962-972 FRANKLIN AVENUE REZONING
Chapter 10: Construction

A. INTRODUCTION

This chapter assesses the potential impacts of the construction of buildings expected to result on the Proposed Development Site from the Proposed Actions. The following sections discuss the potential impacts resulting from the construction of the Proposed Development Site as described in the reasonable worst case development scenario (RWCDS) presented in **Chapter 1, "Project Description."** Construction impacts, although temporary, can include noticeable and disruptive effects from an action that is associated with construction or could induce construction. As stated in the 2021 *City Environmental Quality Review* (CEQR) *Technical Manual*, determination of the significance of construction impacts and need for mitigation is 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 air quality conditions.

The Proposed Actions comprise zoning map and text amendments and special permit to waive a portion of the required parking. The Proposed Actions are expected to facilitate the construction of a new mixed-use building with residential and local retail uses. As discussed in **Chapter 1, "Project Description,"** the Proposed Project would be a 471,495 gross square foot (gsf) mixed-used residential and commercial building and would include 419,346 gsf of residential uses, introducing a total of 475 dwelling units and approximately 8,128 gsf of local retail space. Approximately 27,349 gsf of parking area, 2,752 gsf of loading area, and approximately 13,920 gsf of mechanical/storage space would be allocated for parking on the ground- and cellar-levels of the Proposed Project. The Proposed Project would be 14 stories, reaching a maximum base height of 105 feet before setting back from the street and reaching its maximum height of 145 feet (not including mechanical equipment, which could reach up to an additional 55-feet-tall on a portion of the rooftop).

Under the RWCDS, the Proposed Actions would facilitate the incremental development of approximately 307 total dwelling units, including 119 affordable dwelling units, 8,128 gsf of local retail uses, and a net decrease of approximately 13 accessory parking spaces. The Proposed Project would be constructed in one phase beginning in 2025.

According to the *CEQR Technical Manual*, construction duration is often broken down into short-term (less than two years) and long-term (two or more years). Where the duration of construction is expected to be short-term, any impacts resulting from such short-term construction generally do not require detailed assessment. As described below, as construction activity associated with the RCWDS would occur in a single phase from 2025 through 2027 (31 months), it is considered long-term and a preliminary assessment of potential construction impacts was prepared in accordance with the guidance of the *CEQR Technical Manual*, and is presented in this chapter.

The findings of the preliminary assessment identified the need to undertake more detailed construction impact assessments for air quality and noise. To conduct these detailed assessments, this chapter describes the City, state, and federal regulations and policies that govern construction, followed by the conceptual construction schedule and the types of activities likely to occur during construction. The types

of construction equipment are also discussed, along with the expected number of workers and truck deliveries. Finally, the potential impacts from construction activity are assessed and the methods that may be employed to avoid significant adverse construction-related impacts are presented.

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 construction may not be at the same time as the heaviest construction traffic.

B. PRINCIPAL CONCLUSIONS

Construction of the Proposed Project would result in the potential for significant adverse construction-related noise impacts. Construction of the Proposed Project would not result in significant adverse impacts in the areas of land use, socioeconomic conditions, open space, hazardous materials, neighborhood character, or air quality. Based on the reasonable worst case development scenario (RWCDS) construction schedule, construction activities would be spread out over a period of approximately three years. While construction of the Proposed Project would result in temporary increases in traffic during the construction period, access to residences, businesses, and institutions in the area surrounding the Project Area would be maintained throughout the construction period (as required by City regulations). While construction of the new buildings due to the Proposed Actions would cause temporary impacts, particularly related to noise, it is expected that such impacts in any given area would be relatively short term, even under the worst-case construction sequencing, and therefore would not create neighborhood character impact. Further discussions of the findings of the construction transportation, air quality, noise, community facilities, open space, historic resources, and hazardous materials analyses are provided below.

Transportation

Construction travel demand is expected to peak in the third quarter (Q3) of 2026. This period was therefore analyzed for potential transportation impacts during construction. It is expected that construction of the Proposed Project would generate a peak of approximately 240 workers and 35 truck deliveries per day during the third quarter of 2026.

Traffic

The maximum construction-related traffic increments would be approximately 104 PCEs during the AM period (6:00 AM to 7:00 AM) and 74 PCEs during the PM period (3:00 PM to 4:00 PM). The projected AM and PM construction trips were assigned to the surrounding roadway network with trucks trips assigned to DOT-designated truck routes and the construction workers assigned to/from the two nearest open parking garages. Based on the assigned incremental traffic, no intersections would exceed the *CEQR Technical Manual* analysis threshold for detailed analysis is not warranted. Therefore, significant adverse impacts to traffic during the peak construction quarter are unlikely to occur under the Proposed Actions.

Transit

The Proposed Development Site is located in an area that is well served by public transportation, with two subway stations serving seven subway lines, and five local bus routes located in the vicinity of the Project Area. A maximum of approximately 120 construction workers would travel to/from the construction site via public transit. Transit conditions during the 6-7 AM and 3-4 PM construction peak hours are expected to be generally better than transit conditions during the analyzed operational peak hours with full build-

out of the Proposed Actions; incremental demand would be lower during construction, and most construction trips would not occur during the peak hours of commuter demand. As the construction incremental transit demand projections do not exceed the *CEQR Technical Manual* analysis thresholds of 200 new subway or 50 new bus trips after being distributed to the two subway stations and various bus lines, there would not be a potential for significant adverse transit impacts attributable to anticipated construction worker transit trips.

Pedestrians

Pedestrian trips by construction workers would be concentrated in proximity to the Proposed Development Site, along corridors connecting the Proposed Development Site to area transit services and pedestrian elements connecting the Proposed Development Site to nearby parking garages. As these construction trips would primarily occur outside of the weekday AM and PM commuter peak periods and the weekday midday peak period—the times when area pedestrian facilities typically experience their greatest demand. After being distributed to the area's pedestrian elements, 192 trips would not exceed the *CEQR Technical Manual* analysis threshold of 200 new walk trips on any pedestrian element. As such, significant adverse impacts to pedestrian elements during the peak construction quarter are unlikely to occur under the Proposed Actions.

Parking

Construction workers' parking demand would be equivalent to approximately 88 spaces in the 2026 (Q3) peak construction period. The construction-generated parking demand would be accommodated by off-street and on-street parking within the half-mile radius. As such, given the available parking within half-mile of the Project Area, the temporary nature of the construction, and the availability of alternative modes of transportation via seven subway lines and five bus lines, the Proposed Actions are not expected to result in a shortfall during the 2026 Q3 peak construction period.

Air Quality

The potential air quality impacts of the Proposed Actions were examined through a detailed analysis of construction activities for the peak construction period. This period has the highest potential for air quality impacts, and other construction periods would have lower impacts by comparison. The short-term and annual time periods for analysis were selected through the preparation of a monthly emissions profile based on the potential construction equipment requirements for each site. Off-road equipment, on-road haul truck, and fugitive dust emissions were quantified and impacts at receptors using the U.S. Environmental Protection Agency (EPA) models and methods consistent with the *CEQR Technical Manual*. The analysis accounts for the emission control measures mandated by existing laws and regulations applicable to private developers, including the use of ultra-low sulfur diesel (ULSD), dust control measures and idling restrictions.

No exceedance of National Ambient Air Quality Standards (NAAQS) or CEQR *de minimis* criteria are predicted for carbon monoxide (CO), 24-hour particulate matter with an aerodynamic diameter of less than or equal to 2.5 micrometers ($PM_{2.5}$), or annual average nitrogen dioxide (NO_2). The construction air quality analysis results show the maximum predicted total concentrations of 24-hour PM10, one- and eight-hour CO, and annual-average NO2 are below the applicable NAAQS. In addition, the maximum predicted PM2.5 incremental concentrations would not exceed the applicable CEQR de minimis criteria of 8.9 µg/m3 in the 24-hour average period or 0.3 µg/m3 in the annual average period. Likewise, the maximum predicted CO incremental concentrations would not exceed the applicable CEQR de minimis criteria. Therefore, no significant adverse impacts on air quality are predicted during construction of the

Proposed Project. Since no significant adverse impact occurs from the worst-case site construction period, no significant adverse air quality impacts would occur from the construction related to the Proposed Actions.

To ensure that no significant impacts would occur, the Applicant would commit, through a Restrictive Declaration to the following:

> ***Under the Proposed Action, all diesel-powered non-road construction equipment with a hp rating of 50 hp or greater would meet at least the Tier 4 emission standard.***
>
> ***Under the Proposed Action, a water mist system (a DustBoss system or similar system) would be utilized to remove dust generated by traveling vehicles at the cellar level during its excavation and foundation sequence. On-site truck traveling routes will be treated with chemical dust suppressants during the excavation and foundation sequences.***

Noise

Noise levels from construction of the Proposed Project are expected to be comparable to those from typical New York City construction involving a new building with concrete slab floors and foundation on piles. Similarly, potential disruptions to adjacent residences and other receptors from elevated noise levels generated by construction would be expected to be comparable to those that would occur immediately adjacent to a typical New York City construction site during the portions of construction when the loudest activities would occur.

The detailed analysis of construction noise concluded that construction of the Proposed Project has the potential to result in construction noise levels that exceed the construction noise impact criteria defined herein at portions of six buildings near the proposed construction work area (i.e., the southern façade nearest to the Franklin Avenue Shuttle and courtyard façades of the future 960 Franklin Avenue residential building, the western and southern facades of 1015 Washington Avenue, the northern façade of 1035 Washington Avenue, the eastern façade and a portion of the northern façade of 1 Sullivan Place, the western façade of the P.S. 375 Jackie Robinson school, and the western façade of the Ebbets Field Apartments).

At these receptors, construction could produce noise level increases that would be noticeable and potentially intrusive during the most noise-intensive nearby construction activities and would produce noticeable increases over the course of construction. The analysis evaluated the construction periods with the potential to result in the greatest levels of construction noise; however, the predicted maximum levels would not persist throughout construction, and the noise levels would fluctuate throughout the construction period. Construction noise control measures are discussed in **Chapter 11, "Mitigation."**

Community Facilities

According to the *CEQR Technical Manual*, construction impacts to community facilities are possible if a community facility would be directly affected by construction (e.g., if construction would disrupt services provided at the facility or close the facility temporarily, etc.). The Proposed Actions would not result in physical change to any existing community facilities during the site's construction.

In addition, while construction of the Proposed Project would result in temporary increases in traffic during the construction period, access to and from local community facilities would not be affected during the construction period. Construction workers would not place any burden on public schools and would

have minimal, if any, demands on libraries, childcare facilities, and health care services. New York City Police Department (NYPD) and New York City Fire Department (FDNY) emergency services and response times would not be materially affected by construction due to the geographic distribution of the police and fire facilities and their respective coverage areas.

Open Space

While no open space resources are located on the Proposed Development Site or in the Project Area, the Jackie Robinson Playground is located immediately east of the Proposed Development Site and the Brooklyn Botanic Garden is located approximately 130 feet west of the Proposed Development Site (at its nearest point). As such, access to existing open space resources would not be limited. If any construction staging would occur adjacent to a New York City Department of Parks and Recreation (NYC Parks) resource, the Applicant would be required to apply for a construction permit with NYC Parks, which would limit the length of time a construction project may block an open space resource and dictate how the area must be restored following construction. No publicly accessible open space would be impeded during construction. In addition, while construction of the new buildings due to the Proposed Actions would cause temporary impacts, particularly related to noise, it is expected that such impacts in any given area would be relatively short term, even under the worst-case construction sequencing, and therefore would not create an open space impact. Therefore, no significant construction impacts to open space are expected.

Historic and Cultural Resources

The NYC Landmarks Preservation Commission (LPC) determined that the Proposed Development Site was not sensitive for prehistoric and/or historic archaeological remains. In addition, the area directly north of the Project Area encompasses the former Consumers Park Brewing Company complex, an S/NR-eligible historic resource. However, based on plans filed with the Department of Buildings, the existing buildings on the site, including the S/NR-eligible Consumer Park Brewery Company complex structures, would be demolished and replaced with an as-of-right residential building. Therefore, the Proposed Actions would not result in any new direct impacts to historic architectural resources as compared to No-Action conditions. The Brooklyn Central Office's Bureau of Fire Communications is the only historic resource within 400-feet of the Project Area that is a designated NYCL and is eligible for listing on the S/NR. As the Proposed Actions are Project Area-specific, they would not result in any direct impacts to surrounding historic resources.

Hazardous Materials

Any potential construction-related hazardous materials would be avoided through the adoption of a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) for the Proposed Development Site. Demolition of building interiors, portions of buildings, or entire buildings are regulated by the New York City Department of Buildings (NYCDOB) and require abatement of asbestos prior to any intrusive construction activities, including demolition. The U.S. Occupational Safety and Health Administration (OSHA) regulates construction activities to prevent excessive exposure of workers to contaminants in the building materials, including lead paint. New York State Solid Waste regulations control where demolition debris and contaminated materials associated with construction are handled and disposed of. Adherence to these existing regulations would prevent impacts from construction activities on the Proposed Development Site.

