Chapter 19: Construction Impacts

A. INTRODUCTION

This chapter summarizes the construction program for the proposed project and considers the potential for adverse impacts to occur during construction of the proposed project. The construction phasing and schedule for the proposed project are described, followed by a description of the types of activities likely to occur during the repair and rehabilitation of Pier 57’s historic pier structure, including its caissons, as well as activities associated with construction of the proposed marina. An assessment of potential impacts from construction activity is conducted and the methods that may be employed to avoid significant adverse construction-related impacts are then presented.

PRINCIPAL CONCLUSIONS

Although there would be localized, temporary disruptions due to construction activity, as is the case with any construction activity, this analysis finds that the proposed project would not result in any significant adverse impacts due to construction activities. This finding is based on an analysis of the types of construction activities and their intensity, the location of sensitive receptors that could be affected by the proposed project’s construction, and the overall construction duration.

The overall construction duration of the proposed project would be short-term (less than two years), with the majority of the activities occurring within the existing Pier 57 structure. During interior work, the walls of the building would act as barriers to the transport of air pollutants and would provide acoustical shielding for noise sources, thus limiting potential impacts from construction activity. Unlike typical ground-up construction, the proposed project would not involve extensive demolition, foundation, or superstructure construction activities, which often generate the highest levels of noise and air emissions. In terms of air emissions and noise levels, the most intense construction activity would be pile driving, but this task would be limited in duration (only 12 weeks), would involve piles of small size (predominantly 18-inch diameter steel pipe piles), and is expected to utilize vibratory hammers (which create less intrusive noise levels) rather than impact hammers to the greatest extent possible. With the exception of adjacent portions of Hudson River Park (which consists primarily of an esplanade with limited seating and portions of the publicly accessible Pier 54) and the walkway and seating area around the perimeter of Chelsea Piers, all of the sensitive receptor locations including the nearest residences are located more than 100 feet away from the project site and are separated from the site by Route 9A. In fact, the nearest residences are located approximately 550 feet from the project site, at 450 West 17th Street. In addition, construction of the proposed project would only result in a small number of construction-related vehicle, pedestrian, and transit trips. Therefore, after taking into account the short duration of construction tasks, the relatively low intensity of construction activities and the fact that much of the activity would be interior work, and the very limited number of nearby sensitive receptors (such as residences), the analysis concludes that the proposed project would not result in any significant adverse construction-related impacts.
related impacts. The results of the construction analyses for each technical area are discussed in more detail below.

**TRANSPORTATION**

No significant adverse transportation impacts would be expected due to construction of the proposed project. As discussed below, construction of the proposed project would be short-term (less than two years) and would result in a small number of construction-related vehicle, pedestrian, and transit trips.

Construction of the proposed project would result in a maximum of approximately 73 peak hour vehicle trips (passenger car equivalents [PCEs]) during the construction peak period. However, when distributed to various roadways near the project site, the project construction trip increments would not be expected to result in 50 or more vehicle trips through any intersection.

Construction of the proposed project would result in a maximum of approximately 102 peak hour transit trips during the construction peak period. Since the project site is well served by mass transit including the A, C, E, and L subway lines and various bus routes, only nominal increases in transit demand would be experienced along each of those routes and at each of the transit access locations (fewer than the 2012 City Environmental Quality Review [CEQR] Technical Manual analysis threshold of 200 trips. Therefore, there would not be a potential for significant adverse transit impacts during construction. In addition, 200 pedestrian trips would be expected during the peak hour during the construction peak period. Because these pedestrian trips would primarily occur outside of the typical commuter peak hours (8–9 AM and 5–6 PM) and would originate from several nearby transit services and a number of area parking facilities, they would be distributed among numerous sidewalks and crosswalks in the area, and therefore there would not be a potential for significant adverse pedestrian impacts attributable to the projected construction worker pedestrian trips.

**AIR QUALITY**

The quantity of air pollutants emitted during the construction period would likely vary over time. Unlike typical ground-up construction, the proposed project would not involve extensive demolition, foundation, or superstructure construction activities, which often generate the highest levels of air emissions. Instead, the majority of the construction activities would occur within the Pier 57 structure, and the walls of the building would act as barriers to the transport of air pollutants to nearby areas. Indoor work would also curtail emissions of fugitive (wind-blown) dust, and heavy diesel equipment such as excavators and pile drivers would not be needed during interior work. Without typical demolition or foundation activities for the proposed project, one of the most intense exterior activities in terms of air emissions would be pile driving, but this task would be limited in duration (only 12 weeks). Moreover, there are very few sensitive receptors near the project site, and the nearest residences are located more than 100 feet away from the project site and are separated from the site by Route 9A.

In addition, the duration of the proposed project’s construction is expected to be short-term (less than two years) and an emissions control program would be implemented to minimize potential construction-period effects on air quality. To ensure that the construction of the proposed project would result in the lowest practicable diesel particulate matter (DPM) emissions, the project would implement an emissions reduction program for all construction activities, including diesel equipment reduction; clean fuel; best available tailpipe reduction technologies; utilization of
newer equipment; dust control; and restrictions on vehicle idling. Therefore, construction of the proposed project would not result in any significant adverse air quality impacts.

**NOISE**

Noise associated with the proposed project’s construction activities would not result in any significant adverse impacts. The duration of the proposed project’s construction is expected to be short-term (less than two years), and therefore any potentially intrusive noise levels generated by construction activities would be of limited duration. In addition, there are very few noise sensitive receptors near the project site. With the exception of adjacent portions of Hudson River Park (which consists primarily of an esplanade with limited seating and portions of the publicly accessible Pier 54) and the walkway and seating area around the perimeter of Chelsea Piers, all of the sensitive receptor locations including the nearest residences are located more than 100 feet away from the project site and are separated from the site by Route 9A. During construction, most of the construction activities would be interior work, where the walls of the building would provide acoustical shielding for noise sources, and the proposed project does not involve extensive demolition, foundation, or superstructure construction activities, which often generate the highest noise levels. The noisiest construction activity associated with the proposed project—pile driving—would be of very limited duration, would involve piles of small size (predominantly 18-inch diameter steel pipe piles), and is expected to utilize vibratory hammers rather than impact hammers to the greatest extent possible. Therefore, based on these factors, no significant adverse noise impacts would be expected at any sensitive receptor locations from the proposed construction activities.

**OTHER TECHNICAL AREAS**

*Historic and Cultural Resources*

Since the proposed project would result in new construction and renovation activities within and abutting the Pier 57 structure, which is listed on the State/National Registers of Historic Places (S/NR), the proposed project would comply with the New York City Landmarks Preservation Commission’s (LPC) *Guidelines for Construction Adjacent to a Historic Landmark* as well as the guidelines set forth in section 523 of the *CEQR Technical Manual* and the procedures set forth in the New York City Department of Building’s (DOB) *Technical Policy and Procedure Notice (TPPN)* #10/88. This includes preparation of a Construction Protection Plan (CPP), to be prepared prior to construction activities and submitted to LPC and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) for review and approval.

The proposed project would result in construction activities within 90 feet of the S/NR-eligible Hudson River bulkhead. Therefore, the CPP to be prepared for the proposed project would include measures to ensure that the bulkhead is not affected by potential construction-related issues. None of the other architectural resources in the study area are close enough to experience direct, physical impacts from construction of the proposed project.

