Chapter 21: Mitigation

A. INTRODUCTION

This chapter considers mitigation measures to address significant adverse impacts generated by the proposed project. As described in Chapter 1, "Project Description," under the reasonable worst-case development scenario (RWCDS) the proposed actions would result in the development of approximately 1,711 new dwelling units (DUs), 135,500 gross square feet (gsf) of retail (an increase of approximately 39,845 gsf over the No Action scenario), and approximately 15,055 gsf of community facility space within the rezoning area. The proposed actions have the potential to result in significant adverse impacts to shadows, open space, historic and cultural resources, and transportation, as well as traffic, pedestrians, and noise during the construction period. Potential mitigation measures for each of these technical areas are identified below.

B. PRINCIPAL CONCLUSIONS

SHADOWS

Incremental shadows cast by the proposed project would be substantial enough in extent and duration to significantly affect the Howard Bennett Playground on the December 21 analysis day. The CEQR Technical Manual identifies several measures that could mitigate significant adverse shadow impacts on open spaces, including modifying the height, shape, size or orientation of a proposed development in order to eliminate or reduce the extent and duration of incremental shadow on the resource; relocating sunlight-sensitive features within an open space to avoid sunlight loss; relocating or replacing vegetation; and undertaking additional maintenance to reduce the likelihood of species loss. Potential mMitigation measures for the shadows impact are being explored by the applicant and the open space impact detailed below were developed in consultation with DCP and NYC Parks. Mitigation, and will be refined between the DEIS and FEIS. Potential mitigation measures could include will consist of facility enhancements at the Howard Bennett Playground-and the Hansborough Recreation Centerto mitigate the significant adverse impact to the users of the playground. If feasible With the implementation of these mitigation measures are identified, the shadows impact would be considered partially mitigated. As the significant adverse shadows impact would not be fully mitigated, however, the proposed actions would result in unmitigated significant adverse shadows impacts to thisese resources.

OPEN SPACE

In the 2026 With Action condition, the study area open space ratios would decrease by approximately 4.87 percent for total open space, by 4.65 percent for passive open space, and by 4.96 percent for active open space. The reduction in open space ratios in the With Action scenario (2026) would be less than 5 percent, which is the threshold defined by the *CEQR Technical Manual* for identifying a quantified indirect open space impact; however, because the reduction in

the active open space ratio is very close to 5 percent and the open space ratios in this area would continue to be quantitatively low in the No Action and With Action conditions, the reduction in the open space ratio would be considered a significant adverse indirect impact in the 2026 analysis year. Medical mitigation measures for this the open space impact in the 2026 analysis year as well as the shadows impact described above are being explored by the applicant were developed in consultation with DCP and NYC Parks and will consist of facility enhancements at the Howard Bennett Playground and the Hansborough Recreation Center, and will be refined between the DEIS and FEIS.

HISTORIC AND CULTURAL RESOURCES

The proposed project would result in significant adverse impacts to historic resources on the proposed development site. Possible mMitigation measures to address this impact will be exploredhave been developed in consultation with the New York City Landmarks Preservation Commission (LPC) between the DEIS and FEIS. The applicant is expected to enter into a Restrictive Declaration, which will establish environmental mitigation conditions as necessary for the proposed project. LPC recommends that partial mitigation consist of both HABS Level II recordation of the complex and an interpretive program. The HABS recordation and interpretive program shall be prepared in consultation with a qualified consultant that meets the Secretary of the Interior's Professional Qualifications Standards, and the interpretive program will be installed at publicly-accessible locations within the site. The potential for a direct significant adverse impact on the S/NR-eligible Lenox Terrace historic resource during construction of the projected future development site (the Metropolitan AME Church site) and the potential development site could not be avoided, as these sites are not under the control of the applicant.

TRANSPORTATION

The proposed project would result in significant adverse impacts to traffic and pedestrians, as detailed below. No significant adverse impacts were identified for transit, parking, and vehicular and pedestrian safety.

TRAFFIC

As discussed in Chapter 13, "Transportation," traffic conditions were evaluated at 11 intersections for the weekday AM, midday, PM, and Saturday peak hours. In the 2023 With Action condition there would be the potential for significant adverse traffic impacts at four intersections during the weekday AM peak hour, two intersections during the weekday midday peak hour, three intersections during the weekday PM peak hour, and four intersections during the Saturday peak hour. In the 2026 With Action condition there would be the potential for significant adverse traffic impacts at five intersections during the weekday AM peak hour, four intersections during the weekday midday peak hour, five intersections during the weekday PM peak hour, and six intersections during the Saturday peak hour, as summarized in Tables 21-1 and 21-2.

Table 21-1 Summary of Significant Adverse Traffic Impacts 2023 With Action Condition

Inter	section	Weekday AM	Weekday Midday	Weekday PM	Saturday
EB/WB Street	NB/SB Street	Peak Hour	Peak Hour	Peak Hour	Peak Hour
West 135th Street	Adam Clayton Powell Jr. Boulevard	WB-L WB-TR			
West 135th Street		EB-LTR WB-LTR	WB-LTR		EB-LTR WB-LTR
135th Street	Fifth Avenue	EB-LTR	WB-TR	EB-LTR WB-LTR	EB-LTR WB-DefL
West 132nd Street	Lenox Avenue			EB-LTR SB-L	SB-L
132nd Street	Fifth Avenue	WB-L		EB-TR WB-L	EB-TR WB-L
Total Im	pacted Intersections/ Lane Groups	4/n	2/2	3/6	4/7

Notes:

L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound.

Table 21-2 Summary of Significant Adverse Traffic Impacts 2026 With Action Condition

			2020 With Action Condition							
Inter	section	Weekday AM	Weekday Midday	Weekday PM	Saturday					
EB/WB Street	NB/SB Street	Peak Hour	Peak Hour	Peak Hour	Peak Hour					
West 135th Street	Adam Clayton	WB-L								
West 135th Sheet	Powell Jr. Boulevard	WB-TR			WB-TR					
West 135th Street	Ι οπον Ανοπιιο	EB-LTR	EB-LTR	EB-LTR	EB-LTR					
West 133th Street	Lellox Avellue	WB-LTR	WB-LTR	WB-LTR	WB-LTR					
		EB-LTR		EB-LTR	EB-LTR					
135th Street	Fifth Avenue				WB-DefL					
100til Otteet		WB-LTR		WB-LTR						
			WB-TR		WB-TR					
West 132nd	Lenox Avenue			EB-LTR						
Street	Lellox Avellue			SB-L	SB-L					
West 131st Street	Lenox Avenue	WB-LTR	WB-LTR	WB-LTR	WB-LTR					
132nd Street	Fifth Avenue			EB-TR	EB-TR					
132110 Street	Filli Avenue	WB-L	WB-L	WB-L	WB-L					
Total Imp	acted Intersections/ Lane Groups	5/A	4/5	5/9	6/10					

Notes:

L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound.

The locations where significant adverse traffic impacts are predicted to occur could be fully mitigated with the implementation of standard traffic mitigation measures (e.g., signal timing changes and lane restriping).

PEDESTRIANS

As discussed in Chapter 13, "Transportation," 9 sidewalk segments, 5 corner reservoirs, and 2 crosswalks were selected for detailed analysis for the weekday AM, midday, PM, and Saturday peak hours. As summarized in **Tables 21-3 and 21-4**, potential significant adverse pedestrian impacts were identified for one crosswalk during all four analysis peak hours in both the 2023 and 2026 With Action conditions.

Table 21-3 Summary of Significant Adverse Pedestrian Impacts 2023 With Action Condition

		2023 With Action Condition								
Intersection	Pedestrian Element	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour					
Lenox Avenue and West 135th Street	South Crosswalk	Х	Х	Х	Х					
Total Impacted Pe	destrian Elements	1	1	1	1					
Note: X = Significan	Note: X = Significant Adverse Pedestrian Impact.									

Table 21-4
Summary of Significant Adverse Pedestrian Impacts
2026 With Action Condition

		2026 With Action Condition								
Intersection	Pedestrian Element	Weekday AM Peak Hour	Weekday Midday Peak Hour	Weekday PM Peak Hour	Saturday Peak Hour					
Lenox Avenue and West 135th Street	South Crosswalk	X	Х	Х	Х					
Total Impacted Pe	destrian Elements	1	1	1	1					
Note: X = Significan	it Adverse Pedestria	an Impact.								

The projected crosswalk impacts could not be fully mitigated using standard New York City Department of Transportation (DOT) approved measures, and were therefore considered to be unmitigated.

CONSTRUCTION

TRAFFIC

The first quarter to third quarter of 2022 was identified as the peak construction traffic period for Phase 1 Construction, and the fourth quarter of 2024 was identified as the peak construction traffic period for Phase 2 Construction. For the 2022 Phase 1 construction With Action condition, one of the analyzed intersections would be significantly impacted during the weekday 6 AM to 7 AM construction peak hour and three of the analyzed intersections would be significantly impacted during the weekday 3 PM to 4 PM construction peak hour. For the 2024 Phase 2 construction With Action condition, one of the analyzed intersections would be significantly impacted during the weekday 6 AM to 7 AM construction peak hour and fourthree of the analyzed intersections would be significantly impacted during the weekday 6 PM to 4 PM construction peak hour. These temporary construction period impacts could be fully mitigated by

implementing standard traffic mitigation measures that are the same or similar to those recommended to mitigate the operational impacts.

PEDESTRIANS

A detailed pedestrian analysis for Phase 1 construction was conducted for the south crosswalk at Lenox Avenue and West 135th Street, where operational impacts were identified in Chapter 13, "Transportation." For Phase 2 construction, a detailed pedestrian analysis was prepared for the south crosswalk at West 135th Street and Lenox Avenue, as well as for the threefour sidewalks and one corner where incremental trips generated by the combination of construction and occupied new buildings would be greater than those generated by the full build-out of the proposed actions. Similar to the conclusions made for the operational pedestrian analyses in Chapter 13, "Transportation," no significant adverse pedestrian impacts were identified for the threefour sidewalks and one corner. However, the south crosswalk of Lenox Avenue and West 135th Street would incur significant adverse pedestrian impacts, which cannot be mitigated, during the 6 AM to 7 AM and 3 PM to 4 PM construction peak hours during both Phase 1 and Phase 2 construction.

NOISE

As discuss in Chapter 19, "Construction," the proposed project would have the potential to result in significant adverse construction noise impacts at sensitive receptors in the vicinity of the proposed construction work areas. There would be no feasible and practicable mitigation measures for the identified significant adverse construction noise impacts at outdoor spaces (e.g., residential balconies). There would also be no feasible and practicable mitigation measures to further reduce noise levels at buildings or units that already have insulated glass windows and air conditioning units that have been identified as potentially experiencing significant adverse construction noise impacts. For impacted buildings that do not have insulated glass windows and alternate means of ventilation, the predicted impacts could be partially mitigated with receptor controls (i.e., storm windows and air conditioning units at residences that do not already have air conditioning).

C. SHADOWS

As detailed in Chapter 6, "Shadows," incremental shadow from the proposed projects' buildings would cast new shadows that would be substantial enough to significantly affect the Howard Bennett Playground on the December 21 analysis day (use, but not vegetation).

