses asbestos workers. New York City Transit (NYCT) is in charge of bus stop relocations, and any subsurface construction within 200 feet of a subway. On the federal level, the U.S. Environmental Protection Agency (EPA) has wide ranging authority over environmental matters, including air emissions, noise emission standards, hazardous materials, and the use of poisons. Much of the responsibility is delegated to the state level. The U.S. Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.

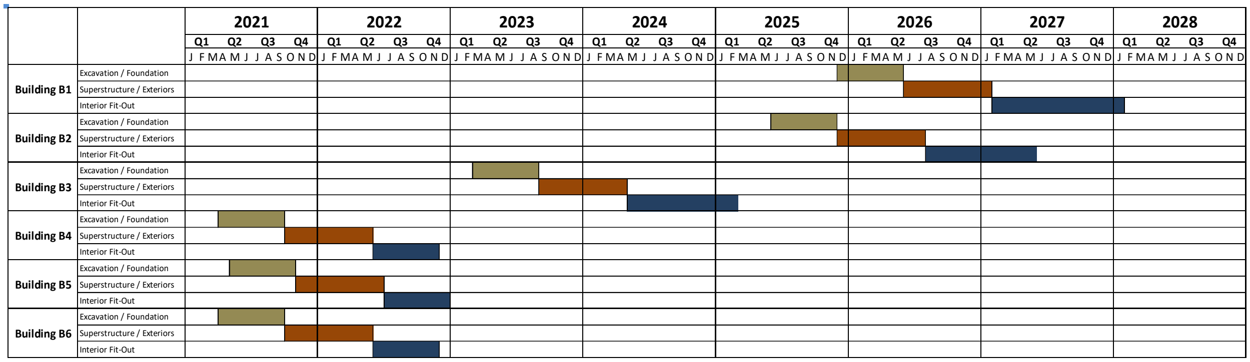
TABLE 17-3
Construction Oversight in New York City

Agency	Area(s) of Responsibility
New York City	
Department of Buildings (DOB)	Primary oversight for Building Code and site safety
Department of Parks & Recreation	Tree protection and removal
Department of Environmental Protection (DEP)	Noise, hazardous materials, dewatering, dust
Fire Department (FDNY)	Compliance with Fire Code, tank operation
Department of Transportation (NYCDOT)	Traffic lane and sidewalk closures
Landmarks Preservation Commission (LPC)	Archaeological and historic architectural protection
New York State	
Department of Labor (DOL)	Asbestos workers
New York City Transit (NYCT)	Bus stop relocation; any subsurface construction within 200 feet of a subway
Department of Environmental Conservation (NYSDEC)	Dewatering, hazardous materials, tanks, Stormwater Pollution Prevention Plan, Industrial SPDES, if any discharge into the Hudson River
United States	
Environmental Protection Agency (EPA)	Air emissions, noise, hazardous materials, toxic substances
Occupational Safety and Health Administration (OSHA)	Worker safety

D. CONSTRUCTION SCHEDULE

The anticipated construction schedule is shown in Figure 17-1 and described below. The construction schedule reflects the preliminary sequencing of construction events as currently contemplated by the Applicant. As shown in Figure 17-1, Construction of the Proposed Project would occur in three phases over a total of approximately 82-months, with an anticipated start date in the second quarter of 2021. Phase 1 would include construction of Buildings B4, B5 and B6, starting in the second quarter of 2021 and ending by the end of 2022, with construction of each building lasting for approximately 20 months. Phase 2 would include Building B3, starting in early 2023 and ending in early 2025, for a total duration of 24 months. Phase 3 would include Buildings B1 and B2, with construction on Building B2 beginning in mid-2025 and ending in mid-2027 (24 months), and construction of Building B2 beginning in late 2025 and ending in early 2028 (26 months).

FIGURE 17-1
Anticipated Construction Schedule



E. DESCRIPTION OF CONSTRUCTION ACTIVITIES

General Construction Practices

Hours of Work

Construction of the Proposed Project would be carried out in accordance with New York City laws and regulations, which allow construction activities between 7:00 AM and 6:00 PM on weekdays, with most workers arriving between 6:00 AM and 7:00 AM. Normally work would end at 3:30 PM, but it can be expected that in order to complete certain critical tasks (e.g., finishing a concrete pour for a floor deck), the workday may occasionally be extended beyond normal work hours. Any extended workdays would generally last until approximately 6:00 PM and would not include all construction workers onsite, but only those involved in the specific task requiring additional work time.

Weekend or night work may also be occasionally required for certain construction activities, such as the erection of the tower crane. Appropriate work permits from DOB would be obtained for any necessary work outside of normal construction and no work outside of normal construction hours would be performed until such permits are obtained. The numbers of workers and pieces of equipment in operation for night or weekend work would typically be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend or night work would be less than that of a normal workday.

Deliveries, Access, and Staging Areas

Access to the Development Site during construction would be fully controlled. The work areas would be fenced off and limited access points for workers and construction-related trucks would be provided. Construction workers are generally prohibited from parking their vehicles onsite during the construction period. Truck movements would be spread throughout the day and would generally occur between the hours of 6 AM and 3 PM, depending on the stage of construction. Material deliveries to the site would be controlled and scheduled. To aid in adhering to the delivery schedules, as is normal for building construction in New York City, flaggers would be employed at each construction gate. The flaggers could be supplied by the subcontractor on-site at the time or by the construction manager. The flaggers would control trucks entering and exiting the site so that they would not interfere with one another. In addition, they would provide an additional traffic aid as the trucks enter and exit the on-street traffic streams.

The New York City Department of Transportation Office of Construction Mitigation and Coordination (DOT-OCMC) reviews and approves all maintenance and protection of traffic (MPT) plans which specify any planned sidewalk or lane closures and staging for all construction sites. MPT plans would be developed for any required temporary sidewalk, lane, and/or street closures to ensure the safety of the construction workers and the public passing through the area. Approval of these plans and implementation of the closures would be coordinated with DOT-OCMC. Measures specified in the MPT plans would likely include parking lane closures, safety signs, safety barriers, and construction fencing.

Description of Construction Activities

Construction of large-scale buildings in New York City typically follows a general pattern. The first task is construction startup, which involves the siting of work trailers, installation of temporary power and communication lines, and the erection of site perimeter fencing. If a site has existing structures, the structures are demolished with some of the materials (such as concrete, block, and brick) either recycled or crushed on-site to be reused as fill and the debris taken to a licensed disposal facility. Hazardous materials remediation typically occurs at this point. Excavation of the soils is next along with the construction of the foundations. When the below-grade construction is completed, construction of the superstructure of the new building begins. As the core and floor decks of the building are being erected, installation of the mechanical and electrical internal networks would start. As the building progresses upward, the exterior cladding is placed, and the interior fit out begins. During what is typically considered the busiest time of building construction, the upper core and structure is being built while mechanical/electrical connections, exterior cladding, and interior finishing are progressing on lower floors.

The following provides a description of each of the anticipated construction tasks for both the proposed Acme smoked Fish facility, which would be constructed first, and the office building.

Construction Startup Tasks

Construction startup work prepares a site for the construction work and would involve the installation of public safety measures, such as fencing, sidewalk sheds, and Jersey barriers. For each proposed building, the construction site would be fenced off, typically with solid fencing to minimize interference between the persons passing by the site and the construction work. Separate gates for workers and for trucks would be installed, and sidewalk sheds and Jersey barriers would be erected. Trailers for the construction engineers and managers would be hauled to the site and installed within the Development Site. On-site power generation capabilities would also be placed at this time where necessary

Demolition

As the portions of the Project Area proposed for new construction currently do not contain any existing structures, no demolition activities would be associated with construction of any of the buildings comprising the Proposed Project.

Excavation and Foundation

The Proposed Project would require excavation for each of the proposed buildings' foundation. As only two of the buildings would include a cellar/basement level, limited excavation (approximately 12 to 13 feet) is anticipated, along with backfilling with clean soil in order to support the foundations. Excavators would be used to excavate soil and the excavated materials would be loaded onto dump trucks for transport to a licensed disposal facility or for reuse on any portion of the project sites that need fill. No blasting is anticipated for the construction of the Proposed Project. This stage of construction would include the construction of the foundation and below-grade elements of the proposed buildings. Piles would be installed with the use of drill rigs. If boulders are encountered during pile installation activities, the obstructions would be removed by a rock hammer. Concrete trucks would be used to pour the foundation and the below-grade structures. Excavation and foundation activities may also involve the use of generators, excavators, bobcats, bar bending machines, and concrete vibrators.

Superstructure and Exterior Façade – Core and Shell Construction

The core is the central part of the building and is the main part of the structural system. It contains the building's beams and columns, as well as elevator shafts, vertical risers for mechanical, electrical, and plumbing systems, electrical and mechanical equipment rooms, and core stairs. The shell is the exterior of the building. Cranes would be brought onto the construction area as needed and would be used to lift structural components, façade elements, and other large materials, and load and place materials into and on the building. Core and shell construction activities would also require the use of generators, bar bending machines, grout pumps, and a variety of small handheld tools. In addition, temporary construction elevators (hoists) would be used for the vertical movement of workers and materials during this stage of construction.

Interior Fit-Out and Exterior Site Work

Interior fit-out activities would typically include the construction of interior partitions, installation of lighting fixtures, and interior finishes (e.g., flooring, painting, etc.), and mechanical and electrical work, such as the installation of elevators and lobby finishes. Final cleanup and touchup of the buildings and final building system (e.g., electrical system, fire alarm, plumbing, etc.) testing and inspections would be part of this stage of construction. Equipment used during this stage of construction would include hoists, delivery trucks, and a variety of small handheld tools. In addition, grid power is expected to be available during this stage of construction although generators may be needed for welding operations. Interior fit-out activities would typically be the quietest period of construction in terms of its effect on the public, because most of the construction activities would occur inside the building with the façades substantially complete and the proposed buildings enclosed. Exterior site work includes the pavement of the parking lots and landscaping, and equipment used during this final stage of construction would be limited to concrete pumps.

Number of Construction Workers and Material Deliveries

The number of workers and the number of truck trips associated with material deliveries vary with the scale of the project and the general construction task. Table 17-4, below, shows the estimated number of workers and deliveries to the Development Site by calendar quarter for all construction activities, based on the construction schedule provided in Figure 17-1. As shown below in Table 17-4, the average number of workers would be approximately 108 per day throughout the construction period and the average number of trucks would be approximately 50 per day. The number of daily workers would peak in the 4^{th} quarter of 2026, at 225 daily workers, while the number of daily trucks would also peak in the 4^{th} quarter of 2026, at 113 per day.

TABLE 17-4
Average Number of Daily Workers and Trucks by Quarter

Year	2021				2022				2023				2024			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Workers	-	67	102	130	157	193	180	140	17	53	60	85	85	60	140	100
Trucks	-	59	72	118	97	30	0	0	8	27	30	43	43	30	70	50
Year	**2025**				**2026**				**2027**				**2028**			
Quarter	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
Workers	67	17	53	77	138	145	145	225	160	193	100	100	33	-	-	-
Trucks	33	8	27	38	70	73	73	113	80	97	50	50	17	-	-	-

	Average	Peak
Workers	108	225
Trucks	50	113

F. PROBABLE IMPACTS OF THE PROPOSED ACTIONS

Similar to many development projects in NYC, construction can cause temporary disruption to the surrounding area throughout the construction period. The following analyses describe potential construction impacts on transportation, air quality, noise and vibration, as well as other technical areas including land use and neighborhood character, socioeconomic conditions, community facilities, open space, historic and cultural resources, and hazardous materials.

Transportation

Traffic

Construction activities would generate construction worker auto trips and truck trips. Similar to other construction projects in New York City, most of the construction activity at the Development Site is expected to take place during the typical construction shift of 7:00 AM to 3:30 PM. The estimated daily vehicle trips were distributed throughout the workday based on projected work shift allocations and conventional arrival/departure patterns of construction workers and trucks. While construction truck trips would be made throughout the day (with more trips typically made during the early morning), construction workers would typically commute during the hours before and after the work shift. For analysis purposes, each truck delivery was assumed to result in two truck trips during the same hour (one "in" and one "out"), and each truck trip was assumed to have a passenger car equivalent (PCE) of 2.0, consistent with *CEQR Technical Manual* guidance. For construction workers, the majority (80 percent) of arrival and departure trips are expected to take place during the hour before and after each shift. For construction trucks, deliveries would typically peak during the early morning, with an estimated 25 percent overlapping with construction worker arrival traffic.

Based on 2000 Census reverse journey-to-work data for construction workers employed in census tracts in proximity to the Project Area,[1] it is anticipated that construction workers' travel to the construction site in the Soundview neighborhood of the Bronx would be primarily by motor vehicle (approximately 60.7

[1] AASHTO CTPP 2000 reverse journey-to-work data for the area encompassed by 2010 Bronx Census Tracts 16, 20, 36, 38, 74 and 98. The 2000 Census Tract 36 is currently Census Tract 42.

percent by private autos and 8.2 percent by taxis/rideshare services), with smaller numbers using public transportation (6.6 percent subway and 12.3 percent bus) and walking (12.2 percent). It is also estimated that auto/taxi occupancy would average approximately 1.26 persons per vehicle. These trip generation assumptions were used as the basis for assessing the potential transportation-related impacts during construction.

Table 17-5 presents the hourly construction vehicle trip estimates in PCEs during the 2026 Q4 peak construction period, based on the assumptions described above. As shown in Table 17-5, it is estimated that peak construction activities would result in 225 PCEs between 6:00 AM and 7:00 AM during this period. For the 3:00 PM to 4:00 PM period, there would be a maximum of 123 PCEs associated with construction activities during this same period. As such, this construction period would represent the reasonable worst-case scenario for the construction traffic assessment.

TABLE 17-5
2026 Q4 Construction Vehicle Trip Generation (Autos, Taxis, and Trucks, in PCEs)

Time Period	Auto			Taxi			Truck			Total		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
6 AM - 7 AM	**87**	**0**	**87**	**12**	**12**	**24**	**57**	**57**	**114**	**156**	**69**	**225**
7 AM -8 AM	22	0	22	3	3	6	23	23	46	48	26	74
8 AM -9 AM	0	0	0	0	0	0	23	23	46	23	23	46
9 AM - 10 AM	0	0	0	0	0	0	23	23	46	23	23	46
10 AM - 11 AM	0	0	0	0	0	0	23	23	46	23	23	46
11 AM - 12 PM	0	0	0	0	0	0	23	23	46	23	23	46
12 PM - 1 PM	0	0	0	0	0	0	23	23	46	23	23	46
1 PM - 2 PM	0	0	0	0	0	0	11	11	22	11	11	22
2 PM - 3 PM	0	6	6	1	1	2	11	11	22	12	18	30
3 PM - 4 PM	**0**	**87**	**87**	**12**	**12**	**24**	**6**	**6**	**12**	**18**	**105**	**123**
4 PM - 5 PM	0	16	16	2	2	4	6	6	12	8	24	32
5 PM - 6 PM	0	0	0	0	0	0	0	0	0	0	0	0
Daily Total	109	109	218	30	30	60	229	229	458	368	368	736

Note: Hourly construction worker and truck trips were derived from an estimated quarterly average number of construction worker and truck deliveries per day, with each truck delivery resulting in two daily trips (arrival and departure).

As it is anticipated that Buildings B3, B4, B5 and B6 would be fully operational by the fourth quarter of 2026, there would likely be some overlap between operational traffic and construction traffic during the 2026 Q4 peak construction period. As shown in Table 17-6, combined with the operational trips generated by the completed buildings on the Development Site, there would be a net increase of 242 vehicle trips during the 6:00 AM – 7:00 AM construction peak hour and a net increase of 192 vehicle trips during the 3:00 PM – 4:00 PM construction peak hour.

TABLE 17-6
2026 Q4 Peak Hour Construction + Operational Traffic Volumes (in PCEs)

Time Period	Construction Trips	Operational Trips	Total Trips
6 AM - 7 AM	225	17	242
3 PM - 4 PM	123	69	192

As shown in Table 11-8 in Chapter 11, "Transportation," the Proposed Actions are expected to generate a net total of approximately 353 vehicle trips (357 PCEs) in the weekday 7:45 AM – 8:45 AM operational peak hour and 377 vehicle trips (379 PCEs) in the weekday 4:30 PM – 5:30 PM operational peak hour. Total weekday AM and PM peak hour incremental vehicle trips with full build-out of the Proposed Project in 2028 would therefore be greater than the combined operational and construction demand generated during the 6:00 AM – 7:00 AM and 3:00 PM – 4:00 PM construction peak hours in the 2026 Q4 peak construction period (242 PCEs and 192 PCEs, respectively).

