

**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, “Projection Description,” the proposed project would result in a 426,576-gross-square-foot (gsf) enlargement of the Staten Island Mall (the Mall), a new structured parking facility, and landscaping improvements to the project site.

The city, state, and federal regulations and policies that govern construction are described, followed by the anticipated construction schedule and the types of activities likely to occur during the construction of the proposed project. The types of equipment to be used during construction are discussed, along with the expected number of workers and truck deliveries. Based on this information, an assessment is provided of the potential impacts from construction activities.

**PRINCIPAL CONCLUSIONS***TRANSPORTATION*

The construction traffic increments would be substantially lower than the operational traffic increments for the full build-out of the proposed project. Therefore, the potential traffic impacts during peak construction would be within the envelope of significant adverse traffic impacts identified for the With Action condition in Chapter 10, “Transportation.”

*AIR QUALITY*

Construction activities associated with the proposed project would not result in any significant adverse stationary or mobile source air quality impacts. Overall, the air quality effects during construction would be temporary and limited. The portions of the surrounding area containing residential communities with supporting private open space and community facility uses—which are located east and north of the project site—would be generally located at some distance away from the construction activities. Based on the increased distance to these sensitive receptor locations, air emissions generated by construction activities would be greatly dispersed before reaching the receptors, and would result in very low concentration increments.

*NOISE*

The proposed project would not result in significant adverse impacts with respect to construction noise. The noise generated by construction activities for the proposed project would not be considered out of the ordinary in terms of intensity, and the overall duration of noise-intensive activities would be below the 24-month *CEQR Technical Manual* threshold. In addition, construction of the proposed project would be required to follow the requirements of the *New*

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*York City Noise Control Code* for construction noise control measures to minimize noise disruption during construction.

### *NATURAL RESOURCES*

Construction of the proposed project would not result in significant adverse impacts in the areas of groundwater, floodplain, wetlands, vegetation and ecological communities, and wildlife. In addition, construction of the proposed project would have no direct or indirect effects on any individuals of these species potentially occurring in the area.

### *HAZARDOUS MATERIALS*

Construction of the proposed project would not result in any significant adverse hazardous materials impacts. The potential for adverse impacts associated with the construction of the proposed project would be minimized by adhering to certain protocols, including performing of a subsurface investigation at the project site, implementation of a New York City Department of Environmental Protection (DEP)- or a New York City Mayor's Office of Environmental Remediation (OER)-approved Remedial Action Plan (RAP) if necessary, and implementation of a DEP- or OER- approved Community Health and Safety Plan (CHASP) during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. Any disturbance of building materials would be in compliance with applicable regulatory requirements relating to testing and work practices associated with asbestos-containing materials (ACM), lead-based paint (LBP) and polychlorinated biphenyls (PCBs). If dewatering is necessary for the proposed construction, water would be discharged to sewers in accordance with New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) and DEP sewer use.

### *OTHER TECHNICAL AREAS*

Based on the analyses presented in this chapter, construction of the proposed project would also not result in significant adverse construction impacts in the areas of vibration, land use and neighborhood character, socioeconomic conditions, community facilities, open space, and historic and cultural resources.

## **B. GOVERNMENTAL COORDINATION AND OVERSIGHT**

Construction oversight involves several city, state, and federal agencies. **Table 16-1** lists the primary involved agencies and their areas of responsibility. For projects in New York City, primary construction oversight lies with the New York City Department of Buildings (DOB), which oversees compliance with the New York City Building Code. In addition, DOB enforces safety regulations to protect workers and the general public during construction. The areas of oversight include installation and operation of equipment such as cranes, sidewalk bridges, safety netting, and scaffolding. DEP or OER reviews and approves any needed RAPs and associated CHASPs. DEP also enforces the *New York City Noise Code*, and regulates water disposal into the sewer system as well as removal of fuel tanks and abatement of hazardous materials. The New York City Fire Department (FDNY) has primary oversight of compliance with the *New York City Fire Code* and the installation of tanks containing flammable materials. The New York City Department of Transportation (DOT)'s Office of Construction Mitigation

and Coordination (OCMC) reviews and approves any traffic lane and sidewalk closures on NYCDOT-mapped streets.

At the state level, the New York State Department of Labor (DOL) licenses asbestos workers. DEC regulates disposal of hazardous materials, and construction and operation of bulk petroleum and chemical storage tanks. At the federal level, although the U.S. Environmental Protection Agency (EPA) has wide-ranging authority over environmental matters, including air emissions, noise, hazardous materials, and the use of poisons, much of its responsibility is delegated to the state level. The Occupational Safety and Health Administration (OSHA) sets standards for work site safety and construction equipment.

**Table 16-1  
Summary of Primary Agency Construction Oversight**

Agency	Areas of Responsibility
<b>New York City</b>	
Department of Buildings	Building Code and site safety
Office of Environmental Remediation	RAPs/CHASPs
Department of Environmental Protection	Noise Code, RAPs/CHASPs, dewatering, fuel tank removal, hazardous materials abatement
Fire Department	Compliance with Fire Code, fuel tank installation
Department of Transportation	Lane and sidewalk closures
<b>New York State</b>	
Department of Labor	Asbestos Workers
Department of Environmental Conservation	Hazardous materials and fuel/chemical storage tanks
<b>United States</b>	
Environmental Protection Agency	Asbestos Abatement
Occupational Safety and Health Administration	Worker safety

**C. CONSTRUCTION PHASING AND SCHEDULE**

Prior to the start of construction, the Subsurface (Phase II) Investigation of the project site, the scope of which was already reviewed and approved by DEP, will be implemented. Based upon the findings of the investigation, a RAP and CHASP will be prepared for implementation during construction.

The preliminary construction schedule is shown on **Table 16-2**, and reflects the sequencing of construction events as currently contemplated. Construction of the proposed project is assumed to take place over an approximately 22-month period, with all project elements (parking garage construction, utility relocation, Mall enlargement, and exterior landscape improvements) complete by 2017. In the preliminary construction schedule, construction of the proposed project is anticipated to begin with the construction of the new parking garage, which is assumed to commence in December 2015 and would take approximately 10 months to complete. Utility relocation activities related to the proposed project are assumed to begin in December 2015 and would take approximately six months to complete. Utility work independent of the proposed project may also be needed and could occur prior to December 2015. Mall enlargement activities, including West Mall enlargement and the construction of a new supermarket, are both assumed to commence in December 2015 and are expected to be complete by September 2017 and May 2017 respectively. Finally, construction activities associated with exterior landscape improvements are assumed to occur between January 2017 and May 2017.