Therefore, the proposed project would not result in significant adverse construction-related impacts to historic and cultural resources.

*Hazardous Materials*

The *Phase I Environmental Site Assessment* (ESA) and Phase II Subsurface Investigation for the site revealed the potential for subsurface contamination and hazardous materials (such as
asbestos-containing materials and lead-based paint) on the project site. Renovation and rehabilitation of Pier 57 would be conducted in accordance with applicable Federal, State, and local regulatory requirements. Excavation work would be performed in accordance with a New York City Department of Environmental Protection (NYCDEP)-approved Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP). The RAP would specify requirements for items such as: installation of two feet of clean fill as a “site cap” in unpaved areas; handling of contaminated or potentially contaminated soil, groundwater or treated wood (e.g., pilings); soil stockpiling, soil disposal and transportation; dust control; air monitoring in the work zone and the community; dewatering procedures; quality assurance; and contingency measures (including reporting and registration requirements) should petroleum storage tanks or contamination be unexpectedly encountered. The CHASP would identify potential hazards that may be encountered during construction and specify appropriate health and safety measures to be undertaken to ensure that subsurface disturbance is performed in a manner protective of workers, the community, and the environment. All excavated soil requiring off-site disposal would be managed in accordance with applicable regulatory requirements. By adhering to these existing requirements, no significant adverse impacts due to the potential presence of any potential hazardous materials would be expected to occur during construction at the site.

Natural Resources

The construction activities associated with the proposed project would not cause any significant adverse environmental impacts on terrestrial or aquatic resources. Pile-driving and other in-water construction activities associated with the redevelopment of Pier 57 and construction of the marina would not result in significant adverse impacts to floodplains, wetlands, water quality, or aquatic biota. Increases in suspended sediment resulting from construction activities would be temporary and localized and would be expected to dissipate quickly. Aquatic threatened or endangered species or species of concern that are known to occur in the vicinity of Pier 57—shortnose sturgeon and Atlantic sturgeon—would only occur in the area as occasional transient individuals and would prefer the deeper water habitat of the navigation channel, which would not be affected by the proposed project. The prohibition of in-water pile driving activities from November through April to protect overwintering striped bass would minimize potential impacts to striped bass and other fish overwintering within the vicinity of Pier 57. Turbidity curtains would be used during pile driving activities. Upon completion of the timeline for in-water, exterior and interior activities, coordination would be conducted with the New York State Department of Environmental Conservation (NYSDEC) to develop and implement measures to minimize the potential for adverse impacts to the state-listed endangered peregrine falcon pair seasonally nesting on the pier. Coordination activities may include attempting to relocate the nest in concert with NYSDEC, staging construction to avoid sensitive periods, or use of monitoring cameras. Seals and the four species of threatened or endangered sea turtles that may be present in the Harbor Estuary would only be expected to be present in the vicinity of Pier 57 as occasional transient individuals and would likewise not be significantly impacted by construction activities.

B. OVERVIEW OF CONSTRUCTION ACTIVITIES

INTRODUCTION

The following section describes the expected schedule and methods and means of construction. While the methods and means described below are commonly used in New York City, the
discussion is illustrative as other means and methods may be chosen at the time of construction. The described means and methods are conservatively chosen to serve as the basis of the analyses in this chapter and are representative of the reasonable worst case for potential impacts.

This section of the chapter first gives an overview of the anticipated construction phasing and schedule of the proposed project. General construction practices are then presented, including those associated with deliveries and access, hours of work, and traffic lane closures. Finally, a detailed description of each type of construction activity is provided.

CONSTRUCTION PHASING AND SCHEDULE

Construction of the proposed project is expected to begin in 2013 with the renovated Pier 57 complete and operational in 2015. Table 19-1 shows the anticipated construction schedule for the proposed project. It would proceed in several stages, some of which would overlap: selective interior demolition; structure rehabilitation and redevelopment; interior fit-outs; in-water activities (including in-water marina work) and non-water marina installation.

<table>
<thead>
<tr>
<th>Task</th>
<th>Month</th>
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<tbody>
<tr>
<td>Selective Interior Demolition</td>
<td></td>
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<tr>
<td>Structure Rehabilitation and Redevelopment</td>
<td></td>
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<tr>
<td>Interior Fit-outs</td>
<td></td>
</tr>
<tr>
<td>In-Water Activities¹</td>
<td></td>
</tr>
<tr>
<td>Marina Installation (Non-water)²</td>
<td></td>
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</tbody>
</table>

Notes: All pile-driving activities associated with the marina would be completed within one pile-driving season (May 1 to October 31); in-water pile-driving activities are prohibited from November through April.

¹ In-water activities include all in-water work associated with the marina and wave screens, pier repairs, and perimeter walkways and walkway extensions. These activities include approximately 10 weeks for other in-water activities not involving pile driving. These activities would include assembly of the wave screens; placement of riprap for scour protection; repairs to the caissons; construction of new stairways, elevator shafts and utility shafts between the ground floor of the pier building and caisson level; pile jacketing and repair work; repairs to girders supporting the apron walkway; completion of fendering; and installation of the floating docks.

² Non-water marina installation would include utility connections and gangway installation. This activity would occur following the driving of the marina piles.

Source: Young Woo & Associates.

For the purposes of a conservative analysis, it is assumed that the marina construction would occur concurrently with the other in-water work. This generally provides for a more conservative analysis because it assumes a greater concentration of construction activity in a shorter period of time. However, it is possible that construction of the marina may not occur concurrently with the other in-water work. If this occurs, the overall construction duration of the proposed project could exceed two years. Even in that circumstance, the conclusions of the analysis would remain that there would be no potential for significant adverse impacts related to construction activities. The most intense activity associated with the marina would be pile driving, but this activity is expected to last for only 10 weeks for the marina and would utilize
vibratory hammers rather than impact hammers to the greatest extent possible.\(^1\) Pile driving associated with the marina would be an intermittent activity consisting of approximately 20 minutes of driving followed by an interval of an hour when no driving occurs, followed by tapping down to the final elevation. In addition, except for adjacent portions of Hudson River Park and the walkway and seating area around the perimeter of Chelsea Piers, all of the sensitive receptor locations including the nearest residences are located more than 100 feet away from the project site and are separated from the site by Route 9A. Due to the distance to sensitive receptors, the short duration, and the low intensity of marina construction, such activities would not have the potential to result in significant adverse construction impacts even if conducted beyond the construction schedule presented above.

**GENERAL CONSTRUCTION PRACTICES**

Certain activities would be on-going throughout the project construction. A field representative would serve as the contact point for the community and local leaders, and would be available to meet and work with the community to resolve concerns or problems that arise during the construction process. New York City maintains a 24-hour-a-day telephone hotline (311) so that concerns can be registered with the City.

