

3.19 CONSTRUCTION IMPACTS

INTRODUCTION

Construction-related activities resulting from the proposed action are not expected to have any significant adverse impacts on natural resources, traffic, air quality, noise, or hazardous materials conditions. However, as noted in **Chapter 3.6**, “Historic Resources”, inadvertent construction-related damage could potentially occur to several eligible resources. These significant adverse impacts would be unmitigated because development activity on development sites nearby or adjacent to these eligible resources would occur as-of-right.

This chapter assesses the potential impacts of the construction of buildings expected to result from the proposed action. The following sections discuss the potential impacts resulting from the construction of the projected development sites as described in the reasonable worst case development scenario (RWCDS) presented in Chapter 2.0, “Project Description.” Construction impacts, although temporary, can include disruptive and noticeable effects of a project. Determination of their significance and need for mitigation is generally based on the duration and magnitude of the impacts. Construction activity could potentially affect traffic conditions, archaeological resources, the integrity of historic resources, community noise patterns, and air quality conditions.

The proposed action would result in the construction of new residential and commercial buildings, containing ground-floor retail and some community facilities. As described in other chapters of this FEIS, the anticipated developments are expected to be medium to high density along the center of the corridor with building heights up to 290 feet, and between 80 and 120 feet west of Morningside Avenue and East of Park Avenue

Construction on the 26 projected development sites is assumed to be completed in the 10 years following the adoption of the proposed action. In addition, there are ~~23~~ 22 potential development sites considered less likely to be developed over the 10-year analysis period, but which are considered potential sites for future development.

Because the proposed action could result in construction-related impacts, this FEIS provides an assessment of the existing and future conditions with and without the proposed action. The following is a discussion of the potential effects associated with the construction related activities, including traffic, air quality, noise, archaeological resources, historic resources, natural resources, and hazardous materials.

3.19.1 CONSTRUCTION SCHEDULE AND ACTIVITIES

The reasonable worst case development scenario presented in Chapter 1, “Project Description,” does not describe which of the sites would be developed first or assume a particular sequence of development. However, it is assumed that construction of all projected development sites would likely be completed by 2017. While market considerations will determine the demand for new residential and commercial development, it is reasonable to assume that a number of projected

development sites may be under construction at the same time. However, given the wide geographic distribution of the projected development sites, this is not expected to result in a clustering of construction activities at any given location at any one time within the proposed action area.

Construction activities would normally take place Monday through Friday, although the delivery/installation of certain critical equipment could occur on weekend days. Construction staging would most likely occur on the projected and potential development sites themselves and may, in some cases, extend within portions of sidewalks, and curb and travel lanes of public streets adjacent to the construction sites. Any sidewalk or street closures require the approval of the New York City Department of Transportation's Office of Construction Management and Coordination (NYCDOT-OCMC), the entity that insures critical arteries are not interrupted, especially during peak travel periods.

Builders would be required to plan and carry out noise and dust control measures during construction. In addition, there would be requirements for street crossing and entrance barriers, protective scaffolding, and strict compliance with all applicable construction safety measures.

Following is a general outline of typical scheduling for the projected development sites. It should be noted however that the duration and extent of new construction activities would vary based on which site is being developed.

- Months 1-4: Site clearance, excavation, and foundation. The first 4 months of construction would entail site clearance; digging, pile-driving, pile capping, and excavation for the foundation; dewatering (to the extent required), 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 5-10: Erection of the superstructure and underground parking foundation, where applicable. Once the foundations have been completed, the construction of the building's steel framework parking lots 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.
- Months 11-24: Façade and roof construction, mechanical installation, interior and finishing work. This would include the assembly of exterior walls and cladding; 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.

