

A. INTRODUCTION

The technical analyses presented in Chapters 2 through 21 discuss the potential for significant adverse environmental impacts to result from the Proposed Project. Such potential impacts were identified in the areas of community facilities, open space, traffic, transit and pedestrians, construction traffic and construction noise. Measures have been examined to minimize or eliminate these anticipated impacts. These mitigation measures are discussed below. The effects of the proposed traffic mitigation measures on air quality and noise are also discussed.

B. COMMUNITY FACILITIES**CHILD CARE FACILITIES***OVERVIEW*

The child care analysis considers the Proposed Project's potential impact on publicly funded child care facilities within approximately 1½ miles of the project site. The analysis estimates that the low- to moderate-income units of the Proposed Project would generate 41 children under the age of 6 who would be eligible for publicly funded child care programs.

For the 41 children under age six, publicly funded child care facilities within 1½ miles of the project site will already be operating above capacity by 2018 because of the many other development projects planned in the future without the Proposed Project. If no new child care facilities are added in the study area to respond to this new demand, the new children from the Proposed Project would exacerbate the predicted shortage in child care slots and the project-generated demand would represent 9 percent of the collective capacity of child care centers serving the area. This increase would result in a significant adverse impact on child care facilities in the area.

PROPOSED MITIGATION MEASURES

At this point, it is not possible to know exactly which type of mitigation would be most appropriate or when its implementation would be necessary, because the demand for publicly funded child care depends not only on the amount of residential development in the area but on the proportion of new residents who are children of low-income families (not all children meet the social and income eligibility criteria). Furthermore, several factors may limit the number of children in need of publicly funded child care slots. For example, families in the 1½-mile study area could make use of alternatives to publicly funded group child care facilities. There are slots at homes licensed to provide family child care that families of eligible children could elect to use instead of publicly funded group child care facilities. Additionally, parents of eligible children are not restricted to enrolling their children in child care facilities in a specific geographical area, and could make use of public and private child care providers beyond the 1½-mile study area

(some parent/guardians choose a child care center close to their employment rather than their residence).

Possible mitigation measures for this significant adverse impact include adding capacity to existing facilities if determined feasible through consultation with the New York City Administration for Children's Services (ACS) or providing a new child care facility within or near the project site. As a city agency, ACS does not directly provide new child care facilities, instead it contracts with providers in areas of need. ACS is also working to create public/private partnerships to facilitate the development of new child care facilities where there is an area of need. As part of that initiative, ACS may be able to contribute capital funding, if it is available, towards such projects to facilitate the provision of new facilities.

The Restrictive Declaration for the Proposed Project will require the project sponsor to work with ACS to consider the need for and the implementation of measures to provide any needed additional capacity as required to mitigate a significant adverse impact in day care facilities within the 1-1/2 mile study area or within Community Board 7. Based on the results of the analysis presented in Chapter 4, "Community Facilities and Services," the Proposed Project would need to provide 15 child care slots to reduce the increase in the utilization rate to less than 5 percent. Absent the implementation of such needed mitigation measures, the Proposed Project could have an unmitigated significant adverse impact on child care facilities.

C. OPEN SPACE

As discussed in Chapter 5, "Open Space," given the size of the decrease (6.1 percent) in the active open space ratio and the already high utilization of many of the active open space resources that would be available to the users in the Future With the Proposed Project, both within and outside the study area, the Proposed Project has the potential to result in a significant adverse active open space impact.

The CEQR Technical Manual lists potential on- and off-site mitigation measures. These measures include creating new public open spaces on-site or elsewhere in the study area of the type needed to serve the proposed population and offset their impact on existing open spaces in the study area, and improving existing open spaces in the study area to increase their utility, safety, and capacity to meet identified needs in the study area. Mitigation measures for this potential significant adverse impact were explored by the lead agency in consultation with the New York City Department of Parks and Recreation (DPR) between the Draft and Final Supplemental Environmental Impact Statement (SEIS).

Potential on-site mitigation measures considered for the active open space ratio deficit included: ball fields, handball courts, basketball courts, playgrounds, volleyball courts, and skate parks. Additionally, existing open spaces in the study area were examined with respect to their condition and utility. No practicable opportunities for off-site mitigation have been identified as of the date of this FSEIS.

To fully mitigate this significant adverse impact, a substantial amount of the on-site open space would need to be programmed for active uses. Given site constraints and the overall design objectives, providing this amount of open space on the Project site would not be compatible with the goals and objectives of the proposed site plan.

Therefore, in order address the active open space impact with on-site active uses, measures to partially mitigate the impact were explored. The inclusion of a children's play area as part of the Proposed Project's publicly accessible open space was identified as the most appropriate

mitigation for the identified significant adverse active open space impact. This use was deemed compatible with the adjacent passive open space and the overall objectives of the site plan. As described in Chapter 28, “Modifications to the Proposed Project,” the project sponsor expects to file a revised application with various design changes. Among the modifications is the addition of a play area between Buildings 3 and 4 in the southern portion of the site. This measure is further analyzed and quantified in that chapter.

Absent the implementation of the mitigation measure through the proposed design change described above, the Proposed Project would have an unmitigated significant adverse impact on active open space. With the implementation of the mitigation measure through the proposed design change described above, the Proposed Project’s impacts on active open space would be partially mitigated.

D. TRAFFIC

OVERVIEW

As discussed in Chapter 16 “Traffic and Parking,” the Proposed Project would result in significant adverse impacts at 24 study area intersections during one or more analyzed peak hours. Specifically, 17, 13, 12, and 13 intersections would be impacted in the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours, respectively. To alleviate these impacts, the feasibility of implementing mitigation measures was explored. The mitigation analysis results and recommendations are discussed below.

According to the CEQR Technical Manual, a significant traffic impact can be considered fully mitigated if the degradation in the level of service under the Action-with-Mitigation condition compared to the No-Action condition is no longer deemed significant based on the impact criteria previously described in Chapter 16, “Traffic and Parking.” For future No-Action LOS A, B or C, mitigation to mid-LOS D (45 seconds of delay) is required.

With the proposed traffic mitigation measures, outlined below, all significant adverse traffic impacts due to the Proposed Project would be fully mitigated with the exception of impacts at three intersections along Route 9A—Twelfth Avenue at West 56th Street (in the AM and PM peak hours), Twelfth Avenue at West 54th Street (in the PM peak hour) and Twelfth Avenue at West 52nd Street (in the AM and PM peak hours). These three intersections already have significant east/west movements and are congested under No Build conditions. As discussed below, at two of these intersections (Twelfth Avenue at West 54th Street, and Twelfth Avenue and West 52nd Street) no feasible mitigation measures have been identified which would fully mitigate north/south project-generated traffic impacts during the AM and PM peak periods. At one of these intersections (Twelfth Avenue and West 56th Street) mitigation has been proposed and that mitigation is currently being reviewed by NYSDOT. However, if NYSDOT decides to not implement the mitigation measure proposed for this intersection, then the significant impacts would remain.