An assignment of AM and PM peak hour construction vehicle trips (in PCEs) is shown in Figure 17-2. As shown in Figure 17-2, construction vehicle trips at a total of ten intersections (seven signalized and three unsignalized) would exceed the *CEQR Technical Manual* 50-trip/hour analysis threshold in one or both construction peak hours. The intersections and peak hours where construction vehicle trips would exceed the 50-trip threshold are listed below:

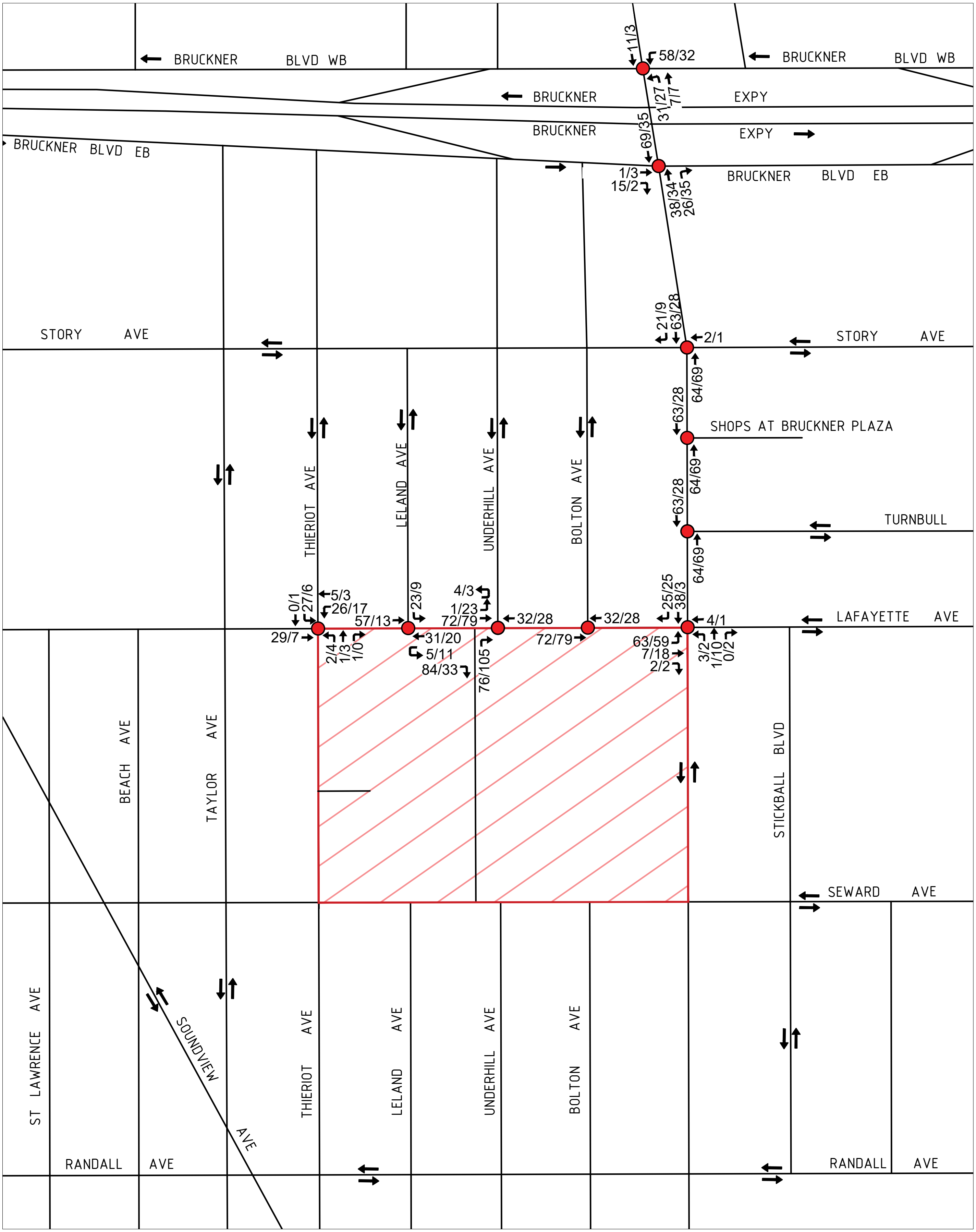
1. White Plains Road at Bruckner Boulevard Westbound (signalized)* – AM
2. White Plains Road at Bruckner Boulevard Eastbound (signalized)* – AM, PM
3. White Plains Road at Story Avenue (signalized)* – AM, PM
4. White Plains Road at Bruckner Plaza (signalized)* – AM, PM
5. White Plains Road at Turnbull Avenue (signalized)* – AM
6. White Plains Road at Lafayette Avenue (signalized)* – AM, PM
7. Bolton Avenue and Lafayette Avenue (signalized) – AM, PM
8. Underhill Avenue at Lafayette Avenue (unsignalized) – AM, PM
9. Leland Avenue at Lafayette Avenue (unsignalized) – AM
10. Thieriot Avenue at Lafayette Avenue (unsignalized)* – AM

(* - denotes intersection significantly adversely impacted by operational traffic in the AM and/or PM operational peak hours.)

In order to assess construction traffic conditions, a 2019 Existing traffic network was established based on ATR data collected for the 6:00 to 7:00 AM and 3:00 to 4:00 PM peak hours (refer to Figure 17-3). The volume-to-capacity (v/c) ratios, delays and levels of service for all lane groups at all analyzed intersections in both construction peak periods under Existing conditions are provided in Table 17-7. A lane group is considered congested if it operates at LOS E or F and/or with a v/c ratio of 0.90 or above. A v/c ratio of 1.00 or above reflects capacity conditions. As shown in Table 17-7, all analyzed lane groups are currently operating at an uncongested LOS D or better during the construction AM peak hour. During the construction PM peak hour, a total of six lane groups at three signalized intersections operate as congested under existing conditions.

A 2026 No-Action construction traffic network was established based on ATR data collected for the 6:00 to 7:00 AM and 3:00 to 4:00 PM peak hoursby applying an annual background growth rate of 0.25 percent per year for the 2019 through 2024 period and 0.125 percent per year for 2024 to 2028, as recommended in the *CEQR Technical Manual* for projects in the Bronx (refer to Figure 17-34). The volume-to-capacity (v/c) ratios, delays and levels of service for all lane groups at all analyzed intersections in both construction peak periods under No-Action conditions are provided in Table 17-7. A lane group is considered congested if it operates at LOS E or F and/or with a v/c ratio of 0.90 or above. A v/c ratio of 1.00 or above reflects capacity conditions. As shown in Table 17-7, a total of sevenfive lane groups at three intersections would be congested under the No-Action conditions during the construction PM peak hour under 2026 conditions. During the construction AM peak hour, all analyzed lane groups would operate at an uncongested LOS D or better under No-Action conditions.

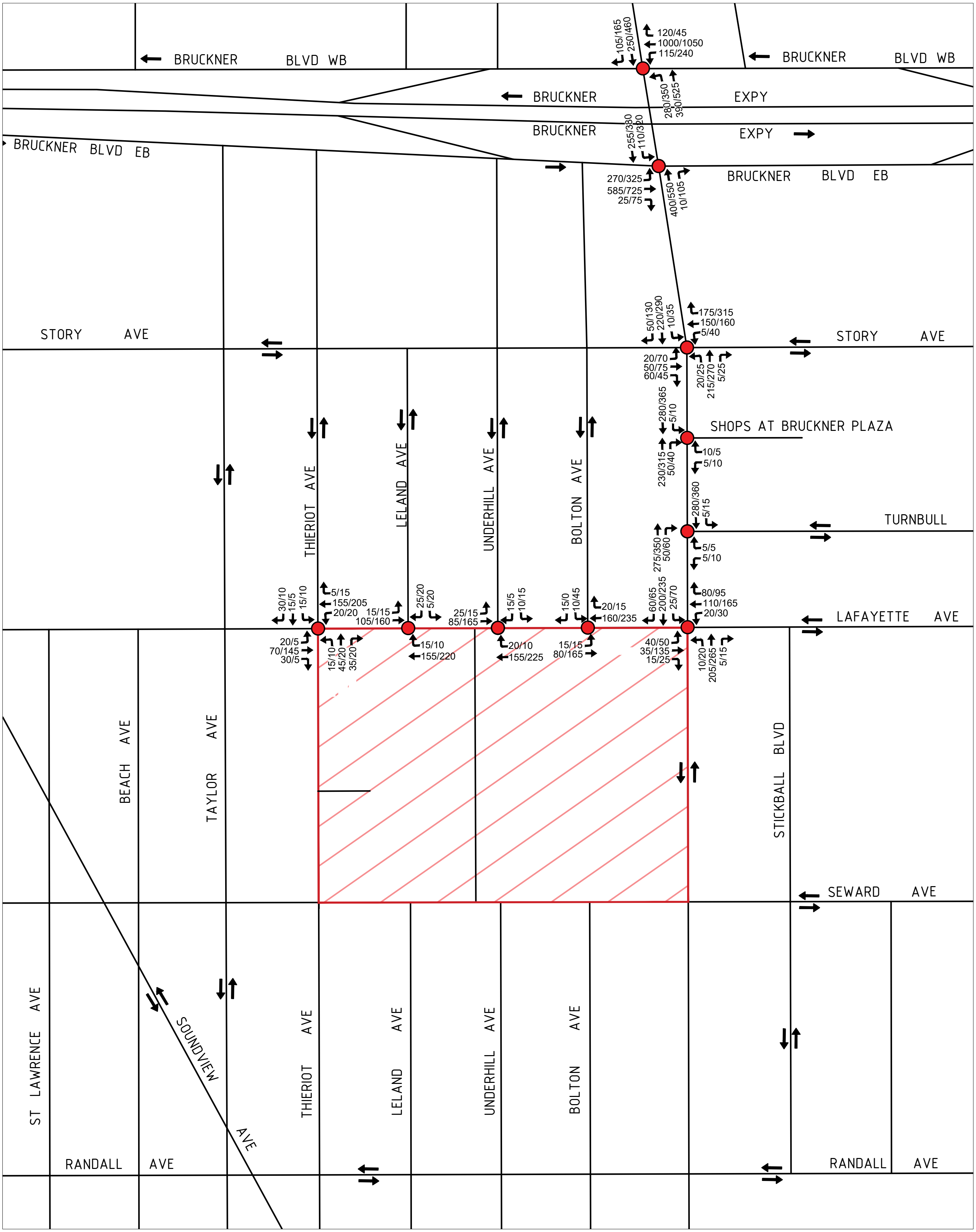
Construction Increment Vehicle Volumes - AM & PM



14/4 - Weekday AM/PM Vehicular Volumes
Project Area
Analysis Intersection

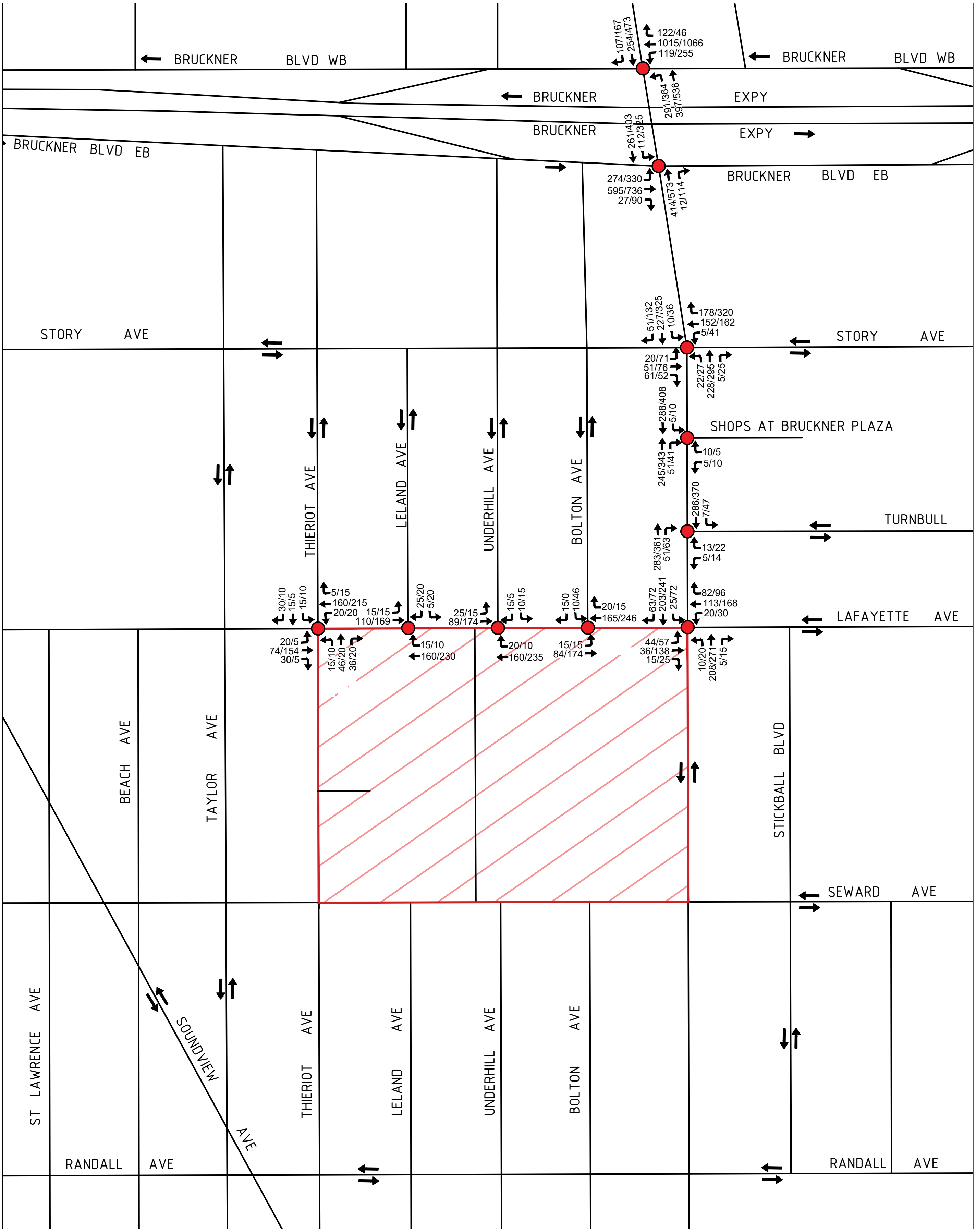
This Figure has been updated for the FEIS

Existing Construction Vehicle Volumes - AM & PM



14/4 - Weekday AM/PM Vehicular Volumes
Project Area
Analysis Intersection
This Figure has been added for the FEIS

No-Action Construction Vehicle Volumes - AM & PM



14/4 - Weekday AM/PM Vehicular Volumes
Project Area
Analysis Intersection

This Figure has been added for the FEIS

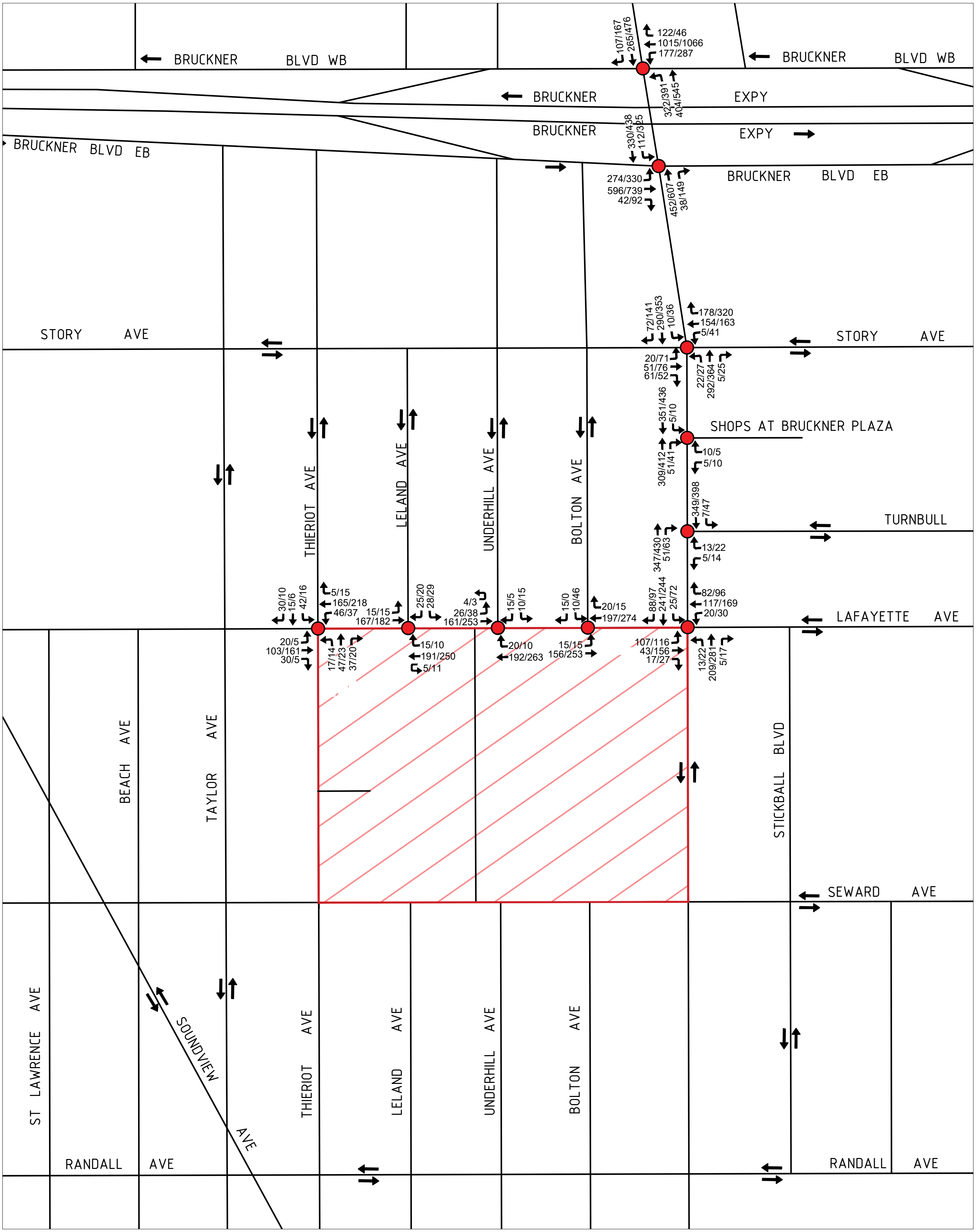
TABLE 17-7
~~No-Action and With-Action~~Existing and No-Action Intersection Level of Service Analysis