3.19.2 POTENTIAL IMPACTS DURING CONSTRUCTION

Historic Resources

Archeological Resources

As described in Chapter 7, “Historic Resources,” the NYC Landmarks Preservation Commission (LPC) reviewed the proposed action area to determine the potential archaeological sensitivity of the area. This was done to determine if the projected and potential developments could affect archaeological resources, as construction activities could result in excavation or other in-ground disturbance. LPC determined that the development sites are not archaeologically sensitive and therefore the proposed action does not have the potential to impact archaeological resources.

Architectural Resources

Three designated resources and two historic districts are located within 90 feet of projected or potential development sites: the Mount Morris Bank at 81 East 125th Street (Historic Resource #1, NYCL and NR listed) is within 90 feet of projected development sites 18, 19, 20, and 21; the Apollo Theatre at 253 West 125th Street (Historic Resource #15, NYCL and NR listed) is within 90 feet of projected development sites 7 and 8 and potential development sites 32 and 35; the Hotel Theresa at 2082-2090 Adam Clayton Powell Boulevard (Historic Resource #23, NYCL and NR listed) is within 90 feet of projected development sites 6 and 9; and the Mount Morris Park Historic District and Historic District Extension (Historic Resource #19, NYCL and NR listed, and Historic Resource #20, NR listed) are within 90 feet of projected development sites 12, 13, 16, and 17 and potential development sites 36 and 40. (See chapter 3.6, “Historic Resources” for more information.)

As these resources are within 90 feet of a projected or potential development site, they could be adversely affected by construction activities at the development sites.

The City has procedures for avoidance of damage to structures from adjacent construction with added protection for designated historic resources and for properties within historic districts, which would be afforded to the three buildings and two historic districts described above. Building Code section 27-166 (C26-112.4) serves to protect buildings by requiring 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 addition, the New York City Department of Buildings’ *Technical Policy and Procedure Notice (PPN) #10/88*, supplements these procedures by requiring a monitoring program to reduce the likelihood of construction damage to adjacent LPC-designated or S/NR-listed historic structures (within 90 feet) or properties within historic districts. This monitoring program will detect at an early stage the beginnings of damage so that construction procedures can be changed. With these measures, significant, adverse construction-related impacts are not expected to the buildings and districts described above.

Inadvertent construction-related damage could potentially occur to nine eligible resources in the proposed action study area, including the Park Avenue Viaduct, the Metro-North 125th Street Station, the Engine Co. 36 (Firehouse), the New York Public Library 125th Street Branch, the Former Twelfth Ward Bank, Blumstein's Department Store, 221 East 124th Street, the apartment building at 2075-2087 Lexington Ave, and the Lenox Ave West 125th Street Subway Station. These significant adverse impacts would be unmitigated because development activity on development sites within 90 feet of these eligible resources would occur as-of-right. With respect to construction-related impacts, the potential resources would be afforded some protection under DOB regulations applicable to all buildings located adjacent to construction sites; however, since the resources are not S/NR-listed or NYLPC-designated, the resources are not afforded special protections under DOB's *TPPN 10/88*. 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 DOB 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.

Natural Resources

As discussed in Chapter 12, "Natural Resources," the projected developments would occur on sites that have been previously developed or improved. Additionally, the project area is not within the designated boundaries of the NYC Coastal Zone. Accordingly, as discussed in Chapter 14, "Waterfront Revitalization Program," the proposed actions are not subject to the NYC Local Waterfront Revitalization Program (LWRP). Therefore, as the locations affected by action generated construction do not contain any important natural resources, the proposed action is not expected to result in any significant adverse construction impacts related to natural resources.

Hazardous Materials

As described in Chapter 3.10, "Hazardous Materials," for all privately owned sites, (E) designations are recommended as part of the proposed zoning. The (E) designation requires that pre-development activities at each site include a Phase 1 environmental site investigation, and, if necessary, a sampling protocol and remediation to the satisfaction of NYCDEP before the issuance of a building permit. Recommendations for (E) designations are based on whether the projected and potential development sites may have been adversely affected by current or historical uses at, adjacent to, or within 400 feet of these sites. By placing (E) designations on sites where there is a known or suspect environmental concern, the potential for an adverse impact to human health and the environment resulting from the proposed action is avoided. The

(E) designation provides the City with the mechanism for addressing environmental conditions so that significant adverse impacts do not occur as a result of site development.