The CEQR Technical Manual identifies several different measures that could mitigate significant adverse shadow impacts on open spaces. These measures include modifying the height, shape, size or orientation of a proposed development in order to eliminate or reduce the extent and duration of incremental shadow on the resource; relocating sunlight-sensitive features within an open space to avoid sunlight loss; relocating or replacing vegetation; and undertaking additional maintenance to reduce the likelihood of species loss. To eliminate the significant adverse shadow impact on the Howard Bennett Playground, the proposed projects' buildings would need to be substantially shorter, which would compromise the feasibility of the project and proportionally reduce the amount of permanently affordable housing that could be provided by the proposed project.

Potential mMitigation measures for the shadows and open space impacts are being explored by the applicantwere developed in consultation with DCP and NYC Parks, and will be refined between the DEIS and FEIS. Potential mitigation measures include dedicated funding for facility enhancements at the Howard Bennett Playground to mitigate the significant adverse shadows impacts to the users of the playground. These measures, which would be the responsibility of the applicant, would consist of: (at the Howard Bennett Playground) replacement of asphalt surface in the playground area, and installation of painted games on the asphalt surface to replace the current painted map; replacement of play equipment in the northwest corner of the facility (Tot Lot area, as well as the play area for older children); replacement of the spray shower; upgrades to make the playground's comfort station ADA accessible and to fix the non-working drinking fountain; and (at the Hansborough Recreation Center) exercise equipment upgrades. With the implementation of these If feasible mitigation measures are identified, the shadows impacts would not be fully mitigated, however, the proposed actions projects would result in an unmitigated significant adverse shadows impacts to these resources.

D. OPEN SPACE

As discussed in Chapter 5, "Open Space," the open space ratios observed in the future with the proposed project would be quantitatively low; however, this condition currently exists and would persist in the future without the proposed project. In the 2026 With Action condition, the study area open space ratios would decrease by approximately 4.87 percent for total open space, by 4.65 percent for passive open space, and by 4.96 percent for active open space. The reduction in open space ratios in the With Action scenario (2026) would be less than 5 percent, which is the threshold defined by the CEOR Technical Manual for identifying a quantified indirect open space impact; however, because the reduction in the active open space ratio is very close to 5 percent and the open space ratios in this area would continue to be quantitatively low in the No Action and With Action conditions, the reduction in the open space ratio would be considered a significant adverse indirect impact in the 2026 analysis year. Potential mMitigation measures for this impact are being explored by the applicantwere developed in consultation with DCP and NYC Parks. These measures, which would be the responsibility of the applicant, would consist of: (at the Howard Bennett Playground) replacement of asphalt surface in the playground area, and installation of painted games on the asphalt surface to replace the current painted map; replacement of play equipment in the northwest corner of the facility (Tot Lot area, as well as the play area for older children); replacement of the spray shower; upgrades to make the playground's comfort station ADA accessible and to fix the non-working drinking fountain; and (at the Hansborough Recreation Center) exercise equipment upgrades. With the implementation of these mitigation measures, the open space impact would be considered partially mitigated. As the impact would not be fully mitigated, however, the proposed actions would result in an unmitigated significant adverse open space impact., and will be refined between the DEIS and FEIS.

E. HISTORIC AND CULTURAL RESOURCES

As discussed in Chapter 7, "Historic and Cultural Resources," the proposed development site is occupied by the Lenox Terrace complex, which comprises six 16-story residential towers and five one-story retail buildings on Lenox and Fifth Avenues and 135th Street. In comment letters dated September 1, 2017 and August 1, 2018, LPC stated that, while the building complex does not appear to be eligible for designation as a New York City Landmark, it does appear to be

eligible for listing on the State and National Registers of Historic Places for its cultural associations with prominent African Americans in the Harlem community.

The proposed project would entail the demolition of five one-story retail structures on the proposed development site. These buildings are not known to have had any tenants that contribute to the Lenox Terrace complex's cultural associations with prominent African Americans in the Harlem community. The buildings do not physically connect to any of the residential buildings that housed prominent community members and are in all cases separate and distinct structures. However, the buildings were constructed as part of the overall development of the Lenox Terrace complex and are part of the S/NR eligibility determination by LPC. Therefore, the demolition of the one-story structures on the proposed development site would result in a significant adverse impact to historic resources. In addition, should standard DOB controls governing the protection of adjacent properties during construction activities not provide sufficient protection, it is possible that development of the projected future development site could have a direct significant adverse impact on the S/NR-eligible Lenox Terrace historic resource during construction. If the potential development site were to be developed, that redevelopment also would have the potential to result in similar construction-related impacts.

Measures to mitigate this impact have been are being developed in consultation with LPC. Per the guidelines of the CEQR Technical Manual, possible mitigation measures for significant adverse effects on architectural resources can include redesign (i.e., relocating the action away from the resource, or redesign of the proposal to be more compatible with the resource), adaptive reuse, construction protection plan, data recovery/recordation, or relocation of the architectural resource. Data recovery can include recordation of a structure to the standards of the HABS. Mitigation measures that are being considered include educational material and displays focused on prominent Lenox Terrace residents who have contributed to the history of the Harlem community, to be installed on the property. The applicant is expected to enter into a Restrictive Declaration, which will establish environmental mitigation conditions as necessary for the proposed project. LPC recommends that partial mitigation for the demolition of the five onestory retail contributing buildings and subsequent new construction within the National Registereligible complex consist of both HABS Level II recordation of the complex and an interpretive program. The HABS recordation shall be prepared in consultation with a qualified consultant that meets the Secretary of the Interior's Professional Qualifications Standards. Regarding the interpretive program, also in consultation with a qualified consultant that meets the Secretary of the Interior's Professional Qualifications Standards, the applicant will develop an interpretive program for the purpose of communicating the resource's historic and/or cultural significance to the general public. The interpretive program will be installed at publicly-accessible locations within the site, including lobbies and other publicly-accessible locations within the new development. Examples of interpretive materials include publicly-accessible building signage, multimedia displays, and interactive websites.

The potential for a direct, physical impact on the Lenox Terrace resource during construction of the projected future development site and the potential development site could not be avoided, as these sites are not under the control of the applicant.

F. TRANSPORTATION

TRAFFIC

As detailed in Chapter 13, "Transportation," traffic conditions were evaluated at 11 intersections for the weekday AM, midday, PM, and Saturday peak hours. In the 2023 With Action condition there would be the potential for significant adverse traffic impacts at four intersections during the weekday AM peak hour, two intersections during the weekday midday peak hour, three intersections during the weekday PM peak hour, and four intersections during the Saturday peak hour. In the 2026 With Action condition there would be the potential for significant adverse traffic impacts at five intersections during the weekday AM peak hour, four intersections during the weekday midday peak hour, five intersections during the weekday PM peak hour, and six intersections during the Saturday peak hour. The potential significant adverse traffic impacts and recommended mitigation measures are discussed below. If these measures are deemed infeasible by DOT and no alternative mitigation measures can be identified, then the identified significant adverse traffic impacts would be unmitigated.

2023 WITH ACTION

Tables 21-5 to 21-8 itemize the recommended mitigation measures that would address the identified impacts. With the implementation of these standard traffic mitigation measures (including signal timing changes and lane restriping), which are subject to review and approval by DOT, the projected traffic impacts would be fully mitigated. A discussion of the recommended mitigation measures is provided below. **Tables 21-9 to 21-12** compare the levels of service (LOS) and lane group delays for the impacted intersections under the 2023 No Action, With Action, and Mitigation conditions for the four analysis peak hours.

West 135th Street and Adam Clayton Powell Jr. Boulevard

The significant adverse impacts at the westbound left-turn and shared through/right-turn lane groups of this intersection during the weekday AM peak hour could be fully mitigated by restriping the southbound approach from one 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot parking lane to one 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot right-turn lane (installing "No Standing Anytime" sign) on the west curbside of the southbound approach for approximately 100 feet from the intersection (which would eliminate approximately four on-street parking spaces); and shifting two seconds of green time from the northbound/southbound phase to the eastbound/westbound phase.

West 135th Street and Lenox Avenue

The significant adverse impacts at the eastbound and westbound approaches of this intersection during the weekday AM and Saturday peak hours could be fully mitigated by shifting two seconds of green time from the northbound/southbound phase to the eastbound/westbound phase. The significant adverse impact at the westbound approach of this intersection during the weekday midday peak hour could be fully mitigated by shifting one second of green time from the northbound/southbound phase to the eastbound/westbound phase.

Table 21-5
Recommended Mitigation Measures
2023 With Action—Weekday AM Peak Hour

	No Action Cianal	2025 With Action—Week	
1	No Action Signal	December ded Mitterstier Messer	Recommended Signal
Intersection	Timing	Recommended Mitigation Measures	Timing
West 135th Street and Adam Clayton Powell Jr. Boulevard	EB/WB: Green = 32 s NB Green: 7 s NB/SB: Green = 36 s	 (1) Restripe the SB approach from one 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot parking lane to 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the SB approach to create an additional right-turn lane. (3) Shift 2 seconds of green time from the NB/SB phase to the EB/WB phase. 	EB/WB: Green = 34 s NB Green: 7 s NB/SB: Green = 34 s
West 135th Street and Lenox Avenue	EB/WB: Green = 26 s LPI: Green = 7 s NB/SB: Green = 47 s	Shift 2 seconds of green time from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 28 s LPI: Green = 7 s NB/SB: Green = 45 s
135th Street and Fifth Avenue	WB: Green = 8 s EB/WB: Green = 30 s SB: Green = 37 s	 (1) Restripe the EB approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the EB approach to create an additional right-turn lane. 	No change from No Action
132nd Street and Fifth Avenue	EB/WB-L: Green = 28 s LPI: Green = 7 s SB: Green = 45 s	Ÿ	EB/WB-L: Green = 30 s LPI: Green = 7 s SB: Green = 43 s
Notes: EB = East	bound; WB = Westbou	nd; NB = Northbound; SB = Southbound; I	L = Left; T = Through; R

Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left; T = Through; R = Right; LPI = Lead Pedestrian Interval

Table 21-6
Recommended Mitigation Measures
2023 With Action—Weekday Midday Peak Hour

		2020 With Metion Weekday	miladay i cak iiodi
Intersection	No Action Signal Timing	Recommended Mitigation Measures	Recommended Signal Timing
West 135th Street and Lenox Avenue	EB/WB: Green = 26 s LPI: Green = 7 s NB/SB: Green = 47 s	Shift 1 second of green time from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 27 s LPI: Green = 7 s NB/SB: Green = 46 s
135th Street and Fifth Avenue	WB: Green = 8 s EB/WB: Green = 30 s SB: Green = 37 s	 (1) Restripe the EB approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the EB approach to create an additional right-turn lane. (3) Shift 1 second of green time from the SB phase to the WB phase. 	WB: Green = 9 s
Notes: EB = East	bound; WB = Westbou	nd; NB = Northbound; SB = Southbound; I	_ = Left; T = Through; R