**GOVERNMENTAL COORDINATION AND OVERSIGHT**

The following describes construction oversight by government agencies, which in New York City involves a number of City, State, and Federal agencies. **Table 19-2** shows the main agencies involved in construction oversight and the agencies’ areas of responsibilities. Primary responsibilities lie with the DOB, which ensures that the construction meets the requirements of the Building Code and that the buildings are structurally, electrically, and mechanically safe. In addition, DOB enforces safety regulations to protect both the workers and the public. The areas of oversight include installation and operation of the equipment, such as cranes and lifts, sidewalk sheds, and safety netting and scaffolding. In addition, the DOB, with LPC and New York State Office of Parks, Recreation and Historic Preservation (OPRHP) concurrence, approves the CPP used when the construction is in proximity to historic structures. NYCDEP enforces the Noise Code, regulates water disposal into the sewer system, and reviews and approves the Remedial Action Plans (RAPs)/Construction Health and Safety Plans (CHASPs). The Fire Department of New York City (FDNY) has primary oversight for compliance with the Fire Code. LPC, along with OPRHP, approves studies, the CPP, and monitoring to prevent damage to historic structures.

\(^1\) If the marina construction is delayed, pile driving activities would likely occur in two separate pile driving seasons, with the installation of fender piles in the first season followed by the installation of marina and wave fence piles in a later season. Under the construction schedule presented above, these activities would occur concurrently in one season.
NYSDOT reviews and approves any Route 9A traffic lane closures. The New York City Department of Labor (NYCDOL) licenses asbestos workers. NYSDEC regulates disposal of hazardous materials, and construction and operation of bulk petroleum and chemical storage tanks. On the federal level, the United States Environmental Protection Agency (EPA) has wide ranging authority over environmental matters, including air emissions, noise, and hazardous materials. Much of the responsibility is delegated to the state level. The U. S. Occupational Safety and Health Administration (OSHA) sets standards for work site safety and the construction equipment.

In addition to the above oversight, the Hudson River Park Trust, consistent with the conditions of the NYSDEC and United States Army Corps of Engineers (USACE) permits issued for the development of Hudson River Park, prohibits in-water pile-driving in the park between November 1 and April 30. Consistent with established practice with respect to other construction activity in Hudson River Park, the Trust will work closely with the applicant to designate appropriate staging areas and to install public safety measures such as fencing around the construction site.

**DEVELOPMENTS AND ACCESS**

Access to the construction site would be controlled. The work areas would be fenced off, and limited access points for workers and trucks would be provided. Private worker vehicles would not be allowed into the construction area. Security guards and flaggers would be posted, and all persons and trucks would have to pass through security points. Workers or trucks without a need to be on the site would not be allowed entry. After work hours, the gates would be closed and locked. Security guards would patrol the construction site after work hours and over the weekends to prevent unauthorized access.

Materials would be delivered to the project site either through trucks or barges. Specifically, prefabricated containers would be delivered to the project site via barges while all other materials would be delivered via trucks. All deliveries to the site would be controlled and scheduled. Unscheduled or haphazard deliveries would be minimized. To aid in adhering to the truck delivery schedules, as is normal for construction in New York City and Hudson River Park, flaggers would be employed where needed, including at the Route 9A bikeway.
flaggers could be supplied by the subcontractor on-site at that time or by the construction manager. The flaggers would control trucks entering and exiting the site under standards established by the Trust and NYSDOT, so that they would not interfere with one another. In addition, they would provide an additional traffic aid as the trucks enter and exit the on-street traffic streams.

*Hours of Work*

Construction activities would take place in accordance with New York City laws and regulations, which allow construction activities to take place between 7:00 AM and 6:00 PM. Construction work would begin at 7:00 AM on weekdays, with most workers arriving between 6:00 AM and 7:00 AM. Typically, work would end at 3:30 PM, but could be extended until 5:00 PM to 6:00 PM for some time-sensitive tasks such as concrete pouring. Extended workday activities would not include all construction workers on site, but only those involved in the specific task. Limited extended workdays could occur on weekdays over the course of construction.

At limited times over the course of construction, weekend work would be required. In such cases, appropriate work permits from DOB would be obtained. The weekend construction work would involve entrance reconfiguration, and the hoisting of materials to the roof via a large crane barge. In such cases, the numbers 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 begin at 9:00 AM and end at 5:00 PM.

*Traffic Lane, Bikeway, and Esplanade Closures*

During the course of construction, the Hudson River Park waterfront esplanade immediately to the north and south of the project site (between West 14th Street and West 17th Street) and traffic lanes on Route 9A may be closed or protected for varying periods of time. Traffic lane closures on southbound Route 9A would be required on limited weekends or nighttime periods during entrance reconfiguration work. Construction of the proposed project may also require temporarily either narrowing or diverting portions of the Route 9A bikeway onto the construction site. For example, during the construction of the access road, which would take approximately three to four months, the Route 9A bikeway may either be narrowed or shifted. However, the Route 9A bikeway would remain open at all times during the entire construction period. In addition, as in other periods of construction in Hudson River Park, pedestrians may at times be diverted to a shared bikeway and pedestrian path to maintain safe pedestrian movement through the area at all times. Any esplanade, bikeway, and traffic lane closures would be coordinated with and approved by HRPT and NYSDOT.

**GENERAL CONSTRUCTION TASKS**

Aside from standard site preparation work, construction of the proposed project would generally involve five main stages, which would overlap at certain times: selective interior demolition, structure rehabilitation and redevelopment, interior fit-outs, in-water activities, and marina construction. Each of the construction stages is described below.
SITE PREPARATION

The staging and laydown of materials would be done from mostly the associated eastern frontage area of Pier 57, portions of the Hudson River Park waterfront esplanade immediately to the north and south, and/or from barges. Typical construction startup work prepares a site for construction and involves the installation of public safety measures, such as fencing, sidewalk sheds, and Jersey barriers. The site is fenced off, typically with solid fencing, to minimize interference with the persons passing by the site. In this case, the fencing is expected to extend as far south as West 14th Street and as far north as West 17th Street. Separate gates for workers and for trucks are installed, and sidewalk/bikeway sheds and Jersey barriers are erected, if required. Trailers for the construction engineers and managers are hauled to the site and installed. For the proposed project, these trailers could be placed within the fence line or the interior of the pier. Also, portable toilets, dumpsters for trash, and water and fuel tankers are brought to the site and installed. Construction startup tasks are normally completed within weeks.

SELECTIVE INTERIOR DEMOLITION

As described in Chapter 10, “Hazardous Materials,” the Phase I ESA and Phase II Subsurface Investigation for the site revealed that the pier contains asbestos-containing materials (ACM), lead-based paint (LBP), and possible polychlorinated biphenyls (PCB)-containing items. Renovation and rehabilitation of the project site would be conducted in accordance with applicable Federal, State, and local regulatory requirements. Stained areas would be cleaned and sealed as necessary. During this stage of construction, non-structural elements and interior partitions are disassembled and any economically salvageable materials are removed. The equipment used would include forklifts, loaders, bobcats, and various hand tools. Approximately 75–85 workers would be employed for this task, and about 10 to 15 truckloads of materials would be removed per day.

STRUCTURE REHABILITATION AND REDEVELOPMENT

This stage of construction would include the restoration of the pier structure, including the headhouse, pier shed, foothouse, and building façades. The rooftop of the pier shed would be redeveloped as approximately 1.8 acres of open space with an observation pavilion, shade structures, and seating. On the north side of the lower headhouse rooftop, a new enclosure would be built to provide retail space. In the center of the upper headhouse rooftop, another enclosure would be built to provide additional space for retail. At the center of the pier shed roof, a new pavilion would be developed to provide a public observation area as well as space for retail, circulation, and mechanical space. This pavilion would incorporate repurposed shipping containers in its construction.

