3. MITIGATION

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 be refined and evaluated between Draft and Final EIS. Therefore, the Final EIS may include more complete information and commitments on all practicable mitigation measures to be implemented with the Proposed Action.

The technical analyses presented in this environmental impact statement (EIS) examine the potential for significant adverse impacts that may result from the proposed action. This chapter discusses the mitigation measures proposed to minimize or avoid the potential significant adverse impacts that have been identified in the area of transportation.

Prior to the completion of the Final Scope, it was announced that a new project adjacent to the East Fordham Road study area – The Kingsbridge Armory – is commencing it's public review, and it is anticipated the project will be operational prior to East Fordham Road's build year. The DEIS's Transportation analysis and any associated mitigation measures will be based on a No-Build condition that includes assumptions on available data regarding the Kingsbridge Armory's projected trip generation results. Because the Kingsbridge Armory project is in the early stages of its review process, further details regarding the traffic analysis for the Kingsbridge Amory project were not completed prior to the completion of the Final Scope. Since the No-Build condition will be based on preliminary results, any changes that are made to the Kingsbridge trip generation results may affect the intersections studied, the outcomes of the analysis and potential mitigation measures. If additional, relevant information regarding the Kingsbridge Armory project becomes available, any changes necessary to the analysis will be made between Draft and Final EIS.

TRANSPORTATION

Traffic

As described in Chapter 2, "Transportation," the Proposed Action would result in significant adverse traffic impacts at 11 intersections during one or more analyzed peak hours; specifically 6 approach movements at 6 intersections would be impacted during the AM peak hour, 7 approach movements at 5 intersections would be impacted during the Midday peak hour, and 8 approach movements at 7 intersections would be impacted during the PM peak hour. Implementation of traffic engineering improvements such as shifting of green signal timing to the impacted approach phases and lane restriping would provide mitigation for all of the anticipated traffic impacts. Table 3.1 shows that significant adverse impacts would be fully mitigated at all movements at all intersections. Table 3.2 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.

As shown in the comparison of No Build, Build, and Build with Mitigation level of service results in Tables 3.4 through 3.6, with the proposed mitigation measures, the proposed action would not result in significant adverse traffic impacts at the study area intersections during the three analyzed peak hours.

Between Draft and Final EIS, NYCDOT will review the specific measures proposed for each intersection to confirm adequacy and feasibility of their implementation and recommend changes as necessary. If it is determined that a specific measure is not feasible at a particular location, DCP in consultation with DOT will explore other mitigation measures to mitigate impacts. However, if it is determined that other measures are not available to mitigate the identified impacts, either in part or in whole, the impact would be identified in the FEIS as unmitigable. If any impacts are determined to be unmitigatable between Draft and Final EIS, they will be identified as such and a discussion will be included in Chapter 4, "Unavoidable Adverse Impacts."

Table 3.1
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	65/13	59/7	6/6	6/6	0/0
Midday	65/13	58/8	7/5	7/5	0/0
PM	65/13	57/6	8/7	8/7	0/0

Table 3.2
Summary of Locations with Siginficant Adverse Traffic Impacts

Intersection	AM Peak Hour		Midday Peak Hour		PM Peak Hour	
	Significant Impacts	Mitigation	Significant Impacts	Mitigation	Significant Impacts	Mitigation
East Fordham Road and Webster Avenue	WB-T	Yes				
East Fordham Road and Third Avenue			WB-LT	Yes		
East Fordham Road and Washington Avenue	WB-L	Yes	WB-L	Yes		
East Fordham Road and Bathgate Avenue					NB-TR	Yes
East Fordham Road and Lorillard Place					EB-T	Yes
East Fordham Road and Hoffman Street					NB-LTR	Yes
East Fordham Road and Arthur Avenue	WB-L	Yes	EB-T, WB-L	Yes	WB-L	Yes
East Fordham Road and Hughes Avenue	NB-LTR	Yes	NB-LTR, SB-LR	Yes	NB-LTR, SB-LR	Yes
East Fordham Road and Cambreleng Avenue					NB-R	Yes
East Fordham Road (Westbound) and Southern Boulevard	WB-LTR	Yes				
East 187th Street and Crotona Avenue	EB-LTR	Yes	EB-LTR	Yes	EB-LTR	Yes

East Fordham Road and Webster Avenue

Significant traffic impacts at this intersection are projected at the westbound through at the East Fordham Road and Webster Avenue intersection, which would deteriorate within LOS E with a v/c ratio of 0.99 and 57.6 seconds of delay to a v/c ratio of 1.01 and 62.8 seconds of delay during the weekday AM peak hour on the eastbound East Fordham. The traffic mitigation measures for the impact to the westbound through would be encompassed by a 1 second shift from NB/SB to EB/WB during the AM period.

East Fordham Road and Third Avenue

Significant traffic impacts at this intersection are projected at the westbound approach at the East Fordham Road and Third Avenue intersection, which would deteriorate from LOS E with a v/c ratio of 1.04 and a delay of 66.3 seconds to LOS F with a v/c ratio of 1.10 and a delay of 87.3 seconds during the weekday midday peak hour. The traffic mitigation measures for the impact to the westbound through would be encompassed by a shift 2 seconds from NB/SB to EB/WB during the midday period.

