

A. INTRODUCTION

The technical analyses presented in Chapters 2 through 21 examine the potential for significant adverse impacts resulting from the Proposed Project. Where significant adverse impacts have been identified, measures are proposed to minimize or avoid them. This chapter discusses these mitigation measures in the areas of historic resources, traffic, and transit. In addition, this chapter analyzes the air quality effects of the proposed traffic mitigation measures.

B. HISTORIC RESOURCES

The demolition of the historic buildings on the project site—Building B and the Bronx House of Detention—would constitute a significant adverse impact on historic resources. Measures to mitigate this impact are being developed in consultation with the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). The mitigation measures are anticipated to include retaining and reutilizing Building D for retail development in conjunction with the Proposed Project; reutilizing ornamental elements from the Bronx House of Detention within the River Avenue façade of the proposed Retail Building B/F as well as the plaza on River Avenue at the entrance to the southern passageway through the site; affixing a plaque to the side of Retail Building B near the plaza or incorporating one into the plaza design, describing the Bronx House of Detention’s significance as an example of WPA-era institutional architecture designed by Joseph Freeland; affixing a plaque to the side of Building D describing the history of the Bronx Terminal Market and its role in the development of terminal markets in the United States; and recording Buildings B and D and the Bronx House of Detention through a Historic American Buildings Survey (HABS)-level photographic documentation and accompanying narrative. Appendix E, “Correspondence,” includes a letter from OPRHP describing these mitigation measures. The mitigation measures developed with OPRHP would be recorded in either a Memorandum of Agreement (MOA) or Letter of Resolution (LOR) and implemented in order to partially mitigate the effects of the Proposed Project on historic resources. The construction of the off-site open space to be developed by the City with contributions from the project sponsor, which would occur by the Proposed Project’s 2009 Build year, would presumably require the demolition of Bronx Terminal Market Buildings F and G.

C. TRAFFIC AND PARKING

The Proposed Project would result in significant adverse impacts at local intersections within the traffic study area and along sections of the Major Deegan Expressway near the project site. The sections that follow identify the traffic capacity and operational improvements needed at each location in order to mitigate traffic impacts.

As discussed in Chapter 16, “Traffic and Parking,” a total of 21 intersections were analyzed, 16 of which are or would be signalized, and the remaining 5 of which are unsignalized. The detailed

analyses of mitigation measures indicated that significant adverse impacts on the local street network can be mitigated by standard traffic engineering improvements such as signal phasing and timing modifications, parking prohibitions, lane re-striping and intersection channelization improvements, and pavement markings in all but one location. These measures represent the standard range of traffic capacity improvements that have been proposed and implemented for numerous projects in the City. At one location—the multi-legged intersection of the northbound Major Deegan Expressway exit ramp, approach from the 145th Street Bridge, 149th Street, Exterior Street, and River Avenue—major measures, including ramp widening, would be needed to mitigate impacts. Figure 23-1 illustrates the proposed traffic mitigation measures at this location. Significant traffic impacts were also identified for sections of the Major Deegan Expressway, and mitigation measures are identified here for those sections.

A summary of traffic mitigation measures needed at each significantly impacted intersection and highway location is provided below for the 2009 and 2014 Build years. In general, the measures needed for each year are nearly identical. Detailed analyses are contained in Appendix A.

Yankee Stadium parking facilities would be displaced by the Proposed Project. However, during Yankee regular season and post-season games, the Proposed Project's parking facilities would not fill to their capacity, and excess parking would be available for displaced Yankee Stadium parking activity. Excess parking capacity at the site is expected to accommodate displaced Yankee-game parking. Therefore, no mitigation would be required.