The structure rehabilitation and redevelopment task would involve the use of cranes, compressors, loaders, container handlers, welding machines, and hand tools. A barge crane would also be used to hoist materials to the rooftop. Trucks would be used to deliver materials and remove construction debris. During the end of this stage, prefabricated containers would be delivered to the project site. This analysis conservatively assumes that the containers would be delivered by truck, although barges may be used instead. About 100 to 150 workers would be on site at any given time and about 10 to 15 trucks would be required each day.
**INTERIOR FIT-OUTS**

This stage would include the construction of interior partitions, installation of lighting fixtures, interior finishes (flooring, painting, etc.), and mechanical and electrical work. Shipping containers would be repurposed and stacked inside the structure to create new retail spaces in the first- and second-floor mezzanine levels. These containers would be prefabricated off-site and transported to the project site. As noted above, this analysis conservatively assumes that the containers would be delivered by truck, although barges may be used instead. The delivery of the containers would begin during the end of the structure rehabilitation and redevelopment stage and would be completed during the beginning of the interior fit-outs stage.

Interior fit-outs would employ the greatest number of construction workers, with about 150 to 200 per day. In addition, 10 to 15 truck deliveries would also be expected for this task per day. Equipment used during interior construction would include container handlers, pneumatic equipment, delivery trucks, and a variety of small, hand-held tools.

**IN-WATER ACTIVITIES**

The proposed project would require a number of in-water construction activities related to the marina and wave screens, pier repairs, perimeter walkways and walkway extensions, and construction of new stairways, elevator shafts and utility shafts between the ground floor of the pier building and caisson level. These activities are discussed in more detail below.

As discussed in Chapter 1, “Project Description,” some aspects of the work to be conducted at Pier 57 were previously assessed in the Final Environmental Impact Statement (FEIS) for Hudson River Park, and permits and subsequent renewals were issued to the Hudson River Park Trust (HRPT), U.S. Army Corps of Engineers (USACE Permit 1998-00290) and New York State Department of Environmental Conservation (NYSDEC Permit 2-6299-00004/00001) permits issued to HRPT authorize the repair of the existing perimeter walkway and its extension to connect with the public esplanade to the east of the pier; the development of new public walkways parallel to the existing bulkhead; and pile jacketing and repair work. While this work was evaluated in the FEIS for Hudson River Park and has been permitted, the cumulative effects of these activities with the proposed project were not addressed and have been included for this analysis.

In terms of worker and truck trips associated with the in-water activities, about 20 workers and about two to three truck deliveries would be required per day for the pier repair and perimeter walkway construction activities and the new stairways, elevator shafts, and utility shafts to the caisson level. In addition, approximately 20 workers and about two to three truck deliveries would be required per day for the marina construction activities.

**Pier Repairs**

The project would require a number of in-water construction activities related to the pier. These would include repairs to the caissons; repairs to girders supporting the apron walkway; pile jacketing and repair work; and repairs to the timber fender system attached to the pier apron, including pile driving for fender piles along the periphery of the pier. As described in Chapter 1, “Project Description,” Pier 57 has three underwater caissons that support the pier structure. These caissons are concrete boxes that form most of the pier’s substructure. Caisson repairs would include the placement of riprap for scour protection at the base of the westernmost caisson and repairs to cracks in the caissons.
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Perimeter Walkway and Walkway Extensions
The proposed project would repair the existing perimeter walkway, extend it to connect with the Hudson River Park waterfront esplanade to the east of the pier, and create new public walkways parallel to the existing bulkhead, extending the currently limited public circulation space along the bulkhead. As noted above, these activities were previously approved and permitted. This construction activity would include pile driving for the perimeter walkway extensions and the new public walkways parallel to the existing bulkhead.

Marina Construction
The project design is expected to include a marina of up to 141 slips located on the north and south sides of Pier 57. As currently envisioned, the marina would include four wave screens (located north and south of the western end of the pier and along the edge of the existing pile fields adjacent to the north and south sides of the pier) and may include a vessel pumpout station within the portion of the marina south of Pier 57. Provision would be made in the design of the marina to accommodate mooring of up to two transient or long-term historic vessels and a non-motorized boat launch. A 30-by-60-foot water taxi landing may be located on the northwest corner of the pier. The proposed development of a marina would not include dredging of the Hudson River or refueling facilities. Construction of the marina would involve installation of guide piles, walkways, and finger floats, and the piles and panels associated with the wave screen structures and potential water taxi landing. Non-water marina installation activities would include utility connections and gangway installation, which would occur following the driving of the marina piles.

Other In-Water Construction
The proposed project would include the construction of new stairways, elevator shafts, and utility shafts between the ground floor and caisson level. As described in Chapter 1, “Project Description,” these structures would involve construction activities in the open water areas below the ground floor of the pier shed.

C. THE FUTURE WITHOUT THE PROPOSED PROJECT
Absent the proposed project, the existing Pier 57 structure will remain vacant. The existing pier structure and overwater platform would remain in their current condition with some level of deterioration over time and would require repairs to preserve the historic structure.

D. PROBABLE IMPACTS OF THE PROPOSED PROJECT
Construction of the proposed project, as is the case with any construction activities, may be disruptive to the surrounding area, in particular, to nearby residential, commercial, and open space uses. However, with the exception of the Hudson River Park, which consists primarily of an esplanade with limited seating near the project site, all of the sensitive receptor locations including the nearest residences are located more than 100 feet away from the project site and are separated from the site by Route 9A. In addition, unlike typical ground-up construction, the proposed project would not involve extensive demolition, foundation, or superstructure construction activities, which often generate the highest levels of noise and air emissions. During interior work, the walls of the building would act as barriers to the transport of air pollutants and would provide acoustical shielding for noise sources, thus limiting disruptions in the vicinity of the construction activity.
The following analysis describes the overall temporary effects on transportation, air quality, noise, historic and cultural resources, hazardous materials, natural resources, open space, socioeconomic conditions, community facilities, land use and public policy, and rodent control.

**TRANSPORTATION**

Construction of the proposed project would generate trips from workers traveling to and from the site, as well as from the movement of materials and equipment, and removal of construction waste. With the proposed project, the estimated number of daily construction workers on site would vary between 75 and 250, depending on the stage of construction, as follows:

- The selective interior demolition stage would require about 75 to 85 workers on site.
- The structure rehabilitation and redevelopment work would require approximately 100 to 150 workers, depending on the task.
- Workers required for the interior fit-out stage would range from 150 to 200 workers.
- In-water activities would require about 20 workers on site.
- Marina construction would also require about 20 workers on site.

Truck movements would generally be distributed throughout the day with peak activities occurring in the early morning. The estimated trucks per day for the construction of the proposed project are as follows:

- The selective interior demolition stage would require about 10 to 15 trucks.
- The structure rehabilitation and redevelopment work would require approximately 10 to 15 trucks, depending on the task.
- The interior fit-outs stage would require 10 to 15 trucks.
- In-water activities would require about two to three trucks.
- Marina construction would require about two to three trucks.