East Fordham Road and Washington Avenue

Significant traffic impacts at this intersection are projected at the westbound left-turn at the East Fordham Road and Washington Avenue intersection, which would deteriorate within LOS F with a v/c ratio of 1.01 and 85.6 seconds of delay, to a v/c ratio of 1.05 and 97.3 seconds of delay during the weekday AM peak hour; and within LOS F with a v/c ratio of 1.03 and 90.9 seconds of delay to a v/c ratio of 1.07 and 106.8 seconds of delay during the weekday midday peak hour. The traffic mitigation measures for the impact to the westbound through would be encompassed by a shift 2 seconds from EB/WB to WB (phase B) during the AM and Midday peak periods.

East Fordham Road and Bathgate Avenue

Significant traffic impacts at this intersection are projected at the northbound through/right-turn at the East Fordham Road and Bathgate Avenue intersection, which would deteriorate within LOS F from a v/c ratio of 1.11 and 131.6 seconds of delay to a v/c ratio of 1.26 and a delay of 186.7 seconds during the weekday PM peak hour. The traffic mitigation measures for the impact to the westbound through would be encompassed by a shift 4 seconds from EB/WB to NB/SB during the PM period.

East Fordham Road and Lorillard Place

Significant traffic impacts at this intersection are projected at the East Fordham Road and Lorillard Place intersection, which would deteriorate from LOS D with a v/c ratio of 1.01 and a delay of 52.7 seconds to LOS E with a v/c ratio of 1.03 and a delay of 59.7 seconds during the weekday PM peak hour. The traffic mitigation measures for the impact to the westbound through would be encompassed by a shift 1 second from EB/WB phase B to EB/WB phase A during the PM peak period.

East Fordham Road and Arthur Avenue

Significant traffic impacts at this intersection are projected at the eastbound through at the East Fordham Road and Arthur Avenue intersection, which would deteriorate within LOS D (from a v/c ratio of 0.95 and a delay of 39.0 seconds to a v/c ratio of 0.99 and a delay of 47.3 seconds) during the weekday midday peak hour. Additionally, significant traffic impacts at this intersection are projected at the westbound left-turn at the East Fordham Road and Arthur Avenue intersection, which would deteriorate within LOS F from a v/c ratio of 1.00 and 81.7 seconds of delay to a v/c ratio of 1.02 and 88.2 seconds of delay during the weekday AM peak hour, within LOS E from a v/c ratio of 0.98 and 73.6 seconds of delay to a v/c ratio of 0.99 and 77.6 seconds of delay during the weekday midday peak hour, and within LOS F from a v/c ratio of 1.18 and 153.5 seconds of delay to a v/c ratio of 1.20 and 163.2 seconds of delay during the weekday PM peak hour. The traffic mitigation measures for the impact to the westbound left and the eastbound through would be encompassed through a combination of lane restriping and signal timing shifts. The two EB through lanes are currently 9 and 10 feet in width. These lanes would be widened to 11 feet in width each. This would require that 3 feet in width be obtained from the adjacent striped median, which is presently 13 feet wide but would be reduced to 10 feet wide for the mitigation. According to DOT, a minimum of 5 feet is needed as a pedestrian refuge in the median, so this reduction in median width would be acceptable. Further mitigation would be encompassed by a shift of 1 second from EB/WB phase A to WB phase B during the AM period; shift 1 second from the EB/WB phase A to WB Phase B during the midday period; shift 1 second from EB/WB phase A to WB phase B during the PM period;

East Fordham Road and Hoffman Street

Significant traffic impacts at this intersection are projected at the northbound approach at the East Fordham Road and Hoffman Street intersection, which would deteriorate within LOS F from a v/c ratio of 1.13 and 132.0 seconds of delay to a v/c ratio of 1.15 and a delay of 139.1 seconds during the weekday PM peak hour. The traffic mitigation measures for the impact to the westbound through would be encompassed by a shift 1 second from EB/WB to NB/SB during the PM period.

East Fordham Road and Hughes Avenue

Significant traffic impacts at this intersection are projected at the northbound approach at the East Fordham Road and Hughes Avenue intersection, which would deteriorate within LOS F during all three peak hours, from a v/c ratio of 0.98 and a delay of 101.8 seconds to a v/c ratio of 1.01 and a delay of 108.9 seconds during the weekday AM peak hour, from a v/c ratio of 1.12 and a delay of 116.2 seconds to a v/c ratio of 1.30 and a delay of 186.2 seconds during the weekday midday peak hour, and from a v/c ratio of 1.18 and a delay of 152.2 seconds to a v/c ratio of 1.27 and a delay of 187.2 seconds during the weekday PM peak hour. Additionally, significant traffic impacts at this intersection are projected at the southbound approach at the East Fordham Road and Hughes Avenue intersection, which would deteriorate from LOS D with a v/c ratio of 0.67 and 45.9 seconds of delay to LOS E with a v/c ratio of 0.77 and 56.7 seconds of delay during the weekday midday peak hour, and within LOS F from a v/c ratio of 1.15 and 171.7 seconds of delay to a v/c ratio of 1.27 and 215.9 seconds of delay during the weekday

PM peak hour. The traffic mitigation measures for the impact to the westbound through would be encompassed by a shift 1 second from EB/WB to NB/SB during the AM period; shift 3 seconds from EB/WB to NB/SB during the midday period; shift 3 seconds from EB/WB to NB/SB during the PM period.