The proposed project would also include the expansion of the existing Macy’s department store. The construction analyses conservatively account for overlapping construction activities for

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project components in proximity to one another to capture the cumulative nature of construction impacts and therefore is representative of the reasonable worst-case for potential impacts. Macy's expansion activities are assumed to commence in December 2015 and would take approximately 10 months to complete. Section G, "Future with 2019 Completion Date" considers whether the 2019 Full-Build Scenario (i.e., a two-year lag in the completion of the Macy's enlargement and a portion of the structured parking) could result in potential impacts that differ from those identified for the 2017 full-build analysis year.

**Table 16-2**  
**Anticipated Construction Schedule**

Construction Task	Approximate Start Month	Approximate Finish Month	Approximate Duration (months)
<b>Parking Garage Construction</b>	December 2015	September 2016	10
<b>Utility Relocation</b>	December 2015	May 2016	6
<b>Mall Enlargement</b>	December 2015	September 2017	22
West Mall Enlargement	December 2015	September 2017	22
Supermarket	December 2015	May 2017	18
<b>Exterior Landscape Improvements</b>	January 2017	May 2017	5
<b>Macy's Expansion</b>	December 2015	September 2016	10
<b>Source:</b> Aurora Contractors, Inc. and GGP Staten Island Mall, LLC.			

## D. CONSTRUCTION DESCRIPTION

This section describes construction activities for the proposed project, including the types of equipment to be used and the estimated number of construction-related workers and truck deliveries throughout the construction period.

### GENERAL CONSTRUCTION PRACTICES

A representative for the proposed project would be available throughout the construction period to serve as the contact person for the community and local leaders to address concerns or problems that may arise during construction. In addition, New York City maintains a 24-hour-a-day telephone hotline (311) so that concerns can be registered with the City.

### *HOURS OF WORK*

Construction for 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. Construction work would typically begin at 7:00 AM on weekdays, with most workers arriving between 6:00 AM and 7:00 AM. Normally weekday work would end by 3:30 PM, but it can be expected that, in order to meet the construction schedule or 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 6PM and would not include all construction workers on-site, but only those involved in the specific task requiring additional work time.

Night or weekend work would not be regularly scheduled, but could occur to make up for weather delays or other unforeseen circumstances. In such cases, appropriate work permits from

NYCDOB would be obtained. Similar to an extended workday, the numbers of construction workers and pieces of equipment in operation would be limited to those needed to complete the particular task at hand.

*ACCESS, DELIVERIES, AND STAGING AREAS*

The work areas would be fenced off and limited access points for workers and construction-related trucks would be provided. A dedicated parking area within the parking lots that are currently serving the Mall would likely be available to accommodate private construction worker vehicles. An analysis of the temporary displacement of parking at the Mall is provided below in the “Parking” section under “Transportation.” Trucks delivering materials are anticipated to enter or exit the Mall area primarily via Richmond Avenue. The Platinum Avenue access point near Richmond Avenue may also be used for deliveries depending on the location of the construction activities. The staging and laydown of materials would be primarily done from portions of the existing parking lots to the west of the Mall.

Emergency vehicle access to the Mall would be maintained at all times throughout the construction period. In addition, emergency egress of Mall patrons and construction workers would be maintained at all times throughout the construction period, although the emergency egress points of the existing Mall may be diverted as necessary to allow for safe emergency exit from the Mall.

Flaggers would be posted as necessary to control trucks entering and exiting the construction site, to provide guidance to pedestrians, and/or to alert or slow down the traffic. This would ensure that pedestrians are provided a safe path to walk to-and-from the Mall and/or vehicles to travel to-and-from the parking lots. The flaggers would be supplied by the subcontractor on-site or by the construction manager.

*LANE AND WALKWAY CLOSURES*

It is not anticipated that Ring Road, an internal roadway that serves the Mall, would be closed during construction but at various times of the construction period, Ring Road in the vicinity of the construction areas may be temporarily narrowed. In such cases, flaggers may be employed where necessary to alert or slow down the traffic. Overhead bridges would be erected where necessary to protect pedestrians passing by the construction site. In addition, walkways adjacent to the Mall in proximity to the construction activities may be temporarily closed or if the walkways are in the areas of the Mall enlargement, they would be relocated.

If any lane and/or sidewalk closures are required on DOT-mapped streets, such as Richmond Avenue and Platinum Avenue, Maintenance and Protection of Traffic (MPT) plans would be developed. Approval of these plans and implementation of the closures would be coordinated with DOT’s OCMC.

*RODENT CONTROL*

Construction contracts may include provisions for a rodent (i.e., 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 construction, the contractor would carry out a maintenance program, as necessary. Signage would be posted, and coordination would be conducted with appropriate public agencies. Only EPA- and NYSDEC-registered rodenticides would be permitted, and the contractor would be required to implement the rodent control

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program in a manner that is not hazardous to the general public, domestic animals, and non-target wildlife.

### **GENERAL CONSTRUCTION TASKS**

Prior to the construction of each major project component, the work area would first be prepared for construction and would involve the installation of public safety measures such as fencing, netting, and signs. The construction areas would be fenced off, typically with solid fencing to minimize interference between the persons passing by the site and the construction work. Access gates for workers and for trucks would be installed, and sidewalk bridges and Jersey barriers would be erected where necessary. Trailers for the construction engineers and managers would be hauled to the site and installed. Also, portable toilets, dumpsters for trash, and water and fuel tankers are brought to the site and installed.

As mentioned above, construction of the proposed project would involve several major project components: utility relocation, parking garage construction, Mall enlargement, and exterior landscape improvements, and Macy's expansion. The construction process for each of the project component is described further below.

#### *PARKING GARAGE CONSTRUCTION*

Construction of the parking garage is anticipated to commence in December 2015 and would take approximately 10 months to complete.

To accommodate the development of the proposed project, approximately 1,780 existing surface parking spaces on the project site would be displaced. These spaces would be replaced by a new structured garage with a capacity of 1,413 parking spaces. An analysis of the temporary displacement of parking at the Mall is provided below in the "Parking" section under "Transportation." The existing parking lot area would first be demolished with the use of jackhammers and/or pavement cutters. Then, excavators would be used for the task of excavation. The soil would be loaded onto dump trucks for transport to a licensed disposal facility or for reuse on a construction site that needs fill. As described in greater detail below under "Hazardous Materials," to reduce the potential for public exposure to contaminants during excavation and foundation activities, all construction subsurface soil disturbances would be performed in accordance with all applicable federal, state, and city regulations relating to hazardous materials.

Next, the concrete foundation system for the parking garage would be installed and would involve the use of concrete pumps and concrete trucks. Construction of the new parking garage structure would then ensue, followed by interior finishing. Interior fit-outs would include the installation of lighting fixtures, interior finishes (i.e., painting, asphalt, and striping), and mechanical and electrical work.

Parking garage construction may also involve the use of water pumps, bobcats, mobile cranes, delivery trucks, and a variety of small hand-held tools.

#### *UTILITY RELOCATION*

Utility relocation activities are assumed to begin in December 2015 and be completed by May 2016. As noted above, utility work independent of the proposed project may also be needed and could occur prior to December 2015.

