19. Mitigation

19.1 INTRODUCTION

In accordance with the *City Environmental Quality Review (CEQR) Technical Manual*, where significant adverse impacts are identified, mitigation to reduce or eliminate the impacts to the fullest extent practicable is developed and evaluated.

Measures to further mitigate adverse impacts may have been evaluated between Draft and Final EIS. Therefore, this Final EIS includes more complete information and commitments on all practicable mitigation measures to be implemented with the Proposed Action.

19.2 PRINCIPAL CONCLUSIONS

19.2.1 Shadows

As discussed in Chapter 5, "Shadows," the Proposed Action would result in significant adverse shadows impacts on three historic architectural resources, namely St. Bartholomew's Church, Lady Chapel of St. Patrick's Cathedral, and Community House and Christ Church United Methodist; there would be no significant adverse shadows impacts on open spaces. These impacts are the result of incremental shadows during limited time periods on certain analysis days cast by Projected Development Site 12 and Potential Development Site 14 on St. Bartholomew's Church and Community House, incremental shadows cast by Projected Site 12 on Lady Chapel, and incremental shadows cast by Projected Development Site 18 on Christ Church United Methodist.

Relocating the Proposed Action so that it does not cast an incremental shadow on these historic resources (e.g., by removing all or portions of the projected and potential development sites from the rezoning proposal) is not a practical solution from a zoning standpoint. Further, removal of the development sites from the proposal would be inconsistent with the overall purpose and need of the Proposed Action.

Between Draft and Final EIS, the lead agency explored whether changes to the bulk regulations governing Projected Development Site 12, Potential Development Site 14, and Projected Development Site 18 that would reduce or eliminate the incremental shadow that causes the impact were feasible. The building massing used for analysis purposes assumed these sites would maximize their building floorplate sizes under the existing height and setback regulations so as to develop commercially-viable buildings. If the height and setback regulations were modified on these sites to permit larger building floorplates that would in turn allow for the permitted floor area to be accommodated in buildings at lower heights, the

resulting building form would conflict with the underlying intent of Midtown height and setback regulations which are designed to ensure pedestrian access to light and air. Further, the reduction in the permitted FAR on these sites that would be required to reduce or eliminate the shadow impacts would make development under the Proposed Action infeasible, and thus not be consistent with the goals and purposes of the proposed action to encourage the development of new commercial buildings in the area.

Another measure would be to provide for measures that would serve as a substitute for the direct sunlight on these sun-sensitive features. In order to adopt such measures in the absence of a site-specific approval, such as a Special Permit with an accompanying restrictive declaration, a mechanism would have to be developed to ensure implementation and compliance, since it is not known and cannot be assumed that owners of these properties would voluntarily implement this mitigation. In consultation with staff of the New York City Landmarks Preservation Commission, DCP, as lead agency, explored the viability of this mitigation measure between Draft EIS and Final EIS. It was determined that techniques exist for artificial lighting, as well as for the reflection of natural light through architectural features or reflective panels, that could potentially serve as a partial substitute for the loss of direct sunlight.

To allow for the potential installation of such features, the City Planning Commission (CPC) is currently considering a modification to the zoning text amendment that would require, prior to the issuance of a New Building Permit for development of Projected Development Sites 12 and 18, and Potential Development Site 14, that the developer provide the Department of City Planning (DCP) with a shadow analysis identifying the incremental shadows cast by the proposed building on the affected resource, and that the Chairperson of the Commission, acting in consultation with the Chair of the Landmarks Preservation Commission, certify to the Commissioner of Buildings either: a) that a plan for such features has been developed and will be implemented; or, b) that such a plan is not feasible or is impracticable, would negatively affect the character or integrity of the historic resource, or has not been accepted by the owner of the resource.

In the event that a plan for artificial lighting or reflection of natural light were developed and implemented pursuant to this provision, significant adverse shadows impacts under the Proposed Action would be partially mitigated. Absent such a plan, the Proposed Action's significant adverse shadows impacts would be wholly unmitigated.

19.2.2 Historic and Cultural Resources

As discussed in Chapter 6, "Historic and Cultural Resources," the Proposed Action could result in significant adverse impacts due to potential partial or complete demolition of 14 historic resources that are eligible for New York City Landmark (NYCL) designation and/or inclusion on the State and/or National Register of Historic Places (S/NR), located on Projected Development Sites 6, 7, 9, and 16 and Potential Development Sites 2, 5, 9, 12, 13, and 19.

Redesigning or relocating the Proposed Action so that it does not disturb the eligible resources by eliminating those development sites from the rezoning proposal would be inconsistent with the overall purpose and need of the Proposed Action and is considered infeasible and impracticable as it would result in an incoherent zoning plan that would not allow for the establishment of an area-wide East Midtown Subdistrict. Contextual redesign, adaptive reuse and the use of a construction protection plan are not available as mitigation measures, given the nature of the Proposed Action as an area-wide rezoning.

Measures that would partially mitigate these significant adverse impacts could include photographically documenting the eligible structures in accordance with Historic American Buildings Survey (HABS) level II, as per National Park Service standards and/or placement of an interpretive exhibit within the lobby of new construction. In order to adopt these measures in the absence of a site-specific approval, such as a Special Permit with an accompanying restrictive declaration, a mechanism would have to be developed to ensure implementation and compliance since it is not known and cannot be assumed that owners of these properties would voluntarily implement this partial mitigation. DCP, as lead agency, explored the viability of these mitigation measures between Draft EIS and Final EIS. The CPC is currently considering a modification to the zoning text amendment that would require, prior to any demolition of an eligible structure, which has not been calendared or designated by the Landmarks Preservation Commission, as part of development undertaken under the Proposed Action, that the developer conduct and complete HABS recordation in a manner acceptable to the Landmarks Preservation Commission. In the event this modification is adopted, significant adverse impacts resulting from the demolition of eligible resources not calendared or designated by the Landmarks Preservation Commission would be partially mitigated.

For those structures that are NYCL-eligible, LPC may elect to calendar, and then conduct a hearing and designate the structures, either in whole or in part, as landmark buildings. Should the New York City Department of Buildings (DOB) issue a notice of pending demolition to LPC with respect to a calendared building, LPC would have 40 days to decide whether to designate. During this period, the owners of the property may work with LPC to modify their plans to make them appropriate. In the event that landmark designation is approved, LPC approval would be required for any alteration or demolition of the designated structures. Designation would avoid any impacts with respect to the eligible resources. However, as the potential for use and results of any designation process cannot be assumed or predicted, designation is not considered a mitigation measure.

The proposed modifications to the zoning text amendment discussed above are considered partial mitigations only. Consequently, these impacts would not be completely eliminated and they would constitute unavoidable significant adverse impacts on these historic resources as a result of the Proposed Action.

19.2.3 Transportation

19.2.3.1 Traffic

As described in Chapter 12, "Transportation," the Proposed Action would result in significant adverse traffic impacts at 57 intersections during one or more analyzed peak hours; specifically 55 approach movements at 42 intersections would be impacted during the AM peak hour, 41 approach movements at 31 intersections would be impacted during the Midday peak hour, and 46 approach movements at 33 intersections would be impacted during the PM peak hour. Implementation of traffic engineering improvements such as signal timing changes or modifications to curbside parking regulations would provide mitigation for many of the anticipated traffic impacts. It is anticipated that funding from the District Improvement Fund established under the Proposed Action would be used for capital costs associated with the implementation of identified and approved traffic mitigation measures. Implementation of the recommended traffic engineering improvements is subject to review and approval by DOT, except for intersections along Route 9A, which are also subject to review and approval by the New York State Department of Transportation (NYSDOT). If, prior to implementation, DOT (or NYSDOT) determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be identified.

Table 19-1 shows that significant adverse impacts would be fully mitigated at all but 23 approach movements at 16 intersections during the AM peak hour, 13 approach movements at 9 intersections during the Midday peak hour, and 23 approach movements at 15 intersections during the PM peak hour. Table 19-2 provides a more detailed summary of the intersections and approach movements that would have significant adverse traffic impacts and specifies if the impacts would be fully mitigated. No practicable mitigation was identified for one or more approach movements at 22 impacted intersections, and impacts in one or more peak hours at these locations would remain unmitigated.

TABLE 19-1: SUMMARY OF MOVEMENTS/INTERSECTIONS WITH SIGNIFICANT ADVERSE TRAFFIC IMPACTS

Peak Hour	Movements/ Intersections Analyzed	Movements/ Intersections With No Significant Impacts	Movements/ Intersections With Significant Impacts	Mitigated Movements/ Intersections	Unmitigated Movements/ Intersections
AM	325/90	270/48	55/42	32/26	23/16
Midday	314/90	273/59	41/31	28/22	13/9
PM	326/90	280/57	46/33	23/18	23/15

Source: Parsons Brinckerhoff, Inc., 2013

Note: This table has been revised for the FEIS.

TABLE 19-2: SUMMARY OF LOCATIONS WITH SIGNIFICANT ADVERSE TRAFFIC IMPACTS

Intersection	AM Peak Hour		Midday Peak Hour		PM Peak Hour	
	Impact(s)	Mitigated	Impact(s)	Mitigated	Impact(s)	Mitigated
First Ave. @ E. 42nd St.	EB-L (East)				EB-LT (West)	No
First Ave. @ E. 46th St.			EB-L	Yes	EB-L	Yes
First Ave. @ E. 47th St.					NB-TR	Yes
First Ave. @ E. 48th St.					NB-R	No
Second Ave. @ E. 42nd St.	EB-R, WB-LT	No	EB-R, SB-L, SB-TR	No	EB-R, SB-L	No
Second Ave. @ E. 44th St.	EB-TR	Yes	EB-TR	Yes	EB-TR	Yes
Second Ave. @ E. 45th St.	WB-LT	Yes				
Second Ave. @ E. 46th St.			EB-R	Yes	EB-T, EB-R	Yes
Second Ave. @ E. 49th St.	WB-L	Yes	WB-LT	Yes	WB-L	Yes
Second Ave. @ E. 57th St.			SB-TR	Yes		
Second Ave. @ E. 59th St.	EB-T	Yes				
Third Ave. @ E. 42nd St.	WB-T, WB-R, NB-R	No	WB-R	Yes	WB-R, NB-R	No
Third Ave. @ E. 44th St.			NB-R	Yes		
Third Ave. @ E. 57th St.			NB-R	Yes		
Lexington Ave. @ E. 39th St.	WB-T	Yes				
Lexington Ave. @ E. 51st St.			WB-L	Yes		
Park Ave. @ E. 39th St.	WB-LTR	Yes	WB-LTR	Yes	WB-LTR, SB-TR	Yes
Park Ave. @ E. 40th St.			SBT-Viaduct Exit	Yes	EB-LT, SBT-Viaduct Exit	No
Park Ave. @ E. 47th St.					NB-T	Yes
Park Ave. @ E. 49th St.	WB-LT	No	WB-LT	No	WB-LT, NB-T	No
Park Ave. @ E. 51st St.					NB-T	Yes
Park Ave. @ E. 53rd St.					NB-T	No
Park Ave. @ E. 57th St.	NB-TR	Yes			NB-TR	Yes
Madison Ave. @ E. 39th St.	WB-T, WB-R	Yes	WB-R	Yes	WB-T, WB-R	Yes
Madison Ave. @ E. 40th St.	EB-L, EB-T	Yes			EB-T	Yes
Madison Ave. @ E. 42nd St.	NB-LT	Yes	NB-LT	Yes		
Madison Ave. @ E. 43rd St.	NB-L, NB-T	Yes				
Madison Ave. @ E. 44th St.	EB-LT, NB-T, NB-R	No	EB-LT, NB-T, NB-R	Yes	EB-LT, NB-R	No
Madison Ave. @ E. 45th St.	NB-T	Yes	NB-T	No	NB-T	Yes
Madison Ave. @ E. 46th St.	EB-LT, NB-T	Yes	EB-LT, NB-T	Yes	EB-LT, NB-R	No
Madison Ave. @ E. 47th St.	WB-T, NB-T	Yes	WB-T, NB-L	Yes	WB-T, WB-R	Yes
Madison Ave. @ E. 49th St.	NB-T	Yes				
Madison Ave. @ E. 51st St.	NB-T	No	NB-T	No	NB-T	No
Madison Ave. @ E. 53rd St.	NB-T	Yes	NB-T	Yes		
Madison Ave. @ E. 57th St.	NB-T	Yes				
Fifth Ave. @ 42nd St.	SB-LT	No			SB-LT	Yes
Fifth Ave. @ 43rd St.	SB-T, SB-R	No	SB-R	Yes		
Fifth Ave. @ 44th St.	SB-LT	No	EB-R, SB-LT	No	EB-R, SB-LT	No
Fifth Ave. @ 45th St.	SB-T	Yes				
Fifth Ave. @ 46th St.	EB-TR, SB-LT	No	EB-TR, SB-LT	No	EB-TR, SB-LT	No
Fifth Ave. @ 47th St.	WB-L, SB-T	No	WB-L, SB-T	No	WB-L	No
Fifth Ave. @ 48th St.	SB-LT	No	EB-R, SB-LT	No	EB-R, SB-LT	No
Fifth Ave. @ 49th St.	SB-T	Yes				
Fifth Ave. @ 50th St.	SB-LT	Yes				
Fifth Ave. @ 51st St.	SB-T	No				
Fifth Ave. @ 52nd St.	SB-LT	No	SB-LT	Yes		
Fifth Ave. @ 53rd St.	SB-T	Yes				
Fifth Ave. @ 54th St.	SB-LT	Yes				
Fifth Ave. @ 56th St.	SB-LT	Yes				
Fifth Ave. @ 57th St.	SB-LT	No				
Fifth Ave. @ 59th St.	SB-LT	No	SB-LT	No	SB-LT	No
Sixth Ave. @ W. 40th St.	NB-TR	No	EB-LT	Yes	NB-R	Yes
Sixth Ave. @ W. 42nd St.	WB-R	Yes	WB-R	Yes	WB-R	Yes
Sixth Ave. @ W. 44th St.					NB-R	Yes
Sixth Ave. @ W. 45th St.			WB-R	Yes		
Sixth Ave. @ W. 46th St.					NB-R	Yes
Route 9A @ W. 56th St.	NB-T	Yes				

Notes:
NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound
L = Left-Turn; T = Through; R = Right-Turn
Mitigation = Mitigation Provided; Unmitigatable Impacts are highlighted

Source: Parsons Brinckerhoff, Inc., 2013

Note: This table has been revised for the FEIS.

19.2.3.2 Transit

a. Bus

The Proposed Action would result in capacity shortfalls of 64 spaces on eastbound M42 service in the AM peak hour and 56 spaces on westbound M42 service in the PM peak hour. These significant adverse impacts to M42 local bus service could be fully mitigated by the addition of two standard buses in the eastbound direction in the AM peak hour and two in the westbound direction in the PM. Alternatively, conversion of the M42 route to articulated bus service could be another option for providing needed capacity.

The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints. Based on NYCT's ongoing passenger monitoring program and as new development occurs throughout the study area, a comprehensive service plan would be generated to respond to specific, known needs with capital and/or operational improvements where fiscally and operationally practicable. NYCT's capital program is developed on a five-year cycle; through this program, expansion of bus services would be provided as needs are determined. It is therefore anticipated that NYCT would increase service frequency on the M42 route to address its capacity shortfalls.

19.2.4 Pedestrians

Incremental demand from the Proposed Action would significantly adversely impact a total of two sidewalks, 25 crosswalks and eight corner areas in one or more peak hours. It is anticipated that funding from the District Improvement Fund established under the Proposed Action would be used for capital costs associated with the implementation of identified and approved pedestrian mitigation measures. Implementation of the recommended pedestrian engineering improvements is subject to review and approval by DOT. If, prior to implementation, DOT determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be identified.

19.2.4.1 Sidewalks

Two of the 27 analyzed sidewalks are expected to be significantly adversely impacted during the AM and PM peak hours – the north sidewalk on East 43rd Street between Vanderbilt and Madison Avenues, and the north sidewalk on East 43rd Street between Madison and Fifth Avenues. Widening the segment of the north sidewalk between Vanderbilt and Madison Avenues by 1.5 feet adjacent to the location of security bollards at a Metro-North entrance would fully mitigate all significant impacts to this sidewalk. The significant impacts to the north sidewalk between Madison and Fifth Avenues would be fully mitigated by removing two of the tree pits located along this sidewalk. No unmitigated significant adverse sidewalk impacts would remain upon incorporation of these recommended mitigation measures.

19.2.4.2 Crosswalks

Twenty-five of the 76 crosswalks analyzed would be significantly adversely impacted by new pedestrian demand generated by the Proposed Action in one or more peak hours. Some of these impacts would be worsened, and additional impacts created, by signal timing changes recommended as traffic mitigation and sidewalk extensions recommended as corner mitigation. Measures recommended to mitigate these crosswalk impacts generally consist of crosswalk widening and/or minor signal timing adjustments. With the recommended mitigation measures, the significant crosswalk impacts at 23 of the 25 impacted crosswalks would be fully mitigated. However, as shown in Table 19-3, no practicable mitigation was identified for impacts at a total of two crosswalks, and impacts in one or more peak hours at these locations would remain unmitigated.

TABLE 19-3: UNMITIGATED PEDESTRIAN IMPACTS

Intersection	Impacted Element	Peak Hour With Unmitigated Impacts		
		AM	Midday	PM
Third Ave/East 42nd Street	NW Corner	X		
Lexington Ave/East 50th Street	NW Corner			X
Madison Ave/East 45th Street	North Crosswalk	X		
Madison Ave/East 43rd Street	NE Corner	X	X	
Madison Ave/East 42nd Street	NW Corner	X		X
Fifth Ave/ East 46th Street	South Crosswalk			
Fifth Ave/ East 44th Street	South Crosswalk			
Fifth Ave/ East 42nd Street	South Crosswalk	X		X

Note: This table has been revised for the FEIS.

19.2.4.3 Corner Areas

Eight of the 62 analyzed corner areas would be significantly adversely impacted in one or more peak hours as a result of new demand generated by the Proposed Action. Some of these significant corner impacts would be worsened by signal timing changes recommended as traffic mitigation. The proposed mitigation measures generally consist of removing sidewalk furniture from the corner area and installing six-foot sidewalk extensions (bulb outs) to increase the available pedestrian space. (Bulb outs were found to be infeasible at some locations due to their effects on traffic flow or the presence of curbside bus lanes.) With the recommended mitigation measures, the significant impacts at four of the eight impacted corner areas would be fully mitigated. However, as shown in Table 19-4, no practicable mitigation was identified for impacts at a total of four corner areas, and impacts in one or more peak hours at these locations would remain unmitigated.

19.2.5 Construction

19.2.5.1 Historic and Cultural Resources

As discussed in Chapter 18, "Construction," development under the Proposed Action—specifically, on Projected Development Sites 3, 6, 9, 10, 12, and 16, and Potential Development Sites 2-7, 12, 13, 15, and 20—could result in inadvertent construction-related damage to 24 NYCL- and/or S/NR-eligible historic resources, as they are located within 90 feet of projected and/or potential development sites. If these eligible resources are designated in the future prior to the initiation of construction, the protective measures of New York City Department of Buildings (DOB) Technical Policy and Procedure Notice (TPPN) #10/88 would apply and indirect significant adverse impacts resulting from construction would be avoided. Should they remain undesignated, however, the additional protective measures of TPPN #10/88 would not apply, and the potential for significant adverse construction-related impacts would not be mitigated.

In order to make TPPN #10/88 or similar measures applicable to eligible historic resources in the absence of a site-specific approval, such as a Special Permit with an accompanying restrictive declaration, a mechanism would have to be developed to ensure implementation and compliance, since it is not known and cannot be assumed that owners of these properties would voluntarily implement this mitigation. DCP, as lead agency, explored the viability of this mitigation measure between Draft EIS and Final EIS. The CPC is currently considering a proposed modification to the zoning text amendment which would require, prior to excavation or demolition pursuant to the Proposed Action on a Projected or Potential Development Site located within 90 feet of an eligible resource, that the Commissioner of Buildings have approved a construction monitoring protocol of similar scope and purpose to the provisions of TPPN #10/88. In the event this modification is adopted, significant adverse historic resources impacts resulting from construction activities under the Proposed Action would be fully mitigated.

19.2.5.2 Traffic

As described in Chapter 18, "Construction," construction-related traffic would have significant adverse impacts to nine intersections during the 6:00–7:00 am peak hour. Implementation of traffic engineering improvements such as signal timing changes or modifications to curbside parking regulations would provide mitigation for all but two of the anticipated traffic impacts. In the absence of the application of mitigation measures, these two construction-related traffic impacts would remain unmitigated.

19.2.5.3 Construction Noise

As discussed in Chapter 18, "Construction," construction activities associated with the Proposed Action would occur on multiple development sites within the same geographic area and, as the result, has the potential to increase interior noise levels of existing adjacent commercial buildings. In particular, simultaneous construction at Projected Development Sites 5, 6 and 7, would likely result in increases that would approach or marginally exceed the impact threshold for short periods of time and has the potential

to do so during other construction quarters bordering the peak construction period. Therefore, if the peak construction scenario conservatively assumed for the purposes of this analysis with regard to simultaneous construction on Projected Development Sites 5, 6 and 7 is realized, the Proposed Action would result in a significant adverse construction noise impact.

Partial mitigation for construction noise impacts could include, in addition to the requirements under the New York City Noise Control Code, noise barriers, use of low noise emission equipment, locating stationary equipment as far as feasible away from receptors, enclosing areas, limiting the duration of activities, specifying quiet equipment, scheduling of activities to minimize impacts (either time of day or seasonal considerations), and locating noisy equipment near natural or existing barriers that would shield sensitive receptors.

The CPC is currently considering a modification to the proposed zoning text amendment which would provide that no demolition or excavation work may be issued for development of Projected Sites 5, 6, or 7 as qualified sites under the rezoning unless the Chairperson of the CPC has certified either a) that the simultaneous construction of Projected Sites 5, 6 and 7 conservatively analyzed in the EIS is not anticipated to occur; or, b) that a restrictive declaration has been executed and recorded providing for implementation during construction of the noise path and control measures described above, except to the extent determined by the Chair to be infeasible or impracticable due to site specific conditions. This provision, if adopted by the CPC, would partially mitigate the potential for significant adverse noise impacts during construction.

The proposed modifications to the zoning text amendment discussed above are considered partial mitigations only. Consequently, these impacts would not be completely eliminated and they would constitute an unmitigated significant adverse construction noise impact.

19.3 SHADOWS

As discussed in Chapter 5, "Shadows," the Proposed Action would result in significant adverse shadows impacts on three historic architectural resources, namely St. Bartholomew's Church and Community House, Lady Chapel of St. Patrick's Cathedral, and Christ Church United Methodist. There would be no significant adverse shadows impacts on open spaces.

The sunlight-sensitive stained-glass windows of St. Bartholomew's Church and Community House would experience significant adverse shadows impacts on the May 6th and June 21st analysis days. Since the stained-glass windows are all experienced within a single large interior space, as opposed to multiple spaces where each individual space experiences only a portion of the windows, the assessment of the potential impact caused by the incremental shadows considered the cumulative effect on all of the windows together. On the May 6th analysis day, between 8:02 a.m. and 8:40 a.m., the effect of the

incremental shadows—cast by Projected Development Site 12 and Potential Development Site 14 on the building's northern and southern facades, respectively—would be to completely eliminate all direct sunlight on the building's stained-glass windows. Incremental shadows from these sites would also affect stained-glass windows between 3:05 p.m. to 4:14[1] p.m., again eliminating all direct sunlight on the building's stained-glass windows. On the June 21st analysis day, between 3:23 p.m. and 3:55 p.m., the effect of the incremental shadows—cast by Projected Development Site 12—would be to completely eliminate all direct sunlight on the building's stained-glass windows. The incremental shadows that would be cast on these two analysis days would result in a reduction in sunlight available for the enjoyment or appreciation of the building's stained-glass windows, and thus the incremental shadows are considered significant adverse shadows impacts.