East Fordham Road and Cambreleng Avenue

Significant traffic impacts at this intersection are projected at the northbound right-turn at the East Fordham Road and Cambreleng Avenue intersection, which would deteriorate from LOS E with a v/c ratio of 0.93 and 78.5 seconds of delay to LOS F with a v/c ratio of 1.03 and 102.3 seconds of delay during the weekday PM peak hour. The traffic mitigation measures for the impact to the westbound through would be encompassed by a shift 2 seconds from EB/WB to NB/SB during the PM period.

East Fordham Road (Eastbound & Westbound) and Southern Boulevard

Significant traffic impacts at this intersection are projected at the westbound approach at the East Fordham Road (westbound) and Southern Boulevard intersection, which would deteriorate within LOS E from a v/c ratio of 1.04 and 66.0 seconds of delay to a v/c ratio of 1.08 and 79.7 seconds of delay during the weekday AM peak hour. The traffic mitigation measures for the impact to the westbound through would be encompassed by a shift of 2 seconds from NB/SB to EB/WB during the AM period.

Crotona Avenue and East 187th Street

Significant traffic impacts at this intersection are projected at the eastbound approach at the East 187th Street and Crotona Avenue intersection, which would deteriorate within LOS E from a v/c ratio of 0.94 and 56.4 seconds of delay to a v/c ratio of 1.00 and 72.1 seconds of delay during the weekday AM peak hour, from LOS E with a v/c ratio of 1.01 and 69.6 seconds of delay to LOS F with a v/c ratio of 1.20 and 136.3 seconds of delay during the weekday midday peak hour, and within LOS F from a v/c ratio of 1.06 and 84.6 seconds of delay to a v/c ratio of 1.18 and 125.9 seconds of delay during the weekday PM peak hour. The traffic mitigation measures for the impact to the westbound through would be encompassed by a shift 1 second from NB/SB to EB/WB during the AM period; shift 3 seconds from NB/SB to EB/WB during the midday period; shift 2 seconds from NB/SB to EB/WB during the PM period.

Table 3.3 summarizes all of the signal timing changes that would be required to mitigate the traffic impacts at the impact intersections. As shown in the comparison of No Build, Build, and Build with Mitigation level of service results in **Tables 3.4 through 3.6**, with the proposed mitigation measures, the proposed action would not result in significant adverse traffic impacts at the study area intersections during the three analyzed peak hours.

Pedestrian

As discussed in Chapter 2, "Transportation," thirteen intersections were analyzed for weekday AM, midday, and PM peak hour conditions. Significant adverse impacts were identified at one intersection. As described in the following discussion and detailed in Tables 3.7 to 3.9, all the sidewalk, corner reservoir, and crosswalk analysis locations operate acceptably at LOS C or better (maximum of 6.0 PMF platoon flows for sidewalks; minimum of 24.0 SFP for corners and crosswalks) in the Build conditions, except at the following location:

- The south crosswalk of Arthur Avenue and East Fordham, which will operate at LOS D with 22.1 SFP and 19.5 SFP during the midday and PM peak 15-minute periods, respectively.

Based on the analysis results presented in Table 3.7, it was determined that shifting of Flashing Don't Walk (FDW) time to Walk (WK) time at Arthur Avenue and East Fordham Road intersection is required during the midday and PM peak hours. This will result in different pedestrian Walk (WK) times between the AM, Midday, and PM peak hours, while retaining the same overall pedestrian phase length for these time periods. The recommended improvements for the East Fordham Road and Arthur Avenue intersection are:

- Shift 1 second of FDW to WK phase during the Midday period and shift 3 seconds of FDW to WK phase during the PM period.

As shown in Table 3.10, with the proposed improvement in place, the proposed action would not result in deterioration of pedestrian operating conditions at the study area intersections during the three analyzed peak periods.