Existing utilities would be relocated to eliminate interference with new structure construction. Utility relocation activities would first involve the use of jackhammers and/or pavement cutters to open the portion of the existing surface parking area where the utility lines relocate to. Then, backhoes would be used to excavate a trench of the required width and depth. The excavated roadway material and soil would be removed with a backhoe and placed in dump trucks. The bottom of the trench would then be lined with gravel to act as bedding material and a crane would be used to lift the utility lines into place. The utility lines would subsequently be aligned and fastened to the connecting joint. Finally, the trench would be filled with compact soil, either with the removed soil if it is suitable or with clean soil. Asphalt trucks and rollers would then be used to patch the street.

#### *MALL ENLARGEMENT*

Mall enlargement activities, including West Mall enlargement and the construction of a new supermarket, are both assumed to commence in December 2015 and are expected to be complete by September 2017 and May 2017, respectively.

#### *West Mall Enlargement*

The proposed project would facilitate the enlargement of the Mall on areas currently used for accessory parking. West Mall enlargement activities would begin with the demolition of the existing parking lot area (where the West Mall enlargement would be) using jackhammers and/or pavement cutters. After demolition activities are complete, excavation activities would commence. The excavated soil would be loaded onto dump trucks for transport to a licensed disposal facility or for reuse on a construction site that needs fill. As described in greater details below under “Hazardous Materials,” to reduce the potential for public exposure to contaminants during excavation and foundation activities, all construction subsurface soil disturbances would be performed in accordance with all applicable federal, state, and city regulations relating to hazardous materials.

Next, the concrete footings and the foundation system for the new Mall structure would be erected. Then, the construction of the core and shell of the new structure would begin. Construction of the interior structure, or core, of the building would include elevator shafts, vertical risers for mechanical, electrical, and plumbing systems, electrical and mechanical equipment rooms, core stairs, and restroom areas. Exterior construction would involve the installation of the curtain wall and the roof. Mobile cranes would be used to lift the curtain walls into place, and welding machines and impact wrenches would secure the exterior to the building structure. Interior fit-out activities would overlap with exterior construction activities and would include the construction of interior partitions, installation of lighting fixtures, interior finishes (flooring, painting, etc.), and mechanical and electrical work, such as the installation of elevators.

Once interior fit-out activities are substantially complete and the new structure substantially enclosed, breakthroughs into existing Mall would be made to establish connection points from the existing Mall to the new West Mall enlargement. Temporary barriers and/or blankets would be used inside the existing Mall once breakthroughs are made to minimize the effects of construction on the Mall users. In addition, as described above in “Hours of Work,” construction of the proposed project would typically occur between 7:00 AM and 3:30 PM on weekdays and would not coincide with the typical Mall usage peak periods (e.g., weeknights and weekends).

Finally, tenant fit-out activities would occur and the existing food court would be renovated.

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West Mall enlargement activities would also involve the use of bulldozers, compressors, generators, cherry pickers, saws, and a variety of small hand-held tools and paving equipment.

### *Supermarket*

As shown on Figure 1-2 in Chapter 1, “Project Description,” the proposed supermarket would be located on the eastside of the Mall. The construction methodology for the new supermarket would be similar to the one listed for the West Mall Enlargement above and would include demolition, excavation, foundation, structure construction, and interior fit-out activities.

### *EXTERIOR LANDSCAPE IMPROVEMENTS*

Construction activities associated with exterior landscape improvements are assumed to occur between January 2017 and May 2017. The proposed project would include landscape improvements throughout the project’s site surface parking areas, including planting approximately 427 new trees. These trees would be planted in areas including the perimeter of the proposed parking structure, as well as within and along the edges of various parking areas. The proposed project would also enhance the main entry point of the Mall with new trees and the creation of a multi-use plaza at the Mall’s entrance. The plaza would be designed with appropriate paving, landscaping, and lighting so that it may function as a pedestrian plaza to be used for public events including holiday fairs, greenmarkets, and cultural events.

Exterior landscape improvements would involve the use of a variety of small hand-held tools and paving equipment.

### *MACY’S EXPANSION*

The proposed project would also include the expansion of the existing Macy’s department store. Macy’s expansion activities are assumed to take approximately 10 months to complete. The construction methodology for Macy’s expansion would be similar to the one listed for the West Mall Enlargement above and would include demolition, excavation, foundation, structure construction, Mall breakthrough, and interior fit-out activities.

### **NUMBER OF CONSTRUCTION WORKERS AND MATERIAL DELIVERIES**

**Table 16-3** shows the estimated average daily numbers of workers and deliveries for the proposed project by calendar quarter for the duration of the construction period. The average number of workers throughout the entire period would be approximately 310 per day. The peak number of workers would be 400 per day, and would occur from the fourth quarter of 2015 to the third quarter of 2016. For truck trips, the average number of trucks throughout the entire construction period would be approximately 70 per day, and the peak would occur from the fourth quarter of 2015 to the third quarter of 2016, with 85 trucks per day.

**Table 16-3**  
**Average Number of Daily Construction Workers and Trucks by Quarter**

Quarter	2015		2016				2017				Average	Peak
	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th		
Workers		400	400	400	400	275	275	242	138	-	310	400
Trucks		85	85	85	85	65	65	60	-40	-	70	85

**Note:**  
With Macy’s Expansion  
**Source:**  
Aurora Contractors and AKRF, Inc.



## **E. FUTURE WITHOUT THE PROPOSED PROJECT**

Absent the proposed project, no new development is anticipated to occur on the project site. However, it is possible that activities associated with the maintenance of the existing Mall would occur prior to the construction of the proposed project.

## **F. FUTURE WITH THE PROPOSED PROJECT**

Construction of the proposed project—as is the case with any construction project—may 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. Section G, “Future with 2019 Completion Date” considers whether the 2019 Full-Build Scenario (i.e., a two-year lag in the completion of the Macy’s enlargement and a portion of the structured parking) could result in potential impacts that differ from those identified for the 2017 full-build analysis year.

### **TRANSPORTATION**

The construction transportation analysis is based on a study of peak worker and truck trips, taking into account several factors, including: worker modal splits, vehicle occupancy and trip distribution; and truck passenger car equivalents (PCEs) and arrival patterns. The effects of the construction activities for the proposed project were compared to the operational impacts identified for the full build-out of the proposed project to assess the potential transportation impacts during construction. Since the potential transportation impacts during construction are based on peak construction related activities, the quarter with the highest level of construction trip generation was assessed.

#### *TRAFFIC*

An evaluation of construction sequencing and worker/truck projections was undertaken to assess potential traffic impacts. As discussed below, peak construction traffic would be less than what would be realized upon the full build-out of the proposed project. Therefore, the anticipated impacts during the peak construction quarters would be within the envelope of the significant adverse traffic impacts identified for the future With Action condition in Chapter 10, “Transportation,” and can be similarly addressed with the mitigation measures described in Chapter 18, “Mitigation,” where necessary.