In addition to the sites receiving (E) designations, there are City owned properties that have been identified as having the potential for hazardous materials contamination. Because these sites are under City ownership, they are not subject to the regulations governing (E) designations. The agencies that own and control these sites will enter into Memoranda of Understanding or other agreements with NYCDEP to ensure that any testing and remediation activities, as deemed necessary by NYCDEP in accordance with NYCDEP requirements, are performed prior to and/or during development of or a change in use on these sites.

Demolition of interiors, portions of buildings or entire buildings are regulated by the NYC Building Department requiring abatement of asbestos prior to any intrusive construction activities including demolition. OSHA regulates construction activities to prevent excessive exposure of workers to contaminants in the building materials including lead in paint. New York State Solid Waste regulations control where demolition debris and contaminated materials associated with construction are handled and disposed. Adherence to these existing regulations would prevent impacts from development activities at any of the projected and potential development sites in the proposed action area.

With the requirements of the (E) designation on development sites, there would be no impact from the potential presence of contaminated materials.

Traffic and Parking

The proposed action would result in residential and commercial development with ground-floor retail space and some community facility development on 26 projected development sites in the 10 years following the adoption of the proposed action. These developments would replace existing uses on the development sites, including storage/manufacturing, commercial, parking/auto related, vacant buildings, and vacant land. Construction of the projected developments anticipated to result from the proposed action would generate trips resulting from arriving and departing construction workers, movement of materials and equipment, and removal of construction waste. Construction would likely occur between 7 AM and 4 PM. Construction workers would typically arrive before the AM peak commuter period and depart before the PM peak hour, and therefore would not represent a substantial increment during 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. Wherever 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 of both traffic and pedestrian movements at the development sites. 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 on traffic and transportation conditions. NYCDOT-OCMC issues permits for any street/sidewalk closures after evaluation of traffic and pedestrian conditions.

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.

Air Quality

Possible impacts on local air quality during construction of the projected development sites include fugitive dust (particulate) emissions from land clearing operations and mobile source emissions, including hydrocarbons, nitrogen oxide, and carbon monoxide.

Fugitive Emissions

Fugitive dust emissions could occur from land clearing, excavation, hauling, dumping, spreading, grading, compaction, wind erosion, and traffic over unpaved areas. Actual quantities of emissions depend on the extent and nature of the land clearing operations, the type of equipment employed, the physical characteristics of the underlying soil, the speed at which construction vehicles are operated, and the type of fugitive dust control methods employed. The U.S. Environmental Protection Agency (EPA) has suggested, in general, an overall emission rate of about 1.2 tons of particulate matter per acre per month of active construction from all phases of land clearing operations with no fugitive dust control measures. However, this is a national estimate and actual emissions would vary widely depending on many factors, including the intensity and type of land clearing operations. Much of the fugitive dust generated by construction activities consists of relatively large-size particles, which are expected to settle within a short distance from the construction site and to not significantly impact nearby buildings or people. All appropriate fugitive dust control measures—including watering of exposed areas and dust covers for trucks—would be employed during construction of the development sites.

Mobile Source Emissions

Mobile source emissions may result from the operation of construction equipment, trucks delivering materials and removing debris, workers' private vehicles, or occasional disruptions in traffic near the 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.

The number of construction-related vehicle trips generated by the proposed action would be relatively small. Additionally, the emissions from such vehicles as well as from construction equipment would occur over the 10 years following the adoption of the proposed action and be dispersed throughout the proposed action area and vicinity. Therefore, the mobile source emissions generated by the proposed action would not be significant.