Table 3.3
Proposed Project Improvements - Signal Retiming

Intersection		Phase	Existing			Proposed		
			Green	Amber	Red	Green	Amber	Red
AM Peak Hour								
East Fordham Road and Webster Avenue	A	East Fordham Road (EB/WB)	50	3	2	51	3	2
	B	Webster Avenue (NB/SB)	39	3	2	38	3	2
	C	Webster Avenue (NB/SB)	16	3	2	16	3	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		
East Fordham Road and Washington Avenue	A	East Fordham Road (EB/WB)	64	3	2	62	3	2
	B	East Fordham Road (WB)	19	3	2	21	3	2
	C	Exclusive Pedestrian (EB/WB)	23	2	2	23	2	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		
East Fordham Road and Arthur Avenue	A	East Fordham Road (EB/WB)	57	3	2	56	3	2
	B	East Fordham Road (WB)	26	3	2	27	3	2
	C	Exclusive Pedestrian (EB/WB)	23	2	2	23	2	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		
East Fordham Road and Hughes Avenue	A	East Fordham Road (EB/WB)	82	3	2	81	3	2
	B	Hughes Avenue (NB/SB)	28	3	2	29	3	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		
East Fordham Road (eastbound) and Crotona Avenue	A	East Fordham Road (EB)	64	3	2	61	3	2
	B	Crotona Avenue (NB/SB)	46	3	2	49	3	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		
East 187th Street and Crotona Avenue	A	East 187th Street (EB/WB)	19	3	2	20	3	2
	B	Crotona Avenue (NB/SB)	31	3	2	30	3	2
			Cycle Length = 60 Seconds			Cycle Length = 60 Seconds		
Midday Peak Hour								
East Fordham Road and Third Avenue	A	East Fordham Road (EB/WB)	35	3	2	37	3	2
	B	East Fordham Road (EB)	6	3	2	6	3	2
	C	Third Avenue (NB)	34	3	2	32	3	2
			Cycle Length = 90 Seconds			Cycle Length = 90 Seconds		
East Fordham Road and Washington Avenue	A	East Fordham Road (EB/WB)	46	3	2	44	3	2
	B	East Fordham Road (WB)	7	3	2	9	3	2
	C	Exclusive Pedestrian (EB/WB)	23	2	2	23	2	2
			Cycle Length = 90 Seconds			Cycle Length = 90 Seconds		
East Fordham Road and Arthur Avenue	A	East Fordham Road (EB/WB)	40	3	2	39	3	2
	B	East Fordham Road (WB)	13	3	2	14	3	2
	C	Exclusive Pedestrian (EB/WB)	23	2	2	23	2	2
			Cycle Length = 90 Seconds			Cycle Length = 90 Seconds		
East Fordham Road and Hughes Avenue	A	East Fordham Road (EB/WB)	52	3	2	49	3	2
	B	Hughes Avenue (NB/SB)	28	3	2	31	3	2
			Cycle Length = 90 Seconds			Cycle Length = 90 Seconds		
East Fordham Road (eastbound) and Crotona Avenue	A	East Fordham Road (EB)	53	3	2	51	3	2
	B	Crotona Avenue (NB/SB)	27	3	2	29	3	2
			Cycle Length = 120 Seconds			Cycle Length = 90 Seconds		
East 187th Street and Crotona Avenue	A	East 187th Street (EB/WB)	19	3	2	22	3	2
	B	Crotona Avenue (NB/SB)	31	3	2	28	3	2
			Cycle Length = 60 Seconds			Cycle Length = 60 Seconds		
PM Peak Hour								
East Fordham Road and Bathgate Avenue	A	East Fordham Road (EB/WB)	78	3	2	74	3	2
	B	Bathgate Avenue (EB)	32	3	2	36	3	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		
East Fordham Road and Lorillard Place	A	East Fordham Road (EB/WB)	64	3	2	65	3	2
	B	East Fordham Road (WB)	19	3	2	18	3	2
	C	Exclusive Pedestrian (EB/WB)	23	2	2	23	2	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		
East Fordham Road and Hoffman Street	A	East Fordham Road (EB/WB)	75	3	2	74	3	2
	B	Hoffman Street (NB)	35	3	2	36	3	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		
East Fordham Road and Arthur Avenue	A	East Fordham Road (EB/WB)	68	3	2	67	3	2
	B	East Fordham Road (WB)	15	3	2	16	3	2
	C	Exclusive Pedestrian (EB/WB)	23	2	2	23	2	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		
East Fordham Road and Hughes Avenue	A	East Fordham Road (EB/WB)	82	3	2	79	3	2
	B	Hughes Avenue (NB/SB)	28	3	2	31	3	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		
East Fordham Road and Cambreleng Avenue	A	East Fordham Road (EB/WB)	82	3	2	80	3	2
	B	Cambreleng Avenue (NB)	28	3	2	30	3	2
			Cycle Length = 120 Seconds			Cycle Length = 120 Seconds		