= Right; LPI = Lead Pedestrian Interval

Table 21-7 Recommended Mitigation Measures 2023 With Action—Weekday PM Peak Hour

	No Action Signal		Recommended
Intersection	Timing	Recommended Mitigation Measures	Signal Timing
135th Street and Fifth Avenue	WB: Green = 8 s EB/WB: Green = 30 s SB: Green = 37 s	 (1) Restripe the EB approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the EB approach to create an additional right-turn lane. 	No change from No Action
West 132nd Street and Lenox Avenue	EB: Green = 26 s LPI: Green = 7 s NB/SB: Green = 47 s	 (1) Restripe the EB approach from one 13.5-foot moving lane with 8-foot parking lanes on both sides to one 10-foot left-turn lane, one 11.5-foot moving lane, and one 8-foot parking lane. (2) Install "No Standing Anytime" for 100-feet at north side of the EB approach to create an additional left-turn lane. (3) Shift 2 seconds of green time from the EB phase to the NB/SB phase. 	EB: Green = 24 s LPI: Green = 7 s NB/SB: Green = 49 s
132nd Street and Fifth Avenue	EB/WB-L: Green = 28 s LPI: Green = 7 s SB: Green = 45 s	Shift 1 second of green time from the SB phase to the EB/WB-L phase.	EB/WB-L: Green = 29 s LPI: Green = 7 s SB: Green = 44 s

Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left; T = Through; R = Right; LPI = Lead Pedestrian Interval

Table 21-8 Recommended Mitigation Measures 2023 With Action—Saturday Peak Hour

	No Action Signal		Recommended Signal
Intersection	Timing	Recommended Mitigation Measures	Timing
West 135th Street and Lenox Avenue	EB/WB: Green = 26 s LPI: Green = 7 s NB/SB: Green = 47 s	Shift 2 seconds of green time from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 28 s LPI: Green = 7 s NB/SB: Green = 45 s
135th Street and Fifth Avenue	WB: Green = 8 s EB/WB: Green = 30 s SB: Green = 37 s	 (1) Restripe the EB approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the EB approach to create an additional right-turn lane. 	No change from No Action
West 132nd Street and Lenox Avenue	EB: Green = 26 s LPI: Green = 7 s NB/SB: Green = 47 s	 (1) Restripe the EB approach from one 13.5-foot moving lane with 8-foot parking lanes on both sides to one 10-foot left-turn lane, one 11.5-foot moving lane, and one 8-foot parking lane. (2) Install "No Standing Anytime" for 100-feet at north side of the EB approach to create an additional left-turn lane. (3) Shift 2 seconds of green time from the EB phase to the NB/SB phase. 	EB: Green = 24 s LPI: Green = 7 s NB/SB: Green = 49 s
and Fifth Avenue	EB/WB-L: Green = 28 s LPI: Green = 7 s SB: Green = 45 s	Shift 1 second of green time from the SB phase to the EB/WB-L phase.	EB/WB-L: Green = 29 s LPI: Green = 7 s SB: Green = 44 s

Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left; T = Through; R = Right; LPI = Lead Pedestrian Interval

Table 21-9 2023 No Action, With Action, and Mitigation Conditions Level of Service Analysis Weekday AM Peak Hour

								* '	eekua	y / 11/1	1 can	iloui
	Weekday AM											
	20	023 No	Action		20:		Action	1	2	023 Mit	igation	
	Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay	
Intersection	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS	Group	Ratio	(sec)	LOS
	W	lest 135	th Stre	et and	Adam C	layton	Powell	Jr. Bo	ulevard			
Eastbound	LTR	0.66	31.3	С	LTR	0.68	32.0	С	LTR	0.64	28.8	С
Westbound	L	0.97	87.0	F	L	1.05	107.3	F+	L	0.95	78.1	Е
	TR	0.90	51.1	D	TR	0.95	60.3	E+	TR	0.89	48.0	D
Northbound	L	0.24	16.6	В	L	0.24	16.6	В	L	0.24	17.4	В
	TR	0.46	14.2	В	TR	0.46	14.2	В	TR	0.48	15.7	В
Southbound	L	0.28	21.6	С	L	0.31	22.3	С	L	0.33	24.4	С
	-	-	-	-	-	-	-	-	Т	0.91	39.7	D
	TR	1.01	56.9	Ε	TR	1.01	56.9	Ε	-	-	-	-
	-	-	-	-	-	-	-	-	R	0.16	19.5	В
West 135th Street and Lenox Avenue												
Eastbound	LTR	0.90	52.0	D	LTR	0.97	66.5	E+	LTR	0.87	46.3	D
Westbound	LTR	1.27	166.7	F	LTR	1.37	208.9	F+	LTR	1.27	158.9	F
Northbound	L	0.37	20.3	С	L	0.41	22.0	С	L	0.45	26.0	С
	TR	0.56	16.2	В	TR	0.56	16.3	В	TR	0.59	18.0	В
Southbound	L	0.28	15.0	В	L	0.28	15.2	В	L	0.30	16.9	В
	TR	0.77	21.3	С	TR	0.77	21.4	С	TR	0.80	24.1	С
			13	5th St	treet and	Fifth A	venue					
Eastbound	-	-	-	-	-	-	-	-	LT	0.71	32.8	С
	LTR	0.84	41.3	D	LTR	0.91	49.2	D+	-	-	-	-
	-	-	-	-	-	-	-	-	R	0.31	25.7	С
Westbound	LTR	0.99	50.2	D	LTR	1.01	54.2	D	LTR	0.98	46.4	D
Southbound	LTR	1.05	67.6	Е	LTR	1.05	68.2	Е	LTR	1.05	68.2	Е
	•	ı	West 1	32nd §	Street an	d Leno	x Aven	ue ⁽¹⁾	1	1		
Eastbound	-	-	-	-	-	-	-	-	L	0.12	24.3	О
	LTR	0.52	31.8	С	LTR	0.54	32.7	С		-	-	-
		-		-		-		-	TR	0.46	30.4	С
Northbound	TR	0.60	17.1	В	TR	0.62	17.4	В	TR	0.62	17.4	В
Southbound	L	0.48	21.3	С	L	0.51	23.0	С	L	0.51	23.0	С
	T	0.70	19.2	В	Т	0.71	19.4	В	Т	0.71	19.4	В
		T			treet and							1
Eastbound	TR	0.58	31.6	С	TR	0.69	35.6	D	TR	0.64	31.9	С
Westbound	L	1.08	118.6	F	L	1.24	180.1	F+	L	1.08	117.6	F
Southbound	L	0.17	13.0	В	L	0.17	13.0	В	L	0.18	14.2	В
	T	0.75	21.8	С	T	0.75	21.8	С	T	0.78	24.5	С

L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service + Denotes a significant adverse traffic impact

⁽¹⁾ Intersection not impacted during the weekday AM peak hour; analysis presented to demonstrate the proposed mitigation measures would not result in additional significant adverse traffic impacts.

Table 21-10 2023 No Action, With Action, and Mitigation Conditions Level of Service Analysis Weekday Midday Peak Hour

	Weekday wildday i ear iioui											
	Weekday Midday											
	2	023 No	Action		20	23 With	Action	1	2	023 Mit	igation	
	Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay	
Intersection	Group	Ratio	(sec)	LOS		Ratio	(sec)	LOS		Ratio	(sec)	LOS
	West 135th Street and Adam Clayton Powell Jr. Boulevard (1)											
Eastbound	LTR	0.55	27.5	C	LTR	0.57	28.1	C	LTR	0.57	28.1	С
Westbound	L	0.59	34.3	С	L	0.63	36.4	D	L	0.63	36.4	D
	TR	0.77	37.4	D	TR	0.80	39.8	D	TR	0.80	39.8	D
Northbound	L	0.13	11.8	В	L	0.13	11.8	В	L	0.12	11.5	В
	TR	0.47	14.3	В	TR	0.47	14.4	В	TR	0.47	14.4	В
Southbound	L	0.23	20.3	С	L	0.27	21.1	С	L	0.27	21.1	С
		<u>-</u>	-	-		<u>-</u>	-	-	Т	0.46	21.2	С
	TR	0.56	22.9	С	TR	0.56	22.9	С	-	-	-	-
- - - - - - R 0.09 17.2 West 135th Street and Lenox Avenue										В		
Eastbound	LTR	0.74	37.4	D	LTR	0.80	41.0	D	LTR	0.76	37.4	D
Westbound	LTR	1.00	68.8	E	LTR	1.05	83.1	F+	LTR	1.01	69.1	E
Northbound	L	0.19	13.0	В	L	0.21	13.3	В	L	0.21	14.0	В
0	TR	0.55	16.1	В	TR	0.55	16.2	В	TR	0.57	17.0	В
Southbound	L	0.38	17.4	B B	L	0.38	17.7	B B	L TR	0.40	18.7	B B
	TR	0.45	14.5		TR	0.45	14.5	В	IK	0.46	15.2	В
	1	ı	13	sotn S	treet and	i Fitth A	venue	1	I . 	0.57	07.0	
Eastbound	- -	- 75	-	-	- - TD		-	١.	LT	0.57	27.8	С
	LTR	0.75	33.9	С	LTR	0.77	35.0	D	-	- 10	-	C
Westbound	- DefL	0.05	50.2	D	- DefL	0.86	- 51.3	D	R	0.43	28.0	
Westbourid	Deil	0.85	30.2	D	Deil	0.60	51.5	D	LTR	0.99	50.8	D
	TR	1.01	62.5	E	TR	1.03	67.8	E+	LIK	0.99	50.6	D
Southbound	LTR	0.81	30.2	C	LTR	0.81	30.2	C.	LTR	0.84	32.3	C
Couribouria	LIIX	0.01		•	Street an			•	LIIX	0.04	02.0	
Eastbound	I _	l _	-	5211a (Juicet an	_	A AVEII		l ı	0.16	25.0	С
Lastbourid	LTR	0.49	30.9	С	LTR	0.51	31.4	C	_	0.10	20.0	_
		-	-	_	-	0.01	-	_	TR	0.37	28.4	С
Northbound	TR	0.59	16.8	В	TR	0.61	17.1	В	TR	0.61	17.1	В
Southbound	L	0.31	16.2	В	L	0.34	17.1	В	L	0.34	17.1	В
1	T	0.39	13.8	В	T	0.40	13.8	В	T	0.40	13.8	В
										·		

Notes:

L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service

⁺ Denotes a significant adverse traffic impact

⁽¹⁾ Intersection not impacted during the weekday midday peak hour; analysis presented to demonstrate the proposed mitigation measures would not result in additional significant adverse traffic impacts.