Signalized Intersections	Existing AM Peak Hour Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	No-Action AM Peak Hour Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Existing PM Peak Hour Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	No-Action PM Peak Hour Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS
Bruckner Blvd EB &	EB	L	0.49	27.9	C	EB	L	0.50	28.1	C	EB	L	0.65	35.2	D	EB	L	0.66	35.6	D
White Plains Rd	EB	LTR	0.65	30.3	C	EB	LTR	0.66	30.6	C	EB	LTR	0.95	53.4	D *	EB	LTR	0.96	55.6	E *
	NB	TR	0.68	45.6	D	NB	TR	0.71	46.8	D	NB	TR	0.93	60.3	E *	NB	TR	0.98	69.6	E *
	SB	L	0.25	30.6	C	SB	L	0.26	31.4	C	SB	Def L	0.57	40.3	D	SB	Def L	0.57	40.3	D
	SB	LT	0.31	23.6	C	SB	LT	0.32	23.8	C	SB	T	0.58	27.2	C	SB	T	0.61	28.2	C
Bruckner Blvd WB &	WB	LT	0.77	30.6	C	WB	LT	0.79	31.2	C	WB	LT	0.94	45.7	D *	WB	LT	0.97	49.9	D *
White Plains Rd	WB	R	0.30	22.5	C	WB	R	0.30	22.6	C	WB	R	0.10	21.6	C	WB	R	0.10	21.6	C
	NB	L	0.53	36.7	D	NB	L	0.56	37.9	D	NB	L	0.65	44.4	D	NB	L	0.69	46.9	D
	NB	LT	0.55	30.1	C	NB	LT	0.57	30.5	C	NB	LT	0.67	30.5	C	NB	LT	0.69	31.3	C
	SB	TR	0.41	38.6	D	SB	TR	0.42	38.8	D	SB	TR	0.57	38.9	D	SB	TR	0.59	39.3	D
	SB	R	0.53	46.1	D	SB	R	0.54	46.5	D	SB	R	0.58	43.6	D	SB	R	0.59	43.8	D
Bruckner Plaza &	WB	LR	0.03	16.5	B	WB	LR	0.03	16.5	B	WB	LR	0.03	16.5	B	WB	LR	0.03	16.5	B
White Plains Rd	NB	TR	0.55	19.7	B	NB	TR	0.57	20.5	C	NB	TR	0.62	21.4	C	NB	TR	0.67	23.1	C
	SB	L	0.02	11.9	B	SB	L	0.02	11.9	B	SB	L	0.04	12.2	B	SB	L	0.04	12.3	B
	SB	T	0.54	19.3	B	SB	T	0.56	19.7	B	SB	T	0.61	20.9	C	SB	T	0.68	23.2	C
Lafayette Ave &	EB	L	0.07	14.9	B	EB	L	0.07	14.9	B	EB	L	0.06	14.6	B	EB	L	0.06	14.6	B
Bolton Ave	EB	T	0.14	15.2	B	EB	T	0.14	15.3	B	EB	T	0.29	17.1	B	EB	T	0.31	17.4	B
	WB	TR	0.34	17.9	B	WB	TR	0.35	18.0	B	WB	TR	0.43	19.2	B	WB	TR	0.45	19.5	B
	SB	LR	0.07	14.6	B	SB	LR	0.07	14.6	B	SB	LR	0.09	14.8	B	SB	LR	0.09	14.8	B
White Plains Rd &	EB	L	0.16	21.7	C	EB	L	0.19	22.3	C	EB	L	0.27	24.2	C	EB	L	0.33	26.1	C
Lafayette Ave	EB	TR	0.15	21.2	C	EB	TR	0.15	21.2	C	EB	TR	0.41	25.4	C	EB	TR	0.43	25.7	C
	WB	L	0.09	20.6	C	WB	L	0.09	20.7	C	WB	L	0.15	21.6	C	WB	L	0.16	21.9	C
	WB	TR	0.55	29.1	C	WB	TR	0.58	30.2	C	WB	TR	0.62	30.7	C	WB	TR	0.66	32.4	C
	NB	L	0.03	9.6	A	NB	L	0.03	9.6	A	NB	L	0.07	10.1	B	NB	L	0.08	10.2	B
	NB	TR	0.29	12.0	B	NB	TR	0.29	12.1	B	NB	TR	0.37	13.0	B	NB	TR	0.38	13.1	B
	SB	L	0.09	10.4	B	SB	L	0.10	10.4	B	SB	L	0.26	12.7	B	SB	L	0.30	13.6	B
	SB	TR	0.47	14.9	B	SB	TR	0.48	15.3	B	SB	TR	0.49	15.2	B	SB	TR	0.52	15.9	B
White Plains Rd &	EB	LTR	0.55	37.3	D	EB	LTR	0.47	30.9	C	EB	LTR	0.93	71.6	E *	EB	LTR	0.92	68.1	E *
Story Ave	WB	LT	0.49	33.9	C	WB	LT	0.42	28.9	C	WB	LT	0.54	32.6	C	WB	LT	0.52	31.4	C
	WB	R	0.73	46.9	D	WB	R	0.61	35.5	D	WB	R	0.99	79.0	E *	WB	R	0.96	70.7	E *
	NB	L	0.11	16.7	B	NB	L	0.10	15.2	B	NB	L	0.14	15.5	B	NB	L	0.12	15.5	B
	NB	TR	0.51	22.8	C	NB	TR	0.51	21.5	C	NB	TR	0.61	23.3	C	NB	TR	0.67	26.3	C
	SB	L	0.03	15.4	B	SB	L	0.03	14.2	B	SB	L	0.14	15.1	B	SB	L	0.15	16.0	B
	SB	TR	0.71	30.6	C	SB	T	0.48	20.5	C	SB	TR	0.92	46.5	D *	SB	T	0.60	23.2	C
						SB	R	0.11	15.0	B						SB	R	0.26	16.7	B
White Plains Rd &	WB	LR	0.03	19.7	B	WB	LR	0.06	20.0	C	WB	LR	0.04	19.8	B	WB	LR	0.09	20.5	C
Turnbull Ave	NB	TR	0.57	16.7	B	NB	TR	0.60	17.5	B	NB	TR	0.65	18.5	B	NB	TR	0.68	19.5	B
	SB	L	0.02	9.6	A	SB	L	0.04	9.8	A	SB	L	0.08	10.4	B	SB	L	0.26	13.8	B
	SB	T	0.48	15.0	B	SB	T	0.49	15.2	B	SB	T	0.57	16.9	B	SB	T	0.58	17.2	B
Lafayette Ave &	EB	LT	0.02	8.2	A	EB	LT	0.02	8.2	A	EB	LT	0.02	8.2	A	EB	LT	0.02	8.3	A
Leland Ave **Unsignalized**	SB	LR	0.06	11.0	B	SB	LR	0.06	11.1	B	SB	LR	0.08	11.9	B	SB	LR	0.09	12.0	B
Lafayette Ave &	EB	LT	0.02	8.0	A	EB	LT	0.02	8.0	A	EB	LT	0.02	8.1	A	EB	LT	0.02	8.1	A
Underhill Ave **Unsignalized**	SB	LR	0.04	10.5	B	SB	LR	0.04	10.5	B	SB	LR	0.05	12.1	B	SB	LR	0.05	12.3	B
Lafayette Ave &	EB	LTR	0.02	8.3	A	EB	LTR	0.02	8.3	A	EB	LTR	0.00	7.9	A	EB	LTR	0.00	7.9	A
Thieriot Ave	WB	L	0.02	7.7	A	WB	L	0.02	7.7	A	WB	L	0.02	8.0	A	WB	L	0.02	8.0	A
Unsignalized	NB	LTR	0.25	15.4	C	NB	LTR	0.26	15.6	C	NB	LTR	0.13	13.6	B	NB	LTR	0.13	13.9	B
	SB	LTR	0.17	15.6	C	SB	LTR	0.17	15.8	C	SB	LTR	0.07	13.6	B	SB	LTR	0.07	13.8	B

Notes: This table is new to the FEIS.
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Defacto Left
* - Denotes a congested movement

The incremental vehicle trips by construction workers and trucks (shown in Figure 17-2) were added to the No-Action traffic network (shown in Figure 17-~~3~~4) to establish the With-Action traffic network shown in Figure 17-~~4~~5. The volume-to-capacity (v/c) ratios, delays and levels of service for all lane groups at the analyzed intersections in both peak periods under With-Action conditions (construction) are provided in Table 17-~~7~~8. As shown in Table 17-~~7~~8, one~~two~~ lane group~~s~~ at one~~two~~ intersection~~s~~ in the construction

With-Action Construction Vehicle Volumes - AM & PM



14/4 - Weekday AM/PM Vehicular Volumes Project Area Analysis Intersection

This Figure has been added for the FEIS

AM peak hour (6:00 AM – 7:00 AM) and ~~six~~ three lane groups at ~~four~~ three intersections in the construction PM peak hour (3:00 PM – 4:00 PM) are expected to have the potential for significant adverse traffic impacts as a result of construction activities. Potential measures to mitigate the significant adverse traffic impacts identified in Table 17-~~7~~ 8 are discussed in Chapter 18, "Mitigation."

TABLE 17-8
No-Action and With-Action Intersection Level of Service Analysis

	No-Action AM Peak Hour					With-Action AM Peak Hour					No-Action PM Peak Hour					With-Action PM Peak Hour				
Signalized Intersections	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS
Bruckner Blvd EB &	EB	L	0.50	28.1	C	EB	L	0.50	28.1	C	EB	L	0.66	35.6	D	EB	L	0.66	35.6	D
White Plains Rd	EB	LTR	0.66	30.6	C	EB	LTR	0.68	31.3	C	EB	LTR	0.96	55.6	E	EB	LTR	0.97	56.8	E
	NB	TR	0.71	46.8	D	NB	TR	0.84	54.3	D *	NB	TR	0.98	69.6	E	NB	TR	1.09	101.1	F *
	SB	L	0.26	31.4	C	SB	L	0.27	34.0	C	SB	Def L	0.57	40.3	D	SB	Def L	0.54	40.0	D
	SB	LT	0.32	23.8	C	SB	LT	0.40	25.1	C	SB	T	0.61	28.2	C	SB	T	0.66	30.0	C
Bruckner Blvd WB &	WB	LT	0.79	31.2	C	WB	LT	0.83	33.6	C	WB	LT	0.97	49.9	D	WB	LT	0.99	55.8	E *
White Plains Rd	WB	R	0.30	22.6	C	WB	R	0.30	22.6	C	WB	R	0.10	21.6	C	WB	R	0.10	21.6	C
	NB	L	0.56	37.9	D	NB	L	0.64	42.1	D	NB	L	0.69	46.9	D	NB	L	0.75	51.5	D
	NB	LT	0.57	30.5	C	NB	LT	0.60	31.2	C	NB	LT	0.69	31.3	C	NB	LT	0.71	32.1	C
	SB	TR	0.42	38.8	D	SB	TR	0.44	39.1	D	SB	TR	0.59	39.3	D	SB	TR	0.59	39.3	D
	SB	R	0.54	46.5	D	SB	R	0.55	47.4	D	SB	R	0.59	43.8	D	SB	R	0.60	44.8	D
Bruckner Plaza &	WB	LR	0.03	16.5	B	WB	LR	0.03	16.5	B	WB	LR	0.03	16.5	B	WB	LR	0.03	16.5	B
White Plains Rd	NB	TR	0.57	20.5	C	NB	TR	0.70	24.6	C	NB	TR	0.67	23.1	C	NB	TR	0.79	28.8	C
	SB	L	0.02	11.9	B	SB	L	0.02	12.0	B	SB	L	0.04	12.3	B	SB	L	0.05	12.4	B
	SB	T	0.56	19.7	B	SB	T	0.68	23.4	C	SB	T	0.68	23.2	C	SB	T	0.73	25.2	C
Lafayette Ave &	EB	L	0.07	14.9	B	EB	L	0.08	15.0	B	EB	L	0.06	14.6	B	EB	L	0.06	14.7	B
Bolton Ave	EB	T	0.14	15.3	B	EB	T	0.27	16.8	B	EB	T	0.31	17.4	B	EB	T	0.45	19.7	B
	WB	TR	0.35	18.0	B	WB	TR	0.41	19.0	B	WB	TR	0.45	19.5	B	WB	TR	0.50	20.5	C
	SB	LR	0.07	14.6	B	SB	LR	0.07	14.6	B	SB	LR	0.09	14.8	B	SB	LR	0.09	14.8	B
White Plains Rd &	EB	L	0.19	22.3	C	EB	L	0.55	34.0	C	EB	L	0.33	26.1	C	EB	L	0.78	53.8	D *
Lafayette Ave	EB	TR	0.15	21.2	C	EB	TR	0.19	21.9	C	EB	TR	0.43	25.7	C	EB	TR	0.50	27.4	C
	WB	L	0.09	20.7	C	WB	L	0.13	21.9	C	WB	L	0.16	21.9	C	WB	L	0.21	23.6	C
	WB	TR	0.58	30.2	C	WB	TR	0.66	33.9	C	WB	TR	0.66	32.4	C	WB	TR	0.71	35.5	D
	NB	L	0.03	9.6	A	NB	L	0.05	9.9	A	NB	L	0.08	10.2	B	NB	L	0.10	10.5	B
	NB	TR	0.29	12.1	B	NB	TR	0.30	12.1	B	NB	TR	0.38	13.1	B	NB	TR	0.40	13.4	B
	SB	L	0.10	10.4	B	SB	L	0.11	10.7	B	SB	L	0.30	13.6	B	SB	L	0.33	14.5	B
	SB	TR	0.48	15.3	B	SB	TR	0.63	19.2	B	SB	TR	0.52	15.9	B	SB	TR	0.60	18.1	B
White Plains Rd &	EB	LTR	0.47	30.9	C	EB	LTR	0.47	30.9	C	EB	LTR	0.92	68.1	E	EB	LTR	0.92	68.9	E
Story Ave	WB	LT	0.42	28.9	C	WB	LT	0.43	29.0	C	WB	LT	0.52	31.4	C	WB	LT	0.53	31.4	C
	WB	R	0.61	35.5	D	WB	R	0.61	35.5	D	WB	R	0.96	70.7	E	WB	R	0.96	70.7	E
	NB	L	0.10	15.2	B	NB	L	0.12	15.6	B	NB	L	0.12	15.5	B	NB	L	0.13	15.7	B
	NB	TR	0.51	21.5	C	NB	TR	0.65	25.7	C	NB	TR	0.67	26.3	C	NB	TR	0.81	33.8	C
	SB	L	0.03	14.2	B	SB	L	0.04	14.3	B	SB	L	0.15	16.0	B	SB	L	0.18	16.7	B
	SB	T	0.48	20.5	C	SB	T	0.61	23.9	C	SB	T	0.60	23.2	C	SB	T	0.65	24.9	C
	SB	R	0.11	15.0	B	SB	R	0.16	15.6	B	SB	R	0.26	16.7	B	SB	R	0.28	17.0	B
White Plains Rd &	WB	LR	0.06	20.0	C	WB	LR	0.06	20.0	C	WB	LR	0.09	20.5	C	WB	LR	0.09	20.5	C
Turnbull Ave	NB	TR	0.60	17.5	B	NB	TR	0.69	20.4	C	NB	TR	0.68	19.5	B	NB	TR	0.78	24.0	C
	SB	L	0.04	9.8	A	SB	L	0.04	9.9	A	SB	L	0.26	13.8	B	SB	L	0.30	15.0	B
	SB	T	0.49	15.2	B	SB	T	0.60	17.7	B	SB	T	0.58	17.2	B	SB	T	0.63	18.4	B
Lafayette Ave &	EB	LT	0.02	8.2	A	EB	LT	0.02	8.3	A	EB	LT	0.02	8.3	A	EB	LT	0.02	8.3	A
Leland Ave	SB	LR	0.06	11.1	B	SB	LR	0.13	13.5	B	SB	LR	0.09	12.0	B	SB	LR	0.11	12.8	B
Unsignalized																				
Lafayette Ave &	EB	LT	0.02	8.0	A	EB	LT	0.03	8.1	A	EB	LT	0.02	8.1	A	EB	LT	0.04	8.3	A
Underhill Ave	SB	LR	0.04	10.5	B	SB	LR	0.05	11.2	B	SB	LR	0.05	12.3	B	SB	LR	0.06	14.5	B
Unsignalized																				
Lafayette Ave &	EB	LTR	0.02	8.3	A	EB	LTR	0.02	8.3	A	EB	LTR	0.00	7.9	A	EB	LTR	0.00	7.9	A
Thieriot Ave	WB	L	0.02	7.7	A	WB	L	0.04	8.0	A	WB	L	0.02	8.0	A	WB	L	0.04	8.2	A
Unsignalized	NB	LTR	0.26	15.6	C	NB	LTR	0.34	19.7	C	NB	LTR	0.13	13.9	B	NB	LTR	0.17	15.7	C
	SB	LTR	0.17	15.8	C	SB	LTR	0.38	26.2	D	SB	LTR	0.07	13.8	B	SB	LTR	0.10	15.5	C