Table 22-1 presents a summary of the intersections and movements that would be significantly impacted with the Proposed Project, and the intersections and movements that would either be mitigated with the proposed mitigation measures, or remain unmitigated.

Table 22-1
2018 Future with the Proposed Project:
Summary of Movements/Intersections with Significant Adverse Impacts

	Movements/ Intersections Analyzed	Movements/ Intersections With No Significant Impacts	Movements/ Intersections With Significant Impacts	Mitigated Movements/ Intersections	Unmitigated Movements/ Intersections
Weekday AM	228/55	207/38	21/17	17/15	4/2
Weekday Midday	226/55	212/42	14/13	14/13	0/0
Weekday PM	224/55	209/43	15/12	11/9	4/3
Saturday Midday	226/55	212/42	14/13	14/13	0/0
Note: This table has been revised for the FSEIS.					

PROPOSED MITIGATION MEASURES

Measures to mitigate project-generated significant adverse traffic impacts would consist of minor adjustments to signal timing in order to increase green time for impacted movements, daylighting intersections (i.e., changing parking regulations to prohibit parking near some intersections during certain peak time periods), installing a new traffic signal and converting West 59th Street between West End Avenue and Amsterdam Avenue to one-way westbound from two-way operation. The operational changes proposed for each intersection are presented in **Table 22-2** and discussed below. **Table 22-3** presents the results of the level of service analysis with the proposed mitigation measures, for the weekday AM, weekday midday, weekday PM, and Saturday midday peak analysis time periods, respectively.

TWELFTH AVENUE NORTHBOUND SERVICE ROAD AND WEST 59TH STREET

This is an unsignalized intersection of two-way West 59th Street and the one-way Twelfth Avenue northbound service road. The northbound approach at this intersection would be impacted during all four peak hours. As shown in **Table 22-2**, the proposed mitigation at this intersection is to introduce a new 90 second traffic signal allowing the northbound phase to have 55 seconds of the cycle length (which includes five seconds for the yellow and all red) and the eastbound phase to have 35 seconds of the cycle length. As shown in **Table 22-3**, with this new traffic signal, the northbound approach delay in the weekday AM peak hour would be reduced to 28.7 seconds (LOS C) as compared with 144.7 seconds (LOS F) under No Build conditions, and in the PM peak hour it would be reduced to 23.1 seconds of delay (LOS C) as compared with 79.5 seconds (LOS F) under No Build conditions. In the weekday midday peak hour, the northbound approach delay would be reduced to 16.1 seconds (LOS B) as compared with 29.20 seconds (LOS D) and in the Saturday midday peak hour it would be reduced to 17.1 seconds of delay (LOS B) as compared with 79.5 seconds (LOS E) under No Build conditions. This new signal would fully mitigate the traffic impacts. With the proposed mitigation measures the impacts at this intersection would be mitigated.

