
CHAPTER 22: CONSTRUCTION IMPACTS

A. INTRODUCTION

Construction impacts, although temporary, can have a disruptive and noticeable effect on the adjacent community, as well as people passing through an area. This chapter provides a discussion of the potential construction impacts associated with the Proposed Action and the impacts that could result from any future construction activity. All analyses were undertaken in accordance with the guidelines contained in Section 3S of the *CEQR Technical Manual*.

B. OVERVIEW

As detailed below, the Proposed Action would have significant adverse impacts resulting from construction activities proximate to historic resources.

C. METHODOLOGY

The methodology outlined in the *CEQR Technical Manual* was used to evaluate potential construction impacts within the Project Area. This chapter summarizes the Proposed Action's likely construction activities and schedule, and considers the potential for adverse impacts during construction. An assessment of potential impacts of construction activity and the methods that may be employed to minimize these potential impacts is also discussed. Per the *CEQR Technical Manual*, construction impact analyses are typically based on the analyses conducted for the different technical areas, and the analysis focuses on the projected development sites. The amount of demolition and excavation debris was estimated and considered, as was the amount of construction and building materials, in order to assess the potential impacts to the community that could result from construction activities.

D. FUTURE CONDITION WITH THE PROPOSED ACTION

In the future condition with the Proposed Action, HPD has identified 34 Projected Development Sites considered likely to be developed by 2018 resulting in a net increase, compared to the future condition without the Proposed Action, of approximately 1,851 dwelling units (of which 905 844 would be affordable), 103,286 square feet of retail space and 35,456 square feet of community facility space.

The construction impact analyses below are based on the assumption that development as a result of the Proposed Action would be completed over a 10-year period, ending in 2018. The 10-year period is typically considered to be the length of time over which developers would act on the change in zoning.

CONSTRUCTION ACTIVITIES AND SCHEDULE

The reasonable worst case development scenario presented in Chapter 1, "Project Description," does not establish the order in which the development sites would be developed nor does it assume a particular sequence of development. However, it is assumed that construction on all projected development sites would likely be completed by 2018. Although future commercial and residential market conditions would drive the demand for new development, it is reasonable to assume that more than one of the projected development sites would be under construction simultaneously.

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Given the 10-year development period, it is not expected that major clustering of construction activity will occur at any one time within the Project Area. However, this analysis will consider a worst case scenario where two large and adjacent developments are under construction concurrently.

Under normal conditions, construction activity would take place Monday through Friday. Work would generally begin at 7 AM, with some workers arriving to prepare work areas between 6 AM and 7 AM. Normally, work would end at 3:30 PM. Under certain circumstances the workday would be extended for specific trades to complete some specific tasks beyond normal work hours. This work could include such tasks as 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 the site, just those involved in the specific task. When work is required outside of normal construction hours, the proper approvals would be obtained from the appropriate agencies.

Construction staging would most likely occur on the projected development sites themselves and may, in some cases, extend into portions of sidewalks, and/or the curb and travel lanes of adjacent streets. Any sidewalk or street closures require the approval of the New York City Department of Transportation (DOT) Office of Construction Management and Coordination. In instances where pedestrians are directed off the sidewalk and into the curb lane of the adjacent street, a barrier would be erected to separate pedestrian traffic from vehicular traffic. Where appropriate, sidewalk sheds may be erected to protect pedestrians from objects falling from adjacent construction sites.

Contractors would be required to comply with all applicable construction safety measures. In addition, contractors would be required to design and implement dust control mitigation programs and would be required to comply with the New York City Construction Noise Code (Local Law 113 of 2005). There would also be requirements for street crossing and entrance barriers and protective scaffolding, where needed.

A general outline of construction activity and typical scheduling is presented below. The actual extent and duration of new construction activity would vary according to the type, size and complexity of the individual development project.