#### *Construction Trip-Generation Projections*

Average daily construction worker and truck activities by quarter were projected for the entire construction period. The projected quarterly average worker and truck trip projections were further refined to account for worker modal splits and vehicle occupancy, arrival and departure distribution, and passenger car equivalent (PCE) factor for construction truck traffic.

#### *Daily Workforce and Truck Deliveries*

For a reasonable worst-case analysis of potential traffic-related impacts during construction, the daily workforce and truck trip projections in the peak quarter were used as the basis for estimating peak-hour construction trips. It is expected that construction associated with the proposed project would generate the highest amount of daily traffic from the fourth quarter of

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2015 to the third quarter of 2016, with an estimated average of 400 workers and 85 truck deliveries per day (see **Table 16-3** above). These estimates of construction activities are discussed further below.

*Construction Worker Modal Splits and Vehicle Occupancy*

Based on the latest available U.S. Census data (2000 U.S. Census) on workers in the construction and excavation industry, it is anticipated that 93 percent of construction workers would commute to the project site by private autos at an average occupancy of approximately 1.19 persons per vehicle.

*Peak-Hour Construction-Worker Vehicle and Truck Trips*

Similar to other construction projects in New York City, most of the construction activities at the project site are expected to take place from 7:00 AM to 3:30 PM. While construction truck trips would occur throughout the day (with more trips during the early morning), and most trucks would remain in the area for short durations, construction workers would commute during the hours before and after the work shift. For analysis purposes, each truck delivery was assumed to result in two truck trips during the same hour (one “in” and one “out”), whereas each worker vehicle was assumed to arrive near the work shift start hour and depart near the work shift end hour. Further, in accordance with the *CEQR Technical Manual*, the traffic analysis assumed that each truck has a PCE of 2.

The estimated daily vehicle trips were distributed throughout the workday based on projected work shift allocations and conventional arrival/departure patterns for construction workers and trucks. For construction workers, the majority (approximately 80 percent) of the arrival and departure trips would take place during the hour before and after each work shift. Construction truck deliveries typically peak during the hour before each shift (25 percent), overlapping with construction worker arrival traffic.

**Table 16-4  
Peak Construction Vehicle Trip Projections**

Hour	Auto Trips			Truck Trips			Total					
	Regular Shift			Regular Shift			Vehicle Trips			PCE Trips		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
<b>6 AM - 7 AM</b>	<b>250</b>	<b>0</b>	<b>250</b>	<b>21</b>	<b>21</b>	<b>42</b>	<b>271</b>	<b>21</b>	<b>292</b>	<b>292</b>	<b>42</b>	<b>334</b>
<b>7 AM - 8 AM</b>	63	0	63	9	9	18	72	9	81	81	18	99
<b>8 AM - 9 AM</b>	0	0	0	9	9	18	9	9	18	18	18	36
<b>9 AM -10 AM</b>	0	0	0	9	9	18	9	9	18	18	18	36
<b>10 AM -11 AM</b>	0	0	0	9	9	18	9	9	18	18	18	36
<b>11 AM - 12 PM</b>	0	0	0	9	9	18	9	9	18	18	18	36
<b>12 PM - 1 PM</b>	0	0	0	9	9	18	9	9	18	18	18	36
<b>1 PM - 2 PM</b>	0	0	0	4	4	8	4	4	8	8	8	16
<b>2 PM - 3 PM</b>	0	16	16	4	4	8	4	20	24	8	24	32
<b>3 PM - 4 PM</b>	<b>0</b>	<b>250</b>	<b>250</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>250</b>	<b>250</b>	<b>0</b>	<b>250</b>	<b>250</b>
<b>4 PM - 5 PM</b>	0	47	47	0	0	0	0	47	47	0	47	47
<b>Daily Total</b>	313	313	626	83	83	166	396	396	792	479	479	958

**Note:** Hourly construction worker and truck trips were derived from an estimated quarterly average number of construction workers and truck deliveries per day, with each truck delivery resulting in two daily trips (arrival and departure).

**Table 16-4** presents the hourly-trip projections for the peak construction quarters (fourth quarter of 2015 to third quarter of 2016) for the proposed project. As shown, the maximum construction-related traffic increments would be approximately 334 PCEs between 6:00 AM and 7:00 AM and 250 PCEs between 3:00 PM and 4:00 PM.

A comparison of the projected traffic levels generated at the proposed site during peak construction and those upon full build-out of the proposed project was developed and summarized in **Table 16-5**. The construction traffic increments would be substantially lower than the operational traffic increments for the full build-out of the proposed project. Therefore, the potential traffic impacts during peak construction would be within the envelope of significant adverse traffic impacts identified for the With Action condition in Chapter 10, “Transportation.”

**Table 16-5**  
**Comparison of Construction and Operational**  
**Peak Vehicle Trip Generation**

Peak Construction Trips in PCEs (Fourth Quarter of 2015 to Third Quarter of 2016)				Full Build-Out Incremental Operational Trips in PCEs			
Peak Period	In	Out	Total	Peak Period	In	Out	Total
Weekday Arrival Peak Hour (6–7 AM)	292	42	334	Weekday MD Peak Hour (1-2 PM)	654	708	1,362
Weekday Departure Peak Hour (4–5 PM)	0	250	250	Weekday PM Peak Hour (5-6 PM)	810	773	1,583
				Saturday MD Peak Hour (1:45-2:45 PM)	1,052	979	2,031
				Saturday PM Peak Hour (4:30–5:30 PM)	1,034	1,150	2,184

**PARKING**

As shown in **Table 16-4**, the peak number of workers during the construction of the proposed project would be approximately 400 per day, and would occur in the fourth quarter of 2015 to the third quarter of 2016. Based on the latest available U.S. Census data (2000 U.S. Census) on workers in the construction and excavation industry, it is anticipated that 93 percent of construction workers would commute to the project site by private autos at an average occupancy of approximately 1.19 persons per vehicle. The anticipated construction activities are therefore projected to generate a maximum parking demand of 313 spaces. As shown in **Table 16-6**, this parking demand could be fully accommodated by the on-site parking lots, where there would be a minimum of approximately 1,000 spaces available for construction workers’ private vehicles.

As discussed above in “Access, Deliveries, and Staging Areas,” construction staging would be done temporarily from portions of the existing parking lots (primarily to the west of the Mall). Even with a temporary reduction of parking spaces and the proposed permanent reduction of 367 accessory parking spaces due to the project, the anticipated construction-related peak parking demand of 313 spaces could be fully accommodated by the on-site parking lots during peak weekday parking utilization period.

Therefore, the construction of the proposed project would not result in any significant adverse parking impacts.