PROJECT-RELATED STREET IMPROVEMENTS

Exterior Street, currently a wide, unstriped, cobblestone street with significant damage to the roadway surface, would be completely rebuilt with the Proposed Project. Upgrades include widening to two travel lanes per direction, a dedicated southbound left turn lane into the parking garage on the east side of Exterior Street, pavement resurfacing, crosswalks at exits and entrances to parking areas, traffic signals at parking garage driveways, lane striping, signage, upgraded lighting, and aesthetically pleasing streetscaping designs. River Avenue would be restriped with the Proposed Project to include crosswalks at 150th and 151st Streets and the proposed garage exit, two travel lanes per direction, shared left-turn/through lanes at 150th and 151st Streets, and streetscaping treatments. Motorists would experience improved levels of service before and after Yankee games along River Avenue due to the added capacity within the four-lane section between 149th and 151st Streets.

LOCAL STREET NETWORK

2009

Grand Concourse and 149th Street

Significant traffic impacts at this intersection can be mitigated by re-striping the northbound and southbound approaches to provide two 10-foot-wide through lanes and one 10-foot-wide shared through-right lane, and by signal timing modifications. These measures would mitigate impacts during all six analysis periods.

Grand Concourse and 161st Street

Significant traffic impacts can be mitigated via the following set of measures: prohibiting parking on the north side of westbound 161st Street and restriping the westbound approach to

provide one 14-foot-wide exclusive left turn lane and one 14-foot-wide shared through and right turn lane; restriping the eastbound 161st Street approach to provide one 12-foot-wide exclusive left turn lane, one 12-foot-wide through lane, and one 12-foot-wide shared through and right turn lane; and signal phasing and timing modifications. These measures would mitigate impacts during all analysis periods. For Saturday game day midday and PM peak hours, parking would also need to be prohibited on the west side of the southbound Grand Concourse service road.

Northbound Major Deegan Expressway Exit Ramp, 145th Street Bridge Approach, 149th Street, Exterior Street, and River Avenue

This is the one intersection location at which major physical improvements would be needed for mitigation. The geometry of this intersection would need to be modified by shifting the approach and receiving lanes closer to the heart of the intersection in order to reduce vehicular conflicts, shorten the distance vehicles need to pass through the intersection, and obtain a better overall transition of traffic from one street to another.

The following set of improvements would be needed: (1) widening the northbound exit ramp off of the Major Deegan Expressway to provide two 12-foot-wide travel lanes; (2) channelizing the southbound Exterior Street approach to provide an exclusive right turn lane onto the 145th Street Bridge, and restriping southbound Exterior Street to provide one 12-foot-wide exclusive left turn lane and one 12-foot-wide through lane, with parking prohibited along the west side of Exterior Street approaching this intersection; (3) restriping the eastbound approach from the 145th Street Bridge (leading onto 149th Street) including removal of a section of the raised concrete median barrier in order to provide two 12-foot-wide eastbound through lanes and one 11-foot-wide eastbound exclusive left turn lane, and two 12-foot-wide westbound receiving lanes on the bridge (8-foot-wide sidewalks would be maintained on each sidewalk along the bridge); (4) shifting the westbound 149th Street approach concrete divider 12 feet southward and restriping the westbound approach to the intersection to provide one 12-foot-wide westbound left turn lane, two 12-foot-wide westbound through lanes (as a result the eastbound and westbound exclusive left turn lanes would be directly aligned); (5) restriping northbound Exterior Street to provide two 12-foot-wide travel lanes; (6) rechannelizing the triangular-shaped concrete island that separates southbound Exterior Street and southbound River Avenue; and (7) signal phasing and timing modifications.

This set of improvements constitutes the primary mitigation option needed at this location. The proposed widening of the northbound Major Deegan Expressway exit ramp is also being studied by the New York State Department of Transportation (NYSDOT) as part of its ongoing studies of the Major Deegan Expressway. The realignment and rechannelization of the 149th Street corridor at this Exterior Street/River Avenue location is also being studied by the New York City Department of Design and Construction (NYCDDC) as part of its ongoing rehabilitation project for the 149th Street corridor in the Bronx, and reconstruction plans for the 145th Street Bridge are being proposed by the New York City Department of Transportation (NYCDOT). Coordination and information sharing has been maintained with these three agencies throughout the conduct of this EIS's traffic studies. The agencies are aware of this project's need for mitigation improvements, and are working to include these mitigation measures within their overall area-wide improvements, or a modification of these measures that would achieve the same level of mitigation or better. All groups will continue to work together to ensure this result.