Notes: This table is new to the FEIS.
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DefL-Defacto Left
* - Denotes a congested movement

Curb Lane Closures and Staging

Construction staging would most likely occur on the Development Site and may extend within portions of sidewalks, curbs and travel lanes of public streets adjacent to the Development Site. Similar to many other construction projects in New York City, temporary curb lane and sidewalk closures are expected to be required adjacent to the Development Site, which would have dedicated gates, driveways, or ramps for delivery vehicle access. As the Proposed Project is still in the preliminary design/approval phase, detailed construction staging plans have not yet been finalized. It is anticipated, however, that construction activity would mostly take place within the Development Site itself, and perhaps within portions of the adjacent Lafayette, Thieriot, and/or Seward avenues. Flag persons are expected to be present at active project site driveways, where needed, to manage the access and movement of trucks to ensure no on-street queuing. Some of the site deliveries may also occur along the perimeter of the construction site within delineated closed-off areas for concrete pour or steel delivery.

Maintenance and protection of traffic (MPT) plans would be developed for any required temporary sidewalk, lane, and/or street closures to ensure the safety of the construction workers and the public passing through the area, and to ensure that traffic and pedestrian flow along critical travel arteries is not interrupted, especially in peak travel periods. Approval of these plans and implementation of any closures would be coordinated with DOT-OCMC. Although the specific measures that would be needed for construction of the Proposed Project are not yet known, it is anticipated that measures specified in the MPT plans would likely include parking lane closures, safety signs, safety barriers, and construction fencing.

Transit

As discussed above and shown in Table 17-4, in the 2026 Q4 peak construction period, approximately 225 construction workers would travel to and from the Development Site each day. As also discussed above, a total of approximately 18.9 percent of construction workers are expected to travel to and from the project site by public transit (subway or bus). In addition, it is estimated that approximately 80 percent of all construction workers would arrive and depart in the peak hour before and after each shift. Therefore, it is estimated that approximately 43 construction workers would travel to and from the Development Site via public transit each day, and that approximately 34 of these trips would occur in each of the 6:00 AM – 7:00 AM and 3:00 PM – 4:00 PM construction peak hours. These construction worker trips, which would occur outside of the peak periods for overall transit ridership, would be distributed among nearby subway stations (12 trips) and bus routes (22 trips).

It is anticipated that Buildings B3, B4, B5 and B6 would be fully operational by the fourth quarter of 2026. However, the residential transit demand generated by these buildings would primarily occur outside of the construction peak hours and therefore, there is expected to be little overlap between operational transit trips and peak construction transit trips during the 2026 Q4 peak construction period.

As peak transit demand from construction workers on the Development Site would not meet the 200 trips/hour *CEQR Technical Manual* analysis threshold for a detailed subway analysis, nor the 50 trips/hour/direction analysis threshold for a detailed bus analysis, significant adverse impacts to subway and bus services are not expected to occur in the construction peak hour during the 2026 Q4 peak construction period.

Pedestrians

As discussed previously, it is anticipated that approximately 225 construction workers would travel to and from the Development Site in the 2026 Q4 peak construction period. An estimated 180 of these workers

(80 percent) would arrive and depart in the peak hour before and after each shift. In addition, there is expected to be little overlap between operational trips generated by the completed buildings at the Development Site and construction worker trips during this same period. Therefore, peak pedestrian demand from construction workers on the Development Site would not meet the 200 trips/hour *CEQR Technical Manual* analysis threshold for a detailed pedestrian analysis, and significant adverse pedestrian impacts are not expected to occur during the 2026 Q4 peak construction period. During construction, where sidewalk closures are required, adequate protection or temporary sidewalks would be provided in accordance with DOT-OCMC requirements.

Parking

Of the estimated 225 construction workers who would travel to the Development Site during the 2026 Q4 peak construction period, approximately 60 percent are expected to travel to the Development Site by private auto. Based on an average auto occupancy of 1.26 persons per auto, the maximum daily parking demand from project site construction workers would total approximately 109 spaces during the 7:00 AM – 8:00 AM period. In addition, Buildings B3, B4, B5, and B6 (which would be operational by the fourth quarter of 2026) would generate a demand for approximately 133 parking spaces in the 7:00 AM – 8:00 AM period. Therefore, site-generated parking demand during the 2026 Q4 peak construction period would total approximately 242 spaces. As it is assumed that there would be 251 parking spaces provided on-site during the 2026 Q4 peak construction period, the site-generated parking demand would be fully accommodated on-site. Therefore, the Proposed Actions are not expected to result in significant adverse parking impacts during the 2026 Q4 peak construction period.

Air Quality

As is typical with construction projects in New York City, construction of the Proposed Project would require use of both non-road construction equipment and on-road vehicles. Non-road construction equipment includes equipment operating on-site such as excavators, cranes and loaders. On-road vehicles include construction delivery trucks, dump trucks, concrete trucks, and construction worker vehicles arriving at and departing from the construction site as well as operating on-site. Emissions from non-road construction equipment and on-road vehicles have the potential to affect air quality. In addition, emissions from dust-generating construction activities (i.e., truck loading and unloading operations) also have the potential to affect air quality. A quantitative analysis of the overall combined impact of both non-road and on-road sources of construction-related air emissions, including dust emissions, was performed to determine the potential for significant adverse impacts from these sources of air emissions generated during construction of the Proposed Project. Chapter 12, "Air Quality," contains a review of these air pollutants; applicable regulations, standards, and benchmarks; and general methodology for the air quality analyses. Additional details relevant only to the construction air quality analysis methodology are presented in this section.

Emissions Reduction Measures

Construction activity in general, and large-scale construction in particular, has the potential to adversely affect air quality as a result of diesel emissions. Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. In addition, contractors would be required under contract specifications to implement an emissions reduction program to minimize the air quality effects from construction of the Proposed Project, consisting of the following components:

A. *Dust Control.* To minimize dust emissions from construction activities, a dust control plan including a robust watering program would be required. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the Project Area; and water sprays would be used for all demolition, excavation, and transfer of soils so that materials would be dampened as necessary to avoid the suspension of dust into the air. Stockpiled soils or debris would be watered, stabilized with a chemical suppressing agent, or covered. All measures required by DEP's *Construction Dust Rules* regulating construction-related dust emissions would be implemented.

B. *Idling Restriction.* In addition to adhering to the local law restricting unnecessary idling on roadways, on-site vehicle idle time would be restricted to three minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or are otherwise required for the proper operation of the engine.

C. *Clean Fuel*. ULSD fuel would be used exclusively for all diesel engines throughout the Project Area.

D. *Diesel Equipment Reduction*. In accordance with the New York City Noise Control Code as discussed below, under "Noise," electrically powered equipment would be preferred over diesel-powered and gasoline-powered versions of that equipment to the extent practicable. Equipment that would use grid power in lieu of diesel engines includes, but may not be limited to, hoists and small equipment (such as welders).

E. *Utilization of Newer Equipment.* EPA's Tier 1 through 4 standards for non-road diesel engines regulate the emission of criteria pollutants from new engines, including PM, CO, NO_x, and hydrocarbons. To the extent practicable, all diesel-powered non-road construction equipment with a power rating of 50 horsepower (hp) or greater would meet at least the Tier 3[2] emissions standard.

F. *Best Available Tailpipe Reduction Technologies*. Non-road diesel engines with a power rating of 50 hp or greater and controlled truck fleets (i.e., truck fleets under long-term contract with the project) including but not limited to concrete mixing and pumping trucks would utilize the best available tailpipe (BAT) technology for reducing diesel particulate matter (DPM) emissions. Diesel particulate filters (DPFs) have been identified as being the tailpipe technology currently proven to have the highest reduction capability. Construction contracts would specify that all diesel non-road engines rated at 50 hp or greater would utilize DPFs, either installed by the original equipment manufacturer or retrofitted. Retrofitted DPFs must be verified by EPA or the California Air Resources Board. Active DPFs or other technologies proven to achieve an equivalent reduction may also be used. The use of DPFs for diesel engines meeting the Tier 3 emissions standard achieves similar emission reductions as the newer Tier 4 particulate matter emission standard.

---

[2] The first federal regulations for new non-road diesel engines were adopted in 1994, and adopted by EPA into regulation in a 1998 Final Rulemaking. The 1998 regulation introduces Tier 1 emissions standards for all equipment 50 hp and greater and phases in the increasingly stringent Tier 2 and Tier 3 standards for equipment manufactured in 2000 through 2008. In 2004, the EPA introduced Tier 4 emissions standards with a phased-in period of 2008 to 2015. The Tier 1 through 4 standards regulate the EPA criteria pollutants, including PM, hydrocarbons (HC), NO_x and carbon monoxide (CO). Prior to 1998, emissions from non-road diesel engines were unregulated. These engines are typically referred to as Tier 0.

Overall, this emissions reduction program is expected to substantially reduce diesel emissions. The analysis accounted for the emissions reduction measures listed above that would be implemented during construction of the Proposed Project.

On-Site Construction Activity Assessment

To determine which construction periods constitute the worst-case periods for the pollutants of concern (PM, CO, NO_2), construction-related emissions were calculated for each calendar year throughout the duration of construction on a rolling annual and peak day basis for $PM_{2.5}$. $PM_{2.5}$ is selected for determining the worst-case periods for all pollutants analyzed, because the ratio of predicted $PM_{2.5}$ incremental concentrations to impact criteria is anticipated to be higher than for other pollutants. Therefore, initial estimates of $PM_{2.5}$ emissions throughout the construction years were used for determining the worst-case periods for analysis of all pollutants. Generally, emission patterns of PM_{10} and NO_2 would follow $PM_{2.5}$ emissions, since they are related to diesel engines by horsepower. CO emissions may have a somewhat different pattern but would also be anticipated to be highest during periods when the most activity would occur.

Based on the resulting multi-year profiles of annual average and peak day average emissions of $PM_{2.5}$, and the proximity of the construction activities to residences, other sensitive uses, and publicly accessible open spaces, worst-case short-term and annual periods for construction were identified for dispersion modeling of annual and short-term (i.e., 24-hour, 8-hour, and 1-hour) averaging periods. August 2021 and the 12-month period from April 2021 to March 2022 were identified as worst-case short-term and annual periods, respectively, since the highest project-wide emissions were predicted in these periods. During these times, construction activities are projected to occur simultaneously at Buildings 4, 5, and 6 under the construction schedule and sequence as presented above in Figure 17-1. In addition, these peak periods include construction activities that would take place in close proximity to existing residential locations on Seward Avenue and Thieriot Avenue across these development sites, as well as the existing Stevenson Commons complex.

Dispersion of the relevant air pollutants from the construction sites during these periods were analyzed. Broader conclusions regarding potential concentrations during non-peak periods are discussed qualitatively, based on the reasonable worst-case analysis period results.

ENGINE EMISSIONS

The sizes, types, and number of units of construction equipment were estimated based on the construction activity schedule developed by the Construction Manager for the Proposed Project. Emission rates for $NO_{X,}$ CO, PM_{10}, and $PM_{2.5}$ from truck engines were developed using the EPA Motor Vehicle Emission Simulator (MOVES2014b) emission model. Emission factors for NO_x, CO, PM_{10}, and $PM_{2.5}$ from on-site construction engines were developed using the NONROAD emission module included in the MOVES2014b emission model. The emission factor calculations took into account any emissions reduction measures (i.e., the application of diesel particulate filters, etc.) that would be implemented for the Proposed Project.

DUST EMISSIONS

In addition to engine emissions, dust emissions from operations (e.g., excavation and transferring of excavated materials into dump trucks) were calculated based on USEPA procedures delineated in AP-42 Table 13.2.3-1. Since construction is required to follow the New York City Air Pollution Control Code regarding construction-related dust emissions, a 50 percent reduction in particulate emissions from fugitive dust were conservatively assumed in the calculation (dust control methods such as wet suppression would often provide at least a 50 percent reduction in particulate emissions).

DISPERSION MODELING

Potential impacts from the Proposed Project's construction sources were evaluated using a refined dispersion model, the EPA/AMS AERMOD dispersion model. AERMOD is a state-of-the-art dispersion model, applicable to rural and urban areas, flat and complex terrain, surface and elevated releases, and multiple sources (including point, area, and volume sources). AERMOD is a steady-state plume model that incorporates current concepts about flow and dispersion in complex terrain and includes updated treatments of the boundary layer theory, understanding of turbulence and dispersion, and handling of terrain interactions.

SOURCE SIMULATION

For short-term model scenarios (predicting concentration averages for periods of 24 hours or less), all stationary sources, such as compressors, cranes, or concrete trucks, which idle in a single location while unloading, were simulated as point sources. Other engines, which would move around the site on any given day, were simulated as area sources. For periods of 8 hours or less (less than the length of a shift), it was assumed that all engines would be active simultaneously.

METEOROLOGICAL DATA

The meteorological data set consists of five consecutive years of latest available meteorological data to be provided by the New York State Department of Environmental Conservation (DEC): surface data collected at the nearest representative National Weather Service Station (La Guardia Airport) from 2014 to 2018 and concurrent upper air data collected at Brookhaven, New York. The meteorological data provide hour-by-hour wind speeds and directions, stability states, and temperature inversion elevation over the five-year period. These data were processed using the USEPA AERMET program to develop data in a format which can be readily processed by the AERMOD model.

BACKGROUND CONCENTRATIONS

To estimate the maximum expected total pollutant concentrations, the calculated impacts from the emission sources must be added to a background value that accounts for existing pollutant concentrations from other sources. The background levels are based on concentrations monitored at the nearest New York State Department of Environmental Conservation (NYSDEC) ambient air monitoring stations (See Table 12-6 in Chapter 12, "Air Quality").

RECEPTOR LOCATIONS

Receptors were placed at locations that would be publicly accessible, at residential and other sensitive uses at both ground-level and elevated locations (e.g., residential windows), at adjacent sidewalk locations, at publically accessible open spaces, at the schools on the adjacent blocks, and at completed portion of the Proposed Project where applicable when occupied.

ON-ROAD SOURCES

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

ON-ROAD VEHICLE EMISSIONS

Vehicular engine emission factors were computed using the EPA mobile source emissions model, MOVES2014b.[3] This emissions model is capable of calculating engine emission factors for various vehicle types, based on the fuel type (gasoline, diesel, or natural gas), meteorological conditions, vehicle speeds, vehicle age, roadway type and grade, number of starts per day, engine soak time, and various other factors that influence emissions, such as inspection maintenance programs. The inputs and use of MOVES incorporate the most current guidance available from NYSDEC.

