Chapter 11: Construction

A. INTRODUCTION

This chapter summarizes the construction program for the proposed project and assesses the potential for significant adverse impacts during construction. As described in Chapter 1, "Project Description," the proposed actions would facilitate new commercial development at 534 South Avenue and the associated circulation improvements in the Mariners Harbor neighborhood of Staten Island. The 28.3-acre project site is bounded by Forest Avenue and Wemple Street (which is mapped but not built) to the north, South Avenue to the east, Amador Street (which is mapped but not built) to the south, and Morrow Street (which is partially built and partially unbuilt) to the west. The proposed project would also result in development on a portion of the New York State Department of Conservation (NYSDEC)'s freshwater wetland adjacent area and isolated U.S. Army Corps of Engineers (USACE) wetland areas.

PRINCIPAL CONCLUSIONS

Construction of the proposed project, as is the case with any construction project, would result in some temporary disruptions in the surrounding area. The construction of the proposed project is anticipated to take approximately 18 months to complete. According to the 2014 *City Environmental Quality Review* (*CEQR) Technical Manual*, a development with an overall construction period lasting less than two years is considered short-term. Activities associated with construction of the proposed project are expected to be comparable to the construction activities under the No Action condition. The size of the proposed project is slightly smaller than that of the No Action development, but includes circulation improvements that are not proposed in the No Action development (in particular, the No Action development would utilize the existing built alignment of Morrow Street as the primary entrance from Forest Avenue).

During construction of the proposed project, all necessary measures would be implemented to ensure adherence to the New York City Air Pollution Control Code regulating construction-related dust emissions and the New York City Noise Control Code regulating construction noise. In addition, Maintenance and Protection of Traffic plans would be developed for curb cuts and any necessary curb-lane closures. Approval of these plans and implementation of all temporary closures during construction would be coordinated with the New York City Department of Transportation (NYCDOT)'s Office of Construction Mitigation and Coordination. Regarding archaeological resources, a Phase 1B archaeological, approved by the New York City Landmarks Preservation Commission (LPC) and the New York State Office of Parks, Recreation, and Historic Preservation (OPRHP), will be conducted to confirm the presence or absence of archaeological resources on the project site. With the completion of the Phase 1B investigation and any subsequent archaeological investigations as necessary (e.g., a Phase 2 Archaeological Survey or a Phase 3 Data Recovery) that would be undertaken in consultation with LPC and OPRHP, the proposed project would not result in significant adverse impacts on archaeological

resources. The applicant will enter into a Restrictive Declaration requiring that these archaeological investigations will be undertaken.

With regard to hazardous materials, based on the findings of a subsurface investigation to be conducted in accordance with a New York City Department of Environmental Protection (DEP)-approved Work Plan, a Remedial Action Plan (RAP) and an associated Construction Health and Safety Plan (CHASP) would be prepared and submitted to the DEP for review and approval prior to implementation during project construction. For natural resources, a Stormwater Pollution Prevention Plan (SWPPP) consisting of temporary erosion and sediment controls would be developed and implemented in accordance with the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002). Through implementation of the measures described above, adverse effects associated with the proposed construction activities would be minimized.

With these proposed measures and considering the limited duration and intensity of construction activities associated with the proposed project, construction of the proposed project would not result in any significant adverse impacts.

B. CONSTRUCTION PHASING AND SCHEDULE

The proposed project is anticipated to take approximately 18 months to construct and would be built in a single phase (see **Figure 11-1**). Assuming commencement of construction in early 2018, the proposed project would be completed and operational in 2019. Construction would consist of the following primary construction stages, which may overlap at certain times: site clearance, retail building construction, circulation improvements, surface parking construction, and wetlands enhancement. These construction stages are described in greater detail below under "General Construction Tasks."