The stained-glass windows of the Lady Chapel of St. Patrick's Cathedral, which is experienced as a distinct space within the Cathedral, would experience significant adverse shadows impacts on the March 21st analysis day. During this analysis day, Projected Development Site 12 would remove sunlight from the windows on the southern and eastern façades starting at 10:07 a.m. until 10:58 a.m., thereby removing all remaining sunlight for this period. Lady Chapel would continue to experience sunlight at other times of the day—from 11:58 a.m. to 1:24 p.m., and from 1:28 p.m. to 2:40 p.m.; a total two hours and thirty eight minutes. Given that the incremental shadow from Projected Development Site 12 would eliminate remaining sunlight on the resource during the morning, and that the incremental shadow would remove nearly a quarter of the sunlight on this analysis day as a whole, this incremental shadow would be considered a significant adverse impact.

The stained-glass windows of the Christ Church United Methodist building would experience a significant adverse shadows impact on the December 21st analysis day. During this analysis day, the incremental shadow would be cast by Projected Development Site 18 on the eastern façade of Christ Church United Methodist for approximately 21 minutes from 12:59 p.m. to 1:20 p.m., covering the stained-glass windows along the building's Park Avenue frontage. Between 1:04 p.m. and 1:18 p.m., all of the building's stained-glass windows would be completely covered by shadow. Since the incremental shadow would completely eliminate all direct sunlight on the sunlight-sensitive features of this resource, albeit for a brief duration of approximately 14 minutes, it could have the potential to affect the public's enjoyment of these features. The limited duration of the incremental shadow is considered substantial in this case because in the No-Action condition the building's sunlight-sensitive features would only be exposed to sunlight for approximately 53 minutes, from 12:55 p.m. to 1:48 p.m.; thus the incremental shadow would result in a substantial reduction of available sunlight. As such, the incremental shadow is considered a significant adverse shadows impact.

[1] This and the following sentence has been added to correct the description of the impact and make it consistent with what was disclosed in the DEIS Shadows Chapter.

The Proposed Action was assessed for possible mitigation measures in accordance with CEQR guidelines. Several ways in which shadow impacts on architectural resources can be mitigated were identified by the DCP, including:

- Relocating the action, (i.e. avoiding the incremental shadows cast on the sunlight-sensitive features altogether by moving the proposed project away from the features.
- Reducing or eliminating the incremental shadows cast on the sunlight-sensitive features by modifying building bulk regulations for the three development sites that result in the significant adverse impacts.
- Providing indirectly mounted artificial lighting on St. Bartholomew's Church and Community House, Lady Chapel and Christ Church United Methodist.

Relocating the Proposed Action so that it does not cast an incremental shadow on these historic resources (e.g., by removing all or portions of the projected and potential development sites from the rezoning proposal) is not a practical solution from a zoning standpoint. Further, removal of f the development sites from the proposal would be inconsistent with the overall purpose and need of the Proposed Action.

Between Draft and Final EIS, the lead agency explored whether changes to the bulk regulations governing Projected Development Site 12, Potential Development Site 14, and Projected Development Site 18 that would reduce or eliminate the incremental shadow that causes the impact are feasible. The building massing used for analysis purposes assumed these sites would maximize their building floorplate sizes under the existing height and setback regulations so as to develop commercially-viable buildings. If the height and setback regulations were modified on these sites to permit larger building floorplates that would in turn allow for the permitted floor area to be accommodated in buildings at lower heights, the resulting building form would conflict with the underlying intent of Midtown height and setback regulations which are designed to ensure pedestrian access to light and air. Further, the reduction in the permitted FAR on these sites that would be required to reduce or eliminate the shadow impacts would make development under the Proposed Action infeasible, and thus not be consistent with the goals and purposes of the proposed action to encourage the development of new commercial buildings in the area.

Another measure would be to provide for measures that would serve as a substitute for the direct sunlight on these sun-sensitive features. In order to adopt such measures in the absence of a site-specific approval, such as a Special Permit with an accompanying restrictive declaration, a mechanism would have to be developed to ensure implementation and compliance, since it is not known and cannot be assumed that owners of these properties would voluntarily implement this mitigation. In consultation with staff of the New York City Landmarks Preservation Commission, DCP, as lead agency, explored the viability of this mitigation measure between Draft EIS and Final EIS. It was determined that techniques exist for artificial lighting, as well as for the reflection of natural light through architectural features or reflective panels, that could potentially serve as a partial substitute for the loss of direct sunlight.

To allow for the potential installation of such features, the CPC is currently considering a modification to the zoning text amendment that would require, prior to the issuance of a New Building Permit for development of Projected Development Sites 12 and 18, and Potential Development Site 14, that the developer provide the DCP with a shadow analysis identifying the incremental shadows cast by the proposed building on the affected resource, and that the Chairperson of the Commission, acting in consultation with the Chair of the Landmarks Preservation Commission, certify to the Commissioner of Buildings either: a) that a plan for such features has been developed and will be implemented; or, b) that such a plan is not feasible or is impracticable, would negatively affect the character or integrity of the historic resource, or has not been accepted by the owner of the resource.

In the event that a plan for artificial lighting or reflection of natural light were developed and implemented pursuant to this provision, significant adverse shadows impacts under the Proposed Action would be partially mitigated. Absent such a plan, the Proposed Action's significant adverse shadows impacts would be wholly unmitigated (refer to Chapter 22, "Unavoidable Adverse Impacts".

19.4 HISTORIC AND CULTURAL RESOURCES

As discussed in Chapter 6, "Historic and Cultural Resources," the Proposed Action could result in significant adverse impacts due to potential partial or complete demolition of NYCL- and S/NR-eligible historic resources located on Projected Development Sites 6, 7, 9, and 16 and Potential Development Sites 2, 5, 9, 12, 13, and 19. As the RWCDS for the Proposed Action anticipates that the existing structures on these sites would be demolished, either partially or entirely, as a consequence of the Proposed Action, this would result in significant adverse direct impacts to these NYCL- and S/NR-eligible resources. The Proposed Action is anticipated to result in direct adverse impacts to the following 14 eligible historic resources:

- The NYCL-eligible Title Guarantee and Trust Company building at 6 East 45th Street (Projected Development Site 6);
- The S/NR-eligible 346 Madison Avenue Building (Projected Development Site 6);
- The NYCL-eligible Yale Club at 50 Vanderbilt Avenue (Projected Development Site 7);
- The S/NR-eligible 52 Vanderbilt Avenue Building (Projected Development Site 7);
- The NYCL- and S/NR-eligible Roosevelt Hotel at 45 East 45th Street (Projected Development Site 9);
- The S/NR-eligible Barclay Hotel at 111 East 48th Street (Projected Development Site 16);
- The NYCL-eligible American Encaustic Tiling Co. building at 16 East 41st Street (Potential Development Site 2);
- The NYCL-eligible building at 18-20 East 41st Street (Potential Development Site 2);
- The NYCL-eligible building at 22-24 East 41st Street (Potential Development Site 2);

- The NYCL- and S/NR-eligible Postum Building at 250 Park Avenue (Potential Development Site 5);
- The NYCL- and S/NR-eligible Pershing Square building at 100 East 42nd Street (Potential Development Site 9);
- The NYCL-eligible Lexington Hotel at 509-511 Lexington Avenue (Potential Development Site 12);
- The NYCL-eligible Shelton Club Hotel at 525 Lexington Avenue (Potential Development Site 13); and
- The NYCL-eligible Girl Scout Building at 830 Third Avenue (Potential Development Site 19).

The *CEQR Technical Manual* identifies several ways in which impacts on architectural resources can be mitigated, including: redesigning the action so that it does not disturb the resource; relocating the action to avoid the resource altogether; contextual redesign of a project that does not actually physically affect an architectural resource but would alter its setting; adaptive reuse to incorporate the resource into the project rather than demolishing it; or a construction protection plan to protect historic resources that may be affected by construction activities related to a proposed action. Redesigning or relocating the Proposed Action so that it does not disturb the eligible resources located on Projected Development Sites 6, 7, 9, and 16 and Potential Development Sites 2, 5, 9, 12, 13, and 19 (e.g., by eliminating these development sites from the rezoning proposal) would be inconsistent with the overall purpose and need of the Proposed Action and is considered infeasible and impracticable as it would result in an incoherent zoning plan that would not allow for the establishment of an area-wide East Midtown Subdistrict. Contextual redesign, adaptive reuse and the use of a construction protection plan are not available as mitigation measures, given the nature of the Proposed Action as an area-wide rezoning.

Other mitigation measures identified in the *CEQR Technical Manual* that could minimize or reduce these impacts include photographically documenting the eligible structures in accordance with Historic American Buildings Survey (HABS) level II, as per National Park Service standards. The scope of work for documentation would be submitted to the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) and/or the New York City Landmarks Preservation Commission (LPC) for approval prior to any demolition. Two copies of the completed documentation would be submitted to OPRHP, one of which would be for archival storage in the New York State Archives and the other for retention in OPRHP files, and a third copy of the documentation would also be provided to the Museum of the City of New York. A fourth copy would be submitted to LPC, and, in addition, an online digital archive would be produced and transmitted to the New York Public Library for permanent inclusion in its database. Further, an interpretive exhibit could be produced within the lobby of new construction, using the completed HABS documentation as a starting point. The exhibit design would be submitted to OPRHP and LPC for review and approval prior to execution and installation. With implementation of the HABS documentation measure, and the related measure to create an interpretive exhibit, the identified significant adverse direct impact to historic architectural resources would be partially mitigated. In order to adopt these measures in the absence of a site-specific approval, such as a Special

Permit with an accompanying restrictive declaration, a mechanism would have to be developed to ensure implementation and compliance since it is not known and cannot be assumed that owners of these properties would voluntarily implement this partial mitigation. Of the 9 development sites that qualify for the Special Permit for superior development under the Proposed Action, only three sites—Projected Development Sites 4, 7, and 9—contain an eligible resource and it is not known if the redevelopment of Projected Development Sites 4, 7, or 9 under the Proposed Action would seek to utilize the Special Permit or that the Special Permit would be granted by the CPC.

DCP, as lead agency, explored the viability of these mitigation measures between Draft EIS and Final EIS. The CPC is currently considering a modification to the zoning text amendment that would require, prior to any demolition of an eligible structure, which has not been calendared or designated by the Landmarks Preservation Commission, as part of development undertaken on Projected Development Sites 6,7, 9 and 16 and Potential Development Sites 2,5,9,12,13 and 19 pursuant to the Proposed Action, that the developer conduct and complete HABS recordation in a manner acceptable to the Landmarks Preservation Commission. In the event this modification is adopted, significant adverse impacts resulting from the demolition of eligible resources not calendared or designated by the Landmarks Preservation Commission would be partially mitigated.

For those structures that are NYCL-eligible—which include all but the Barclay Hotel, the 346 Madison Avenue Building, and the 52 Vanderbilt Avenue Building—LPC may elect to calendar, and then conduct a hearing and designate the structures, either in whole or in part, as landmark buildings. Should the DOB issue a notice of pending demolition to LPC with respect to a calendared building, LPC would have 40 days to decide whether to designate. During this period, the owners of the property may work with LPC to modify their plans to make them appropriate. In the event that landmark designation is approved, LPC approval would be required for any alteration or demolition of the designated structures. Designation would avoid the potential for impacts to the eligible resources. However, as the potential for use and results of any designation process cannot be assumed or predicted, designation is not considered a mitigation measure herein.

In addition, those structures that are S/NR-eligible are given a measure of protection under Section 106 of the National Historic Preservation Act from the impacts of projects sponsored, assisted, or approved by federal agencies. Although preservation is not mandated, federal agencies must attempt to avoid adverse impacts on such resources through a notice, review, and consultation process. Additionally, the OPRHP could elect to designate these structures as S/NR-listed properties. Properties listed on the Registers are similarly protected against impacts resulting from projects sponsored, assisted, or approved by state agencies under the State Historic Preservation Act. However, private owners of properties eligible for, or even listed on, the Registers using private funds can alter or demolish their properties without such a review process. Redevelopment under the Proposed Action of the sites containing S/NR-eligible

structures is expected to be privately sponsored. Further, the potential for use and results of any designation process cannot be assumed or predicted, and S/NR designation is therefore not considered a mitigation measure herein.

The modification to the zoning text amendment described above, if adopted, would only be considered partial mitigation. Consequentially, these impacts would not be completely eliminated they would constitute unavoidable significant adverse impacts on these historic resources as a result of the Proposed Action (refer to Chapter 22, "Unavoidable Adverse Impacts").

19.5 TRAFFIC

As described in Chapter 12, "Transportation," the Proposed Action would result in significant adverse traffic impacts at 57 study area intersections during one or more analyzed peak hours; specifically 55 approach movements at 42 intersections during the AM peak hour, 41 approach movements at 31 intersections during the Midday peak hour, and 46 approach movements at 33 intersections during the PM peak hour.

As demonstrated below, most of these impacts could be mitigated through the implementation of traffic engineering improvements, including:

- Modification of traffic signal phasing and/or timing;
- Elimination of on-street parking within 100 feet of intersections to add a limited travel lane, known as "daylighting";
- Channelization and lane designation changes to make more efficient use of available street widths.

All of these improvements are low-cost, readily implementable measures that conform to the guidelines of the New York City Department of Transportation (DOT)'s *2009 Street Design Manual*. The types of mitigation measures proposed herein are standard measures that are routinely identified by the City and considered feasible for implementation. It is anticipated that funding from the District Improvement Fund established under the Proposed Action would be used for capital costs associated with the implementation of identified and approved traffic mitigation measures.

Table 19-4 through Table 19-6 summarize the recommended mitigation measures for each of the intersections with significant adverse traffic impacts during the AM, Midday, and PM peak hours, respectively. These tables also include the pedestrian mitigation measures described in Section 19.7 that have the potential to affect traffic conditions. Implementation of the recommended traffic engineering improvements is subject to review and approval by DOT, except for intersections along Route 9A, which is also subject to review and approval by the New York State Department of Transportation (NYSDOT).

If, prior to implementation, DOT (or NYSDOT) determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be identified. In the absence of the application of mitigation measures, the impacts would remain unmitigated.

TABLE 19-4: AM PROPOSED TRAFFIC MITIGATION MEASURES

Intersection	Movement	No-Action	With-Action	Change	Proposed Mitigation	
First Avenue @ East 42nd Street (East and West Sides)	NB (East Side):	LT (16'), R (12.2')	LT (16'), R (12.2')	Restriping	LT (16'), R (13')	Restriping
	EB / WB Ped Crossing:	9	9	0	9	
	EB LT / WB TR: G=	31	31	1	32	
	NB LTR: G=	40	40	-1	39	
Second Avenue @ East 42nd Street	EB TR / WB LT: G=	32	32			**Impacts cannot be fully mitigated in this time period.**
	NB / SB Ped Crossing: G=	7	7			
	SB LTR: G=	41	41			
Second Avenue @ East 44th Street	EB TR: G=	27	27	3	30	
	SB LT: G=	53	53	-3	50	
Second Avenue @ East 45th Street	WB LT: G=	27	27	1	28	
	SB TR: G=	53	53	-1	52	
Second Avenue @ East 49th Street	EB / WB Ped Crossing:	7	7		7	
	WB LT: G=	25	25	1	26	
	SB TR: G=	48	48	-1	47	
Second Avenue @ East 59th Street	EB:	1 T (11.1'), 1 T (11.2'), 1 TR (11.0')	1 T (11.1'), 1 T (11.2'), 1 TR (11.0')	Restriping	1 T (11.6'), 1 T (11.7'), 1 TR (10.0')	
Third Avenue @ East 42nd Street	EB / WB Ped Crossing:	6	6			**Impacts cannot be fully mitigated in this time period.**
	EB T / WB TR: G=	21	21			
	EB LT: G=	13	13			
	NB LTR: G=	35	35			
Third Avenue @ East 57th Street*	NB:	T (9.9'), T (9.8'), T (9.7'), T (11.1'), TR (11.1'), R (10.9')	T (9.9'), T (9.8'), T (9.7'), T (11.1'), TR (11.1'), R (10.9')	Restriping	T (9.9'), T (9.8'), T (9.7'), T (11.1'), TR (10.5'), R (11.5')	Restriping as per MD mitigation
Lexington Avenue @ East 39th Street	WB:	1 L, 1 T	1 L, 1 T	Daylighting	1 L, 2 T	Implement No Standing 7am-10am Mon-Fri along the north curb of 39th St for 100 feet of the WB approach and the block between Lexington and Park Avenues. This would result in the elimination of up to 19 commercial parking spaces.
Lexington Avenue @ East 50th Street **	EB:	3 TR	3 TR	Parking lane added to south curb of EB approach	2 TR	Bulbout installed at SW corner of intersection, on 50th Street approach, as part of pedestrian mitigation
Park Avenue @ East 39th Street	WB:	1 LTR (12.5')	1 LTR (12.5')	Daylighting	1 LT (10'), 1 TR (11')	Daylighting as per mitigation for Lexington Avenue and 39th Street. Implement No Standing 7am-10am Mon-Fri along the north curb of 39th Street between Lexington and Park Avenues.
Park Avenue @ East 49th Street	WB: G=	36	36			**Impacts cannot be fully mitigated in this time period**
	NB/SB: G=	43	43			
Park Avenue @ East 57th Street	WB: G=	34	34	-1	33	
	NB/SB: G=	46	46	1	47	
Madison Avenue @ East 39th Street	NB:	3 LT	3 LT	Daylighting and restriping, creating a left turn lane	1 L (11.3'), 3 LT (11.1')	Implement No Standing Anytime for 100 feet along the west curb of Madison Avenue to create an exclusive left lane. This would result in the elimination of up to 3 commercial parking spaces.
	WB:	1 T (12.9'), 1 R (9.1')	1 T (12.9'), 1 R (9.1')	Restriping	1 T (12.0'), 1 R (10.0')	
	WB T: G=	23	23	0	23	
	WB TR: G=	13	13	4	17	
	NB LT: G=	44	44	-4	40	

TABLE 19-4: AM PROPOSED TRAFFIC MITIGATION MEASURES (CONTINUED)

Intersection	Movement	No-Action	With-Action	Change	Proposed Mitigation	
Madison Avenue @ East 40th Street	EB T: G= EB L & T: G= NB: G=	23 13 44	23 13 44	0 1 -1	23 14 43	
Madison Avenue @ East 42nd Street	NB:	2 LT, 1 R	2 LT, 1 R	Daylighting	3LT, 1 R	Implement No Standing 7am-1pm for 100 feet along the west curb of Madison Ave NB approach and extend it to 43rd St to create a left/ thru lane for NB approach. This would result in the elimination of up to 10 commercial parking spaces.
Madison Avenue @ East 43rd Street	EB TR: G= NB LT: G=	35 45	35 45	-2 2	33 47	
Madison Avenue @ East 44th Street*	EB:	1 P (9'), 1 B (4.9'), 1 LT (11'), 1 P (8.9')	1 P (9'), 1 B (4.9'), 1 LT (11'), 1 P (8.9')	Daylighting and restriping, creating a left turn lane	L (10'), 1 B (4.9'), 1 T (10'), 1 P (8.9')	Create an EB left turn lane on this approach by prohibiting standing along north curb of EB approach, for 100 feet up to face of the intersection as per MD mitigation. This would result in the elimination of up to 4 commercial parking spaces. **Impacts cannot be fully mitigated in this time period.**
Madison Avenue @ East 45th Street	WB TR: G= NB LT: G=	35 45	35 45	-4 4	31 49	
Madison Avenue @ East 46th Street	EB:	1 LT	1 LT	Enforcement of of existing parking regulations	2 LT	Enforcement of of existing parking regulations (No Standing 7am-6pm Mon-Fri) along the north curb of EB approach.
	EB LT: G= NB TR: G=	35 45	35 45	-4 4	31 49	
Madison Avenue @ East 47th Street	WB:	1 T, 1 R	1 T, 1 R	Daylighting	2 T, 1 R	Implement No Standing 7am-7pm Mon-Fri for 100 feet along the south curb of WB approach, and along south curb of 47th Street between Madison & Fifth Avenues. This would result in the elimination of up to 16 commercial parking spaces.
	WB T: G= WB TR: G= NB LT: G=	23 14 43	23 14 43	0 -3 3	23 11 46	
Madison Avenue @ East 49th Street	EB TR: G= NB LT: G=	35 45	35 45	-2 2	33 47	
Madison Avenue @ East 51st Street	EB T: G= EB TR: G= NB LT: G=	23 14 43	23 14 43		23 14 43	**Impacts cannot be fully mitigated in this time period.**
Madison Avenue @ East 53rd Street	WB TR: G= NB LT: G=	35 45	35 45	-2 2	33 47	
Madison Avenue @ East 57th Street	EB LT / WB TR: G= NB LTR: G=	35 45	35 45	-1 1	34 46	

TABLE 19-4: AM PROPOSED TRAFFIC MITIGATION MEASURES (CONTINUED)

Intersection	Movement	No-Action	With-Action	Change	Proposed Mitigation	
Fifth Avenue @ 42nd Street	EB / WB: G= SB: G=	35 45	35 45			**Impacts cannot be fully mitigated in this time period.**
Fifth Avenue @ 43rd Street	WB LT: G= SB TR: G=	35 45	35 45			**Impacts cannot be fully mitigated in this time period.**
Fifth Avenue @ 44th Street	EB: G= SB LT: G=	35 45	35 45			**Impacts cannot be fully mitigated in this time period.**
Fifth Avenue @ 45th Street	WB LT: G= SB TR: G=	35 45	35 45	-4 4	31 49	
Fifth Avenue @ 46th Street	EB TR: G= SB LT: G=	35 45	35 45			**Impacts cannot be fully mitigated in this time period.**
Fifth Avenue @ 47th Street	WB T: G= WB LT: G= SB TR: G=	24 15 41	24 15 41			**Impacts cannot be fully mitigated in this time period.**
Fifth Avenue @ 48th Street	EB T: G= EB TR: G= SB LT: G=	24 15 41	24 15 41	0 -2 2	24 13 43	**Impacts cannot be fully mitigated in this time period.**
Fifth Avenue @ 49th Street	WB LT: G= SB TR: G=	35 45	35 45	-2 2	33 47	
Fifth Avenue @ 50th Street	EB TR: G= SB LT: G=	35 45	35 45	-2 2	33 47	
Fifth Avenue @ 51st Street	WB T: G= WB LT: G= SB TR: G=	24 15 41	24 15 41			**Impacts cannot be fully mitigated in this time period.**
Fifth Avenue @ 52nd Street	EB T: G= EB TR: G= SB LT: G=	24 15 41	24 15 41			**Impacts cannot be fully mitigated in this time period.**
Fifth Avenue @ 53rd Street	WB LT: G= SB TR: G=	35 45	35 45	-2 2	33 47	
Fifth Avenue @ 54th Street	EB TR: G= SB LT: G=	35 45	35 45	-2 2	33 47	
Fifth Avenue @ 56th Street	EB TR: G= SB LT: G=	35 45	35 45	-2 2	33 47	
Fifth Avenue @ 57th Street	EB TR / WB LT: G= SB LTR: G=	35 45	35 45			**Impacts cannot be fully mitigated in this time period.**
Fifth Avenue @ 59th Street	EB T: G= EB TR: G= SB LT: G=	23 15 42	23 15 42			**Impacts cannot be fully mitigated in this time period.**
Sixth Avenue @ West 40th Street	EB / WB Ped Crossing: EB: G= NB: G=	7 35 38	7 35 38			**Impacts cannot be fully mitigated in this time period.**
Sixth Avenue @ West 42nd Street	EB LT / WB TR: G= NB LTR: G=	31 49	31 49	2 -2	33 47	
Sixth Avenue @ West 45th Street*	WB:	1 T (11'), 1R (12')	1 T (11'), 1R (12')	Restriping	1T (10.5'), 1R (12.5')	Restriping as per MD mitigation
Route 9A @ West 56th Street	NB T / SB T: G= SB LT: G=	68 69	68 69	1 -1	69 68	

Note:

"G" indicates amount of green phase time, in seconds.

NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound

L = Left-Turn; T = Through; R = Right-Turn

(*) Intersection modified due to improvement in other time period or adjacent intersection.

(**) Changes are due to pedestrian mitigation measures.

Source: Parsons Brinckerhoff, Inc., 2013

Note: This table has been revised for the FEIS.