Table 22-2
Traffic Mitigation Measures

Intersection	Approach	Impacted Period	No-Build Signal Timing (Seconds) (1)	Proposed Mitigation Plan	
				Build Signal Timing (Seconds) (1)	Proposed Mitigation Measures
12th Avenue					
12th Avenue (NB) @ W. 59th Street (EW)	EW NB Only	AM MD PM Sat MD	NA	35/35/35/35 55/55/55/55	Implement new 90s traffic signal.
12th Avenue (NS) @ W. 57th Street (EB)	NB Only WB Only	AM	85/82/110/82 65/38/43/38	86/82/110/82 64/38/43/38	Transfer 1s from WB only to NB only during the weekday AM period.
12th Avenue (NS) @ W. 56th Street (EB)	NB Only SB Only	AM MD PM Sat MD	75/89/107/89 75/31/43/31	75/86/107/86 75/34/43/34	Transfer 3s from NB only to SB only during the weekday MD and Sat MD periods. Not fully mitigated during weekday AM and PM periods.
12th Avenue (NS) @ W. 54th Street (EB)	NS SB LT+WB RT	PM	114/85/115/85 36/35/35/35	114/85/116/85 36/35/34/35	Transfer 1s from SB LT+WB RT to NS during the weekday PM period. Not Fully Mitigated
12th Avenue (NS) @ W. 52nd Street (EB)	EB Only NS SB Only	AM MD PM Sat MD	36/35/33/34 92/70/97/70 22/15/20/16	36/33/33/33 92/72/97/71 22/15/20/16	Transfer 2s from EB only to NS during the weekday MD period. Transfer 1s from EB only to NS during the Sat MD period. Not fully mitigated during weekday AM and PM periods.
12th Avenue (NS) @ W. 42nd Street (EW)	EW NS SB Only	AM MD Sat MD	39/39/39/39 74/50/91/50 37/31/20/31	38/37/39/37 75/52/91/52 37/31/20/31	Transfer 1s from EW to NS during the weekday AM period. Transfer 2s from EW to NS during the weekday MD and Sat MD periods.
12th Avenue (NS) @ W. 41st Street (EW)	EW EB Only NS SB Only	AM MD Sat MD	34/32/23/32 16/18/16/18 74/53/99/63 26/17/12/17	31/31/23/30 16/18/16/18 77/54/99/55 26/17/12/17	Transfer 3s from EW to NS during the weekday AM period. Transfer 1s from EW to NS during the weekday MD period. Transfer 2s from EW to NS during the Sat MD period.
12th Avenue (NS) @ W. 37th Street (EW)	EB Only NB Only NS SB Only	AM MD Sat MD	33/27/27/27 20/20/17/20 70/55/96/55 27/18/10/18	30/26/27/24 20/20/17/20 73/56/96/58 27/18/10/18	Transfer 3s from EB only to NS during the weekday AM and Sat MD periods. Transfer 1s from EB only to NS during the weekday MD period.
Riverside Drive					
Riverside Drive (NS) @ W. 79th Street (EW)	NS EW	AM	38/38/38/38 52/52/52/52	39/38/38/38 51/52/52/52	Transfer 1s from EW to NS during the weekday AM period.
Riverside Drive (NS) @ W. 72nd Street (EW)	EW SB+WB RT Peds Only	Sat MD	30/37/37/37 49/42/42/42 11/11/11/11	30/37/37/35 49/42/42/44 11/11/11/11	Transfer 2s from EW to SB and WB right turn during the Sat MD period.
Riverside Boulevard.					
Riverside Blvd. (NS) @ W. 70th Street (EW)	NB WB Only	PM	UN SIGNALIZED	UN SIGNALIZED	Implement No Standing Anytime for 100 feet along the east curb of the NB approach and restripe with one 11' through lane and one 11' right turn lane.
11th Avenue/West End Avenue					
West End Avenue (NS) @ W. 79th Street (EW)	NC	PM	NC	NC	Restripe the northbound approach to include one 11' shared left-through lane, and one 19' shared through-right turn lane with parking.
West End Avenue (NS) @ W. 72nd Street (EW)	EW Peds Only (EW) NS NB Only Peds Only (NS)	AM MD	30/25/25/25 6/9/7/9 37/34/28/34 11/14/24/14 6/8/6/8	31/26/25/25 6/9/7/9 36/33/28/34 11/14/24/14 6/8/6/8	Transfer 1s from NS to EW during the weekday AM and MD periods.
West End Avenue (NS) @ W. 70th Street (EB)	EB Only NS Peds Only	PM Sat MD	36/36/36/36 48/48/48/48 6/6/6/6	36/36/34/34 48/48/50/50 6/6/6/6	Transfer 2s from EB only to NS during the weekday PM and Sat MD periods.
West End Avenue (NS) @ W. 66th Street (EW)	EW Peds Only NS	AM	36/36/36/36 9/9/6/9 45/45/48/45	35/36/36/36 9/9/6/9 46/45/48/45	Transfer 1s from EW to NS during the weekday AM period.
West End Avenue (NS) @ W. 59th Street (EW)	EW NS	AM MD PM Sat MD	30/30/30/30 60/60/60/60	33/30/30/30 57/60/60/60	W. 59th Street between West End Avenue and Amsterdam Avenue to be converted to one-way westbound from two-way operation. Transfer 3s from NS to EW during the weekday AM periods. Parking would be permitted on the south curb between West End Avenue and Amsterdam Avenue W. 59th Street would be restriped to include one 13' shared through-right turn lane and one 22' left lane with parking.
11th Avenue (NS) @ W. 57th Street (EW)	NC	AM	NC	NC	Implement No Standing 7-10AM Mon-Fri to allow for an additional shared through-right turn lane at the northbound approach.
10th Avenue/Amsterdam Avenue					
Amsterdam Avenue (NB) @ W. 59th Street (EW)	NS	AM	NC	NC	W. 59th Street between West End Avenue and Amsterdam Avenue to be converted to one-way westbound from two-way operation. W. 59th Street would be restriped to include one 13' shared through-right turn lane and one 22' left lane with parking.
10th Avenue (NB) @ W. 57th Street (EW)	EW NB Only	AM	43/40/40/40 47/50/50/50	44/40/40/40 46/50/50/50	Transfer 1s from NB only to EW during weekday AM period.
9th Avenue/Columbus Avenue					
Columbus Avenue (SB) @ W. 66th Street (EW)	WB Only SB Only	MD PM Sat MD	58/58/58/58 32/32/32/32	58/57/57/57 32/33/33/33	Transfer 1s from WB only to SB only during the weekday MD, PM and Sat MD periods.
Columbus Avenue (SB) @ W. 60th Street (EW)	EW SB Only Peds Only	AM MD PM Sat MD	35/35/35/35 45/45/45/45 10/10/10/10	37/38/38/38 43/42/42/42 10/10/10/10	Transfer 2s from SB only to EW during the weekday AM period. Transfer 3s from SB only to EW during the MD, PM and Sat MD periods.
9th Avenue (SB) @ W. 57th Street (EW)	WB Only EW SB Only Peds Only	AM MD PM Sat MD	21/21/21/21 26/26/26/26 36/36/36/36 7/7/7/7	21/21/21/21 27/28/28/28 35/34/34/34 7/7/7/7	Transfer 1s from SB only to EW during the weekday AM period. Transfer 2s from SB only to EW during the weekday MD, PM and Sat MD periods.
Central Park West					
Central Park West (NS) @ W. 72nd Street (WB)	EB Only Peds Only NS	MD	38/38/38/35 6/6/6/6 46/46/46/49	38/37/38/35 6/6/6/6 46/47/46/49	Transfer 1s from EB only to NS during weekday MD period.
Central Park West (NS) @ W. 66th Street (WB)	WB Only NB Only NS	AM MD PM Sat MD	32/32/32/32 13/13/13/13 45/45/45/45	33/33/33/34 13/13/13/13 44/44/44/43	Implement No Standing Anytime 125 feet along the west curb of SB approach to allow for a new right turn only lane Implement No Standing Anytime 40 feet west of Central Park West along the south curb of W. 66th Street to assist southbound right turning trucks Transfer 1s from NS to WB only during the weekday AM, MD and PM periods. Transfer 2s from NS to WB only during the Sat MD period.

Notes:
 (1) Signal timings shown indicate Green plus Yellow (including All Red) for each phase and as AM/MD/PM/Sat MD.
 (2) NC-No Change to signal timing.
 This table has been revised for the FSEIS