C. REGULATORY FRAMEWORK

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 10-1** 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 (NYCDOB) 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, NYCDOB 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 Environmental Protection (NYCDEP) 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 NYCDEP 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 (NYCLPC) approves studies and testing to prevent loss of archaeological materials and to prevent damage to fragile historic structures.

On 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.

TABLE 10-1
Construction Oversight in New York City

Agency	Area(s) of Responsibility
New York City	
Department of Buildings (NYCDOB)	Primary oversight for Building Code and site safety
Department of Environmental Protection (NYCDEP)	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 (NYCLPC)	Archaeological and historic architectural protection
New York State	
Department of Labor (NYSDOL)	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. CONCEPTUAL CONSTRUCTION SCHEDULE AND ACTIVITIES

This chapter presents a description of the construction process for the purposes of analyzing construction activities that may result in environmental impacts. It is not intended to describe the precise construction methods that may ultimately be used, nor is it intended to dictate or confine the construction process. Actual construction methods and materials may vary, depending in part on how the construction contractors choose to implement their work to be most cost-effective, within the requirements set forth in bid, contract, and construction documents. Construction specifications will require that construction contractors comply with applicable environmental regulations and obtain necessary permits for the duration of construction. Construction would follow applicable federal, state, and local laws for building and safety, as well as local noise ordinances, as appropriate.

Construction Sequencing

A reasonable worst-case for the anticipated schedule of construction activities and phases was developed for the purposes of assessing potential construction impacts (see Figure 10-1). As shown in the figure, construction of the Proposed Project is anticipated to begin in the second quarter of 2025. Construction activities for the Proposed Project would span approximately 31 months, with all construction activities expected to be completed during the 2027 analysis year.

Typical Construction Activities

Overview

Construction of mid-rise or large-scale buildings in New York City typically follows a general pattern. The first task is construction startup, which involves the siting of field offices, installation of temporary power and communication lines, and the erection of site perimeter fencing. Then, if there is an existing building on the site, any potential hazardous materials (such as asbestos) are abated, and the building is then demolished with some of the materials recycled and the debris taken to a licensed disposal facility. For sites requiring new or upgraded public utility connections, these activities are undertaken next (e.g., electrical connections, and installation of new water or sewer lines and hook-ups, etc.). Excavation and removal and/or addition and re-grading of the soils is the next step, followed by construction of the foundations. When the below-grade construction is completed, construction of the core and shell of the new building begins. The core is the central part of the building and is the main part of the structural system. It contains the elevators and the mechanical systems for heating, ventilation, and air conditioning (HVAC). The shell is the outside of the building. 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 the busiest time of building construction, the upper core and structure are built while the mechanical/electrical connections, exterior cladding, and interior finishing progress on lower floors. Finally, site work, including landscaping, and other site work associated with a particular building site, like completing or resurfacing new access roadways and sidewalks (or for waterfront sites, completing the associated segments of waterfront esplanade and upland connections) is undertaken, and site access and protection measures required during construction are removed.

General Construction Tasks

ABATEMENT, DEMOLITION, AND REMEDIATION

Development of the Proposed Project would require the demolition of a portion of the Golombeck Spice buildings (a 12,916 gsf one-story warehouse). Prior to demolition, a New York City-certified asbestos investigator would inspect the buildings for asbestos-containing materials (ACMs). If ACMs are found, these materials would be removed by a NYSDOL-licensed asbestos abatement contractor prior to any building demolition. Asbestos abatement is strictly regulated by DEP, the NYSDOL, the EPA, and OSHA to protect the health and safety of construction workers and nearby residents and workers. Depending on the extent and types of ACMs, these agencies would be notified of the asbestos removal project and may inspect the abatement site to ensure that work is being performed in accordance with applicable regulations. These regulations specify abatement methods, including wet removal of ACMs that minimize asbestos fibers from becoming airborne. The areas of the building ACMs would be isolated from the surrounding area with a containment system and a decontaminant system. The types of these systems would depend on the type and quantity of ACMs and may include hard barriers, isolation barriers, and/or critical barriers. Specially trained and certified workers wearing personal protective equipment would remove the ACMs and place them in bags or containers lined with plastic sheering for disposal at an asbestos-permitted landfill. After the abatement is complete and the work areas have passed a visual inspection, if applicable, the general demolition work can begin. At the same time that the ACMs are being abated, removal of other materials that could be hazardous could take place. These other materials may include fluorescent light bulbs that contain mercury, lead based paints (LBPs), and transformers that contain polycyclic biphenyls (PCBs).

General demolition is the next step. First, any economically salvageable materials are removed. Then, the building is deconstructed using large equipment. Typical demolition requires solid temporary walls around the building to prevent the accidental dispersal of building materials into areas accessible to the general public. The demolition debris would be sorted prior to being disposed at landfills to maximize recycling opportunities.

CONSTRUCTION STARTUP TASKS

The following tasks are considered to be typical startup work to prepare for site construction. 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. 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. 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. Also, portable toilets, dumpsters for trash, and water and fuel tankers would be brought to the site and installed. Temporary utilities would be connected to the construction trailers. During the startup period, permanent utility connections may be made, especially if the construction manager has obtained early electric power for construction use, but utility connections may be made at almost any time during the construction sequence.

EXCAVATION AND FOUNDATION

First, piles would be installed along the perimeter of the construction site to hold back soil around the excavation area. Next, excavators would be used for the task of digging the building foundations. Any excavated soil to be removed from the project site would be loaded onto dump trucks for transport to a licensed disposal facility or for reuse elsewhere on the project site or on another construction site. This stage of construction would also include construction of the Proposed Project's foundation. As described in greater detail below under "Hazardous Materials," to reduce the potential for public exposure to contaminants during excavation activities, construction activities would be performed in accordance with all applicable regulatory requirements. Specifically, all construction subsurface soil disturbances would be performed in accordance with RAPs and CHASPs approved by one or more of the NYSDEC, OER, and DEP.

SUPERSTRUCTURE AND EXTERIOR FACADE

Construction of the buildings' cores would include construction of the buildings' frameworks (installation of beams and columns) and floor decks; elevator shafts; vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment; core stairs; and restroom areas. Exterior construction involves the installation of the façade (exterior walls, windows, and cladding and the roof). Temporary construction elevators (hoists) would be constructed for the delivery of materials and vertical movement of workers, when necessary.

INTERIOR AND FINISHING

This stage would include the construction of interior partitions, installation of lighting fixtures, amenity construction, interior finishes (floor, painting, millwork, glass and glazing, door and hardware, etc.), mechanical and electrical work (such as the installation of elevators) and plumbing and fire protections fit-out work. This stage of construction is typically the quietest, as most of the construction activities would occur within the buildings with the facades substantially complete. This stage of construction would include the final finishing of the buildings and grounds. Construction of various components of the Proposed Project would occur over several years, with construction activities and intensities varying, depending upon which components of the overall development are underway at a given time.

The following is a general outline of anticipated construction stages on the Proposed Development Site.

- Months 1-10: Abatement, site clearance, remediation, excavation, and foundation. The first ten months of construction would entail abatement, site clearance (including demolition of existing buildings); remediation; digging, pile-driving, pile capping, and excavation for the foundation; and reinforcing and pouring of the foundation. Typical equipment used for these activities would include excavators, backhoes, tractors, pile-drivers, hammers, and cranes. Trucks would arrive at the site with pre-mixed concrete and other building materials and would remove any excavated material and construction debris.
- Months 11-24: Underground parking foundation, erection of the superstructure, and façade and roof construction. Once the foundations have been completed, the construction of the building's steel framework, parking ramp, and decking would take place. This process involves the installation of beams, columns and decking, and would require the use of cranes, derricks, hoists, and welding equipment, as warranted. This stage of construction would also include the assembly of exterior walls and cladding, as well as roof construction.
- Months 4-31: Mechanical installation, interior and finishing work. This would include the installation of heating, ventilation and air conditioning (HVAC) equipment and ductwork; installation and checking of elevator, utility, and life safety systems; and work on interior walls and finishes. During these activities, hoists and cranes would continue to be used, and trucks would remain in use for material supply and construction waste removal. It should be noted that since much of this stage of construction would occur when the building is fully enclosed, disruption to the surrounding neighborhood would be minimized.

The phases, duration, and overlap of construction activities specific to the Proposed Project are identified in **Figure 10-1**. It should be noted that the actual duration of such activities could vary. For example, the time necessary for each activity would vary depending upon such factors as work hours, traffic restrictions, and contractors' means and methods. Other factors would include the number and type of utilities requiring relocation and the location, and condition of nearby surface and subsurface structures.

Estimate of Construction Workers and Construction Period Trucks

Worker and truck projections were based on projections from the development team and are site-specific. The resultant estimate of the number of trucks and workers per quarter are summarized in **Table 10-2**. For conservative analysis purposes, no credit was taken for construction activities associated with No-Action conditions. As indicated in **Table 10-2**, over the duration of the nearly three-year analysis period, the number of daily construction workers would average 134, the number of daily construction worker vehicles would average 49, and the number of daily construction trucks would average 23. The number of daily construction workers, construction worker vehicles, and construction trucks would peak in the third quarter of 2026 (with 240 workers, 70 worker vehicles, and 35 trucks, respectively).

For the purposes of establishing a reasonable worst-case for the construction assessment, based on the conceptual construction schedule presented in **Figure 10-1**, the third quarter of 2026 was selected as the construction peak year for the transportation assessment in this chapter. It should be noted that, while 2026 (Q3) was identified as the peak construction traffic period (as it represents the period during which the cumulative construction worker and truck trips would peak), as discussed in the following sections, different peak periods were identified for other technical areas, as appropriate, in accordance with *CEQR Technical Manual* criteria.

Construction Task	Approximate Duration	2025												2026												2027											
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
General Requirements	31.5					1	1	1	1	1	1	1	1	1	1	2	4	4	4	6	6	6	6	6	6	8	8	8	8	10	10	10	10	10	10	10	
Excavations & Foundations	11.2					20	25	25	45	55	55	60	60	60	45	24																						
Structure	6.1															100	160	160	181	181	126																
Exterior Wall	9.2																4	4	25	40	50	65	65	50	49												
Roofing & Waterproofing	8.1																					20	20	20	5	5	10	10	10								
Interior Partitions & Finishes	20.3																20	20	20	20	35	35	35	50	65	65	65	75	75	75	75	75	60	60	60	59	
Specialties	16.2																																5	5	5	2	
Equipment & Furnishings	16.2																																5	5	5	5	
Conveying Equipment	13.2																					6	6	6	6	6	6	2	2	2	2	2	2	1			
Fire Suppression	24.3												2				2	2	4	4	4	6	6	6	6	6	6	6	6	6	6	6	6	8	8	7	
Plumbing	28.4								4	4	4	6	6	6	6	8	8	8	8	10	10	12	14	14	20	22	22	20	20	20	18	18	18	16	16	14	
Heating Ventilating & Air Conditioning	20.3																6	6	6	8	8	12	12	12	16	16	16	12	12	12	12	12	12	12	12	8	
Electrical	28.4								4	4	6	6	6	6	6	8	8	8	16	16	16	16	20	20	20	24	24	26	26	26	26	24	20	16	16	16	
Site & Infrastructure	4.0												8	8	8	7																					
Average # Workers Per Day						21	26	26	54	64	66	73	83	81	66	149	212	212	264	285	255	178	184	184	193	152	157	159	159	151	149	147	138	133	132	121	
# Trucks Per Day						10	15	30	30	30	30	30	30	30	30	30	35	35	35	35	35	35	35	35	35	20	20	20	10	10	10	10	10	10	10	10	

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Figure 10-1

Preliminary Construction Schedule / Truck and Worker Estimate

TABLE 10-2
Estimated Total Number of Construction Workers and Construction Trucks On-Site Per Day

Year	2025				2026				2027			
Quarter	*1st*	*2nd*	*3rd*	*4th*	*1st*	*2nd*	*3rd*	*4th*	*1st*	*2nd*	*3rd*	*4th*
Construction Workers	0	24	48	74	99	230	240	187	156	153	140	127
Construction Worker Vehicles[1]	0	7	14	21	29	67	70	54	45	44	41	37
Construction Trucks	0	13	30	30	30	35	35	35	20	10	10	10
Total Construction Vehicles (Worker Vehicles + Trucks) in PCEs[2]	0	33	74	81	89	137	140	124	85	64	61	57

	Project Daily	
	Peak Quarter	Average
Construction Workers	240	134
Construction Worker Vehicles	70	39
Construction Trucks	35	23
Total Construction Vehicles (Worker Vehicles + Trucks) in PCEs[2]	140	86

Note:
Peak construction vehicle period highlighted in orange.
[1] Based on 2000 Census reverse journey to work data for construction industry employees (Brooklyn census tracts 213, 215, 217, 219, 325, 327)
[2] Passenger Car Equivalents (PCEs) assume each truck trip is equivalent to two passenger cars.