ON-ROAD DUST EMISSIONS

$PM_{2.5}$ emission rates were determined with fugitive road dust to account for their impacts. Road dust emission factors were calculated according to the latest procedure delineated by EPA[4]. An average weight of 20 tons and 2.5 tons were assumed for construction trucks and worker vehicles in the analyses, respectively.

Construction Air Quality Analysis Results

Maximum predicted concentrations during the representative worst-case construction periods for the Proposed Project are presented in Table 17-~~8~~9. To estimate the maximum total pollutant NO_2, CO, and PM_{10} concentrations, the modeled concentrations from the Proposed Project were added to a background value that accounts for existing pollutant concentrations from other nearby sources. As shown in Table 17-~~8~~9, the maximum predicted total concentrations of NO_2, CO, and PM_{10} are below the applicable NAAQS for both construction phases. In addition, the maximum predicted $PM_{2.5}$ concentrations would not exceed the applicable *CEQR Technical Manual de minimis* thresholds in the 24-hour and annual averaging periods.[5] Emissions from the other less intensive construction periods would be less than the emissions during the modeled worst case periods; therefore, the resulting concentrations from these non-peak periods are expected to be less than the concentrations presented in Table 17-~~8~~9.

Conclusion

The dispersion modeling analysis of construction-related air emissions for both non-road and on-road sources determined that $PM_{2.5}$ and PM_{10}, annual-average NO_2, and CO concentrations would be below their corresponding *de minimis* thresholds or NAAQS, respectively. Therefore, construction of the Proposed Project would not result in significant adverse air quality impacts due to construction sources.

---

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

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

[5] The *CEQR Technical Manual* 24-hour $PM_{2.5}$ *de minimis* criterion is equal to half the difference between the 24-hour background concentration (21.3 $\mu g/m^3$) and the 24-hour standard (35 $\mu g/m^3$).

TABLE 17-~~8~~9
Maximum Pollutant Concentrations from Phase 1 Construction

Pollutant	Averaging Period	Units	Maximum Modeled Impact	Background Concentration (1)	Total Concentration	Criterion
NO_2	Annual	$\mu g/m^3$	33.6	32.8	66.4	100 (2)
CO	1-hour	ppm	0.5	1.9	2.4	35 (2)
	8-hour	ppm	0.3	1.5	1.8	9 (2)
PM_{10}	24-hour	$\mu g/m^3$	3.9	33.0	36.9	150 (2)
$PM_{2.5}$	24-hour	$\mu g/m^3$	1.7	N/A	N/A	8.5 (3)
	Annual—Local	$\mu g/m^3$	0.29	N/A	N/A	0.30 (4)
	Annual—Neighborhood	$\mu g/m^3$	0.01	N/A	N/A	0.1 (4)

Notes:
N/A—Not Applicable
1 The background levels are based on the most representative concentrations monitored at DEC ambient air monitoring stations (see Table 12-6 in Chapter 12, "Air Quality").
2 NAAQS.
3 $PM_{2.5}$ *de minimis* criterion—24-hour average, not to exceed more than half the difference between the background concentration and the 24-hour standard of 35 $\mu g/m^3$.
4 $PM_{2.5}$ *de minimis* criterion—annual (local and neighborhood scale).

Noise

Potential impacts on community noise levels during construction could result from construction equipment operation and construction vehicles and delivery vehicles traveling to and from the Development Site. Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, the acoustical utilization factor of the equipment (i.e., the percentage of time a piece of equipment is operating at full power), the distance from the construction site, and any shielding effects (from structures such as buildings, walls, or barriers). Noise levels caused by construction activities would vary widely, depending on the stage of construction and the location of the construction relative to receptor locations. The most significant construction noise sources are expected to be impact equipment such as pile drivers and excavators with hydraulic break rams, as well as crane operation and movements of trucks.

Construction noise is regulated by the requirements of the *New York City Noise Control Code* (also known as Chapter 24 of the *Administrative Code of the City of New York*, or Local Law 113) and the DEP Notice of Adoption of Rules for Citywide Construction Noise Mitigation (also known as Chapter 28). These requirements mandate that specific construction equipment and motor vehicles meet specified noise emission standards; that construction activities be limited to weekdays between the hours of 7 AM and 6 PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. As described above, for weekend and after hour work, permits would be required, as specified in the *New York City Noise Control Code*. As required under the *New York City Noise Control Code*, a site-specific noise mitigation plan for the proposed project would be developed and implemented.

Sound Level Descriptors

Chapter 14, "Noise," defines the sound level descriptors. The $L_{eq(1)}$ is the noise descriptor recommended for use in the *CEQR Technical Manual* for vehicular traffic and construction noise impact evaluation, and is used to provide an indication of highest expected sound levels. The 1-hour L_{10} is the noise descriptor used in the *CEQR Technical Manual* noise exposure guidelines. The maximum 1-hour equivalent sound level ($L_{eq(1)}$) and maximum 1-hour L_{10} were selected as the noise descriptors used in the construction noise impact evaluation.

Construction Noise Impact Criteria

Chapter 22, Section 100 of the *CEQR Technical Manual* breaks construction duration into “short-term” and “long-term” and states that construction noise is not likely to require analysis unless it “affects a sensitive receptor over a long period of time.” Consequently, the construction noise analysis considers both the potential for construction of a project to create high noise levels (the “intensity”), whether construction noise would occur for an extended period of time (the “duration”), and the locations where construction has the potential to produce noise (“receptors”) in evaluating potential construction noise effects.

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 result in any exceedances of these criteria at a given receptor, then that receptor would not have the potential to experience a construction noise impact. However, as is the case with the Proposed Project, if construction would result in exceedances of these noise impact criteria, then further consideration of the intensity and duration of construction noise is warranted at that receptor. The screening level noise impact criteria for mobile and on-site construction activities are as follows:

- If the No Action noise level is less than 60 dBA $L_{eq(1)}$, a 5 dBA $L_{eq(1)}$ or greater increase would require further consideration.
- If the No Action noise level is between 60 dBA $L_{eq(1)}$ and 62 dBA $L_{eq(1)}$, a resultant $L_{eq(1)}$ of 65 dBA or greater would require further consideration.
- 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 PM and 7 AM), the threshold requiring further consideration would be 3 dBA $L_{eq(1)}$.

Additionally, the *CEQR Technical Manual* characterizes noise exposure into “acceptable,” “marginally acceptable,” “marginally unacceptable,” or “clearly unacceptable” categories based on the $L_{10(1)}$ noise level and land use. For the purposes of construction noise evaluation, noise levels in the “acceptable” or “marginally acceptable” categories are not considered to exceed the screening threshold. If construction of the proposed project would result in “marginally unacceptable” or “clearly unacceptable” noise levels that exceed these noise impact criteria at a receptor, then further consideration of the intensity and duration of construction noise is warranted at that receptor. Generally, exceedances of these criteria for more than 24 consecutive months are considered to be significant impacts. Noise level increases that would be considered objectionable (i.e., equal to or greater than 15 dBA) lasting more than 12 consecutive months or more and noise level increases considered very objectionable (i.e., equal to or greater than 20 dBA)[6] would also be considered significant impacts.

[6] Definition of “objectionable” and “very objectionable” noise level increases based on Table B from New York State Department of Environmental Conservation Assessing and Mitigating Noise Impacts policy manual, revised February 2001.

Noise Analysis Fundamentals

As stated above, construction activities for the Proposed Project would be expected to result in increased noise levels as a result of the operation of construction equipment on-site, and the movement of construction-related vehicles (i.e., worker trips, and material and equipment trips) on the roadways to and from the Development Site. The effect of each of these noise sources was evaluated. The results presented below show the effects of construction activities (i.e., noise due to both on-site construction equipment and construction-related vehicle operation) on noise levels at nearby noise receptor locations.

Noise from the operation of construction equipment at a specific receptor location near a construction site is generally 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 following:

- The noise emission level of the equipment;
- A usage factor, which accounts for the percentage of time the equipment is operating at full power;
- The distance between the piece of equipment and the receptor;
- Topography and ground effects; and
- Shielding.

Noise levels due to construction-related traffic are a function of the following:

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

Noise Analysis Methodology

The construction noise methodology used the following process:

1. *Select analysis hours for construction mobile source noise analysis*. The 6:00 AM to 7:00 AM hour was selected as the analysis hour because this would be the hour when the highest number of construction worker auto and construction truck trips to and from the construction site would simultaneously occur.
2. *Conduct construction mobile source noise analysis.* At each of the roadway segments analyzed for construction traffic, the construction worker vehicle and construction truck trips during the analysis hour were converted to Noise Passenger Car Equivalents (PCEs) and compared to the existing level of Noise PCEs to determine whether there would be a potential doubling, which would result in an exceedance of CEQR construction noise screening thresholds (i.e., a 3 dBA increase in noise levels).
3. *Select analysis hours for cumulative on-site equipment and construction truck noise analysis.* The 7:00 AM to 8:00 AM hour was selected as the analysis hour because this would be the hour when the highest number of truck trips to and from the construction site would overlap with on-site equipment operation.

4. *Select receptor locations for cumulative on-site equipment and construction truck noise analysis.* Selected receptors represent open space, residential, or other noise-sensitive uses potentially affected by the construction associated with the Proposed Project during operation of on-site construction equipment and/or along routes taken to and from the development site by construction trucks. Project elements (i.e., buildings) that would be completed and occupied while construction of the Proposed Project is still ongoing were also included in the analysis as receptors.
5. *Establish existing noise levels at selected receptors.* Measured noise levels from the approved *1965 Lafayette Avenue Rezoning EAS (2017)* (ULURP Nos. C-170392-ZMK; N-170393-ZRX) and *1755 Watson Avenue Rezoning EAS (2016)* (ULURP Nos. C-170150-ZMX; N-170151-ZRX) were used to establish existing noise levels in the operational noise analysis, and was relied upon for the construction noise analysis as well. A CadnaA model representing the existing conditions (including existing building geometry and existing condition traffic levels) was validated based on the estimated noise levels from the *1965 Lafayette Avenue Rezoning EAS* and the *1755 Watson Avenue Rezoning EAS* and used to calculate baseline noise levels at the other noise receptor locations included in the analysis.
6. *Establish worst-case noise analysis periods under the anticipated construction schedule.* The worst-case noise analysis periods are the periods during the construction schedule that are expected to have the greatest potential to result in construction noise effect. The selected time periods are described below in the "Analysis Periods" section.
7. *Calculate construction noise levels for each analysis period at each receptor location.* Given the on-site equipment and construction truck trips expected during each of the analysis periods, and the location of the equipment, which is based on construction logistics diagrams and construction truck and worker vehicle trip assignments, a CadnaA model file for each analysis period was created. All model files included each of the construction noise sources during the analysis period and hour, calculation points representing multiple locations on various façades and floors of the associated receptors previously identified, as well as the noise control measures that would be used on the Development Site.
8. *Determine total noise levels and noise level increments during construction.* For each analysis period and each noise receptor, the calculated level of construction noise was logarithmically added to the existing noise level to determine the cumulative total noise level. The existing noise level at each receptor was then arithmetically subtracted from the cumulative noise level in each analysis period to determine the noise level increments.
9. *Compare construction noise increments to impact criteria.* For each analysis period and each noise receptor, the predicted noise increments due to construction was compared to CEQR noise impact thresholds and additional incremental noise impact criteria as described above.
10. *Establish construction noise duration.* For each receptor, the noise level increments in each analysis period was evaluated to determine the duration during construction that the receptor would experience exceedances of impact criteria.
11. *Identify potential construction noise impacts.* At each receptor where exceedances of construction noise impact criteria are predicted, a determination was made as to whether the Proposed Actions would have the potential to result in significant adverse construction noise impacts.

Construction Mobile Source Analysis

A Noise PCE screening was conducted for noise levels emitted from construction mobile sources. At each of the roadway segments analyzed for construction traffic, the construction worker vehicle and construction truck trips during the analysis hour was converted to Noise PCEs and compared to the existing level of Noise PCEs to determine whether there would be a potential doubling, which would result in an exceedance of CEQR construction noise screening thresholds (i.e., a 3 dBA increase in noise levels). The 6:00 AM to 7:00 AM hour was selected as the analysis hour because this would be the hour when the highest number of worker vehicle and construction truck trips to and from the construction site would occur. At any receptor locations where a doubling of Noise PCEs would occur as a result of construction trips, estimated noise levels from the *1965 Lafayette Avenue EAS* (CEQR No. 17DCP172X) and the *1755 Watson Avenue Rezoning EAS* (CEQR No. 17DCP075X) were used to establish a baseline, and the predicted noise level increment was added to determine the total future noise level during the construction period.

Construction truck trips that would occur during the construction work day (i.e., after 7:00 AM) were included in the modeling of construction noise as discussed below.

Construction Noise Modeling

Noise effects from construction activities were evaluated using the CadnaA model, a computerized model developed by DataKustik for noise prediction and assessment. The model can be used for the analysis of a wide variety of noise sources, including stationary sources (e.g., construction equipment, industrial equipment, power generation equipment) and transportation sources (e.g., roads, highways, railroad lines, busways, waterways, 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, etc. The CadnaA model is based on the acoustic propagation standards promulgated in International Standard ISO 9613-2. 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 input data used with the CadnaA model included CAD drawings that define site work areas, adjacent building footprints and heights, locations of streets, and 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 site, as well as noise control measures—were input to the model. Construction equipment source strength was determined by the L_{max} levels presented in Table 22-1 of the 202014 *CEQR Technical Manual.* For construction equipment not included in this table, manufacturer specifications or field measured noise levels were used. Construction-related vehicles were represented by roadway sources along the adjacent roadways in the CadnaA model.

In addition, reflections and shielding by barriers erected on the construction site and shielding from adjacent buildings were accounted for in the model. 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. The $L_{10(1)}$ noise levels were conservatively estimated by adding 3 dBA to the $L_{eq(1)}$ noise levels, as is standard practice[7].

Determination of Non-Construction Noise Levels

Noise generated by construction activities (calculated using the CadnaA model as described above) was added to baseline (i.e., non-construction) noise levels, including noise generated by non-construction traffic on adjacent roadways, to determine the total noise levels at each receptor location. Baseline noise levels were calculated using the CadnaA model using existing condition traffic data. The existing condition CadnaA model

[7] Federal Highway Administration Roadway Construction Noise Model User's Guide, Page 15. http://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf

included receptors representing the noise measurement locations on Lafayette Avenue, Thieriot Avenue, and Seward Avenue to be used for the purpose of validating or calibrating the existing condition results.

Noise Analysis Periods

The construction noise analysis calculated construction noise levels based on projected activity and equipment usage as well as the level of construction traffic for various phases of construction of the Proposed Project. Based on the anticipated construction schedule and preliminary construction estimates to be developed for the Proposed Project, specific time periods during construction were selected for detailed analysis. These were selected to capture each major construction stage (e.g., excavation/foundation work, superstructure work, interior fit-out work) at the buildings to be constructed under the Proposed Actions, including major overlaps of construction stages between individual building sites. These are the time periods with the potential to result in the maximum incremental construction noise at nearby receptors (i.e., time periods when multiple buildings would be under construction using noisy equipment) as well as resulting in the maximum levels of construction noise at the proposed buildings that would be completed and occupied during subsequent construction associated with the Proposed Project. Each analysis time period conservatively represents 3 to 11 months of time based on the duration of activities that would be underway during the time period.

The selected analysis periods are shown in Table 17-~~9~~10.

TABLE 17-~~9~~10
Summary of Construction Noise Analysis Periods

Time (Year / Month)	Construction Activities
2021 / May	B4, B5, B6 – Excavation
2021 / August	B4, B5, B6 – Foundation
2021 / December	B4, B5, B6 – Superstructure and Exteriors
2022 / June	B4, B5, B6 – Exteriors and Interiors
2023 / June	B3 – Foundation
2024 / January	B3 – Superstructure and Exteriors
2024 / July	B3 – Exteriors and Interiors
2025 / October	B2 – Foundation
2026 / April	B1 – Foundation B2 – Superstructure and Exteriors
2026 / August	B1 – Superstructure B2 – Exteriors and Interiors
2027 / May	B1 – Exteriors and Interiors B2 – Site Work and Interiors
2027 / July	B1 – Interiors

Noise Reduction Measures

Construction of the Proposed Project would be required to follow the requirements of the *New York City Noise Control Code* (also known as Chapter 24 of the *Administrative Code of the City of New York*, or Local Law 113) for construction noise control measures. Specific noise control measures would be incorporated in the noise mitigation plan(s) required under the *New York City Noise Control Code*. These measures could include a variety of source and path controls.