This set of improvements would mitigate projected significant impacts during five of the six traffic analysis hours. During the Saturday game day PM peak hour (coinciding with peak departures from Yankee Stadium), additional measures would be needed: either deploying a

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traffic enforcement agent (also known as a traffic control officer) to optimize the provision of green time to all movements at this location, or installing an electronic signal controller capable of operating with a three permitted-phase timing plan.

River Avenue and 151st Street

Significant traffic impacts projected for the weekday PM peak hour on non-game days can be mitigated via signal timing modifications. Significant traffic impacts projected for Saturday PM peak hour conditions on game days would require enforcement of existing parking prohibitions on the north side of westbound 151st Street approaching the intersection and deployment of a traffic enforcement agent to override the existing signal phasing and timing plan.

River Avenue and 153rd Street

Significant traffic impacts projected for the weekday PM peak hour on non-game days can be mitigated via signal timing modifications. Significant traffic impacts projected for weekday PM, Saturday midday, and Saturday PM peak hour conditions on a game day can be mitigated by enforcing existing parking restrictions on the northbound River Avenue approach to the intersection; for the Saturday PM peak hour conditions, signal timing modifications would also be needed.

River Avenue and 161st Street

This intersection is expected to be significantly impacted in all six peak hours analyzed. It would be necessary to prohibit parking on the east side of northbound River Avenue and to offset the centerline of River Avenue—providing two 11-foot-wide northbound lanes south of 161st Street (with 16 feet available for southbound traffic in one wide travel lane) and two 11-foot-wide southbound lanes north of 161st Street (with 16 feet available for northbound traffic in one wide travel lane)—and a transitional striping plan that allows for left turns onto 161st Street in both directions. This set of mitigation measures would mitigate projected impacts during five of the six traffic analysis hours. During the Saturday game day PM peak hour, when southbound River Avenue traffic is limited to right turns after the Yankee game, significant traffic impacts can be mitigated by allowing southbound right turns to use both the 161st Street westbound receiving service road and the main road, and installing signage and cones to direct southbound right-turning traffic to the two sets of receiving lanes.

Jerome Avenue and 161st Street

Two physical improvements would be needed to mitigate significant traffic impacts: (1) restriping the northbound approach from its current configuration with an exclusive left turn lane, a through lane, and a through-right lane, to a new configuration with a left-through lane, a through lane, and an exclusive right turn lane each with 11-foot widths; and (2) shifting the southbound centerline five feet to the west by reducing the parking lane width along the southbound approach from its current 13-foot width to an 8-foot width in order to achieve a better transition for northbound traffic movements. These improvements would be needed to mitigate significant traffic impacts in the weekday PM peak hour and Saturday peak hour on non-game days and in the weekday PM peak hour on game days, but these physical changes would be in place permanently for all conditions. Signal timing modifications would also be needed for weekday PM peak hour conditions on non-game days.

Major Deegan Expressway Northbound Ramp and Service Road, and 157th Street

Physical changes and signal timing modifications would be needed for two of the traffic analysis hours, and would therefore be installed and operational for all traffic conditions. These involve the modification of the operation of the intersection to allow both the northbound service road and the northbound Major Deegan Expressway exit ramp to operate within the same signal phase, and installing lane striping and signage, and a lane transition plan, on the northbound “receiving side” of the intersection.

Macombs Place and 155th Street

A reduction in the number of signal phases and signal timing modifications would be needed to mitigate significant traffic impacts at this location during all six traffic peak hours analyzed.