Table 21-11 2023 No Action, With Action, and Mitigation Conditions Level of Service Analysis Weekday PM Peak Hour

		Weekday PM										
	20	023 No	Action		20	23 With	Action		2	023 Mit	igation	
	Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay	
Intersection	Group	Ratio	(sec)	LOS		Ratio	(sec)		Group	Ratio	(sec)	LOS
	West 135th Street and Adam Clayton Powell Jr. Boulevard ⁽¹⁾											
Eastbound	LTR	0.51	26.4	С	LTR	0.54	27.1	С	LTR	0.54	27.1	С
Westbound	L	0.63	37.1	D	L	0.68	40.8	D	L	0.68	40.8	D
	TR	0.78	37.7	D	TR	0.82	41.2	D	TR	0.82	41.2	D
Northbound	L	0.15	12.1	В	L	0.15	12.1	В	L	0.15	11.9	В
	TR	0.78	21.5	С	TR	0.79	21.5	С	TR	0.78	21.5	С
Southbound	L	0.45	29.6	С	L	0.53	34.2	С	L	0.53	34.2	С
		-	-	-	-		-	-	Т	0.47	21.3	С
	TR	0.56	22.9	С	TR	0.56	22.9	С	_			-
R 0.10 17.3 B											В	
135th Street and Fifth Avenue												
Eastbound	-	-	-	-	-	-	-	-	LT	0.79	35.0	D
	LTR	0.95	51.8	D	LTR	0.98	58.3	E+	_	-	-	-
		- -	-	_		-	_ - _	_	R	0.33	26.0	С
Westbound	LTR	0.97	48.8	D	LTR	1.00	55.7	E+	LTR	0.97	47.7	D
Southbound	LTR	0.81	29.7	С	LTR	0.82	30.2	С	LTR	0.82	30.2	С
	ı	1	West	132nd	Street a	nd Len	ox Avei	านе	1 -			
Eastbound		-	- <u>-</u>	_	. <u>-</u> _	-			L	0.32	29.7	С
	LTR	0.96	67.7	Е	LTR	1.00	77.7	E+			- .	-
		-	-	-	-	-		-	TR	0.85	53.1	D
Northbound	TR	0.88	27.3	C	TR	0.92	31.5	С	TR	0.88	26.4	C
Southbound	L	0.80	60.2	E	L	0.91	83.8	F+	L	0.82	62.0	E
	Т	0.50	15.2	В	Т	0.51	15.3	В	Т	0.49	13.9	В
					treet and							
Eastbound	TR	0.89	51.0	D	TR	0.95	61.3	E+	TR	0.92	53.8	D
Westbound	Ŀ	0.58	45.6	D	L	0.65	53.8	D+	L	0.58	44.9	D
Southbound	L	0.17	12.9	В	L	0.17	12.9	В	L	0.17	13.5	В
	Т	0.53	16.7	В	T	0.53	16.7	В	Т	0.54	17.5	В

Notes:

L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service

⁺ Denotes a significant adverse traffic impact

⁽¹⁾ Intersection not impacted during the weekday PM peak hour; analysis presented to demonstrate the proposed mitigation measures would not result in additional significant adverse traffic impacts.

Table 21-12 2023 No Action, With Action, and Mitigation Conditions Level of Service Analysis Saturday Peak Hour

Saturday 2023 No Action 2023 With Action 2023 Mitigation Lane v/c Delay Lane	LOS
Lane v/c Delay Lane	LOS
Intersection Group Ratio (sec) LOS Group Ratio (sec) LOS Group Ratio (sec) LOS Group Ratio (sec) CS CS CS CS CS CS CS C	LOS
Eastbound LTR 0.61 29.2 C LTR 0.65 30.9 C LTR 0.65 30.9	
	$\overline{}$
	С
Westbound L 0.58 34.0 C L 0.63 36.8 D L 0.63 36.8	D
TR 0.82 40.0 D TR 0.86 44.0 D TR 0.86 44.0	D
Northbound L 0.21 13.8 B L 0.21 13.8 B L 0.20 13.4	В
TR 0.71 19.0 B TR 0.71 19.0 B TR 0.71 19.0	В
Southbound L 0.40 26.3 C L 0.46 29.1 C L 0.46 29.1	С
T 0.61 23.6 TR 0.73 27.1 C TR 0.73 27.1 C	С
TR 0.73 27.1 C TR 0.73 27.1 C - - - - - R 0.14 18.0	- В
West 135th Street and Lenox Avenue	Ь
Eastbound LTR 0.93 54.4 D LTR 1.01 71.8 E+ LTR 0.90 48.8	D
Westbound LTR 1.08 92.3 F LTR 1.16 121.7 F+ LTR 1.06 83.4	F
Northbound L 0.29 15.8 B L 0.32 16.5 B L 0.34 18.6	В
TR 0.71 19.7 B TR 0.73 20.1 C TR 0.76 22.5	C
Southbound L 0.55 26.3 C L 0.57 27.7 C L 0.62 33.1	C
TR 0.60 16.8 B TR 0.60 16.9 B TR 0.63 18.7	В
135th Street and Fifth Avenue	
Eastbound LT 0.78 34.6	С
LTR 1.06 79.7 E LTR 1.09 91.0 F+ - - -	-
- - - - - - R 0.57 33.3	С
Westbound DefL 1.00 90.9 F DefL 1.01 94.8 F+ DefL 0.86 55.2	E
TR 0.93 43.0 D TR 0.96 47.3 D TR 0.96 47.3	D
Southbound LTR 0.79 28.7 C LTR 0.80 29.0 C LTR 0.80 29.0	С
West 132nd Street and Lenox Avenue	
Eastbound L 0.19 27.0	С
	-
TR 0.62 37.1 Northbound TR 0.75 20.8 C TR 0.78 22.0 C TR 0.75 19.6	D B
Northbound	E
T 0.57 16.2 B T 0.58 16.4 B T 0.55 14.8	В
132nd Street and Fifth Avenue	
Eastbound TR 0.79 40.8 D TR 0.85 46.2 D+ TR 0.82 42.4	D
Westbound L 0.69 51.6 D L 0.76 62.5 E+ L 0.69 51.7	D
Southbound L 0.26 14.0 B L 0.26 14.0 B L 0.27 14.7	В
T 0.64 18.8 B T 0.64 18.8 B T 0.66 19.7	В

L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service + Denotes a significant adverse traffic impact

⁽¹⁾ Intersection not impacted during the Saturday peak hour; analysis presented to demonstrate the proposed mitigation measures would not result in additional significant adverse traffic impacts.

135th Street and Fifth Avenue

The significant adverse impact at the eastbound approach of this intersection during the weekday AM peak hour could be fully mitigated by restriping the eastbound approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane (installing "No Standing Anytime" sign) on the south curbside of the eastbound approach for approximately 100 feet from the intersection (which would eliminate approximately four on-street parking spaces).

The significant adverse impact at the westbound through/right-turn lane group of this intersection during the weekday midday peak hour could be fully mitigated by restriping the eastbound approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane (installing "No Standing Anytime" sign) on the south curbside of the eastbound approach for approximately 100 feet from the intersection (which would eliminate approximately four on-street parking spaces); and shifting one second of green time from the southbound phase to the westbound phase.

The significant adverse impacts at the eastbound and westbound approaches of this intersection during the weekday PM peak hour could be fully mitigated by restriping the eastbound approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane (installing "No Standing Anytime" sign) on the south curbside of the eastbound approach for approximately 100 feet from the intersection (which would eliminate approximately four on-street parking spaces).

The significant adverse impacts at the eastbound approach and westbound defacto left-turn lane group of this intersection during the Saturday peak hour could be fully mitigated by restriping the eastbound approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane (installing "No Standing Anytime" sign) on the south curbside of the eastbound approach for approximately 100 feet from the intersection (which would eliminate approximately four on-street parking spaces).

West 132nd Street and Lenox Avenue

The significant adverse impacts at the eastbound approach and southbound left-turn lane group of this intersection during the weekday PM peak hour could be fully mitigated by restriping the eastbound approach from one 13.5-foot moving lane with 8-foot parking lanes on both sides to one 10-foot left-turn lane, one 11.5-foot moving lane, and one 8-foot parking lane (installing "No Standing Anytime" sign) on the north curbside of the eastbound bound approach for approximately 100 feet from the intersection (which would eliminate approximately four onstreet parking spaces); and shifting two seconds of green time from the eastbound phase to the northbound/southbound phase.

The significant adverse impact at the southbound left-turn lane group of this intersection during the Saturday peak hour could be fully mitigated by restriping the eastbound approach from one 13.5-foot moving lane with 8-foot parking lanes on both sides to one 10-foot left-turn lane, one 11.5-foot moving lane, and one 8-foot parking lane (installing "No Standing Anytime" sign) on the north curbside of the eastbound bound approach for approximately 100 feet from the intersection (which would eliminate approximately four on-street parking spaces); and shifting two seconds of green time from the eastbound phase to the northbound/southbound phase.

132nd Street and Fifth Avenue

The significant adverse impact at the westbound left-turn lane group of this intersection during the weekday AM peak hour could be fully mitigated by shifting two seconds of green time from the southbound phase to the eastbound/westbound phase.

The significant adverse impacts at the eastbound approach and westbound left-turn lane group of this intersection during the weekday PM and Saturday peak hours could be fully mitigated by shifting one second of green time from the southbound phase to the eastbound/westbound phase.

Effects of Traffic Mitigation on Pedestrian Operations

As described above, intersection operations would improve overall with the implementation of the recommended traffic mitigation measures, which include changes to existing signal timings. These changes on pedestrian circulation and service levels at intersection corners and crosswalks would not alter the conclusions made for the pedestrian impact analyses, nor would they result in the potential for any additional significant adverse pedestrian impacts.

Mitigation Implementation

Subject to the approvals of DOT, the above recommended mitigation measures could be implemented to mitigate the projected significant adverse traffic impacts at or prior to the completion of Phase 1 of the proposed project, in 2023.

2026 WITH ACTION

As detailed in Chapter 13, "Transportation," and summarized above, there would be one additional significant adverse impacted traffic intersection (West 131st Street and Lenox Avenue) under the 2026 With Action condition as compared to the 2023 With Action condition. In addition, at some of the traffic intersections impacted under both the 2023 and 2026 With Action conditions, due to the greater magnitude of the potential impacts under the 2026 With Action condition, additional signal timing shifts were recommended to mitigate the potential impacts and are described below. **Tables 21-13 to 21-16** itemize the recommended mitigation measures that would address the identified impacts under the 2026 With Action condition. With the implementation of these standard traffic mitigation measures (including signal timing changes and lane restriping), which are subject to review and approval by DOT, the projected traffic impacts would be fully mitigated. A discussion of the recommended mitigation measures is provided below.