**Table 16-6**  
**Parking Availability During Peak Construction**

	<b>Parking Spaces</b>
Total Parking Available at Existing Mall <sup>1</sup>	6,926
Estimated Parking Displaced by Enlargement	(1,780)
Maximum Parking Utilized for Construction Staging	(700)
Maximum Parking Utilization During Peak Weekday <sup>1</sup>	(3,435)
Minimum Parking Availability for Construction Workers	1,011
<b>Note:</b> 1) Total Parking estimate does not include 388 parking spaces associated with the convenience store adjacent to the Mall. 2) Maximum parking utilization during peak weekday from Table 10-4 in Chapter 10, "Transportation."	

*TRANSIT*

Based on the latest available U.S. Census data (2000 U.S. Census) on workers in the construction and excavation industry, it is anticipated that seven percent of construction workers would commute to the project site via transit. The study area is served by numerous local and express bus routes. During the peak-construction worker shift (a maximum of 400 average daily construction workers in the 7:00 AM to 8:00 AM shift during the peak construction period for the proposed project, this would correspond to approximately 28 workers traveling by transit. With 80 percent of these workers arriving or departing during the construction peak hours, the estimated number of peak-hour transit trips would be 22, well below the *CEQR Technical Manual* 200-transit-trip analysis threshold for detailed analysis. Therefore, construction of the proposed project would not result in any significant adverse transit impacts, and no further analysis is required.

*PEDESTRIANS*

As summarized above, up to 400 average daily construction workers are projected in the 7:00 AM to 3:30 PM shift during peak construction of the proposed project. However, a dedicated parking area within the parking lots that are currently serving the Mall is expected to be available to accommodate private construction worker vehicles. The number of peak-hour pedestrian trips traversing the area's sidewalks, corners, and crosswalks would be limited to those workers who would commute to the project site via transit. As identified above in "Transit," the estimated number of peak-hour transit trips would be 22 during the construction peak hours. Therefore, construction associated with the proposed project would generate 22 additional pedestrian trips during the peak construction period, well below the *CEQR Technical Manual* 200-pedestrian-trip analysis threshold for detailed analysis. Consequently, construction of the proposed project would not result in any significant adverse pedestrian impacts, and no further analysis is required.

**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. In general, much of the heavy equipment used in construction has diesel-powered engines and produces relatively high levels of nitrogen oxides (NO<sub>x</sub>) and particulate matter (PM). Fugitive dust generated by construction activities also contains particulate matter. Finally, gasoline engines

produce relatively high levels of carbon monoxide (CO). As a result, the primary air pollutants of concern for construction activities include nitrogen dioxide (NO<sub>2</sub>), particulate matter with an aerodynamic diameter of less than or equal to 10 micrometers (PM<sub>10</sub>), particulate matter with an aerodynamic diameter of less than or equal to 2.5 micrometers (PM<sub>2.5</sub>), and CO.

The *CEQR Technical Manual* lists several factors for consideration in determining whether a quantified on-site and/or off-site construction impact assessment for air quality is appropriate. These factors include the duration and intensity of construction activities, the location of nearby sensitive receptors, the use of emission control measures, and project generated construction-related vehicle trips.

#### *DURATION AND INTENSITY OF CONSTRUCTION ACTIVITIES*

Construction of the proposed project, as is the case with any construction project, may be disruptive to the surrounding area. However, while the proposed project would entail utility work as well as excavation and foundation activities, unlike ground-up high-rise building construction, construction of the proposed project would not involve extensive building demolition, excavation, and foundation, which often generate the highest levels of air emissions when multiple heavy-duty diesel engines are employed on-site simultaneously. Based on the preliminary construction schedule, it is anticipated that short-term utility work (approximately six months) and limited excavation and foundation activities (approximately two months for the parking garage, approximately three months for the West Mall enlargement, and approximately one and a half month for the supermarket) would be required for the construction of the proposed project. Further, equipment would generally move throughout the site as construction progresses such that elevated air pollutant concentrations due to construction would not persist in any single location. The other stages of construction, including superstructure, exterior facades, interior finishes, and site work would result in much lower air emissions since they would require few pieces of heavy duty diesel equipment. In addition, interior finishes activities would be better shielded from the nearby sensitive receptors by the proposed structures themselves. To minimize disruption to Mall users, breakthroughs into the existing Mall (to establish connection points from the existing Mall to the new Mall enlargement) would not be made until interior fit-out activities are substantially complete and the new structure substantially enclosed. Temporary barriers and/or blankets would be used inside the existing Mall once breakthroughs are made to minimize the effects of construction on the Mall users. In addition, where necessary, overhead protection would be provided and construction fencing would be installed to ensure the safety of pedestrians passing by the construction areas outside the Mall.

Overall, the air quality effects would be temporary and limited and would only occur during the construction period.

#### *LOCATION OF NEARBY SENSITIVE RECEPTORS*

The bulk of the construction activities (i.e., parking garage construction, West Mall Enlargement etc.) would be located on the west side of the Mall facing Richmond Avenue. The area to the west of the project site that is separated by Richmond Avenue is currently vacant and will be converted to open space uses and become part of Fresh Kills Park well after 2017 or 2019, when the proposed project is anticipated to be complete and occupied.

The new supermarket would be constructed on the east side of the Mall but would be setback from Marsh Avenue by parking uses and landscaping. The portions of the surrounding area

## **Staten Island Mall Enlargement**

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containing residential communities with supporting open space and community facility uses (i.e., P.S. 58) —which are located east and north of the project site—would be generally located at some distance (more than 470 feet) away from the construction activities. Based on the increased distance to these sensitive receptor locations, air emissions generated by construction activities would be greatly dispersed before reaching the receptors, and would result in very low concentration increments.

### *EMISSION CONTROL MEASURES*

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 construction site; and water sprays would be used to ensure that materials are dampened as necessary to avoid release of dust into the air. In addition, idling time would be limited to three minutes for all on-site equipment and vehicles that are not operating a loading, unloading, or processing device (e.g., concrete mixing trucks), or do not otherwise require idling for the proper operation of their engines. Further, to reduce pollutant emissions during construction, ultra-low sulfur diesel (ULSD) would be used exclusively for all diesel engines throughout the construction site. Moreover, it is anticipated that electric grid service would be available for use during construction, thereby minimizing the need for generators.

### *OFF-SITE SOURCES*

As discussed above in “Transportation” the traffic increments during construction would be substantially lower than the operational traffic increments for the full build-out of the proposed project. In addition, construction worker commuting trips and construction truck deliveries would generally occur during off-peak hours. Furthermore, when distributed over the transportation network, the construction trip increments would not concentrate at any single location. Therefore, construction of the proposed project would not result in significant adverse air quality impacts related to vehicular traffic, and further mobile-source analysis is not required.

### *CONCLUSIONS*

Based on this information presented above, the proposed project would not result in any significant adverse construction air quality impacts, and no further analysis is required.