TABLE 19-5: MIDDAY PROPOSED TRAFFIC MITIGATION MEASURES

Intersection	Movement	No-Action	With-Action	Change	Proposed Mitigation	
First Avenue @ East 42nd Street (East and West Sides)*	NB (East Side):	LT (16'), R (12.2')	LT (16'), R (12.2')	Restriping	LT (16'), R (13')	Restriping as per AM mitigation
	EB / WB Ped Crossing:	9	9			
	EB LT / WB TR: G=	31	31			
	NB LTR: G=	40	40			
First Avenue @ East 46th Street	EB LT: G=	35	35	3	38	
	NB TR: G=	45	45	-3	42	
Second Avenue @ East 42nd Street	EB TR / WB LT: G=	32	32			**Impacts cannot be fully mitigated in this time period.**
	NB / SB Ped Crossing: G=	7	7			
	SB LTR: G=	41	41			
Second Avenue @ East 44th Street	EB TR: G=	27	27	1	28	
	SB LT: G=	53	53	-1	52	
Second Avenue @ East 46th Street	EB TR: G=	27	27	2	29	
	SB LT: G=	53	53	-2	51	
Second Avenue @ East 49th Street	EB / WB Ped Crossing:	7	7	0	7	
	WB LT: G=	25	25	1	26	
	SB TR: G=	48	48	-1	47	
Second Avenue @ East 57th Street	EB / WB Ped Crossing:	7	7	0	7	
	EB TR: G=	21	21	0	21	
	WB LT: G=	11	11	-2	9	
	SB LTR: G=	36	36	2	38	
Second Avenue @ East 59th Street *	EB:	1 T (11.1'), 1 T (11.2'), 1 TR (11.0')	1 T (11.1'), 1 T (11.2'), 1 TR (11.0')	Restriping	1 T (11.6'), 1 T (11.7'), 1 TR (10.0')	Restriping as per AM mitigation measure
Third Avenue @ East 42nd Street	EB / WB Ped Crossing:	6	6	0	6	
	EB T / WB TR: G=	21	21	1	22	
	EB LT: G=	13	13	0	13	
	NB LTR: G=	35	35	-1	34	
Third Avenue @ East 44th Street	EB LT: G=	35	35	-1	34	
	NB LT: G=	45	45	1	46	
Third Avenue @ East 57th Street	NB:	T (9.9'), T (9.8'), T (9.7'), T (11.1'), TR (11.1'), R (10.9')	T (9.9'), T (9.8'), T (9.7'), T (11.1'), TR (11.1'), R (10.9')	Restriping	T (9.9'), T (9.8'), T (9.7'), T (11.1'), TR (10.5'), R (11.5')	Restriping
Lexington Avenue @ East 50th Street **	EB:	3 TR	3 TR	Parking lane added to south curb of EB approach	2 TR	Bulbout installed at SW corner of intersection, on 50th Street approach, as part of pedestrian mitigation
Lexington Avenue @ East 51st Street	WB T: G=	23	23		23	
	WB L: G=	14	14	1	15	
	SB TR: G=	43	43	-1	42	

TABLE 19-5: MIDDAY PROPOSED TRAFFIC MITIGATION MEASURES (CONTINUED)

Intersection	Movement	No-Action	With-Action	Change	Proposed Mitigation	
Park Avenue @ East 39th Street	WB:	1 LTR (12.5')	1 LTR (12.5')	Daylighting	1 LT (10'), 1 TR (11')	Implement No Standing 7am- 7pm Mon-Fri for 100 feet along the north curb of 39th Street westbound approach. This would result in the elimination of up to 3 commercial parking spaces.
Park Avenue @ East 40th Street	EB: G=	32	32	-1	31	
	NB/SB: G=	48	48	1	49	
Park Avenue @ East 49th Street	WB: G=	36	36			**Impacts cannot be fully mitigated in this time period**
	NB/SB: G=	43	43			
Madison Avenue @ East 39th Street *	WB:	1 T (12.9'), 1 R (9.1')	1 T (12.9'), 1 R (9.1')	Restriping	1 T (12.0'), 1 R (10.0')	Restriping
	NB:	3 LT	3 LT	Daylighting and restriping, creating a left turn lane	1 L (11.3'), 3 LT (11.1')	Daylighting and restriping as per AM mitigation
	WB T: G=	23	23		23	
	WB R: G=	13	13	1	14	
	NB LT: G=	44	44	-1	43	
Madison Avenue @ East 42nd Street	NB:	2 LT, 1 R	2 LT, 1 R	Daylighting	3LT, 1 R	Implement No Standing 7am-1 pm for 100 feet along the west curb of Madison Ave NB approach and extend it to 43rd St to create a left/ thru lane for NB approach. This would result in the elimination of up to 10 commercial parking spaces.
Madison Avenue @ East 44th Street	EB:	1 P (9'), 1 B (4.9'), 1 LT (11'), 1 P (8.9')	1 P (9'), 1 B (4.9'), 1 LT (11'), 1 P (8.9')	Daylighting and restriping, creating a left turn lane	L (10'), 1 B (4.9'), 1 T (10'), 1 P (8.9')	Create an EB left turn lane on this approach by prohibiting standing along north curb of EB approach, for 100 feet up to face of the intersection. This would result in the elimination of up to 4 commercial parking spaces.
	EB: G=	35	35	-4	31	
	NB: G=	45	45	4	49	
Madison Avenue @ East 45th Street	WB TR: G=	35	35			**Impacts cannot be fully mitigated in this time period.**
	NB LT: G=	45	45			
Madison Avenue @ East 46th Street	EB:	1 LT	1 LT	Enforcement of of existing parking regulations	2 LT	Enforcement of of existing parking regulations (No Standing 7am-6pm Mon-Fri) along the north curb of EB approach.
	EB LT: G=	35	35	-3	32	
	NB TR: G=	45	45	3	48	
Madison Avenue @ East 47th Street	WB:	1 T, 1 R	1 T, 1 R	Daylighting	2 T, 1 R	Implement No Standing 7am-7pm Mon-Fri for 100 feet along the south curb of WB approach, and along south curb of 47th Street between Madison & Fifth Avenues. This would result in the elimination of up to 16 commercial parking spaces.
Madison Avenue @ East 51st Street	WB T: G=	23	23			**Impacts cannot be fully mitigated in this time period.**
	WB R: G=	14	14			
	NB LT: G=	43	43			
Madison Avenue @ East 53rd Street	WB TR: G=	35	35	-1	34	
	NB LT: G=	45	45	1	46	

TABLE 19-5: MIDDAY PROPOSED TRAFFIC MITIGATION MEASURES (CONTINUED)

Intersection	Movement	No-Action	With-Action	Change	Proposed Mitigation	
Fifth Avenue	WB LT: G=	35	35	-3	32	
@ 43rd Street	SB TR: G=	45	45	3	48	
Fifth Avenue	EB: G=	35	35			**Impacts cannot be fully mitigated in this time period.**
@ 44th Street	SB LT: G=	45	45			
Fifth Avenue	EB TR: G=	35	35			**Impacts cannot be fully mitigated in this time period.**
@ 46th Street	SB LT: G=	45	45			
Fifth Avenue	WB T: G=	24	24			**Impacts cannot be fully mitigated in this time period.**
@ 47th Street	WB L: G=	15	15			
	SB TR: G=	41	41			
Fifth Avenue	EB T: G=	24	24			**Impacts cannot be fully mitigated in this time period.**
@ 48th Street	EB R: G=	15	15			
	SB LT: G=	41	41			
Fifth Avenue	EB T: G=	24	24	-1	23	
@ 52nd Street	EB R: G=	15	15		15	
	SB LT: G=	41	41	1	42	
Fifth Avenue	EB T: G=	23	23			**Impacts cannot be fully mitigated in this time period.**
@ 59th Street	EB R: G=	15	15			
	SB LT: G=	42	42			
Sixth Avenue @ West 40th Street	EB:	1 LT	1 LT	Daylighting	1 L, 1 T	Implement No Standing 7am-7pm for 100 feet along the north curb of 40th Street. This would result in the elimination of up to 4 commercial parking spaces.
Sixth Avenue	EB / WB G:	31	31	1	32	
@ West 42nd Street	NB G:	49	49	-1	48	
Sixth Avenue @ West 45th Street	WB:	1 T (11'), 1R (12')	1 T (11'), 1R (12')	Restriping	1T (10.5'), 1R (12.5')	Restriping
	WB: G=	35	35	4	39	
	NB: G=	45	45	-4	41	

Note:

"G" indicates amount of green phase time, in seconds.

NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound

L = Left-Turn; T = Through; R = Right-Turn

(*) Intersection modified due to improvement in other time period.

(**) Changes are due to pedestrian mitigation measures.

Source: Parsons Brinckerhoff, Inc., 2013

Note: This table has been revised for the FEIS.

TABLE 19-6: PM PROPOSED TRAFFIC MITIGATION MEASURES

Intersection	Movement	No-Action	With-Action	Change	Proposed Mitigation	
First Avenue @ East 42nd Street (East and West Sides)	NB (East Side):	LT (16'), R (12.2')	LT (16'), R (12.2')	Restriping	LT (16'), R (13')	Restriping as per AM mitigation
	EB / WB Ped Crossing:	9	9			**Impacts cannot be fully mitigated in this time period.**
	EB LT / WB TR: G=	31	31			
	NB LTR: G=	40	40			
First Avenue @ East 46th Street	EB:	1 L (16')	1 L (16')	Daylighting	2 L (11.8')	Implement No Standing 4pm-7pm Mon-Fri for 100 feet along the north curb of the EB approach. This would result in the elimination of up to 4 diplomat parking spaces.
First Avenue @ East 47th Street	EB TR: G=	35	35	-3	32	
	NB LT: G=	45	45	3	48	
First Avenue @ East 48th Street	NB: G=	45	45			**Impacts cannot be fully mitigated in this time period.**
	EB/WB: G=	35	35			
Second Avenue @ East 42nd Street	EB TR / WB LT: G=	34	34			**Impacts cannot be fully mitigated in this time period.**
	NB / SB Ped Crossing: G=	7	7			
	SB LTR: G=	39	39			
Second Avenue @ East 44th Street	SB: G=	53	53	-1	52	
	EB: G=	27	27	1	28	
Second Avenue @ East 46th Street	SB: G=	53	53	-4	49	
	EB: G=	27	27	4	31	
Second Avenue @ East 49th Street	EB / WB Ped Crossing:	7	7		7	
	WB: G=	25	25	1	26	
	SB: G=	48	48	-1	47	
Second Avenue @ East 59th Street *	EB:	1 T (11.1'), 1 T (11.2'), 1 TR (11.0')	1 T (11.1'), 1 T (11.2'), 1 TR (11.0')	Restriping	1 T (11.6'), 1 T (11.7'), 1 TR (10.0')	Restriping as per AM mitigation
Third Avenue @ East 42nd Street	EB / WB Ped Crossing:	6	6			**Impacts cannot be fully mitigated in this time period.**
	EB T / WB TR: G=	21	21			
	EB LT: G=	13	13			
	NB LTR: G=	35	35			
Third Avenue @ East 57th Street*	NB:	T (9.9'), T (9.8'), T (9.7'), T (11.1'), TR (11.1'), R (10.9')	T (9.9'), T (9.8'), T (9.7'), T (11.1'), TR (11.1'), R (10.9')	Restriping	T (9.9'), T (9.8'), T (9.7'), T (11.1'), TR (10.5'), R (11.5')	Restriping as per MD mitigation
Lexington Avenue @ East 50th Street **	EB:	3 TR	3 TR	Parking lane added to south curb of EB approach	2 TR	Bulbout installed at SW corner of intersection, on 50th Street approach, as part of pedestrian mitigation
Park Avenue @ East 39th Street	WB:	1 LTR (12.5')	1 LTR (12.5')	Daylighting	1 LT (10'), 1 TR (11')	Implement No Standing 7am-7pm Mon-Fri for 100 feet along the north curb of 39th Street westbound approach. This would result in the elimination of up to 3 commercial parking spaces.
	WB: G=	35	35	-1	34	
	NB/SB: G=	45	45	1	46	

TABLE 19-6: PM PROPOSED TRAFFIC MITIGATION MEASURES (CONTINUED)

Intersection	Movement	No-Action	With-Action	Change	Proposed Mitigation	
Park Avenue @ East 40th Street	EB: G= NB/SB: G=	32 48	32 48			**Impacts cannot be fully mitigated in this time period**
Park Avenue @ East 47th Street	WB: G= NB/SB: G=	38 41	38 41	-2 2	36 43	
Park Avenue @ East 49th Street	WB: G= NB/SB: G=	36 43	36 43			**Impacts cannot be fully mitigated in this time period**
Park Avenue @ East 51st Street	WB: G= NB/SB: G=	34 45	34 45	-3 3	31 48	
Park Avenue @ East 53rd Street	WB: G= NB/SB: G=	32 47	32 47			**Impacts cannot be fully mitigated in this time period**
Park Avenue @ East 57th Street	WB: G= NB/SB: G=	34 46	34 46	-2 2	32 48	
Madison Avenue @ East 39th Street *	WB:	1 T (12.9'), 1 R (9.1')	1 T (12.9'), 1 R (9.1')	Restriping	1 T (12.0'), 1 R (10.0')	Restriping
	NB:	3 LT	3 LT	Daylighting and restriping, creating a left turn lane	1 L (11.3'), 3 LT (11.1')	Daylighting and restriping as per AM Mitigation
	WB T: G= WB T & R: G= NB T: G=	23 13 44	23 13 44	 2 -2	23 15 42	
Madison Avenue @ East 40th Street	EB T: G= EB L & T: G= NB: G=	23 13 44	23 13 44	 4 -4	23 17 40	
Madison Avenue @ East 44th Street*	EB:	1 P (9'), 1 B (4.9'), 1 LT (11'), 1 P (8.9')	1 P (9'), 1 B (4.9'), 1 LT (11'), 1 P (8.9')	Daylighting and restriping, creating a left turn lane	L (10'), 1 B (4.9'), 1 T (10'), 1 P (8.9')	Create an EB left turn lane on this approach by prohibiting standing along north curb of EB approach, for 100 feet up to face of the intersection as per MD mitigation. This would result in the elimination of up to 4 commercial parking spaces.
	EB: G= NB: G=	35 45	35 45			**Impacts cannot be fully mitigated in this time period.**
Madison Avenue @ East 45th Street	WB: G= NB: G=	35 45	35 45	-2 2	33 47	
Madison Avenue @ East 46th Street *	EB:	1 LT	1 LT	Enforcement of of existing parking regulations	2 LT	Enforcement as per AM mitigation measure. Enforcement of of existing parking regulations (No Standing 7am-6pm Mon-Fri) along the north curb of EB approach.
	EB: G= NB: G=	35 45	35 45			**Impacts cannot be fully mitigated in this time period.**
Madison Avenue @ East 47th Street	WB:	1 T, 1 R	1 T, 1 R	Daylighting	2 T, 1 R	Implement No Standing 7am-7pm Mon-Fri for 100 feet along the south curb of WB approach, and along south curb of 47th Street between Madison & Fifth Avenues. This would result in the elimination of up to 16 commercial parking spaces.
	WB T: G= WB T & R: G= NB LT: G=	23 14 43	23 14 43	 3 -3	23 17 40	
Madison Avenue @ East 51st Street	WB T: G= WB T & R: G= SB: G=	23 14 43	23 14 43			**Impacts cannot be fully mitigated in this time period.**

TABLE 19-6: PM PROPOSED TRAFFIC MITIGATION MEASURES (CONTINUED)

Intersection	Movement	No-Action	With-Action	Change	Proposed Mitigation	
Fifth Avenue @ 42nd Street	EB / WB: G=	35	35	-1	34	
	SB: G=	45	45	1	46	
Fifth Avenue @ 44th Street	EB: G=	35	35			**Impacts cannot be fully mitigated in this time period.**
	SB: G=	45	45			
Fifth Avenue @ 46th Street	EB: G=	35	35			**Impacts cannot be fully mitigated in this time period.**
	SB: G=	45	45			
Fifth Avenue @ 47th Street	WB T: G=	24	24			**Impacts cannot be fully mitigated in this time period.**
	WB L & T: G=	15	15			
	SB: G=	41	41			
Fifth Avenue @ 48th Street	EB: G=	24	24			**Impacts cannot be fully mitigated in this time period.**
	EB: G=	15	15	-1	14	
	NB: G=	41	41	1	42	
Fifth Avenue @ 59th Street	EB T: G=	23	23			**Impacts cannot be fully mitigated in this time period.**
	EB R: G=	15	15			
	SB: G=	42	42			
Sixth Avenue @ West 40th Street	EB / WB Ped Crossing:	7	7		7	
	EB: G=	35	35	-1	34	
	NB: G=	38	38	1	39	
Sixth Avenue @ West 42nd Street	EB LT / WB TR: G=	31	31	1	32	
	NB LTR: G=	49	49	-1	48	
Sixth Avenue @ West 44th Street	EB: G=	31	31	-2	29	
	NB: G=	49	49	2	51	
Sixth Avenue @ West 45th Street*	WB:	1 T (11'), 1R (12')	1 T (11'), 1R (12')	Restriping	1T (10.5'), 1R (12.5')	Restriping as per MD mitigation
Sixth Avenue @ West 46th Street	EB T: G=	25	25	0	25	
	EB T & L: G=	16	16	-3	13	
	NB: G=	39	39	3	42	

Note:

"G" indicates amount of green phase time, in seconds.

NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound

L = Left-Turn; T = Through; R = Right-Turn

(*) Intersection modified due to improvement in other time period.

(**) Changes are due to pedestrian mitigation measures.

Source: Parsons Brinckerhoff, Inc., 2013

Note: This table has been revised for the FEIS.

Table 19-7 through Table 19-9 provide a comparison of the v/c ratios, delays, and levels of service (LOS) at impacted intersections with implementation of these mitigation measures to No-Action and With-Action conditions for the AM, Midday, and PM peak hours, respectively. According to the *CEQR Technical Manual*, an impact is considered fully mitigated when the resulting LOS degradation under the Action-with-Mitigation condition compared to the No-Action condition is no longer deemed significant following the impact criteria described in Chapter 12, "Transportation." Tables 19-7 through 19-9 show that significant adverse impacts would be fully mitigated at all but 23 approach movements at 16 intersections during the AM peak hour, 13 approach movements at 9 intersections during the Midday peak hour, and 23 approach movements at 15 intersections during the PM peak hour. All of the pedestrian mitigation measures would neither alter the conclusions made for the traffic impact analyses nor result in the potential for any additional significant adverse traffic impacts.

Figures 19-1 through 19-3 show the location of intersections were significant adverse impacts are expected to occur during the weekday AM, Midday, and PM peak hours, respectively. No practicable mitigation was identified for one or more approach movements at 22 impacted intersections, and impacts in one or more peak hours at these locations would remain unmitigated. Consequentially, these impacts would constitute unavoidable significant adverse traffic impacts as a result of the Proposed Action (refer to Chapter 22, "Unavoidable Adverse Impacts").

TABLE 19-7: AM LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION

		No-Action 2033 - AM				With-Action 2033 - AM					With-Action with Mitigation 2033 - AM				
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS		Movt.	V/C Ratio	Delay Sec/Veh	LOS
First Avenue @ East 42nd Street	EB	L (east)	0.61	47.2	D	L (east)	0.65	51.8	D		L (east)	0.60	45.3	D
		T (east)	1.08	85.4	F	T (east)	1.08	84.5	F		T (east)	1.05	72.6	E
		L (west)	0.99	95.5	F	L (west)	1.02	104.7	F	+	L (west)	0.97	89.9	F
		T (west)	1.24	149.9	F	T (west)	1.24	148.9	F		T (west)	1.20	131.7	F
	WB	TR (east)	0.85	37.3	D	TR (east)	0.87	39.2	D		TR (east)	0.85	36.0	D
		R (east)	0.80	43.2	D	R (east)	0.82	44.7	D		R (east)	0.78	40.7	D
		TR (west)	0.52	25.5	C	TR (west)	0.53	25.8	C		TR (west)	0.52	24.8	C
	NB	LT (east)	0.59	19.4	B	LT (east)	0.59	19.4	B		LT (east)	0.61	20.6	C
		R (east)	0.91	41.6	D	R (east)	0.91	41.6	D		R (east)	0.92	42.9	D
		L (west)	0.53	18.6	B	L (west)	0.53	18.6	B		L (west)	0.55	19.8	B
		T (west)	0.61	20.1	C	T (west)	0.61	20.2	C		T (west)	0.62	21.5	C
	INTERSECTION			63.9	E			64.0	E				57.9	E
Second Avenue @ East 42nd Street	EB	T	0.58	26.2	C	T	0.58	26.2	C		T	0.58	26.2	C
		R	1.84	425.3	F	R	1.86	434.1	F	+	R	1.86	434.1	F
	WB	LT	1.14	111.3	F	LT	1.19	130.0	F	+	LT	1.19	130.0	F
	SB	L	1.36	195.6	F	L	1.36	196.3	F		L	1.36	196.3	F
		T	0.84	21.9	C	T	0.84	22.0	C		T	0.84	22.0	C
		R	0.77	30.4	C	R	0.80	32.6	C		R	0.80	32.6	C
	INTERSECTION			93.0	F			97.1	F				97.1	F
Second Avenue @ East 44th Street	EB	TR	1.07	105.0	F	TR	1.13	124.5	F	+	TR	1.06	98.8	F
	SB	LT	0.86	12.1	B	LT	0.86	12.3	B		LT	0.97	22.5	C
	INTERSECTION			20.5	C			22.8	C				29.6	C
Second Avenue @ East 45th Street	WB	LT	1.10	113.8	F	LT	1.12	120.8	F	+	LT	1.08	105.3	F
	SB	T	0.80	10.5	B	T	0.80	10.6	B		T	0.82	11.7	B
		R	0.62	12.7	B	R	0.66	14.1	B		R	0.68	15.3	B
	INTERSECTION			19.6	B			20.5	C				20.2	C
Second Avenue @ East 49th Street	WB	L	1.14	126.4	F	L	1.18	142.4	F	+	L	1.12	118.8	F
		T	0.53	30.0	C	T	0.60	31.5	C		T	0.58	30.2	C
	SB	T	0.89	17.5	B	T	0.91	18.3	B		T	0.93	20.5	C
		R	0.50	13.3	B	R	0.52	13.9	B		R	0.54	15.0	B
	INTERSECTION			27.9	C			30.3	C				29.8	C
Second Avenue @ East 59th Street	EB	TR (local)	0.18	25.8	C	TR (local)	0.18	25.8	C		TR (local)	0.18	25.9	C
		T (bridge)	1.30	176.7	F	T (bridge)	1.31	182.9	F	+	T (bridge)	1.30	175.4	F
	SB	L (bridge)	1.13	80.3	F	L (bridge)	1.13	80.3	F		L (bridge)	1.13	80.3	F
		LT (local)	0.52	6.0	A	LT (local)	0.53	6.0	A		LT (local)	0.53	6.0	A
	INTERSECTION			67.1	E			68.2	E				66.4	E
Third Avenue @ East 42nd Street	EB	L	1.14	137.5	F	L	1.15	138.9	F		L	1.15	138.9	F
		T	1.19	127.9	F	T	1.20	129.2	F		T	1.20	129.2	F
	WB	T	1.21	145.2	F	T	1.23	151.8	F	+	T	1.23	151.8	F
		R	1.10	138.2	F	R	1.14	149.4	F	+	R	1.14	149.4	F
	NB	LT	0.89	29.1	C	LT	0.91	30.5	C		LT	0.91	30.5	C
		R	1.39	237.3	F	R	1.41	245.5	F	+	R	1.41	245.5	F
	INTERSECTION			90.0	F			92.7	F				90.5	F
Third Avenue @ East 57th Street	EB	LT	0.93	43.0	D	LT	0.94	44.2	D		LT	0.94	44.2	D
	WB	T	0.88	46.6	D	T	0.88	46.6	D		T	0.88	46.6	D
		R	0.97	86.6	F	R	0.97	87.9	F		R	0.97	87.9	F
	NB	LTR	0.88	28.2	C	LTR	0.90	29.4	C		LTR	0.90	29.6	C
		R	0.43	25.6	C	R	0.44	25.8	C		R	0.43	25.3	C
	INTERSECTION			37.5	D			38.4	D				38.5	D
Lexington Avenue @ East 39th Street	WB	L	0.64	51.7	D	L	0.64	51.7	D		L	0.64	51.7	D
		T	0.96	57.7	E	T	1.12	105.4	F	+	T	0.54	22.7	C
	SB	T	0.85	21.0	C	T	0.86	21.5	C		T	0.86	21.5	C
		R	0.46	17.8	B	R	0.48	18.5	B		R	0.32	13.1	B
	INTERSECTION			30.3	C			42.8	D				22.9	C