In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with the *New York City Noise Code*:

- Equipment that meets the sound level standards specified in Subchapter 5 of the *New York City Noise Control Code* would be utilized from the start of construction. Table 17-~~10~~ 11 shows the noise levels for typical construction equipment and the mandated noise levels for the equipment that would be used for construction of the Proposed Project.
- As early in the construction period as logistics would allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders, water pumps, bench saws, and table saws (i.e., early electrification) to the extent feasible and practicable. Where electrical equipment cannot be used, diesel or gas-powered generators and pumps would be located within buildings to the extent feasible and practicable.
- Where feasible and practicable, construction sites would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than 3 minutes at the construction site based upon Title 24, Chapter 1, Subchapter 7, Section 24-163 of the New York City Administrative Code.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.
- Pile installation will be drilled rather than impact driven.

TABLE 17-~~10~~11
Typical Construction Equipment Noise Emissions (dBA)

Equipment List	L_{max} @ 50 feet[1]
Bar Bender	80
Concrete Pump	82
Concrete Truck	85
Concrete Vibrator	80
Cranes (Mobile)	85
Delivery Truck	84
Drill Rig	85
Dump Truck	84
Excavator	85
Forklift	64[2]
Generator	82
Hoist	75[3]

Sources:
[1] Table 22-1 of Chapter 22, *CEQR Technical Manual*, March 20~~20~~~~14~~ Edition, except where noted.
[2] *East New York Rezoning FEIS,* 2016.
[3] "Noise Control for Construction Equipment…" Report for Hydro Quebec, 1985.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented:

- 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;
- Noise barriers constructed from plywood or other materials would be utilized to provide shielding (e.g., the construction sites would have a minimum 10-foot tall barrier); and
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents) for certain dominant noise equipment to the extent feasible and practical based on the results of the construction noise calculations. The requirements for construction of portable noise barriers, enclosures, tents, etc. are set forth in DEP's "Rules for Citywide Construction Noise Mitigation."

Noise Receptor Sites

A noise-sensitive receptor is defined in Chapter 19, Section 124 of the 20~~14~~20 *CEQR Technical Manual* and includes indoor receptors such as residences, hotels, health care facilities, nursing homes, schools, houses of worship, court houses, public meeting facilities, museums, libraries, and theaters. Outdoor sensitive receptors include parks, outdoor theaters, golf courses, zoos, campgrounds, and beaches.

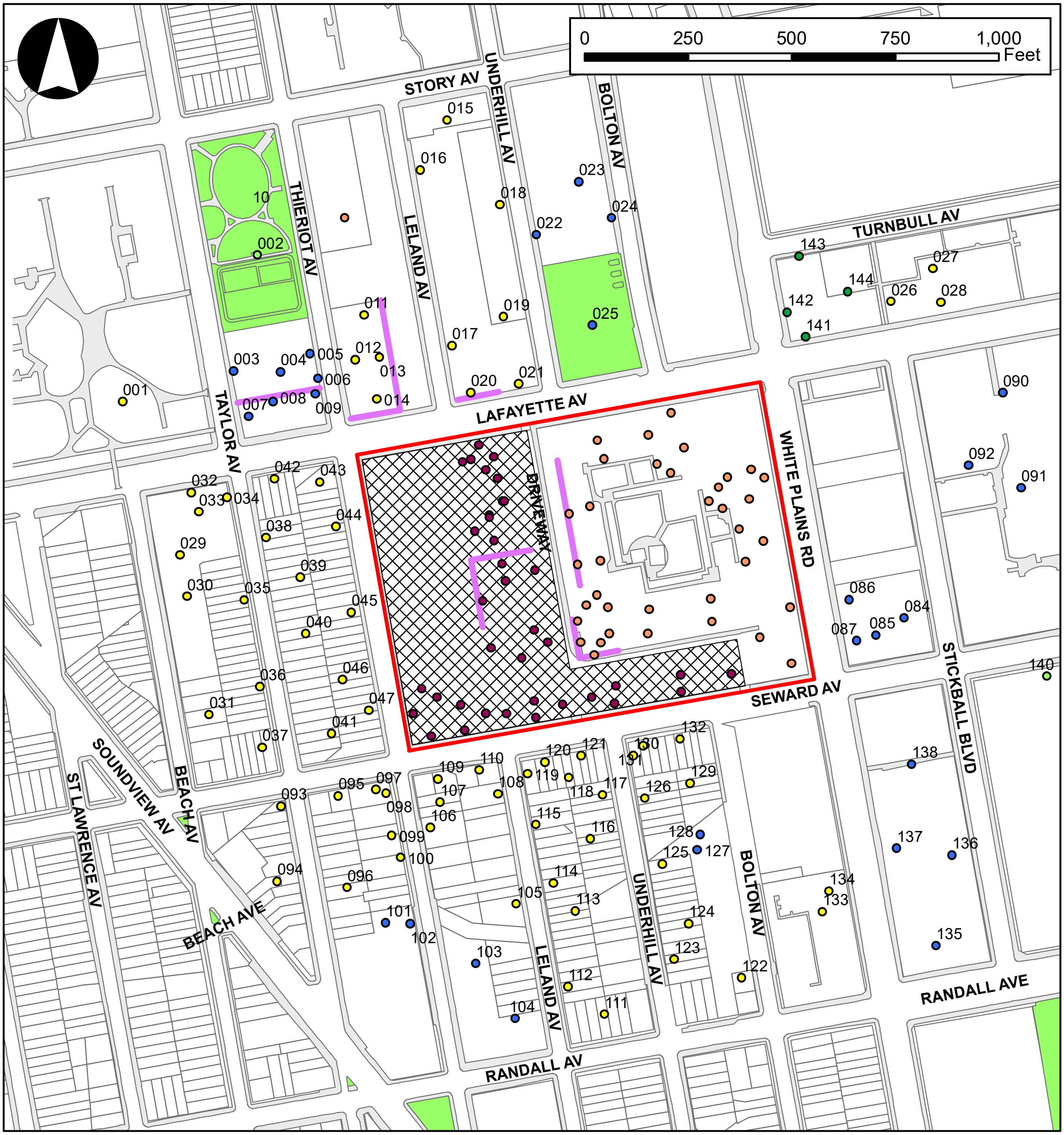
Within the study area, 179 receptor locations close to the Development Site were selected for the construction noise analysis to represent buildings or noise-sensitive open space locations that have the potential to experience elevated noise as a result of construction. These receptors were either located adjacent to planned areas of activity or streets where construction trucks would pass. At some buildings, multiple façades were analyzed as receptors. At high-rise buildings, noise receptors were selected at multiple elevations. At open space locations, receptors were selected at street level. The receptor sites selected for detailed analysis are representative locations where maximum project effects due to construction noise would be expected.

Figure 17-~~5~~ 6 shows the locations of the 179 noise receptor sites, and Table 17-~~11~~ 12 lists the 3 noise measurement sites (i.e., sites M1 and M2) as well as the 179 noise receptor sites (i.e., sites 1 to 179) and the associated land use at these sites.

TABLE 17-~~11~~12
Noise Receptors by Location and Land Use

Receptor	Location	Block / Lot	Associated Land Use
M1	Midpoint of the Development Site's northern frontage along Lafayette Avenue	Block 3600 / Lot 4	Noise Measurement Location
M2	Midpoint of the Development Site's southern frontage along Seward Avenue	Block 3600 / Lot 4	Noise Measurement Location
1	805 Taylor Avenue	Block 3637 / Lot 1	Residential
2	1820 Story Avenue	Block 3641 / Lot 1	Open Space
3-9	800 Taylor Avenue	Block 3641 / Lot 1	School
10	880 Thieriot Avenue	Block 3642 / Lot 1	Mixed Residential & Commercial
11-14	820 Thieriot Avenue	Block 3642 / Lot 30	Residential
15	1872 Story Avenue	Block 3643 / Lot 7502	Residential
16	856 Leland Avenue	Block 3643 / Lot 7501	Residential
17	822 Leland Avenue	Block 3643 / Lot 7501	Residential
18	857 Underhill Avenue	Block 3643 / Lot 7502	Residential
19	835 Underhill Avenue	Block 3643 / Lot 7502	Residential
20	1861-1865 Lafayette Avenue	Block 3643 / Lot 7501	Residential
21	1871 Lafayette Avenue	Block 3643 / Lot 7501	Residential
22-25	885 Bolton Avenue	Block 3644 / Lot 1	School
26-28	1965 Lafayette Avenue	Block 3672 / Lot 1	Residential
29-30	740 Beach Avenue	Block 3598 / Lot 17	Residential
31	714 Beach Avenue	Block 3598 / Lot 12	Residential
32-34	1810 Lafayette Avenue	Block 3598 / Lot 17	Residential
35	741 Taylor Avenue	Block 3598 / Lot 53	Residential
36	719 Taylor Avenue	Block 3598 / Lot 65	Residential
37	1817 Seward Avenue	Block 3598 / Lot 2	Residential
38	746 Taylor Avenue	Block 3599 / Lot 34	Residential
39	738 Taylor Avenue	Block 3599 / Lot 24	Residential
40	726 Taylor Avenue	Block 3599 / Lot 18	Residential
41	706 Taylor Avenue	Block 3599 / Lot 9	Residential

Construction Noise Receptors



Legend

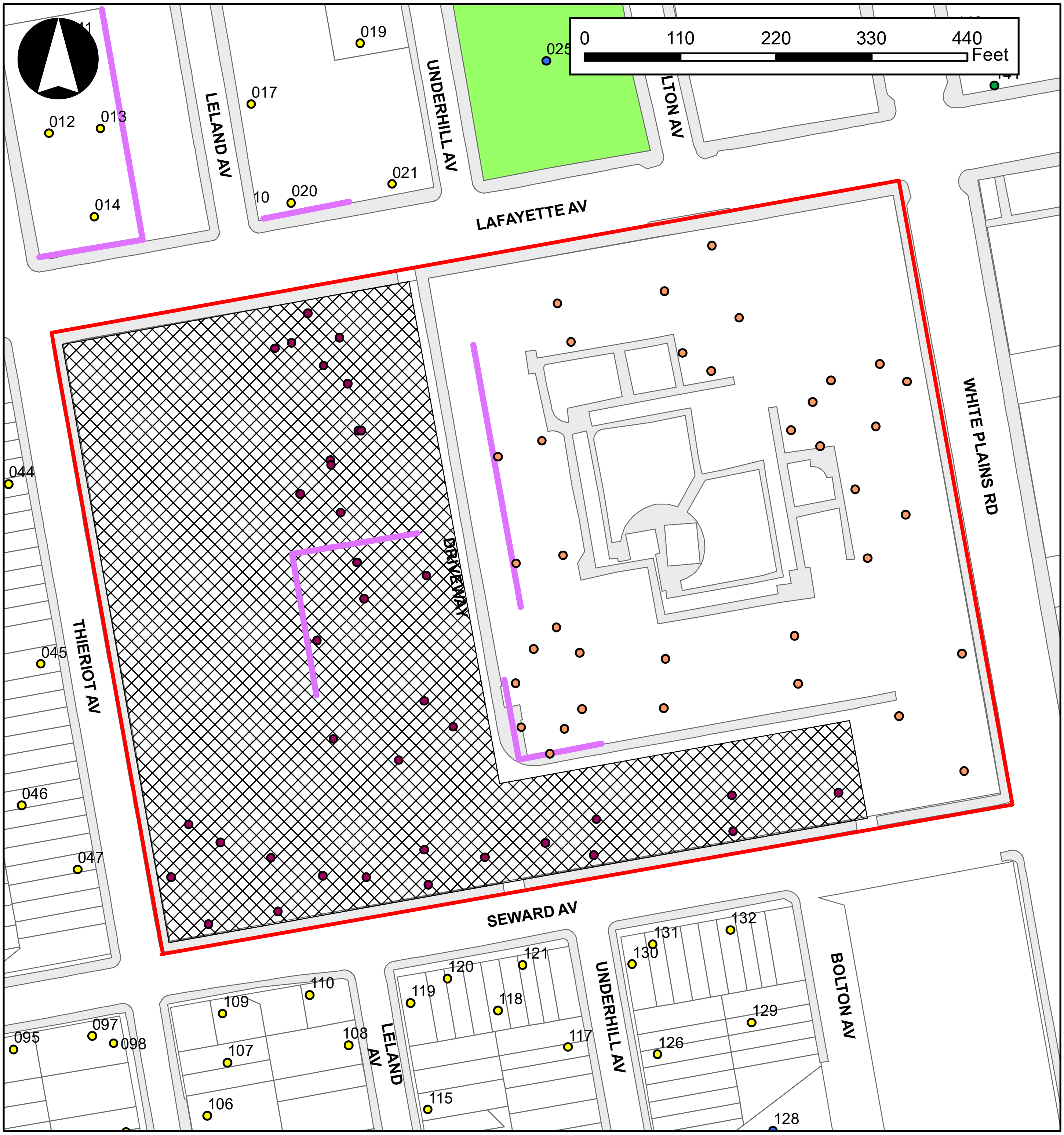
- Primary Study Area (Project Area)
- Development Site
- Open Space
- Facades with Significant Construction Noise Impacts

Receptors (keyed to Table 17-11)

- Residential
- Mixed Residential and Commercial
- Institutional
- Open Space
- Future Residential
- Future Mixed Use

This figure has been updated for the FEIS.

Construction Noise Receptors



Legend

- Primary Study Area (Project Area)
- Development Site
- Open Space
- Facades with Significant Construction Noise Impacts

Receptors (keyed to Table 17-11)

- Residential
- Mixed Residential and Commercial
- Institutional
- Open Space
- Future Residential
- Future Mixed Use

This figure has been updated for the FEIS.

42	1824 Lafayette Avenue	Block 3599 / Lot 38	Residential
43	759 Thieriot Avenue	Block 3599 / Lot 42	Residential
44	749 Thieriot Avenue	Block 3599 / Lot 47	Residential
45	731 Thieriot Avenue	Block 3599 / Lot 56	Residential
46	717 Thieriot Avenue	Block 3599 / Lot 63	Residential
47	711 Thieriot Avenue	Block 3599 / Lot 66	Residential
48-49	1870 Lafayette Avenue	Block 3600 / Lot 4	Mixed Residential & Commercial
50-54	1880 Lafayette Avenue	Block 3600 / Lot 4	Mixed Residential & Commercial
55-61	755 White Plains Road	Block 3600 / Lot 4	Mixed Residential & Commercial
62-64	741 White Plains Road	Block 3600 / Lot 4	Mixed Residential & Commercial
65-67	731 White Plains Road	Block 3600 / Lot 4	Mixed Residential & Commercial
68-69	721 White Plains Road	Block 3600 / Lot 4	Mixed Residential & Commercial
70-71	711 White Plains Road	Block 3600 / Lot 4	Mixed Residential & Commercial
72-79	1850 Lafayette Avenue	Block 3600 / Lot 4	Mixed Residential & Commercial
80-81	1856 Lafayette Avenue	Block 3600 / Lot 4	Mixed Residential & Commercial
82-83	1860 Lafayette Avenue	Block 3600 / Lot 4	Mixed Residential & Commercial
84-87	700 White Plains Road	Block 3604 / Lot 1	Nursing and Rehabilitation Center
88-92	1980 Lafayette Avenue	Block 3604 / Lot 39	School
93	663 Taylor Avenue	Block 3558 / Lot 34	Residential
94	652 Soundview Avenue	Block 3558 / Lot 13	Residential
95	1822 Seward Avenue	Block 3559 / Lot 39	Residential
96	636 Taylor Avenue	Block 3559 / Lot 28	Residential
97-98	667 Thieriot Avenue	Block 3559 / Lot 48	Residential
99	657 Thieriot Avenue	Block 3559 / Lot 54	Residential
100	651 Thieriot Avenue	Block 3559 / Lot 57	Residential
101-102	639 Thieriot Avenue	Block 3559 / Lot 1	School Annex
103-104	620 Thieriot Avenue	Block 3560 / Lot 1	Church and School
105	639 Leland Avenue	Block 3560 / Lot 64	Residential
106	660 Thieriot Avenue	Block 3560 / Lot 37	Residential
107	664 Thieriot Avenue	Block 3560 / Lot 39	Residential
108	655 Leland Avenue	Block 3560 / Lot 50	Residential
109	1844 Seward Avenue	Block 3560 / Lot 43	Residential
110	1858 Seward Avenue	Block 3560 / Lot 146	Residential
111	1871 Randall Avenue	Block 3561 / Lot 5	Residential
112	612 Leland Avenue	Block 3561 / Lot 15	Residential
113	636 Leland Avenue	Block 3561 / Lot 122	Residential
114	644 Leland Avenue	Block 3561 / Lot 126	Residential
115	628 Leland Avenue	Block 3561 / Lot 33	Residential
116	645 Underhill Avenue	Block 3561 / Lot 149	Residential
117	653 Underhill Avenue	Block 3561 / Lot 145	Residential
118	1868 Seward Avenue	Block 3561 / Lot 139	Residential
119	1860 Seward Avenue	Block 3561 / Lot 135	Residential
120	1864 Seward Avenue	Block 3561 / Lot 137	Residential
121	1872 Seward Avenue	Block 3561 / Lot 141	Residential
122	605 Bolton Avenue	Block 3562 / Lot 71	Residential
123	614 Underhill Avenue	Block 3562 / Lot 12	Residential
124	626 Underhill Avenue	Block 3562 / Lot 15	Residential
125	640 Underhill Avenue	Block 3562 / Lot 21	Residential
126	654 Underhill Avenue	Block 3562 / Lot 134	Residential
127-128	625 Bolton Avenue	Block 3562 / Lot 61	School
129	647 Bolton Avenue	Block 3562 / Lot 146	Residential
130	1880 Seward Avenue	Block 3562 / Lot 137	Residential
131	1882 Seward Avenue	Block 3562 / Lot 138	Residential
132	1890 Seward Avenue	Block 3562 / Lot 142	Residential
133-134	669 White Plains Road	Block 3563 / Lot 5	Residential
135-138	601 Stickball Boulevard	Block 3564 / Lot 1	School