Construction Work Hours

Construction activities for buildings in the City generally take place Monday through Friday, with exceptions that are discussed separately below. In accordance with City laws and regulations, construction work at the Proposed Project would generally begin at 7 AM on weekdays, with workers arriving to prepare work areas between 6 and 7 AM. Construction work activities would typically finish around 3:30 PM, but on some occasions, the workday could be extended depending upon the need to complete some specific tasks beyond normal work hours, such as completing the drilling of piles, finishing a concrete pour for a floor deck, or completing the bolting of a steel frame erected that day. The extended workday would generally last until about 6 PM and would not include all construction workers on-site, but just those involved in the specific tasks requiring additional work time.

Occasionally, Saturday or overtime hours may be required to complete some time-sensitive tasks. Weekend work requires a permit from the NYCDOB and, in certain instances, approval of a noise mitigation plan from NYCDEP under the City's Noise Code. The New York City Noise Control Code, as amended in December 2005 and effective July 1st, 2007, limits construction (absent special circumstances as described below) to weekdays between the hours of 7 AM and 6 PM and sets noise limits for certain specific pieces of construction equipment. Construction activities occurring after hours (weekdays between 6 PM and 7 AM or on weekends) may be permitted only to accommodate: (i) emergency conditions; (ii) public safety; (iii) construction projects by or on behalf of City agencies; (iv) construction activities with minimal noise impacts; and (v) undue hardship resulting from unique site characteristics, unforeseen conditions, scheduling conflicts, and/or financial considerations. In such cases, the number of workers and pieces of equipment in operation would be limited to those needed to complete the particular authorized task. Therefore, the level of activity for any weekend work would be less than a normal workday. The typical weekend workday would be on Saturday from 7 AM with worker arrival and site preparation to 5 PM for site cleanup.

Construction Staging Areas, Sidewalk and Lane Closures

Construction staging areas, also referred to as "laydown areas," are sites that would be used for the storage of materials and equipment and other construction-related activities. Work zones are those areas where the construction is occurring. Field offices for contractors and construction managers would be situated at staging areas or in existing office space near the work areas. Staging areas would typically be fenced and lit for security and would adhere to New York City Building Codes.

Staging areas of adequate size and proximity to the construction sites are essential to minimize construction traffic and to provide adequate space and access for construction activities. It is anticipated that construction staging would most likely occur on the Proposed Development Site and may in some cases, extend within the curb and travel lanes and sidewalks of public streets adjacent to the construction site. As is typical with construction projects in New York City, it is anticipated that some sidewalks immediately adjacent to the Proposed Development Site would be closed to accommodate heavy loading areas for at least several months of the construction period for each site and that portions of adjacent roadways may need to be temporarily closed during certain limited periods of construction. Pedestrians would either use a temporary walkway in a sectioned-off portion of the street or be diverted to walk on the opposite side of the street. The construction manager would be required to demonstrate how they intend to reduce disruptions due to vehicle deliveries and staging and the closures of adjacent sidewalks and public streets, which would be reviewed and approved by DOT. In addition, detailed MPT plans for any temporary sidewalk and lane closures would be submitted for approval to the NYCDOT Office of Construction Mitigation and Coordination (OCMC), the entity that ensures critical arteries are not interrupted, especially in peak travel periods. Builders would be required to plan and carry out noise and dust control measures during construction.

Appropriate protective measures for ensuring pedestrian safety surrounding the Proposed Development Site would be implemented under these plans. Construction activities would also be subject to compliance with the New York City Noise Code and by the EPA noise emission standards for construction equipment. In addition, there would be requirements for street crossing and entrance barriers, protective scaffolding, and compliance with applicable construction safety measures.

E. PRELIMINARY ASSESSMENT

In accordance with the guidance of the *CEQR Technical Manual*, this preliminary assessment evaluated the effects associated with the Proposed Actions' construction-related activities including transportation (traffic, transit, pedestrians and parking), air quality, noise, land use and neighborhood character, socioeconomic conditions, community facilities, open space, historic and cultural resources, and hazardous materials.

Transportation

The construction transportation analysis assesses the potential for construction activities to result in significant adverse impacts to traffic, transit, and pedestrians. The analysis is based on the peak worker and truck trips during construction of the Proposed Project; these are developed based on several factors including worker modal splits, vehicle occupancy, truck passenger car equivalents (PCEs), and arrival/departure patterns.

Construction Worker Modal Splits and Vehicle Occupancy

Construction worker modal splits and vehicle occupancy rates were based on the latest available U.S. Census data for workers in the construction industry working in Brooklyn census tracts 213, 215, 217, 219, 325, 327 (2000 Census data was used as this is the latest Census where the Reverse-Journey-to-Work dataset was available). Based on the data, it is anticipated that approximately 38.9 percent of construction workers would commute to the project site using private vehicles and at an average occupancy of approximately 1.34 persons per vehicle. Similarly, it is expected that approximately 50.0 percent of construction workers would commute to the project site via transit, 7.9 percent via ferry or railroad, and the remaining 3.2 percent would walk to the project site.

Daily Workforce and Truck Deliveries

To assess a reasonable worst-case analysis of potential transportation-related effects during construction, the daily combined workforce and truck trip projections in the peak quarter were used as the basis for estimating peak-hour construction trips. It is expected that construction of the Proposed Project would generate a peak of approximately 240 workers and 35 truck deliveries per day during the third quarter of 2026. These estimates of construction activities are discussed further below.

Traffic

CONSTRUCTION-WORKER VEHICLE AND TRUCK TRIPS

Similar to other construction projects in NYC, most of the construction activities at the project site are expected to take place in the early morning and late midday periods, from 7:00 AM to 3:30 PM. While construction truck trips would occur throughout the day, most trucks would remain in the area for short durations, and construction workers would commute during the hours before and after the work shift. For analysis purposes, each truck delivery was assumed to result in two truck trips (one “in” and one “out”) and would start arriving to the project site during the hour before each work shift. Construction truck deliveries typically peak during the hour before each shift (25 percent), overlapping with construction worker arrival traffic. For construction workers, the majority (approximately 80 percent) of the arrival and departure trips would generally occur during the hour before and after each work shift. In accordance with the *CEQR Technical Manual*, the traffic analysis assumed that each truck has a PCE of two while other vehicles have a PCE of one.

As shown in **Table 10-3**, the maximum construction-related traffic increments would be approximately 90 PCEs during the AM period (6:00 AM to 7:00 AM) and 60 PCEs during the PM period (3:00 PM to 4:00 PM). These incremental construction PCEs would exceed the *CEQR Technical Manual* threshold of 50 vehicle-trips.

TABLE 10-3
2026(Q3) Hourly Construction Vehicle Trip Projections (in PCEs)

Time Period	Construction Worker Auto Trips			Construction Truck Trips			Total Construction Trips		
	In	Out	Total	In	Out	Total	In	Out	Total
6-7 AM	56	0	56	17	17	34	73	17	90
7-8 AM	14	0	14	7	7	14	21	7	28
8-9 AM	0	0	0	7	7	14	7	7	14
9-10 AM	0	0	0	7	7	14	7	7	14
10-11 AM	0	0	0	7	7	14	7	7	14
11 AM-12 PM	0	0	0	7	7	14	7	7	14
12-1 PM	0	0	0	7	7	14	7	7	14
1-2 PM	0	0	0	4	4	8	4	4	8
2-3 PM	0	3	3	4	4	8	4	7	11
3-4 PM	0	56	56	2	2	4	2	58	60
4-5 PM	0	11	11	1	1	2	1	12	13
Total	70	70	140	70	70	140	140	140	280

As shown in **Figure 10-2**, the projected AM and PM peak construction vehicle trips were assigned to the surrounding roadway network, with trucks assigned to DOT-designated truck routes. Because on-site parking would not be provided on the construction site to accommodate the construction workers driving to the Proposed Development Site, construction worker vehicles were assigned to/from the two nearest open parking garages at 1109 President Street and 580-590 Flatbush Avenue. Based on the assigned incremental traffic and as shown in **Figure 10-2**, no intersections would exceed the *CEQR Technical Manual* analysis threshold for detailed analysis is not warranted. Therefore, significant adverse impacts to traffic during the peak construction quarter are unlikely to occur under the Proposed Actions.

Transit

As described previously, approximately 50 percent of construction workers would be expected to commute to/from the construction sites by public subway or bus. An additional 7.9 percent would commute using ferry or railroad but would likely use public transit for a final leg. With a peak of 240 construction workers anticipated in 2026(Q3), a maximum of approximately 147 construction workers would travel to/from the construction sites by public transit (including subway, commuter rail, ferry, and bus). **Table 10-4**, presents the hourly distribution of construction worker public transit trips during the 2026(Q3) construction peak.

As presented in **Table 10-4**, during the 2026(Q3) construction peak period, construction workers would generate a total of 117 public transit trips in the 6-7 AM and 3-4 PM construction peak hours. As presented in **Chapter 14, "Transportation,"** the Proposed Development Site is served by two subway stations: the Franklin Avenue-Botanic Garden station (2, 3, 4 and 5 trains, Franklin Avenue Shuttle) and the Prospect Park station (B and Q trains, Franklin Avenue Shuttle). The Project Area is also served by a total of five local bus routes operated by New York City Transit (NYCT): the B16, B41, B43, B48, and B49. Given that the area is well-served by seven subway lines and five bus lines, the 96 transit trips are expected be distributed across all lines and routes. As such, as these projections do not exceed the *CEQR Technical Manual* analysis thresholds of 200 new subway or 50 new bus trips after being distributed to the two subway stations and various bus lines, and as these trips would occur outside of the typical commuter peak hours, there would not be a potential for significant adverse transit impacts attributable to anticipated construction worker transit trips.



962-972 Franklin Avenue Rezoning **Figure 10-2**

Weekday Construction AM/PM Peak Hour Traffic Assignments

TABLE 10-4
2026(Q3) Peak Hour Construction Worker Public Transit Trips

Time Period	Construction Worker Transit Trips		
	In	Out	Total
6-7 AM	117	0	117
7-8 AM	30	0	30
8-9 AM	0	0	0
9-10 AM	0	0	0
10-11 AM	0	0	0
11 AM-12 PM	0	0	0
12-1 PM	0	0	0
1-2 PM	0	0	0
2-3 PM	0	8	8
3-4 PM	0	117	117
4-5 PM	0	22	22
Total	147	147	294

Pedestrians

As discussed above, during the 2026(Q3) peak construction period it is estimated that there would be a net increment of approximately 240 construction workers on-site daily under the Proposed Actions, approximately 50 percent of whom are expected to travel to/from the proposed rezoning area by transit, walking to and from area subway stations and bus stops, and an additional 7.9 percent would commute using ferry or railroad but would likely use public transit for a final leg.. Up to an additional 3.2 percent are expected to walk to or from the proposed rezoning area. In addition, the 38.9 percent of construction workers who would drive are anticipated to park at the nearby garages would walk to/from the Proposed Development Site. In sum, all 240 construction workers would approach the Proposed Development Site on-foot. As approximately 80 percent of these trips are expected to occur during any one peak hour, net incremental construction worker travel demand on area sidewalks and crosswalks is expected to total approximately 192 trips (transit walk trips, walk-only trips and auto-walk trips combined) in both the 6-7 AM and 3-4 PM construction peak hours. After being distributed to pedestrian elements primarily en route to the two subway stations, five local bus routes, and nearby garages, these trips would not exceed the *CEQR Technical Manual* analysis threshold of 200 new walk trips on any pedestrian element. As such, significant adverse impacts to pedestrian elements during the peak construction quarter are unlikely to occur under the Proposed Actions.

Parking

As discussed above, during the 2026(Q3) peak quarter for construction traffic, it is estimated that there would be approximately 240 workers on site daily, approximately 38.9 percent of whom would be expected to travel to the Project Area by private auto. Based on an average vehicle occupancy of 1.34 persons per vehicle, the maximum daily parking demand from project site construction workers would total approximately 70 spaces. These workers are expected to primarily park in off-street public parking facilities or available on-street parking in proximity to the Proposed Development Site as there would be no on-site construction parking to be provided on the Proposed Development Site while under construction.