TABLE 19-7: AM LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION (CONTINUED)

		No-Action 2033 - AM				With-Action 2033 - AM					With-Action with Mitigation 2033 - AM				
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS		Movt.	V/C Ratio	Delay Sec/Veh	LOS
Lexington Avenue @ East 50th Street*	EB	TR	0.37	20.5	C	TR	0.38	20.6	C		TR	0.59	24.8	C
	SB	LT	0.84	19.9	B	LT	0.87	21.4	C		LT	0.87	21.4	C
	INTERSECTION			20.0	C			21.2	C				22.3	C
Park Avenue @ West 39th Street	WB	LTR	1.18	127.1	F	LTR	1.34	193.4	F	+	LTR	0.70	25.9	C
	NB	L††	0.00	41.0	D	L††	0.00	41.1	D		L††	0.00	41.1	D
		LT	0.54	16.9	B	LT	0.55	17.0	B		LT	0.55	17.0	B
	SB	TR	0.96	37.8	D	TR	0.96	38.5	D		TR	0.96	38.5	D
	INTERSECTION			51.6	D			70.5	E				29.3	C
Park Avenue @ West 49th Street	WB	LT	0.90	50.0	D	LT	1.06	86.2	F	+	LT	1.06	86.2	F
		R	0.34	21.5	C	R	0.38	22.5	C		R	0.38	22.5	C
	NB	L††	0.00	37.5	D	L††	0.00	37.5	D		L††	0.00	37.5	D
		T	0.96	39.2	D	T	0.98	42.1	D		T	0.98	42.1	D
	SB	TR	0.81	24.0	C	TR	0.82	24.4	C		TR	0.82	24.4	C
	INTERSECTION			33.0	C			39.3	D				39.3	D
Park Avenue @ West 57th Street	EB	LT	0.83	34.7	C	LT	0.83	34.8	C		LT	0.86	37.5	D
		R	0.52	27.1	C	R	0.52	27.1	C		R	0.53	28.4	C
	WB	LT	0.66	27.7	C	LT	0.66	26.7	C		LT	0.68	27.9	C
		R	0.54	28.3	C	R	0.54	28.3	C		R	0.56	29.8	C
	NB	L††	0.00	38.8	D	L††	0.00	38.9	D		L††	0.00	39.0	D
		TR	1.04	57.1	E	TR	1.06	64.5	E	+	TR	1.04	56.3	E
	SB	L††	0.00	35.8	D	L††	0.00	35.8	D		L††	0.00	35.9	D
		TR	0.82	22.3	C	TR	0.82	22.4	C		TR	0.80	21.1	C
	INTERSECTION			35.8	D			38.1	D				35.8	D
Madison Avenue @ East 39th Street	WB	T	0.98	60.4	E	T	1.03	73.8	E	+	T	0.95	52.0	D
		R	0.81	71.9	E	R	1.19	167.7	F	+	R	0.88	71.1	E
	NB	LT	0.90	24.5	C	LT	0.93	27.5	C		L	0.42	21.4	C
											T	0.87	25.3	C
	INTERSECTION			36.0	D			50.1	D				35.2	D
Madison Avenue @ East 40th Street	EB	L	0.62	52.2	D	L	0.74	61.3	E	+	L	0.68	54.6	D
		T	0.87	43.7	D	T	0.92	49.6	D	+	T	0.89	44.9	D
	NB	TR	0.90	24.5	C	TR	0.95	30.0	C		TR	0.99	37.3	D
	INTERSECTION			29.9	C			35.7	D				39.8	D
Madison Avenue @ East 42nd Street	EB	LT	0.75	29.9	C	LT	0.76	30.3	C		LT	0.76	30.3	C
	WB	T	0.93	41.5	D	T	0.94	43.3	D		T	0.94	43.3	D
		R	0.14	19.3	B	R	0.14	19.3	B		R	0.14	19.3	B
	NB	LT	1.17	104.4	F	LT	1.29	156.2	F	+	LT	0.84	19.5	B
		R	0.41	14.0	B	R	0.42	14.2	B		R	0.42	14.2	B
	INTERSECTION			65.5	E			91.7	F				28.1	C
Madison Avenue @ East 43rd Street	WB	T	0.46	23.4	C	T	0.23	19.6	B		T	0.25	21.1	C
		R	0.62	32.3	C	R	0.65	33.8	C		R	0.69	38.2	D
	NB	L	0.49	17.7	B	L	0.89	50.4	D	+	L	0.83	38.7	D
		T	1.02	48.5	D	T	1.07	64.1	E	+	T	1.03	47.4	D
	INTERSECTION			41.6	D			56.9	E				43.9	D
Madison Avenue @ East 44th Street	EB	LT	0.80	40.9	D	LT	1.26	170.1	F	+	L	0.92	65.3	E
											T	0.31	20.9	C
	NB	T	1.15	93.8	F	T	1.16	100.7	F	+	T	1.16	100.7	F
		R	1.02	107.6	F	R	1.72	388.6	F	+	R	1.72	388.6	F
	INTERSECTION			85.8	F			138.9	F				114.4	F
Madison Avenue @ East 45th Street	WB	TR	0.68	27.1	C	TR	0.72	28.6	C		TR	0.82	36.8	D
	NB	L	0.22	10.8	B	L	0.27	11.4	B		L	0.25	8.6	A
		T	1.05	57.8	E	T	1.15	93.0	F	+	T	1.05	53.7	D
	INTERSECTION			46.7	D			70.9	E				46.6	D
Madison Avenue @ East 46th Street	EB	LT	1.09	96.6	F	LT	1.25	158.5	F	+	LT	0.69	30.1	C
	NB	T	1.17	103.4	F	T	1.26	141.7	F	+	T	1.16	94.6	F
		R	0.41	14.3	B	R	0.53	17.4	B		R	0.47	12.8	B
	INTERSECTION			95.3	F			135.8	F				71.5	E

TABLE 19-7: AM LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION (CONTINUED)

		No-Action 2033 - AM				With-Action 2033 - AM					With-Action with Mitigation 2033 - AM				
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS		Movt.	V/C Ratio	Delay Sec/Veh	LOS
Madison Avenue @ East 47th Street	WB	T	0.80	35.7	D	T	1.26	159.6	F	+	T	0.65	26.4	C
		R	0.46	42.3	D	R	0.35	38.8	D		R	0.44	45.3	D
	NB	L	0.53	22.2	C	L	0.71	33.8	C		L	0.35	12.2	B
		T	1.15	94.7	F	T	1.22	124.7	F	+	T	1.14	88.9	F
	INTERSECTION			76.0	E			126.3	F				65.3	E
Madison Avenue @ East 49th Street	WB	TR	0.54	23.5	C	TR	0.59	24.6	C		TR	0.63	26.8	C
	NB	L	0.23	11.0	B	L	0.23	11.0	B		L	0.22	9.6	A
		T	1.08	66.7	E	T	1.12	83.8	F	+	T	1.08	63.8	E
	INTERSECTION			53.2	D			64.9	E				51.6	D
Madison Avenue @ East 51st Street	WB	T	0.78	34.2	C	T	0.79	34.9	C		T	0.79	34.9	C
		R	0.65	52.7	D	R	0.65	52.7	D		R	0.65	52.7	D
	NB	L	0.52	21.9	C	L	0.53	22.3	C		L	0.53	22.3	C
		T	1.24	134.1	F	T	1.29	155.5	F	+	T	1.29	155.5	F
	INTERSECTION			104.6	F			120.4	F				120.4	F
Madison Avenue @ East 53rd Street	WB	TR	0.83	33.7	C	TR	0.84	33.8	C		TR	0.89	40.0	D
	NB	L	0.23	10.7	B	L	0.23	10.7	B		L	0.22	9.3	A
		T	1.20	113.9	F	T	1.24	134.1	F	+	T	1.19	109.9	F
	INTERSECTION			82.6	F			96.2	F				82.6	F
Madison Avenue @ East 57th Street	EB	LT	0.80	31.5	C	LT	0.80	31.6	C		LT	0.83	33.8	C
	WB	T	0.69	26.8	C	T	0.69	26.9	C		T	0.71	28.2	C
		R	0.73	36.8	D	R	0.73	36.8	D		R	0.75	39.7	D
	NB	L	0.41	14.2	B	L	0.41	14.3	B		L	0.40	13.4	B
		T	1.01	43.9	D	T	1.05	56.5	E	+	T	1.03	48.3	D
		R	0.38	14.0	B	R	0.38	14.0	B		R	0.37	13.1	B
	INTERSECTION			34.5	C			40.0	D				37.4	D
Fifth Avenue @ 42nd Street	EB	T	0.64	25.5	C	T	0.64	25.6	C		T	0.64	25.6	C
		R	0.17	20.6	C	R	0.17	20.6	C		R	0.17	20.6	C
	WB	LT	1.01	58.6	E	LT	1.02	62.4	E		LT	1.02	62.4	E
	SB	LT	1.16	96.3	F	LT	1.20	110.4	F	+	LT	1.20	110.4	F
		R	0.05	9.3	A	R	0.05	9.3	A		R	0.05	9.3	A
	INTERSECTION			74.9	E			84.4	F				84.4	F
Fifth Avenue @ 43rd Street	WB	L	0.60	30.5	C	L	0.41	24.0	C		L	0.41	24.0	C
		T	0.35	21.3	C	T	0.27	20.1	C		T	0.27	20.1	C
	SB	T	1.08	61.3	E	T	1.14	87.4	F	+	T	1.14	87.4	F
		R	1.36	204.7	F	R	1.71	358.8	F	+	R	1.71	358.8	F
	INTERSECTION			73.1	E			118.9	F				118.9	F
Fifth Avenue @ 44th Street	EB	T	0.33	21.1	C	T	0.46	23.7	C		TR	0.46	23.7	C
		R	0.63	31.3	C	R	0.66	33.4	C		R	0.66	33.4	C
	SB	LT	1.27	143.4	F	LT	1.47	233.1	F	+	LT	1.47	233.1	F
	INTERSECTION			128.3	F			205.1	F				205.1	F
Fifth Avenue @ 45th Street	WB	LT	0.62	25.3	C	LT	0.71	28.3	C		LT	0.81	36.3	D
	SB	T	1.11	74.4	E	T	1.20	114.1	F	+	T	1.11	69.4	E
		R	0.46	14.9	B	R	0.73	24.9	C		R	0.66	17.7	B
	INTERSECTION			61.3	E			90.8	F				58.8	E
Fifth Avenue @ 46th Street	EB	TR	1.21	144.0	F	TR	1.29	177.3	F	+	TR	1.29	177.3	F
	SB	LT	1.27	140.9	F	LT	1.50	248.5	F	+	LT	1.50	248.5	F
	INTERSECTION			141.4	F			237.6	F				237.6	F
Fifth Avenue @ 47th Street	WB	L	0.73	52.9	D	L	1.76	395.3	F	+	L	1.76	395.3	F
		T	0.65	26.3	C	T	0.70	28.3	C		T	0.70	28.3	C
	SB	T	1.23	128.4	F	T	1.31	162.7	F	+	T	1.31	162.7	F
		R	0.78	41.7	D	R	0.78	41.7	D		R	0.78	41.7	D
	INTERSECTION			106.6	F			171.1	F				171.1	F
Fifth Avenue @ 48th Street	EB	T	0.61	24.9	C	T	0.63	25.4	C		T	0.63	25.4	C
		R	1.13	142.2	F	R	1.13	142.2	F		R	1.13	142.2	F
	SB	LT	1.28	151.2	F	LT	1.36	186.6	F	+	LT	1.36	186.6	F
	INTERSECTION			135.7	F			165.1	F				165.1	F

TABLE 19-7: AM LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION (CONTINUED)

		No-Action 2033 - AM				With-Action 2033 - AM					With-Action with Mitigation 2033 - AM				
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS		Movt.	V/C Ratio	Delay Sec/Veh	LOS
Fifth Avenue @ 49th Street	WB	LT	0.46	21.9	C	LT	0.51	22.8	C		LT	0.64	27.1	C
	SB	T	1.07	59.7	E	T	1.12	79.2	E	+	T	1.07	58.7	E
		R	0.37	13.5	B	R	0.37	13.5	B		R	0.59	22.0	C
	INTERSECTION			50.8	D			65.8	E				51.1	D
Fifth Avenue @ 50th Street	EB	TR	0.44	21.8	C	TR	0.45	22.0	C		TR	0.48	23.8	C
	SB	LT	1.15	89.5	F	LT	1.20	111.0	F	+	LT	1.15	87.5	F
	INTERSECTION			79.3	E			97.8	F				78.1	E
Fifth Avenue @ 51st Street	WB	L	0.67	49.5	D	L	0.69	50.3	D		L	0.69	50.3	D
		T	0.65	26.0	C	T	0.66	26.2	C		T	0.66	26.2	C
	SB	T	1.15	94.6	F	T	1.20	117.4	F	+	T	1.20	117.4	F
		R	0.94	67.5	E	R	0.94	67.5	E		R	0.94	67.5	E
	INTERSECTION			81.3	F			98.9	F				98.9	F
Fifth Avenue @ 52nd Street	EB	T	0.57	23.1	C	T	0.58	23.2	C		T	0.58	23.2	C
		R	0.78	58.4	E	R	0.78	58.4	E		R	0.78	58.4	E
	SB	LT	1.35	179.8	F	LT	1.40	203.4	F	+	LT	1.40	203.4	F
	INTERSECTION			152.4	F			172.5	F				172.5	F
Fifth Avenue @ 53rd Street	WB	LT	0.74	28.8	C	LT	0.74	28.9	C		LT	0.79	32.4	C
	SB	T	1.04	48.6	D	T	1.09	65.7	E	+	T	1.04	47.3	D
		R	0.32	12.2	B	R	0.32	12.2	B		R	0.31	10.6	B
	INTERSECTION			42.0	D			54.6	D				42.1	D
Fifth Avenue @ 54th Street	EB	TR	0.54	23.6	C	TR	0.54	23.6	C		TR	0.58	25.7	C
	SB	LT	1.15	92.4	F	LT	1.20	112.9	F	+	LT	1.15	89.3	F
	INTERSECTION			80.1	F			97.4	F				78.3	E
Fifth Avenue @ 56th Street	EB	T	0.60	27.7	C	T	0.61	27.9	C		T	0.65	30.8	C
		R	0.51	26.2	C	R	0.51	26.2	C		R	0.55	29.3	C
	SB	LT	1.22	122.4	F	LT	1.27	142.2	F	+	LT	1.21	116.7	F
	INTERSECTION			107.1	F			124.2	F				103.1	F
Fifth Avenue @ 57th Street	EB	T	0.72	27.7	C	T	0.72	27.7	C		T	0.72	27.7	C
		R	0.96	68.0	E	R	0.97	69.4	E		R	0.97	69.4	E
	WB	LT	0.92	42.4	D	LT	0.93	42.9	D		LT	0.93	42.9	D
	SB	LT	1.02	41.3	D	LT	1.06	55.0	E	+	LT	1.06	55.0	E
		R	0.28	11.9	B	R	0.28	11.9	B		R	0.28	11.9	B
	INTERSECTION			40.4	D			47.8	D				47.8	D
Fifth Avenue @ 59th Street	EB	T	0.45	19.9	B	T	0.45	19.9	B		T	0.45	19.9	B
		R	1.12	131.9	F	R	1.12	131.9	F		R	1.12	131.9	F
	SB	LT	1.61	301.4	F	LT	1.69	336.5	F	+	LT	1.69	336.5	F
	INTERSECTION			229.0	F			256.3	F				256.3	F
Sixth Avenue @ West 40th Street	EB	L	0.80	42.4	D	L	0.85	47.2	D		L	0.85	47.2	D
		T	0.77	34.8	C	T	0.87	42.9	D		T	0.87	42.9	D
	NB	TR	1.11	79.7	E	TR	1.15	96.3	F	+	TR	1.15	96.3	F
	INTERSECTION			70.0	E			83.6	F				84.8	F
Sixth Avenue @ West 42nd Street	EB	LT	0.68	30.0	C	LT	0.68	30.0	C		LT	0.64	27.3	C
	WB	T	0.80	34.2	C	T	0.80	34.3	C		T	0.75	30.5	C
		R	1.26	174.0	F	R	1.31	195.2	F	+	R	1.23	160.8	F
	NB	LTR	0.64	10.8	B	LTR	0.64	10.9	B		LTR	0.67	12.7	B
	INTERSECTION			32.0	C			34.3	C				31.2	C
Sixth Avenue @ West 45th Street	WB	T	0.76	34.8	C	T	0.77	35.5	D		T	0.79	36.6	D
		R	0.59	29.7	C	R	0.64	32.0	C		R	0.63	31.4	C
	NB	LT	0.71	14.8	B	LT	0.71	14.9	B		LT	0.71	14.9	B
	INTERSECTION			18.6	B			19.1	B				19.2	B
Route 9A @ West 56th Street	NB	T	1.09	88.6	F	T	1.10	93.1	F	+	T	1.09	86.1	F
	SB	L	0.37	27.1	C	L	0.37	27.1	C		L	0.38	27.8	C
		T	0.67	1.2	A	T	0.68	1.3	A		T	0.68	1.3	A
	INTERSECTION			38.3	D			40.0	D				37.3	D

Source: Parsons Brinckerhoff, Inc., 2013

Note: This table has been revised for the FEIS.

+ Denotes a significant adverse traffic impact

Unmitigated approach movements denoted by shading

(*) No significant adverse impact for the With-Action condition. Changes in LOS are due to modifications in lane configuration as part of pedestrian mitigation measures.

†† To mimic actual conditions for NB/SB left turning vehicles on Park Avenue, the sum of two delays were accounted for: (1) delay from making the left turn; and (2) delay from waiting at the red light after the left turn.

TABLE 19-8: MIDDAY LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION

		No-Action 2033 - MD				With-Action 2033 - MD					With-Action with Mitigation 2033 - MD				
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS		Movt.	V/C Ratio	Delay Sec/Veh	LOS
First Avenue @ East 42nd Street	EB	LT (east)	0.96	54.8	D	LT (east)	0.97	58.0	E		LT (east)	0.97	58.0	E
		L (west)	0.93	72.7	E	L (west)	0.93	73.8	E		L (west)	0.94	74.8	E
		T (west)	0.64	28.0	C	T (west)	0.65	28.2	C		T (west)	0.65	28.2	C
	WB	TR (east)	0.52	25.5	C	TR (east)	0.52	25.6	C		TR (east)	0.53	25.6	C
		R (east)	0.58	30.5	C	R (east)	0.59	30.8	C		R (east)	0.60	31.1	C
		TR (west)	0.40	23.5	C	TR (west)	0.40	23.6	C		TR (west)	0.40	23.6	C
	NB	LT (east)	0.51	17.6	B	LT (east)	0.51	17.6	B		LT (east)	0.51	17.6	B
		R (east)	0.29	14.7	B	R (east)	0.29	14.7	B		R (east)	0.29	14.6	B
		L (west)	0.37	15.6	B	L (west)	0.37	15.6	B		L (west)	0.37	15.6	B
		T (west)	0.40	16.2	B	T (west)	0.41	16.2	B		T (west)	0.41	16.2	B
	INTERSECTION			31.0	C			31.7	C				31.7	C
First Avenue @ East 46th Street	EB	L	1.00	67.4	E	L	1.08	93.3	F	+	L	0.99	62.7	E
	NB	T	0.64	14.3	B	T	0.65	14.3	B		T	0.69	17.5	B
	INTERSECTION			28.4	C			36.5	D				30.2	C
Second Avenue @ East 42nd Street	EB	T	0.41	23.1	C	T	0.41	23.1	C		T	0.41	23.1	C
		R	1.22	155.5	F	R	1.28	180.0	F	+	R	1.28	180.0	F
	WB	LT	0.88	42.3	D	LT	0.89	43.1	D		LT	0.89	43.1	D
	SB	L	0.90	41.6	D	L	0.93	47.8	D	+	L	0.91	42.1	D
		TR	1.01	41.2	D	TR	1.03	46.7	D	+	TR	1.00	39.0	D
	INTERSECTION			49.1	D			55.2	E				50.5	D
Second Avenue @ East 44th Street	EB	TR	0.95	72.1	E	TR	1.00	84.0	F	+	TR	0.96	73.4	E
	SB	LT	0.82	11.0	B	LT	0.83	11.3	B		LT	0.85	12.5	B
	INTERSECTION			16.1	B			17.6	B				17.8	B
Second Avenue @ East 46th Street	EB	T	0.57	31.6	C	T	0.65	33.9	C		T	0.60	30.8	C
		R	1.17	141.4	F	R	1.25	173.0	F	+	R	1.16	133.6	F
	SB	LT	0.80	10.5	B	LT	0.81	10.7	B		LT	0.84	13.0	B
	INTERSECTION			23.8	C			27.8	C				25.7	C
Second Avenue @ East 49th Street	WB	LT	1.03	77.0	E	LT	1.07	89.7	F	+	LT	1.03	74.5	E
	SB	TR	0.87	16.7	B	TR	0.89	17.6	B		TR	0.91	19.5	B
	INTERSECTION			28.0	C			31.3	C				30.0	C
Second Avenue @ East 57th Street	EB	T	0.79	29.6	C	T	0.81	30.4	C		T	0.81	30.4	C
		R	0.54	41.5	D	R	0.54	41.5	D		R	0.54	41.5	D
	WB	DefL	0.27	32.0	C	DefL	0.27	32.0	C		DefL	0.29	33.1	C
		T	0.40	21.3	C	T	0.40	21.3	C		T	0.41	22.2	C
	SB	L	0.24	16.9	B	L	0.24	16.9	B		L	0.23	16.0	B
		TR	1.01	44.8	D	TR	1.03	49.9	D	+	TR	1.00	41.2	D
	INTERSECTION			38.9	D			42.4	D				36.9	D
Second Avenue @ East 59th Street	EB	TR (local)	0.46	26.8	C	TR (local)	0.46	26.8	C		TR (local)	0.48	27.4	C
		T (bridge)	0.80	34.2	C	T (bridge)	0.80	34.5	C		T (bridge)	0.79	33.8	C
	SB	L (bridge)	1.08	68.2	E	L (bridge)	1.08	68.2	E		L (bridge)	1.08	68.2	E
		LT (local)	0.69	11.5	B	LT (local)	0.71	11.7	B		LT (local)	0.71	11.7	B
	INTERSECTION			27.7	C			27.7	C				27.7	C
Third Avenue @ East 42nd Street	EB	L	1.19	158.7	F	L	1.19	160.4	F		L	1.19	160.4	F
		T	0.87	38.7	D	T	0.88	40.0	D		T	0.86	36.7	D
	WB	T	0.95	59.8	E	T	0.96	61.3	E		T	0.92	52.7	D
		R	1.08	130.1	F	R	1.15	154.0	F	+	R	1.09	132.4	F
	NB	LT	0.92	31.4	C	LT	0.94	33.3	C		LT	0.97	38.5	D
		R	0.73	36.0	D	R	0.75	37.9	D		R	0.78	41.3	D
	INTERSECTION			49.5	D			52.3	D				52.6	D
Third Avenue @ East 44th Street	EB	LT	0.32	21.3	C	LT	0.32	21.3	C		LT	0.33	22.2	C
	NB	T	0.68	14.2	B	T	0.70	14.5	B		T	0.68	13.6	B
		R	0.92	62.7	E	R	0.96	71.4	E	+	R	0.93	61.8	E
	INTERSECTION			18.8	B			19.8	B				18.2	B
Third Avenue @ East 57th Street	EB	LT	1.06	71.4	E	LT	1.07	75.0	E		LT	1.07	75.0	E
	WB	T	0.59	31.6	C	T	0.59	31.6	C		T	0.59	31.6	C
		R	0.47	33.8	C	R	0.47	33.8	C		R	0.47	33.8	C
	NB	LTR	0.87	29.1	C	LTR	0.90	30.5	C		LTR	0.90	30.7	C
		R	0.89	70.1	E	R	0.92	76.3	E	+	R	0.90	72.3	E
	INTERSECTION			42.5	D			44.5	D				44.4	D

TABLE 19-8: MIDDAY LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION (CONTINUED)