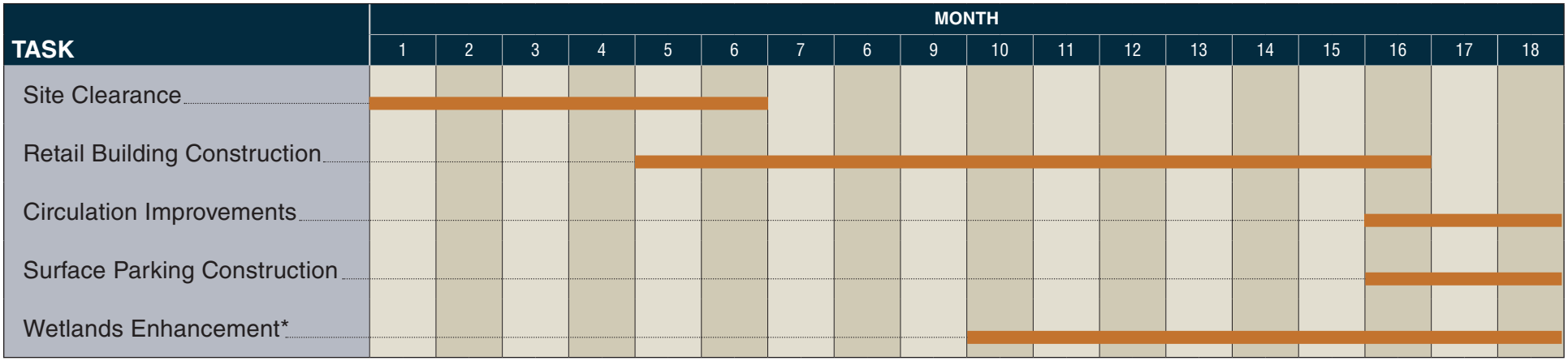
Wetland enhancement activities could occur anytime during the construction period but are expected to be complete prior to or concurrent with the completion of the retail center. Although the proposed project would result in the removal of approximately 1,700 trees, the Wetland Enhancement Plan includes the planting of approximately 2,200 new trees and 9,200 new shrubs. Planting activities are typically conducted during the spring and fall seasons.

C. CONSTRUCTION DESCRIPTION

GENERAL CONSTRUCTION PRACTICES

HOURS OF WORK

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



NOTE:
*Wetlands enhancement activities could occur anytime during the construction period but are expected to be complete prior to or concurrent with the completion of the retail center.

South Avenue Retail Development

Construction Schedule
Figure 11-1

Night or weekend work may also be required for certain construction activities. Appropriate work permits from the New York City Department of Buildings (DOB) would be obtained for any necessary work outside of normal construction and no work outside of normal construction hours could be performed until such permits are obtained. The numbers of workers and pieces of equipment in operation for night and weekend work, if necessary, 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 weekend workday, if necessary, would typically be a Saturday.

ACCESS, DELIVERIES, AND STAGING AREAS

Because of the size of the project site to be developed, there is expected to be substantial flexibility in on-site construction equipment and materials staging areas within the project site, including accommodating worker parking. Access to the project site during construction would be controlled. The work areas would be fenced off, and limited access points for workers and construction-related trucks would be provided. After work hours, the gates would be closed and locked. Flaggers would be posted as necessary to control trucks entering and exiting the construction site and to alert or slow down the traffic. Maintenance and Protection of Traffic plans would be developed for curb cuts, roadway realignment activities, and any necessary curb-lane closures. Approval of these plans and implementation of the closures would be coordinated with DOT's Office of Construction Mitigation and Coordination.

GENERAL CONSTRUCTION STAGES

Prior to the commencement of construction, the project site would be prepared for construction, including the installation of public safety measures such as fencing, netting, and signs. The construction areas would be fenced off to minimize interference between passersby and the construction work. Access points to the construction area would be established, and portable toilets and dumpsters for trash would be brought to the site and installed. These site set-up activities would be completed within a few weeks.

SITE CLEARING

The portion of the project site to be developed would be cleared and graded as the first stage of construction. A detailed assessment of potential construction impacts on natural resources is described in Chapter 4, "Natural Resources." Site clearing activities would include the use of a variety of forestry equipment (i.e., log hauler, chipper, harvester, etc.). Although the proposed project would result in the removal of approximately 1,700 trees in the area to be redeveloped with the retail center, as part of the ~~mitigation~~ Wetland Mitigation Plan, the wetland and wetland adjacent areas on the southern portion of the project site would be enhanced with the removal of nonnative and invasive plant species and the planting of approximately 2,200 new trees and 9,200 new shrubs (resulting in denser vegetation in this area). Tree protection measures would be implemented to protect existing trees that are located near the limits of disturbance on the boundaries of the project site.[1] Protection measures would also be implemented for the 6.94 acres of mapped wetland areas that would be preserved.