The 70 spaces of 2026(Q3) peak construction worker parking demand would be accommodated by off-street parking and available on-street parking within the ½-mile study area. Based on the utilization data at the two nearest, open garages at 1109 President Street (77.5% of 108 spaces) and 580-590 Flatbush Avenue (69.8% of 209 spaces), approximately 87 parking spaces and off-street would be available in the

weekday overnight period within ½-mile of the Project Area. It should be noted that the nearest parking lot at 200 Eastern Parkway (with a peak of 80% utilization of its 325 spaces) would also be able to accommodate any additional vehicles following its overnight closure and opening at 7am, when the remaining approximately 20% of construction workers would arrive. All of the construction workers' vehicles would be accommodated at the two nearest, open parking garages with additional availability of spaces at the 200 Eastern Parkway garage as well as on-street parking in the Project Area. Consequently, the construction-generated parking demand would be accommodated by off-street parking and on-street parking within the half-mile radius. Therefore, given the available parking within half-mile of the Project Area, the temporary nature of the construction, and the availability of alternative modes of transportation via seven subway lines and five bus lines, the Proposed Actions are not expected to result in a shortfall during the 2026 Q3 peak construction period.

Air Quality

According to the *CEQR Technical Manual*, a quantitative assessment of air quality for construction activities is likely not warranted if the project's construction activities: (1) are considered short term, which for air quality assessments has generally been accepted as two years or less; (2) are not located near sensitive receptors; (3) do not involve the construction of multiple buildings where there is a potential for cumulative impacts from different buildings under simultaneous construction before the final build-out; and (4) would not operate multiple pieces of diesel equipment in a single location during peak construction. If a project does not meet one or more of the criteria above, a quantitative air quality assessment could be required.

As construction of the Proposed Development Site under the RWCDS would involve the use of multiple pieces of diesel equipment, with construction anticipated to last more than two years, the Proposed Actions do not screen out of all of the four criteria. As a result, a quantitative air quality assessment was performed. The methodologies and results of this analysis are described in the "Detailed Analysis" section, below.

Noise

According to the *CEQR Technical Manual*, an assessment of noise for construction activities is likely not warranted if the project's construction activities: (1) are considered short term; (2) are not located near sensitive receptors; (3) do not involve the construction of multiple buildings where there is a potential for cumulative impacts from different buildings under simultaneous construction before the final build-out; and (4) would not operate multiple pieces of diesel equipment in a single location during peak construction. If a project does not meet one or more of the criteria above, a quantitative noise assessment could be required.

As construction of the Proposed Development Site under the RWCDS would involve the use of multiple pieces of diesel equipment, with construction anticipated to last more than two years, the Proposed Actions do not screen out all of the four criteria. As a result, a quantitative construction noise assessment was performed. The methodologies and results of this analysis are described in the "Detailed Analysis" section, below.

Other Technical Areas

Land Use and Neighborhood Character

According to the *CEQR Technical Manual*, a construction impact analysis for land use and neighborhood character is typically needed if construction would require continuous use of property for an extended duration, thereby having the potential to affect the nature of the land use and character of the neighborhood. A land use and neighborhood character assessment for construction impacts examines construction activities that would occur on the site (or portions of the site) and their duration. The analysis determines whether the type and duration of the activities would affect neighborhood land use patterns or neighborhood character. For example, a single property might be used for staging for several years, resulting in a "land use" that would be industrial in nature. Depending upon the nature of existing land uses in the surrounding area, the use of a single piece of property for an extended duration and its compatibility with neighboring properties may be assessed to determine whether it would have a significant adverse impact on the surrounding area.

Construction activities associated with the Proposed Project would affect land use on the Proposed Development Site temporarily but would not alter surrounding land uses. As is typical with construction projects, during periods of peak construction activity there would be some disruption to the nearby area. There would be construction trucks and construction workers coming to the project site. There would also be noise, sometimes intrusive, from demolition, excavation, and foundation activities, as well as trucks and other vehicles backing up, loading, and unloading. These disruptions would be temporary in nature and would have limited effects on land uses within the study area, particularly as most construction activities would take place within the project site. In addition, throughout the construction period, measures would be implemented to control noise and dust on the project site, including the erection of construction fencing and barriers. The fencing would reduce potentially undesirable views of the construction site and buffer noise emitted from construction activities. Since none of these impacts would be continuous or ultimately permanent, they would not create significant adverse impacts on land use patterns or neighborhood character in the area. Therefore, it is expected that such impacts would be temporary and would not impact neighborhood character. Therefore, no significant construction impacts to land use and neighborhood character are expected.

Socioeconomic Conditions

According to the *CEQR Technical Manual*, construction impacts to socioeconomic conditions are possible if a project would entail construction of a long duration that could affect access to and thereby viability of a number of businesses and if the failure of those businesses has the potential to affect neighborhood character. The Proposed Development Site is located on Franklin Avenue and there are no existing businesses located immediately adjacent to the Proposed Development Site to the north, south, or west. Construction activities associated with the Proposed Project would not significantly block or restrict access to any facilities in the area, affect the operations of any nearby businesses, or obstruct thoroughfares used by customers or businesses.

Community Facilities

According to *CEQR Technical Manual* guidance, construction impacts to community facilities are possible if a community facility would be directly affected by construction (e.g., if construction would disrupt services provided at a facility or close a facility temporarily, etc.). While the Proposed Project would result in construction activities immediately across Franklin Avenue from P.S. 375/Jackie Robinson School and Ebbets Field M.S. 352 (both located at 46 McKeever Place), there would be no direct effects on the schools

and the schools would continue operation without disruption of services. No other community facilities would be directly affected by the proposed construction activities for an extended duration. The construction site would 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, day 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. NYPD and FDNY emergency services and response times would not be materially affected as a result of the geographic distribution of the police and fire facilities and their respective coverage areas. Therefore, no significant construction impacts to community facilities are expected as a result of the Proposed Project and further assessment is not warranted.

Open Space

According to *CEQR Technical Manual* guidance, construction impacts to open space are possible if open space resources are taken out of service for a period of time during the construction process. No open space resources would be disrupted during the proposed construction work, nor would access to any publicly accessible open space be impeded during construction. The open space resource most proximate, Jackie Robinson Playground, is located northeast of the site across Franklin Avenue. At limited times, early-stage construction activities such as excavation and foundation construction may generate noise that could diminish the enjoyment of nearby open space users, but such noise disturbances would be temporary. Additionally, construction fences around the Proposed Development Site would shield the nearby open space from construction activities. Furthermore, construction activities would be required to comply with the New York City Noise Code, which regulates construction noise to reduce the effects on noise sensitive receptors including public open space. As such, no construction impacts related to open space are expected and further assessment is not warranted.

Historic and Cultural Resources

According to *CEQR Technical Manual* guidance, construction impacts may occur on historic and cultural resources if in-ground disturbances or vibrations associated with project construction could undermine the foundation or structural integrity of nearby resources. As discussed in **Attachment B, "Supplemental Screening,"** of the Environmental Assessment Statement (EAS), in the futures both without the Proposed Actions, the existing buildings north of the Project Area, including the S/NR-eligible Consumer Park Brewery Company complex structures, would be demolished and replaced with an as-of-right residential building. Therefore, the Proposed Actions would not result in any new direct impacts to historic architectural resources as compared to No-Action conditions. However, there is one historic resource within 400-feet of the Project Area that is a designated NYCL and is eligible for listing on the S/NR: the Brooklyn Central Office's Bureau of Fire Communications. This historic building is located on the southeast corner of block 1183, with frontage along Washington Avenue to the east and Empire Boulevard to the south. There are no other historic architectural resources eligible for listing on the S/NR or designation as NYCLs within the 400-foot study area. As this eligible historic resource is located approximately 400 feet from the Project Area the New York City Department of Building (DOB) Technical Policy and Procedure Notice (TPPN) #10/88's special protections for historic resources located within 90 feet of a construction site are not required. As such, no construction impacts related to historic or cultural resources are expected and further assessment is not warranted.

Hazardous Materials

According to the guidance in the *CEQR Technical Manual*, any impacts from in-ground disturbance that are identified in hazardous materials studies or institutional controls, such as (E) designations or restrictive

declarations, should be identified in this chapter. If the impact identified in hazardous materials studies is fully mitigated or avoided, no further analysis of the effects from construction activities on hazardous materials is needed.

As discussed in **Chapter 7, "Hazardous Materials,"** a Phase I Environmental Site Assessment (ESA) was prepared in February 2023 in order to evaluate potential contamination of the Proposed Development Site. The Phase I ESA identified Recognized Environmental Conditions (RECs). Based on the findings of the Phase I ESA, it was determined that a Phase II Environmental Site Investigation (ESI) was necessary to adequately identify/characterize the surface and subsurface soils of the Proposed Development Site.

The Applicant will submit the results of the Phase II report for NYCDEP review and approval. The Applicant will prepare a Remedial Action Plan (RAP), which incorporates a Construction Health and Safety Plan (CHASP), which will detail the procedures to be followed to avoid the potential for adverse impacts related to hazardous materials. The Applicant will commit to implementing the RAP and CHASP, which are anticipated to be approved by NYCDEP in advance of the issuance of the FEIS, prior to the commencement of construction activities.

With the inclusion of the remedial measures described above, the Proposed Actions would not result in any significant adverse impacts related to hazardous materials.

F. DETAILED ANALYSES

Air Quality

The need for a detailed quantitative air quality analysis is determined by several factors, such as the type of construction activity and the construction equipment used, the duration of any heavy construction activity, the physical relationship of the project site to nearby sensitive receptors (e.g., residential, hospital, school), and the commitment to use emission control measures.

Construction under the Proposed Action is anticipated to last approximately 31 months (May 2025 to November 2027). The level of construction activity would vary among the stages of construction. The demolition, excavation, and foundation work stage (first segment) will last approximately ten months (5/1/2025 to 3/19/2026). The foundation work, comprising five sequences, will start after the clearing and demolishing of the existing building on the site. The cellar-level excavation and pile drilling will occur in the foundation's first three sequences. Excavation and pile drilling at the upper lot will start in the fourth sequence, while concrete is purred at the cellar level.

The superstructure will be constructed after the construction's first segment, during an approximately 3.5-month period (3/19/2026 to 7/8/2026). The exterior envelope build-out stage will overlap with the superstructure build-out, lasting approximately fourteen months (6/12/2026 to 7/20/2027). The interior fit-out will last approximately 17 months, starting April 30, 2026. Other construction-related activities include elevator installations, utilities, site work, start-up and testing, and inspections.

The emissions generated in the abatement, demolition, excavation, and foundation stages are mainly related to on-site nonroad diesel equipment, truck emissions, and particulate matter (as fugitive dust) generated by excavation and earth-moving operations. Generally, there is significantly more particulate emission during the excavation and foundation stage of the construction. In addition to on-site emission sources, the construction air quality analysis also accounted for the emissions of construction-related on-

road trucks. Construction workers' vehicles will use parking facilities in the area and will generally not travel on streets adjacent to the site.

The construction activities would involve heavy-duty diesel equipment and earth-moving operations, the construction phase would last more than two years, and there are sensitive receptors near the Project Site. Therefore, a quantitative air quality analysis was undertaken to evaluate the potential for significant adverse impact. The analysis included emissions from non-road construction equipment, construction-related dust emissions, and on-road vehicles.

Air Quality Standards, Regulations, and Benchmarks

As required by the Clean Air Act, The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six of the most common air pollutants, known as "criteria" pollutants. The presence of these pollutants (criteria pollutants) in the ambient air is generally due to numerous diverse and widespread sources of emissions. Generally, criteria pollutants are the pollutants of concern for construction activities. Determination of significant impact related to criteria pollutants accounts for pollutant concentrations in the ambient air, which include background concentrations. Background concentrations at the nearest New York State Department of Environmental Conservation (NYSDEC) federally mandated monitoring station(s) were applied in the analysis.

The EPA mandates ultra-low sulfur diesel (ULSD) fuel for all highway and non-road diesel engines. As such, sulfur oxide (SOx) emissions associated with the construction activities would be negligible. Therefore, the pollutants analyzed for the construction period were annual average nitrogen dioxide (NO_2), particulate matter with aerodynamic diameter less than or equal to 10 microns (PM_{10}), $PM_{2.5}$, and CO.

In addition to the NAAQS, New York City's *de minimis* criteria are used to determine the significance of the incremental increases in carbon monoxide (CO) and $PM_{2.5}$ concentrations. The *CEQR Technical Manual de minimis* criteria set allowable incremental increases in CO and $PM_{2.5}$ concentrations that would result as a consequence of a proposed project. The *de minimis* for CO is:

- An increase of 0.5 parts per million (ppm) or more in the maximum 8-hour average CO concentration at a location where the predicted No-Action 8-hour concentration is equal to 8 ppm or between 8 ppm and 9 ppm; or

- An increase of more than half the difference between baseline (i.e., No-Action) concentrations and the 8-hour standard, when No-Action concentrations are below 8 ppm.