**CONSTRUCTION WORKER VEHICLE AND TRUCK TRIPS**

The estimated daily vehicle trips were distributed throughout the workday based on projected work shift allocations and conventional arrival/departure patterns of construction workers and trucks. For construction workers, the majority (80 percent) of the arrival and departure trips would take place during the hour before and after each shift (6–7 AM for arrival and 4-5 PM for departure on a regular day shift). Based on U.S. Census Reverse-Journey-to-Work data, it is expected that approximately 49 percent of construction workers would commute to the project site via auto. For construction trucks, deliveries would occur throughout the day when the construction site is active. Truck movements would be spread throughout the day and would generally occur between the hours of 6 AM and 3 PM, depending on the stage of construction. Construction truck deliveries typically peak during the hour before the normal work day (25 percent of daily total), overlapping with construction worker arrival traffic. Therefore, the early morning 6–7 AM construction peak hour is generally considered the most critical hour for a construction traffic analysis. Since construction activities vary among different construction stages and tasks, representative daily construction traffic is typically summarized using quarterly averages. Table 19-3 presents the monthly breakdown of the average construction vehicle trips (including the worker and truck trips in PCEs) for the 6–7 AM construction peak hour. The construction of the proposed project would result in peak construction trips during month 11 to month 14 of
construction, with a maximum of 73 PCEs during the construction AM peak hour during those months. On average, construction of the proposed project would result in 54 PCEs during the AM peak hour.

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<tr>
<th>Month</th>
<th>M1</th>
<th>M2</th>
<th>M3</th>
<th>M4</th>
<th>M5</th>
<th>M6</th>
<th>M7</th>
<th>M8</th>
<th>M9</th>
<th>M10</th>
<th>M11</th>
<th>M12</th>
<th>Average</th>
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<td>55</td>
<td>55</td>
<td>73</td>
<td>73</td>
<td>54</td>
</tr>
</tbody>
</table>

Table 19-3: Average Peak Hour Construction Vehicle Trips in PCEs (Monthly)

Notes: Numbers of construction worker vehicles were calculated using a 49-percent auto split based on the U.S. Census Reverse-Journey-to-Work data; an auto-occupancy of 2.04 was used based on a survey conducted by AKRF, Inc. at the construction site of the New York Times Building in 2006.

It is not expected that there will not be any worker parking available on-site and therefore workers would park at various facilities in the surrounding area. Distributed to various roadways near the project site, these incremental construction vehicle trips would not result in more than 50 vehicle-trips (the CEQR Technical Manual’s threshold for a detailed analysis) at any intersection. In addition, the proposed project’s construction activities would be short-term, as discussed above. Therefore, the traffic increase due to construction activities for the proposed project is not expected to result in significant adverse impacts.

Traffic Lane, Bikeway, and Esplanade Closures

There could be traffic lane and/or esplanade closures associated with the project’s construction activities. During the course of construction, approximately 10 weekends or nighttime periods would require a traffic lane closure on Route 9A to accommodate the entrance reconfiguration construction work. No rerouting of traffic is anticipated and, as mentioned above, moving lanes of traffic are expected to be available at all times. It is anticipated that the Hudson River Park waterfront esplanade immediately adjacent to the project site would also be closed to accommodate heavy loading areas for at least several months of the construction period. NYSDOT would be consulted to determine the appropriate protective measures for ensuring pedestrian safety around the project site.

As noted above, construction of the proposed project may require temporarily either narrowing or diverting portions of the Route 9A bikeway onto the construction site, but the bikeway would remain open at all times during the entire construction period. As in other periods of construction in Hudson River Park, pedestrians may at times be diverted to a shared bikeway and pedestrian path to maintain safe pedestrian movement through the area at all times.

PARKING

The construction activities would generate an estimated daily parking demand of up to 60 parking spaces during peak construction. This parking demand could be fully accommodated by the parking facilities available within a ¼-mile radius, where an estimated 390 public parking spaces are currently available during the peak midday parking utilization period, as shown in Chapter 14, “Transportation.”

TRANSIT AND PEDESTRIAN

With approximately 49 percent of the construction workers predicted to commute via auto, the remaining 51 percent are expected to travel to and from the project site via transit and walking.
During the peak month of construction, up to approximately 250 workers could be at the project site on a given day. This would result in approximately 102 construction-related transit trips. Since the project location is well served by mass transit including the A, C, E, and L subway lines and various bus routes near the project site (M11, M14A, and M14D), only nominal increases in incremental transit demand would be experienced along each of those routes and at each of the transit access locations (fewer than the CEQR Technical Manual analysis threshold of 200 trips). Therefore, there would not be a potential for any significant adverse transit impacts during construction. In addition, 200 pedestrian trips would be expected during the peak hour. Because these pedestrian trips would primarily occur outside of the typical commuter peak hours (8–9 AM and 5–6 PM) and would originate from several nearby transit services and a number of area parking facilities, they would be distributed among numerous sidewalks and crosswalks in the area; therefore, there would not be a potential for significant adverse pedestrian impacts attributable to the projected construction worker pedestrian trips.

AIR QUALITY

Emissions from on-site construction equipment and on-road construction-related vehicles, as well as dust generating activities, have the potential to affect air quality. In general, much of the heavy equipment used in construction has diesel-powered engines and produces relatively high levels of nitrogen oxides (NOx) and particulate matter (PM). Gasoline engines produce relatively high levels of carbon monoxide (CO). Fugitive dust generated by construction activities is composed of particulate matter. As a result, the primary air pollutants of concern for construction activities include nitrogen dioxide (NO2), particulate matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM10), particulate matter with an aerodynamic diameter of less than or equal to 2.5 micrometers (PM2.5), and CO.

The main component of diesel exhaust that has been identified as having an adverse effect on human health is PM2.5. As described above, the duration of the proposed project’s construction is expected to be short-term (less than two years); would not involve extensive demolition, foundation, or superstructure construction activities; and would occur largely within the existing Pier 57 structure. Nevertheless, in order to minimize the project’s potential to have construction-period impacts on air quality, the following measures would be implemented, to the extent commercially feasible:

- **Diesel Equipment Reduction.** Construction of the proposed project would minimize the use of diesel engines and use electric engines, to the extent practicable. This would reduce the need for on-site generators, and require the use of electric engines in lieu of diesel where practicable.
- **Clean Fuel.** Ultra-low sulfur diesel (ULSD) would be used exclusively for all diesel engines throughout the construction site.
- **Best Available Tailpipe Reduction Technologies.** Nonroad diesel engines with a power rating of 50 horsepower (hp) or greater and controlled truck fleets (i.e., truck fleets under long-term contract, such as concrete mixing and pumping trucks) would utilize the best available tailpipe (BAT) technology for reducing DPM emissions. Diesel particulate filters (DPFs) have been identified as being the tailpipe technology currently proven to have the highest reduction capability. Construction contracts would specify that all diesel nonroad engines rated at 50 hp or greater would utilize DPFs, either installed on the engine by the original equipment manufacturer (OEM) or a retrofit DPF verified by the United States Environmental Protection Agency (USEPA) or the California Air Resources Board, and may
include active DPFs, if necessary; or other technology proven to reduce DPM by at least 90 percent. This measure is expected to reduce site-wide tailpipe PM emissions by at least 90 percent.