[1]Tree protection measures will conform with the International Society of Arboriculture recommendations.

RETAIL BUILDING CONSTRUCTION

The proposed development program would include two one-story retail buildings and one one-story building with three retail spaces (plus a gas station and automated bank teller). Construction of the retail buildings would begin with the task of soil excavation. Excavators and front end loaders would be used for excavation and to load the excavated soil onto dump trucks for transport to a licensed disposal facility or for reuse on a construction site needing fill. Then, piles would be driven to support the new buildings. Pile caps would be formed and concrete poured to build the foundations for the buildings. When the below-grade construction is completed, construction of the superstructures of the new buildings would begin. The superstructure of the proposed buildings would include the building's framework (beams and columns) and floor decks. Construction of the interior structure, or core, of the building would include vertical risers for mechanical, electrical, and plumbing systems; electrical and mechanical equipment rooms; and restroom areas. Finally, interior fit-out activities would commence and would include the construction of nonstructural building elements such as interior partitions, lighting fixtures, and interior finishes (i.e., flooring, painting, etc.).

CIRCULATION IMPROVEMENTS

The proposed project would map an additional area of Morrow Street and realign the street so that it would utilize the existing traffic light located at the easterly curb cut for the Home Depot site on the northern side of Forest Avenue. Access to the movie theater located on the west side of Morrow Street would be maintained during roadway realignment activities. Street alignment would typically begin with site clearance and milling of the existing road surface where necessary. The realigned street would be graded with three to four layers of material laid to form the new roadway. First, a subbase is placed and compacted, followed by the base layer, a binder layer, and finally the top layer of asphalt. The final realignment work would be striping the street and crosswalks. This stage of construction would involve graders, bulldozers, and compactors for the first three layers. The asphalt would need a paving machine and rollers to spread and compact the asphalt.

The circulation improvements would involve a number of new curb cuts. As discussed in Chapter 1, "Project Description," primary access to the development site from Forest Avenue would be provided by this re-aligned roadway. A two-way, right-in/right-out only access from Forest Avenue would be provided from a proposed curb cut to the east of the main entrance, which would not be signalized. A third vehicular entrance would provide two-way access to South Avenue from the eastern boundary of the development site. Installation would first involve the placement of forms to shape the curb with the use of hand tools, followed by the laying of a reinforcing mesh and the pouring of concrete from concrete truck.

SURFACE PARKING CONSTRUCTION

Parking would be provided for 838 spaces accessory to the proposed retail uses. The proposed project would also include the planting of new trees throughout the project's site surface parking areas. Concrete sidewalks would be poured, and furniture such as bicycle racks would be installed. Additionally, walkways would be constructed adjacent to the development parcels.

This stage of construction would involve the use of a variety of small hand-held tools and paving equipment.

WETLAND ENHANCEMENTS

The proposed project would result in development on a portion of the NYSDEC freshwater wetland adjacent area and isolated USACE wetland areas, but would preserve 6.94 acres of mapped wetland areas. The proposed project would also construct a landscaped buffer between the proposed retail center and the regulated wetland areas to be preserved. A stormwater retention basin would also be constructed to the south of the supermarket portion of the proposed development to collect and treat stormwater on the site before it is drained into the wetland areas.

During wetland enhancement activities, clean top soil would be imported for installation of the grassy areas and landscaping. The top soil would involve dump trucks bringing the soil and hand spreading. Trees would also be planted during this stage of construction with handheld tools. Excavators and loaders would be used for the construction of the stormwater retention basin.

D. THE FUTURE WITHOUT THE PROPOSED PROJECT

As described in Chapter 1, "Project Description," absent the proposed actions (the No Action condition), the development site is assumed to be developed with six new retail buildings as well as a gas station and automated bank teller, totaling approximately 228,250 gross square feet (gsf) of commercial space. The No Action development would not require any discretionary approvals, and would not include the mapping or demapping of any City streets. In accordance with a NYSDEC-approved site plan, the No Action development will not develop a portion of project site, which will be preserved as mapped wetlands, as well as a landscaped buffer between the regulated wetlands and the development site and a stormwater management area. Therefore, activities associated with construction of the proposed project are expected to be comparable to those for the No Action condition since the proposed size of the retail development for the proposed project is smaller than that possible under the No Action condition (the proposed project would include approximately 226,000 gsf of commercial space, approximately 2,000 gsf less than the No Action development) and the No Action development will not include circulation improvements (in particular, the No Action development would utilize the existing built alignment of Morrow Street as the primary entrance from Forest Avenue).