The following criteria are used for the determination of significant adverse $PM_{2.5}$ incremental impacts for projects under CEQR:

- Predicted 24-hour maximum $PM_{2.5}$ concentration increase of more than half the difference between the 24-hour background concentration and the 24-hour standard; or

- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.1 $\mu g/m^3$ at ground level on a neighborhood scale (i.e., the annual increase in concentration representing the average over an area of approximately 1 square kilometer, centered on the location where the maximum ground-level impact is predicted for stationary sources; or for mobile sources, at a distance from a roadway corridor similar to the minimum distance defined for locating neighborhood scale monitoring stations).

- Predicted annual average $PM_{2.5}$ concentration increments greater than 0.3 $\mu g/m^3$ at any receptor location for stationary sources.

Emission Reduction Program

Emission reduction measures concerning dust suppression measures, idling vehicles, and use of clean fuel would be implemented to reduce pollutants emissions. The following emission reduction measures are specified in the New York City Air Pollution Code (New York City Administrative Code and Rules of the City of New York (RCNY)):

- *Dust Control.* Dust suppression measures would be implemented. Such actions would include, but not be limited to, wetting of construction material and particulate matter kept on-site (e.g., soil or debris piles), wetting where certain construction activities (e.g., drilling and grinding) occur, covering of spoil or loose material during transport and wetting of material before loading into trucks, removal of dust from adjacent streets and sidewalks, and requiring that vehicles entering or exiting the site travel at low speed.

- *Restrictions on Vehicle Idling.* Idling restrictions require that no motor vehicle idle for longer than three minutes unless the engine is used to operate a loading, unloading, or processing device (e.g., concrete mixing trucks and concrete pump trucks).

- *Diesel Equipment Reduction.* Construction of the proposed project would minimize the use of diesel engines and maximize the use of electric motors to the extent practicable. This would reduce the need for on-site generators and require using electric motors instead of diesel where feasible.

- *Clean Fuel.* Ultra-low sulfur diesel (ULSD) would be used for all diesel-fueled nonroad equipment, where the sulfur content in ULSD is 15 parts per million (ppm). The EPA regulates the use of USLD under diesel fuel regulations. Diesel fuel contained as much as 5,000 ppm of sulfur before the EPA began regulating the sulfur content.

In addition to the required emission reduction measures specified above, the construction activities under the Proposed Actions are expected to implement additional measures. These control measures aim to reduce particulate matter emissions during construction (implementing these measures could potentially decrease emissions of other pollutants). The following emission control measures' commitments were specified:

- *Best Available Tailpipe Reduction Technologies.* Under the Proposed Action, all diesel-powered non-road construction equipment with a horsepower (hp) rating of 50 hp or greater would meet at least the Tier 4 emission standard.

- *Dust suppression:* A water mist system (a DustBoss system or a similar system) would be utilized to remove airborne dust from traveling vehicles at the cellar level during excavation and foundation sequences. On-site truck traveling routes will be treated with chemical dust suppressants during the excavation and foundation stage.

Emissions Profile – Air Quality

Construction emission sources include non-road construction equipment, on-road vehicles, and dust-generating construction activities. Non-road construction equipment may consist of equipment operating on Site, such as a crane, excavators, and a front-end loader. On-road vehicles may include trucks (e.g.,

dump trucks) traveling on-site and on roadways. Worker vehicles will generally not travel on streets adjacent to the site as parking facilities are not located within the vicinity of the site.

A construction equipment schedule was developed using data from the construction management team for this project and based on similar project analyses under CEQR and the anticipated stages of construction. Truck distribution (dump, concrete, and delivery trucks) was based on the construction and equipment schedule and to reasonably maximize emissions (dump trucks traveling on-site generate significant emissions). As such, a reasonable minimum number of delivery or concrete mixing trucks was assumed during the construction's demolition, excavation, and foundation stage. During the superstructure build-out, truck trip generation will comprise of mainly concrete mixing trucks. Concrete mixing truck emissions during unloading were based on 60 minutes of idle time. Dump and delivery trucks were assumed to idle for 3 minutes while loading/off-loading and soak for less than an hour before restarting. Trucks would travel on Franklin Avenue, a southbound one-way roadway.

Pollutant emission factors emitted by non-road construction equipment and on-road vehicles were developed with the EPA's Motor Vehicle Emission Simulator version 3 (MOVES3) emission model. Tier 4 engine emissions of the heavier nonroad equipment were calculated as the average of the 2018-2024 model year. An engine certified to meet the EPA Tier 4 Exhaust Emission Standards is deemed to be using the Best Available Technology ("BAT") and does not require additional retrofit technologies. Public works contracts in the City require the use of BAT equipment to reduce emissions of pollutants (PM, CO, NOx, and hydrocarbon). The first federal standard, Tier 1, for new non-road diesel engines, was adopted in 1994. The standard applies to non-road diesel engines with over 50 horsepower (hp) rated power. Tier 2 and Tier 3 standards, mainly met by advanced engine designs, were phased in between 2000 and 2008 (Tier 3 for PM was never adopted). Tier 4 standard was adopted in 2004 and phased between 2008 and 2015. Tier 4 emission standards are achieved by utilizing engine or after-treatment control technologies. On-road MOVES3 input (inspection and maintenance, fuel data, age distribution, and meteorology) was obtained from NYSDEC. The MOVES3 model was compiled for the year 2024.

Fugitive dust emissions (PM_{10} and $PM_{2.5}$) generated by traveling vehicles (on paved or unpaved roads) and material handling were calculated using the EPA's AP-42 manual *Chapter 13: Miscellaneous Source.*[1] Silt loading factors for paved and unpaved roadways, obtained from the *CEQR Technical Manual*, were used in the analysis. Applying water to unpaved roads and surfaces (trucks and equipment travel on-site) and suppressing airborne dust emissions at the source accounted for fifty percent control efficiency. Utilizing chemical dust suppressants accounted for eighty percent control efficiency, based on the EPA AP-42 manual, *Section 13.2.2 Unpaved Roads - Updated November 2006*. Because trucks could travel anywhere on the site, chemical dust suppressant application was applied only for planned truck pathways (there is no apparent truck pathway during the demolition and clearing of the site), which is approximately 50 percent of the travel distance in the foundation work sequences. Utilizing the water mist system (DustBoss or a like system to remove dust from the air), removing dust from the air, accounted for an additional 50 percent removal efficiency. A worst-case analysis period was derived for each pollutant averaging time. The maximum 12-month rolling average emission for each pollutant was applied in the annual time frame periods. The 12-month rolling average fugitive dust emissions (PM_{10} and $PM_{2.5}$) accounted for approximately 75 percent of the total particulate emissions.

[1] EPA. "Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Vol. 1: Stationary Point and Area Sources." Accessed April 3, 2023. epa.gov/air-emissions-factors-and-quantification/ap-42-fifth-edition-volume-i-chapter-13-miscellaneous-0.

Dispersion Analysis

Pollutant concentrations were predicted with AERMOD. AERMOD MPI version 22112 executable was used in the dispersion analysis. Lakes Environmental, Inc. adjusted the EPA AERMOD source code and recompiled the model to parallelize the processing of receptors, reducing run-time significantly. The MPI executable (used in the analysis) modified the EPA AERMOD executable model version 22112. The AERMOD model incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of surface and elevated sources and simple and complex terrain. The model was run with the regulatory default option, where applicable, and for both with and without downwash effects options, where the Building Profile Input Program (BPIP) was run with the downwash effect enabled. All analyses used five consecutive years of meteorological data (2017-2021) from the NYSDEC. Meteorology surface data is from LaGuardia Airport, and upper air data is from Brookhaven station, New York. The meteorological data provided hour-by-hour wind speeds and directions, stability states, and temperature inversion elevations over the five years. Population in Brooklyn was specified to account for the effects of increased surface heating from an urban area on pollutant dispersion under stable atmospheric conditions.

Receptors (more than 8,000 receptors) were placed at land uses within 400 feet of the Project Site. This included nearby existing buildings, where receptors were placed on all wall façade from the ground floor (6-foot above grade) to rooftop height in spaced intervals, and on sidewalks and at ground level (6 feet above grade) over the Jackie Robinson Playground and Brooklyn Botanic Garden. Lakes Environmental, Inc.'s commercial application of AERMOD (AERMOD View) was used to spatially locate features (buildings, emission sources, and receptors). On-street vehicular emissions were modeled as line area sources, where the source dispersion parameters were calculated based on the EPA's guidance manual.[2] Franklin Avenue's on-road truck mixing zone was narrowed so sensitive receptors would not be located within the mixing zone.

The model was run twice (with the building wake effect enabled/disabled). The predicted concentration is the highest concentration of these. The criteria pollutants dispersion analysis results are presented in **Table 10-5**. As seen in **Table 10-5**, $PM_{2.5}$ and 8-hour CO concentrations are within the *de minimis,* and all other pollutant concentrations are within the NAAQS.

Table 10-5: Criteria Pollutants Dispersion Analysis Results

Criteria Pollutant	Increment Conc.	Background Conc.(1)	Evaluated Conc.	Standard Conc.	Standard	Conc. Unit(2)
$PM_{2.5}$ 24-Hour	3.91	18.7	3.91	8.15	*de minimis*	*µg/m³*
$PM_{2.5}$ Annual	0.281	7.6	0.28	0.3	*de minimis*	*µg/m³*
PM_{10} 24-Hour	43.9	24	68	150	NAAQS	*µg/m³*
CO 1-Hour	2.51	2.13	4.64	35	NAAQS	ppm
CO 8-Hour	1.36	1.60	1.36	9	*de minimis*	ppm
NO_2 Annual	5.8	23.5	29.3	100	NAAQS	*µg/m³*

Note: (1) NYSDEC. 2020. "New York State Ambient Air Quality Report for 2020." Accessed October 12, 2023. dec.ny.gov/docs/air_pdf/2019airqualreport.pdf.

[2] EPA. 2021. *PM Hot-spot Guidance, Transportation Conformity Guidance for Quantitative Hot-spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas*. EPA-420-B-10-040, Transportation and Regional Programs Division, Office of Transportation and Air Quality, U. S. Environmental Protection Agency, October 2021.

(2) $PM_{2.5}$: NYSDEC JHS 126 monitoring station (Site ID 36-047-0122); PM_{10}: Division Street (Site ID 36-061-0134); CO and NO_2: Queens College (Site ID 36-081-0124)

Part per million – ppm; Micrograms per cubic meter $\mu g/m^3$

As the annual $PM_{2.5}$ maximum predicted concentration for stationary sources is within the *de minimis*, exceedance of the neighborhood scale $PM_{2.5}$ (annual increase in concentration representing the average over an area of approximately 1 square kilometer) is unlikely.

Conclusion

Predicted pollutant concentrations at nearby sensitive land uses will not exceed the NAAQS, and the increment pollutant concentrations will be within the *de minimis*. Therefore, there is no reason to believe that the Proposed Actions construction phases would result in any potentially significant adverse air quality impact with the implementation of the following commitment(s):

Air Quality Restrictive Declaration

> ***Under the Proposed Action, all diesel-powered non-road construction equipment with a hp rating of 50 hp or greater would meet at least the Tier 4 emission standard.***
>
> ***Under the Proposed Action, a water mist system (a DustBoss system or similar system) would be utilized to remove dust generated by traveling vehicles at the cellar level during its excavation and foundation sequence. On-site truck traveling routes will be treated with chemical dust suppressants during the excavation and foundation sequences.***

Noise

Construction of the Proposed Project has the potential to result in noise impacts generated by the operation of construction equipment on construction sites and construction-related vehicles traveling to and from the construction work area on adjacent roadways. The potential for noise impacts due to the construction of the Proposed Project is discussed below.

Sound Level Descriptors

Attachment H, "Noise," of the EAS 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} noise descriptor is 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 Analysis Fundamentals

Construction activities increase noise levels as a result of (1) the operation of construction equipment on site; and (2) the movement of construction-related vehicles (i.e., worker trips, and material and equipment trips) on the roadways to and from the construction site. The combined effect of each of these noise sources was evaluated.

Noise from the on-site 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 location 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.

Similarly, 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.

Construction Noise Analysis Methodology

A detailed modeling analysis was conducted to quantify potential construction noise effects at existing noise receptors (e.g., residences, schools, etc.) near the Proposed Development Site.