		No-Action 2033 - MD				With-Action 2033 - MD					With-Action with Mitigation 2033 - MD				
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS		Movt.	V/C Ratio	Delay Sec/Veh	LOS
Lexington Avenue @ East 50th Street*	EB	TR	0.26	19.1	B	TR	0.27	19.2	B		TR	0.42	21.3	C
	SB	LT	0.85	20.4	C	LT	0.89	22.2	C		LT	0.89	22.2	C
	INTERSECTION			20.1	C			21.6	C				22.1	C
Lexington Avenue @ East 51st Street	WB	L	0.94	83.0	F	L	0.97	88.8	F	+	L	0.90	72.9	E
		T	0.49	22.8	C	T	0.50	23.0	C		T	0.49	22.0	C
	SB	T	0.73	17.7	B	T	0.75	18.3	B		T	0.77	19.6	B
		R	0.46	19.8	B	R	0.46	19.8	B		R	0.48	21.7	C
	INTERSECTION			25.9	C			27.0	C				26.1	C
Park Avenue @ West 39th Street	WB	LTR	1.30	177.5	F	LTR	1.35	197.9	F	+	LTR	0.70	27.4	C
	NB	L††	0.00	39.6	D	L††	0.00	39.6	D		L††	0.00	39.6	D
		LT	0.44	15.4	B	LT	0.44	15.4	B		LT	0.44	15.4	B
	SB	TR	0.88	28.4	C	TR	0.90	30.1	C		TR	0.90	30.1	C
	INTERSECTION			62.9	E			69.7	E				25.7	C
Park Avenue @ West 40th Street	EB	LT	0.68	32.4	C	LT	0.73	35.3	D		LT	0.76	37.6	D
		R	0.31	24.1	C	R	0.37	25.4	C		R	0.38	26.6	C
	NB	T (Tunnel Exit)	0.88	31.8	C	T (Tunnel Exit)	0.88	31.8	C		T (Tunnel Exit)	0.87	29.2	C
		T (SR onto Viaduct)	0.50	15.4	B	T (SR onto Viaduct)	0.50	15.4	B		T (SR onto Viaduct)	0.49	14.6	B
		TR	0.44	15.0	B	TR	0.44	15.0	B		TR	0.43	14.2	B
	SB	T	0.08	10.4	B	T	0.08	10.4	B		T	0.08	9.9	A
		T (Viaduct Exit)	1.13	90.8	F	T (Viaduct Exit)	1.14	95.9	F	+	T (Viaduct Exit)	1.12	86.2	F
	INTERSECTION			47.7	D			49.7	D				45.8	D
Park Avenue @ West 49th Street	WB	LT	0.96	59.5	E	LT	1.04	79.6	E	+	LT	1.04	79.6	E
		R	0.42	23.2	C	R	0.48	24.8	C		R	0.48	24.8	C
	NB	L††	0.00	37.9	D	L††	0.00	37.9	D		L††	0.00	37.9	D
		T	0.91	32.5	C	T	0.94	36.3	D		T	0.94	36.3	D
	SB	TR	0.73	21.2	C	TR	0.74	21.5	C		TR	0.74	21.5	C
	INTERSECTION			30.9	C			35.4	D				35.4	D
Madison Avenue @ East 39th Street	WB	T	0.85	39.7	D	T	0.88	42.8	D		T	0.88	42.5	D
		R	1.05	121.9	F	R	1.16	156.2	F	+	R	1.04	114.8	F
	NB	LT	0.86	21.6	C	LT	0.87	22.4	C		L	0.54	24.0	C
											T	0.72	17.4	B
	INTERSECTION			33.8	C			38.7	D				31.9	C
Madison Avenue @ East 42nd Street	EB	LT	0.85	35.0	C	LT	0.86	35.2	D		LT	0.86	35.3	D
	WB	T	0.84	33.2	C	T	0.85	33.6	C		T	0.85	33.6	C
		R	0.08	18.0	B	R	0.08	18.0	B		R	0.08	18.0	B
	NB	LT	1.10	74.5	E	LT	1.14	90.8	F	+	LT	0.78	17.3	B
		R	0.41	13.9	B	R	0.43	14.4	B		R	0.43	14.4	B
	INTERSECTION			50.7	D			58.5	E				25.7	C
Madison Avenue @ East 44th Street	EB	LT	0.97	64.5	E	LT	1.60	309.0	F	+	L	0.96	75.4	E
											T	0.84	45.1	D
	NB	T	1.08	65.5	E	T	1.12	83.4	F	+	T	1.03	46.8	D
		R	0.83	51.9	D	R	1.02	105.9	F	+	R	0.81	49.1	D
	INTERSECTION			64.3	E			147.2	F				49.8	D
Madison Avenue @ East 45th Street	WB	TR	0.53	23.4	C	TR	0.57	24.2	C		TR	0.57	24.2	C
	NB	L	0.18	10.4	B	L	0.20	10.7	B		L	0.20	10.7	B
		T	1.02	47.0	D	T	1.17	100.4	F	+	T	1.17	100.4	F
	INTERSECTION			39.8	D			79.5	E				79.5	E
Madison Avenue @ East 46th Street	EB	LT	0.91	48.8	D	LT	1.06	84.6	F	+	LT	0.57	25.9	C
	NB	T	1.14	90.5	F	T	1.22	122.7	F	+	T	1.14	88.3	F
		R	0.20	10.9	B	R	0.28	11.1	B		R	0.48	13.8	B
	INTERSECTION			77.9	E			105.0	F				67.2	E
Madison Avenue @ East 47th Street	WB	T	0.92	48.7	D	T	1.20	136.0	F	+	T	0.57	22.6	C
		R	0.22	35.8	D	R	0.24	36.4	D		R	0.24	36.2	D
	NB	L	0.52	24.9	C	L	1.61	334.6	F	+	L	0.54	19.5	B
		T	1.06	62.1	E	T	1.06	62.9	E		T	1.06	62.9	E
	INTERSECTION			56.9	E			103.6	F				47.9	D

TABLE 19-8: MIDDAY LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION (CONTINUED)

		No-Action 2033 - MD				With-Action 2033 - MD					With-Action with Mitigation 2033 - MD				
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS		Movt.	V/C Ratio	Delay Sec/Veh	LOS
Madison Avenue @ East 51st Street	WB	T	0.61	26.1	C	T	0.62	26.5	C		T	0.62	26.5	C
		R	0.74	59.5	E	R	0.74	59.5	E		R	0.74	59.5	E
	NB	L	0.71	34.1	C	L	0.71	34.1	C		L	0.71	34.1	C
		T	1.08	66.5	E	T	1.10	75.1	E	+	T	1.10	75.1	E
	INTERSECTION			57.3	E			63.5	E				63.5	E
Madison Avenue @ East 53rd Street	WB	TR	0.52	22.9	C	TR	0.52	22.9	C		TR	0.53	23.9	C
	NB	L	0.20	10.5	B	L	0.20	10.5	B		L	0.20	9.9	A
		T	1.00	41.0	D	T	1.02	46.6	D	+	T	1.00	40.0	D
	INTERSECTION			34.7	C			38.7	D				34.3	C
Fifth Avenue @ 43rd Street	WB	L	0.62	30.4	C	L	0.60	29.6	C		L	0.67	35.7	D
		T	0.29	20.3	C	T	0.33	21.0	C		T	0.36	23.6	C
	SB	T	0.88	21.4	C	T	0.91	23.1	C		T	0.85	17.2	B
		R	1.33	199.2	F	R	1.57	304.7	F	+	R	1.31	189.1	F
	INTERSECTION			39.8	D			51.0	D				35.9	D
Fifth Avenue @ 44th Street	EB	T	0.55	25.5	C	T	0.59	26.7	C		T	0.59	26.7	C
		R	0.90	56.3	E	R	0.94	65.5	E	+	R	0.94	65.5	E
	SB	LT	1.00	37.0	D	LT	1.20	114.4	F	+	LT	1.20	114.4	F
	INTERSECTION			37.9	D			99.6	F				99.6	F
Fifth Avenue @ 46th Street	EB	TR	0.86	43.4	D	TR	0.96	59.1	E	+	TR	0.96	59.1	E
	SB	LT	1.04	49.7	D	LT	1.20	112.5	F	+	LT	1.20	112.5	F
	INTERSECTION			48.7	D			103.9	F				103.9	F
Fifth Avenue @ 47th Street	WB	L	0.93	79.0	E	L	1.82	422.3	F	+	L	1.82	422.3	F
		T	0.61	24.8	C	T	0.65	26.3	C		T	0.65	26.3	C
	SB	T	0.98	36.6	D	T	1.02	46.1	D	+	T	1.02	46.1	D
		R	1.16	152.5	F	R	1.16	152.5	F		R	1.16	152.5	F
	INTERSECTION			45.6	D			108.8	F				108.8	F
Fifth Avenue @ 48th Street	EB	T	0.57	23.5	C	T	0.64	25.6	C		T	0.64	25.6	C
		R	0.91	80.3	F	R	1.05	115.2	F	+	R	1.05	115.2	F
	SB	LT	1.04	51.9	D	LT	1.07	63.1	E	+	LT	1.07	63.1	E
	INTERSECTION			50.4	D			62.3	E				62.3	E
Fifth Avenue @ 52nd Street	EB	T	0.52	21.8	C	T	0.52	21.9	C		T	0.54	22.9	C
		R	0.86	67.2	E	R	0.86	67.2	E		R	0.86	67.2	E
	SB	LT	1.09	70.1	E	LT	1.12	81.6	F	+	LT	1.09	69.8	E
	INTERSECTION			63.3	E			72.4	E				63.3	E
Fifth Avenue @ 59th Street	EB	T	0.34	18.3	B	T	0.34	18.3	B		T	0.34	18.3	B
		R	0.86	66.5	E	R	0.86	66.5	E		R	0.86	66.5	E
	SB	LT	1.34	178.8	F	LT	1.39	198.1	F	+	LT	1.39	198.1	F
Sixth Avenue @ West 40th Street	EB	LT	1.20	136.7	F	LT	1.26	159.7	F	+	L	0.74	35.6	D
											T	0.64	28.4	C
	NB	TR	0.95	32.1	C	TR	0.96	33.8	C		TR	0.96	33.8	C
	INTERSECTION			56.2	E			63.6	E				33.3	C
Sixth Avenue @ West 42nd Street	EB	LT	0.82	36.2	D	LT	0.83	36.4	D		LT	0.80	34.0	C
	WB	T	0.66	28.8	C	T	0.66	28.8	C		T	0.64	27.6	C
		R	1.44	249.0	F	R	1.45	254.7	F	+	R	1.39	227.4	F
	NB	LTR	0.56	9.9	A	LTR	0.56	10.0	A		LTR	0.57	10.8	B
	INTERSECTION			40.2	D			40.8	D				38.0	D
Sixth Avenue @ West 45th Street	WB	T	0.51	24.5	C	T	0.52	24.8	C		TR	0.48	21.1	C
		R	0.86	51.8	D	R	1.08	102.7	F	+	R	0.92	55.8	E
	NB	LT	0.62	13.4	B	LT	0.62	13.5	B		LT	0.69	17.5	B
	INTERSECTION			18.4	B			25.5	C				22.5	C

Source: Parsons Brinckerhoff, Inc., 2013

Note: This table has been revised for the FEIS.

+ Denotes a significant adverse traffic impact

Unmitigated approach movements denoted by shading

(*) No significant adverse impact for the With-Action condition. Changes in LOS are due to modifications in lane configuration as part of pedestrian mitigation measures.

†† To mimic actual conditions for NB/SB left turning vehicles on Park Avenue, the sum of two delays were accounted for: (1) delay from making the left turn; and (2) delay from waiting at the red light after the left turn.

TABLE 19-9: PM LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION

		No-Action 2033 - PM				With-Action 2033 - PM					With-Action with Mitigation 2033 - PM			
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS		Movt.	V/C Ratio	Delay Sec/Veh	LOS
First Avenue @ East 42nd Street	EB	LT (east)	1.29	172.5	F	LT (east)	1.34	196.3	F	+	LT (east)	1.34	196.3	F
		L (west)	1.08	120.9	F	L (west)	1.08	120.9	F		L (west)	1.08	120.9	F
		T (west)	0.67	28.5	C	T (west)	0.70	29.5	C		T (west)	0.70	29.5	C
	WB	TR (east)	0.86	38.7	D	TR (east)	0.86	38.8	D		TR (east)	0.86	38.8	D
		R (east)	0.90	59.7	E	R (east)	0.91	60.9	E		R (east)	0.91	60.9	E
		TR (west)	0.49	25.0	C	TR (west)	0.49	25.0	C		TR (west)	0.49	25.0	C
	NB	LT (east)	1.04	63.2	E	LT (east)	1.04	62.9	E		LT (east)	1.04	62.9	E
		R (east)	0.34	15.5	B	R (east)	0.34	15.5	B		R (east)	0.33	15.3	B
		L (west)	0.48	17.5	B	L (west)	0.48	17.5	B		L (west)	0.48	17.5	B
		T (west)	0.55	18.6	B	T (west)	0.54	18.6	B		T (west)	0.54	18.6	B
	INTERSECTION			60.5	E			64.9	E				64.9	E
First Avenue @ East 46th Street	EB	L	0.95	55.1	E	L	1.15	116.2	F	+	L	0.59	24.1	C
	NB	T	1.00	35.9	D	T	1.00	36.5	D		T	1.00	36.5	D
	INTERSECTION			39.7	D			54.9	D				33.6	C
First Avenue @ East 47th Street	WB	TR (east)		16.8	B	TR (east)		16.8	B		TR (east)		18.7	B
		TR (west)		16.8	B	TR (west)		16.8	B		TR (west)		18.7	B
	NB	L (west)	0.36	11.9	B	L (west)	0.37	11.9	B		L (west)	0.34	9.7	A
		T (west)	0.74	20.0	B	T (west)	0.74	20.2	C		T (west)	0.70	16.0	B
		TR (east)	1.19	109.5	F	TR (east)	1.26	141.2	F	+	TR (east)	1.18	104.7	F
	INTERSECTION			79.5	E			102.4	F				76.2	E
First Avenue @ East 48th Street	NB	T	0.82	23.0	C	T	0.83	23.2	C		T	0.83	23.2	C
		R	1.32	171.5	F	R	1.46	233.4	F	+	R	1.46	233.4	F
	INTERSECTION			107.1	F			147.1	F				147.1	F
Second Avenue @ East 42nd Street	EB	T	0.44	23.6	C	T	0.44	23.6	C		T	0.44	23.6	C
		R	1.95	472.5	F	R	2.00	493.1	F	+	R	2.00	493.1	F
	WB	LT	1.13	105.7	F	LT	1.12	104.0	F		LT	1.12	104.0	F
	SB	L	1.04	73.3	E	L	1.14	106.1	F	+	L	1.14	106.1	F
		T	0.97	31.6	C	T	0.98	34.1	C		T	0.98	34.1	C
		R	0.42	16.7	B	R	0.47	18.1	B		R	0.47	18.1	B
	INTERSECTION			85.6	F			92.0	F				92.0	F
Second Avenue @ East 44th Street	EB	TR	1.33	200.1	F	TR	1.37	216.8	F	+	TR	1.31	193.2	F
	SB	LT	0.82	10.9	B	LT	0.84	11.4	B		LT	0.85	12.6	B
	INTERSECTION			31.6	C			33.8	C				32.4	C
Second Avenue @ East 46th Street	EB	T	0.71	36.8	D	T	0.92	55.6	E	+	T	0.80	38.3	D
		R	1.23	157.7	F	R	1.40	227.0	F	+	R	1.21	144.8	F
	SB	LT	0.80	10.5	B	LT	0.81	10.8	B		LT	0.88	16.0	B
	INTERSECTION			29.0	C			41.3	D				33.7	C
Second Avenue @ East 49th Street	WB	L	1.18	135.9	F	L	1.21	148.0	F	+	L	1.16	129.3	F
		T	0.41	28.0	C	T	0.42	28.2	C		T	0.40	27.2	C
	SB	T	0.71	12.5	B	T	0.72	12.6	B		T	0.73	13.6	B
		R	0.35	10.8	B	R	0.40	11.5	B		R	0.41	12.3	B
	INTERSECTION			30.2	C			32.0	C				30.2	C
Second Avenue @ East 59th Street	EB	TR (local)	0.42	25.5	C	TR (local)	0.42	25.5	C		TR (local)	0.44	26.0	C
		T (bridge)	0.96	50.5	D	T (bridge)	0.97	51.3	D		T (bridge)	0.95	48.7	D
	SB	L (bridge)	1.24	130.5	F	L (bridge)	1.24	130.5	F		L (bridge)	1.24	130.5	F
		LT (local)	0.77	12.6	B	LT (local)	0.78	12.9	B		LT (local)	0.78	12.9	B
	INTERSECTION			45.1	D			45.1	D				44.7	D

TABLE 19-9: PM LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION (CONTINUED)

		No-Action 2033 - PM				With-Action 2033 - PM				With-Action with Mitigation 2033 - PM			
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS
Third Avenue @ East 42nd Street	EB	L	1.20	163.9	F	L	1.20	163.9	F	L	1.20	163.9	F
		T	1.00	60.9	E	T	1.01	63.2	E	T	1.01	63.2	E
	WB	T	0.95	60.1	E	T	0.96	61.3	E	T	0.96	61.3	E
		R	1.05	119.1	F	R	1.10	132.1	F +	R	1.10	132.1	F
	NB	LT	1.02	47.7	D	LT	1.03	51.8	D	LT	1.03	51.8	D
		R	0.98	82.4	F	R	1.00	88.7	F +	R	1.00	88.7	F
	INTERSECTION			62.3	E			66.0	E			66.0	E
Third Avenue @ East 57th Street	EB	LT	0.80	30.2	C	LT	0.83	32.1	C	LT	0.83	32.1	C
	WB	T	0.43	29.3	C	T	0.43	29.3	C	T	0.43	29.3	C
		R	0.33	30.2	C	R	0.33	30.3	C	R	0.33	30.3	C
	NB	LTR	0.71	22.6	C	LTR	0.73	23.1	C	LTR	0.74	23.1	C
		R	0.71	42.6	D	R	0.74	46.0	D	R	0.73	43.8	D
	INTERSECTION			25.9	C			26.7	C			26.7	C
Lexington Avenue @ East 50th Street*	EB	TR	0.24	18.9	B	TR	0.25	19.0	B	TR	0.39	21.0	C
	SB	LT	0.87	21.4	C	LT	0.91	23.8	C	LT	0.91	23.8	C
	INTERSECTION			21.0	C			22.9	C			23.3	C
Park Avenue @ West 39th Street	WB	LTR	1.18	124.6	F	LTR	1.21	137.6	F +	LTR	0.65	25.2	C
	NB	L††		40.0	D	L††		39.9	D	L††		39.7	D
		LT	0.47	15.9	B	LT	0.47	15.8	B	LT	0.46	15.1	B
	SB	TR	0.93	33.9	C	TR	1.00	47.1	D +	TR	0.98	41.0	D
	INTERSECTION			51.5	D			61.1	E			30.5	C
Park Avenue @ West 40th Street	EB	LT	0.81	39.8	D	LT	0.96	59.1	E +	LT	0.96	59.1	E
		R	0.53	29.9	C	R	0.71	38.8	D	R	0.71	38.8	D
	NB	T (Tunnel Exit)	0.98	46.7	D	T (Tunnel Exit)	0.98	46.7	D	T (Tunnel Exit)	0.98	46.7	D
		T (SR onto Viaduct)	0.53	16.1	B	T (SR onto Viaduct)	0.53	16.0	B	T (SR onto Viaduct)	0.53	16.0	B
		TR	0.55	17.5	B	TR	0.56	17.5	B	TR	0.56	17.5	B
	SB	T	0.06	10.3	B	T	0.06	10.3	B	T	0.06	10.3	B
		(Viaduct Ex	1.14	96.3	F	(Viaduct Ex	1.18	112.6	F +	(Viaduct Ex	1.18	112.6	F
	INTERSECTION			52.9	D			61.0	E			61.0	E
Park Avenue @ West 47th Street	WB	LT	0.64	26.2	C	LT	0.73	29.8	C	LT	0.77	33.7	C
		R	0.52	25.0	C	R	0.61	28.7	C	R	0.65	32.3	C
	NB	L††		38.0	D	L††		39.0	D	L††		39.0	D
		T	1.04	59.7	E	T	1.09	76.5	E +	T	1.04	57.6	E
	SB	TR	0.82	25.7	C	TR	0.82	25.9	C	TR	0.78	23.0	C
	INTERSECTION			39.9	D			47.4	D			39.2	D
Park Avenue @ West 49th Street	WB	LT	0.92	51.4	D	LT	0.97	61.4	E +	LT	0.97	61.4	E
		R	0.50	25.3	C	R	0.55	26.8	C	R	0.55	26.8	C
	NB	L††		37.7	D	L††		37.9	D	L††		37.9	D
		T	1.00	47.9	D	T	1.05	61.3	E +	T	1.05	61.3	E
	SB	TR	0.77	22.3	C	TR	0.77	22.5	C	TR	0.77	22.5	C
	INTERSECTION			36.2	D			43.1	D			43.1	D
Park Avenue @ West 51st Street	WB	LT	0.63	28.9	C	LT	0.63	29.0	C	LT	0.70	34.1	C
		R	0.56	31.7	C	R	0.56	31.7	C	R	0.65	39.6	D
	NB	L††		39.0	D	L††		39.3	D	L††		39.3	D
		T	1.02	52.4	D	T	1.08	70.2	E +	T	1.01	46.5	D
	SB	TR	0.79	21.9	C	TR	0.79	21.9	C	TR	0.74	18.6	B
	INTERSECTION			36.0	D			43.9	D			33.1	C

TABLE 19-9: PM LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION (CONTINUED)

		No-Action 2033 - PM				With-Action 2033 - PM					With-Action with Mitigation 2033 - PM				
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS		Movt.	V/C Ratio	Delay Sec/Veh	LOS	
Park Avenue @ West 53rd Street	WB	LTR	0.90	42.6	D	LTR	0.90	42.9	D		LTR	0.90	42.9	D	
	NB	L††	0.00	38.3	D	L††	0.00	38.3	D		L††	0.00	38.3	D	
		T	1.08	69.5	E	T	1.13	90.2	F	+	T	1.13	90.2	F	
	SB	TR	0.70	18.0	B	TR	0.70	18.1	B		TR	0.70	18.1	B	
	INTERSECTION			44.1	D			53.4	D				53.4	D	
Park Avenue @ West 57th Street	EB	LT	0.72	28.6	C	LT	0.72	28.6	C		LT	0.76	31.9	C	
		R	0.29	21.8	C	R	0.29	21.8	C		R	0.31	23.7	C	
	WB	LT	0.42	22.0	C	LT	0.42	22.0	C		LT	0.44	23.8	C	
		R	0.32	22.6	C	R	0.32	22.6	C		R	0.35	24.6	C	
	NB	L††	0.00	39.9	D	L††	0.00	38.8	D		L††	0.00	40.1	D	
		TR	1.14	94.5	F	TR	1.20	119.4	F	+	TR	1.15	97.1	F	
	SB	L††	0.00	36.4	D	L††	0.00	36.4	D		L††	0.00	36.5	D	
		TR	1.14	95.1	F	TR	1.14	95.7	F		TR	1.10	75.5	E	
	INTERSECTION			73.7	E			83.2	F				69.2	E	
Madison Avenue @ East 39th Street	WB	T	0.91	46.0	D	T	0.96	55.1	E	+	T	0.94	49.3	D	
		R	0.81	68.0	E	R	0.86	76.0	E	+	R	0.73	54.7	D	
	NB	LT	0.60	14.1	B	LT	0.61	14.3	B		L	0.35	17.8	B	
											T	0.75	18.9	B	
	INTERSECTION			25.7	C			29.0	C				29.1	C	
Madison Avenue @ East 40th Street	EB	L	0.45	42.2	D	L	0.51	44.2	D		L	0.39	36.1	D	
		T	0.78	34.4	C	T	1.01	68.5	E	+	T	0.91	43.6	D	
	NB	TR	0.63	14.6	B	TR	0.65	14.9	B		TR	0.71	19.2	B	
	INTERSECTION			20.2	C			30.0	C				26.3	C	
Madison Avenue @ East 44th Street	EB	LT	1.11	110.0	F	LT	1.87	433.0	F	+	L	1.39	221.7	F	
											T	0.37	21.9	C	
	NB	T	0.84	21.5	C	T	0.86	22.7	C		T	0.86	22.7	C	
		R	1.53	320.7	F	R	1.66	376.8	F	+	R	1.66	376.8	F	
	INTERSECTION			62.0	E			174.8	F				87.7	F	
Madison Avenue @ East 45th Street	WB	TR	0.46	22.1	C	TR	0.46	22.1	C		TR	0.49	23.9	C	
	NB	L	0.20	10.6	B	L	0.23	11.0	B		L	0.22	9.5	A	
		T	0.92	27.4	C	T	1.04	53.8	D	+	T	1.00	39.4	D	
	INTERSECTION			25.2	C			44.2	D				34.2	C	
Madison Avenue @ East 46th Street	EB	LT	0.88	44.0	D	LT	1.27	164.6	F	+	LT	1.27	164.6	F	
	NB	T	0.89	25.2	C	T	0.89	24.8	C		T	0.89	24.8	C	
		R	0.80	46.6	D	R	1.82	414.9	F	+	R	1.82	414.9	F	
	INTERSECTION			31.8	C			125.7	F				125.7	F	
Madison Avenue @ East 47th Street	WB	T	0.78	34.3	C	T	1.19	131.8	F	+	T	0.52	19.8	B	
		R	0.58	46.8	D	R	0.88	74.7	E	+	R	0.71	49.6	D	
	NB	L	0.51	22.9	C	L	0.70	36.0	D		L	0.36	17.0	B	
		T	0.89	26.6	C	T	0.86	24.6	C		T	0.92	33.5	C	
	INTERSECTION			29.7	C			63.7	E				29.7	C	
Madison Avenue @ East 51st Street	WB	T	0.77	33.0	C	T	0.78	33.4	C		T	0.78	33.4	C	
		R	0.48	43.1	D	R	0.48	43.1	D		R	0.48	43.1	D	
	NB	L	0.76	42.7	D	L	0.76	42.7	D		L	0.76	42.7	D	
		T	0.99	41.1	D	T	1.04	55.6	E	+	T	1.04	55.6	E	
	INTERSECTION			39.5	D			49.3	D				49.3	D	
Fifth Avenue @ 42nd Street	EB	T	0.43	21.5	C	T	0.44	21.6	C		T	0.45	22.4	C	
		R	0.16	20.5	C	R	0.16	20.5	C		R	0.17	21.3	C	
	WB	LT	0.84	33.5	C	LT	0.84	34.0	C		LT	0.87	36.7	D	
	SB	LT	0.99	34.7	C	LT	1.03	46.4	D	+	LT	1.01	39.0	D	
		R	0.03	9.1	A	R	0.03	9.1	A		R	0.03	8.5	A	
	INTERSECTION			32.4	C			39.8	D				36.0	D	