Unlike the proposed project, in the No Action condition, ground-disturbing construction activities could be conducted without the completion of archeological investigations to confirm the presence or absence of archaeological resources on the project site. Therefore, unlike the proposed project, the No Action development has the potential to impact archaeological resources if such resources are present. Similarly, development under the No Action scenario would not have the benefit of additional protections and review as there would be no requirement for subsurface testing or implementation of a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP).

E. THE FUTURE WITH THE PROPOSED PROJECT

Construction of the proposed project—as is the case with most construction projects—would result in some temporary disruptions in the surrounding area. The following analysis describes the overall temporary effects on transportation, air quality, noise and vibration, land use and neighborhood character, socioeconomic conditions, community facilities, open space, historic and cultural resources, hazardous materials, and natural resources.

TRANSPORTATION

As described in the *CEQR Technical Manual*, construction activities may affect several elements of the transportation system, including traffic, transit, pedestrians, and parking. A transportation analysis of construction activities is predicated upon the duration, intensity, complexity, and/or location of construction activity. The effects of the construction activities for the proposed project were compared with the construction activities for the No Action development to assess the potential transportation impacts during construction.

The development site is not located in a Central Business District (CBD). Similar to the construction of the No Action development, construction of the proposed project would be staged primarily within the development site, thereby limiting any effects on surrounding arterial roadways including Forest Avenue and South Avenue. Maintenance and Protection of Traffic plans would be developed for curb cuts, roadway realignment activities, and any necessary curb-lane closures. Approval of these plans and implementation of the closures would be coordinated with DOT's Office of Construction Mitigation and Coordination.

Throughout the construction period, construction workers would travel to and from the development site by personal vehicle or public transportation. Because of the size of the project site to be developed, there is expected to be substantial flexibility in on-site construction equipment and materials staging areas within the project site, including accommodating worker parking on-site. Construction would also generate truck trips from the deliveries of materials and removal of trees and excavated materials. As discussed above, activities associated with construction of the proposed project are expected to be comparable to the construction activities under the No Action condition. Therefore, the incremental construction-related trips generated by the proposed project would not exceed the *CEQR Technical Manual* 50-vehicle-trip, 200-transit-trip, or the 200-pedestrian-trip analysis thresholds, and, as the result, no further quantified analysis is warranted. Accordingly, construction of the proposed project would not result in significant adverse transportation impacts during construction.

AIR QUALITY

Emissions from on-site construction equipment and on-road construction-related vehicles, as well as dust generating construction activities, have the potential to affect air quality. The *CEQR Technical Manual* states that the significance of a predicted consequence of a project (i.e., whether it is material, substantial, large or important) should be assessed in connection with its setting (e.g., urban or rural), its probability of occurrence, its duration, its irreversibility, its geographic scope, its magnitude, and the number of people affected. This guidance was followed to assess the potential for construction air quality impacts from the proposed project.

The overall construction period for the proposed project is anticipated to be approximately 18 months and is considered short-term (less than two years) in accordance with the *CEQR Technical Manual*. As stated in the *CEQR Technical Manual,* any impacts from such short-term construction generally do not require detailed assessment. In addition, the proposed project would be constructed in a single phase, so there would not be the potential for completed buildings to become on-site receptors before construction of the proposed project is completed. Although the portion of the study area immediately adjacent to the development site contains predominantly non-sensitive uses (i.e., commercial, manufacturing, undeveloped land), there are residences located on the east side of South Avenue and to the north of the development site on Lilac Court, as well as a healthcare center (Metro Community Healthcare Center) to the north of the development site at the intersection of Forest and South Avenues. Therefore, a qualitative

assessment of the potential air quality effects during construction of the proposed project was conducted and is presented below.