The construction noise methodology followed these steps:

1. *Selected 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 when the highest number of construction worker auto and construction truck trips to and from the construction site would simultaneously occur.
2. *Conducted 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 PCEs and compared with the existing level of Noise PCEs to determine the potential for an "objectionable" or "very objectionable" increase (i.e., a 15 dBA or 20 dBA increase, respectively) to occur.
3. *Selected 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 it is when the highest number of truck trips to and from the construction site overlap with on-site equipment operation.
4. *Selected 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 Project Site by construction trucks.
5. *Established existing noise levels at selected receptors.* Noise levels as measured at two at-grade locations from the operational noise analysis were used as a baseline for comparison to projected construction noise levels. The existing noise levels measured at locations adjacent to the project were used to represent existing-condition noise levels at noise receptor locations included in the analysis. Specifically, existing-condition noise levels at receptors directly along roadways were represented by measured L_{eq} values at measurement location 1 from the operational noise analysis (see **Attachment H, "Noise"** of the EAS), receptors with line of sight to the Franklin Avenue Shuttle rail line were represented by measured L_{eq} values at measurement location 2, and

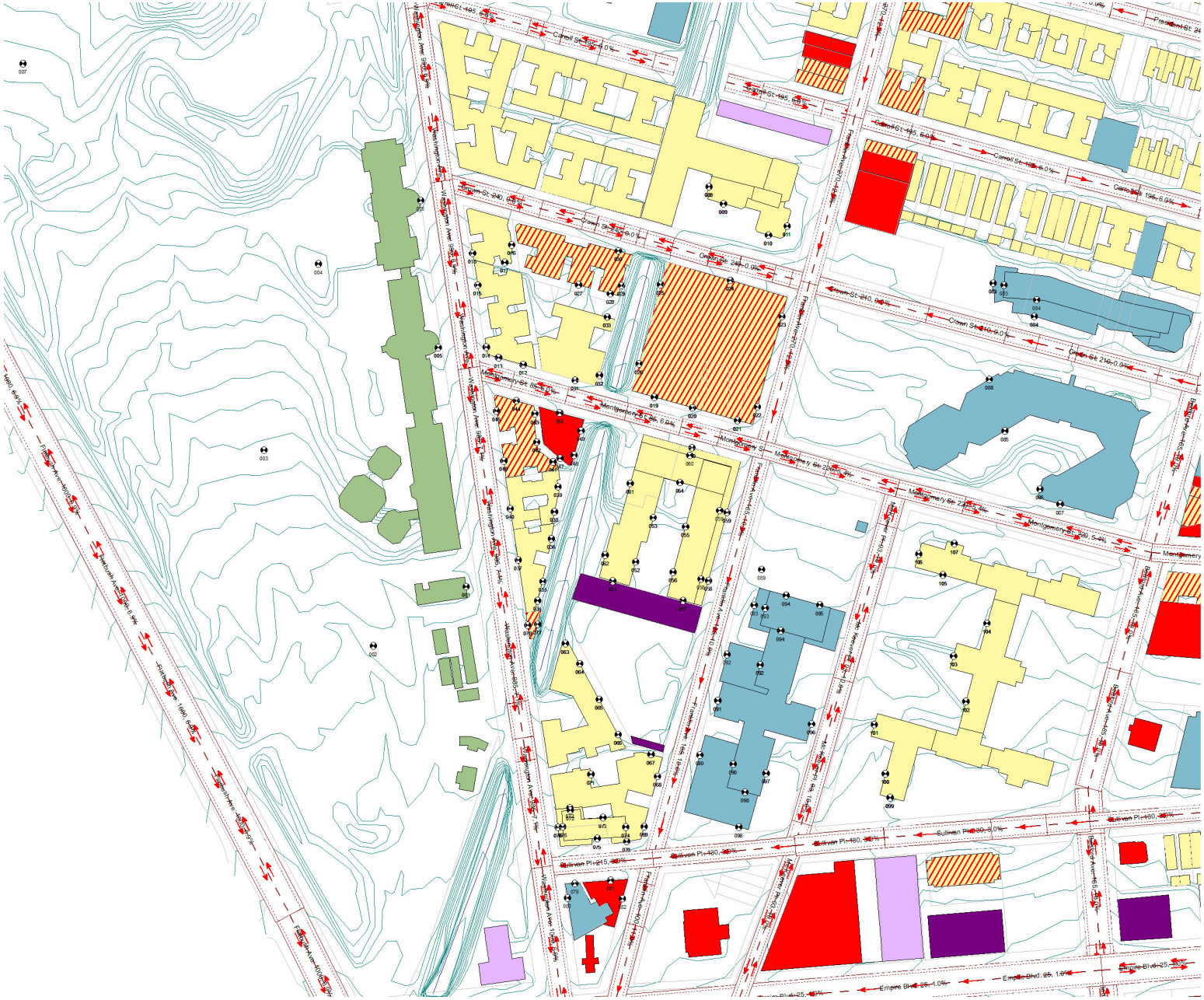
receptors not directly along roadways or having line of sight to the rail line were represented by the average of all measured L_{90} values. Use of the average L_{90} to represent existing L_{eq} levels at these receptors is conservative in that the average L_{90} represents a minimum ambient noise level and the lower estimated existing levels would tend to result in larger predicted noise level increments from construction. The conservative nature of this assumption may be refined between the Draft and Final EIS.

6. *Established 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. *Calculated 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 was based on construction logistics diagrams and construction truck and worker vehicle trip assignments, a CadnaA model file for each analysis period was created. All models 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 construction sites.
8. *Determined 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 subtracted from the cumulative noise level in each analysis period to determine the noise level increments.
9. *Compared construction noise increments with impact criteria.* For each analysis period and each noise receptor, the predicted noise increments from construction were compared with CEQR noise impact thresholds and additional incremental noise impact criteria as described below.
10. *Established construction noise duration.* For each receptor, the noise level increments in each analysis period were evaluated to determine the duration during construction that the receptor would experience exceedances of impact criteria.
11. *Identified potential construction noise impacts.* At each receptor where exceedances of construction noise impact criteria were predicted, a determination was made as to whether the Proposed Project would have the potential to result in temporary significant adverse construction noise impacts.

NOISE RECEPTOR SITES

A noise-sensitive receptor is defined in Chapter 19, "Noise," Section 114 of the *CEQR Technical Manual* and includes indoor receptors such as residences, hotels, health care facilities, nursing homes, schools, commercial offices, 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, 107 receptor locations were selected for the construction noise analysis. **Table 10-6** lists the noise measurement sites (i.e., sites M1 and M2) as well as the noise receptor sites (i.e., sites 1 to 107) and the associated land use at these sites. Noise receptor locations are shown in **Figure 10-3**.



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Figure 10-3

Construction Noise Receptor Locations

Table 10-6: Noise Receptors by Location and Land Use

Receptor	Location	Block / Lot	Associated Land Use
M1	Brooklyn Botanic Garden	Block 1183 / Lot 1	Open Space and Outdoor
M2	49 Crown Street	Block 1189 / Lot 60	Residential
1-7	921 Washington Avenue	Block 1190 / Lot 1	Residential
8-11	915 Washington Avenue	Block 1190 / Lot 9	Residential
12-15	54 Crown Street	Block 1190 / Lot 29	Mixed Residential & Commercial
16-18	12 Crown Street	Block 1190 / Lot	Mixed Residential & Commercial
19-26	111 Montgomery Street	Block 1190 / Lot	Residential
27-30	975 Washington Avenue	Block 1192 / Lot 6	Residential
31-33	961 Washington Avenue	Block 1192 / Lot 14	Residential
34-37	941 Washington Avenue	Block 1192 / Lot 18	Mixed Residential & Commercial
38-40	104 Montgomery Street	Block 1192 / Lot 30	Commercial Office
41-46	960 Franklin Avenue	Block 1192 / Lot 40	Residential
47-50	1015 Washington Avenue	Block 1192 / Lot 77	Residential
51-62	1035 Washington Avenue	Block 1192 / Lot 85	Residential
63-66	1 Sullivan Place	Block 1192 / Lot 95	Residential
67-71	995 Washington Avenue	Block 1192 / Lot	Mixed Residential & Commercial
72-76	Gospel Truth Church of God – 1055 Washington	Block 1196 / Lot 6	Place of Worship
77, 78	1028 Franklin Avenue	Block 1196 / Lot 11	Commercial Office
79, 80	Medgar Evers College Academic Building 1 – 1638 Bedford Avenue	Block 1287 / Lot 61	School
81, 82	Medgar Evers College B–Building – 1650 Bedford	Block 1294 / Lot 1	School
83, 84	Jackie Robinson School – 945 Frankin Avenue	Block 1301 / Lot 1	School
85-88	Ebbets Field Apartments – 47 Mc Keever Place	Block 1302 / Lot 1	Residential
89-98	Ebbets Field Apartments – 1720 Bedford Avenue	Block 1302 / Lot 1	Residential
99-101	Ebbets Field Apartments – 11 Mc Keever Place	Block 1302 / Lot 1	Residential
102-104	Brooklyn Botanic Garden	Block 1183 / Lot 1	Open Space and Outdoor
105-107	49 Crown Street	Block 1189 / Lot 60	Residential

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, that 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), transportation sources (e.g., roads, highways, railroad lines, busways, airports), and other specialized sources (e.g., sporting facilities). 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. This standard is currently under review for adoption by the American National Standards Institute (ANSI) as an American Standard. The CadnaA model is a state-of-the-art tool for noise analysis and is approved for construction noise level prediction by the *CEQR Technical Manual.*

Geographic input data used with the CadnaA model included site work areas, adjacent building footprints and heights, locations of streets, and locations of sensitive receptors. For each analysis period, the

approximate 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 Project 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 *CEQR Technical Manual.* For construction equipment not included in this table, other reference sources, manufacturer specifications, or field measured noise levels were used.

Reflections and shielding from adjacent buildings and shielding by barriers erected on the construction site were accounted for in the model. In addition, construction-related vehicles were assigned to the adjacent roadways. 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.[3]

Analysis Time Period Selection

The construction noise analysis estimated construction noise levels based on projected activity and equipment usage as well as the level of construction traffic for various stages of construction of the Proposed Project.

Based on the anticipated construction schedule and preliminary construction estimates developed for the Proposed Project, specific time periods during construction were selected for detailed analysis. The periods were selected to capture each major construction stage (e.g., demolition/excavation/foundation work, superstructure work) at the building to be constructed, including major overlaps of construction stages. These would be the time periods with the potential to result in the maximum incremental construction noise at nearby receptors. Each analysis time period conservatively represented 4 to 16 months of time based on the duration of activities that would be underway during the time period.

The four time periods selected for the detailed construction noise analysis are shown in **Table 10-7**.

Table 10-7: Summary of Construction Noise Analysis Periods

Analysis Period	Construction Activities
May 2025 – October 2025	Excavation and Foundations
November 2025 – February 2026	Excavation, Foundations, and Sitework
March 2026 – July 2026	Excavation, Foundations, Superstructure, Exteriors, and Interiors
August 2026 – November 2027	Exteriors and Interiors

Construction Noise Impact Criteria

Chapter 22 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 the potential for construction of a project to create high noise levels (the “intensity”), whether construction noise would

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

occur for an extended period of time (the "duration"), and the locations where construction has the potential to increase 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.

If noise levels during construction would exceed the screening thresholds at a given receptor, the specific intensity and duration of construction noise level increases would be considered further to determine the potential for temporary significant adverse impacts. Noise level increases that would be considered "objectionable" (i.e., equal to or greater than 15 dBA) lasting 12 consecutive months or more and noise level increases considered "very objectionable" (i.e., equal to or greater than 20 dBA)[4] lasting three consecutive months or more could be considered significant impacts.

For receptors representing interior spaces (i.e., not open space) where construction of the Proposed Project is predicted to result in objectionable noise level increments lasting 12 consecutive months or more or very objectionable noise level increments lasting three consecutive months or more, and where the façade attenuation can be determined based on readily available information, interior noise levels may also be considered in the determination of impact significance. Portions of the construction period during which predicted interior noise levels would be in the acceptable range (i.e., not greater than 45 dBA for residential and community facility uses or not greater than 50 dBA for commercial office uses), would not be counted toward the consecutive duration of construction noise impact as described above.

Evaluation of Construction Noise Levels

The predicted exterior noise level increments during construction of the Proposed Project at the analyzed receptor sites were compared with the construction noise impact thresholds described above. At the noise-sensitive receptors that experience exceedances of these thresholds during the analysis periods as determined above, the duration of exceedance of each impact threshold was determined. The significance of exceedances was determined based on the predicted magnitude and duration of the construction noise at these locations according to the criteria described above. Based on the incremental noise level increase, overall exterior noise levels for each analysis period were also determined.

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 noise mitigation plan(s) required under the New York City Noise Control Code. These measures would 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, included under New York City regulations, would be implemented:

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

- Equipment that meets the sound level standards specified in Subchapter 5 of the *New York City Noise Control Code* and Table 22-1 of the *CEQR Technical Manual* would be utilized from the start of construction. **Table 10-8** shows the noise levels for typical construction equipment that would be used for construction of the Proposed Project.
- As early in the construction period as logistics 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.
- The construction site would be configured to minimize back-up alarm noise. In addition, all trucks would not be allowed to idle more than three 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.