Table 22-3

2018 Mitigation Traffic Conditions

Level of Service for Mitigated Conditions - AM Peak Hour

	LANE GROUP	NO BUILD AM PEAK HOUR			BUILD AM PEAK HOUR			Mitigation AM PEAK HOUR		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
		RATIO	(sec.)		RATIO	(sec.)		RATIO	(sec.)	
Riverside Dr.										
Riverside Dr. (N-S) @ W. 79th St. (E-W)	EB-LTR	0.46	14.3	B	0.48	14.6	B	0.50	15.3	B
	WB-LTR	0.34	12.9	B	0.34	12.9	B	0.35	13.5	B
	NB-LTR	0.46	26.5	C	0.49	27.1	C	0.46	25.4	C
	SB-LTR	0.99	62.7	E	1.02	67.9	E	0.98	58.4	E
Riverside Blvd.										
Riverside Blvd. (N-S) @ W. 61st St. (WB) UN SIGNALIZED 2-WAY STOP Mitigation Diversion	WB-LR	NA	8.5	A	NA	9.5	A	NA	9.6	A
	NB-TR	NA	9.6	A	NA	11.3	B	NA	12.0	B
	SB-LT	NA	8.5	A	NA	9.8	A	NA	10.0	A
Riverside Blvd. (N-S) @ W. 70th St. (WB) UN SIGNALIZED ALL-WAY STOP	WB-LR	NA	9.9	A	NA	10.6	B	NA	10.3	B
	NB-TR	NA	14.6	B	NA	22.6	C	NA	14.0	B
	NB-T							NA	16.5	C
	NB-R							NA	8.5	A
SB-LT	NA	9.2	A	NA	10.2	B	NA	10.2	B	
12th Avenue										
12th Ave. (NB) @ W. 59th St. (WB) UN SIGNALIZED 2-WAY STOP	EB-LT	0.00	8.5	A	0.00	8.9	A	0.04	20.4	C
	WB-TR							0.69	32.2	C
	NB-LTR	1.23	144.7	F	1.65	320.7	F	0.81	23.3	C
									Signalized	
12th Ave. (N-S) @ W. 57th St. (E-W)	NB-T Main Line	0.73	28.2	C	0.73	28.2	C	0.72	27.4	C
	NB-T Service	0.74	32.0	C	0.91	46.6	D	0.90	44.3	D
	WB-R	0.38	32.6	C	0.38	32.6	C	0.39	33.3	C
	NB-R Service unsignalized	0.92	35.9	E	0.92	35.9	E	0.94	39.6	E
12th Ave. (N-S) @ W. 56th St. (EB) Not Fully Mitigated	NB-T	1.08	82.2	F	1.11	96.4	F	1.11	96.4	F
	SB-L	0.95	48.8	D	1.00	58.5	E	1.00	58.5	E
	NB-TR Service	0.65	33.9	C	0.69	36.8	C	0.69	36.8	D
12th Ave. (N-S) @ W. 52nd St. (EB) Not Fully Mitigated	EB-LTR	1.05	109.4	F	1.05	109.4	F	1.05	109.4	F
	NB-TR	1.03	54.5	D	1.06	63.8	E	1.06	63.8	E
	SB-L	0.87	96.8	F	0.87	96.8	F	0.87	96.8	F
	SB-T	1.03	27.4	C	1.05	36.6	D	1.05	36.6	D
12th Ave. (N-S) @ W. 42nd St. (E-W)	EB-LTR	0.04	46.2	D	0.04	46.2	D	0.04	47.0	D
	WB-L	0.35	53.2	D	0.35	53.2	D	0.37	54.5	D
	WB-R	0.54	33.2	C	0.56	34.1	C	0.58	35.5	D
	NB-T	0.99	54.7	D	1.02	62.4	E	1.00	58.0	E
	NB-R	0.29	26.7	C	0.29	26.7	C	0.29	26.0	C
	SB-L	0.47	53.9	D	0.47	53.9	D	0.47	53.9	D
	SB-T	0.74	4.4	A	0.76	4.8	A	0.76	4.2	A
12th Ave. (N-S) @ W. 41st St. (E-W)	EB-LR	0.00	38.2	D	0.00	38.2	D	0.00	40.3	D
	WB-L	0.07	50.6	D	0.07	50.6	D	0.08	53.1	D
	WB-R	0.31	54.7	D	0.34	55.3	E	0.37	58.7	E
	NB-T	1.16	150.7	F	1.19	163.9	F	1.14	140.1	F
	SB-T	1.06	84.1	F	1.10	99.4	F	1.07	83.7	F
12th Ave. (N-S) @ W. 37th St. (EB)	EB-LR	0.12	52.5	D	0.12	52.5	D	0.14	55.4	E
	EB-R	0.13	53.1	D	0.13	53.1	D	0.14	56.2	E
	NB-L	0.10	63.7	E	0.10	63.7	E	0.10	63.7	E
	NB-T	0.95	37.8	D	0.98	42.1	D	0.94	35.0	D
	SB-TR	1.05	105.8	F	1.09	119.8	F	1.05	103.9	F
11th Avenue/West End Avenue										
West End Ave. (N-S) @ W. 79th St. (E-W)	EB-LTR	1.09	96.4	F	1.10	97.0	F	1.10	97.0	F
	WB-LTR	0.82	39.0	D	0.82	39.0	D	0.82	39.0	D
	NB-LTR	0.63	22.3	C	0.66	23.0	C	0.64	22.3	C
	SB-LTR	0.71	19.8	B	0.73	20.3	C	0.73	20.3	C
West End Ave. (N-S) @ W. 72nd St. (E-W)	EB-LT	0.53	30.0	C	0.54	30.3	C	0.52	29.1	C
	EB-R	0.51	34.3	C	0.53	34.9	C	0.51	33.2	C
	WB-LTR	0.85	47.3	D	0.92	56.8	E	0.87	49.2	D
	NB-L	0.50	30.6	C	0.51	32.0	C	0.53	33.6	C
	NB-TR	0.44	16.7	B	0.46	16.9	B	0.47	17.6	B
	SB-TR	0.64	25.8	C	0.66	26.1	C	0.68	27.5	C
West End Ave. (N-S) @ W. 66th St. (E-W)	EB-LR	0.51	27.9	C	0.52	28.3	C	0.55	30.4	C
	WB-L	0.55	29.6	C	0.59	31.0	C	0.61	32.7	C
	WB-T	0.73	35.4	D	0.76	36.9	D	0.79	39.7	D
	WB-R	0.36	24.8	C	0.36	24.8	C	0.38	25.9	C
	NB-L	0.83	68.5	E	0.88	81.1	F	0.84	71.2	E
	NB-T	0.35	17.3	B	0.37	17.5	B	0.36	16.8	B
SB-TR	0.65	18.3	B	0.67	18.7	B	0.66	17.6	B	
West End Ave. (N-S) @ W. 61st St. Mitigation Diversion	EB-LTR	0.06	20.0	C	0.14	21.0	C	0.23	22.2	C
	NB-T	0.58	15.2	B	0.58	15.3	B	0.58	15.3	B
	NB-R	0.12	10.4	B	0.12	10.4	B	0.12	10.4	B
	SB-L	0.39	17.3	B	0.39	17.5	B	0.39	17.5	B
	SB-TR	0.86	19.1	B	0.95	28.6	C	0.95	28.8	C