EMISSION CONTROL MEASURES

Measures would be taken to reduce pollutant emissions during construction in accordance with all applicable laws, regulations, and building codes. All measures required by the portion of the *New York City Air Pollution Control Code* regulating construction-related dust emissions would be implemented. For example, all trucks hauling loose material would be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the development site; and water sprays would be used to ensure that materials are dampened as necessary to avoid release of dust into the air.

LOCATION OF NEARBY SENSITIVE RECEPTORS

Sensitive receptors are locations where people are likely to have continuous access such as areas with exterior uses (i.e., parks and playgrounds) and buildings with sensitive interior uses (i.e., residences, hospitals, nursing homes, schools, and community facilities). The study area contains primarily commercial and manufacturing uses, with residential development in the area east of South Avenue and north of the development site on Lilac Court as well as a large amount of undeveloped land. The nearest sensitive receptor locations are the Metro Community Healthcare Center and residences immediately to the north of the project site as well as the low-density residences located on the east side of South Avenue approximately 60 feet across from the project site.

DURATION AND INTENSITY

The overall construction period for the entire proposed project is anticipated to be approximately 18 months and would be considered short-term in accordance with the *CEQR Technical Manual*. Most of the activities would take place within the development site with a setback distance from nearby streets. Therefore, with the increased distance, air emissions generated by on-site construction equipment would be dispersed before reaching these receptor locations, which would result in reduced concentrations. Based on the nature of the construction work for the proposed project, construction activities would not be considered out of the ordinary in terms of intensity, and emissions would be reduced through implementation of the measures described above under "Emission Control Measures." Overall, the air quality effects would be temporary and limited and would only occur during the construction period.

SUMMARY

Based on the information presented above and considering that the construction activities would be of limited duration, the construction of the proposed project would not have the potential for significant adverse impacts on local air quality and no further analysis is required.

NOISE AND VIBRATION

NOISE

Potential impacts on community noise levels during construction could result from the operation of construction equipment and from construction and delivery vehicles traveling to and from the project site. Noise 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 the equipment is operating), the distance from the construction site, and any shielding effects (from structures such as walls or barriers). Noise levels caused by construction activities would vary widely and the location of the construction activities relative to noise-sensitive receptor locations would also vary.

Noise Control Measures

Noise from construction activities and some construction equipment is regulated by the *New York City Noise Control Code* (also known as Chapter 24 of the Administrative Code of the City of New York, or Local Law 113) and by the U.S. Environmental Protection Agency'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 7:00 AM and 6:00 PM (for weekend and after hour work, permits would be required to be obtained before these activities could occur); and that construction materials be handled and transported in such a manner as not to create unnecessary noise. During construction of the proposed project, all necessary measures would be implemented to ensure adherence to the *New York City Noise Control Code* regulating construction noise. The *New York City Noise Control Code* regulations would minimize noise disruption to the nearby community during the construction of the proposed project. In accordance with City regulations, a noise control plan would be developed and implemented to minimize intrusive noise impacts on sensitive receptors near the project site. This noise control plan is expected to include such measures as avoiding unnecessary evening construction and truck idling. A copy of the noise mitigation plan would also be kept at the construction site for compliance review by DEP and DOB.

Location of Nearby Sensitive Receptors

As discussed above in "Air Quality," the study area contains primarily commercial and manufacturing uses, with residential development in the area east of South Avenue and north of the development site on Lilac Court as well as a large amount of undeveloped land. The nearest sensitive receptor locations are the Metro Community Healthcare Center and residences immediately to the north of the project site as well as the residences located on the east side of South Avenue approximately 60 feet across from the project site.

Duration and Intensity

The overall construction period for the entire proposed project is anticipated to be approximately 18 months and would be considered short-term in accordance with the *CEQR Technical Manual*. Most of the activities would take place within the development site with a setback distance from nearby streets. Based on the nature of the construction work for the proposed project, construction activities would not be considered out of the ordinary in terms of intensity, and noise levels would be minimized by adherence to the *New York City Noise Control Code* and implementation of a noise control plan as discussed above. Overall, the noise effects would be temporary and limited and would only occur during the construction period.

Summary

The construction of the proposed project is considered short-term. Based on the information presented above and considering the limited duration and intensity of construction activities associated with the proposed project and the adherence to the *New York City Noise Control Code*

to minimize noise disruption, construction of the proposed project would not result in any significant adverse noise impacts.