BUILDING DEMOLITION AND SITE CLEARANCE

Land use on the potential and projected development sites currently consists of uses such as paved and unpaved parking lots, motor vehicle repair facilities, and industrial uses. Because of the historic and current uses of land in the Project Area, all of the potential and projected development sites would be mapped with an (E) designation (see Chapter 13, "Hazardous Materials"). Development involving ground disturbance or demolition on a site with an (E) designation would require that a Phase I Environmental Site Assessment be conducted, and if necessary, a sampling and remediation protocol be developed and implemented to the satisfaction of the New York City Department of Environmental Protection (DEP) prior to issuance of a building permit. As such, the first phase of development would testing and characterization of soils on the site, and if appropriate, constituents of structures on the site. If the Phase I Environmental Site Assessment indicates no potential for contamination on the site, the first phase of construction would be demolition or excavation, if appropriate to the development plans.

If asbestos, lead-based paint or any other hazardous materials are identified in on-site structures, abatement of those materials would precede demolition. Asbestos abatement is strictly regulated in New York City to protect the health and safety of construction workers, the public, and the environment. Depending on the extent of the asbestos, either the whole building or portions of the building would be sealed by containment barriers made of either plastic or wood to prevent asbestos from leaving the containment area. Specially trained workers in protective clothing would use hand tools to remove the

asbestos. These asbestos containing materials would then be sealed in bags and taken to licensed landfills for disposal. It is anticipated that demolition of the types of existing buildings would not require additional special mobilization and could be done during normal working hours.

The next step in the demolition process would be the removal of economically salvageable materials. Much of this task would be done on-site and the materials would then be transported to recycling centers. Once demolition is complete, all debris would be removed from the site. Depending upon the size and layout of the building, demolition could require the erection of temporary solid walls and overhead protection around the building to prevent the accidental release of building materials into public areas. Also depending upon the specific site, dust suppression measures, such as wetting of materials, would be used.

Plans and specifications for demolition would likely specify the complete removal, including the foundations, of all on-site structures. Other necessary improvements may include those for underground site utilities, soil erosion and sediment control, and preliminary site work and would be incorporated into the site clearance activities.

EXCAVATION AND FOUNDATION WORK

Excavation for basement cavities would begin with removal of soil overlaying bedrock. Some form of site retention is required in order to prevent collapse of these earthen walls into the excavation. For the Proposed Action, site retention would likely consist of one of three types: secant piles, sheet piling or soldier piles and wood lagging. The latter involves installation of vertical soldier piles around the perimeter of the area to be excavated and installing horizontal wood lagging between the soldier piles, forming a temporary wall to prevent earth from collapsing into the excavation. After the basement wall are poured the lagging and piles are removed.

Sheet piling consists of a series of panels with interlocking connections, driven into the ground with impact or vibratory hammers to form a barrier. Sheets can be made from a variety of materials including steel, plastic, recast concrete and fiberglass. Sheet piling can be temporary and removed after the basement walls have been constructed, or can be a permanent structural element of the building.

Secant piles consist of a series of interlocking concrete cylinders that form support for the structure above and a waterproof basement wall. Installation of secant piles involves the construction of guide walls, which provide an accurate alignment for the drilling auger. A drilling rig then advances an initial series of cylindrical holes to the desired depth, spaced slightly less than one pile diameter apart. The holes are filled with slow-curing, or soft, concrete to form piles. A second series of holes are drilled that intersect with piles that have just been installed. This hole, which intersects with piles on either side, is now filled with concrete and steel reinforcement. Typically the secant piles form the basement walls.

After site retention, the basement cavity is excavated. Typically, hydraulic excavators remove the earthen material to the desired depth. The excavation spoils would either be stockpiled on-site for later removal, or be loaded directly onto waiting trucks and hauled off-site. Bedrock mining would follow excavation of soil if excavation extends below the level of bedrock. In such cases, hydraulic hoe ram would likely be used to chip the bedrock. Bedrock spoils would be trucked away.

Following excavation, construction of the foundations and any below-grade elements would begin. Excavation typically includes the use of heavy excavation equipment to remove material from the site. Foundation work would include the pouring of concrete footings and the foundation. Ready-mix concrete trucks would deliver concrete to the site and trucks would remove excavated material for off-site disposal

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at a licensed landfill or recycling facility. Depending on the size of the building, this phase is typically up to four months in duration.