Table 22-3

2018 Mitigation Traffic Conditions

Level of Service for Mitigated Conditions - AM Peak Hour

	LANE GROUP	NO BUILD AM PEAK HOUR			BUILD AM PEAK HOUR			Mitigation AM PEAK HOUR		
		V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS
West End Ave. (N-S) @ W. 60 th St. (EB) Mitigation Diversion	EB-LTR	0.06	19.4	B	0.15	20.5	C	0.15	20.5	C
	NB-L	0.13	11.9	B						
	NB-TR	0.84	23.5	C	0.87	25.9	C	0.88	26.6	C
	SB-L	0.36	15.1	B	0.38	16.4	B	0.43	18.5	B
	SB-T	0.81	16.6	B	0.79	16.0	B	0.79	15.8	B
West End Ave. (N-S) @ W. 59 th St. (E-W) Mitigation Diversion	EB-LT				0.96	82.2	F			
	EB-L				0.21	26.3	C	0.77	63.6	E
	EB-R							0.18	23.7	C
	EB-LTR	0.97	82.6	F		68.4	E			
	EB-LR							Approach	46.9	D
	WB-L							0.29	25.2	C
	WB-TR							0.89	52.4	D
	WB-LTR	1.12	114.4	F	1.81	411.1	F	Approach	45.8	D
	NB-L	0.29	11.9	B	0.55	21.5	C	0.61	28.1	C
	NB-T							0.59	13.8	B
	NB-TR	0.56	11.8	B	0.56	11.8	B			
SB-L	0.02	4.0	A	0.02	4.0	A				
SB-TR	0.74	9.9	A	0.77	10.8	B	0.81	14.5	B	
11th Ave. (N-S) @ W. 58 th St. (EB) Mitigation Diversion	EB-LTR	0.46	30.1	C	0.46	30.1	C	0.59	33.6	C
	NB-TR	0.74	15.7	B	0.77	16.6	B	0.77	16.7	B
	SB-L	0.29	8.7	A	0.39	11.6	B	0.39	11.6	B
	SB-TR	0.68	8.7	A	0.70	9.0	A	0.70	9.0	A
11th Ave. (N-S) @ W. 57 th St. (E-W)	EB-L	0.71	32.7	C	0.73	34.3	C	0.73	34.3	C
	EB-TR	0.67	31.0	C	0.67	31.0	C	0.67	31.0	C
	WB-L	0.76	37.5	D	0.76	37.5	D	0.76	37.5	D
	WB-TR	0.72	33.7	C	0.75	35.1	D	0.75	35.1	D
	NB-L	0.40	24.5	C	0.41	25.1	C	0.41	25.1	C
	NB-TR	0.63	21.8	C	0.64	22.2	C	0.42	17.7	B
	SB-L	0.81	48.3	D	0.94	72.6	E	0.84	50.5	D
	SB-T									
	SB-TR	0.75	21.8	C	0.76	22.2	C	0.76	22.2	C
10th Avenue/Amsterdam Avenue										
Amsterdam Ave. (NB) @ W. 61 st St. (E-W) Mitigation Diversion	EB-LT	0.40	25.3	C	0.40	25.3	C	0.48	26.9	C
	WB-R	0.09	21.1	C	0.09	21.1	C	0.09	21.1	C
	NB-TR	0.43	8.2	A	0.44	8.3	A	0.42	8.2	A
Amsterdam Ave. (NB) @ W. 60 th St. (EB) Mitigation Diversion	EB-LT	0.45	26.0	C	0.52	27.6	C	0.56	28.8	C
	WB-R	0.41	26.4	C	0.41	26.4	C	0.41	26.4	C
	NB-TR	0.45	9.0	A	0.45	9.0	A	0.44	8.9	A
Amsterdam Ave. (NB) @ W. 59 th St. (E-W) Mitigation Diversion	EB-L	0.61	38.4	D	0.71	46.9	D			
	WB-T	0.39	24.2	C	0.41	24.5	C	0.41	24.5	C
	WB-R	0.05	19.9	B	0.05	19.9	B	0.05	19.9	B
	NB-LT	0.46	9.1	A	0.48	9.2	A	0.50	9.4	A
10th Ave. (NB) @ W. 58 th St. (EB) Mitigation Diversion	EB-LT	0.47	25.5	C	0.48	25.8	C	0.58	27.9	C
	NB-TR	0.52	9.0	A	0.53	9.1	A	0.53	9.1	A
10th Ave. (NB) @ W. 57 th St. (E-W)	EB-LT	0.95	46.0	D	0.98	53.6	D	0.95	45.6	D
	WB-TR	0.65	23.6	C	0.68	24.2	C	0.66	23.1	C
	NB-LTR	0.73	17.7	B	0.74	17.9	B	0.76	19.1	B
9th Avenue/Columbus Avenue										
Columbus Ave. (SB) @ W. 60 th St. (E-W)	EB-R	1.14	128.6	F	1.23	164.0	F	1.14	123.9	F
	WB-L	0.53	28.2	C	0.55	28.5	C	0.50	25.9	C
	WB-LT	0.23	22.8	C	0.23	22.8	C	0.21	21.2	C
	SB-TR	0.66	18.2	B	0.67	18.2	B	0.70	20.5	C
9th Ave. (SB) @ W. 57 th St. (E-W)	EB-TR	1.27	164.7	F	1.29	176.4	F	1.24	150.7	F
	WB-DefL	1.03	74.9	E	1.03	81.3	F	1.03	74.9	E
	WB-T	0.87	36.3	D	0.92	42.2	D	0.90	38.5	D
	SB-L	0.48	28.3	C	0.50	29.0	C	0.52	30.5	C
	SB-T	0.77	27.7	C	0.78	27.9	C	0.81	29.7	C
	SB-R	0.66	36.5	D	0.66	36.5	D	0.68	39.0	D
Central Park W.										
Central Park W. (N-S) @ W. 66 th St. (WB)	WB-L	0.44	29.2	C	0.44	29.2	C	0.42	28.0	C
	WB-T	1.16	124.2	F	1.19	136.7	F	1.15	119.5	F
	WB-R	0.85	51.4	D	0.85	51.4	D	0.82	46.5	D
	NB-LT	0.64	15.2	B	0.65	15.4	B	0.64	15.6	B
	SB-T							0.66	20.1	C
	SB-R							0.29	18.2	B
	SB-TR	0.83	25.3	C	0.83	25.8	C	Approach	19.9	B
Freedom Place										
W.61st St. (E-W) @ Freedom Pl. (N-S) UNSIGNALIZED 2-WAY STOP Mitigation Diversion	EB-LTR				0.00	7.8	A	0.00	7.8	A
	WB-LTR				0.05	8.0	A	0.05	8.1	A
	NB-LTR				0.27	17.2	C	0.29	18.3	C
	SB-LTR				0.03	11.2	B	0.03	11.3	B

Notes:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, Dfl-Analysis considers a Defacto Left Lane on this approach

V/C Ratio - Volume to Capacity Ratio, sec. - Seconds

LOS - Level of Service

* -Denotes Impacted Location

(1) -Total approach delay (provided due to changes in lane configuration)

Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.4)

This table has been revised for the FSEIS

Table 22-3 (Continued)