VIBRATION

Construction activities have the potential to result in vibration levels that may in turn result in structural or architectural damage, and/or annoyance or interference with vibration-sensitive activities. In general, vibratory levels at a receiver are a function of the source strength (which in turn is dependent upon the construction equipment and methods utilized), the distance between the equipment and the receiver, the characteristics of the transmitting medium, and the receiver building construction. Construction equipment operation causes ground vibrations which spread through the ground and decrease in strength with distance. Vehicular traffic, even in locations close to major roadways, typically does not result in perceptible vibration levels unless there are discontinuities in the roadway surface. With the exception of the case of fragile and possibly historically significant structures or buildings, generally, construction activities do not reach the levels that can cause architectural or structural damage, but can rise to levels that may be perceptible and annoying in buildings very close to a construction site. Localized increases in vibration associated with construction of the proposed project would be temporary. In addition, as discussed below in "Historic and Cultural Resources," no architectural resources have been identified within a 400-foot radius of the project site. For these reasons, the proposed project would not result in any potential significant adverse vibration impacts during construction.

LAND USE AND NEIGHBORHOOD CHARACTER

Construction activities would affect land use on the project site (i.e., a vacant wooded parcel would be developed as a retail center with circulation improvements, with preservation and enhancement of the wetland and wetland adjacent areas south of the retail center), but would not affect land use conditions outside of the development site. As part of the proposed actions, portions of Garrick Street, Amador Street, and Albany Avenue, and Morrow Street (unbuilt streets) would be demapped (no construction activities would occur in these areas, which would remain unbuilt), and a new section of Morrow Street would be mapped to accommodate the realignment of the intersection of Morrow Street and Forest Avenue

As is typical with construction projects, during periods of peak activity there would be some disruption to the nearby area. This disruption would include construction trucks and construction workers coming to the area as well as trucks and other vehicles backing up, loading, and unloading. These disruptions would be temporary in nature and would have limited effects on land uses within the study area, particularly as most construction activities would take place within the development site. In addition, throughout the construction period, measures would be implemented to control noise, vibration, and dust on the construction area, including the erection of construction fencing and barriers. The fencing would reduce potentially undesirable views of the construction site and buffer noise emitted from construction activities. Barriers would be used to protect the safety of pedestrians and to reduce noise from particularly disruptive activities where practicable. While construction activities at the development site would be evident to the local community, the limited duration of construction would not result in any significant or long-term adverse impacts on local land use patterns or the character of the nearby area.

SOCIOECONOMIC CONDITIONS

Construction activities would not block or restrict access to any facilities in the area, including the Home Depot to the north and the movie theater to the west. The proposed project would not affect the operations of any other nearby businesses, or obstruct major thoroughfares used by customers or 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 construction activity. Construction also would contribute to increased tax revenues for the city and state, including those from personal income taxes. Construction activities associated with the proposed project would not result in any significant adverse impacts on socioeconomic conditions.

COMMUNITY FACILITIES

No community facilities would be directly affected by construction activities. Construction workers would not place any burden on most community facilities and services. New York City Police Department (NYPD), and the New York City Fire Department (FDNY) emergency services and response times would not be materially affected by construction significantly due to the geographic distribution of the police and fire facilities and their respective coverage areas.

OPEN SPACE

There are no publicly accessible open spaces within the development site, and no open space resources would be used for staging or other construction activities. The nearest publically accessible open space resource is the Graniteville Swamp Park approximately 320 feet west of the development site. Construction of the proposed building would not limit access to any open space resources in the vicinity of the development site. Therefore, the proposed project would not result in significant adverse impacts on open space during construction.