CORE AND SHELL CONSTRUCTION

This phase is typically up to six months in duration and would include construction of the structure of the proposed building, which could either be of steel and concrete or of reinforced concrete, the building's facade (exterior walls and cladding), and roof. During this stage of construction, pouring of the building's concrete floors or "decks" would occur. Installation of the building's core – which consists of the elevators, vertical riser systems for mechanical, electrical, and plumbing, as well as the satellite electrical and mechanical equipment rooms and the stairs and restroom facilities – would start during this stage and continue through the interior construction and finishing stage. These activities would require the use of cranes, derricks, exterior hoists, delivery trucks, fork lifts, man lifts, and other heavy equipment.

Cranes would be used to lift structural components, facade elements, large pieces of equipment, etc. on taller buildings. Other construction materials and debris generated as part of the construction would generally be moved via hoists. Trucks would continue to deliver materials and carters would remove construction debris. Construction of the core and shell would be expected to overlap with interior construction and finishing. When the building reaches about 10 stories, three construction activities would occur simultaneously. The superstructure would be erected on the higher floors, cladding would be attached farther down, and the interior would be finished on the lowest floors.

INTERIOR CONSTRUCTION AND FINISHING

Installation of the building's mechanical, electrical, and plumbing systems would continue during this stage and include installation of heating, ventilation, and air conditioning (HVAC) equipment and ductwork, installation of electric lines within the buildings, and interior installation of water supply and wastewater piping. Installation and checking of elevator and life safety systems would also take place at this time. This stage would also include the construction of interior walls, installation of lighting fixtures, and interior finishes (flooring, painting, etc.). This phase is typically up to 10 months in duration.

TYPICAL CONSTRUCTION EQUIPMENT

Typical equipment used for demolition, excavation, and foundation construction would include excavators, bulldozers, backhoes, front-end loaders, pile drivers or pile drilling rigs, cranes, jack hammers, and concrete pumping trucks. Equipment that would be used for construction activities would include cranes, hoist complexes, dump trucks and loaders, concrete trucks, backhoes, and other pieces of large equipment. Trucks would arrive at the site with pre-mixed concrete and other building materials, and would remove any excavated material and construction debris. Cranes, compressors, electricity generators, hoists, rebar bending machines and welding machines also would be used during construction of the superstructure and framing. During façade and roof construction, hoists and cranes would continue to be used and trucks would remain in use for material supply and construction waste removal.

E. POTENTIAL IMPACTS DURING CONSTRUCTION

LAND USE

Construction activities would affect land use on each of the projected and potential development sites and in the immediately surrounding areas. These effects, however, would be temporary in duration. Although the Proposed Action has a build year of 2018, no single projected development site would experience construction activity for this entire time period, and the intensity of construction activity would vary in time and location throughout the Project Area.

Construction activities would be disruptive and concentrated in areas surrounding each projected development site for a period of time. No permanent change to land use adjacent to each projected development site due to construction activity is anticipated; consequently no significant adverse impact to land use within the Project Area or surrounding areas would be expected to result from the Proposed Action.

SOCIOECONOMIC CONDITIONS

Construction activities associated with the Proposed Action could, in some instances, temporarily affect socioeconomic conditions in the vicinity of the projected or potential development site under construction. However, access to any businesses near each site would not be impeded, and none are expected to be significantly affected by a temporary reduction in the amount of pedestrian foot traffic that could occur as a result of construction activities. Construction associated with the Proposed Action is not expected to result in any significant adverse impacts to businesses or residences in the Project Area and may contribute to the local economy due to construction worker spending. Therefore, no significant adverse socioeconomic impacts would be expected to result from the Proposed Action.

COMMUNITY FACILITIES AND SERVICES

Construction on any of the projected or potential development sites would not block or restrict access to any community facilities (P.S. 318 Eugeno Maria De Hostos Intermediate High School and United Talmudical Academy) located in the Project Area or in the surrounding area. Streets would remain open for emergency and police vehicle access at all times, and access to occupied buildings would remain. Construction activity is not expected to significantly affect emergency response times. Consequently, the Proposed Action is not expected to result in any significant adverse construction impacts to community facilities.

OPEN SPACE

Open space exists within the Project Area and adjacent to development sites. The Bartlett Playground occupies the central portion of Block 2272, between Bartlett Street and Whipple Street. This open space lies adjacent to projected development Site #5 and projected development Site #6, and is situated across Bartlett Street from projected development Sites #12 and #13, and across Whipple Street from projected development Site #2.