Lenox Avenue and 145th Street

Signal timing modifications would be needed to mitigate significant traffic impacts for weekday PM and Saturday midday peak hour conditions on non-game days and for weekday PM and Saturday PM peak hour conditions on game days.

River Avenue and 150th Street

In order to mitigate significant traffic impacts on game days (during all three traffic analysis peak hours), it would be necessary to prohibit parking on the north side of the westbound 150th Street approach to the intersection and to re-stripe this approach to provide one 11-foot-wide exclusive left turn lane and one 11-foot-wide shared right-through lane. These physical street modifications would be in-place and workable for all conditions.

2014

With the exception of the measures noted below, traffic capacity improvements needed to mitigate significant impacts under 2014 Build conditions are identical to those described above for 2009 Build conditions. In addition, at some locations, further signal timing shifts would be needed under year 2014 Build conditions.

River Avenue and 153rd Street

It would also be necessary to enforce existing parking restrictions on the southbound River Avenue approach to the intersection on game days in the weekday PM peak hour and the Saturday PM peak hour.

IMPLEMENTATION

Each of the traffic engineering improvements described above require the approval of NYCDOT. These improvement measures fall within the range of typical measures employed by NYCDOT in improving traffic conditions in all parts of the City. Approval may also be needed from the New York Police Department (NYPD) for locations requiring enforcement of parking prohibitions since such enforcement activity is typically within the purview of NYPD.

MAJOR DEEGAN EXPRESSWAY

The simulation analyses of existing and projected future conditions along the Major Deegan Expressway also identified significant impacts resulting from the Proposed Project at two locations: the northbound Major Deegan Expressway approaching Exit 4 (149th Street) and the

southbound Major Deegan Expressway approaching the exit ramp at 161st Street at Exits 5 and 6. These impacts would occur as a result of the retail development, which is expected to be in place by 2009; impacts requiring mitigation would be similar for 2014 Build conditions.

For the northbound Major Deegan Expressway approaching 149th Street, widening of the exit ramp would be needed in order to mitigate impacts at the local street intersection of the northbound exit ramp with 149th Street, Exterior Street, River Avenue, and the 145th Street Bridge approach to the intersection. In order to fully mitigate conditions along the northbound Major Deegan Expressway, the simulation analysis indicates that it would also be necessary to widen the approach to the exit ramp in order to provide a deceleration lane leading to the exit ramp. NYSDOT has indicated its interest in improving the conditions by widening the exit ramp, but it is uncertain at this time whether NYSDOT would also be able to create a widening along the highway mainline to provide a fully acceptable deceleration lane. The developers and traffic consultants are working with NYSDOT to provide full mitigation, but it is possible that only partial mitigation of the potential impacts at the northbound exit would be accomplished by 2009. It is also possible that should the New York Yankees continue their efforts to relocate Yankee Stadium from its current location to a new site on the north side of 161st Street, as the team has proposed, that a significant volume of Yankee game traffic that currently exits the Major Deegan Expressway at 149th Street, would in the future exit further north at 161st Street (to gain direct access to new parking facilities expected to be built ringing the new Stadium). This potential change in traffic patterns would reduce the potential for impacts at 149th Street and possibly reduce or eliminate the need to complete any mainline widening for a deceleration lane. In the interim, the ramp widening can be accomplished and the need for mainline widening can be monitored before such measures are designed and built.

For the southbound Major Deegan Expressway approaching 161st Street (Exit 6), during game day peak periods, it would be necessary to channelize the right-most travel lane so it can serve as an exclusive deceleration lane to the exit. This channelization can be accomplished by coning off this lane starting approximately 1,000 feet upstream of the exit diverge, which would reduce friction between exiting vehicles and traffic staying on the southbound Major Deegan Expressway by effectively restricting Major Deegan Expressway traffic to the two left-most lanes.