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

- Noise equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations to the extent practicable given site limitations (i.e., receptors on multiple sides).
- Noise barriers constructed from plywood or other materials would be utilized to provide shielding (e.g., the construction sites would have a minimum 8-foot-tall barrier around the perimeter).
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents) for certain equipment as necessary to remain consistent with **Table 10-8**. The details to construction portable noise barriers, enclosures, tents, etc. are shown in DEP's *Rules for Citywide Construction Noise Mitigation.* [5]

Table 10-8: Construction Equipment Noise Emissions in dBA

Equipment List	Typical L_{max} Noise Level at 50 feet[1]
Bar Bender	80
Compressor	80
Concrete Mixer Truck	85
Concrete Pump Truck	82
Concrete Trowel	70[2]
Crane	85
Excavator	85
Front End Loader	80
Generator	82
Hoist	75
Impact Pile Driver	95
Manlift	85

Note:
[1] Rules for Citywide Construction Noise Mitigation, Chapter 28, DEP, 2007, except where noted.
[2] Previous project equipment noise certification.

[5] As found at http://www.nyc.gov/html/dep/pdf/noise_constr_rule.pdf

In addition, the path controls listed below would be implemented as project commitments for the construction of the Proposed Project beyond the regulations listed above and would be included in the PCREs:

- Throughout the construction period, concrete operations and generators would be located within the construction barrier.

Construction Noise Analysis Results

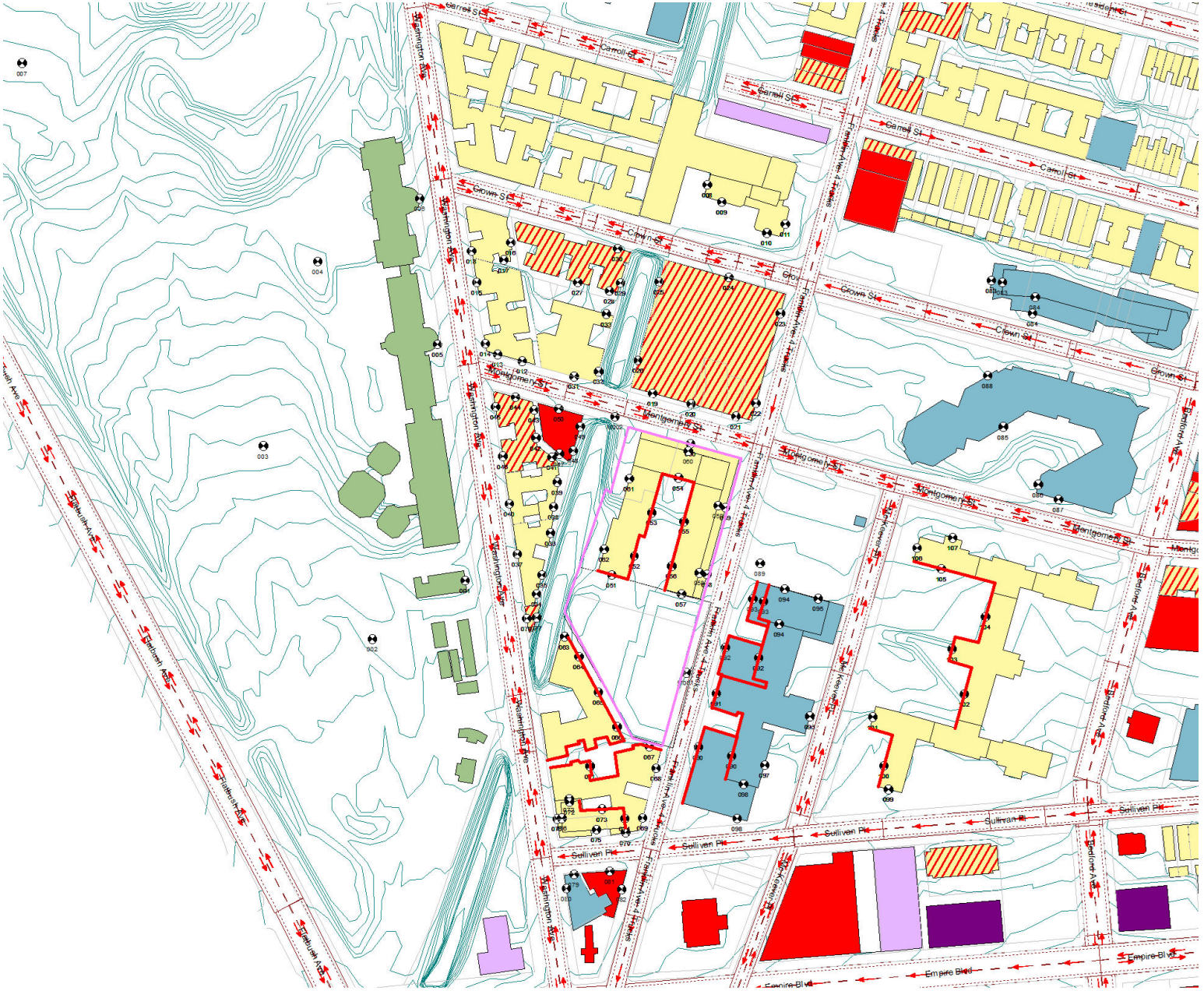
Cumulative On-Site and Mobile Construction Noise Sources

Using the methodology described and considering the noise abatement measures specified above, a cumulative noise analysis was performed to determine maximum 1-hour equivalent ($L_{eq(1)}$) noise levels that would be expected at each of the 107 noise receptor locations during each of the four selected construction periods.

The full results of the detailed construction noise analysis are shown in **Appendix C.** The results of the detailed construction noise analysis at locations where "objectionable" and "very objectionable" noise level increases are summarized in **Table 10-9.** Locations in which significant adverse impacts were determined are shown in **Figure 10-4**.

Table 10-9: Construction Noise Analysis Results in dBA

Receptor	Address	Existing L_{10}	Max Total L_{10}	Max Change in L_{10}	Maximum Continuous Duration (months)	
					"Objectionable" Increase	"Very Objectionable" Increase
34	975 Washington Avenue	65.8	81.7	16.0	4	0
35	975 Washington Avenue	65.8	81.0	15.3	4	0
51	960 Franklin Avenue	54.8	86.2	31.4	9	9
52	960 Franklin Avenue	54.8	82.5	27.7	9	9
53	960 Franklin Avenue	54.8	82.6	27.8	9	9
54	960 Franklin Avenue	54.8	82.8	28.0	9	9
55	960 Franklin Avenue	54.8	82.0	27.2	9	9
56	960 Franklin Avenue	54.8	82.9	28.1	9	4
57	960 Franklin Avenue	66.2	85.0	18.8	9	0
63	1015 Washington Avenue	65.8	85.2	19.4	4	0
64	1015 Washington Avenue	54.8	85.6	30.8	31	15
65	1015 Washington Avenue	54.8	85.5	30.7	31	31
66	1015 Washington Avenue	54.8	84.3	29.5	31	31
67	1035 Washington Avenue	66.2	84.8	18.6	15	0
71	1035 Washington Avenue	54.8	77.4	22.6	15	15
73	1 Sullivan Place	54.8	74.7	19.9	31	0
74	1 Sullivan Place	54.8	73.8	18.9	16	0
77	995 Washington Avenue	65.8	82.5	16.7	4	0
90	Jackie Robinson School – 945 Frankin Avenue	66.2	82.4	27.0	31	16



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Figure 10-4

Predicted Significant Adverse Construction Noise Impacts

91	Jackie Robinson School – 945 Frankin Avenue	66.2	87.2	21.0	31	16
92	Jackie Robinson School – 945 Frankin Avenue	66.2	82.9	28.1	31	16
93	Jackie Robinson School – 945 Frankin Avenue	66.2	77.9	23.1	31	16
100	Ebbets Field Apartments – 47 McKeever Place	54.8	74.2	19.3	16	0
102	Ebbets Field Apartments – 1720 Bedford Avenue	54.8	72.5	17.6	16	0
103	Ebbets Field Apartments – 1720 Bedford Avenue	54.8	73.8	18.9	16	0
104	Ebbets Field Apartments – 1720 Bedford Avenue	54.8	74.3	19.5	16	0
105	Ebbets Field Apartments – 11 McKeever Place	54.8	74.9	20.1	16	16

960 FRANKLIN AVENUE

Receptors 51 through 62 represent the future residential building to be constructed at 960 Franklin Avenue, immediately north of the Proposed Project. Existing noise levels at this location range from the mid-50s to mid-60s dBA, which would be considered "acceptable" to "marginally acceptable" according to *CEQR Technical Manual* noise exposure criteria.

At receptors 58 through 62, which represent the eastern, northern, and western façades, construction is predicted to result in noise levels up to the high 70s dBA, resulting in maximum noise level increases up to approximately 13 dBA throughout construction. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these locations would be in the "marginally unacceptable" category. At these receptors, construction would not result in "objectionable" or "very objectionable" noise level increases. Consequently, while construction noise at these receptors may be perceptible at times, it would not rise to the level of a significant impact according to the impact criteria described above.

At receptor 57, which represents the southern façade nearest to Franklin Avenue, construction is predicted to result in noise levels up to the mid-80s dBA, resulting in maximum noise level increases up to approximately 19 dBA during the most noise-intensive stages of construction (i.e., the overlap of excavation, foundations, and sitework), which would occur for up to approximately 4 consecutive months. Over the course of the construction period, "objectionable" increases are predicted to occur at these façades for no more than approximately 9 consecutive months. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these façades would be in the "clearly unacceptable" category. Based on the prediction of no "very objectionable" noise level increases and less than 12 consecutive months of "objectionable" noise level increases, while construction noise at these receptors may be perceptible at times, it would not rise to the level of a significant impact according to the impact criteria described above.

At receptors 51 through 56, which represent the southern façade nearest to the Franklin Avenue Shuttle as well as the courtyard façades, construction is predicted to result in noise levels up to the mid-80s dBA, resulting in maximum noise level increases up to approximately 31 dBA during the most noise-intensive stages of construction (i.e., the overlap of excavation, foundations, and sitework), which would occur for

up to approximately 4 consecutive months. Over the course of the construction period, both "objectionable" and "very objectionable" increases are predicted to occur at this façade for up to approximately 9 consecutive months. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at this façade would be in the "clearly unacceptable" category.

Since the 960 Franklin Avenue building will be new construction, it is expected that it will be constructed with contemporary façade construction methods and include an alternate means of ventilation. As such, it is likely that this building will provide at least 30 dBA window/wall attenuation. However, even with this attenuation, interior noise levels during the 9 consecutive months of "very objectionable" noise level increases would still exceed the acceptable interior noise level limit.

Based on the prediction of both "objectionable" and "very objectionable" noise level increases lasting up to approximately 9 consecutive months and interior noise levels exceeding the acceptable limit, construction noise would result in a temporary significant adverse impact at the southern façade nearest to the Franklin Avenue Shuttle as well as the courtyard façades of 960 Franklin Avenue represented by receptors 51 through 56. These receptors are discussed further in **Chapter 11, "Mitigation."**

1015 WASHINGTON AVENUE

Receptors 63 through 66 represent the residential building located at 1015 Washington Avenue, immediately southwest of the Proposed Project. Existing noise levels at this location range from the mid-50s to mid-60s dBA, which would be considered "acceptable" to "marginally acceptable" according to *CEQR Technical Manual* noise exposure criteria.

At receptor 63, which represents the northern and western façades, construction is predicted to result in noise levels up to the mid-80s dBA, resulting in maximum noise level increases up to approximately 19 dBA during the most noise-intensive stages of construction (i.e., the overlap of excavation, foundations, and sitework), which would occur for up to approximately 4 consecutive months. Over the course of the construction period, "objectionable" increases are predicted to occur at these façades for no more than approximately 4 consecutive months. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these façades would be in the "clearly unacceptable" category. Based on the prediction of no "very objectionable" noise level increases and less than 12 consecutive months of "objectionable" noise level increases, while construction noise at this receptor may be perceptible at times, it would not rise to the level of a significant impact according to the impact criteria described above.

At receptors 64 through 66, which represent the western and southern façades, construction is predicted to result in noise levels up to the mid-80s dBA, resulting in maximum noise level increases up to approximately 31 dBA during the most noise-intensive stages of construction (i.e., excavation and foundations), which would occur for up to approximately 10 consecutive months. Over the course of the construction period, "objectionable" and "very objectionable" increases are predicted to occur at these façades for the entirety of construction. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these façades would be in the "clearly unacceptable" category.