Users of this open space would be temporarily affected by noise, and under certain conditions fugitive dust, from construction activity at the adjacent development sites. Fugitive dust emanating from construction sites is expected to be controlled by spraying water or some other dust suppression agent during periods when climactic conditions require such. Noise emanating from the sites would be

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controlled by contractors' adherence to the New York City Noise Code (Local Law 113). Although proximate construction activity may detract from the enjoyment experienced by some open space users, these effects would be temporary and short-term. No significant impacts to open space due to construction associated with the Proposed Action is expected.

HISTORIC RESOURCES

Archaeological Resources

As discussed in Chapter 8 "Historic Resources," there is low potential for intact archaeological deposits within the Project Area. As such, no impacts to archaeological resources due to the Proposed Action are anticipated.

Architectural Resources

Four architectural resources potentially eligible for listing on the State and/or National Register of Historic Places (S/NR-listed) are located within 90 feet of projected or potential development sites: The Lincoln Savings Bank is located across Broadway from potential development Site #34; United Talmudical Academy is located across Bartlett Street from potential development Site #11; All Saints Church is located across Throop Street from potential development Site # 1; and the Charles Pfizer & Co. building is located across Harrison Street from potential development Site #9.

Inadvertent construction-related damage could potentially occur to these S/NR eligible resources as a result of development in the Project Area. The resources would be afforded some protection from construction-related impacts under DOB regulations applicable to all buildings located adjacent to construction sites; however, since the resources are not S/NR-listed or New York City Landmarks (NYCL-designated), the resources are not afforded special protections under the New York City Department of Buildings' *Technical Policy and Procedure Notice #10/88, (TPPN 10/88)*. However, the resources would be provided a measure of protection from construction as Building Code section 27-166 (C26-112.4), which requires that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the requirements of Building Construction Subchapter 7 and Building Code Subchapters 11 and 19. Additional protective measures afforded under TPPN 10/88, which apply to designated historic resources, would not be applicable in this case, unless the eligible resources are designated in the future prior to the initiation of construction. If these resources are not designated, however, they would not be subject to the above construction protection procedures and adjacent or nearby development resulting from the Proposed Action could potentially result in significant adverse construction-related impacts to these resources. As discussed in Chapter 26, "Unavoidable Adverse Impacts", these impacts would be unmitigated for privately owned development sites as no mechanism to require a CPP is currently in place for private sites, aside from the standard Building Code measures identified above.

For city-owned development sites that are under HPD jurisdiction and located within 90 feet of potentially eligible resources, the Land Disposition Agreement (LDA) between HPD and the private entity will include a requirement for a Construction Protection Plan (CPP) to insure that the potentially eligible historic resource is not adversely impacted by construction activities. The measure would require consultation with and review and acceptance by the LPC. With this measure required through provisions in the LDA, no significant adverse construction-related impacts would result from redevelopment of city-owned property. Construction activity associated with Projected Development Sites 9 and 11 would result in potential construction-related impacts. The resource within 90' feet of Projected Development Site 9 is the Charles Pfizer & Co. building, located on Harrison Avenue. The resource within 90' feet of Projected Development Site 11 is the United Talmudical Academy (former Bartlett School, PS 168),

which is located on Bartlett Street. See the CEQR Technical Manual: 2001, chapter F, page 3F-18, section 523, regarding references and suggested elements for inclusion in the construction protection plan.

NEIGHBORHOOD CHARACTER

Construction activity could affect the character of the area immediately surrounding each development site during portions of the construction period, due to increases in traffic and construction noise. The degree of this temporary impact would depend on the type of construction activity being performed, the construction location and duration, and the land uses found in the immediately adjacent neighborhood. Since these impacts would be localized, sporadic and temporary, they would not cause a significant adverse impact to the overall neighborhood character of the Project Area.

Measures to minimize noise, vibration, dust, and other construction-related nuisances would be employed where appropriate and practicable. These impacts would be localized to the individual projected development site, would be considered temporary in nature and would not alter the character of the larger rezoning area. Therefore, the Proposed Action would not result in significant adverse impacts to neighborhood character during construction.