### **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 caused by construction activities would vary widely, depending on the stage of construction (i.e., excavation and foundation, interior fit-out, etc.) and the location of the construction activities relative to noise-sensitive receptor locations. The most significant construction noise sources are expected to be the operation of pavement breakers and concrete pumps, as well as movements of trucks to and from the Project Site.

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 DEP 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 7:00 AM and 6:00 PM; and that construction materials be handled and transported in such a manner as not to create unnecessary noise. As described above, for weekend and after hour work, 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.

#### *CONSTRUCTION NOISE IMPACT CRITERIA*

The *CEQR Technical Manual* divides construction duration into “short-term (less than two years) and long-term (two or more years)” and states that impacts resulting from short-term construction generally do not require detailed assessment. This has typically been interpreted to mean that construction noise would generally only have a significant impact on sensitive receptors only when the activity with the potential to create high noise levels (the “intensity”) would occur continuously for two or more years (the “duration”).

The *CEQR Technical Manual* states that the impact criteria for vehicular sources, using the No-Build noise level as the baseline, should be used for assessing construction noise impacts. As recommended in the *CEQR Technical Manual*, this study uses the following criteria to define a significant adverse noise impact from mobile and on-site construction activities:

- If the No Action noise level is less than 60 dBA  $L_{eq(1)}$ , a 5 dBA  $L_{eq(1)}$  or greater increase would be considered significant.
- If the No Action noise level is between 60 dBA  $L_{eq(1)}$  and 62 dBA  $L_{eq(1)}$ , a resultant  $L_{eq(1)}$  of 65 dBA or greater would be considered a significant increase.
- If the No Action noise level is equal to or greater than 62 dBA  $L_{eq(1)}$ , or if the analysis period is a nighttime period (defined in the *CEQR* criteria as being between 10:00 PM and 7:00 AM), the incremental significant impact threshold would be 3 dBA  $L_{eq(1)}$ .

#### *NOISE ANALYSIS FUNDAMENTALS*

Construction activities for the proposed project would be expected to result in increased noise levels as a result of: (1) the operation of construction equipment on site; and (2) the movement of construction-related vehicles (i.e., worker trips, and material and equipment trips) on the roadways to and from the project site.

Noise from the operation of construction equipment on-site at a specific receptor location near a construction site is generally calculated by computing the sum of the noise produced by all pieces of equipment operating at the construction site. For each piece of equipment, the noise level at a receptor site is a function of the following:

- The noise emission level of the equipment;
- A usage factor, which accounts for the percentage of time the equipment is operating at full power;

## **Staten Island Mall Enlargement**

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- The distance between the piece of equipment and the receptor;
- Topography and ground effects; and
- Shielding.

Similarly, noise levels due to construction-related traffic are a function of the following:

- The noise emission levels of the type of vehicle (e.g., auto, light-duty truck, heavy-duty truck, bus, etc.);
- Volume of vehicular traffic on each roadway segment;
- Vehicular speed;
- The distance between the roadway and the receptor;
- Topography and ground effects; and
- Shielding.

### *NOISE REDUCTION MEASURES*

Construction of the proposed project would be required to follow the requirements of the *New York City Noise Control Code* for construction noise control measures. These measures would include a variety of source and path controls.

In terms of source controls (i.e., reducing noise levels at the source or during the most sensitive time periods), the following measures would be implemented in accordance with the *New York City Noise Control Code*.

- Equipment that meets the sound level standards specified in Subchapter 5 of the New York City Noise Control Code (as shown in Table 16-7) would be used from the start of construction.
- As early in the construction period as logistics will allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders and saws (i.e., early electrification) to the extent feasible and practicable.
- Where feasible and practical, the construction site would be configured to minimize back-up alarm noise.
- Idling time would be limited to 3 minutes for all construction-related trucks that are not operating a loading, unloading, or processing device (e.g., concrete mixing trucks), or do not otherwise require idling for the proper operation of their engines.
- Contractors and subcontractors would be required to properly maintain their equipment and mufflers.

In terms of path controls (e.g., placement of equipment, implementation of barriers or enclosures between equipment and sensitive receptors), the following measures for construction would be implemented to the extent feasible and practical:

- Where logistics allow, noisy equipment, such as concrete pumps, concrete trucks, and delivery trucks, would be located away from sensitive receptor locations and noise barriers would be installed to provide shielding.
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents, where feasible) would be used for certain dominant noise equipment (i.e., cranes and generators) to the extent feasible and practical. These barriers are conservatively assumed to



offer only a 10 dBA reduction in noise levels for each piece of equipment to which they are applied. The details for construction of portable noise barriers, enclosures, tents, etc. are based upon DEP’s rules for Citywide Construction Noise Mitigation.

**Table 16-7  
Typical Construction Equipment Noise Emission Levels (dBA)**

Equipment List	NYCDEP & FTA Typical Noise Level at 50 feet <sup>1</sup>	Noise Level with Path Controls at 50 feet <sup>2</sup>
Backhoe/Loader	80	
Compressor	80	
Concrete Pump	82	
Concrete Trowel	85	
Concrete Vibrator	80	
Concrete Truck	85	
Cranes (Crawler Crane)	85	75
Delivery Truck	84	
Dozer	85	
Dump Truck	84	
Excavator	85	
Generator	82	72
Impact Wrench	85	
Jackhammer / Pavement Breaker	85	
Paver	85	
Pumps	77	
Rebar Bender	80	
Welder	73	
<b>Notes:</b>		
<sup>1</sup> Sources: Citywide Construction Noise Mitigation, Chapter 28, Department of Environmental Protection of New York City, 2007. Transit Noise and Vibration Impact Assessment, FTA, May 2006.		
<sup>2</sup> Path controls include portable noise barriers, enclosures, acoustical panels, and curtains, whichever feasible and practical.		
<sup>3</sup> Source: Kessler, Frederick M., “Noise Control for Construction Equipment and Construction Sites,” report for Hydro Quebec,		

*CONSTRUCTION NOISE ANALYSIS*

The construction noise analysis considers the noise generated by construction-related traffic, including delivery trucks and worker vehicles, traveling to and from the project Site as well as by on-site construction equipment and activity. The analysis looks first at the location of the construction activities relative to nearby sensitive receptor locations, then assesses the intensity of noise levels during construction and the potential duration of those noise levels, followed by a review of construction-related traffic, and finally makes a determination of the potential for impact.

*On-site sources - Location of nearby sensitive receptors*

The project site is bounded by Richmond Hill Road, Marsh Avenue, Platinum Avenue, and Richmond Avenue. As discussed above in “Air Quality,” the bulk of the construction activities (i.e., parking garage construction, West Mall Enlargement etc.) would be located on the west side of the Mall facing Richmond Avenue. The area to the west of the project site that is separated by Richmond Avenue is currently vacant and will be converted to open space uses and become part of Fresh Kills Park after 2017 and 2019, when the proposed project is anticipated to be complete and occupied.