• **Utilization of New Equipment.** In addition to the tailpipe control commitments, the project’s construction program would mandate the use of construction equipment rated Tier 2 or higher for all nonroad diesel engines with a power output of 50 hp or higher. The use of newer engine models with lower PM emissions is expected to reduce the likelihood of DPF plugging due to soot loading (i.e., clogging of DPF filters by accumulating particulate matter). Additionally, while all engines undergo some deterioration over time, newer and better maintained engines will emit less PM than their older Tier or unregulated counterparts. Therefore, restricting site access to equipment with lower tailpipe emission values would enhance this emissions reduction program and implementation of DPF systems as well as reduce maintenance frequency due to soot loading (i.e., less downtime for construction equipment to replace clogged DPF filters).

• **Dust Control.** Fugitive dust control plans will be required as part of contract specifications. For example, stabilized truck exit areas would be established for washing off the wheels of all trucks that exit the construction site. Truck routes within the site would be watered as needed to avoid the re-suspension of dust. All trucks hauling loose material will be equipped with tight fitting tailgates and their loads securely covered prior to leaving the site. In addition to regular cleaning by the City, streets adjacent to the site would be cleaned as frequently as needed by the construction contractor. Chutes would be used for material drops during structure rehabilitation. Water sprays will be used for all transfer of spoils to ensure that materials are dampened as necessary to avoid the suspension of dust into the air.

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

As described above, the duration of the proposed project’s construction is expected to be short-term (less than two years) and, as detailed above, an emissions control program would be implemented to minimize potential construction-period effects on air quality. Overall, this emissions control program is expected to significantly reduce DPM emissions by a similar

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1 There are two types of DPFs currently in use: passive and active. Most DPFs currently in use are the “passive” type, which means that the heat from the exhaust is used to regenerate (burn off) the PM to eliminate the buildup of PM in the filter. Some engines do not maintain temperatures high enough for passive regeneration. In such cases, “active” DPFs can be used (i.e., DPFs that are heated either by an electrical connection from the engine, by plugging in during periods of inactivity, or by removal of the filter for external regeneration).

2 The first federal regulations for new nonroad diesel engines were adopted in 1994, and signed by USEPA into regulation in a 1998 Final Rulemaking. The 1998 regulation introduces Tier 1 emissions standards for all equipment 50 hp and greater and phases in the increasingly stringent Tier 2 and Tier 3 standards for equipment manufactured in 2000 through 2008. In 2004, USEPA introduced Tier 4 emissions standards with a phased-in period of 2008 to 2015. The Tier 1 through 4 standards regulate the USEPA criteria pollutants, including particulate matter (PM), hydrocarbons (HC), oxides of nitrogen (NOx) and carbon monoxide (CO). Prior to 1998, emissions from nonroad diesel engines were unregulated. These engines are typically referred to as Tier 0.
reduction level that would be achieved by applying the currently defined best available control technologies under New York City Local Law 77, which are required only for publically funded City projects.

In addition, the nature of the proposed project would serve to minimize the potential for significant adverse air quality impacts during construction activities. Unlike typical ground-up construction, the proposed project would not involve extensive demolition, foundation, or superstructure construction activities, which often generate the highest levels of air emissions. Instead, the majority of the construction activities would occur within the Pier 57 structure, and the walls of the building would act as barriers to the transport of air pollutants to nearby areas. Indoor work would also curtail emissions of fugitive (wind-blown) dust, and heavy diesel equipment such as excavators and pile drivers would not be needed during interior work. Without typical demolition or foundation activities for the proposed project, one of the most intense exterior activities in terms of air emissions would be pile driving, but this task would be limited in duration (only 12 weeks). Moreover, there are very few sensitive receptors near the project site, and the nearest residences are located more than 100 feet away from the project site and are separated from the site by Route 9A. Therefore, the construction of the proposed project would not result in any significant adverse impact on air quality.

**NOISE**

Impacts on community noise levels during construction would include noise from the operation of construction equipment and noise from construction and delivery vehicles traveling to and from the site. Noise and vibration levels at a given location are dependent on the type and quantity of construction equipment being operated, the acoustical utilization factor of the equipment (i.e., the percentage of time a piece of equipment is operating), the distance from the construction site, and any shielding effects (from structures such as buildings, walls, or barriers). Noise levels of typical construction equipment are shown in Table 19-4. Noise levels caused by construction activities would vary widely, depending on the phase of construction (i.e., structure rehabilitation, interior fit-outs, etc.) and the location of the construction activities relative to noise-sensitive receptor locations. As noted above, there are very few noise sensitive receptors near the project site. With the exception of adjacent portions of Hudson River Park (which consists primarily of an esplanade with limited seating and portions of the publicly accessible Pier 54) and the walkway and seating area around the perimeter of Chelsea Piers, all of the sensitive receptor locations including the nearest residences are located more than 100 feet away from the project site and are separated from the site by Route 9A. In fact, the nearest residences are located approximately 550 feet from the project site, at 450 West 17th Street.

Typically, increased noise levels caused by construction activities can be expected to be greatest during the stages of construction where impact equipment (i.e., pile drivers) would be employed. However, the duration of pile driving activities for the proposed project would be very limited in duration—approximately 12 weeks—and in many cases the piles would be left to sink into the sediment under their own weight, followed by a brief driving period to the final elevation. For each pile, the actual driving time would be short, on the order of 45 minutes. Within this driving period, driving may be intermittent, with 20 minutes of driving followed by an interval of an hour when no driving occurs, followed by tapping down to the final elevation. Moreover, pile driving activities would involve small diameter piles (predominantly 18-inch diameter steel pipe piles) and are expected to utilize vibratory hammers rather than impact hammers to the greatest extent possible. In general, vibratory hammers produce less intrusive noise levels than impact hammers (vibratory hammers produce continuous noise versus impulsive noise from an impact
Aside from pile driving, a majority of the construction activities for the proposed project would occur within the Pier 57 structure, where impact equipment would not be needed and the walls of the building would provide acoustical shielding for noise sources, thus limiting noise disruptions to nearby sensitive locations.

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

In terms of source controls (i.e., reducing noise levels at the source or during most sensitive time periods), the following measures for construction would be implemented as required by the New York City Noise Control Code:

- The contractors would use equipment that meets the sound level standards for equipment (specified in Subchapter 5 of the New York City Noise Control Code) from the start of construction activities and use a wide range of equipment, including construction trucks, which produce lower noise levels than typical construction equipment.
- As early in the construction period as practicable, electrical-powered equipment, such as electric scissor lifts and electric articulating forklifts (i.e., early electrification), would be used.
- All contractors and subcontractors would be required to properly maintain their equipment and have quality mufflers installed.

In terms of path controls (e.g., placement of equipment and implementation of barriers between equipment and sensitive receptors), the following measures for construction would be implemented as required by the New York City Noise Control Code:

- Perimeter noise barriers would be constructed that satisfy New York City Noise Control Code requirements.
- To the extent feasible, noisy equipment, such as generators, cranes, trailers, concrete pumps, concrete trucks, and dump trucks, would be located away from and shielded from sensitive receptor locations.

For impact determination purposes, significant adverse noise impacts are based on whether maximum predicted incremental noise levels at sensitive receptor locations off-site would be greater than the impact criteria suggested in the CEQR Technical Manual for more than two years. The duration of the proposed project’s construction is expected to be short-term (less than two years), and while noise associated with the proposed construction activities may be considered noisy and intrusive, potential increases in noise levels as a result of construction-related activities would therefore be of limited duration. In addition, there are very few noise sensitive receptors near the project site and, as explained above, most of the construction activities would be interior work, which would provide acoustical shielding for noise sources.
Although the noisiest construction activity—pile driving—would not be shielded by the existing structure, it would be of very limited duration (only approximately 12 weeks), would involve small diameter piles, and is expected to utilize vibratory hammers rather than impact hammers to the greatest extent possible. Due to distance and existing noise levels generated by traffic on Route 9A and the other factors described above, no significant adverse noise impacts would be expected at sensitive receptor locations due to the construction of the proposed project.