TRAFFIC AND PARKING

It is expected that the Proposed Action would introduce a substantial number of new residents, employees and visitors to the Project Area by 2018. Construction on the projected development sites would generate trips resulting from arriving and departing construction workers, movement of materials and equipment, and the removal of excavation spoils and construction and demolition debris. Construction would likely occur between 7 AM and 4 PM. Construction workers typically would arrive before the AM peak commuter period and depart before the PM peak hour, and therefore would not represent a substantial factor in the area's peak travel periods. Truck movements typically would be spread throughout the day on weekdays and would generally occur between the hours of 7:00 AM and 4:30 PM. Whenever possible; the scheduling of deliveries and other construction activities would take place during off-peak travel hours.

Construction activities may result in short-term disruption to both traffic and pedestrian movements adjacent to development sites that are under construction. This would occur primarily due to the temporary loss of curbside lanes from the staging of equipment and the movement of materials to and from the site. Additionally, construction at times would result in temporary closings of sidewalks adjacent to the sites. These conditions would be temporary and not result in significant adverse impacts to traffic conditions. DOT issues permits for any street or sidewalk closures after it completes an evaluation of traffic and pedestrian conditions in the vicinity.

Construction workers would use either public transportation or private automobile to travel to and from the development sites. As with other workers in the area, parking demand likely would be accommodated at public off-street parking facilities available in the area. Overall, significant adverse construction impacts to traffic and/or parking would not be expected to occur as a result of the Proposed Action.

Given the potential size of developments within the Project Area and the 10-year span of time over which development would occur, it is expected that traffic generated by construction activities would result in far fewer than 50 additional passenger car equivalent (PCE) vehicles at any intersection in the Project Area or in adjacent areas. As such, according to the *CEQR Technical Manual*, a detailed construction traffic analysis is not warranted. No significant adverse impacts to traffic due to construction in the Project Area and surroundings are anticipated.

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AIR QUALITY

Construction activity has the potential to impact air quality due to particulates (largely dust) being generated from land clearing and excavation, as well as emissions emanating from on-site construction equipment and from on-road construction-related vehicles and their potential effects on traffic congestion.

Airborne Particulate Emissions

Airborne particulate emissions (also known as “fugitive dust”) could occur from numerous construction activities, including but not limited to, land clearing, excavation, stockpiling of materials, grading, and traffic over unpaved areas. Another major generator of particulate emissions is wind erosion of unprotected soil. The actual quantity of airborne particulates generated depends on the extent and nature of the land clearing operations, the physical characteristics of the soil, weather conditions, the type of construction equipment utilized and the speed at which it is operated, and the type of dust control methods employed on the site. These impacts would be short-term.

Much of the fugitive dust generated at construction sites consists of relatively large-size particles, which typically settle within a short distance from the site without impacting nearby buildings or people. Because fugitive dust is a common impact of construction, it is regulated by the city. During construction, all appropriate fugitive dust control measures must be used to satisfy Section 1402.2-9.11 of the New York City Air Pollution Code. To prevent fugitive dust from becoming airborne, the measures include:

- Use of water to control dust in the construction operations and during the clearing and grading of land;
- Application of water to dirt paths, materials, stockpiles, and other surfaces that can generate airborne dust over extended period;
- Covering of open-body trucks transporting materials likely to generate airborne dust at all times when in motion; and
- Prompt removal of earth or other materials from paved streets where earth or other material has been deposited by trucking or earth-moving equipment, erosion by water, or other means.

Mobile Source Emissions

Mobile source emissions result from the operation of construction equipment, trucks delivering materials and removing debris, workers’ private vehicles, or occasional disruptions in traffic near a construction site. Localized increases in mobile source emissions would be minimized by following standard traffic maintenance requirements, such as:

- Construction requiring temporary street closings would be performed during off-peak hours wherever possible;
- The existing number of traffic lanes would be maintained to the maximum extent possible; and
- Idling of delivery trucks or other equipment would not be permitted during unloading or other inactive times in accordance with local law.

The number of construction-related vehicle trips generated by the Proposed Action would be relatively small. In addition, emissions from such vehicles would occur over the 10-year period following the

adoption of the Proposed Action and be dispersed throughout the Project Area and vicinity. Therefore, the mobile source emissions generated by the Proposed Action would not be significant.