D. TRANSIT AND PEDESTRIANS

STREET-LEVEL PEDESTRIAN OPERATIONS

The Proposed Project is expected to result in a significant adverse impact to the operations of the north crosswalk at 149th Street and River Avenue. The No Build LOS A is projected to decrease to a Build LOS D (below 20 SFP). The potential impact could be mitigated by widening the north crosswalk by five feet to a total width of 16 feet. Accounting for the proposed geometry improvements and signal retiming which would be done in conjunction with the traffic mitigation at this intersection, an additional eight foot widening for a total crosswalk width of 24 feet would be required. As shown in Table 23-1, this widening would mitigate the potential impact so that the north crosswalk would operate at LOS D (20 SFP) or better during all analysis peaks.

Table 23-1
No Build and Build Conditions: Crosswalk Mitigation

Intersection	Crosswalk	Width (feet)	2014 No Build Condition		2014 Build Condition		Mitigated Condition		
			SFP	LOS	SFP	LOS	Width	SFP	LOS
Non-Game Day Saturday Midday Peak Period									
149th Street & River Avenue	North	11	<u>85</u>	<u>A</u>	<u>10</u>	<u>E</u>	<u>24</u>	<u>20</u>	<u>D</u>

E. AIR QUALITY

Chapter 18, “Air Quality,” presents the maximum predicted 8-hour carbon monoxide (CO) concentrations for the Proposed Project, and concludes that the Proposed Project would not result in significant adverse air quality impacts. Therefore, no air quality mitigation is required. Tables 23-2 and 23-3 illustrate the effect that the proposed traffic mitigation measures would have on maximum predicted CO concentrations in the 2009 and 2014 Build years. The values shown are the highest predicted concentrations for the analyzed receptor locations. The results presented in the tables demonstrate that the proposed traffic mitigation measures would not result in any violations of the CO standard or any significant impacts at the intersections analyzed.

Table 23-2
Future (2009) Maximum Predicted 8-Hour Average Carbon Monoxide Concentrations (parts per million)

Site	Location	Time Period	8-Hour Concentration (ppm) with Traffic Mitigation		
			2009 No Build	2009 Build	2009 Build with Mitigation
1	E. 161st Street and Grand Concourse	Weekday PM	<u>4.2</u>	<u>4.3</u>	<u>4.3</u>
		Saturday PM	<u>3.4</u>	<u>3.8</u>	<u>4.0</u>
2	E. 151st Street and River Ave.	Weekday PM	<u>2.9</u>	<u>3.3</u>	<u>3.3</u>
		Saturday PM	<u>3.1</u>	<u>3.7</u>	<u>3.5</u>
3	E. 149th Street and River Ave./Exterior St.	Weekday PM	<u>4.7</u>	<u>4.9</u>	<u>4.9</u>
		Saturday PM	<u>4.7</u>	<u>4.8</u>	<u>5.0</u>

Note: 8-hour CO standard is 9 ppm.

Table 23-3
Future (2014) Maximum Predicted 8-Hour Average Carbon Monoxide Concentrations (parts per million)

Site	Location	Time Period	8-Hour Concentration (ppm) with Traffic Mitigation		
			2014 No Build	2014 Build	2014 Build with Mitigation
1	E. 161st Street and Grand Concourse	Weekday PM	<u>3.9</u>	<u>4.0</u>	<u>3.9</u>
		Saturday PM	<u>3.2</u>	<u>3.8</u>	<u>3.7</u>
2	E. 151st Street and River Ave	Weekday PM	<u>2.8</u>	<u>3.1</u>	<u>3.1</u>
		Saturday PM	<u>2.8</u>	<u>3.3</u>	<u>3.3</u>
3	E. 149th Street and River Ave/Exterior St.	Weekday PM	<u>4.5</u>	<u>4.5</u>	<u>4.6</u>
		Saturday PM	<u>4.5</u>	<u>4.5</u>	<u>4.7</u>

Note: 8-hour CO standard is 9 ppm.

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