139-140	680 Stickball Boulevard	Block 3565 / Lot 1	Open Space
141-144	1965 Lafayette Avenue	Block 3672 / Lot 20	Future Development - Residential
145-150	Future Development Building B6	Block 3600 / Lot 4	Future Development - Mixed Residential & Commercial
151-154	Future Development Building B5	Block 3600 / Lot 4	Future Development - Mixed Residential & Commercial
155-161	Future Development Building B4	Block 3600 / Lot 4	Future Development - Mixed Residential & Commercial
162-169	Future Development Building B3	Block 3600 / Lot 4	Future Development - Mixed Residential & Commercial
170-179	Future Development Building B2	Block 3600 / Lot 4	Future Development - Mixed Residential & Commercial

Noise Measurement Results

EQUIPMENT USED DURING NOISE SURVEY

Measurements were performed using a Brüel & Kjær Sound Level Meter (SLM) Type 2250, a Brüel & Kjær ½-inch microphone Type 4189, and a Brüel & Kjær Sound Level Calibrator Type 4231. The Brüel & Kjær SLMs are Type 1 instruments according to ANSI Standard S1.4-1983 (R2006). The SLMs have laboratory calibration dates within one year of the date of the measurements, as is standard practice. The microphones were mounted at a height of approximately 5 to 6 feet above the ground, away from any large reflecting surfaces that could affect the sound level measurements. The SLMs were calibrated before and after readings with a Brüel & Kjær Type 4231 Sound Level Calibrator using the appropriate adaptor. Measurements at the location were made on the A-scale (dBA). The data were digitally recorded by the SLM and displayed at the end of the measurement period in units of dBA. Measured quantities included L_{eq}, L_1, L_{10}, L_{50}, and L_{90}. A windscreen was used during all sound measurements except for calibration. All measurement procedures were based on the guidelines outlined in ANSI Standard S1.13-2005.

NOISE SURVEY RESULTS

The baseline noise levels at each of the noise survey locations are shown in Table 17-~~12~~13. At all noise measurement locations, the dominant existing noise source was vehicular traffic on the adjacent roadways.

TABLE 17-~~12~~13
Noise Survey Results in dBA

Site	Measurement Location	L_{EQ}	L_{10}
M1	Midpoint of the Development Site's northern frontage along Lafayette Avenue (approximately 200 feet east of Thieriot Avenue)	64.8	67.7
M2	Midpoint of the Development Site's southern frontage along Seward Avenue (approximately 425 feet east of Thieriot Avenue)	64.8	67.7

In terms of CEQR noise exposure guidelines (shown in Table 14-3 in Chapter 14, "Noise") existing noise levels at all sites are in the "marginally acceptable" category during the morning analysis hour.

Construction Noise Analysis Results

CONSTRUCTION MOBILE SOURCES (6:00 AM TO 7:00 AM)

Construction worker vehicles and trucks traveling on roadways prior to the start of the construction work day would have the potential to generate noise at receptors along the routes used to access the construction sites. A screening analysis using the methodology described above found that construction worker vehicles and trucks would not result in a significant increase in noise levels (i.e., would not result in a doubling of Noise PCEs, which would be necessary to produce a 3 dBA noise level increase) from 6:00 AM to 7:00 AM on roadways other than the route taken by construction trucks traveling between the project site and the Bruckner Expressway. Trucks using this route would travel south along White Plains Road to Seward Avenue, west on Seward Avenue to the site entrance, north through the Development Site, east along Lafayette Avenue back to White Plains Road, and then North on White Plains Road back to the Bruckner Expressway. As described above in the construction transportation analysis, during the fourth quarter of 2026 (i.e., the period of construction that would result in the highest volume of construction traffic), at most approximately 29 trucks would travel to and from the Development Site via this route in the hour from 6:00 AM to 7:00 AM. During this peak construction traffic period, construction traffic in the 6:00 AM to 7:00 AM hour would result in noise level increases up to approximately 5 dBA. However, during the fourth quarter of 2025 and fourth quarter of 2027, when there would be fewer construction trips, construction mobile sources in the 6:00 AM to 7:00 AM hour would result in noise level increases less than 3 dBA. Consequently, noise receptors would experience exceedances of the CEQR construction noise screening thresholds for less than 24 consecutive months. Due to the limited duration of the predicted threshold exceedances, construction worker vehicles and trucks traveling on roadways prior to the start of the construction work day would not have the potential to result in significant adverse noise impacts at these receptors.

At other receptors not along this route, noise level increases resulting from construction-generated traffic during the 6:00 AM to 7:00 AM hour would be up to approximately 1 dBA, which would be imperceptible and below the *CEQR Technical Manual* construction noise screening thresholds.

Construction vehicles traveling to and from construction sites during the construction workday (i.e., after 7:00 AM) are included the detailed construction noise analysis described below.

Cumulative On-Site and Mobile Construction Noise Sources

Using the methodology described and considering the noise abatement reduction measures specified above, cumulative noise analyses were performed to determine maximum noise levels that would be expected at each of the noise receptor locations during each of the 12 selected construction analysis periods. This resulted in a predicted range of peak hourly construction noise levels throughout the construction periods. The results of the construction noise analysis at these receptors are summarized in Table 17-~~13~~14.

TABLE 17-~~13~~14
Construction Noise Analysis Results in dBA

Receptor	Address	Existing L_{10}	Max Total L_{10}	Max Change	Maximum Continuous Duration (months)		
					Exceedance of CEQR Screening Threshold	"Objectionable" Increase	"Very Objectionable" Increase
1	805 Taylor Avenue	61.4	72.8	11.5	13	0	0
2	1820 Story Avenue	61.4	66.4	5.1	0	0	0
3 - 9	800 Taylor Avenue	65.1	78.4	17.0	19	13	0
10	880 Thieriot Avenue	61.4	69.4	8.1	0	0	0
11 - 14	820 Thieriot Avenue	65.1	79.3	15.6	25	6	0
15	1872 Story Avenue	61.4	68.9	7.5	0	0	0
16	856 Leland Avenue	61.4	68.1	6.8	0	0	0
17	822 Leland Avenue	61.4	71.2	9.8	6	0	0

TABLE 17-~~13~~14
Construction Noise Analysis Results in dBA

Receptor	Address	Existing L_{10}	Max Total L_{10}	Max Change	Maximum Continuous Duration (months)		
					Exceedance of CEQR Screening Threshold	"Objectionable" Increase	"Very Objectionable" Increase
18	857 Underhill Avenue	61.4	65.2	3.8	0	0	0
19	835 Underhill Avenue	61.4	72.8	11.5	13	0	0
20	1865 Lafayette Avenue	66.2	79.6	14.3	25	0	0
21	1871 Lafayette Avenue	66.4	77.9	12.5	19	0	0
22 - 25	885 Bolton Avenue	61.9	72.7	11.4	13	0	0
26 - 28	1965 Lafayette Avenue	65.0	70.4	7.1	6	0	0
29, 30	740 Beach Avenue	61.4	75.5	14.1	19	0	0
31	714 Beach Avenue	61.4	74.1	12.8	6	0	0
32 - 34	1810 Lafayette Avenue	66.4	76.1	13.6	19	0	0
35	741 Taylor Avenue	61.4	76.8	15.5	19	6	0
36	719 Taylor Avenue	61.4	74.5	13.1	13	0	0
37	1817 Seward Avenue	61.4	73.0	11.6	6	0	0
38	746 Taylor Avenue	61.4	68.6	7.2	0	0	0
39	738 Taylor Avenue	61.4	79.0	17.6	19	6	0
40	726 Taylor Avenue	61.4	77.4	16.0	19	6	0
41	706 Taylor Avenue	61.4	78.0	16.6	13	4	0
42	1824 Lafayette Avenue	66.6	70.5	3.9	7	0	0
43	759 Thieriot Avenue	64.9	78.8	15.6	19	6	0
44	749 Thieriot Avenue	63.4	81.5	19.0	19	6	0
45	731 Thieriot Avenue	63.2	80.7	18.3	19	6	0
46	717 Thieriot Avenue	61.4	73.6	12.2	4	0	0
47	711 Thieriot Avenue	63.7	80.4	17.5	13	4	0
48, 49	1870 Lafayette Avenue	63.8	79.3	17.9	19	6	0
50 - 54	1880 Lafayette Avenue	65.6	77.6	16.0	13	6	0
55 - 61	755 White Plains Road	66.3	76.8	15.5	13	6	0
62 - 64	741 White Plains Road	64.5	74.4	13.1	13	0	0
65 - 67	731 White Plains Road	66.8	76.9	15.6	11	4	0
68, 69	721 White Plains Road	61.4	78.8	17.4	11	4	0
70, 71	711 White Plains Road	61.4	79.9	18.5	13	11	0
72 - 79	1850 Lafayette Avenue	64.6	82.8	21.3	21	11	4
80, 81	1856 Lafayette Avenue	62.6	80.1	18.7	19	13	0
82, 83	1860 Lafayette Avenue	62.7	80.6	19.2	19	13	0
84 - 87	700 White Plains Road	66.4	73.2	7.1	6	0	0
88 - 92	1980 Lafayette Avenue	61.4	65.2	3.8	0	0	0
93	663 Taylor Avenue	63.5	74.2	11.5	6	0	0
94	652 Soundview Avenue	61.4	70.6	9.2	4	0	0
95	1822 Seward Avenue	65.9	76.2	11.3	13	0	0
96	636 Taylor Avenue	61.4	69.3	7.9	0	0	0
97, 98	667 Thieriot Avenue	66.1	78.1	13.9	11	0	0
99	657 Thieriot Avenue	61.4	74.5	13.1	4	0	0
100	651 Thieriot Avenue	64.4	72.4	8.0	4	0	0
101, 102	639 Thieriot Avenue	63.7	71.7	8.0	4	0	0
103, 104	620 Thieriot Avenue	61.4	70.4	9.0	4	0	0
105	639 Leland Avenue	61.4	73.2	11.8	4	0	0
106	660 Thieriot Avenue	64.3	76.3	12.0	6	0	0
107	664 Thieriot Avenue	61.4	74.9	13.5	4	0	0
108	655 Leland Avenue	62.0	76.1	14.8	4	0	0
109	1844 Seward Avenue	65.8	80.5	16.0	11	4	0
110	1858 Seward Avenue	65.8	82.2	17.2	21	4	0

TABLE 17-~~13~~14
Construction Noise Analysis Results in dBA

Receptor	Address	Existing L_{10}	Max Total L_{10}	Max Change	Maximum Continuous Duration (months)		
					Exceedance of CEQR Screening Threshold	"Objectionable" Increase	"Very Objectionable" Increase
111	1871 Randall Avenue	61.4	66.7	5.3	0	0	0
112	612 Leland Avenue	61.4	69.0	7.7	0	0	0
113	636 Leland Avenue	61.4	66.3	4.9	0	0	0
114	644 Leland Avenue	61.4	72.1	10.7	4	0	0
115	628 Leland Avenue	61.4	74.8	13.4	4	0	0
116	645 Underhill Avenue	61.4	69.8	8.4	0	0	0
117	653 Underhill Avenue	61.4	72.2	10.8	4	0	0
118	1868 Seward Avenue	61.4	70.7	9.4	4	0	0
119	1860 Seward Avenue	63.1	78.2	16.5	11	4	0
120	1864 Seward Avenue	65.4	81.5	16.9	21	4	0
121	1872 Seward Avenue	65.8	80.5	15.0	21	4	0
122	605 Bolton Avenue	61.4	69.6	8.2	0	0	0
123	614 Underhill Avenue	61.4	70.3	8.9	4	0	0
124	626 Underhill Avenue	61.4	70.5	9.1	4	0	0
125	640 Underhill Avenue	61.4	71.2	9.8	4	0	0
126	654 Underhill Avenue	61.4	76.3	15.0	4	0	0
127, 128	625 Bolton Avenue	61.4	74.1	12.8	4	0	0
129	647 Bolton Avenue	61.4	75.9	14.5	4	0	0
130	1880 Seward Avenue	64.1	80.1	17.0	11	4	0
131	1882 Seward Avenue	65.2	80.2	16.0	21	4	0
132	1890 Seward Avenue	65.0	78.9	15.0	11	4	0
133, 134	669 White Plains Road	62.8	70.4	8.7	4	0	0
135 - 138	601 Stickball Boulevard	63.7	70.7	9.4	4	0	0
139, 140	680 Stickball Boulevard	63.1	71.3	8.2	4	0	0
141 - 144	1965 Lafayette Avenue (Future)	61.4	72.1	10.7	6	0	0
145 - 150	Future Building 6	61.4	74.0	12.7	13	0	0
151 - 154	Future Building 5	61.4	77.5	16.1	13	6	0
155 - 161	Future Building 4	61.4	78.7	17.3	13	6	0
162 - 169	Future Building 3	61.4	82.5	21.2	25	13	6
170 - 179	Future Building 2	61.4	66.8	5.5	0	0	0

RECEPTORS AT 800 TAYLOR AVENUE

Receptors 3 through 9 represent the residential receptors at 800 Taylor Avenue. Existing noise levels at these receptors are in the low-to-mid 60s dBA, which would be considered "acceptable" according to *CEQR Technical Manual* noise exposure criteria.

At receptors 8 and 9 (i.e., the south façade of this building along Lafayette Avenue), construction is predicted to produce noise levels up to the high 70s dBA, resulting in noise level increases up to 17 dBA during the most noise-intensive stages of construction (i.e., concrete operations at Building B1), which would occur for up to approximately 6 months. Noise level increases greater than 15 dBA at these receptors, which would be considered objectionable, would occur for up to approximately 13 months and noise level increases exceeding the *CEQR Technical Manual* construction noise screening thresholds would occur for up to approximately 19 months. During this time, total noise levels at these receptors would be in the mid- to high 70s dBA. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these receptors would be in the "marginally unacceptable" category.

At receptors 3 through 7, which face away from construction, construction is predicted to produce noise levels up to the mid-70s dBA, resulting in noise level increases up to 11 dBA during the most noise-intensive stages of construction (i.e., concrete operations at Building B1), which would occur for up to approximately 6 months. Noise level increases exceeding the *CEQR Technical Manual* construction noise screening thresholds would occur for up to approximately 13 months. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these receptors would be in the "marginally unacceptable" category.

Based on the prediction of construction noise levels up to the high 70s dBA resulting in construction noise level increments up to approximately 17 dBA, which would be considered objectionable, occurring over the course of up to 13 months, construction noise associated with the Proposed Project would result in a temporary significant adverse impact at south-facing receptors at 800 Taylor Avenue. These receptors are discussed further in Chapter 18, "Mitigation."

RECEPTORS AT 820 THIERIOT AVENUE

Receptors 11 through 14 represent the residential receptors at 820 Thieriot Avenue. Existing noise levels at these receptors are in the low-to-mid 60s dBA, which would be considered "marginally acceptable" according to *CEQR Technical Manual* noise exposure criteria.

At receptors 13 and 14 (i.e., the façades of this building facing south and east towards the project site, construction is predicted to produce noise levels up to the high 70s dBA, resulting in noise level increases up to 16 dBA during the most noise-intensive stages of construction (i.e., concrete operations on Building B1), which would occur for up to approximately 6 months. Noise level increases exceeding the *CEQR Technical Manual* construction noise screening thresholds would occur for up to approximately 25 months. During this time, total noise levels at these receptors would be in the mid to high 70s dBA. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these receptors would be in the "marginally unacceptable" category.