Table 21-13 Recommended Mitigation Measures 2026 With Action—Weekday AM Peak Hour

	No Action Signal		Recommended Signal
Intersection	Timing	Recommended Mitigation Measures	Timing
West 135th Street and Adam Clayton Powell Jr. Boulevard	EB/WB: Green = 32 s NB Green: 7 s NB/SB: Green = 36 s	(1) Restripe the SB approach from one 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot parking lane to 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the SB approach to create an additional right-turn lane. (3) Shift 2 seconds of green time from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 34 s NB Green: 7 s NB/SB: Green = 34 s
West 135th Street and Lenox Avenue	EB/WB: Green = 26 s LPI: Green = 7 s NB/SB: Green = 47 s	Shift 3 seconds of green time from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 29 s LPI: Green = 7 s NB/SB: Green = 44 s
135th Street and Fifth Avenue	WB: Green = 8 s EB/WB: Green = 30 s SB: Green = 37 s	 (1) Restripe the EB approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the EB approach to create an additional right-turn lane. 	No change from No Action
West 131st Street and Lenox Avenue	WB: Green = 26 s LPI: Green = 7 s NB/SB: Green = 47 s	Shift 1 second of green time from the NB/SB phase to the WB phase.	WB: Green = 27 s LPI: Green = 7 s NB/SB: Green = 46 s
132nd Street and Fifth Avenue	EB/WB-L: Green = 28 s LPI: Green = 7 s SB: Green = 45 s	Shift 3 seconds of green time from the SB phase to the EB/WB-L phase.	EB/WB-L: Green = 31 s LPI: Green = 7 s SB: Green = 42 s

Notes:
EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left; T = Through; R = Right;
LPI = Lead Pedestrian Interval

Table 21-14 Recommended Mitigation Measures 2026 With Action—Weekday Midday Peak Hour

	No Action Signal	·	Recommended Signal
Intersection	Timing	Recommended Mitigation Measures	Timing
West 135th Street and Lenox Avenue	EB/WB: Green = 26 s LPI: Green = 7 s NB/SB: Green = 47 s	Shift 2 seconds of green time from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 28 s LPI: Green = 7 s NB/SB: Green = 45 s
135th Street and Fifth Avenue	WB: Green = 8 s EB/WB: Green = 30 s SB: Green = 37 s	 (1) Restripe the EB approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the EB approach to create an additional right-turn lane. (3) Shift 2 seconds of green time from the SB phase to the WB phase. 	VVB: Green = 10 s FR/MR: Green = 30 s
West 131st Street and Lenox Avenue	WB: Green = 26 s LPI: Green = 7 s NB/SB: Green = 47 s	Shift 1 second of green time from the NB/SB phase to the WB phase.	WB: Green = 27 s LPI: Green = 7 s NB/SB: Green = 46 s
132nd Street and Fifth Avenue	EB/WB-L: Green = 28 s LPI: Green = 7 s SB: Green = 45 s	Shift 1 second of green time from the SB phase to the EB/WB-L phase.	EB/WB-L: Green = 29 s LPI: Green = 7 s SB: Green = 44 s
Notes:	_		•

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left; T = Through; R = Right; LPI = Lead Pedestrian Interval

Table 21-15 Recommended Mitigation Measures 2026 With Action—Weekday PM Peak Hour

		2020 With Metion Weeka	ay 1 wi i can iioai
Intersection	No Action Signal Timing	Recommended Mitigation Measures	Recommended Signal Timing
West 135th Street and Lenox Avenue	Pi: (-ireen = / s	Shift 1 second of green time from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 27 s LPI: Green = 7 s NB/SB: Green = 46 s
135th Street and Fifth Avenue	WB: Green = 8 s EB/WB: Green = 30 s SB: Green = 37 s	 (1) Restripe the EB approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the EB approach to create an additional right-turn lane. 	No change from No Action
West 132nd Street and Lenox Avenue		 (1) Restripe the EB approach from one 13.5-foot moving lane with 8-foot parking lanes on both sides to one 10-foot left-turn lane, one 11.5-foot moving lane, and one 8-foot parking lane. (2) Install "No Standing Anytime" for 100-feet at north side of the EB approach to create an additional left-turn lane. (3) Shift 3 seconds of green time from the EB phase to the NB/SB phase. 	EB: Green = 23 s LPI: Green = 7 s NB/SB: Green = 50 s
West 131st Street and Lenox Avenue		Shift 1 second of green time from the NB/SB phase to the WB phase.	WB: Green = 27 s LPI: Green = 7 s NB/SB: Green = 46 s
132nd Street and Fifth Avenue	EB/WB-L: Green = 28 s LPI: Green = 7 s SB: Green = 45 s	Shift 2 seconds of green time from the SB phase to the EB/WB-L phase.	EB/WB-L: Green = 30 s LPI: Green = 7 s SB: Green = 43 s
Notes:	•	•	

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left; T = Through; R = Right; LPI = Lead Pedestrian Interval

Table 21-16 Recommended Mitigation Measures 2026 With Action—Saturday Peak Hour

Intersection	No Action Signal Timing	Recommended Mitigation Measures	Recommended Signal Timing
West 135th Street and Adam Clayton Powell Jr. Boulevard	EB/WB: Green = 32 s NB Green: 7 s NB/SB: Green = 36 s	(1) Restripe the SB approach from one 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot parking lane to 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the SB approach to create an additional right-turn lane. (3) Shift 1 second of green time from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 33 s NB Green: 7 s NB/SB: Green = 35 s
West 135th	EB/WB: Green = 26 s	Shift 2 seconds of green time from the NB/SB phase to the EB/WB phase.	EB/WB: Green = 28 s
Street and	LPI: Green = 7 s		LPI: Green = 7 s
Lenox Avenue	NB/SB: Green = 47 s		NB/SB: Green = 45 s
135th Street and Fifth Avenue	WB: Green = 8 s EB/WB: Green = 30 s SB: Green = 37 s	 (1) Restripe the EB approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane. (2) Install "No Standing Anytime" for 100-feet at the EB approach to create an additional right-turn lane. (3) Shift 1 second of green time from the SB phase to the WB phase. 	WB: Green = 9 s EB/WB: Green = 30 s SB: Green = 36 s
West 132nd	EB: Green = 26 s	 (1) Restripe the EB approach from one 13.5-foot moving lane with 8-foot parking lanes on both sides to one 10-foot left-turn lane, one 11.5-foot moving lane, and one 8-foot parking lane. (2) Install "No Standing Anytime" for 100-feet at north side of the EB approach to create an additional left-turn lane. (3) Shift 2 seconds of green time from the EB phase to the NB/SB phase. 	EB: Green = 24 s
Street and	LPI: Green = 7 s		LPI: Green = 7 s
Lenox Avenue	NB/SB: Green = 47 s		NB/SB: Green = 49 s
West 131st	WB: Green = 26 s	Shift 1 second of green time from the NB/SB phase to the WB phase.	WB: Green = 27 s
Street and	LPI: Green = 7 s		LPI: Green = 7 s
Lenox Avenue	NB/SB: Green = 47 s		NB/SB: Green = 46 s
132nd Street	EB/WB-L: Green = 28 s	Shift 2 seconds of green time from the SB phase to the EB/WB-L phase.	EB/WB-L: Green = 30 s
and Fifth	LPI: Green = 7 s		LPI: Green = 7 s
Avenue	SB: Green = 45 s		SB: Green = 43 s

Notes: EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left; T = Through; R = Right; LPI = Lead Pedestrian Interval

Tables 21-17 to 21-20 compare the levels of service (LOS) and lane group delays for the impacted intersections under the 2026 No Action, With Action, and Mitigation conditions for the four analysis peak hours.

Table 21-17 2026 No Action, With Action, and Mitigation Conditions Level of Service Analysis Weekday AM Peak Hour

Weekday AM Weekday AM												
	20	026 No	Action		2		h Actio	n	20	026 Mit	ination	
	Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay	
Intersection	Group	_		LOS			(sec)	LOS	Group	Ratio	(sec)	LOS
			` '		d Adam				_			
Eastbound	LTR	0.67	31.7	С	LTR	0.70	33.2	С	LTR	0.65	29.4	С
Westbound	L	0.98	89.8	F	L	1.08	117.8	F+	L	0.98	85.6	F
	TR	0.91	52.5	D	TR	0.98	67.9	E+	TR	0.92	52.6	D
Northbound	L	0.24	16.9	В	L	0.24	16.9	В	L	0.24	17.7	В
0 41 1	TR	0.47	14.4	В	TR	0.47	14.4	В	TR	0.50	15.9	В
Southbound	L	0.28	21.7	С	L -	0.33	23.0	С	L	0.35 0.93	25.3 41.6	C
	TR	1.02	60.7	E	TR	1.02	60.7	E	_	0.93	41.0	-
	-	1.02	- 00.7	_	-	1.02	- 00.7	_	R	0.16	19.5	В
			Was	135th	Street	and I e	ηρχ Δνε		- 11	0.10	10.0	
Eastbound	LTR	0.93	56.9	E	LTR	1.05	86.0	F+	LTR	0.88	46.9	D
Westbound	LTR	1.32	188.6	F	LTR	1.48	256.5	F+	LTR	1.29	175.0	F
Northbound	L	0.40	22.2	С	L	0.43	23.3	С	L	0.49	30.3	С
	TR	0.61	17.3	В	TR	0.61	17.4	В	TR	0.66	20.2	С
Southbound	L	0.32	16.5	В	L	0.35	17.3	В	L	0.39	20.8	С
	TR	0.80	22.5	С	TR	0.80	22.6	С	TR	0.85	27.5	С
		ı	1	35th 9	Street ar	d Fifth	Avenue	•				
Eastbound	-	-	-	-	-	-	-	-	LT	0.78	36.3	D
	LTR	0.90	47.6	D	LTR	1.02	73.3	E+	- 6	-	- 07.5	C
Westbound	- LTR	1.02	56.9	E	LTR	1.05	65.8	E+	R LTR	0.38 1.01	27.5 54.5	D
Southbound	LTR	1.02	76.1	E	LTR	1.03	77.5	E	LTR	1.08	77.5	E
Couribound	LIIX	1.07			Street a				LIIX	1.00	11.0	
Eastbound	_	_	-	-	-	-	-	-	L	0.14	24.7	С
	LTR	0.54	32.5	С	LTR	0.57	33.8	С	-	-		-
	-	-	-	-	-	-	-	-	TR	0.47	30.8	С
Northbound	TR	0.63	17.6	В	TR	0.66	18.3	В	TR	0.66	18.3	В
Southbound	L	0.51	23.0	С	L	0.53	24.7	С	L	0.53	24.7	С
	Т	0.72	19.7	В	Т	0.73	20.0	В	Т	0.73	20.0	В
	T				t Street				T			
Westbound	LTR	1.03	85.1	F	LTR	1.07	96.8	F+	LTR	1.03	83.3	F
Northbound	LT	0.65	18.3	B C	LT TR	0.67	18.8	B C	LT	0.68	19.8	B C
Southbound	TR	0.78	21.8		Street a	0.79	22.2	_	TR	0.81	23.7	U
Eastbound	TR	0.59	31.8	C	TR	0.75	39.0	e D	TR	0.67	32.4	С
Westbound	L	1.09	122.2	F	L	1.35	226.5	F+	L	1.10	122.7	F
Southbound	Ĺ	0.17	13.0	В	Ĺ	0.18	13.1	В	L	0.19	14.9	В
	T	0.76	22.1	C	T	0.77	22.5	C	T	0.82	27.0	C
Notes					1	1		_	1			<u> </u>

Notes:

L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service

⁺ Denotes a significant adverse traffic impact

⁽¹⁾ Intersection not impacted during the weekday AM peak hour; analysis presented to demonstrate the proposed mitigation measures would not result in additional significant adverse traffic impacts.