2018 Mitigation Traffic Conditions

Level of Service for Mitigated Conditions - MD Peak Hour

	LANE GROUP	NO BUILD MD PEAK HOUR			BUILD MD PEAK HOUR			Mitigation MD PEAK HOUR		
		V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS
Riverside Blvd.										
Riverside Blvd. (N-S) @ W. 61st St. (WB) UNSIGNALIZED 2-WAY STOP Mitigation Diversion	WB-LR	NA	7.2	A	NA	8.8	A	NA	8.8	A
	NB-TR	NA	8.7	A	NA	10.4	B	NA	10.6	B
	SB-LT	NA	7.8	A	NA	9.1	A	NA	9.1	A
Riverside Blvd. (N-S) @ W. 70th St. (WB) UNSIGNALIZED ALL-WAY STOP	WB-LR	NA	9.3	A	NA	10.0	B	NA	10.0	A
	NB-TR	NA	11.0	B	NA	15.5	C	NA	13.2	B
	NB-T							NA	14.7	B
	NB-R							NA	8.0	A
	SB-LT	NA	8.8	A	NA	9.7	A	NA	9.8	A
12th Avenue										
12th Ave. (NB) @ W. 59th St. (WB) UNSIGNALIZED 2-WAY STOP	EB-LT	0.00	8.2	A	0.00	8.50	A	0.03	20.2	C
	WB-TR							0.52	27.4	C
	NB-LTR	0.78	29.2	D	1.14	109.30	F *	0.60	16.1	B
Signalized										
12th Ave. (N-S) @ W. 56th St. (EB)	NB-T	0.75	12.6	B	0.77	13.2	B	0.80	15.6	B
	SB-L	1.10	115.6	F	1.21	159.8	F *	1.07	103.6	F
	NB-TR Service	0.27	7.0	A	0.27	7.0	A	0.28	8.2	A
12th Ave. (N-S) @ W. 52nd St. (EB)	EB-LTR	0.65	45.8	D	0.65	45.8	D	0.70	49.2	D
	NB-TR	1.13	89.2	F	1.16	103.0	F *	1.12	86.8	F
	SB-L	0.84	86.4	F	0.84	86.4	F	0.84	86.4	F
	SB-T	0.64	12.4	B	0.66	12.9	B	0.65	11.6	B
12th Ave. (N-S) @ W. 42 nd St. (E-W)	EB-LTR	0.07	32.4	C	0.07	32.4	C	0.08	33.9	C
	WB-L	0.61	45.9	D	0.61	45.9	D	0.66	50.3	D
	WB-R	0.64	25.3	C	0.67	26.3	C	0.70	29.1	C
	NB-T	1.08	82.4	F	1.12	97.1	F *	1.07	77.1	E
	NB-R	0.31	28.5	C	0.31	28.5	C	0.30	26.8	C
	SB-L	0.26	40.0	D	0.26	40.0	D	0.26	40.0	D
	SB-T	0.75	17.0	B	0.78	18.0	B	0.76	16.3	B
12th Ave. (N-S) @ W. 41 st St. (E-W)	EB-LR	0.02	24.9	C	0.02	24.9	C	0.02	25.5	C
	WB-L	0.08	37.7	D	0.08	37.7	D	0.08	38.6	D
	WB-R	0.37	42.5	D	0.41	43.1	D	0.42	44.3	D
	NB-T	1.05	68.8	E	1.08	80.3	F *	1.06	71.6	E
	SB-T	0.92	31.9	C	0.96	36.4	D	0.94	33.7	C
12th Ave. (N-S) @ W. 37 th St. (EB)	EB-LR	0.14	43.1	D	0.14	43.1	D	0.14	44.0	D
	EB-R	0.14	43.7	D	0.14	43.7	D	0.15	44.8	D
	NB-L	0.20	50.4	D	0.20	50.4	D	0.20	50.4	D
	NB-T	0.78	19.8	B	0.80	20.6	C	0.79	19.7	B
	SB-TR	0.98	39.5	D	1.02	49.0	D *	1.00	44.4	D
11th Avenue/West End Avenue										
West End Ave. (N-S) @ W. 79th St. (E-W)	EB-LTR	0.76	35.8	D	0.76	35.8	D	0.76	35.8	D
	WB-LTR	0.49	28.2	C	0.49	28.2	C	0.49	28.2	C
	NB-LTR	0.46	18.2	B	0.48	18.6	B	0.47	18.3	B
	SB-LTR	0.53	19.2	B	0.55	19.6	B	0.55	19.6	B
West End Ave. (N-S) @ W. 72nd St. (E-W)	EB-LT	0.28	29.9	C	0.31	30.2	C	0.29	29.2	C
	EB-R	0.44	40.4	D	0.48	42.7	D	0.45	39.8	D
	WB-LTR	0.99	79.2	E	1.04	93.2	F *	0.99	77.6	E
	NB-LTR	0.44	16.5	B	0.47	16.9	B	0.48	17.7	B
	SB-TR	0.79	35.6	D	0.82	37.2	D	0.85	40.2	D
West End Ave. (N-S) @ W. 61 st St. Mitigation Diversion	EB-LTR	0.04	19.7	B	0.10	20.4	C	0.14	20.8	C
	NB-T	0.27	11.4	B	0.28	11.5	B	0.28	11.5	B
	NB-R	0.06	9.9	A	0.06	9.9	A	0.06	9.9	A
	SB-L	0.14	11.0	B	0.15	11.0	B	0.15	11.0	B
	SB-TR	0.58	15.4	B	0.67	17.5	B	0.67	17.5	B
West End Ave. (N-S) @ W. 60 th St. (EB) Mitigation Diversion	EB-LTR	0.07	19.5	B	0.16	20.7	C	0.16	20.7	C
	NB-L	0.14	11.4	B						
	NB-TR	0.40	12.9	B	0.41	13.1	B	0.43	13.3	B
	SB-L	0.22	12.4	B	0.26	13.2	B	0.29	13.9	B
	SB-TR	0.52	14.4	B						
	SB-T				0.51	14.3	B	0.51	14.2	B

Table 22-3 (Continued)