Table 19-4

<table>
<thead>
<tr>
<th>Equipment Item</th>
<th>Noise Level at 50 ft. (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backhoe</td>
<td>80</td>
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<tr>
<td>Bar Bender</td>
<td>80</td>
</tr>
<tr>
<td>Chain Saw</td>
<td>85</td>
</tr>
<tr>
<td>Compactor (ground)</td>
<td>80</td>
</tr>
<tr>
<td>Compressor (air, less than or equal to 350 cfm)</td>
<td>53</td>
</tr>
<tr>
<td>Compressor (air, greater than 350 cfm)</td>
<td>58</td>
</tr>
<tr>
<td>Concrete Mixer Truck</td>
<td>85</td>
</tr>
<tr>
<td>Concrete Pump Truck</td>
<td>82</td>
</tr>
<tr>
<td>Concrete Saw</td>
<td>90</td>
</tr>
<tr>
<td>Crane</td>
<td>85</td>
</tr>
<tr>
<td>Drill Rig</td>
<td>84</td>
</tr>
<tr>
<td>Drum Mixer</td>
<td>80</td>
</tr>
<tr>
<td>Dump Truck</td>
<td>84</td>
</tr>
<tr>
<td>Dumpster/Rubbish Removal</td>
<td>78</td>
</tr>
<tr>
<td>Excavator</td>
<td>85</td>
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<tr>
<td>Flat Bed Truck</td>
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<tr>
<td>Front End Loader</td>
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</tr>
<tr>
<td>Generator</td>
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</tr>
<tr>
<td>Impact Pile Driver</td>
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</tr>
<tr>
<td>Jackhammer</td>
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</tr>
<tr>
<td>Man Lift</td>
<td>85</td>
</tr>
<tr>
<td>Mounted Impact Hammer (Hoe Ram)</td>
<td>90</td>
</tr>
<tr>
<td>Pavement Scarifier</td>
<td>85</td>
</tr>
<tr>
<td>Paver</td>
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</tr>
<tr>
<td>Pickup Truck</td>
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<tr>
<td>Pneumatic Tools</td>
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<td>Pumps</td>
<td>77</td>
</tr>
<tr>
<td>Refrigeration Unit</td>
<td>82</td>
</tr>
<tr>
<td>Rivet Buster / Chipping Gun</td>
<td>85</td>
</tr>
<tr>
<td>Rock Drill</td>
<td>85</td>
</tr>
<tr>
<td>Roller</td>
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</tr>
<tr>
<td>Sand Blasting</td>
<td>85</td>
</tr>
<tr>
<td>Soil Mix Drill Rig</td>
<td>80</td>
</tr>
<tr>
<td>Tractor</td>
<td>84</td>
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<tr>
<td>Vacuum Excavator (Vac-truck)</td>
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<td>Vacuum Street Sweeper</td>
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<td>Vibrating Hopper</td>
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<td>Vibratory Pile Driver</td>
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<td>Warning Horn</td>
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<tr>
<td>Welder / Torch</td>
<td>73</td>
</tr>
</tbody>
</table>

Source: CEQR Technical Manual, Chapter 22, section 330, Table 22-1, January 2012.

OTHER TECHNICAL AREAS

HISTORIC AND CULTURAL RESOURCES

The proposed project would result in the rehabilitation and redevelopment of the historic Pier 57 structure, which is S/NR-listed. As described in Chapter 7, “Historic Resources,” the proposed project would comply with LPC’s Guidelines for Construction Adjacent to a Historic Landmark.
as well as the guidelines set forth in section 523 of the *CEQR Technical Manual* and the procedures set forth in DOB’s TPPN #10/88. This includes preparation of a CPP, to be prepared prior to construction activities and submitted to LPC and OPRHP for review and approval.

The proposed project would result in construction activities within 90 feet of the Hudson River bulkhead. The Hudson River bulkhead between Battery Place and West 59th Street has been determined eligible for listing on the S/NR. Therefore, the CPP to be prepared for the proposed project would include measures to ensure that the bulkhead is not affected by potential construction-related issues. Furthermore, any bulkhead work required for the proposed project would be relatively minor—such as assuring that coping stones are capable to support railing attachments—and would be undertaken in a manner consistent with bulkhead activities in the rest of Hudson River Park and in conformance with relevant stipulations in the Hudson River Park Programmatic Agreement. As noted above, the repair and extension of the existing perimeter walkways and development of the new public walkways would be conducted pursuant to the existing USACE and NYSDEC permits. None of the other architectural resources in the study area are close enough to experience direct, physical impacts from construction of the proposed project.

Therefore, the proposed project would not result in any significant adverse construction-related impacts to historic and cultural resources.

**HAZARDOUS MATERIALS**

Construction of the proposed project would entail renovation and rehabilitation of the existing structure along with the addition of several new rooftop structures. Based on the findings of the *Phase I Environmental Site Assessment* (ESA) and Phase II Subsurface Investigation, the pier contains ACM, LBP and possible PCB-containing items. Some concrete staining in the vicinity of petroleum tanks was also observed. Renovation and rehabilitation of Pier 57 would be conducted in accordance with applicable Federal, State, and local regulatory requirements including those relating to ACM, LBP, and PCB-containing items. Any remaining stored chemicals would be properly removed and disposed of off-site. Stained areas would be cleaned and sealed as necessary.

Limited shallow subsurface disturbance upland of the pier, within Hudson River Park, would be required for construction of the proposed project. This work would consist primarily of construction of driveways to the pier structure and the realignment of the Route 9A bikeway, and no buildings, piles, or deep disturbance are anticipated in this area. Based on the findings of the Phase I ESA and Phase II Subsurface Investigation, petroleum-contaminated soil could be encountered, especially in the vicinity of the known historical spill near the northeast corner of the pier. In 2002, NYCT addressed the residual contamination using bioremediation but further monitoring and sampling indicated that residual contamination still remained. Since 2007, quarterly groundwater and soil samples have been collected on behalf of New York City Transit (NYCT) as part of a NYSDEC-approved Monitored Natural Attenuation (MNA) Work Plan. If remediation of this spill has not been completed to the satisfaction of NYSDEC (i.e., the spill still has an “open” status) when the subsurface disturbance occurs, coordination with NYCT and NYSDEC would be performed to ensure that construction for the proposed project would not exacerbate the spill or prevent it from being properly addressed during or following construction. Petroleum-contaminated groundwater is not expected to be encountered, as construction is not expected to extend to the water table. In this and other areas, historical urban fill materials are known to be present and the presence of unexpected tanks or other unexpected
sources of contamination cannot be ruled out. Since excavation would disturb any such materials and potentially increase pathways for human exposure, impacts would be avoided by performing the work in accordance with a NYCDEP-approved RAP and CHASP. The RAP would specify requirements for items such as: installation of two feet of clean fill as a “site cap” in unpaved areas; handling of contaminated or potentially contaminated soil, groundwater or treated wood (e.g., pilings); soil stockpiling, soil disposal and transportation; dust control; air monitoring in the work zone and the community; dewatering procedures; quality assurance; and contingency measures (including reporting and registration requirements) should petroleum storage tanks or contamination be unexpectedly encountered. The CHASP would identify potential hazards that may be encountered during construction and specify appropriate health and safety measures to be undertaken to ensure that subsurface disturbance is performed in a manner protective of workers, the community, and the environment. The measures included in the CHASP would include oversight by a trained Health and Safety Officer (HSO), training for workers, personal protective equipment, air monitoring requirements including community air monitoring, and emergency response procedures. Following any excavation, the area would be backfilled with clean soil. Most of the area east of the pier structure would also be paved.