Table 3.4

2023 No Build, Build, and Build with Improvements Conditions Level of Service Analysis

Weekday AM Peak Hour

	2023 No Build				2023 Build				2023 Build with Improvements			
Intersection	**Lane Group**	**v/c Ratio**	**Delay (sec)**	**LOS**	**Lane Group**	**v/c Ratio**	**Delay (sec)**	**LOS**	**Lane Group**	**v/c Ratio**	**Delay (sec)**	**LOS**
East Fordham Road and Webster Avenue												
Eastbound	T	0.81	36.6	D	T	0.84	38.5	D	T	0.83	39.6	D
	R	0.23	24.1	C	R	0.23	24.1	C	R	0.23	23.4	C
Westbound	T	0.99	57.6	E	T	1.01	62.8	E	T	0.99	57.0	E
	R	0.26	24.6	C	R	0.28	25.0	C	R	0.27	24.2	C
Northbound	L	0.61	36.9	D	L	0.61	36.9	D	L	0.62	38.2	D
	TR	0.65	38.7	D	TR	0.65	38.8	D	TR	0.67	40.1	D
Southbound	L	0.63	39.1	D	L	0.67	41.1	D	L	0.68	42.5	D
	T	0.50	34.5	C	T	0.50	34.5	C	T	0.51	35.5	D
	R	0.47	37.4	D	R	0.47	37.5	D	R	0.48	38.8	D
	Intersection		42.6	D	Intersection		44.8	D	Intersection		44.8	D
East Fordham Road and Washington Avenue												
Eastbound	T	0.77	25.8	C	T	0.84	24.9	C	T	0.83	30.0	C
	R	0.38	18.0	B	R	038	18.0	B	R	0.39	19.3	B
Westbound	L	1.01	85.6	F	L	1.07	106.8	F	L	1.01	86.1	F
	T	0.64	11.0	B	T	0.61	10.9	B	T	0.66	11.2	B
	Intersection		26.8	C	Intersection		28.1	C	Intersection		28.9	C
East Fordham Road and Arthur Avenue												
Eastbound	T	0.89	37.5	D	T	0.92	40.5	D	T	0.89	37.4	D
	R	0.04	17.0	B	R	0.04	17.0	B	R	0.04	17.6	B
Westbound	L	1.00	81.7	F	L	1.02	88.2	F	L	0.99	80.4	F
	T	0.74	11.3	B	T	0.74	11.6	B	T	0.74	11.6	B
	Intersection		30.3	C	Intersection		32.4	C	Intersection		30.2	C
East Fordham Road and Hughes Avenue												
Eastbound	LT	0.64	12.2	B	LT	0.66	12.6	B	LT	0.67	13.3	B
Westbound	T	0.66	12.0	B	T	0.66	12.1	B	T	0.67	12.8	B
	R	0.02	6.2	A	R	0.02	6.2	A	R	0.02	6.5	A
Northbound	LTR	0.98	101.8	F	LTR	1.01	108.9	F	LTR	0.97	98.2	F
Southbound	LR	0.51	52.1	D	LR	0.56	55.1	E	LR	0.54	52.1	D
	Intersection		18.1	B	Intersection		18.9	B	Intersection		18.8	B
East Fordham Road (Eastbound) and Crotona Avenue												
Eastbound	LT	0.26	15.5	B	LT	0.27	15.7	B	LT	0.29	17.4	B
	R	0.26	16.4	B	R	0.33	18.0	B	R	0.36	20.5	C
Northbound	TR	0.51	31.9	C	TR	0.54	33.0	C	TR	0.51	29.9	C
Southbound	LT	0.85	44.7	D	LT	0.95	58.8	E	LT	0.90	47.5	D
	Intersection		31.2	C	Intersection		38.3	D	Intersection		33.3	C
East Fordham Road (Westbound) and Southern Boulevard												
Westbound	LTR	1.04	66.0	E	LTR	1.08	79.7	E	LTR	1.04	65.1	E
Northbound	L	0.62	35.8	D	L	0.65	37.3	D	L	0.68	41.6	D
	T	0.28	20.6	C	T	0.28	20.6	C	T	0.29	21.9	C
Southbound	TR	0.33	21.2	C	TR	0.33	21.2	C	TR	0.35	22.5	C
	Intersection		45.8	D	Intersection		53.8	E	Intersection			
East 187th Street and Crotona Avenue												
Eastbound	LTR	0.94	56.4	E	LTR	1.00	72.1	E	LTR	0.94	54.9	D
Westbound	LTR	0.98	62.9	E	LTR	0.99	66.3	E	LTR	0.94	53.0	D
Northbound	LTR	0.31	9.5	A	LTR	0.32	9.7	A	LTR	0.33	10.4	B
Southbound	LTR	0.65	14.6	B	LTR	0.66	15.0	B	LTR	0.68	16.3	B
	Intersection		35.6	D	Intersection		40.0	D	Intersection		33.4	C

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

Table 3.5
2023 No Build, Build, and Build with Improvements Conditions
Level of Service Analysis
Weekday Midday Peak Hour