2018 Mitigation Traffic Conditions

Level of Service for Mitigated Conditions - MD Peak Hour

	LANE GROUP	NO BUILD MD PEAK HOUR			BUILD MD PEAK HOUR			Mitigation MD PEAK HOUR		
		V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS
West End Ave. (N-S) @ W. 59 th St. (E-W) Mitigation Diversion	EB-LT				0.29	26.8	C			
	EB-L							0.26	29.7	C
	EB-R				0.23	26.6	C	0.23	26.6	C
	EB-LTR	0.34	27.8	C		26.7	C			
	EB-LR							Approach	27.5	C
	WB-L							0.34	28.4	C
	WB-TR							0.68	37.3	D
	WB-LTR	0.81	44.8	D	0.97	68.5	E *	Approach	34.5	C
	NB-L	0.15	8.6	A	0.33	11.8	B	0.33	11.8	B
	NB-T							0.26	8.5	A
	NB-TR	0.27	8.6	A	0.27	8.6	A			
SB-L	0.02	6.9	A	0.02	6.9	A				
SB-TR	0.42	10.0	B	0.44	10.2	B	0.44	10.2	B	
11th Ave. (N-S) @ W. 58 th St. (EB) Mitigation Diversion	EB-LTR	0.24	26.0	C	0.24	26.0	C	0.34	27.6	C
	NB-TR	0.40	9.8	A	0.43	10.1	B	0.43	10.1	B
	SB-L	0.19	8.9	A	0.23	9.5	A	0.23	9.5	A
	SB-TR	0.45	10.3	B	0.47	10.6	B	0.47	10.6	B
10th Avenue/Amsterdam Avenue										
Amsterdam Ave. (NB) @ W. 61 st St. (E-W) Mitigation Diversion	EB-LT	0.20	22.2	C	0.20	22.2	C	0.24	22.8	C
	WB-R	0.07	20.9	C	0.07	20.9	C	0.07	20.9	C
	NB-TR	0.55	9.4	A	0.56	9.5	A	0.55	9.4	A
Amsterdam Ave. (NB) @ W. 60 th St. (EB) Mitigation Diversion	EB-LT	0.25	21.9	C	0.34	23.1	C	0.38	24.1	C
	WB-R	0.44	26.4	C	0.44	26.4	C	0.44	26.4	C
	NB-TR	0.45	9.6	A	0.45	9.6	A	0.44	9.5	A
Amsterdam Ave. (NB) @ W. 59 th St. (E-W) Mitigation Diversion	EB-L	0.25	23.8	C	0.33	25.8	C			
	WB-T	0.28	22.6	C	0.31	22.9	C	0.31	22.9	C
	WB-R	0.08	20.3	C	0.08	20.3	C	0.08	20.3	C
	NB-LT	0.43	8.9	A	0.44	9.0	A	0.46	9.1	A
10th Ave. (NB) @ W. 58 th St. (EB) Mitigation Diversion	EB-LT	0.32	23.4	C	0.33	23.5	C	0.41	24.7	C
	NB-TR	0.63	10.4	B	0.65	10.6	B	0.65	10.6	B
9th Avenue/Columbus Avenue										
Columbus Ave. (SB) @ W. 66 th St. (E-W)	WB-LT	0.49	12.0	B	0.51	12.2	B	0.52	12.9	B
	SB-TR	1.18	121.5	F	1.19	127.1	F *	1.15	108.5	F
Columbus Ave. (SB) @ W. 60 th St. (E-W)	EB-R	0.85	55.7	E	0.98	79.6	E *	0.87	53.4	D
	WB-L	0.72	34.7	C	0.73	35.5	D	0.65	29.3	C
	WB-LT	0.26	23.2	C	0.26	23.2	C	0.23	20.8	C
	SB-TR	0.68	21.6	C	0.68	21.6	C	0.74	24.8	C
9th Ave. (SB) @ W. 57 th St. (E-W)	EB-TR	1.24	157.3	F	1.29	176.9	F *	1.17	127.6	F
	WB-DefL	0.93	58.2	E	0.93	57.6	E	0.93	58.4	E
	WB-T	1.16	112.8	F	1.21	134.3	F *	1.16	110.9	F
	SB-L	0.43	27.3	C	0.46	28.1	C	0.50	31.1	C
	SB-T	0.77	28.3	C	0.78	28.5	C	0.83	32.4	C
	SB-R	0.76	45.9	D	0.65	35.5	D	0.70	40.4	D
Central Park W.										
Central Park W. (N-S) @ W. 72 nd St. (E-W)	EB-L	0.22	20.2	C	0.23	20.2	C	0.23	21.0	C
	EB-R	0.47	26.5	C	0.47	26.5	C	0.49	27.9	C
	NB-LT	1.08	79.8	E	1.10	84.6	F *	1.07	74.9	E
	SB-TR	0.65	18.5	B	0.67	18.9	B	0.65	17.7	B
Central Park W. (N-S) @ W. 66 th St. (WB)	WB-L	0.59	33.2	C	0.59	33.2	C	0.56	31.5	C
	WB-T	1.12	107.7	F	1.15	118.4	F *	1.11	102.4	F
	WB-R	0.70	38.3	D	0.70	38.3	D	0.67	35.9	D
	NB-LT	0.57	13.6	B	0.59	13.8	B	0.59	14.5	B
	SB-T							0.59	21.5	C
	SB-R							0.10	15.6	B
Freedom Place										
W.61st St. (E-W) @ Freedom Pl. (N-S) UN SIGNALIZED 2-WAY STOP Mitigation Diversion	EB-LTR				0.00	7.3	A	0.00	7.3	A
	WB-LTR				0.03	7.5	A	0.03	7.5	A
	NB-LTR				0.12	10.2	B	0.12	10.4	B
	SB-LTR				0.02	9.9	A	0.02	10.1	B

Notes:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, Df-Analysis considers a Defacto Left Lane on this approach
V/C Ratio - Volume to Capacity Ratio, sec. - Seconds
LOS - Level of Service
* -Denotes Impacted Location

(1) -Total approach delay (provided due to changes in lane configuration)
Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.4)
This table has been revised for the FSEIS

Table 22-3 (Continued)