TABLE 19-9: PM LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION (CONTINUED)

		No-Action 2033 - PM				With-Action 2033 - PM					With-Action with Mitigation 2033 - PM				
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS		Movt.	V/C Ratio	Delay Sec/Veh	LOS
Fifth Avenue @ 44th Street	EB	T	0.44	23.0	C	T	0.50	24.3	C		TR	0.50	24.3	C
		R	1.10	109.8	F	R	1.17	135.6	F	+	R	1.17	135.6	F
	SB	LT	1.01	40.6	D	LT	1.13	82.0	F	+	LT	1.13	82.0	F
	INTERSECTION			47.7	D			82.7	F				82.7	F
Fifth Avenue @ 46th Street	EB	TR	1.00	68.8	E	TR	1.18	128.7	F	+	TR	1.18	128.7	F
	SB	LT	1.00	37.0	D	LT	1.16	96.9	F	+	LT	1.16	96.9	F
	INTERSECTION			43.3	D			103.3	F				103.3	F
Fifth Avenue @ 47th Street	WB	L	0.76	56.0	E	L	1.59	322.6	F	+	L	1.59	322.6	F
		T	0.57	23.4	C	T	0.64	25.5	C		T	0.64	25.5	C
	SB	T	0.96	33.7	C	T	1.01	44.1	D		T	1.01	44.1	D
		R	1.05	115.6	F	R	1.06	118.5	F		R	1.06	118.5	F
	INTERSECTION			38.6	D			85.4	F				85.4	F
Fifth Avenue @ 48th Street	EB	T	0.67	26.5	C	T	0.76	30.7	C		T	0.76	30.7	C
		R	1.11	130.8	F	R	1.34	219.0	F	+	R	1.34	219.0	F
	SB	LT	1.00	42.5	D	LT	1.03	50.4	D	+	LT	1.03	50.4	D
	INTERSECTION			49.1	D			67.1	E				67.1	E
Fifth Avenue @ 59th Street	EB	T	0.40	19.1	B	T	0.40	19.1	B		T	0.40	19.1	B
		R	0.79	58.5	E	R	0.79	58.5	E		R	0.79	58.5	E
	SB	LT	1.31	166.9	F	LT	1.35	183.5	F	+	LT	1.35	183.5	F
	INTERSECTION			124.2	F			136.5	F				136.5	F
Sixth Avenue @ West 40th Street	EB	L	0.69	36.4	D	L	0.71	37.6	D		L	0.73	40.2	D
		T	0.57	25.7	C	T	0.59	26.3	C		T	0.61	27.6	C
		T	0.86	25.1	C	T	0.87	25.3	C		T	0.84	23.5	C
	NB	R	1.37	232.0	F	R	1.40	245.2	F	+	R	1.31	203.7	F
	INTERSECTION			39.2	D			40.5	D				36.8	D
Sixth Avenue @ West 42nd Street	EB	LT	0.48	25.2	C	LT	0.48	25.2	C		LT	0.47	24.2	C
	WB	T	0.63	28.3	C	T	0.63	28.4	C		T	0.61	27.2	C
		R	1.22	162.6	F	R	1.25	173.2	F	+	R	1.19	148.6	F
		LT	0.64	11.0	B	LT	0.64	11.1	B		LT	0.66	12.0	B
	NB	R	0.24	9.1	A	R	0.24	9.1	A		R	0.25	9.9	A
	INTERSECTION			28.8	C			29.9	C				28.0	C
Sixth Avenue @ West 44th Street	EB	L	0.43	28.4	C	L	0.43	28.4	C		L	0.46	31.2	C
		T	0.33	23.8	C	T	0.35	24.2	C		T	0.38	26.1	C
	NB	T	0.68	11.6	B	T	0.71	12.0	B		T	0.68	10.1	B
		R	1.17	125.6	F	R	1.22	142.2	F	+	R	1.17	122.1	F
	INTERSECTION			25.9	C			28.2	C				24.7	C
Sixth Avenue @ West 45th Street	WB	T	0.70	30.9	C	T	0.75	33.3	C		T	0.76	34.3	C
		R	0.45	25.0	C	R	0.77	40.1	D		R	0.75	38.9	D
	NB	LT	0.86	19.4	B	LT	0.89	20.7	C		LT	0.89	20.7	C
	INTERSECTION			21.3	C			24.0	C				24.1	C
Sixth Avenue @ West 46th Street	EB	L	0.33	35.6	D	L	0.33	35.6	D		L	0.40	40.6	D
		T	0.44	19.1	B	T	0.45	19.3	B		T	0.49	22.0	C
	NB	T	0.81	22.2	C	T	0.85	23.9	C		T	0.79	19.2	B
		R	0.71	32.0	C	R	0.91	54.7	D	+	R	0.84	40.9	D
	INTERSECTION			23.1	C			26.8	C				22.3	C

Source: Parsons Brinckerhoff, Inc., 2013

Note: This table has been revised for the FEIS.

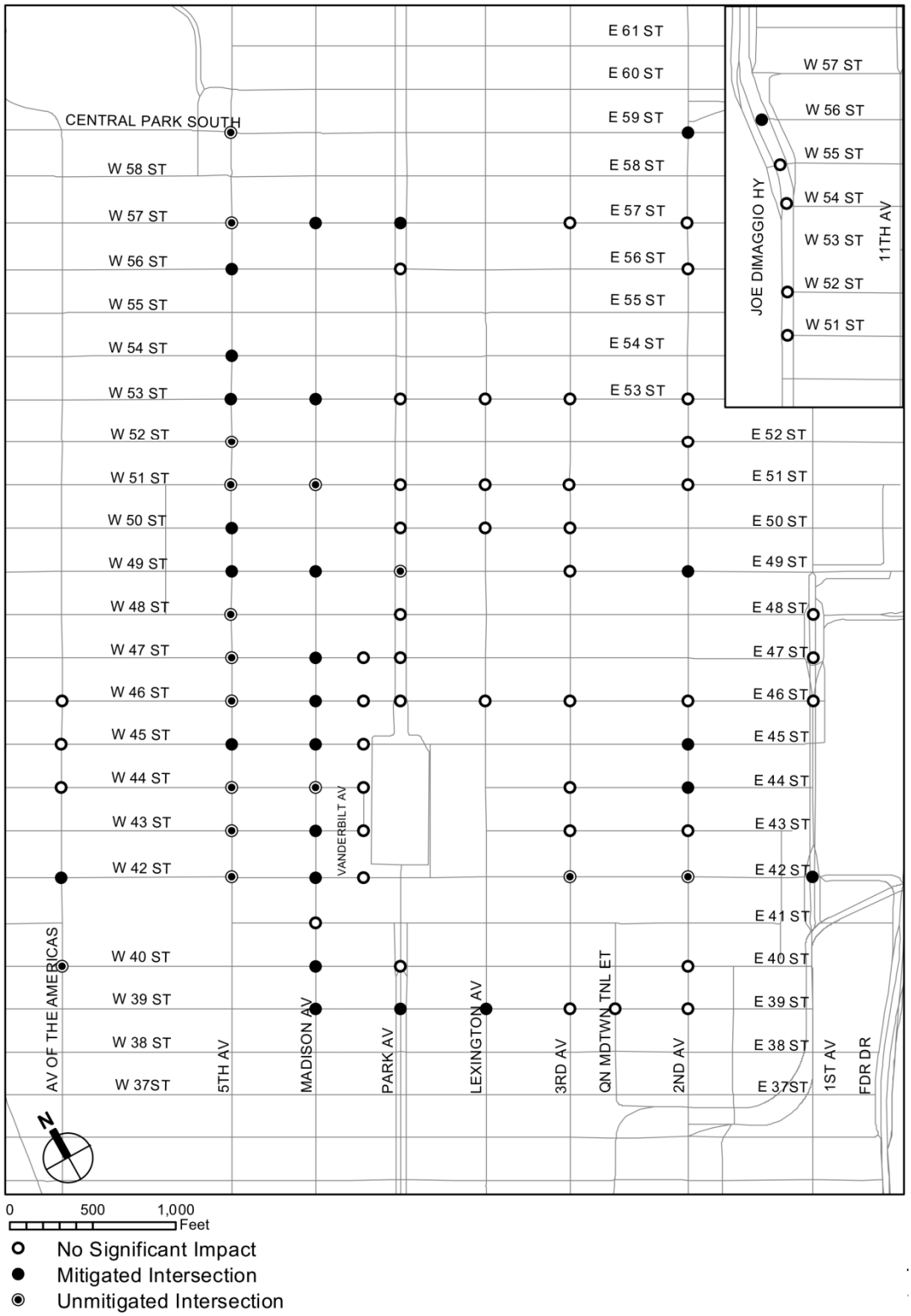
+ Denotes a significant adverse traffic impact

Unmitigated approach movements denoted by shading

(*) No significant adverse impact for the With-Action condition. Changes in LOS are due to modifications in lane configuration as part of pedestrian mitigation measures.

†† To mimic actual conditions for NB/SB left turning vehicles on Park Avenue, the sum of two delays were accounted for: (1) delay from making the left turn; and (2) delay from waiting at the red light after the left turn.

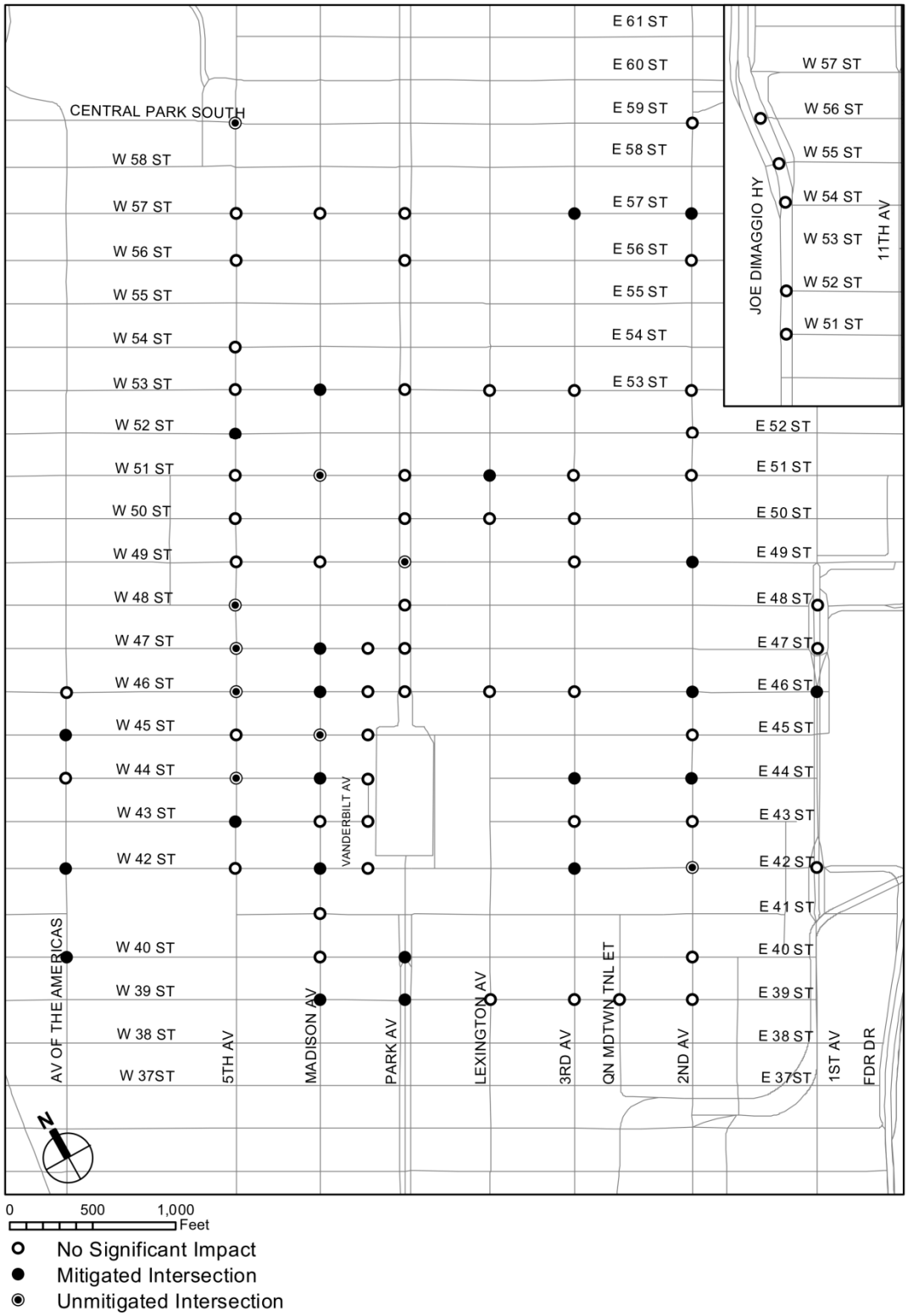
FIGURE 19-1: AM WITH-ACTION CONDITIONS WITH MITIGATION



Source: Parsons Brinckerhoff, Inc., 2013

Note: This figure has been revised for the FEIS.

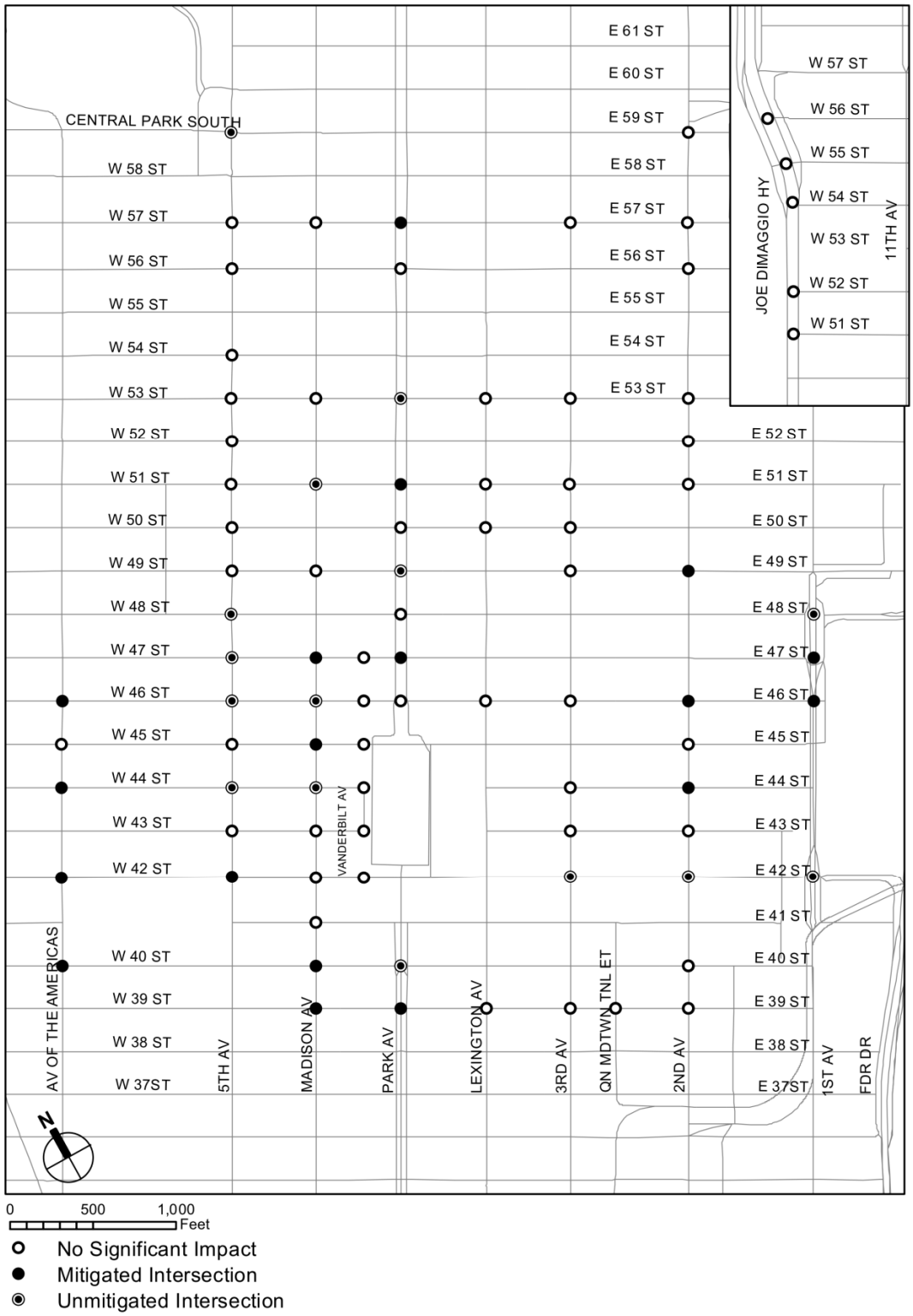
FIGURE 19-2: MIDDAY WITH-ACTION CONDITIONS WITH MITIGATION



Source: Parsons Brinckerhoff, Inc., 2013

Note: This figure has been revised for the FEIS.

FIGURE 19-3: PM WITH-ACTION CONDITIONS WITH MITIGATION



Source: Parsons Brinckerhoff, Inc., 2013

Note: This table has been revised for the FEIS.

19.5.1 Proposed Mitigation Schedule for Traffic Mitigation Measures

Subject to the approvals of DOT and NYSDOT, the mitigation measures described in Section 19.5 would be implemented to mitigate the significant adverse traffic impacts resulting from full build-out of the Proposed Action in 2033. As the development of the Proposed Action would be expected to occur over an approximate 20-year period, it is possible that some of the significant adverse traffic impacts could occur prior to full build-out in 2033.

Based on the anticipated construction schedule shown in Chapter 18, "Construction," the first significant adverse traffic impacts resulting from the Proposed Action could potentially occur in the second quarter of 2017 in the event the segment of Vanderbilt Avenue between East 45th and East 46th Streets is closed to through traffic, as the amount of existing traffic volumes that would be rerouted would exceed the *CEQR Technical Manual* analysis threshold of 50 peak hour vehicle trips. Incremental vehicle trips associated with traffic generated by projected development sites could potentially result in significant adverse traffic impacts in the fourth quarter of 2020 following the completion of four projected development sites (Sites 2, 3, 4, and 18). This level of development would result in a net increase of 429,470 gross square feet (gsf) of office space, 9,021 gsf of retail space and 2 dwelling units, and would generate more than 50 peak hour vehicle trip ends. At these earlier points in time, implementation of some or all of the mitigation measures developed for full build-out of the Proposed Action in 2033 would be considered to address potential significant adverse traffic impacts. The CPC is currently considering a proposed modification to the zoning text amendment pursuant to which DCP, as lead agency, would review the need for implementation of these mitigation measures at earlier points in time and provide periodic reports to the DIF Committee regarding same.

19.6 TRANSIT

19.6.1 Subway Stations

19.6.1.1 51st Street Subway Station

As discussed in Chapter 12, "Transportation," the Proposed Action would not result in any significant adverse impacts to analyzed stairs, escalators, passageways or fare arrays at the 51st Street subway station. It should be noted, however, that potential transit improvements funded under the District Improvement Fund may include the replacement of existing four-foot-wide stair U1 and escalator E252 at the north end of the southbound platform with a new 15-foot-wide stair. As shown in Table 19-19, existing stair U1 is projected to operate at a congested LOS F in both the AM and PM peak hours in the With-Action condition, with v/c ratios of 2.65 and 2.14 during these periods respectively. By contrast, replacement of this stair and adjoining escalator E252 by a 15-foot-wide stair would result in LOS E conditions in the AM peak hour and LOS C in the PM in the future with the Proposed Action, with v/c ratios of 1.39 and 0.80 during these periods, respectively.

As there would no significant adverse impact to existing stair U1 or escalator E252 under the Proposed Action based on *CEQR Technical Manual* criteria, this improvement would not be considered as mitigation in the context of CEQR, but as a measure that could potentially address an underlying issue at this station. The analysis of the effects of this potential improvement measure is provided for informational purposes.

19.6.1.2 Lexington Avenue-53rd Street Subway Station

As discussed in Chapter 12, "Transportation," the Proposed Action would not result in any significant adverse impacts to analyzed stairs, escalators or fare arrays at the Lexington Avenue-53rd street subway station. It should be noted that potential transit improvements funded under the District Improvement Fund may include the replacement of existing 24-inch-wide escalator E254X with a new 40-inch-wide escalator that would operate in the up direction in both the AM and PM peak hours. The potential improvements may also include operating this and all other analyzed escalators at a higher speed (100 feet per minute versus 90 feet per minute). It is therefore anticipated that pedestrian flow patterns would change at all four analyzed escalators as a result of the additional capacity, as well as the change in direction (from down to up) in the PM peak hour at escalator E254X. As shown in Table 19-11, in the future with the Proposed Action, existing escalator E254X is projected to operate at a congested LOS E in the up direction in the AM peak hour and an uncongested LOS A in the down direction in the PM, with v/c ratios of 1.44 and 0.41 during these periods respectively. By contrast, the installation of a 40-inch escalator operating at a higher speed at E254X would result in LOS D conditions in the AM peak hour and LOS A in the PM in the Action-With-Improvements condition, with v/c ratios of 1.09 and 0.42 during these periods, respectively. Conditions at each of the other three analyzed escalators would also improve

in both the AM and PM peak hours relative to the With-Action condition as a result of the higher operating speeds and the anticipated reallocation of pedestrian flows.

As there would no significant adverse impact to existing escalator E254X under the Proposed Action based on *CEQR Technical Manual* criteria, this improvement would not be considered as mitigation in the context of CEQR, but as a measure that could potentially address an underlying issue at this station. The analysis of the effects of this potential improvement measure is provided for informational purposes.