	2023 No Build				2023 Build				2023 Build with Improvements			
Intersection	**Lane Group**	**v/c Ratio**	**Delay (sec)**	**LOS**	**Lane Group**	**v/c Ratio**	**Delay (sec)**	**LOS**	**Lane Group**	**v/c Ratio**	**Delay (sec)**	**LOS**
East Fordham Road and Third Avenue												
Eastbound	TR	0.83	24.2	C	TR	0.87	26.3	C	TR	0.83	22.9	C
Westbound	LT	1.04	66.3	E	LT	1.10	87.3	F	LT	1.04	65.1	E
Northbound	LR	0.03	17.7	B	LR	0.03	17.7	B	LR	0.03	19.1	B
	Intersection		42.9	D	Intersection		53.6	D	Intersection		41.8	D
East Fordham Road and Washington Avenue												
Eastbound	T	0.80	23.1	C	T	0.84	24.9	C	T	0.88	28.8	C
	R	0.19	12.6	B	R	0.19	12.6	B	R	0.20	13.7	B
Westbound	L	1.03	90.9	F	L	1.07	106.8	F	L	1.01	86.8	F
	T	0.57	10.4	B	T	0.61	10.9	B	T	0.61	10.9	B
	Intersection		25.6	C	Intersection		28.1	C	Intersection		27.6	C
East Fordham Road and Arthur Avenue												
Eastbound	T	0.95	39.0	D	T	0.99	47.3	D	T	0.97	41.8	D
	R	0.12	15.1	B	R	0.13	15.1	B	R	0.12	15.7	B
Westbound	L	0.98	73.6	E	L	0.99	77.6	E	L	0.99	66.2	E
	T	0.67	11.7	B	T	0.69	12.2	B	T	0.68	12.2	B
	Intersection		30.6	C	Intersection		34.6	C	Intersection		31.0	C
East Fordham Road and Hughes Avenue												
Eastbound	LT	0.72	16.5	B	LT	0.75	17.3	B	LT	0.80	20.8	C
Westbound	T	0.59	13.1	B	T	0.60	13.2	B	T	0.63	15.5	B
	R	0.05	8.4	A	R	0.05	8.4	A	R	0.05	9.8	A
Northbound	LTR	1.12	116.2	F	LTR	1.30	186.2	F	LTR	1.13	117.1	F
Southbound	LR	0.67	45.9	D	LR	0.77	56.7	E	LR	0.65	39.9	D
	Intersection		27.4	C	Intersection		37.0	D	Intersection		30.5	C
East Fordham Road (Eastbound) and Crotona Avenue												
Eastbound	LT	0.32	9.8	A	LT	0.34	10.0-	A	LT	0.36	11.1	B
	R	0.22	9.5	A	R	0.41	13.1	B	R	0.43	14.7	B
Northbound	TR	0.55	31.6	C	TR	0.65	35.2	D	TR	0.60	31.7	C
Southbound	LT	0.71	35.1	D	LT	0.98	67.4	E	LT	0.86	44.5	D
	Intersection		20.6	C	Intersection		31.7	C	Intersection		24.9	C
East 187th Street and Crotona Avenue												
Eastbound	LTR	1.01	69.6	E	LTR	1.20	136.3	F	LTR	0.98	57.9	E
Westbound	LTR	0.59	23.5	C	LTR	0.68	26.6	C	LTR	0.58	20.4	C
Northbound	LTR	0.36	10.1	B	LTR	0.41	10.7	B	LTR	0.45	13.3	B
Southbound	LTR	0.44	10.9	B	LTR	0.52	12.3	B	LTR	0.58	15.5	B
	Intersection		31.2	C	Intersection		51.5	D	Intersection		28.5	C

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

Table 3.6
2023 No Build, Build, and Build with Improvements Conditions
Level of Service Analysis
Weekday PM Peak Hour

	2023 No Build				2023 Build				2023 Build with Improvements			
Intersection	**Lane Group**	**v/c Ratio**	**Delay (sec)**	**LOS**	**Lane Group**	**v/c Ratio**	**Delay (sec)**	**LOS**	**Lane Group**	**v/c Ratio**	**Delay (sec)**	**LOS**
East Fordham Road and Bathgate Avenue												
Eastbound	L	0.15	10.4	B	L	0.21	12.2	B	L	0.24	15.4	B
	T	0.66	14.7	B	T	0.68	15.1	B	T	0.71	18.2	B
Westbound	T	0.73	16.6	B	T	0.75	17.3	B	T	0.79	21.1	C
	R	0.02	7.5	A	R	0.02	7.5	A	R	0.03	9.0	A
Northbound	L	0.35	38.7	D	L	0.43	40.7	D	L	0.38	36.2	D
	TR	1.11	131.6	F	TR	1.26	186.7	F	TR	1.09	120.7	F
Southbound	LR	0.27	40.6	D	LR	0.33	43.3	D	LR	0.24	35.7	D
	Intersection		28.7	C	Intersection		34.8	C	Intersection		30.7	C
East Fordham Road and Lorillard Place												
Eastbound	T	1.01	52.7	D	T	1.03	59.7	E	T	1.02	54.6	D
	R	0.08	13.8	B	R	0.08	13.8	B	R	0.07	13.3	B
Westbound	L	0.67	50.1	D	L	0.68	50.7	D	L	0.70	52.9	D
	T	0.68	10.4	B	T	0.71	10.9	B	T	0.71	10.9	B
	Intersection		33.0	C	Intersection		36.5	D	Intersection		34.2	C
East Fordham Road and Hoffman Street												
Eastbound	L	0.04	9.4	A	L	0.05	10.1	B	L	0.06	10.6	B
	T	0.83	22.2	C	T	0.85	23.4	C	T	0.86	24.7	C
Westbound	T	0.87	24.3	C	T	0.89	26.5	C	T	0.91	28.2	C
	R	0.02	8.6	A	R	0.03	8.7	A	R	0.03	9.1	A
Northbound	LTR	1.13	132.0	F	LTR	1.15	139.1	F	LTR	1.11	125.3	F
	Intersection		34.4	C	Intersection		36.5	D	Intersection		36.5	D
East Fordham Road and Arthur Avenue												
Eastbound	T	0.92	32.2	C	T	0.93	34.5	C	T	0.90	31.0	C
	R	0.07	11.9	B	R	0.07	11.9	B	R	0.07	12.3	B
Westbound	L	1.18	153.5	F	L	1.20	163.2	F	L	1.15	144.3	F
	T	0.68	10.1	B	T	0.70	10.5	B	T	0.70	10.5	B
	Intersection		34.6	C	Intersection		36.7	D	Intersection		33.2	D
East Fordham Road and Hughes Avenue												
Eastbound	LT	0.82	17.3	B	LT	0.83	18.1	B	LT	0.87	21.5	C
Westbound	T	0.61	11.2	B	T	0.62	11.4	B	T	0.65	13.3	B
	R	0.01	6.1	A	R	0.01	6.1	A	R	0.01	7.1	A
Northbound	LTR	1.18	152.2	F	LTR	1.27	187.2	F	LTR	1.14	134.3	F
Southbound	LR	1.15	171.7	F	LR	1.27	215.9	F	LR	1.15	166.6	F
	Intersection		33.1	C	Intersection		39.4	D	Intersection		34.5	C
East Fordham Road and Cambreleng Avenue												
Eastbound	T	0.24	7.5	A	T	0.26	7.6	A	T	0.26	8.4	A
Northbound	R	0.93	78.5	E	R	1.03	102.3	F	R	0.96	82.4	F
	Intersection		34.2	C	Intersection		44.3	D	Intersection		37.1	D
East 187th Street and Crotona Avenue												
Eastbound	LTR	1.06	84.6	F	LTR	1.18	125.9	F	LTR	1.04	75.1	E
Westbound	LTR	0.47	20.1	C	LTR	0.52	21.3	C	LTR	0.46	18.5	B
Northbound	LTR	0.46	11.6	B	LTR	0.50	12.1	B	LTR	0.53	14.1	B
Southbound	LTR	0.45	11.0	B	LTR	0.55	12.8	B	LTR	0.59	15.0	B
	Intersection		35.7	D	Intersection		48.4	D	Intersection		33.6	C