HISTORIC AND CULTURAL RESOURCES

A detailed assessment of potential impacts on historic and cultural resources is described in Chapter 5, "Historic and Cultural Resources." The archaeological sensitivity of the project site was assess in Phase 1A and Supplemental Phase 1A studies which identified areas of precontact and historic period archaeological sensitivity within the project site and recommended Phase 1B archaeological testing in those locations. As recommended by the supplemental Phase 1A study, prior to the start of field testing, a Phase 1B Archaeological Testing Protocol was prepared and submitted to the New York City Landmarks Preservation Commission (LPC) and New York State Office of Parks, Recreation, and Historic Preservation (OPRHP) for review. In comment letters dated February 15, 2017, and February 28, 2017, LPC and OPRHP, respectively concurred with the testing protocol. A Phase 1B archaeological investigation will be conducted to confirm the presence or absence of archaeological resources on the project site. With the completion of the Phase 1B investigation and any subsequent archaeological investigations as necessary (e.g., a Phase 2 Archaeological Survey or a Phase 3 Data Recovery) that would be undertaken in consultation with LPC and OPRHP, the proposed project would not result in significant adverse impacts on archaeological resources. The applicant will enter into a Restrictive Declaration requiring that these archaeological investigations will be undertaken.

No architectural resources have been identified within a 400-foot radius of the project site. Therefore, the proposed project would not result in impacts on architectural resources.

HAZARDOUS MATERIALS

A detailed assessment of potential impacts on hazardous materials during construction is described in Chapter 5, "Hazardous Materials." A *Phase I Environmental Site Assessment* (ESA) of the project site was performed in April 2011, which identified "Recognized Environmental Conditions" (RECs), i.e., the presence or likely presence of hazardous substances or petroleum in the ground or groundwater. These were:

- Demolition of the project site's former residential structures could have resulted in buried debris containing asbestos-containing materials (ACM), lead-based paint, or other hazardous materials or heating oil tanks. Even if there were tanks that were removed, soil or groundwater contamination could remain from any past spills.
- A large amount of surface debris was observed throughout the project site (including one partially filled 55-gallon drum, tires, empty gas cylinders, etc.), seemingly dumped over many years. It is possible that the debris includes hazardous materials.

To update the information in the Phase I ESA, a site inspection and a review of updated environmental records and regulatory databases were conducted in December 2016. The site visit also noted surface debris including tires, household garbage, concrete, multiple 55-gallon drums containing unknown material, abandoned car bodies, dimensional lumber and wood piles, and raised areas (along the eastern portion) which could include dumped material. The database search revealed no significant changes from the findings in 2011.

Construction the proposed project would require excavation and soil disturbance for foundations, circulation areas, etc. Applicable requirements include:

- Removal of any encountered tanks would be performed in accordance with applicable regulatory requirements including NYSDEC requirements relating to spill reporting and tank registration.
- If dewatering is necessary for the proposed construction, water would be discharged to sewers in accordance with DEP requirements or otherwise in accordance with NYSDEC SPDES requirements.
- During debris removal or excavation, any material suspected of containing asbestos would be tested for asbestos content by a NYC-certified asbestos investigator. All material confirmed to be ACM would be removed and disposed of in accordance with local, state, and federal asbestos requirements.
- All debris including any suspect PCB-containing electrical equipment would be disposed of off-site in accordance with applicable federal, state, and local requirements.

Although subsurface construction activities could increase pathways for human exposure, there would be a lower potential for adverse impacts for the proposed project than those under the No Action condition as impacts would be avoided by performing work in accordance with measures listed above as well as the following measure:

- Prior to construction, a subsurface investigation involving the collection of subsurface samples for laboratory analysis would be conducted in accordance with a DEP-approved Work Plan. Based on the findings of the Phase II, a RAP and associated CHASP would be prepared and submitted to DEP for review and approval. The RAP and CHASP would be implemented during the subsurface disturbance associated with the proposed project. The RAP would address requirements for items such as: drum and debris disposal, soil

stockpiling, soil disposal and transportation; dust control; quality assurance; and contingency measures should petroleum storage tanks or contamination be unexpectedly encountered. The RAP would also address any measures required to be incorporated into the new buildings. The CHASP would include measures for worker and community protection, including personal protective equipment, dust control, and air monitoring.

With these measures, soil disturbance during construction of the proposed project would not result in any significant adverse hazardous materials impacts on construction workers and the nearby community.