This building appears based on field observations to consist of insulated glass windows, and some residential units appear to have alternate means of ventilation in the form of through-window air conditioning units; the building façade at these units would be expected to provide approximately 30 dBA of window/wall attenuation. At units that do not have alternate means of ventilation; the building façade would be expected to provide approximately 28 dBA of window/wall attenuation. Consequently, interior L_{10} noise levels would be up to approximately 56 dBA at residential units with through-window air

conditioning and approximately 58 dBA at units without alternate means of ventilation. Compared to the CEQR interior noise threshold of 45 dBA for residences, interior noise levels would be up to approximately 11 dBA higher at residences with through-window air conditioning and up to approximately 13 dBA higher at residences without alternate means of ventilation.

Based on the prediction of both "objectionable" and "very objectionable" noise level increases lasting the entirety of construction and interior noise levels exceeding the acceptable limit, construction noise would result in a temporary significant adverse impact at the western and southern façades of 1015 Washington Avenue represented by receptors 64 through 66. These receptors are discussed further in **Chapter 11, "Mitigation."**

1035 WASHINGTON AVENUE

Receptors 67 through 71 represent the residential building located at 1035 Washington Avenue, immediately south of the Proposed Project. Existing noise levels at this location range from the mid-50s to mid-60s dBA, which would be considered "acceptable" to "marginally acceptable" according to *CEQR Technical Manual* noise exposure criteria.

At receptors 68 through 70, which represent the eastern, southern, and western façades (i.e., set back from or facing away from construction), construction is predicted to result in noise levels up to the low 80s dBA, resulting in maximum noise level increases up to approximately 14 dBA throughout construction. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these locations would be in the "clearly unacceptable" category. At these receptors, construction would not result in "objectionable" or "very objectionable" noise level increases. Consequently, while construction noise at these receptors may be perceptible at times, it would not rise to the level of a significant impact according to the impact criteria described above.

At receptors 67 and 71, which represents the northern façade, construction is predicted to result in noise levels up to the mid-80s dBA, resulting in maximum noise level increases up to approximately 23 dBA during the most noise-intensive stages of construction (i.e., excavation and foundations), which would occur for up to approximately 10 consecutive months. Over the course of the construction period, both "objectionable" and "very objectionable" increases are predicted to occur at this façade for up to approximately 15 consecutive months. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these façades would be in the "clearly unacceptable" category.

This building appears based on field observations to consist of insulated glass windows, and some residential units appear to have alternate means of ventilation in the form of through-window air conditioning units; the building façade at these units would be expected to provide approximately 30 dBA of window/wall attenuation. At units that do not have alternate means of ventilation; the building façade would be expected to provide approximately 28 dBA of window/wall attenuation. Consequently, interior L_{10} noise levels would be up to approximately 55 dBA at residential units with through-window air conditioning and approximately 57 dBA at units without alternate means of ventilation. Compared to the CEQR interior noise threshold of 45 dBA for residences, interior noise levels would be up to approximately 10 dBA higher at residences with through-window air conditioning and up to approximately 12 dBA higher at residences without alternate means of ventilation.

Based on the prediction of "objectionable" and "very objectionable" noise level increases lasting up to approximately 15 consecutive months and interior noise levels exceeding the acceptable limit, construction noise would result in a temporary significant adverse impact at the northern façade of 1035 Washington

Avenue represented by receptors 67 and 71. These receptors are discussed further in **Chapter 11, "Mitigation."**

1 SULLIVAN PLACE

Receptors 72 through 76 represent the residential building located at 1 Sullivan Place, south of the Proposed Project. Existing noise levels at this location range from the mid-50s to mid-60s dBA, which would be considered "acceptable" to "marginally acceptable" according to *CEQR Technical Manual* noise exposure criteria.

At receptors 72, 75, and 76, which represent the western and southern façades as well as the western portion of the northern façade (i.e., set back from or facing away from construction), construction is predicted to result in noise levels up to the mid-70s dBA, resulting in maximum noise level increases up to approximately 8 dBA throughout construction. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these locations would be in the "marginally unacceptable" category. At these receptors, construction would not result in "objectionable" or "very objectionable" noise level increases. Consequently, while construction noise at these receptors may be perceptible at times, it would not rise to the level of a significant impact according to the impact criteria described above.

At receptors 73 and 74, which represents the eastern façade and the remainder of the northern façade, construction is predicted to result in noise levels up to the mid-70s dBA, resulting in maximum noise level increases up to approximately 19 dBA during the most noise-intensive stages of construction (i.e., excavation and foundations), which would occur for up to approximately 10 consecutive months. Over the course of the construction period, "objectionable" increases are predicted to occur at these façades for the entirety of construction. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these façades would be in the "clearly unacceptable" category.

This building appears based on field observations to consist of insulated glass windows, and some residential units appear to have alternate means of ventilation in the form of through-window air conditioning units; the building façade at these units would be expected to provide approximately 30 dBA of window/wall attenuation. At units that do not have alternate means of ventilation; the building façade would be expected to provide approximately 28 dBA of window/wall attenuation. Consequently, interior L_{10} noise levels would be up to approximately 45 dBA at residential units with through-window air conditioning and approximately 47 dBA at units without alternate means of ventilation. Compared to the CEQR interior noise threshold of 45 dBA for residences, interior noise levels would be up to approximately 2 dBA higher at residences without alternate means of ventilation.

Based on the prediction of "objectionable" noise level increases lasting the entirety of construction and interior noise levels exceeding the acceptable limit, construction noise would result in a temporary significant adverse impact at the eastern façade and a portion of the northern façade of 1 Sullivan Place represented by receptors 73 and 74. These receptors are discussed further in **Chapter 11, "Mitigation."**

P.S. 375 JACKIE ROBINSON SCHOOL

Receptors 89 through 98 represent P.S. 375 Jackie Robinson, a school located at 945 Franklin Avenue, east of the Proposed Project. Existing noise levels at this location range from the mid-50s to mid-60s dBA, which would be considered "acceptable" to "marginally acceptable" according to *CEQR Technical Manual* noise exposure criteria.

At receptors 89 and 94 through 98, which represent the northern, eastern, and southern façades (i.e., facing away from construction), construction is predicted to result in noise levels up to the high 70s dBA,

resulting in maximum noise level increases up to approximately 14 dBA throughout construction. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these locations would be in the "marginally unacceptable" category. At these receptors, construction would not result in "objectionable" or "very objectionable" noise level increases. Consequently, while construction noise at these receptors may be perceptible at times, it would not rise to the level of a significant impact according to the impact criteria described above.

At receptors 90 through 93, which represents the western façade, construction is predicted to result in noise levels up to the mid-80s dBA, resulting in maximum noise level increases up to approximately 28 dBA during the most noise-intensive stages of construction (i.e., the overlap of exteriors and interiors), which would occur for up to approximately 16 consecutive months. Over the course of the construction period, "very objectionable" increases are predicted to occur at this façade for up to approximately 15 consecutive months, and "objectionable" increases are predicted to occur at this façade for the entirety of construction. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these façades would be in the "clearly unacceptable" category.

This building appears based on field observations to consist of monolithic glass windows and does not have an apparent alternate means of ventilation. Assuming approximately 25 dBA window/wall attenuation provided by this building façade, interior L_{10} noise levels at this building would be up to approximately 62 dBA. Compared to the CEQR interior noise threshold of 45 dBA for community facility use, interior noise levels at this building would be up to approximately 17 dBA higher.

Based on the prediction of "very objectionable" noise level increases lasting up to approximately 16 consecutive months, "objectionable" noise level increases lasting the entirety of construction, and interior noise levels exceeding the acceptable limit, construction noise would result in a temporary significant adverse impact at the western façade of P.S. 375 Jackie Robinson represented by receptors 90 through 93. These receptors are discussed further in **Chapter 11, "Mitigation."**

EBBETS FIELD APARTMENTS

Receptors 99 through 107 represent the residential Ebbets Field Apartments to the east of McKeever Place and between Montgomery Street and Sullivan Place. Existing noise levels at this location range from the mid-50s to mid-60s dBA, which would be considered "acceptable" to "marginally acceptable" according to *CEQR Technical Manual* noise exposure criteria.

At receptors 99, 101, 106, and 107, which represent portions of the western façade as well as the northern, eastern, and southern façades (i.e., facing away from construction), construction is predicted to result in noise levels up to the mid-70s dBA, resulting in maximum noise level increases up to approximately 9 dBA throughout construction. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these locations would be in the "marginally unacceptable" category. At these receptors, construction would not result in "objectionable" or "very objectionable" noise level increases. Consequently, while construction noise at these receptors may be perceptible at times, it would not rise to the level of a significant impact according to the impact criteria described above.

At receptors 100 and 102 through 105, which represent the western façade, construction is predicted to result in noise levels up to the mid-70s dBA, resulting in maximum noise level increases up to approximately 20 dBA during the most noise-intensive stages of construction (i.e., excavation and foundations as well as the overlap of exteriors and interiors), which would occur for up to approximately 16 consecutive months. Over the course of the construction period, both "objectionable" and "very objectionable" increases are predicted to occur at this façade for up to approximately 16 consecutive

months. According to *CEQR Technical Manual* noise exposure criteria, maximum construction noise levels at these façades would be in the "marginally unacceptable" category.

These buildings appear based on field observations to consist of insulated glass windows, and some residential units appear to have alternate means of ventilation in the form of through-window air conditioning units; the building façade at these units would be expected to provide approximately 30 dBA of window/wall attenuation. At units that do not have alternate means of ventilation; the building façade would be expected to provide approximately 28 dBA of window/wall attenuation. Consequently, interior L_{10} noise levels would be up to approximately 45 dBA at residential units with through-window air conditioning and approximately 47 dBA at units without alternate means of ventilation. Compared to the CEQR interior noise threshold of 45 dBA for residences, interior noise levels would be up to approximately 2 dBA higher at residences without alternate means of ventilation.

Based on the prediction of both "objectionable" and "very objectionable" noise level increases lasting up to approximately 16 consecutive months and interior noise levels exceeding the acceptable limit, construction noise would result in a temporary significant adverse impact at the western façade of the Ebbets Field Apartments represented by receptors 100 and 102 through 105. These receptors are discussed further in **Chapter 11, "Mitigation."**

OTHER RECEPTORS EXPERIENCING "OBJECTIONABLE" INCREASES

At receptors 34, 35, and 77, construction of the Proposed Project would result in noise level increases that would be perceptible to noticeable and at times, "objectionable." However, at these receptors, "objectionable" increases would occur for periods of fewer than 12 consecutive months. Consequently, while construction noise at these receptors would be perceptible, it would not rise to the level of a significant impact according to the impact criteria described above.

OTHER NEARBY RECEPTORS

At the remaining receptors, construction of the Proposed Project would, for some portion of the construction period, result in noise level increases that would be perceptible to noticeable. However, at these receptors, maximum noise level increases would not result in "objectionable" or "very objectionable" noise level increases. Consequently, while construction noise at these receptors may be perceptible at times, it would not rise to the level of a significant impact according to the impact criteria described above.

MOBILE SOURCE SCREENING

Construction worker vehicles and trucks traveling on roadways prior to the start of the construction workday would have the potential to generate noise at receptors along the routes used to access the construction sites. Using the methodology described above, construction worker vehicles and trucks traveling to and from the construction sites between 6:00 AM and 7:00 AM were estimated. While there are roadways that would experience doubling of Noise PCEs during the peak construction traffic condition, peak construction traffic during the 6:00 AM to 7:00 AM hour would not result in noise increments that would be considered objectionable (i.e., 15 dBA or greater). Therefore, considering the limited magnitude and duration of predicted noise increases, construction work vehicles and trucks traveling to and from the construction sites between 6:00 AM and 7:00 AM would not likely result in significant adverse construction

impacts, and no further analysis of construction mobile source noise for the 6:00 AM to 7:00 AM hour would be warranted.

Construction vehicles traveling to and from construction sites during the construction workday are included in the detailed construction noise analysis described above.

CONSTRUCTION NOISE CONCLUSIONS

Construction of the Proposed Project would have the potential to result in temporary significant adverse impacts related to noise. At some receptors, construction of the Proposed Project would result in increments that would be considered objectionable (i.e., 15 dBA or greater) or very objectionable (i.e., 20 dBA or greater). The potential for temporary significant adverse impacts at these receptors was determined by evaluating the duration of these increments. While construction of the Proposed Project would typically occur during weekday daytime hours and not produce noise during nighttime hours when residences are most sensitive to noise, the detailed analysis of construction noise determined that construction pursuant to the Proposed Actions has the potential to result in temporary significant adverse impacts at three receptors. As described above, construction would comply with *New York City Noise Control Code* regulations as well as commit to staging concrete operations and generators within the construction barrier throughout construction, which is considered a noise control measure beyond the minimum required by code. Per *New York City Noise Control Code* regulations, the Proposed Project would be required to prepare a Construction Noise Mitigation Plan. Further noise reduction measures are discussed in **Chapter 11, "Mitigation."**