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

Transit

Bus

The Proposed Action would result in capacity shortfalls of 77 spaces on westbound Bx12 SBS service in the AM peak hour, 40 spaces on eastbound Bx12 SBS service in the PM peak hour, and 58 spaces on westbound Bx12 SBS service in the PM peak hour. These significant adverse impacts to Bx12 SBS bus service could be fully mitigated by the addition of one articulated bus in the westbound direction in the AM peak hour and one articulated bus each in the eastbound and westbound directions in the PM peak hour.

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 Bx12 SBS route to address its capacity shortfalls.

Table 3.7
2023 Build Conditions: Sidewalk Analysis

Location	Sidewalk	Effective Width (ft)	Two-way Peak Hour Volume	PHF	PMF	Platoon LOS
AM Peak Hour						
East Fordham Road between Crotona Avenue and Southern Blvd- West	South	6.5	398	0.85	1.20	B
East Fordham Road between Crotona Avenue and Southern Blvd- East	South	10.0	435	0.85	0.95	B
Crotona Avenue between E.Fordham Road and 189th Street	East	13.0	490	0.81	0.78	B
189th Street between Beaumont Avenue and Crotona Avenue	North	7.0	287	0.80	0.85	B
189th Street between Cambreleng Avenue and Beaumont Avenue	North	3.0	352	0.80	2.44	B
East Fordham Road Between Crotona Ave and Cambreleng Avenue	South	10.0	600	0.88	1.14	B
East Fordham Road Between Cambreleng Avenue and Belmont Ave-East	South	8.0	552	0.80	1.44	B
East Fordham Road Between Cambreleng Avenue and Belmont Ave-West	South	9.0	653	0.80	1.51	B
East Fordham Road between Belmont Ave and Hughes Ave	South	8.0	388	0.80	1.01	B
East Fordham Road between Hughes Ave and Arthur Avenue	South	11.0	324	0.80	0.61	B
East Fordham Road between Arthur Ave and Hoffman Street - East of Bus stop	South	7.0	630	0.80	1.88	B
East Fordham Road between Arthur Ave and Hoffman Street - West of Bus stop	South	7.0	497	0.80	1.48	B
East Fordham Road between Hoffman Street and Lorillard Place	South	7.0	442	0.81	1.30	B
Midday Peak Hour						
East Fordham Road between Crotona Avenue and Southern Blvd- West	South	6.5	523	0.80	1.68	B
East Fordham Road between Crotona Avenue and Southern Blvd- East	South	10.0	882	0.80	2.04	B
Crotona Avenue between E.Fordham Road and 189th Street	East	13.0	700	0.80	1.12	B
189th Street between Beaumont Avenue and Crotona Avenue	North	7.0	776	0.80	2.31	B
189th Street between Cambreleng Avenue and Beaumont Avenue	North	3.0	545	0.80	3.78	C
East Fordham Road Between Crotona Ave and Cambreleng Avenue	South	10.0	697	0.86	1.34	B
East Fordham Road Between Cambreleng Avenue and Belmont Ave-East	South	8.0	966	0.86	2.35	B
East Fordham Road Between Cambreleng Avenue and Belmont Ave-West	South	9.0	1633	0.86	3.54	C
East Fordham Road between Belmont Ave and Hughes Ave	South	8.0	1198	0.80	3.12	C
East Fordham Road between Hughes Ave and Arthur Avenue	South	11.0	746	0.96	1.18	B
East Fordham Road between Arthur Ave and Hoffman Street - East of Bus stop	South	7.0	969	0.81	2.84	B
East Fordham Road between Arthur Ave and Hoffman Street - West of Bus stop	South	7.0	778	0.91	2.04	B
East Fordham Road between Hoffman Street and Lorillard Place	South	7.0	755	0.82	2.18	B
PM Peak Hour						
East Fordham Road between Crotona Avenue and Southern Blvd- West	South	6.5	539	0.82	1.68	B
East Fordham Road between Crotona Avenue and Southern Blvd- East	South	10.0	699	0.82	1.57	B
Crotona Avenue between E.Fordham Road and 189th Street	East	13.0	570	0.80	0.91	B
189th Street between Beaumont Avenue and Crotona Avenue	North	7.0	594	0.80	1.77	B
189th Street between Cambreleng Avenue and Beaumont Avenue	North	3.0	388	0.87	2.48	B
East Fordham Road Between Crotona Ave and Cambreleng Avenue	South	10.0	724	0.84	1.43	B
East Fordham Road Between Cambreleng Avenue and Belmont Ave-East	South	8.0	833	0.91	1.91	B
East Fordham Road Between Cambreleng Avenue and Belmont Ave-West	South	9.0	1184	0.91	2.42	B
East Fordham Road between Belmont Ave and Hughes Ave	South	8.0	912	0.85	2.24	B
East Fordham Road between Hughes Ave and Arthur Avenue	South	11.0	653	0.92	1.07	B
East Fordham Road between Arthur Ave and Hoffman Street - East of Bus stop	South	7.0	958	0.90	2.53	B
East Fordham Road between Arthur Ave and Hoffman Street - West of Bus stop	South	7.0	787	0.80	2.34	B
East Fordham Road between Hoffman Street and Lorillard Place	South	7.0	610	0.80	1.81	B