## **Staten Island Mall Enlargement**

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The new supermarket would be constructed on the east side of the Mall but would be setback from Marsh Avenue by parking uses and landscaping. The portions of the surrounding area containing residential communities with supporting open space and institutional uses (i.e., P.S. 58)—which are located east and north of the project site—would be generally located at some distance (more than 470 feet) away from the construction activities. The existing parking lot areas and Richmond Hill Road/Marsh Avenue would serve as a buffer between the construction activities and the surrounding residential communities. Given the buffer and distance between construction activities and these sensitive locations, noise levels at these locations due to construction activities alone would be substantially reduced.

### *On-site sources – Duration and intensity of construction activities*

While the overall construction duration for the proposed project is anticipated to take approximately 22 months, the most noise-intensive construction activities (utility work as well as excavation and foundation work) for the Proposed Project would last for only a portion for this duration (approximately six months for utility work, approximately two months for the parking garage excavation and foundation activities, approximately three months for the West Mall enlargement excavation and foundation activities, and approximately one and a half month for the supermarket excavation and foundation activities). The other stages of construction for the proposed project would include superstructure, exterior façades, and interior fit-out, and site work. Construction equipment with higher noise levels such as excavators and dozers etc. would not be used during the superstructure, exterior façade, and site work stages of construction. In addition, fewer dump trucks would travel to and from the site during the superstructure, exterior façade, and site work stages of construction than during utility work, excavation, and foundation activities. Therefore, the superstructure, exterior façade, and site work activities would be expected to result in noise levels less than those during utility/excavation/foundation work.

Interior fit-out would require much less heavy construction equipment, and would be better shielded from the nearby sensitive receptors by the structures being constructed. Equipment used during interiors and finishing would mainly include a variety of small hand-held tools. In addition, most of the construction activities would occur within the buildings so this stage of construction is usually the quietest.

Further, to minimize disruption to Mall users, breakthroughs into the existing Mall (to establish connection points from the existing Mall to the new Mall enlargement) would not be made until interior fit-out activities are substantially complete and the new structure substantially enclosed. Sound blankets would be used inside the existing Mall once breakthroughs are made to minimize the effects of construction noise.

In general, the noise generated by construction activities for the proposed project would not be considered out of the ordinary in terms of intensity, and the overall duration of noise-intensive activities would be below the 24-month *CEQR Technical Manual* threshold discussed above. The noise effects would be temporary and limited; any ground-up construction that would require excavation, foundation, and superstructure would result in comparable noise levels to the surrounding community during construction.

### *Off-Site Sources*

Throughout the construction period, construction-related trucks and vehicles driven by workers would travel to and from the project site. Most of these vehicles would be expected to use Richmond Avenue. Further, heavy trucks (e.g. trucks with three or more axles) are required to

use Richmond Avenue since it is the only DOT-designated truck route near the project site. This large roadway is already heavily trafficked, and the construction traffic would therefore not be expected to result in substantially increased noise at locations along this roadway. Some vehicles associated with construction of the proposed project may use Richmond Hill Road but since the vehicles would be distributed amongst the different routes to and from the project, the amount of construction traffic would be low compared to the existing and No Action traffic levels on this street.

#### *Conclusion*

Based on this information presented above, the proposed project would not result in any significant adverse construction noise impacts, and no further analysis is required.

### **VIBRATION**

Construction activities have the potential to generate vibrations that may in turn result in structural or architectural damage, and/or annoyance or interference with vibration-sensitive activities. In general, vibration levels at a receiver are a function of the construction equipment and methods utilized, the distance between the construction site and the receiver, the characteristics of the transmitting medium, and the receiver building construction. Construction equipment causes 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 fragile and/or historic structures, vibration levels generated by construction activities generally do not cause architectural or structural damage, but can be perceptible or annoying in buildings located very close to a construction site.

#### *CONSTRUCTION VIBRATION CRITERIA*

With respect to potential structural or architectural damage, a significant adverse impact can occur if vibration levels generated by construction activities exceed a peak-particle velocity (PPV) of 0.5 inch/second.<sup>1</sup>

With respect to potential annoyance or interference with vibration-sensitive activities, a significant adverse impact can occur if vibration levels greater than 65 vibration decibels (VdB) occur for a prolonged period of time.

#### *CONSTRUCTION VIBRATION ANALYSIS RESULTS*

The building of greatest concern with regard to the potential for structural or architectural damage, as well as annoyance or interference with vibration-sensitive activities, due to construction-generated vibrations is the Mall itself. Given the use of demolition equipment on the building's façade, vibration levels would have the potential to exceed the 0.50 inches/second PPV and 65 VdB thresholds at the location on the façade where the work is being performed and its immediate vicinity. Construction-generated vibration levels at other nearby structures would not exceed the 0.50 inch/second PPV or 65 VdB thresholds due to their distances from the construction activities.

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<sup>1</sup> NYCDOB's *Technical Policy and Procedure Notices (TPPN) #10/88*.

## **OTHER TECHNICAL 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 project site. 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 existing Mall areas currently used for accessory parking. Overall, while construction activities at the project 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 associated with the proposed project would not result in any significant adverse impacts on socioeconomic conditions. The proposed project would enhance the main entry point of the Staten Island Mall with new trees and the creation of a multi-use plaza at the Mall's entrance. With the exception of renovation activities to the main entry point of the Mall which would require temporary closure of the entrance, construction of the proposed project would not block or restrict access to any facilities in the area, affect the operations of any nearby businesses, or obstruct major thoroughfares used by customers or businesses. Existing businesses within the Mall would not be required to be temporarily closed during the construction of the proposed project. 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.

### *COMMUNITY FACILITIES*

No community facilities would be directly affected by construction activities, because none would be directly displaced or altered by construction. The construction sites would be surrounded by construction fencing and barriers that would limit the effects of construction on nearby facilities. The construction workers would not place any burden on public schools and would have minimal, if any, demands on libraries, child care facilities, and health care. NYPD and 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. Emergency vehicle access to the Mall would be maintained at all times throughout the construction period. In addition, emergency egress of Mall patrons and construction workers would also be maintained at all times throughout the construction period although the emergency egress points of the existing Mall may be diverted as necessary to allow for safe emergency exit from the Mall.

### *OPEN SPACE*

The proposed project would not directly affect any existing open space resources. The ¼-mile study area surrounding the project site does not contain any publicly-accessible open space

resources that could be utilized by Mall workers. However, the Mall itself currently includes landscaped areas with seating that provide passive recreational opportunities. At limited times, activities such as excavation and foundation construction may generate noise that could impair the enjoyment of the users at these passive recreational areas, but such noise effects would be temporary. However, there are trafficked roadways near these open spaces and the construction activities would therefore not be expected to result in substantially increased noise at these open space locations. Furthermore, a majority of the construction activities for the proposed project are expected to occur to the west of the existing Mall while these open space resources are located to the east of the Mall. Construction of the proposed project would not limit access to any open space resources in the vicinity of the project site. Therefore, the proposed project would not result in significant adverse impacts on open space during construction.