Table 21-18 2026 No Action, With Action, and Mitigation Conditions Level of Service Analysis Weekday Midday Peak Hour

	weekday Midday Peak Hour											
		Weekday Midday										
	2026 No Action						Action			026 Miti		
	Lane	v/c	Delay		Lane	v/c	Delay		Lane	v/c	Delay	
Intersection	Group		(sec)	LOS		Ratio	(sec)	LOS		Ratio	(sec)	LOS
			h Stree		Adam Cl				levard ⁽¹			
Eastbound	LTR	0.56	27.6	С	LTR	0.59	28.6	С	LTR	0.59	28.6	С
Westbound	L	0.59	34.5	С	L	0.64	37.3	D	L	0.64	37.3	D
	TR	0.77	37.6	D	TR	0.82	41.0	D	TR	0.82	41.0	D
Northbound	L	0.14	11.9	В	L	0.14	11.9	В	L	0.13	11.7	В
	TR	0.49	14.6	В	TR	0.49	14.6	В	TR	0.49	14.6	В
Southbound	L	0.24	20.4	С	L	0.29	21.7	С	L	0.29	21.7	С
	-	-	-	-	-	-	-	-	Т	0.48	21.5	С
	TR	0.58	23.3	С	TR	0.58	23.3	С	-	-	-	-
	-	-	-	-	-	-	-	-	R	0.10	17.3	В
West 135th Street and Lenox Avenue												
Eastbound	LTR	0.77	39.3	D	LTR	0.85	45.9	D+	LTR	0.77	37.2	D
Westbound	LTR	1.05	84.1	F	LTR	1.13	109.7	F+	LTR	1.03	75.2	Е
Northbound	L	0.20	13.4	В	L	0.22	13.7	В	L	0.23	15.1	В
	TR	0.61	17.4	В	TR	0.62	17.6	В	TR	0.65	19.4	В
Southbound	L	0.44	20.2	С	L	0.46	20.9	С	L	0.49	23.7	С
	TR	0.47	14.8	В	TR	0.47	14.9	В	TR	0.49	16.3	В
135th Street and Fifth Avenue												
Eastbound	-	-	-	-	-	-	-	-	LT	0.62	29.3	С
	LTR	0.80	37.1	D	LTR	0.84	40.4	D	-	-	-	-
	-	-	-	-	-	-	-	-	R	0.48	30.0	С
Westbound	DefL	0.88	55.7	Ε	DefL	0.90	58.9	E	-	-	-	-
	-	-	-	-	-	-	-	-	LTR	1.00	52.0	D
	TR	1.05	73.1	Ε	TR	1.07	81.5	F+	-	-	-	-
Southbound	LTR	0.85	32.4	С	LTR	0.85	32.4	С	LTR	0.90	38.4	D
			West 1	32nd \$	Street an	d Leno	x Aven	ue ⁽¹⁾				
Eastbound	-	-	-	-	-	-	-	-	L	0.17	25.3	С
	LTR	0.50	31.4	С	LTR	0.53	32.2	С	-	-	-	-
	-	-	-	-	-	-	-	-	TR	0.39	28.6	С
Northbound	TR	0.62	17.4	В	TR	0.65	18.0	В	TR	0.65	18.0	В
Southbound	L	0.33	17.0	В	L	0.37	18.2	В	L	0.37	18.2	В
	Т	0.41	14.0	В	Т	0.42	14.1	В	T	0.42	14.1	В
					Street a	nd Len		iue				
Westbound	LTR	1.08	100.1	F	LTR	1.11	109.2	F+	LTR	1.07	94.0	F
Northbound	LT	0.43	14.3	В	LT	0.45	14.6	В	LT	0.46	15.3	В
Southbound	TR	0.44	14.4	В	TR	0.45	14.5	В	TR	0.46	15.2	В
					treet an	d Fifth	Avenue					
Eastbound	TR	0.54	30.4	С	TR	0.61	32.6	С	TR	0.59	31.1	С
Westbound	L	0.67	43.0	D	L	0.74	50.4	D+	L	0.69	44.4	D
Southbound	L	0.16	12.9	В	L	0.17	12.9	В	L	0.17	13.5	В
	Т	0.63	18.7	В	Т	0.64	18.9	В	Т	0.66	19.8	В

L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service + Denotes a significant adverse traffic impact

⁽¹⁾ Intersection not impacted during the weekday midday peak hour; analysis presented to demonstrate the proposed mitigation measures would not result in additional significant adverse traffic impacts.

Table 21-19 2026 No Action, With Action, and Mitigation Conditions Level of Service Analysis Weekday PM Peak Hour

					,	Mooke	ov DM		veekua	y 1 1V1	1 can	iioui
	2	Weekday PM 2026 No Action 2026 With Action 2026 Mitigation										
	Lane	V/C	Delay	I	Lane	V/C	Delay	l	Lane	v/c	Delay	1
Intersection	Group	Ratio	(sec)	LOS		Ratio	(sec)	LOS		Ratio	(sec)	LOS
									levard (1		(000)	
Eastbound	LTR	0.52	26.4	С	LTR	0.56	27.6	С	LTR	0.56	27.6	С
Westbound	L	0.63	37.3	D	L	0.69	42.1	D	L	0.69	42.1	D
	TR	0.78	37.9	D	TR	0.84	42.6	D	TR	0.84	42.6	D
Northbound	L	0.16	12.2	В	L	0.16	12.2	В	L	0.15	12.0	В
	TR	0.80	22.0	С	TR	0.80	22.0	С	TR	0.80	22.0	С
Southbound	L	0.46	30.3	С	L	0.58	37.6	D	L	0.58	37.6	D
	-	-	-	-	-	-	-	-	Т	0.49	21.5	С
	TR	0.58	23.2	С	TR	0.58	23.2	С	_	-		_
	-	-	-	-	-	-	-	-	R	0.10	17.4	В
					Street a							
Eastbound	LTR	0.78	38.6	D	LTR	0.88	46.6	D+	LTR	0.84	41.6	D
Westbound	LTR	0.78	38.7	D	LTR	0.89	48.3	D+	LTR	0.84	42.4	D
Northbound	L	0.35	17.3	В	L	0.36	17.8	В	L	0.38	18.9	В
Couthbound	TR	0.86	26.7	С	TR	0.87	27.5	С	TR	0.89	29.9	C
Southbound	L TR	0.37 0.58	20.4 16.5	C B	L TR	0.44 0.58	23.8 16.5	C B	L TR	0.46 0.59	26.0 17.3	В
	IK	0.56			treet and			Б	IK	0.59	17.3	Б
Eastbound	Г_	_		-	lieet and				LT	0.84	38.6	D
Lastboaria	LTR	0.99	61.8	Е	LTR	1.06	83.1	F+		-	-	_
	-	-	-	_	-	-	-		R	0.40	27.9	С
Westbound	LTR	1.00	56.7	Е	LTR	1.05	70.2	E+	LTR	1.01	58.3	Ē
Southbound	LTR	0.83	30.9	C	LTR	0.84	31.7	С	LTR	0.84	31.7	C
			West	132nd	Street a	nd Len	ox Avei	nue				•
Eastbound	-	-	-	-	-	-	-	-	L	0.36	31.8	С
	LTR	0.98	73.3	Е	LTR	1.04	88.2	F+	-	-	-	-
	-	-	-	-	-	-	-	-	TR	0.91	63.5	Е
Northbound	TR	0.90	29.1	С	TR	0.97	39.6	D	TR	0.91	28.6	С
Southbound	L	0.84	68.1	Е	L	1.00	112.9	F+	L	0.85	68.0	Е
	T	0.52	15.5	В	Т	0.53	15.6	В	Т	0.50	13.4	В
		1			Street a					1 1		
Westbound	LTR	0.87	51.1	D	LTR	0.91	57.1	E+	LTR	0.87	50.8	D
Northbound	LT	0.89	29.2	С	LT	0.94	34.6	С	LT	0.96	38.6	D
Southbound	TR	0.57	16.4	В	TR	0.58	16.5	В	TR	0.60	17.3	В
Footbarrad	I TO	0.00			treet an				TD	0.00	E 1 1	
Eastbound	TR	0.89	51.3	D D	TR	0.99	70.9	E+ E+	TR	0.92	54.1 42.3	D
Westbound	L	0.59	46.1 12.9		L	0.70	62.0 12.9		L	0.57		D B
Southbound	L T	0.17 0.54	16.9	B B	L	0.17 0.55	17.1	B B	L	0.18 0.58	14.2 18.8	В
Notoo	<u> </u>	0.54	10.8	D	ı	0.55	17.1	D	_ ·	0.50	10.0	U

Notes:

L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service

⁺ Denotes a significant adverse traffic impact

⁽¹⁾ Intersection not impacted during the weekday PM peak hour; analysis presented to demonstrate the proposed mitigation measures would not result in additional significant adverse traffic impacts.

Table 21-20 2026 No Action, With Action, and Mitigation Conditions Level of Service Analysis Saturday Peak Hour