Note: PMF = pedestrians per minute per foot

Table 3.8
2023 Build Conditions: Corner Analysis

Location	Corner	AM Peak Period		Midday Peak Period		PM Peak Period	
		SFP	LOS	SFP	LOS	SFP	LOS
Crotona Avenue and E.Fordham Road	Southwest	175.6	A	180.2	A	175.0	A
	Southeast	241.8	A	155.3	A	178.4	A
Cambreleng Avenue and E.Fordham Road	Southwest	125.1	A	88.9	A	88.4	A
	Southeast	129.0	A	97.8	A	97.1	A
Hughes Avenue and E.Fordham Road	Southwest	150.8	A	62.5	A	101.2	A
	Southeast	98.5	A	37.9	C	58.4	B
Arthur Avenue and E.Fordham Road	Southwest	57.5	B	33.5	C	27.4	C
	Southeast	360.9	A	189.7	A	209.4	A
Hoffman Street and E.Fordham Road	Southwest	193.6	A	157.0	A	193.3	A
	Southeast	123.1	A	130.5	A	131.9	A

Note: SFP = square feet per pedestrian

Table 3.9
2023 Build Conditions: Crosswalk Analysis

Location	Crosswalk	Crosswalk Length (ft)	Crosswalk Width (ft)	2-way Peak Hour Volume	SFP	LOS
AM Peak Period						
Crotona Avenue and E.Fordham Road	South	43.0	15.0	504	84.9	A
Cambreleng Avenue and E.Fordham Road	South	30.0	14.0	435	105.3	A
Hughes Avenue and E.Fordham Road	South	30.0	14.0	426	151.3	A
Arthur Avenue and E.Fordham Road	South	38.0	17.0	361	34.0	C
Hoffman Street and E.Fordham Road	South	30.0	17.0	411	180.6	A
Midday Peak Period						
Crotona Avenue and E.Fordham Road	South	43.0	15.0	679	74.6	A
Cambreleng Avenue and E.Fordham Road	South	30.0	14.0	544	82.8	A
Hughes Avenue and E.Fordham Road	South	30.0	14.0	1041	47.9	B
Arthur Avenue and E.Fordham Road	South	38.0	17.0	718	22.1	D
Hoffman Street and E.Fordham Road	South	30.0	17.0	712	92.3	A
PM Peak Period						
Crotona Avenue and E.Fordham Road	South	43.0	15.0	616	73.1	A
Cambreleng Avenue and E.Fordham Road	South	30.0	14.0	572	110.3	A
Hughes Avenue and E.Fordham Road	South	30.0	14.0	706	88.5	A
Arthur Avenue and E.Fordham Road	South	38.0	17.0	600	19.5	D
Hoffman Street and E.Fordham Road	South	30.0	17.0	576	126.1	A

Note: SFP = square feet per pedestrian

Table 3.10
2023 Build with Mitigation Condition: Crosswalk Analysis

Location	Crosswalk	Crosswalk Length (ft)	Crosswalk Width (ft)	2-way Peak Hour Volume	SFP	LOS
Midday Peak Period						
Arthur Avenue and E.Fordham Road	South	38.0	17.0	718	24.0	C
PM Peak Period						
Arthur Avenue and E.Fordham Road	South	38.0	17.0	600	24.5	C

Note: SFP = square feet per pedestrian