NOISE AND VIBRATION

Noise

The operation of construction equipment on the projected development sites, as well as construction vehicles and delivery vehicles traveling to and from the sites, could impact noise and vibration levels in the community during the construction period.

Perceived noise levels at a receptor are a function of the noise level of the generator(s), the distance from the source to the receptor, and the features of the intervening space (e.g., topography, vegetation, structures, noise barriers, etc.). The perceived noise level also would vary according to the phase of construction and the specific task being undertaken within that phase. It is expected that various pieces of construction equipment, including jackhammers, hydraulic excavators, bulldozers, cranes, compressors, trucks, and loaders, etc. would be utilized during various stages of construction (see Table 22-1).

Noise from construction activity and some construction equipment is regulated by the New York City Noise Control Code and by the U.S. Environmental Protection Agency (USEPA). The city's Noise Control Code requires the adoption and implementation of a noise mitigation plan for each construction site, limits construction to weekdays between the hours of 7 AM and 6 PM, and sets noise limits for certain specific types of construction equipment. Construction activities occurring after hours may be authorized by the Commissioner of the NYCDEP under certain exceptional circumstances. The USEPA requirements mandate that certain classifications of construction equipment meet specified noise emissions standards.

Construction noise associated with the projected development sites is expected to be temporary, typical of other similar construction projects in the city. While there may be short periods of time when noise is greater than specified in the Noise Control Code, no significant adverse impacts would be expected to result from the Proposed Action.

Vibration

Vibration refers to ground-borne noise and perceptible motion. Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used. The operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings with foundations in the soil in the vicinity of a construction site respond to these vibrations, with varying results ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. Ground vibrations from construction activities do not often reach the levels that can damage structures, but they can achieve the audible and perceptible ranges in buildings that are located very close to a construction site. Ground-borne noise vibration generally is not annoying to people who are outdoors; the motion may be discernable but without the effects associated with the shaking of a building, there is less adverse reaction. Vibration source levels are presented in Table 22-2.

Vibration levels would be perceptible in the vicinity of each construction site for limited periods of time, especially during the early phases of construction that could include ground clearing, demolition and excavation activities, and pile driving for building foundation supports. Because of their minor intensity and limited duration, these levels would not be considered significant adverse impacts. By using proper

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construction techniques and standard protective measures, no significant adverse vibration impacts would be expected to result from the Proposed Action.

**Table 22-1
Construction Equipment Noise Levels**

Equipment	Typical Noise Level (dBA) 50 feet from Source
Air Compressor	78
Asphalt Paver	89
Asphalt Roller	74
Backhoe	80
Bar Bender	80
Boom Truck	85
Bulldozer	85
Cherry Picker	85
Compactor	83
Concrete Truck (10 yd. ³)	85
Crane	85
Drum Mixer	80
Dump Truck	84
Dumpster Removal (30 yd. ³)	85
Excavator	85
Forklift	85
Front End Loader	80
Generator	82
Grader	85
Hand Tools (Hammers, etc.)	70
Hoe Ram	90
Hydraulic Truck Crane (125-160 ton)	83
Impact Wrench	85
Jack Hammer	85
Pickup truck	55
Pneumatic Tools	85
Roller	85
Saw (Circular)	76
Saw (Table)	76
Scissor Lift	85
Straight Truck, 6-wheel (fuel, water, rack)	85
Street Cleaner	85
Tractor-Trailer	84
Welder/Torch	73
Warning Horn	85
Water Pump	77

Sources: *Federal Transit Administration Transit Noise and Vibration Impact Assessment, May 2006.*
New York City Noise Code, July 2007.

Table 22-2
Construction Equipment Vibration Source Levels

Equipment	PPV ¹ at 25 feet (inches per second)	Approximate Vibration Level (VdB) ² At 25 feet
Pile Driver (typical)	0.644	104
Vibratory Roller	0.210	94
Large Bulldozer	0.089	87
Hoe Ram	0.089	87
Loaded Truck	0.076	86
Jack Hammer	0.035	79
Small Bulldozer	0.003	58

Notes: 1 Peak particle velocity of the equipment.