#### *HISTORIC AND CULTURAL RESOURCES*

Historic and cultural resources include both archaeological and architectural resources. In a letter dated August 19, 2013, LPC determined that the site had no archaeological significance. A review of the New York States Historic Preservation Office (SHPO) and New York City Landmarks databases performed in July 2013 found that there are no known architectural resources on the project site or in the study area. As the project site had no archaeological significance and there are no architectural resources on the project site or study area, construction of the proposed project would have no significant adverse impact on historic and cultural resources, and no further assessment is warranted.

#### *HAZARDOUS MATERIALS*

The proposed project would include construction of an on-grade parking garage, several on-grade building additions, and landscaping improvements, which would entail shallow excavation in portions of the project site and limited disturbance of existing buildings for connections to the new additions. The greatest potential for exposure to any contaminated materials would occur during building material disturbance and subsurface disturbance associated with the excavation, although the potential for vapor intrusion post-construction would also need to be addressed. As described in Chapter 7, "Hazardous Materials," the potential for adverse impacts associated with these activities would be minimized by adhering to the following protocols:

- An (E) Designation for hazardous materials (E-361), administered by OER, ~~will be~~ is assigned to the project site.
- Prior to the start of construction, the Subsurface (Phase II) Investigation of the project site, the scope of which was already reviewed and approved by DEP, will be implemented. Based upon the findings of this investigation, a RAP and CHASP will be prepared for implementation during construction. The RAP and CHASP will be subject to DEP- or OER-approval.
- A written report with investigation findings and a summary of the data will be submitted to DEP or OER after completion of the testing and laboratory analysis for review and approval.
- After receiving such results, a determination will be made by DEP or OER as to whether the results indicate that remediation is necessary. Written notice will be provided by DEP or OER if they determine that no remediation is necessary. If remediation is indicated from the test results, a proposed RAP will be submitted to DEP or OER for review and approval prior to construction. The Applicants will complete such remediation as determined necessary by DEP or OER, typically during construction. The Applicants will then provide proper

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documentation that the work has been satisfactorily completed before the new structures are put into use.

- A DEP- or OER-approved CHASP would be implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. This plan would be submitted to DEP or OER for review and approval prior to implementation.
- Any disturbance of building materials would be in compliance with applicable regulatory requirements relating to testing and work practices associated with ACM, LBP and PCBs.
- Stormwater at the project site is conveyed through storm sewers to outfalls into nearby creeks. If dewatering is necessary for the proposed construction, water would be discharged to sewers in accordance with NYSDEC SPDES and DEP sewer use requirements.
- If the renovated building or the addition are to include petroleum storage tanks (e.g., for heating or emergency generators), any such tanks would be properly maintained in accordance with the applicable regulations, including Fire Department and DEC requirements.

With the above measures in place, the proposed project would not result in any significant adverse hazardous materials impacts during construction.

### *NATURAL RESOURCES*

#### *Groundwater*

Because groundwater is not used as a potable water supply on Staten Island, construction of the proposed project would not have the potential to affect drinking water supplies.

#### *Floodplains*

As discussed in Chapter 6 “Natural Resources,” the project site and study area are not within the 100-Year Floodplain or 500-Year Floodplain. Therefore, construction of the proposed project would not result in significant adverse impacts to the floodplain.

#### *Wetlands*

The construction of the proposed project would not adversely affect the National Wetlands Inventory (NWI)-mapped wetlands within the Freshkills East Park portion of the study area that receive stormwater runoff from the project site. Erosion and sediment control measures (e.g., silt fences) implemented in accordance with the New York State Standards and Specifications for Erosion and Sediment Control will minimize the potential for the deposition of sediments to wetlands within the Freshkills East Park portion of the study area due to construction of the proposed project.

#### *Terrestrial Resources*

##### *Vegetation and Ecological Communities*

Construction of the proposed project would result in a slight decrease of landscaped areas on the project site from 13.42 acres (existing) to 13.21 acres (proposed). However, this decrease represents a very small percentage (0.24 percent) of the total project site. Therefore, the construction of the proposed project would not result in significant adverse impacts to vegetation and ecological communities.

*Wildlife*

At present, only highly urban-adapted wildlife species occur within the project site. Disturbance during construction of the proposed project due to increased noise and human activity has the potential to temporarily displace wildlife within the project site. However, there is suitable habitat available within the vicinity of the project site for these urban-adapted wildlife species, and these species would be expected to return to the project site after completion of the construction. The majority of the year, wildlife that would be expected to occur in these areas would remain limited to non-native, invasive birds such as the house sparrow. During spring and fall, common migratory songbirds would have the potential to occasionally and briefly occur in the trees present within the project site. Although some of the trees utilized by migratory songbirds would be removed during construction, there are other areas in the vicinity of the project site which are suitable for these migratory songbirds. In addition, trees would be planted after construction of the proposed project to replace those removed. Overall, construction of the proposed project would not result in significant adverse impacts to wildlife.

*THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES*

As discussed in Chapter 6, “Natural Resources,” the project site and study area do not contain suitable habitat for the northern long-eared bat. In addition, NYNHP and NYSDEC have no records of the northern long-eared bat from any of the five boroughs of New York City (NYNHP 2014, NYSDEC 2014), and no nuisance bats ever collected from New York City and submitted to the New York State Department of Health for rabies testing have included a northern long-eared bat (NYSDEC 2014). Therefore, northern long-eared bats are not considered to have the potential to occur within the project site. There are no federally or state-listed species with the potential to occur within the study area. Therefore construction of the proposed project would not result in significant adverse impacts to any federally or state-listed species.

**G. FUTURE WITH 2019 COMPLETION DATE**

As detailed in Chapter 1, “Project Description,” there is the possibility that Macy’s would elect to postpone commencement of construction of its proposed 75,000-gsf enlargement, in which case the Macy’s enlargement and a portion of the proposed structured parking garage would be expected to be complete by 2019, rather than by 2017. In this event, the effects of the construction of the proposed project would be similar or less than those described above for the 2017 full-build analysis. The 2017 full-build construction analysis presented above conservatively account for overlapping construction activities and simultaneously operating construction equipment for project components in proximity to one another to capture the cumulative nature of construction impacts and therefore is representative of the reasonable worst-case for potential impacts. The delay in the completion of the Macy’s enlargement and a portion of the parking garage would result in less disruption during the peak construction period because there would be less overlapping of construction activities. There would be less construction-related traffic as well as less simultaneously operating construction equipment. Therefore, consistent with the findings of the 2017 full-build construction analysis, the completion of the proposed project by 2019 would not result in any construction-related significant adverse impacts. \*