NATURAL RESOURCES

As noted above, although the proposed project would result in the removal of approximately 1,700 trees, as part of the Wetland Mitigation Plan approximately 2,200 new trees and 9,200 new shrubs will be planted in the wetland preservation and enhancement area, along with the removal of non-native and invasive plant species. No trees in healthy condition beyond the field-identified limits of disturbance would be disturbed during construction. These limits would be delineated by snow fencing or similar methods.[2] Tree protection measures would be implemented during construction to protect existing trees that are located near the limits of disturbance on the boundaries of the project site. Trees near working areas may be wrapped at the base by snow fencing to avoid accidental damage to trunks and roots. No disturbance is planned within the projected root zone of these trees or within the drip line of the tree foliage. Snow fencing or other highly visible means of marking would be placed around the maximum area of the root system to prevent the destruction of roots by exposure or through the compaction of soils. Construction crews would be notified to exclude all equipment from these protected areas. If necessary, trees would be protected by tree wells in fill areas, and retaining walls in cut areas.

The proposed project would result in development on a portion of NYSDEC's freshwater wetland adjacent area and isolated, non-jurisdictional USACE wetland areas (totaling approximately 0.39 acres of freshwater wetland adjacent area and approximately 1.96 acres of isolated wetland areas). The disturbances to the regulated NYSDEC's freshwater wetland adjacent area and the isolated non-jurisdictional USACE wetland areas were minimized to the maximum extent possible when designing the site plan. To compensate for the loss of NYSDEC's freshwater wetland adjacent area, the applicant has proposed 10.77 acres of freshwater buffer plantings, freshwater wetland enhancement area, tidal wetland adjacent area enhancement, stormwater management area, and preserved natural areas. Construction protection measures (described in detail below) would be developed and implemented as part of the Stormwater Pollution Prevention Plan (SWPPP) for the 6.94 acres of mapped wetland areas that would be preserved.

The proposed project will require a NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activities (Permit No. GP-0-15-002) as more than one acre of land would be disturbed. During construction of the proposed project, potential short-term effects from regrading and stockpiling of soil materials could impact surface water quality by the loss of sediment and suspended solids to on-site and downstream waters. To avoid impacts to on-site wetlands and water quality, a SWPPP would be developed in accordance with the

[2] Tree protection measures will conform with the International Society of Arboriculture recommendations.

NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002). The SWPPP would consist of both temporary erosion and sediment controls and post-construction stormwater management practices. As discussed in detail in Chapter 4, "Natural Resources," erosion and sedimentation would be controlled during the construction period by temporary devices in accordance with the construction Erosion and Sediment Control (ESC) plan developed specifically for the project site and would include the following guidelines and controls:

- Installation of protective fencing around trees and other features to be preserved.
- Installation of a stabilized construction entrance and temporary perimeter silt fencing around the construction area.
- Construction of permanent water quality and stormwater control devices and installation of temporary swales and berms as needed to direct runoff to the devices. The stormwater control devices are to be utilized as temporary sediment traps during construction.
- Clearing and grubbing of vegetation, removal of existing structural debris.
- Provision of temporary sediment protection at all stormwater inlets.
- Maintenance of silt fence barriers, sediment traps, and other erosion control measures in working order throughout the construction period.
- Planting, seeding, or paving of all disturbed areas in a timely manner to prevent or minimize erosion.
- Monitoring all provisions over time to ensure successful establishment of all landscape plantings and other permanent erosion control measures at the site, including the prompt stabilization and restoration of damaged plantings and seeded areas.

No species of plants or wildlife identified on the project site and the surrounding area are listed as endangered or threatened by federal, state, or county government. Therefore, construction of the proposed project would not result in significant adverse impacts to threatened or endangered wildlife or plant species.

Disturbance from construction activities would be temporary. Any wildlife individuals that may be displaced from the site during construction of the proposed project would be expected to move to similar habitats off-site, in particular adjacent undeveloped protected land south and southwest of the development site consisting of wetlands and forested areas near Old Place Creek and Graniteville Swamp. The composition of the wildlife population on the project site may be altered immediately adjacent to developed areas, as species able to adapt to a suburban environment (such as raccoons, opossum, woodchucks, mice, songbirds, etc.) would have a greater ecological advantage in comparison to species that are less tolerant of human activity. Therefore, construction activities would not eliminate any high quality or valuable habitat for wildlife, and would not adversely affect wildlife within the area

Based on the analysis presented above and the development and implementation of a SWPPP in accordance with the NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-15-002), no significant adverse impacts related to natural resources would result from construction of the proposed project. ✷