Northbound		Saturday											
Intersection Carce Vic. Carce Carce		2	026 No	Action		20:				20	026 Mit	igation	
Intersection													
Eastbound	Intersection			_	LOS			_	LOS				LOS
Westbound		V	est 135	th Stre	et and	Adam C	layton	Powell	Jr. Bo	ulevard			
Northbound	Eastbound	LTR				LTR			С	LTR	0.64		С
Northbound	Westbound	_	0.58		С			38.1	D	_		35.1	D
Southbound		TR				TR		-		TR			
Southbound	Northbound												
Control Cont			_										
TR	Southbound	L	0.40	26.6	С	L	0.50	30.9	С				
Control Cont		-	-	-	-	-	-	-	-		0.64	25.0	
Eastbound		IR	0.74	27.6	C	IR	0.74	27.6	С		- 0.45	-	
Eastbound		-	-	-	-	-		-	-	R	0.15	18.8	В
Westbound Northbound LTR 1.12 107.6 F LTR 1.24 154.4 F+ LTR 1.13 108.6 F Northbound L 0.30 16.4 B L 0.32 16.7 B L 0.34 18.8 B Southbound L 0.60 31.0 C L 0.66 35.4 D L 0.71 43.5 D TR 0.62 17.2 B TR 0.62 17.3 B TR 0.65 19.1 B TR 0.62 17.3 B TR 0.65 19.1 B TR 0.62 17.3 B TR 0.65 19.1 B TR 0.62 17.3 B TR 0.65 19.1 B TR 0.62 17.3 B TR 0.65 19.1 B TR 0.62 17	- " .		0.05							1.TD	0.05	50.0	_
Northbound													
TR													
Southbound L 0.60 31.0 C L 0.66 35.4 D L 0.71 43.5 D	Northbound			-									
TR 0.62 17.2 B TR 0.62 17.3 B TR 0.65 19.1 B	Couthbound									_			
Eastbound	Southbound				_								
Eastbound - - - - - - - - LTR 0.83 37.5 D Westbound LTR 1.10 95.3 F LTR 1.18 124.7 F+ - <td colspan="11"></td>													
LTR	Factbound			13	5611 51	ileet allo	FIIUI	-venue		ıт	U 83	27.5	
Westbound DefL 1.03 98.5 F DefL 1.06 108.9 F+ DefL 0.84 50.8 D	Lasibouriu	I TP	1 10	05.3	_	ITP	1 12	12/17	F_		0.03	37.3	_
Westbound DefL 1.03 98.5 F DefL 1.06 108.9 F+ DefL 0.84 50.8 D Southbound LTR 0.95 46.8 D TR 0.99 54.3 D+ TR 0.97 48.1 D West 132nd Street and Lenox Avenue Eastbound - - - - - - - - - LTR 0.83 30.5 C LTR 0.85 32.7 C West 132nd Street and Lenox Avenue Eastbound -		-	1.10	-	' <u>'</u>	-	1.10	124.1	' '		0.66	38.5	
TR 0.95 46.8 D TR 0.99 54.3 D+ TR 0.97 48.1 D	Westhound	Defl	1.03	98.5	F	Defl	1.06	108 9	F+				
Southbound LTR 0.82 30.0 C LTR 0.83 30.5 C LTR 0.85 32.7 C	Westbound												
Eastbound	Southbound												
Eastbound -			0.02		-				nue		0.00	<u> </u>	
LTR	Fastbound	_	_		-	-		-		1	0.20	27.4	С
Northbound TR 0.77 21.5 C TR 0.83 24.1 C TR 0.79 21.1 C		LTR	0.68	37.8	D	LTR	0.73	40.5	D	_	-		-
Northbound TR 0.77 21.5 C TR 0.83 24.1 C TR 0.79 21.1 C Southbound L 0.91 75.6 E L 1.02 106.7 F+ L 0.94 79.3 E T 0.59 16.5 B T 0.59 16.7 B T 0.57 15.1 B E E E E E E E E E		-	-	-	_	-	-	-	_	TR	0.65	38.2	D
Southbound L 0.91 75.6 E L 1.02 106.7 F+ L 0.94 79.3 E West 131st Street and Lenox Avenue Westbound LTR 0.87 52.0 D LTR 0.91 57.1 E+ LTR 0.87 50.8 D	Northbound	TR	0.77	21.5	С	TR	0.83	24.1	С	TR			С
West 131st Street and Lenox Avenue Westbound LTR 0.87 52.0 D LTR 0.91 57.1 E+ LTR 0.87 50.8 D	Southbound	L	0.91	75.6	E	L	1.02	106.7	F+	L	0.94	79.3	
Westbound LTR 0.87 52.0 D LTR 0.91 57.1 E+ LTR 0.87 50.8 D		Т	0.59	16.5	В	Т	0.59	16.7	В	Т	0.57	15.1	
				West	131st	Street a	nd Len	ox Aver	nue				
	Westbound	LTR	0.87							LTR	0.87	50.8	D
	Northbound	LT	0.74	20.5	С	LT	0.77	21.6	С	LT	0.78	22.9	С
Southbound TR 0.67 18.3 B TR 0.68 18.5 B TR 0.69 19.5 B	Southbound	TR	0.67		В	TR	0.68	18.5	В	TR	0.69		В
132nd Street and Fifth Avenue				13	32nd S	treet and	d Fifth	Avenue					
Eastbound TR 0.80 41.1 D TR 0.90 52.8 D+ TR 0.84 43.0 D	Eastbound	TR	0.80	41.1	D	TR	0.90	52.8	D+	TR	0.84	43.0	D
Westbound L 0.69 52.3 D L 0.83 77.0 E+ L 0.68 49.8 D				52.3	D	L			E+	L	0.68	49.8	D
Southbound L 0.26 14.0 B L 0.27 14.1 B L 0.28 15.4 B	Southbound		0.26	14.0			0.27					15.4	
T 0.65 19.0 B T 0.66 19.2 B T 0.69 21.3 C		Т	0.65	19.0	В	Т	0.66	19.2	В	Т	0.69	21.3	С

L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service

⁺ Denotes a significant adverse traffic impact

(1) Intersection not impacted during the Saturday peak hour; analysis presented to demonstrate the proposed mitigation measures would not result in additional significant adverse traffic impacts.

West 135th Street and Adam Clayton Powell Jr. Boulevard

The significant adverse impacts at the westbound left-turn and shared through/right-turn lane groups of this intersection during the weekday AM peak hour could be fully mitigated by restriping the southbound approach from one 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot parking lane to one 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot right-turn lane (installing "No Standing Anytime" sign) on the west curbside of the southbound approach for approximately 100 feet from the intersection (which would eliminate approximately four on-street parking spaces); and shifting two seconds of green time from the northbound/southbound phase to the eastbound/westbound phase.

The significant adverse impact at the westbound shared through/right-turn lane group of this intersection during the Saturday peak hour could be fully mitigated by restriping the southbound approach from one 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot parking lane to one 9-foot left-turn lane, two 11-foot moving lanes, and one 13-foot right-turn lane (installing "No Standing Anytime" sign) on the west curbside of the southbound approach for approximately 100 feet from the intersection; and shifting one second of green time from the northbound/southbound phase to the eastbound/westbound phase. This intersection would not be impacted during the Saturday peak hour under the 2023 With Action condition.

West 135th Street and Lenox Avenue

The significant adverse impacts at the eastbound and westbound approaches of this intersection during the weekday AM, midday, PM, and Saturday peak hours could be fully mitigated by shifting three, two, one, and two seconds of green time from the northbound/southbound phase to the eastbound/westbound phase, respectively. The recommended signal timing shifts represent an increase of one second of green time during the weekday AM and midday peak hours, respectively, over the 2023 With Action recommended mitigation measures. This intersection would not be impacted during the weekday PM peak hour under the 2023 With Action condition.

135th Street and Fifth Avenue

The significant adverse impacts at the eastbound and westbound approaches of this intersection during the weekday AM and PM peak hours could be fully mitigated by restriping the eastbound approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane (installing "No Standing Anytime" sign) on the south curbside of the eastbound approach for approximately 100 feet from the intersection (which would eliminate approximately four on-street parking spaces).

The significant adverse impacts at the westbound through/right-turn lane group of this intersection during the weekday midday peak hour could be fully mitigated by restriping the southeastbound approach from one 10.5-foot moving lane, one 11-foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane (installing "No Standing Anytime" sign) on the south curbside of the eastbound approach for approximately 100 feet from the intersection (which would eliminate approximately four on-street parking spaces); and shifting two seconds of green time from the southbound phase to the westbound phase. The recommended signal timing shift represents an increase of one second of green time during the weekday midday peak hour, over the 2023 With Action recommended mitigation measures.

The significant adverse impacts at the eastbound approach and westbound defacto left-turn and through/right-turn lane groups of this intersection during the Saturday peak hour could be fully mitigated by restriping the southeast bound approach from one 10.5-foot moving lane, one 11-

foot moving lane, and one 8-foot parking lane to two 10-foot moving lanes and one 10-foot right-turn lane (installing "No Standing Anytime" sign) on the south curbside of the eastbound approach for approximately 100 feet from the intersection (which would eliminate approximately four on-street parking spaces); and shifting one second of green time from the southbound phase to the westbound phase.

West 132nd Street and Lenox Avenue

The significant adverse impacts at the eastbound approach and southbound left-turn lane group of this intersection during the weekday PM peak hour could be fully mitigated by restriping the eastbound approach from one 13.5-foot moving lane with 8-foot parking lanes on both sides to one 10-foot left-turn lane, one 11.5-foot moving lane, and one 8-foot parking lane (installing "No Standing Anytime" sign) on the north curbside of the eastbound bound approach for approximately 100 feet from the intersection (which would eliminate approximately four onstreet parking spaces); and shifting three seconds of green time from the eastbound phase to the northbound/southbound phase. The recommended signal timing shift represents an increase of one second of green time during the weekday PM peak hour over the 2023 With Action recommended mitigation measures.

The significant adverse impact at the southbound left-turn lane group of this intersection during the Saturday peak hour could be fully mitigated by restriping the eastbound approach from one 13.5-foot moving lane with 8-foot parking lanes on both sides to one 10-foot left-turn lane, one 11.5-foot moving lane, and one 8-foot parking lane (installing "No Standing Anytime" sign) on the north curbside of the eastbound bound approach for approximately 100 feet from the intersection; and shifting two seconds of green time from the eastbound phase to the northbound/southbound phase.

West 131st Street and Lenox Avenue

The significant adverse impacts at the westbound approach of this intersection during the weekday AM, midday, PM, and Saturday peak hours could be fully mitigated by shifting one second of green time from the northbound/southbound phase to the westbound phase. This intersection would not be impacted under the 2023 With Action condition.

132nd Street and Fifth Avenue

The significant adverse impacts at the westbound left-turn lane group of this intersection during the weekday AM and midday peak hours could be fully mitigated by shifting three and one second of green time from the southbound phase to the eastbound/westbound phase, respectively. The recommended signal timing shift represents an increase of one second of green time during the weekday AM peak hour over the 2023 With Action recommended mitigation measures. This intersection would not be impacted during the weekday midday peak hour under the 2023 With Action condition.

The significant adverse impact at the eastbound shared through/right-turn and westbound left-turn lane groups of this intersection during the weekday PM and Saturday peak hours could be fully mitigated by shifting two seconds of green time from the southbound phase to the eastbound/westbound phase. The recommended signal timing shifts represent an increase of one second of green time during the weekday PM and Saturday peak hours, over the 2023 With Action recommended mitigation measures.

Effects of Traffic Mitigation on Pedestrian Operations

As described above, intersection operations would improve overall with the implementation of the recommended traffic mitigation measures, which include changes to existing signal timings. These changes on pedestrian circulation and service levels at intersection corners and crosswalks would not alter the conclusions made for the pedestrian impact analyses, nor would they result in the potential for any additional significant adverse pedestrian impacts.

Mitigation Implementation

Subject to the approvals of DOT, the above recommended mitigation measures could be implemented to mitigate the projected significant adverse traffic impacts at or prior to the completion of the proposed project in 2026.

PEDESTRIANS

As discussed in Chapter 13, "Transportation," 9 sidewalk segments, 5 corner reservoirs, and 2 crosswalks were selected for detailed analysis for the weekday AM, midday, PM, and Saturday peak hours. Potential significant adverse impacts were identified for one crosswalk during all four analysis peak hours in the 2023 With Action condition and the 2026 With Action condition.

2023 WITH ACTION

The pedestrian 2023 No Action and With Action Conditions are summarized in **Table 21-21**. The projected crosswalk impacts could not be fully mitigated using standard DOT approved measures, and were therefore considered to be unmitigated.