Under the proposed zoning text amendment, a list of priority improvements would be adopted by the DIF Committee, with priority given to improvements which are needed to avoid or address the potential for significant potential impacts. The CPC is currently considering a proposed modification to the zoning text amendment pursuant to which DCP, as lead agency, would review the need for implementation of such measures during the course of development in the Subdistrict. These mechanisms would provide a framework for the implementation of transit improvements funded under the District Improvement Fund.

TABLE 19-10: WITH-ACTION W/IMPROVEMENTS STAIR ANALYSIS AT THE 51ST STREET SUBWAY STATION

			With-Action								Action-With-Improvements							
Peak Period	Fare Control Area	Stairway	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS	Width (ft.)	Effective Width (ft.)	15-Minute Pedestrian Volumes		Surging Factor	Friction Factor	V/C Ratio	LOS
					Down	Up							Down	Up				
AM	N305A	U1	4.17	3.17	910	45	0.75	1.0	2.65	F	15.00	13.50	910	1323	0.75	0.9	1.39	E
PM	N305A	U1	4.17	3.17	759	4	0.75	1.0	2.14	F	15.00	13.50	759	445	0.75	0.9	0.80	C

Notes:
Methodology based on 2012 CEQR Technical Manual guidelines.
Due the removal of Escalator E252 as part of the Action-With-Improvements, 'Up' volumes on stair U1 accommodate the With-Action volumes on E252.

Note: This table has been revised for the FEIS.

TABLE 19-11: WITH-ACTION W/IMPROVEMENTS ESCALATOR ANALYSIS AT THE LEXINGTON AVENUE-53RD STREET SUBWAY STATION

					No-Action				Project Increment			Action-With-Improvements							
Peak Period	Escalator	Width (in.)	Treads Per Minute	Guideline Capacity	15-Minute Pedestrian Volumes	Surging Factor	V/C Ratio	LOS	Reallocated Volumes	New Demand	Total Increment	Width (in.)	Treads Per Minute	Guideline Capacity	15-Minute Pedestrian Volumes	Surging Factor	V/C Ratio	LOS	V/C Ratio Increase
AM	E243 (UP)	40	90	945	1043	0.75	1.47	E	-193	5	-188	40	100	1050	855	0.75	1.09	D	-0.386
	E244 (UP)	40	90	945	1016	0.75	1.43	E	-166	5	-161	40	100	1050	855	0.75	1.09	D	-0.348
	E254X (UP)	24	90	480	516	0.75	1.43	E	334	5	339	40	100	1050	855	0.75	1.09	D	-0.348
	E269 (DN)	40	90	945	910	0.95	1.01	D	-	8	8	40	100	1050	918	0.95	0.92	C	-0.093
PM	E243 (UP)	40	90	945	642	0.75	0.91	C	-321	10	20	40	100	1050	662	0.75	0.84	C	-
	E244 (DN)	40	90	945	1196	0.95	1.33	E	99	7	106	40	100	1050	1302	0.95	1.30	D	-0.027
	E254X (UP)*	24	90	480	197	1.00	0.41	A	124	10	134	40	100	1050	331	0.75	0.42	A	-
	E269 (DN)	40	90	945	1336	0.95	1.49	E	99	7	106	40	100	1050	1442	0.95	1.45	E	-0.043

Notes:
Methodology based on 2012 CEQR Technical Manual guidelines.
* During the PM peak period in the No-Action condition, Escalator 254X operates in the down direction.

Note: This table has been revised for the FEIS.

19.6.2 Bus

As discussed in Chapter 12, "Transportation", significant adverse impacts are anticipated on the M42 local bus service as follows:

- In the AM peak hour, the Proposed Action would add approximately 92 trips through the maximum load point on the eastbound M42 service, resulting in a capacity shortfall of 64 spaces; and
- In the PM peak hour, the Proposed Action would add approximately 62 trips through the maximum load point on the westbound M42 service resulting in a capacity shortfall of 56 spaces.

As shown in Table 19-12, these significant adverse impacts to M42 local bus service could be fully mitigated by the addition of two standard buses in the eastbound direction in the AM peak hour and two in the westbound direction in the PM. Alternatively, conversion of the M42 route to articulated bus service could be another option for providing needed capacity.

The general policy of NYCT is to provide additional bus service where demand warrants, taking into account financial and operational constraints. Based on NYCT's ongoing passenger monitoring program and as new development occurs throughout the study area, a comprehensive service plan would be generated to respond to specific, known needs with capital and/or operational improvements where fiscally and operationally practicable. NYCT's capital program is developed on a five-year cycle; through this program, expansion of bus services would be provided as needs are determined. It is therefore anticipated that NYCT would increase service frequency on the M42 route to address its capacity shortfalls.

TABLE 19-12: ACTION-WITH-MITIGATION LOCAL BUS CONDITIONS

Peak Hour (1)	Route	Peak Direction	Maximum Load Point	Peak Hour Buses (2)	No-Action Available Capacity (3)	Project Increment	Available Capacity w/ Proposed Action (3)	Additional Peak Hour Buses Needed to Accommodate Project-Generated Demand	Available Capacity w/ Mitigation (3)
AM	M42	EB	W 42 St & Broadway	41	28	92	-64	**2**	44
PM	M42	WB	E 42 St & Lexington Ave	35	6	62	-56	**2**	52

Notes:
(1) Peak hours: weekday 8:00-9:00 AM and 5:00-6:00 PM.
(2) Assumes service levels adjusted to address capacity shortfalls in the No-Action condition.
(3) Available capacity based on MTA NYCT loading guidelines of 54 passengers per standard bus.

19.7 PEDESTRIANS

As discussed in Chapter 12, "Transportation," the results of the analyses of pedestrian conditions show that demand from the Proposed Action would significantly adversely impact a total of two sidewalks, 25 crosswalks and eight corner areas in one or more peak hours under the With-Action condition. A significant adverse pedestrian impact is considered mitigated if measures implemented return the anticipated conditions to an acceptable level, following the same impact criteria used in determining impacts. Standard mitigation for projected significant adverse pedestrian impacts can include providing additional signal green time or new signal phases; widening crosswalks; relocating or removing street furniture; providing curb extensions, neck-downs or lane reductions to reduce pedestrian crossing distance; sidewalk widening and providing direct pedestrian connections from adjacent transit stations.

Discussed below are recommended mitigation measures to address the Proposed Action's significant adverse pedestrian impacts. The mitigation measures generally consist of sidewalk and crosswalk widening and minor signal timing changes. At some locations, signal timing changes associated with traffic mitigation measures are expected to create new significant adverse pedestrian impacts to corner areas or crosswalks, or worsen previously identified impacts. In these cases, additional mitigation is proposed to return anticipated pedestrian conditions with traffic mitigation to acceptable levels. It is anticipated that funding from the District Improvement Fund would be used for capital costs associated with the implementation of identified and approved pedestrian mitigation measures. If, prior to implementation, DOT determines that an identified mitigation measure is infeasible, an alternative and equivalent mitigation measure will be identified.

19.7.1 Sidewalks

Of the 27 sidewalks analyzed for the weekday peak hours, two are expected to be significantly adversely impacted, both during the AM and PM peak hours. Table 19-13 shows the recommended mitigation measures to address these impacts and their effectiveness. As shown in Table 19-13, no unmitigated significant adverse sidewalk impacts would remain upon incorporation of the recommended mitigation measures.

19.7.1.1 East 43rd Street North Sidewalk (S12) between Vanderbilt and Madison Avenues

The AM and PM peak hour impacts to the north sidewalk along East 43rd Street between Vanderbilt and Madison Avenues would occur at the location of security bollards adjacent to a Metro-North entrance at the east end of this sidewalk. Widening the portion of this sidewalk adjacent to the bollards by 1.5 feet would fully mitigate these impacts.

19.7.1.2 East 43rd Street North Sidewalk (S19) between Madison and Fifth Avenues

The AM and PM peak hour impacts to the north sidewalk on East 43rd Street between Madison and Fifth Avenues would occur at the location of two tree pits located along this sidewalk in front of the Fifth Church of Christ, Scientist church. Removal of these tree pits would fully mitigate the Proposed Action's significant adverse impacts to this sidewalk in the AM and PM peak hours.

TABLE 19-13: ACTION-WITH-MITIGATION: SIDEWALK CONDITIONS

Location	Side	No-Action			With-Action			Action-With-Mitigation			
		Effective Width	Pedestrian Flow Rate (PMF)	LOS	Effective Width	Pedestrian Flow Rate (PMF)	LOS	Effective Width	Pedestrian Flow Rate (PMF)	LOS	Mitigation Measures
AM Peak Period											
(S12) East 43rd Street Vanderbilt Ave to Madison Ave	North	3.50	18.4	F	3.50	20.5	F	5.0	14.4	E	Mitigated through sidewalk widening.
(S19) East 43rd Street Madison Ave to Fifth Ave	North	4.25	8.7	D	4.25	10.7	D	5.5	8.3	D	Mitigated by removing tree pits.
PM Peak Period											
(S12) East 43rd Street Vanderbilt Ave to Madison Ave	North	3.50	15.4	E	3.50	17.6	E	5.0	12.3	E	Mitigated through sidewalk widening.
(S19) East 43rd Street Madison Ave to Fifth Ave	North	4.25	10.0	D	4.25	12.3	E	5.5	9.5	D	Mitigated by removing tree pits.

Notes:
PMF – Pedestrians per minute per foot.

19.7.2 Crosswalks

Twenty-five of the 76 crosswalks analyzed would be significantly adversely impacted by the Proposed Action in one or more peak hours. There would be 13 crosswalks with significant adverse impacts in the AM peak hour, 16 in the midday and 16 in the PM peak hour. Four of these crosswalks would be located on Fifth Avenue, four on Madison Avenue and two each on Lexington and Third Avenues. The remaining 13 impacted crosswalks would be located on cross-streets, including three on East 43rd Street, two each on East 44th and East 46th Streets, and one each on East 40th, East 42nd, East 45th, East 47th, East 49th and East 50th Streets. Table 19-14 through Table 19-16 show the mitigation measures recommended to address these crosswalk impacts and their effectiveness. The mitigation measures generally consist of crosswalk widening and minor traffic signal timing adjustments. As shown in Table 19-14 through Table 19-16, a total of two crosswalks would continue to be significantly adversely impacted in one or more peak hours with implementation of the recommended mitigation measures. No practicable mitigation was identified for these two crosswalks and impacts in one or more peak hours at these crosswalks would remain unmitigated. Consequentially, these impacts would constitute unavoidable significant adverse pedestrian impacts as a result of the Proposed Action (refer to Chapter 22, "Unavoidable Adverse Impacts").

19.7.2.1 Third Avenue and East 49th Street

The Proposed Action's significant adverse impact to the north crosswalk in the Midday peak hour would be fully mitigated by widening this crosswalk by one foot.

19.7.2.2 Third Avenue and East 42nd Street

The Proposed Action's significant adverse impact to the north crosswalk in all three peak hours would be fully mitigated by widening this crosswalk by 2.5 feet.

19.7.2.3 Lexington Avenue and East 50th Street

The Proposed Action would result in a significant adverse impact to the east crosswalk in the Midday peak hour. In addition, a new significant impact to the north crosswalk would be created in the AM peak hour by a sidewalk bulb out proposed as mitigation for a significant corner impact at this intersection. A sidewalk bulb out proposed as corner mitigation would similarly impact the west crosswalk in the AM peak hour. Lastly, the south crosswalk at this intersection would be impacted by project-generated demand in the Midday, and this impact would be worsened by a sidewalk bulb out proposed as mitigation for a significant corner impact. All of these significant impacts would be fully mitigated by a one -foot widening of the east crosswalk, a 2.5-foot widening of the south crosswalk, and a 0.5-foot widening of both the north and west crosswalks.

TABLE 19-14: ACTION-WITH-MITIGATION: AM PEAK HOUR CROSSWALK CONDITIONS

Intersection	Crosswalk	No-Action			With-Action			Action-With-Mitigation				See Note
		Width	Pedestrian Space (SFP)	LOS	Width	Pedestrian Space (SFP)	LOS	Width	Pedestrian Space (SFP)	LOS	Mitigation Measures	
AM Peak Period												
(5) Third Ave @ East 42nd St.	North	19.83	6.8	F	19.83	6.0	F	22.33	6.9	F	Mitigated through crosswalk widening.	
(6) Lexington Ave @ East 50th St.	North	11.83	16.2	D	11.83	15.3	D	12.33	15.4	D	Mitigated through crosswalk widening.	3
	West	15.75	20.6	D	15.75	19.7	D	16.25	18.8	D	Mitigated through crosswalk widening.	3
(7) Lexington Ave @ East 49th St.	West	10.50	19.1	D	10.50	15.9	D	12.50	19.6	D	Mitigated through crosswalk widening.	
(13) Madison Ave @ East 47th St.	South	17.25	25.4	C	17.25	21.7	D	17.75	20.0	D	Mitigated through crosswalk widening.	1
(14) Madison Ave @ East 46th St.	East	12.58	19.4	D	12.58	16.4	D	15.08	23.0	D	Mitigated through crosswalk widening and changes in signal timing due to traffic mitigation.	
(15) Madison Ave @ East 45th St.	North	13.17	15.4	D	13.17	12.0	E	16.67	12.7	**E***	Unmitigated. Conditions improved by crosswalk widening but impact would remain unmitigated.	2
	East	12.33	13.1	E	12.33	11.8	E	14.33	16.1	D	Mitigated through crosswalk widening and changes in signal timing due to traffic mitigation.	
(16) Madison Ave @ East 44th St.	East	14.83	21.9	D	14.83	19.2	D	15.33	20.0	D	Mitigated through crosswalk widening.	
(17) Madison Ave @ East 43rd St.	North	13.00	10.4	E	13.00	9.4	E	14.50	9.7	E	Mitigated through crosswalk widening.	2
	South	14.50	16.3	D	14.50	16.2	D	15.00	15.4	D	Mitigated through crosswalk widening.	1
	West	12.17	23.9	D	12.17	18.6	D	12.67	20.8	D	Mitigated through crosswalk widening and changes in signal timing due to traffic mitigation.	
(18) Madison Ave @ East 42nd St.	North	21.75	7.8	F	21.75	7.2	F	22.25	7.4	F	Mitigated through crosswalk widening.	
(20) Fifth Ave @ East 47th St.	South	15.00	9.0	E	15.00	7.2	F	17.50	8.6	E	Mitigated through crosswalk widening.	
(22) Fifth Ave @ East 45th St.	South	17.75	30.0	C	17.75	24.4	C	18.25	19.7	D	Mitigated through crosswalk widening.	1
(23) Fifth Ave @ East 44th St.	East	15.25	16.8	D	15.25	12.6	E	18.25	15.7	D	Mitigated through crosswalk widening.	
(25) Fifth Ave @ East 42nd St.	North	21.00	21.9	D	21.00	17.5	D	24.00	20.4	D	Mitigated through crosswalk widening.	
	South	22.33	17.6	D	22.33	13.1	E	24.83	14.9	**E***	Unmitigated. Conditions improved by crosswalk widening but impact would remain unmitigated.	

Notes:
* - Denotes an unmitigated impact.
SFP - Square feet per pedestrian.
1. No significant adverse impact for the With-Action condition. Significant adverse impact is due to changes in traffic signal timing as part of traffic mitigation measures.
2. Impact worsened by traffic mitigation signal timing changes.
3. No significant adverse impact for the With-Action condition. Significant adverse impact is due to corner mitigation measures.
4. Impact worsened by corner mitigation measures.

Note: This table has been revised for the FEIS.

TABLE 19-15: ACTION-WITH-MITIGATION: MIDDAY PEAK HOUR CROSSWALK CONDITIONS

Intersection	Crosswalk	No-Action			With-Action			Action-With-Mitigation				See Note
		Width	Pedestrian Space (SFP)	LOS	Width	Pedestrian Space (SFP)	LOS	Width	Pedestrian Space (SFP)	LOS	Mitigation Measures	
MD Peak Period												
(4) Third Ave @ East 49th St.	North	15.25	22.8	D	15.25	18.6	D	16.25	19.9	D	Mitigated through crosswalk widening.	
(5) Third Ave @ East 42nd St.	North	19.83	21.2	D	19.83	17.1	D	22.33	19.5	D	Mitigated through crosswalk widening.	
(6) Lexington Ave @ East 50th St.	South	13.42	18.9	D	13.42	14.8	E	15.92	17.3	D	Mitigated through crosswalk widening.	1
	East	11.83	12.5	E	11.83	10.8	E	12.83	12.0	E	Mitigated through crosswalk widening.	
(8) Lexington Ave @ East 48th St.	South	13.50	23.6	D	13.50	18.7	D	14.00	19.5	D	Mitigated through crosswalk widening.	
(13) Madison Ave @ East 47th St.	West	13.00	23.6	D	13.00	17.7	D	14.50	20.2	D	Mitigated through crosswalk widening.	
(14) Madison Ave @ East 46th St.	East	12.58	28.1	C	12.58	19.0	D	15.08	25.8	C	Mitigated through crosswalk widening and changes in signal timing due to traffic mitigation.	
	West	12.33	23.6	D	12.33	19.4	D	12.33	21.1	D	Mitigated through changes in signal timing due to traffic mitigation.	
(15) Madison Ave @ East 45th St.	North	13.17	18.2	D	13.17	13.4	E	16.67	17.6	D	Mitigated through crosswalk widening.	
	East	12.33	15.1	D	12.33	11.6	E	14.33	14.0	E	Mitigated through crosswalk widening.	
(17) Madison Ave @ East 43rd St.	North	13.00	22.1	D	13.00	18.5	D	14.50	20.9	D	Mitigated through crosswalk widening.	
(19) Madison Ave @ East 40th St.	North	17.50	13.4	E	17.50	11.5	E	19.00	12.6	E	Mitigated through crosswalk widening.	
	West	14.50	20.7	D	14.50	18.4	D	15.00	19.2	D	Mitigated through crosswalk widening.	
(20) Fifth Ave @ East 47th St.	South	15.00	15.9	D	15.00	13.3	E	17.50	15.8	D	Mitigated through crosswalk widening.	
(21) Fifth Ave @ East 46th St.	South	13.00	21.1	D	13.00	17.2	D	14.50	19.5	D	Mitigated through crosswalk widening.	
(23) Fifth Ave @ East 44th St.	East	15.25	13.5	E	15.25	10.9	E	18.25	13.6	E	Mitigated through crosswalk widening.	

Notes:
SFP - Square feet per pedestrian.
1. Impact worsened by corner mitigation measures.

Note: This table has been revised for the FEIS.

TABLE 19-16: ACTION-WITH-MITIGATION: PM PEAK HOUR CROSSWALK CONDITIONS

Intersection	Crosswalk	No-Action			With-Action			Action-With-Mitigation				See Note
		Width	Pedestrian Space (SFP)	LOS	Width	Pedestrian Space (SFP)	LOS	Width	Pedestrian Space (SFP)	LOS	Mitigation Measures	
PM Peak Period												
(5) Third Ave @ East 42nd St.	North	19.83	8.9	E	19.83	7.4	F	22.33	8.5	E	Mitigated through crosswalk widening.	
(7) Lexington Ave @ East 49th St.	West	10.50	23.6	D	10.50	16.5	D	12.50	20.3	D	Mitigated through crosswalk widening.	
(13) Madison Ave @ East 47th St.	West	13.00	20.1	D	13.00	18.7	D	14.50	19.3	D	Mitigated through crosswalk widening.	1
(14) Madison Ave @ East 46th St.	East	12.58	16.4	D	12.58	12.2	E	15.08	15.3	D	Mitigated through crosswalk widening.	
(15) Madison Ave @ East 45th St.	North	13.17	19.2	D	13.17	14.8	E	16.67	17.6	D	Mitigated through crosswalk widening.	2
	East	12.33	11.2	E	12.33	10.2	E	14.33	13.1	E	Mitigated through crosswalk widening and changes in signal timing due to traffic mitigation.	
(17) Madison Ave @ East 43rd St.	North	13.00	11.9	E	13.00	10.8	E	14.50	12.4	E	Mitigated through crosswalk widening.	
	West	12.17	21.3	D	12.17	18.5	D	12.67	19.4	D	Mitigated through crosswalk widening.	
(18) Madison Ave @ East 42nd St.	North	21.75	6.7	F	21.75	6.2	F	22.25	6.4	F	Mitigated through crosswalk widening.	
(20) Fifth Ave @ East 47th St.	South	15.00	9.6	E	15.00	7.9	F	17.50	9.4	E	Mitigated through crosswalk widening.	
(21) Fifth Ave @ East 46th St.	South	13.00	22.2	D	13.00	19.1	D	14.50	21.6	D	Mitigated through crosswalk widening.	
(23) Fifth Ave @ East 44th St.	East	15.25	12.1	E	15.25	9.6	E	18.25	12.0	E	Mitigated through crosswalk widening.	
(24) Fifth Ave @ East 43rd St.	East	20.25	25.5	C	20.25	18.3	D	21.75	20.0	D	Mitigated through crosswalk widening.	
	West	21.58	17.6	D	21.58	15.7	D	22.08	16.2	D	Mitigated through crosswalk widening.	
(25) Fifth Ave @ East 42nd St.	North	21.00	18.1	D	21.00	15.1	D	24.00	16.8	D	Mitigated through crosswalk widening.	2
	South	22.33	18.3	D	22.33	12.6	E	24.83	13.7	**E***	Unmitigated. Conditions improved by crosswalk widening but impact would remain unmitigated.	2
	East	21.00	16.4	D	21.00	14.0	E	22.00	15.3	D	Mitigated through crosswalk widening and changes in signal timing due to traffic mitigation.	

Notes:
* - Denotes an unmitigated impact.
SFP - Square feet per pedestrian.
1. No significant adverse impact for the With-Action condition. Significant adverse impact is due to changes in traffic signal timing as part of traffic mitigation measures.
2. Impact worsened by traffic mitigation signal timing changes.

Note: This table has been revised for the FEIS.

19.7.2.4 Lexington Avenue and East 49th Street

The Proposed Action's significant adverse impacts to the west crosswalk in the AM and PM peak hours would be fully mitigated by widening this crosswalk by two feet.

19.7.2.5 Lexington Avenue and East 48th Street

The Proposed Action's significant adverse impact to the south crosswalk in the Midday peak hour would be fully mitigated by widening this crosswalk by 0.5 feet.

19.7.2.6 Madison Avenue and East 47th Street

The west crosswalk at this intersection would be significantly adversely impacted in the Midday peak hour by project-generated demand, and in the PM peak hour by signal timing changes proposed as traffic mitigation. In addition, the south crosswalk would be significantly impacted by traffic mitigation signal timing changes in the AM peak hour. All of these impacts could be fully mitigated by widening the south crosswalk by 0.5 feet and the west crosswalk by 1.5 feet.

19.7.2.7 Madison Avenue and East 46th Street

The Proposed Action would significantly adversely impact the west crosswalk at this intersection in the Midday peak hour and the east crosswalk in all three peak hours. A 2.5-foot widening of the east crosswalk along with signal timing changes recommended as traffic mitigation would fully mitigate all of the significant adverse impacts to the east and west crosswalks.

19.7.2.8 Madison Avenue and East 45th Street

The Proposed Action would significantly adversely impact the north and east crosswalks at this intersection in all three peak hours. A two-foot widening along with signal timing changes recommended as traffic mitigation would fully mitigate all of the significant adverse impacts at the east crosswalk; however, the signal timing changes would also worsen the impact at the north crosswalk in the AM and PM peak hours. Widening the north crosswalk by 3.5 feet would fully mitigate the significant impact in the Midday and PM peak hours and improve conditions in the AM. However, the significant adverse impacts to this crosswalk in the AM would remain unmitigated based on *CEQR Technical Manual* criteria.

19.7.2.9 Madison Avenue and East 44th Street

The Proposed Action's significant adverse impact to the east crosswalk in the AM peak hour would be fully mitigated by widening this crosswalk by 0.5 feet.

19.7.2.10 Madison Avenue and East 43rd Street

The Proposed Action would significantly adversely impact the west crosswalk in the AM and PM peak hours and the north crosswalk in all three peak hours. In the AM peak hour, signal timing changes recommended as traffic mitigation would also significantly impact the south crosswalk and worsen the

impact on the north crosswalk. Widening the north crosswalk by 1.5 feet and the south and west crosswalks by 0.5 feet each, along with signal timing changes recommended as traffic mitigation, would fully mitigate all of the significant adverse impacts at these crosswalks.