At receptors 11 and 12, which face away from construction, construction is predicted to produce noise levels up to the low 70s dBA, resulting in noise level increases up to 9 dBA during the most noise-intensive stages of construction (i.e., drill rig activity at Building B1), which would occur for up to approximately 4 months. Noise level increases exceeding the *CEQR Technical Manual* construction noise screening thresholds would occur only during these 4 months. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these receptors would be in the "marginally unacceptable" category.

Based on the prediction of construction noise levels up to the high 70s dBA resulting in construction noise level increments up to approximately 16 dBA and exceedances of the *CEQR Technical Manual* construction noise screening thresholds occurring over the course of up to 25 months, construction noise associated with the Proposed Project would result in a temporary significant adverse impact at east and south-facing receptors at 820 Thieriot Avenue. These receptors are discussed further in Chapter 18, "Mitigation."

RECEPTORS AT 1861-1865 LAFAYETTE AVENUE

Receptor 20 represents the residential receptors at 1861-1865 Lafayette Avenue. Existing noise levels at these receptors are in the mid-60s dBA, which would be considered "marginally acceptable" according to *CEQR Technical Manual* noise exposure criteria.

At this receptor, construction is predicted to produce noise levels up to the high 70s dBA, resulting in noise level increases up to approximately 14 dBA during the most noise-intensive stages of construction (i.e., drill rig activity at Buildings B1 and B2). Drill rig activity at Buildings 1 and 2 would each occur for up to approximately 4 months. Noise level increases exceeding the *CEQR Technical Manual* construction noise screening thresholds would occur at these receptors for up to approximately 25 months. During this time, total noise levels at these receptors would be in the mid to high 70s dBA. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these receptors would be in the "marginally unacceptable" category.

Based on the prediction of construction noise levels up to the high 70s dBA resulting in construction noise level increments up to approximately 14 dBA and exceedances of the *CEQR Technical Manual* construction noise screening thresholds occurring over the course of up to 25 months, construction noise associated with the Proposed Project would result in a temporary significant adverse impact at receptors at 1861-1865 Lafayette Avenue. These receptors are discussed further in Chapter 18, "Mitigation."

RECEPTORS AT 1850 LAFAYETTE AVENUE

Receptors 72 through 79 represent the residential receptors at 1850 Lafayette Avenue. Existing noise levels at these receptors are in the mid-60s dBA, which would be considered "acceptable" according to *CEQR Technical Manual* noise exposure criteria.

At receptors 73 through 78 (i.e., the façades of this building facing north, south, and west towards the project site), construction is predicted to produce noise levels up to the low 80s dBA, resulting in noise level increases up to approximately 21 dBA during the most noise-intensive stages of construction (i.e., concrete operations at Building B6), which would occur for up to approximately 4 months. Noise level increases greater than 20 dBA, which would be considered very objectionable, at these receptors would occur only during these 4 months. Noise level increases greater than 15 dBA at these receptors, which would be considered objectionable, would occur for up to approximately 11 months. Noise level increases exceeding the *CEQR Technical Manual* construction noise screening thresholds would occur for up to approximately 21 months. During this time, total noise levels at these receptors would be in the high 70s to low 80s dBA. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these receptors would be in the "clearly unacceptable" category.

The predicted "clearly unacceptable" noise levels at these receptors would occur at times during relatively short periods of peak noise generation, i.e., during times when multiple pieces of noise-intensive construction equipment would be operating simultaneously adjacent to the receptors. Construction noise levels would more generally be in the "marginally unacceptable" range throughout the construction period (i.e., times when L_{10} noise levels would be less than 80 dBA as shown in Appendix E).

At receptors 72 and 79, which face away from construction, construction is predicted to produce noise levels up to the low to mid-70s dBA, resulting in noise level increases up to 14 dBA during the most noise-intensive stages of construction (i.e., concrete operations at Building B1), which would occur for up to approximately 6 months. Noise level increases exceeding the *CEQR Technical Manual* construction noise screening thresholds would occur for up to approximately 19 months. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these receptors would be in the "marginally unacceptable" category.

Based on the prediction of construction noise levels up to the low 80s dBA resulting in construction noise level increments up to approximately 21 dBA, which would be considered very objectionable, occurring over the course of up to four months, construction noise associated with the Proposed Project would result in a temporary significant adverse impact at north, south, and west-facing receptors at 1850 Lafayette Avenue. These receptors are discussed further in Chapter 18, "Mitigation."

RECEPTORS AT 1856 AND 1860 LAFAYETTE AVENUE

Receptors 80 through 83 represent the residential receptors at 1856 and 1860 Lafayette Avenue. Existing noise levels at these receptors are in the mid-60s dBA, which would be considered “acceptable” according to *CEQR Technical Manual* noise exposure criteria.

At receptors 81 and 83 (i.e., the façades of these buildings facing west towards the project site), construction is predicted to produce noise levels up to the low 80s dBA, resulting in noise level increases up to approximately 19 dBA during the most noise-intensive stages of construction (i.e., concrete operations at Building B1), which would occur for up to approximately 10 months. Noise level increases greater than 15 dBA at these receptors, which would be considered objectionable, would occur for up to approximately 13 months. Noise level increases exceeding the *CEQR Technical Manual* construction noise screening thresholds would occur for up to approximately 19 months. During this time, total noise levels at these receptors would be in the high 70s to low 80s dBA. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these receptors would be in the “clearly unacceptable” category.

The predicted “clearly unacceptable” noise levels at these receptors would occur at times during relatively short periods of peak noise generation, i.e., during times when multiple pieces of noise-intensive construction equipment would be operating simultaneously adjacent to the receptors. Construction noise levels would more generally be in the “marginally unacceptable” range throughout the construction period (i.e., times when L_{10} noise levels would be less than 80 dBA as shown in Appendix E).

At receptors 80 and 82, which face away from construction, construction is predicted to produce noise levels up to the low 70s dBA, resulting in noise level increases up to 10 dBA during the most noise-intensive stages of construction (i.e., concrete operations at Building B1), which would occur for up to approximately 10 months. Noise level increases exceeding the *CEQR Technical Manual* construction noise screening thresholds would occur for up to approximately 19 months. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these receptors would be in the “marginally unacceptable” category.

Based on the prediction of construction noise levels up to the low 80s dBA resulting in construction noise level increments up to approximately 19 dBA, which would be considered objectionable, occurring over the course of up to 13 months, construction noise associated with the Proposed Project would result in a temporary significant adverse impact at west-facing receptors at 1856 and 1860 Lafayette Avenue. These receptors are discussed further in Chapter 18, “Mitigation.”

PROPOSED BUILDING B3

The analysis assumes that proposed Building B3 would be completed and occupied during approximately three years of construction on proposed Buildings B1 and B2. At Building B3, construction would result in $L_{10(1)}$ noise levels ranging from the low 70s to low 80s dBA with a maximum total noise exposure of approximately 82 dBA and maximum noise level increment of 21 dBA during the most noise-intensive stages of construction (i.e., concrete operations on Building B2), which would have a duration of approximately 6 months. According to *CEQR Technical Manual* noise exposure criteria, maximum noise levels at these receptors during construction would be in the “clearly unacceptable” category, whereas With-Action noise levels would be in the “marginally acceptable” range category in the completed/operational condition of the Proposed Project. The maximum predicted increase in noise level at this receptor (as compared to a theoretical No-Action baseline level at this location) would be considered “very objectionable.”

Based on the 25 dBA minimum window/wall attenuation expected to be included in the design for the facades of this building (see Table 14-12 in Chapter 14, "Noise"), interior noise levels at this building is expected to exceed 45 dBA, which is the acceptable criterion for residential and community facility uses according to *CEQR Technical Manual* noise exposure criteria, by up to approximately 12 dBA. Based on the prediction of "very objectionable" noise levels over a period of approximately 6 months, and interior levels that would exceed the acceptable threshold for residential and community facility uses, construction noise associated with the Proposed Project would result in a temporary significant adverse impact at residential and community facility receptors in the proposed Building B3. These receptors are discussed further in Chapter 18, "Mitigation."

OTHER NEARBY RECEPTORS

At the remaining receptors, construction of the Proposed Project may, for some portion of the construction period, result in noise level increases that would exceed the *CEQR Technical Manual* construction noise screening thresholds, and in some cases would exceed the 15 dBA threshold for an objectionable noise level increase. However, at these receptors, any exceedances of the *CEQR Technical Manual* construction noise screening thresholds would occur for less than 24 consecutive months, and any exceedances of the objectionable noise level increase threshold would occur for less than 12 consecutive months. Consequently, while construction noise would be perceptible at these receptors, the predicted construction noise levels would not rise to the level of a significant impact at these receptors according to the impact criteria described above.

Vibration

The vibration analysis considers the potential for construction to result in vibration levels that could result in structural or architectural damage, and/or annoyance or interference with vibration-sensitive activities. Vibratory levels at a receiver are a function of the source strength (which is dependent upon the construction equipment and methods utilized), the distance between the equipment and the receiver, the characteristics of the transmitting medium, and the receiver building construction. Construction equipment operation causes ground vibrations, which spread through the ground and decrease in strength with distance. Vehicular traffic, even in locations close to major roadways, typically does not result in perceptible vibration levels unless there are discontinuities in the roadway surface. With the exception of the case of fragile and possibly historically significant structures or buildings, construction activities generally do not reach the levels that can cause architectural or structural damage, but can achieve levels that may be perceptible and annoying in buildings very close to a construction site. An assessment has been prepared to quantify potential vibration impacts of construction activities on structures and residences near the Development Site

Construction Vibration Criteria

For purposes of assessing potential structural or architectural damage, the determination of a significant impact was based on the vibration impact criterion used by the Landmarks Preservation Commission (LPC) of a peak particle velocity (PPV) of 0.50 inches/second as specified in the Department of Buildings (DOB) Technical Policy and Procedure Notice (TPPN) #10/88. For non-fragile buildings, vibration levels between 0.5 inches/second and 2.0 inches/second would typically not be expected to result in any structural or architectural damage.

For purposes of evaluating potential annoyance or interference with vibration-sensitive activities, vibration levels greater than 65 vibration decibels (VdB) would have the potential to result in significant adverse impacts if they were to occur for a prolonged period of time.

Vibration Analysis

For purposes of assessing potential structural or architectural damage, the following formula was used:

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

where: PPV_{equip} is the peak particle velocity in in/sec of the equipment at the receiver location;

PPV_{ref} is the reference vibration level in in/sec at 25 feet; and

D is the distance from the equipment to the receiver location in feet.

For purposes of assessing potential annoyance or interference with vibration sensitive activities, the following formula was used:

$$L_v(D) = L_v(ref) – 30\log(D/25)$$

where: $L_v(D)$ is the vibration level in VdB of the equipment at the receiver location;

Lv(ref) is the reference vibration level in VdB at 25 feet; and

D is the distance from the equipment to the receiver location in feet.

Table 17-~~14~~ 15 shows vibration source levels for typical construction equipment.

TABLE 17-~~14~~15
Vibration Source Levels for Construction Equipment

Equipment	PPV_{ref} (in/sec)	Approximate L_v (ref) (VdB)
Large bulldozer	0.089	87
Caisson drilling	0.089	87
Loaded trucks	0.076	86
Source: Transit Noise and Vibration Impact Assessment, FTA-VA-90-1003-06, May 2006.		

Construction Vibration Analysis Results

The buildings of most concern with regard to the potential for structural or architectural damage due to vibration are the existing buildings and structures immediately adjacent to the site. However, given their distances from the construction work areas (at least 35 feet), vibration levels at these buildings and structures would not be expected to exceed 0.50 in/sec PPV, including during drill rig activity, which would be the most vibration-intensive activity associated with construction under the proposed actions. Additional receptors farther away from the Development Site would experience less vibration than those listed above, which would not be expected to cause structural or architectural damage.

In terms of potential vibration levels that would be perceptible and annoying, the equipment that would have the most potential for producing levels that exceed the 65 VdB limit is also the drill rig. It would have the potential to produce perceptible vibration levels (i.e., vibration levels exceeding 65 VdB) at receptor locations within a distance of approximately 135 feet depending on soil conditions. However, the operation would only occur for limited periods of time at a particular location and therefore would not result in any significant adverse impacts.

Consequently, significant adverse vibration impacts would not result from construction of the Proposed Project.

Other Technical Areas

Land Use and Neighborhood Character

Construction activities would affect land use within the Development Site but would not alter surrounding land uses. As is typical with construction projects, during periods of peak construction activity there would be some disruption, predominantly noise, to the nearby area. There would be construction trucks and construction workers coming to the Development Site. These disruptions would be temporary in nature and would have limited effects on land uses within the surrounding area, particularly as most construction activities would take place within the Development Site or within portions of sidewalks, curbs, and travel lanes of public streets immediately adjacent to the site. In addition, measures would be implemented to control noise, vibration, emissions, and dust on the construction site, including the erection of construction fencing. The fencing would reduce potentially undesirable views of the construction site and buffer noise emitted from construction activities. Overall, while the construction at the Development Site would be evident to the local community, the temporary nature of construction would not result in significant or long-term adverse impacts on local land use patterns or the character of the nearby area.

Socioeconomic Conditions

Construction activities could temporarily affect pedestrian and vehicular access. However, lane and/or sidewalk closures would not obstruct entrances to any existing businesses, and businesses are not expected to be significantly affected by any temporary reductions in the amount of pedestrian foot traffic or vehicular delays that could occur as a result of construction activities. Maintenance and Protection of Traffic (MPT) plans would be developed for any temporary curb-lane and sidewalk narrowing/closures as required by DOT. This work would be coordinated with and approved by DOT's OCMC. Overall, construction activities associated with the Proposed Actions would not result in any significant adverse impacts on surrounding businesses.

Construction would create direct benefits resulting from expenditures on labor, materials, and services, and indirect benefits created by expenditures by material suppliers, construction workers, and other employees involved in the direct activity. Construction also would contribute to increased tax revenues for the City and State, including those from personal income taxes.

Community Facilities

No community facilities would be directly affected by construction activities for an extended duration. The Development Site will be surrounded by construction fencing and barriers that would limit the effects of construction on nearby facilities. Construction workers would not place any burden on public schools and would have minimal, if any, demands on libraries, child care facilities, and health care. Construction of the Proposed Project would not block or restrict access to any facilities in the area, and would not materially affect emergency response times significantly. The NYPD and FDNY emergency services and response times would not be materially affected due to the geographic distribution of the police and fire facilities and their respective coverage areas.

Open Space

There are no publicly accessible open spaces within the Project Area and no public open space resources would be used for staging or other construction activities. As discussed above, there would be no significant adverse air quality impacts on open spaces in the surrounding area taking into account dust control measures and other emission reduction measures incorporated in the Proposed Project. The construction noise analysis (discussed above) showed that, while construction noise could be perceptible at some of the nearby open spaces, the predicted construction noise levels would not rise to the level of a significant impact, and would therefore not result in a major change in the usability of these facilities.

Historic and Cultural Resources

As described in Chapter 6, "Historic and Cultural Resources," the Development Site does not possess archaeological significance and no further assessment is warranted. Therefore, the Proposed Project does not have the potential to result in construction period archaeological impacts. The Proposed Actions would not result in any significant adverse impacts to architectural resources on the Development Site as no historic architectural resources are located on the site. Moreover, no architectural resources are located within 90 feet of the Development Site. Therefore, the Proposed Actions would not result in any significant adverse impacts to historic architectural resources.

Hazardous Materials

An assessment of potential impacts on hazardous materials is described in Chapter 9, "Hazardous Materials." A Phase II Environmental Site Assessment Work Plan and a Health and Safety Plan (HASP) were prepared and submitted to DEP for review and approval. DEP approved the Phase II Work Plan and HASP, and sampling activities on the Development Site have been conducted in accordance with the approved Work Plan. The Phase II Report along with a Remedial Action Plan (RAP) have been submitted to DEP for review and approval. The RAP incorporates a Construction Health and Safety Plan (CHASP). These plans set out procedures to be followed to avoid the potential for adverse impacts related to the hazardous materials identified by the Phase II investigation as well as other hazardous materials that could be unexpectedly encountered. The Applicant will commit to implementing the remedial activities outlined in the RAP and CHASP, which ~~are anticipated to be~~ were approved by DEP ~~in advance of the issuance of the FEIS~~, prior to construction. With adherence to existing standard regulations, there would be no increase in the exposure of people or the environment to hazardous materials associated with construction of the Proposed Project. As such, the Proposed Actions would not result in any significant adverse construction-related impacts to hazardous materials.