Table 21-21 2023 No Action, With Action, and Mitigation Conditions Pedestrian Level of Service Analysis

	Mitigation	20 No A		20 With <i>A</i>		2023 Mitigation				
Location	Measures	SFP	LOS	SFP	LOS	SFP LOS				
W	eekday AM Po	eak Houi	•							
South Crosswalk of Lenox Avenue and West 135th Street	None	28.10	С	12.16	Е	Unmitigated				
Weekday Midday Peak Hour										
South Crosswalk of Lenox Avenue and West 135th Street	None	31.53	С	18.76	D	Unmitigated				
W	eekday PM Po	ak Hour	r							
South Crosswalk of Lenox Avenue and West 135th Street	None	24.73	С	11.05	E	Unmitigated				
Saturday Peak Hour										
South Crosswalk of Lenox Avenue and West 135th Street	None	30.07	С	12.89	Е	Unmitigated				

2026 WITH ACTION

The pedestrian 2026 No Action and With Action Conditions are summarized in **Table 21-22**. The projected crosswalk impacts could not be fully mitigated using standard DOT approved measures, and were therefore considered to be unmitigated.

Table 21-22 2026 No Action, With Action, and Mitigation Conditions Pedestrian Level of Service Analysis

		1 040	DOCT TEETT	DC (CI)	or Serv	SFP LO				
	Mitigation	20 No A		2026 With Action		2026 Mitigation				
Location	Measures	SFP	LOS	SFP	LOS	SFP	LOS			
W	eekday AM Po	eak Houi	•							
South Crosswalk of Lenox Avenue and West 135th Street	None	24.05	C	8.48	E	Unmit	igated			
Weekday Midday Peak Hour										
South Crosswalk of Lenox Avenue and West 135th Street	None	24.89	D	13.64	E	Unmit	igated			
I None I 24 89 I I) I 13 64 I E I I Inmitidated I										
South Crosswalk of Lenox Avenue and West 135th Street	None	21.63	D	7.91	F	Unmit	igated			
Saturday Peak Hour										
South Crosswalk of Lenox Avenue and West 135th Street	None	25.04	С	9.04	E	Unmit	igated			

G. CONSTRUCTION

TRAFFIC

As detailed in Chapter 19, "Construction," the first quarter to third quarter of 2022 was identified as the peak construction traffic period for Phase 1 Construction, and the fourth quarter of 2024 was identified as the peak construction traffic period for Phase 2 Construction. For the 2022 Phase 1 construction With Action condition, one of the analyzed intersections would be significantly impacted during the weekday 6 AM to 7 AM construction peak hour, and three of the analyzed intersections would be significantly impacted during the weekday 3 PM to 4 PM construction peak hour. For the 2024 Phase 2 construction With Action condition, one of the analyzed intersections would be significantly impacted during the weekday 6 AM to 7 AM construction peak hour, and fourthree of the analyzed intersections would be significantly impacted during the weekday 3 PM to 4 PM construction peak hour. These temporary construction period impacts could be fully mitigated by implementing standard traffic mitigation measures that are the same or similar to those recommended to mitigate the operational impacts. For Phase 1 construction, the weekday AM and PM construction peak hour impacts at West 135th Street and Lenox Avenue can be mitigated by adjustments to signal timing that are similar to those imposed for 2023 Phase 1 operational traffic, the weekday PM construction peak hour impact at West 135th Street and Fifth Avenue can be mitigated by implementing the lane restriping measures proposed to address the 2023 Phase 1 operational impacts, and the weekday PM construction peak hour impacts at West 132nd Street and Lenox-Fifth Avenue can be mitigated by adjustments to signal timing that are similar to those imposed for 2023 Phase 1 operational trafficimplementing the lane restriping measures proposed to address the 2023 Phase 1 operational impacts. For Phase 2 construction, the weekday AM and PM construction peak hour impacts at the three-four impacted intersections can be mitigated by implementing the lane restriping measures proposed to address the 2023 Phase 1 operational impacts and adjustments to signal timing that are similar to those imposed for 2023 Phase 1 and 2026 Phase 2 operational traffic.

PEDESTRIANS

A detailed pedestrian analysis for Phase 1 construction was conducted for the south crosswalk at Lenox Avenue and West 135th Street, where operational impacts were identified in Chapter 13, "Transportation." For Phase 2 construction, a detailed pedestrian analysis was prepared for the south crosswalk at West 135th Street and Lenox Avenue, as well as for the <u>four-three</u> sidewalks and one corner where incremental trips generated by the combination of construction and occupied new buildings would be greater than those generated by the full build-out of the proposed actions. Similar to the conclusions made for the operational pedestrian analyses in Chapter 13, "Transportation," no significant adverse pedestrian impacts were identified for the <u>four-three</u> sidewalks and one corner. However, the south crosswalk of Lenox Avenue and West 135th Street would likewise incur significant adverse pedestrian impacts, which cannot be mitigated, during the 6 AM to 7 AM and 3 PM to 4 PM construction peak hours during both Phase 1 and Phase 2 construction.

NOISE

Chapter 19, "Construction," identifies that construction activities generated by the proposed project would have the potential to result in significant adverse construction noise impacts at sensitive receptors in the vicinity of the construction work areas. The detailed modeling analysis concluded that project construction has the potential to result in construction noise levels exceeding *CEQR Technical Manual* noise impact criteria for an extended period of time at existing residential buildings within the rezoning area (i.e., 470 Lenox Avenue, 40 West 135th Street, 10 West 135th Street, 2186 Fifth Avenue, 25 West 132nd Street, and 45 West 132nd Street), Metropolitan AME Church, Harlem Hospital Center, 2235 Fifth Avenue, 2120 and 2140 Madison Avenue, 485 Malcolm X Boulevard, receptors along the south side of West 132nd Street between Lenox Avenue and 45 West 132nd Street, receptors along the south side of West 132nd Street between 25 West 132nd Street and Fifth Avenue, and the proposed Building NW.

As described in the "Noise Reduction Measures" section of Chapter 19, "Construction," construction of the proposed project would employ a variety of measures to reduce noise, including both source and path controls. In addition to the path controls described in Chapter 19, the following measures to mitigate noise from project construction would be implemented to the extent feasible and practicable:

- Where logistics allow, noisy equipment, such as cranes, concrete pumps, concrete trucks, and delivery trucks, would be located away from and shielded from sensitive receptor locations.
- Where logistics allow, truck deliveries would take place behind the noise barriers once building foundations are completed;
- Path noise control measures (i.e., portable noise barriers, panels, enclosures, and acoustical tents) for certain dominant noise equipment to the extent feasible and practical based on the results of the construction noise calculations. The details to construct portable noise barriers, enclosures, tents, etc. are shown in DEP's Rules for Citywide Construction Noise Mitigation;

 Mitigation;

¹ As found at http://www.nyc.gov/html/dep/pdf/noise constr rule.pdf

- As early in the construction period as logistics would allow, diesel- or gas-powered equipment would be replaced with electrical-powered equipment such as welders, water pumps, bench saws, and table saws (i.e., early electrification) to the extent feasible and practicable. Where electrical equipment cannot be used, diesel or gas-powered generators and pumps would be located within buildings to the extent feasible and practicable; and
- As early in the construction period as logistics would allow, materials and concrete deliveries
 would be staged within the first floor of the proposed structures to the extent feasible and
 practicable.

In addition to these source and path control measures, receptor control measures (e.g., changes to building façades at locations where impacts would potentially occur) were also considered.

At the outdoor residential balconies of the residential buildings within the rezoning area (i.e., 470 Lenox Avenue, 40 West 135th Street, 10 West 135th Street, 2186 Fifth Avenue, 25 West 132nd Street, and 45 West 132nd Street) and 485 Malcolm X Boulevard, there are no feasible or practicable mitigation measures to avoid the significant adverse construction noise impacts identified in Chapter 19, "Construction." Therefore, at these receptors, the significant adverse construction noise would be unavoidable. However, as construction would not regularly occur during evening or weekend hours, the balconies would be free of construction noise during these times.

At many of the buildings where significant adverse impacts are predicted to occur, field observations identified the presence of insulated glass windows and alternate means of ventilation (i.e., air conditioning), which would be expected to provide at least 25 A-weighted decibels (dBA) of window/wall attenuation. These measures are in place at some or all units of the following buildings: the residential buildings within the rezoning area (i.e., 470 Lenox Avenue, 40 West 135th Street, 10 West 135th Street, 2186 Fifth Avenue, 25 West 132nd Street, and 45 West 132nd Street), the Metropolitan AME Church, 2235 Fifth Avenue, 2120 and 2140 Madison Avenue, 485 Malcolm X Boulevard, receptors along the south side of West 132nd Street between Lenox Avenue and 45 West 132nd Street, and receptors along the south side of West 132nd Street between 25 West 132nd Street and Fifth Avenue. Even with such measures, these locations would be expected to experience interior $L_{10(1)}$ noise levels during portions of construction that would exceed the 45 dBA guideline recommended for residential and community spaces according to CEQR noise exposure guidelines. Interior noise levels at these units would exceed the acceptable threshold level by up to 17 dBA as a result of construction of the proposed project. With these façade noise attenuation measures already in place, there are no feasible and practicable mitigation measures that would eliminate the significant adverse noise impacts.

For units in the residential buildings within the rezoning area (i.e., 470 Lenox Avenue, 40 West 135th Street, 10 West 135th Street, 2186 Fifth Avenue, 25 West 132nd Street, and 45 West 132nd Street), 2235 Fifth Avenue, 2120 and 2140 Madison Avenue, 485 Malcolm X Boulevard, receptors along the south side of West 132nd Street between Lenox Avenue and 45 West 132nd Street, and receptors along the south side of West 132nd Street between 25 West 132nd Street and Fifth Avenue that do not have alternate means of ventilation (i.e., air conditioning), the Applicant would offer to provide through-window air conditioning units to allow for a closed-window condition. With the provision of such measures, the façades of these buildings would be expected to provide approximately 25 dBA window/wall attenuation. Therefore, interior noise levels would be reduced to less than the 45 dBA threshold recommended for residential and community spaces according to CEQR noise exposure guidelines during much of the

construction period (times when L₁₀ noise levels are predicted to be less than 70 dBA as shown in **Appendix** C) and no more than 17 dBA greater than the 45 dBA threshold during nearby worst case construction activity. Consequently, construction noise impacts at these receptors would be partially mitigated.

At the Harlem Hospital Center, field observations identified the presence of insulated glass windows and central air conditioning, which would be expected to provide at least 30 A-weighted decibels (dBA) of window/wall attenuation. Even with such measures, the hospital would be expected to experience interior L₁₀₍₁₎ noise levels during the most noise-intensive nearby construction activities that would exceed the 45 dBA guideline recommended for inpatient medical use according to CEQR noise exposure guidelines by up to 7 dBA. Given the façade noise attenuation measures already in place, there are no feasible and practicable mitigation measures that would eliminate the potential significant adverse noise impacts.

At the proposed Building NW, as described in Chapter 16, "Noise," the building façade would be required to provide at 28 dBA window/wall attenuation. However, if this building would be completed and occupied during the most noise-intensive construction activities at the adjacent projected development site, acoustical storm windows would be offered to residential units with line of sight to the construction area on the projected development site as mitigation for the predicted levels of construction noise. With such windows, the building façade would be expected to provide 30 to 35 dBA window/wall attenuation, which would result in interior noise levels in the mid 50s to low 60s dBA, up to approximately 17 dBA greater than the the 45 dBA guideline recommended for residential use according to CEQR noise exposure guidelines.