2 Velocity in decibels

Source: Federal Transit Administration Transit Noise and Vibration Impact Assessment, May 2006.

INFRASTRUCTURE

According to the *CEQR Technical Manual*, infrastructure impacts may occur if project construction would affect or disrupt infrastructure service for extended time periods or intermittent periods over a long period of time. Examples include construction disturbing a water main that results in a long-term interruption in service, or an extensive number of construction vehicles degrading the pavement of local streets.

It is possible that water distribution lines and sewer lines would have to be replaced or relocated, and water and sewer service lines would have to be connected to all new buildings. Relocations and replacements would be expected to meet the standards of the New York City Department of Environmental Protection (NYCDEP) and would have to be approved by that agency. NYCDEP regularly repairs, relocates, and replaces water and sewer lines with no disruption to service. Consequently, no significant adverse impacts to infrastructure systems or to users in the Project Area would be expected to result from the Proposed Action.

HAZARDOUS MATERIALS

As described in Chapter 13, “Hazardous Materials,” all projected and potential development sites identified in the RWCDS are potentially affected by contamination because they (1) currently comprise uses consistent with *Appendix A, List of Facilities, Activities or Conditions Requiring Assessment (CEQR Technical Manual)*, (2) are adjacent to such land uses, or (3) are within 400 feet of two or more such land uses. As such, each of these sites would be assigned an (E) designation as part of the Proposed Action.

City-owned parcels are among the development sites that have been identified as having the potential for hazardous materials contamination. For city-owned development sites, or sites that are proposed for acquisition by the city (for subsequent disposition to a developer), (E) designations are not recommended. Since development of these sites would occur through disposition to a private entity, similar mechanisms would be required through the Land Disposition Agreement (LDA) between HPD and a private entity. The provisions would be similar to an (E) designation and would ensure that further investigative and/or remedial activities (as well as health and safety measures) prior to and/or during construction would be required under the city’s contract of sale with the private entity selected to develop the site.

Building demolition in the city is regulated by the New York City Department of Buildings (DOB). DOB regulations require the abatement of asbestos prior to any intrusive construction activities, including demolition. In addition, the federal Occupational Safety and Health Administration regulates construction

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activities to prevent excessive exposure of workers to contaminants in building materials including lead in paint. New York State solid waste regulations control how contaminated demolition debris and contaminated materials associated with construction are handled and disposed. Adherence to these and other applicable regulations, as well as the mapping of an (E) designation to each of the projected and potential development sites, requiring a DEP-approved Construction Health and Safety Plan (CHASP), would minimize impacts from the potential presence of contaminated materials during construction activity.

F. CONCLUSION

Construction-related activities resulting from the Proposed Action are not expected to have significant adverse impacts on land use and neighborhood character, socioeconomics conditions, community facilities and services, open space, traffic and parking, air quality, noise, infrastructure, or hazardous materials conditions.

Both direct and indirect construction-related impacts could potentially occur to several eligible historic resources. These significant adverse impacts would be considered unmitigated because development activity on development sites nearby or adjacent to these eligible resources would occur within the limitations of the area's new zoning. Since the resources are not S/NR-listed or NYCL-designated, they would not be afforded special protections under DOB's *Technical Policy and Procedure Notice 10/88*. The resources would be provided a measure of protection from construction under Building Code Section 27-166 (C26-112.4), which requires that all lots, buildings, and service facilities adjacent to foundation and earthwork areas be protected and supported in accordance with the requirements of Building Construction Subchapter 7 and Building Code Subchapters 11 and 19.

In order to ensure that construction period impacts are eliminated or minimized, construction in the city is a highly regulated process that requires consultation and coordination with a number of city and state agencies, including DOT, DOB, and DEP, among others.

G. NEPA CONSIDERATION

The CEQR analysis provided above has been relied upon to evaluate the potential effects on construction as a result of the Proposed Action. As concluded above, the Proposed Action would have significant adverse impacts resulting from construction activities proximate to historic resources but would not adversely impact land use, neighborhood character, socioeconomics conditions, community facilities and services, open space, traffic and parking, air quality, noise, infrastructure, or hazardous materials conditions.