Additionally, all excavated soil requiring off-site disposal would be managed in accordance with applicable regulatory requirements, and, as necessary, tested in accordance with the requirements of the intended receiving facility. Transportation of all material leaving the site would be in accordance with applicable requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc. Should dewatering be required for construction of the proposed project, testing would be performed to ensure that the discharged water would meet applicable NYCDEP sewer discharge and/or NYSDEC SPDES requirements. If necessary, the water would be pretreated prior to discharge, as required by NYCDEP or NYSDEC permit/approval requirements.

With the implementation of the above procedures, no significant adverse impacts due to the potential presence of any hazardous materials would be expected to occur either during or following construction at the project site.

**NATURAL RESOURCES**

The construction activities associated with the proposed project would not cause any significant adverse environmental impacts on terrestrial or aquatic resources, as discussed in greater detail in Chapter 9, “Natural Resources.” Pile-driving and other in-water construction activities associated with the redevelopment of Pier 57 and construction of the marina would not result in significant adverse impacts to floodplains, wetlands, water quality, or aquatic biota. Increases in suspended sediment resulting from construction activities would be temporary and localized and would be expected to dissipate quickly. Furthermore, with the use of the vibratory hammer to the greatest extent possible, the short overall duration of pile driving activity (approximately 12 weeks), and the intermittent nature of pile driving for each pile, the proposed pile driving activities would not result in significant adverse impacts to fish within the lower Hudson River. Aquatic threatened or endangered species or species of concern that are known to occur in the vicinity of Pier 57—shortnose sturgeon and Atlantic sturgeon—would only occur in the area as occasional transient individuals and would prefer the deeper water habitat of the navigation channel, which would not be affected by the proposed project. The prohibition of in-water construction activities from November through April to protect overwintering striped bass would minimize potential impacts to striped bass and other fish overwintering within the vicinity of Pier 57. Turbidity curtains would be used during pile driving activities. Coordination would be
Chapter 19: Construction Impacts

conducted with the New York State Department of Environmental Conservation (NYSDEC) to develop and implement measures to minimize the potential for adverse impacts to the state-listed endangered peregrine falcon pair nesting on the pier. Coordination activities may include attempting to relocate the nest in concert with NYSDEC, staging construction to avoid sensitive periods, or use of monitoring cameras. Seals and the four species of threatened or endangered sea turtles that may be present in the Harbor Estuary would only be expected to be present in the vicinity of Pier 57 as occasional transient individuals and would likewise not be significantly impacted by construction activities.

OPEN SPACE

The project site consists of Pier 57 (Block 662, Lot 3), adjacent lands underwater, and associated frontage area, all located within Hudson River Park at approximately West 15th Street. To the east of the pier is a paved apron area containing a portion of the Hudson River Park waterfront esplanade and the adjacent Route 9A bikeway; south of the project site is the publicly accessible Pier 54 and east of the site across Route 9A is the Hudson River Park area known as 14th Street Park. At limited times, activities such as structure rehabilitation may generate noise that could impair the enjoyment of nearby open space users, but such noise effects would be temporary. Construction fences around the project site and/or the walls of the existing structure would shield the park from noise generated by most construction activities except for those associated with marina construction and other in-water activities. During the course of construction, the Hudson River Park waterfront esplanade immediately to the north and south of the project site (between West 14th Street and West 17th Street) may be closed or protected for varying periods of time, but this closure would be temporary and would not affect the overall use of Hudson River Park. As discussed above, bike and pedestrian movement through the area would be maintained at all times. The proposed project would result in the construction of permanent walkway extensions along the bulkhead and around Pier 57, and the creation of publicly accessible rooftop open space. Construction activities would be conducted with the care mandated by the close proximity of an open space to the project site. Air emissions control measures—including watering of exposed areas and dust covers for trucks—would be implemented to ensure compliance with the New York City Air Pollution Control Code, which regulates construction-related dust emissions. Therefore, construction of the proposed project would not result in significant adverse impacts on open space.

SOCIOECONOMIC CONDITIONS

Construction activities on the site would result in some interruptions to activities in the surrounding area and would include various lane and/or esplanade closures for different stages of construction. However, such closures would be limited to the area immediately adjacent to the project site, and would not be expected to affect socioeconomic conditions within the surrounding area. In addition, because lane and/or esplanade closures would be short-term and limited to the immediately adjacent area, they would not affect the operations of any nearby businesses, including Chelsea Piers Sports and Entertainment Complex—a sports facility and event center—just north of the site. The proposed project would coordinate with the Chelsea Piers Sports and Entertainment Complex to minimize any potential disruptions due to construction of the proposed project, including the driveways that would extend north and south of Pier 57. As discussed above, construction of the proposed project would not result in significant adverse air quality or noise impacts that could be detrimental to nearby business.
activities. Overall, construction activities associated with the proposed project would not result in any significant adverse impacts on surrounding businesses.

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

COMMUNITY FACILITIES

No community facilities are located near the construction site. Construction workers would not place any burden on public schools and would have minimal, if any, demands on libraries, childcare facilities, and health care facilities. 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. New York Police Department (NYPD) and FDNY emergency services and response times would not be materially affected due to the geographic distribution of the police and fire facilities and their respective coverage areas.

LAND USE AND NEIGHBORHOOD CHARACTER

Construction activities would affect land use on the project site but would not alter surrounding land uses. As is typical with construction projects, during periods of peak construction activity there would be some disruption, predominantly noise, to the nearby area. There would be construction trucks and construction workers coming to the site. There would also be noise, sometimes intrusive, from construction work as well as trucks and other vehicles backing up, loading, and unloading. These disruptions would be temporary in nature and would have minimal effects on land uses within the study area, particularly as most construction activities would take place within the project site or within portions of sidewalks, curbs, and travel lanes of public streets immediately adjacent to the project site. Overall, while the construction at the site would be evident to the local community, the limited duration of construction would not result in significant or long-term adverse impacts on local land use patterns or neighborhood character in the area.

The project site is located within the Coastal Zone boundary of the City’s Waterfront Revitalization Program (WRP), as discussed in Chapter 2, “Land Use, Zoning, and Public Policy.” Construction of the proposed project would be consistent with Coastal Zone policies.

RODENT CONTROL

Construction contracts would include provisions for a rodent (mouse and rat) control program. Before the start of construction, the contractor would survey and bait the appropriate areas and provide for proper site sanitation. During the construction phase, as necessary, the contractor would carry out a maintenance program. Coordination would be maintained with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides would be utilized, and the contractor would be required to perform rodent control programs in a manner that avoids hazards to persons, domestic animals, and non-target wildlife. 

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