Noise

Impacts on noise levels during construction of the development sites would include noise and vibration from the operation of construction equipment. The severity of impacts from these noise sources would depend on the noise characteristics of the equipment and activities involved, the construction schedule, and the distance to potentially sensitive noise receptors. Noise and vibration levels at a given location are dependent on the kind and number of pieces of construction equipment being operated, as well as the distance from the construction site (refer to Table 3.19-1). Noise caused by construction activities would vary widely, depending on the phase of construction—land clearing and excavations, foundation and capping, erection of structural steel, construction of exterior walls, etc.—and the specific task being undertaken.

Construction noise associated with the proposed action is expected to be similar to noise generated by other residential and commercial construction projects in the city. Increased noise levels caused by construction activities can be expected to be most significant during the early phases of construction. The most significant noise source associated with the construction equipment would be the use of pile-drivers. This noise would be intrusive and would be heard by the employees at surrounding businesses and the residents who live within several blocks of the development sites; however, this construction noise would be temporary in nature. Increases in noise levels caused by delivery trucks and other construction vehicles would not be significant. Small increases in noise levels are expected to be found near a few defined truck routes and the streets in the immediate vicinity of the development sites.

Construction noise is regulated by the New York City Noise Control Code and by EPA noise emission standards for construction equipment. These local and federal requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards; that, except under exceptional circumstances, construction activities be limited to weekdays between the hours of 7 AM and 6 PM; and that construction material be handled and transported in such a manner as not to create unnecessary noise. These regulations would be followed. In addition, appropriate low-noise emission level equipment and operational procedures would be used. Compliance with noise control measures would be ensured by directives to the construction contractor.

**Table 3.19-1
 Typical Noise Emission Levels for Construction Equipment**

Equipment Item	Noise Level at 50 Feet (dBA)
Air Compressor	81
Asphalt Spreader (paver)	89
Asphalt Truck	88
Backhoe	85
Bulldozer	87
Compactor	80
Concrete Plant	83 ¹
Concrete Spreader	89
Concrete Mixer	85
Concrete Vibrator	76
Crane (derrick)	88
Delivery Truck	88
Diamond Saw	90 ²
Dredge	88
Dump Truck	88
Front End Loader	84
Gas-driven Vibro-compactor	76
Hoist	76
Jackhammer (Paving Breaker)	88
Line Drill	98
Motor Crane	83
Extractor	101
Pump	76
Roller	80
Shovel	82
Truck	88

Notes:

¹ Wood, E. W. and A. R. Thompson, *Sound Level Survey, Concrete Batch Plant: Limerick Generating Station*, Bolt Beranek and Newman, Inc., Report 2825, Cambridge, MA, May 1974.

² New York State Department of Environmental Conservation, *Construction Noise Survey*, Report No. NC-P2, Albany, NY, April 1974.

Sources: Patterson, W. N., R. A. Ely, and S. M. Swanson, *Regulation of Construction Activity Noise*, Bolt Beranek and Newman, Inc., Report 2887, for the Environmental Protection Agency, Washington, D. C., November 1974. Except for footnoted items.

CONCLUSION

Construction-related activities resulting from the proposed action are not expected to have any significant adverse impacts on natural resources, traffic, air quality, noise, or hazardous materials conditions. Inadvertent construction-related damage could potentially occur to several eligible historic resources. These significant adverse impacts would be unmitigated because development activity on development sites nearby or adjacent to these eligible resources would occur as-of-right. With respect to construction-related impacts, these resources would be afforded limited protection under DOB regulations applicable to all buildings located adjacent to construction sites; however, since the resources are not S/NR-listed or NYLPC-designated, they would not be afforded special protections under DOB's *TPPN 10/88*. 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 DOB 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 resources are not designated, however, it would not be subject to the above construction protection procedures, and may therefore be adversely impacted by adjacent development resulting from the proposed action.

The construction process in New York City is highly regulated to ensure that construction period impacts are eliminated or minimized. The construction process requires consultation and coordination with a number of City and/or State agencies, including NYCDOT, NYC Department of Buildings (DOB), NYCDEP, and NYCEDC (where applicable), among others.