19.7.2.11 Madison Avenue and East 42nd Street

The Proposed Action would significantly adversely impact the north crosswalk in the AM and PM peak hours. Widening the north crosswalk by 0.5 feet would fully mitigate all of the significant adverse impacts at this crosswalk.

19.7.2.12 Madison Avenue and East 40th Street

The Proposed Action's significant adverse impacts to the north and west crosswalks in the Midday peak hour would be fully mitigated by widening these crosswalks by 1.5 and 0.5 feet, respectively.

19.7.2.13 Fifth Avenue and East 47th Street

The Proposed Action's significant adverse impact to the south crosswalk in the AM, Midday and PM peak hours would be fully mitigated by widening this crosswalk by 2.5 feet.

19.7.2.14 Fifth Avenue and East 46th Street

The Proposed Action would significantly adversely impact the south crosswalk in the Midday and PM peak hours. Widening this crosswalk by 1.5 feet would fully mitigate the significant adverse impacts in the Midday and PM peak hours.

19.7.2.15 Fifth Avenue and East 45th Street

Signal timing changes recommended as traffic mitigation would significantly impact the south crosswalk at this intersection in the AM peak hour. Widening this crosswalk by 0.5 feet foot would fully mitigate this significant adverse impact.

19.7.2.16 Fifth Avenue and East 44th Street

The Proposed Action would significantly adversely impact the east crosswalk in the AM, Midday and PM peak hours. Widening the east crosswalk by three feet would fully mitigate the significant adverse impacts in all periods.

19.7.2.17 Fifth Avenue and East 43rd Street

The Proposed Action would significantly adversely impact the east and west crosswalks in the PM peak hour. Widening the east crosswalk by 1.5 feet and the west crosswalk by 0.5 feet would fully mitigate all of the significant adverse impacts to the these crosswalks in all periods.

19.7.2.18 Fifth Avenue and East 42nd Street

The Proposed Action would significantly adversely impact the east crosswalk in the PM peak hour and the north and south crosswalks in both the AM and PM. Signal timing changes recommended as traffic

mitigation would worsen the PM impact to the north and south crosswalks. Widening the north, south and east crosswalks by three feet, 2.5 feet, and one foot, respectively, along with signal timing changes recommended as traffic mitigation in the PM peak hour would fully mitigate the significant impacts to the north crosswalk in the AM and PM peak hours and the east crosswalk in the PM. While conditions at the south crosswalk would be improved in the AM and PM, the significant impacts to this crosswalk in both periods would remain unmitigated based on *CEQR Technical Manual* criteria.

19.7.3 Corner Areas

Eight of the 62 analyzed corner areas would be significantly adversely impacted in one or more peak hours as a result of the Proposed Action. There would be five significantly impacted corner areas at a total of four intersections in the AM peak hour, five impacted corner areas at three intersections in the midday and six impacted corner areas at three intersections in the PM peak hour. Three of the corner areas with significant impacts would be located along Madison Avenue, four along Lexington Avenue and one on Third Avenue. The proposed mitigation measures generally consist of relocating sidewalk furniture out of the corner area and installing six-foot sidewalk extensions (bulb outs) to increase the available pedestrian space. It should be noted, however, that bulb outs are not feasible at many locations due to their effects on traffic flow or the presence of curbside bus lanes.

As shown in Table 19-17, upon incorporation of the recommended mitigation measures, impacts to three corner areas would remain unmitigated in the AM peak hour, one during the midday peak hour, and two during the PM peak hour. No practicable mitigation was identified for these three locations and impacts in one or more peak hours at these corner areas would remain unmitigated. Consequentially, these impacts would constitute unavoidable significant adverse pedestrian impacts as a result of the Proposed Action (refer to Chapter 22, "Unavoidable Adverse Impacts").

19.7.3.1 Third Avenue and East 42nd Street

A significant adverse impact would occur on the northwest corner in the AM peak hour. While conditions at this corner would be improved by removing a waste receptacle out of the corner area, no practicable measures to fully mitigate this impact were identified. The AM peak hour impact at this location would therefore remain unmitigated.

19.7.3.2 Lexington Avenue and East 50th Street

Both the southeast and southwest corners at this intersection would be significantly adversely impacted in the Midday and PM peak hours, while the southeast corner would also be impacted in the AM. A bulb out along the East 50th Street sidewalk adjacent to the southwest corner would fully mitigate the significant adverse impacts to this corner in the Midday and PM peak hours. Similarly, a bulb out along the Lexington Avenue sidewalk adjacent to the southeast corner would fully mitigate the significant adverse impacts to this corner in all three peak hours.

TABLE 19-17: ACTION-WITH-MITIGATION: CORNER CONDITIONS

Intersection	Corner	No-Action				With-Action				Action-With-Mitigation					See Note
		Major Width	Minor Width	Pedestrian Space (SFP)	LOS	Major Width	Minor Width	Pedestrian Space (SFP)	LOS	Major Width	Minor Width	Pedestrian Space (SFP)	LOS	Mitigation Measures	
AM Peak Period															
(5) Third Ave @ East 42nd St.	Northwest	15.3	19.8	19.9	D	15.3	19.8	16.7	D	15.3	19.8	17.5	**D***	Unmitigated. Conditions improved by street furniture removal but impact would remain unmitigated.	
(6) Lexington Ave @ East 50th St.	Northeast	11.8	12.5	11.3	E	11.8	12.5	10.4	E	17.8	12.5	25.2	C	Mitigated through bulb out.	
	Southeast	12.0	12.5	19.4	D	12.0	12.5	17.3	D	18.0	12.5	33.8	C	Mitigated through bulb out.	
(17) Madison Ave @ East 43rd St.	Northeast	13.3	10.3	2.5	F	13.3	10.3	1.5	F	13.3	10.3	1.1	**F***	Unmitigated.	1
(18) Madison Ave @ East 42nd St.	Northwest	12.8	20.5	13.4	E	12.8	20.5	11.0	E	12.8	20.5	11.0	**E***	Unmitigated.	
MD Peak Period															
(6) Lexington Ave @ East 50th St.	Northeast	11.8	12.5	21.1	D	11.8	12.5	17.8	D	17.8	12.5	35.0	C	Mitigated through bulb out.	
	Southeast	12.0	12.5	13.5	E	12.0	12.5	10.0	E	18.0	12.5	22.9	D	Mitigated through bulb out.	
	Southwest	11.3	12.5	16.2	D	11.3	12.5	11.3	E	11.3	18.5	27.8	C	Mitigated through bulb out.	
(15) Madison Ave @ East 45th St.	Northwest	12.8	12.8	22.5	D	12.8	12.8	15.1	D	12.8	18.8	31.0	C	Mitigated through bulb out.	
(17) Madison Ave @ East 43rd St.	Northeast	13.3	10.3	21.4	D	13.3	10.3	18.1	D	13.3	10.3	18.1	**D***	Unmitigated.	
PM Peak Period															
(6) Lexington Ave @ East 50th St.	Northeast	11.8	12.5	14.9	E	11.8	12.5	12.9	E	17.8	12.5	27.2	C	Mitigated through bulb out.	
	Northwest	12.5	13.0	22.8	D	12.5	13.0	19.0	D	12.5	13.0	19.0	**D***	Unmitigated. Adjacent plaza provides additional queuing space therefore no mitigation proposed.	
	Southeast	12.0	12.5	14.1	E	12.0	12.5	11.5	E	18.0	12.5	25.8	C	Mitigated through bulb out.	
	Southwest	11.3	12.5	20.6	D	11.3	12.5	16.8	D	11.3	18.5	34.0	C	Mitigated through bulb out.	
(15) Madison Ave @ East 45th St.	Northwest	12.8	12.8	18.2	D	12.8	12.8	15.2	D	12.8	18.8	32.9	C	Mitigated through bulb out.	1
(18) Madison Ave @ East 42nd St.	Northwest	12.8	20.5	11.7	E	12.8	20.5	10.3	E	12.8	20.5	10.3	**E***	Unmitigated.	

Notes:
SFP - square feet per pedestrian.
1. Impact worsened by traffic mitigation signal timing changes.

Note: This table has been revised for the FEIS.

The northeast corner at this intersection would also be impacted in the AM, Midday and PM peak hours, as would the northwest corner in the PM peak hour only. A bulb out along the Lexington Avenue sidewalk adjacent to the northeast corner would fully mitigate the significant adverse impacts at this location in all periods. Although a similar bulb out would likely mitigate the PM peak hour impact at the northwest corner, it should be noted that the building adjacent to this corner has been set back to create a covered plaza area around an entrance stair to the 51st Street subway station. As this plaza provides additional pedestrian circulation and queuing space immediately adjacent to the corner area, no additional mitigation measures are proposed for this location, and the PM peak hour impact would remain unmitigated.

19.7.3.3 Madison Avenue and East 45th Street

The northwest corner at this intersection would be significantly adversely impacted in the Midday and PM peak hours, and the PM peak hour impact would be worsened somewhat by signal timing changes proposed as mitigation for traffic impacts. A bulb out along the East 45th Street sidewalk adjacent to the northwest corner would fully mitigate the significant adverse impacts at this location in both periods.

19.7.3.4 Madison Avenue and East 43rd Street

The northeast corner at this intersection would be significantly adversely impacted in the AM and Midday peak hours, and the AM impact would be worsened somewhat by signal timing changes proposed as mitigation for traffic impacts. As no practicable measures to fully mitigate the pedestrian impacts at the northeast corner were identified, the AM and Midday peak hour impacts at this location would remain unmitigated.

19.7.3.5 Madison Avenue and East 42nd Street

No practicable measures to fully mitigate the AM and PM peak hour impacts to the northwest corner were identified, and the impacts at this location would therefore remain unmitigated.

19.7.4 Proposed Mitigation Schedule for Pedestrian Mitigation Measures

Subject to DOT approval, the mitigation measures described in Section 19.7 would be implemented to mitigate the significant adverse pedestrian impacts resulting from full build-out of the Proposed Action in 2033. As the development of the Proposed Action would be expected to occur over an approximately 20-year period, it is possible that some of the significant adverse impacts to sidewalks, crosswalks and corner areas could occur prior to full build-out in 2033.

Based on the anticipated construction schedule shown in Chapter 18, "Construction," the first significant adverse pedestrian impacts resulting from the Proposed Action could potentially occur in the fourth quarter of 2020 due to incremental demand associated with the completion of development on Projected Development Site 4. This level of development would result in a net increase of 363,644 gsf of office space,

and would potentially generate more than the *CEQR Technical Manual* analysis threshold of 200 peak hour pedestrian trips along nearby sidewalks and crosswalks that have been identified as significantly adversely impacted. In addition, it should be noted that some traffic mitigation measures, which could be implemented starting as early as 2017, are also expected to result in significant adverse crosswalk impacts. At these earlier points in time, implementation of some or all of the mitigation measures developed for full build-out of the Proposed Action in 2033 would be considered to address potential significant adverse pedestrian impacts. The CPC is currently considering a proposed modification to the zoning text amendment pursuant to which DCP, as lead agency, would review the need for implementation of these mitigation measures at earlier points in time and provide periodic reports to the DIF Committee regarding same.

19.8 CONSTRUCTION

19.8.1 Historic and Cultural Resources

As discussed in Chapter 18, "Construction," development under the Proposed Action—specifically, on Projected Development Sites 3, 6, 9, 10, 12, and 16 and Potential Development Sites 2-7, 12, 13, 15, and 20—could result in inadvertent construction-related damage to 24 NYCL- and/or S/NR-eligible historic resources, as they located within 90 feet of projected and/or potential development sites. The 24 eligible resources include:

- 50-52 East 41st Street (NYCL- and S/NR-eligible);
- 51 East 42nd Street (S/NR-eligible);
- East 45th Street Bridges (S/NR-eligible);
- 6 East 45th Street (NYCL-eligible);
- 45 East 45th Street (NYCL- and S/NR-eligible);
- 17 East 47th Street (NYCL-eligible);
- 111 East 48th Street (S/NR-eligible);
- 39 East 51st Street (NYCL- and S/NR-eligible);
- 509-511 Lexington Avenue (NYCL-eligible);
- 525 Lexington Avenue (NYCL-eligible);
- 299 Madison Avenue (NYCL-eligible);
- 400 Madison Avenue (NYCL-eligible);
- 437 Madison Avenue (NYCL-eligible);
- 200 Park Avenue (NYCL-eligible);
- 250 Park Avenue (NYCL and S/NR-eligible);

- 270 Park Avenue (NYCL-eligible);
- 830 Third Avenue (NYCL-eligible);
- 884 Third Avenue (NYCL-eligible);
- 50 Vanderbilt Avenue (NYCL-eligible);
- 59 East 54th Street (S/NR-eligible);
- 295 Madison Avenue (S/NR-eligible);
- 346 Madison Avenue (S/NR-eligible);
- 280 Park Avenue (S/NR-eligible); and
- 52 Vanderbilt Avenue (S/NR-eligible #152).

Development under the Proposed Action could potentially result in construction-related impacts to these 24 non-designated resources. The New York City Building Code, under section C26-112.4, provides some measures of protection for all properties against accidental damage from adjacent construction by requiring that all buildings, lots, and service facilities adjacent to foundation and earthwork areas be protected and supported. For designated NYC Landmarks and S/NR-listed historic buildings located within 90 feet of a proposed construction site, additional protective measures under the New York City Department of Buildings (DOB) Technical Policy and Procedure Notice (TPPN) #10/88 supplement the procedures of C26-112.4 by requiring a monitoring program to reduce the likelihood of construction damage and to detect at an early stage the beginnings of damage so that construction procedures can be changed. For the 24 non-designated resources that are within 90 feet of one or more projected and/or potential development sites, development under the Proposed Action could potentially result in construction-related impacts to the resources, and the protective measures under TPPN #10/88 would only apply if the resources become designated.

In order to make TPPN #10/88 or similar measures applicable to eligible historic resources in the absence of a site-specific approval, such as a Special Permit with an accompanying restrictive declaration, a mechanism would have to be developed to ensure implementation and compliance, since it is not known and cannot be assumed that owners of these properties would voluntarily implement this mitigation. DCP, as lead agency, explored the viability of this mitigation measure between Draft EIS and Final EIS. The CPC is currently considering a proposed modification to the zoning text amendment which would require, prior to excavation or demolition pursuant to the Proposed Action on a Projected or Potential Development Site located within 90 feet of an eligible resource, that the Commissioner of Buildings have approved a construction monitoring protocol of similar scope and purpose to the provisions of TPPN #10/88. In the event this modification is adopted, significant adverse historic resources impacts resulting from construction activities under the Proposed Action would be fully mitigated.

19.8.2 Traffic

As described in Chapter 18, "Construction," construction-related traffic would have significant adverse impacts to nine intersections during the 6:00-7:00 am peak hour. Implementation of traffic engineering improvements such as signal timing changes or modifications to curbside parking regulations would fully mitigate the anticipated traffic impacts at all but two intersections (Second Avenue at East 44th Street and Fifth Avenue at 47th Street). Table 19-18 summarizes the recommended mitigation measures for each of these intersections, which is subject to review and approval by DOT.

Table 19-19 provides a comparison of the v/c ratios, delays, and levels of service (LOS) at impacted intersections with implementation of these mitigation measures to No-Action and Construction conditions. With the implementation of recommended mitigation measures, nearly all of the significant adverse impacts would be mitigated. Absent measures that could be implemented to mitigate impacts at the two remaining impacted intersections, these construction-related traffic impacts would remain unmitigated (refer to Chapter 22, "Unavoidable Adverse Impacts").

TABLE 19-18: AM PROPOSED TRAFFIC MITIGATION MEASURES (CONSTRUCTION)

Intersection	Movement	No-Action	With-Action	Change	Proposed Mitigation
Second Avenue @ 44th Street	EB TR: G=	27	27		**Impacts cannot be fully mitigated in this time period.**
	SB LT: G=	53	53		
Second Avenue @ 46th Street	EB TR: G=	27	27	2	29
	SB LT: G=	53	53	-2	51
Second Avenue @ 49th Street	Ped Crossing: G =	7	7	0	7
	WB LT: G =	24	25	3	28
	SB TR: G =	49	48	-3	45
Third Avenue @ 39th Street	WB TR: G =	40	40	4	44
	NB TR: G =	40	40	-4	36
Third Avenue @ East 42nd Street	Ped Crossing: G =	6	6	0	6
	EB T/WB TR: G =	21	21	3	24
	EB LT: G =	13	13	1	14
	NB LTR: G =	35	35	-4	31
Park Avenue @ East 39th Street	WB LTR: G =	35	35	1	36
	NB LT/SB TR: G =	45	45	-1	44
Madison Avenue @ East 44th Street	EB LT: G =	35	35	2	37
	NB TR: G =	45	45	-2	43
Fifth Avenue @ 43rd Street	WB TR: G =	35	35	-3	32
	SB TR: G =	45	45	3	48
Fifth Avenue @ 47th Street	WB T: G=	24	24		**Impacts cannot be fully mitigated in this time period.**
	WB LT: G=	15	15		
	SB TR: G=	41	41		

Note:
"G" indicates amount of green phase time, in seconds.
NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound
L = Left-Turn; T = Through; R = Right-Turn

Source: Parsons Brinckerhoff, Inc., 2013
Note: This table has been revised for the FEIS.

TABLE 19-19: AM LEVEL OF SERVICE ANALYSIS WITH AND WITHOUT PROPOSED MITIGATION (CONSTRUCTION)

		No-Action 2022 - AM				Construction 2022 - AM				Construction with Mitigation 2022 - AM			
Signalized Intersection	Approach	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS	Movt.	V/C Ratio	Delay Sec/Veh	LOS
Second Avenue @ East 44th Street	EB	TR	0.64	37.4	D	TR	0.97	77.7	E +	TR	0.97	77.7	E
	SB	LT	0.53	7.2	A	LT	0.55	7.4	A	LT	0.55	7.4	A
	INTERSECTION			10.0	B			15.8	B			15.8	B
Second Avenue @ East 46th Street	EB	TR	1.00	83.7	F	TR	1.08	105.4	F +	TR	0.99	76.7	E
	SB	LT	0.58	7.6	A	LT	0.59	7.8	A	LT	0.62	9.3	A
	INTERSECTION			17.7	B			21.1	C			18.5	B
Second Avenue @ East 49th Street	WB	LT	1.68	353.1	F	LT	1.86	432.4	F +	LT	1.64	333.3	F
	SB	TR	0.65	11.7	B	TR	0.66	11.8	B	TR	0.70	14.7	B
	INTERSECTION			80.2	F			102.2	F			83.2	F
Third Avenue @ East 39th Street	WB	TR	0.95	52.1	D	TR	1.08	87.4	F +	TR	0.98	54.3	D
	NB	LT	0.43	15.0	B	LT	0.44	15.1	B	LT	0.49	18.8	B
	INTERSECTION			26.3	C			38.9	D			30.5	C
Third Avenue @ East 42nd Street	EB	L	0.77	55.0	D	L	0.80	58.2	E	L	0.76	52.5	D
		T	0.69	26.7	C	T	0.69	26.7	C	T	0.62	21.7	C
	WB	T	0.74	39.5	D	T	0.74	39.9	D	T	0.65	33.9	C
		R	0.66	51.9	D	R	0.83	74.7	E +	R	0.72	55.2	E
	NB	LTR	0.69	22.6	C	LTR	0.72	23.2	C	LTR	0.81	29.4	C
	INTERSECTION			29.6	C			31.2	C			31.7	C
Park Avenue @ West 39th Street	WB	LTR	0.76	32.9	C	LTR	0.91	47.1	D +	LTR	0.88	42.8	D
	NB	L††	-	38.6	D	L††	-	38.7	D	L††	-	38.8	D
		LT	0.37	14.5	B	LT	0.38	14.6	B	LT	0.39	15.3	B
	SB	TR	0.65	19.1	B	TR	0.69	20.2	C	TR	0.71	21.3	C
	INTERSECTION			0.0	A			25.1	C			24.8	C
Madison Avenue @ East 44th Street	EB	LT	0.52	26.0	C	LT	0.91	54.7	D +	LT	0.86	44.9	D
	NB	T	0.77	18.8	B	T	0.77	18.7	B	T	0.80	21.9	C
		R	0.29	12.9	B	R	0.44	16.4	B	R	0.47	19.0	B
	INTERSECTION			19.6	B			27.8	C			27.6	C
Fifth Avenue @ 43rd Street	WB	L	0.37	22.6	C	L	0.40	23.4	C	L	0.45	27.0	C
		T	0.24	19.6	B	T	0.28	20.3	C	T	0.31	22.7	C
	SB	T	0.71	15.7	B	T	0.72	15.9	B	T	0.68	12.7	B
		R	0.81	40.0	D	R	0.90	52.9	D +	R	0.84	40.0	D
	INTERSECTION			18.9	B			20.8	C			17.5	B
Fifth Avenue @ 47th Street	WB	L	0.48	40.8	D	L	1.07	115.6	F +	L	1.07	115.6	F
		T	0.41	19.9	B	T	0.41	19.9	B	T	0.41	19.9	B
	SB	T	0.81	21.5	C	T	0.83	22.6	C	T	0.83	22.6	C
		R	0.43	18.9	B	R	0.43	19.0	B	R	0.43	19.0	B
	INTERSECTION			22.4	C			33.6	C			33.6	C

+ Denotes a significant adverse traffic impact

Unmitigated approach movements denoted by shading

†† To mimic actual conditions for NB/SB left turning vehicles on Park Avenue, the sum of two delays were accounted for: (1) delay from making the left turn; and (2) delay from waiting at the red light after the left turn.

Source: Parsons Brinckerhoff, Inc., 2013

Note: This table has been revised for the FEIS.

19.8.3 Construction Noise

As discussed in Chapter 18, "Construction," construction activities associated with the Proposed Action would occur on multiple development sites within the same geographic area and, as the result, has the potential to increase interior noise levels of existing adjacent commercial buildings. These increases would likely approach or marginally exceed the impact threshold for short periods of time and has the potential during other construction quarters bordering the peak construction period.

The findings indicate that noise levels above the CEQR 5 dBA impact threshold are expected at several existing adjacent buildings to Projected Development Sites 5, 6, and 7. The highest noise levels are projected to be at ground level and at elevated receptor locations adjacent to existing commercial buildings on West 43rd Street between Madison and Fifth Avenues that border Projected Development Site 5. Although these locations are expected to experience exterior noise levels significantly above CEQR limits, for those buildings with double-paned glazed-glass windows and a closed ventilation system, it would keep interior noise levels for those buildings below or near the CEQR 50-dBA L_{10} impact threshold. The interior noise levels of these adjacent commercial buildings would likely approach or marginally exceed the CEQR 50-dBA L_{10} impact threshold for short periods of time. The potential does exist for similar noise-level increases at these and/or other receptor locations in the immediate vicinity of Project Development Sites 5, 6, and 7 during other construction quarters bordering this peak construction period (i.e., second quarter of 2022). Therefore, if the peak construction scenario conservatively assumed for simultaneous construction on Projected Development Sites 5, 6 and 7 for the purposes of this analysis is realized, the Proposed Action would result in a significant adverse construction noise impact.

Partial mitigation for construction noise impacts could include, in addition to the requirements under the New York City Noise Control Code, noise barriers, use of low noise emission equipment, locating stationary equipment as far as feasible away from receptors, enclosing areas, limiting the duration of activities, specifying quiet equipment, scheduling of activities to minimize impacts (either time of day or seasonal considerations), and locating noisy equipment near natural or existing barriers that would shield sensitive receptors.

The CPC is currently considering a modification to the proposed zoning text amendment which would provide that no demolition or excavation work may be issued for development of Projected Sites 5, 6, or 7 as qualifying sites under the rezoning unless the Chairperson of the CPC has certified either a) that the simultaneous construction of Projected Sites 5, 6 and 7 conservatively analyzed in the EIS is not anticipated to occur; or, b) that a restrictive declaration has been executed and recorded providing for implementation during construction of the noise path and control measures described above, except to the extent determined by the Chair to be infeasible or impracticable due to site specific conditions. This provision, if adopted by the CPC, would partially mitigate the potential for significant adverse noise impacts during construction.

The proposed modifications to the zoning text amendment discussed above are considered partial mitigations only. Consequently, these impacts would not be completely eliminated and they would constitute an unmitigated significant adverse construction noise impact, as is discussed in Chapter 22, "Unavoidable Adverse Impacts."