2018 Mitigation Traffic Conditions

Level of Service for Mitigated Conditions - PM Peak Hour

	LANE GROUP	NO BUILD PM PEAK HOUR			BUILD PM PEAK HOUR			Mitigation PM PEAK HOUR		
		V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS
Riverside Blvd.										
Riverside Blvd. (N-S) @ W. 61st St. (WB) UN SIGNALIZED 2-WAY STOP Mitigation Diversion	WB-LR	NA	8.4	A	NA	9.6	A	NA	9.7	A
	NB-TR	NA	10.7	B	NA	14.2	B	NA	14.5	B
	SB-LT	NA	8.3	A	NA	9.8	A	NA	9.9	A
Riverside Blvd. (N-S) @ W. 70th St. (WB) UN SIGNALIZED ALL-WAY STOP	WB-LR	NA	9.6	A	NA	10.5	B	NA	10.2	B
	NB-TR	NA	16.1	C	NA	35.6	E *	NA	19.6	C
	NB-T							NA	23.5	C
	NB-R							NA	8.8	A
	SB-LT	NA	9.4	A	NA	10.6	B	NA	10.6	B
12th Avenue										
12th Ave. (NB) @ W. 59th St. (WB) UN SIGNALIZED 2-WAY STOP	EB-LT	0.00	8.5	A	0.00	8.9	A	0.02	20.2	C
	WB-TR							0.70	32.7	C
	NB-LTR	1.05	79.5	F	1.51	262.0	F *	0.80	23.1	C
								Signalized		
12th Ave. (N-S) @ W. 56th St. (EB) Not Fully Mitigated	NB-T	1.04	35.8	D	1.07	49.3	D *	1.07	49.3	D *
	SB-L	1.02	96.1	F	1.12	128.7	F *	1.12	128.7	F *
	NB-TR Service	0.29	3.7	A	0.29	3.7	A	0.29	3.7	A
12th Ave. (N-S) @ W. 54th St. (EB) Not Fully Mitigated	WB-R	0.69	71.7	E	0.69	71.7	E	0.71	74.8	E
	NB-TR	1.06	40.1	D	1.08	52.9	D *	1.07	48.2	D *
	SB-L	0.45	58.3	E	0.45	58.3	E	0.46	59.6	E
	SB-T	0.74	12.8	B	0.74	12.8	B	0.73	12.2	B
	SB-T Service	0.16	6.3	A	0.25	7.0	A	0.25	6.7	A
12th Ave. (N-S) @ W. 52nd St. (EB) Not Fully Mitigated	EB-LTR	0.86	77.0	E	0.86	77.0	E	0.86	77.0	E
	NB-TR	1.15	85.1	F	1.18	99.4	F *	1.18	99.4	F *
	SB-L	0.80	91.6	F	0.80	91.6	F	0.80	91.6	F
	SB-T	0.73	11.8	B	0.76	12.5	B	0.76	12.5	B
11th Avenue/West End Avenue										
West End Ave. (N-S) @ W. 79th St. (E-W)	EB-LTR	1.09	87.2	F	1.09	87.2	F	1.09	87.2	F
	WB-LTR	0.62	28.2	C	0.62	28.2	C	0.62	28.2	C
	NB-LTR	0.95	41.9	D	0.99	50.6	D *	0.95	43.0	D
	SB-LTR	0.66	24.4	C	0.68	25.0	C	0.68	25.0	C
West End Ave. (N-S) @ W. 70th St. (EB)	EB-LTR	0.62	30.4	C	0.64	31.1	C	0.68	34.6	C
	NB-LTR	0.49	14.0	B	0.52	14.3	B	0.49	12.5	B
	SB-LTR	1.07	70.8	E	1.11	86.0	F *	1.06	66.4	E
West End Ave. (N-S) @ W. 61 st St. Mitigation Diversion	EB-LTR	0.04	19.8	B	0.12	20.6	C	0.14	20.8	C
	NB-TR	0.31	8.1	A	0.32	8.2	A	0.32	8.2	A
	SB-L	0.21	12.2	B	0.21	12.2	B	0.21	12.2	B
	SB-TR	0.69	17.8	B	0.78	20.9	C	0.78	20.9	C
West End Ave. (N-S) @ W. 60 th St. (EB) Mitigation Diversion	EB-LTR	0.11	20.0	C	0.24	21.8	C	0.24	21.8	C
	NB-L	0.10	7.8	A						
	NB-TR	0.38	8.7	A	0.39	8.8	A	0.41	9.0	A
	SB-L	0.41	17.4	B	0.42	17.9	B	0.48	20.2	C
	SB-TR	0.61	15.9	B						
	SB-T				0.61	16.0	B	0.60	15.8	B
West End Ave. (N-S) @ W. 59 th St. (E-W) Mitigation Diversion	EB-LT				0.58	36.0	D			
	EB-L							0.55	36.9	D
	EB-R				0.38	29.4	C	0.38	29.4	C
	EB-LTR	0.82	52.6	D		33.1	C			
	EB-LR							Approach	33.1	C
	WB-L							0.47	31.2	C
	WB-TR							1.15	129.2	F
	WB-LTR	1.36	212.5	F	1.95	471.5	F *	Approach	100.2	F
	NB-L	0.28	7.3	A	0.45	11.2	B	0.45	11.2	B
	NB-T							0.20	4.4	A
	NB-TR	0.20	4.4	A	0.20	4.4	A			
SB-L	0.03	7.0	A	0.03	7.0	A				
SB-TR	0.52	11.3	B	0.54	11.5	B	0.54	11.5	B	
11th Ave. (N-S) @ W. 58 th St. (EB) Mitigation Diversion	EB-LTR	0.39	28.7	C	0.39	28.7	C	0.43	29.7	C
	NB-TR	0.28	4.9	A	0.29	4.9	A	0.30	4.9	A
	SB-L	0.26	10.0	B	0.31	10.8	B	0.31	10.8	B
	SB-TR	0.56	11.7	B	0.58	12.1	B	0.58	12.1	B

Table 22-3 (Continued)

2018 Mitigation Traffic Conditions

Level of Service for Mitigated Conditions - PM Peak Hour

10th Avenue/Amsterdam Avenue										
Amsterdam Ave. (NB) @ W. 61 st St. (E-W) Mitigation Diversion	EB-LT	0.24	23.0	C	0.24	23.0	C	0.26	23.3	C
	WB-R	0.08	21.1	C	0.08	21.1	C	0.08	21.1	C
	NB-TR	0.51	8.8	A	0.52	8.9	A	0.51	8.9	A
Amsterdam Ave. (NB) @ W. 60 th St. (EB) Mitigation Diversion	EB-LT	0.30	23.0	C	0.39	24.5	C	0.48	26.4	C
	WB-R	0.29	23.2	C	0.29	23.2	C	0.29	23.2	C
	NB-TR	0.56	9.9	A	0.56	10.0	A	0.55	9.8	A
Amsterdam Ave. (NB) @ W. 59 th St. (E-W) Mitigation Diversion	EB-L	0.35	27.5	C	0.45	31.2	C	0.45	25.2	C
	WB-T	0.42	24.8	C	0.45	25.2	C			
	WB-R	0.05	20.0	B	0.05	20.0	B	0.05	20.0	B
	NB-LT	0.47	9.1	A	0.48	9.2	A	0.49	9.2	A
10th Ave. (NB) @ W. 58 th St. (EB) Mitigation Diversion	EB-LT	0.34	23.6	C	0.35	23.8	C	0.39	24.4	C
	NB-TR	0.64	10.1	B	0.65	10.3	B	0.65	10.3	B
9th Avenue/Columbus Avenue										
Columbus Ave. (SB) @ W. 66 th St. (E-W)	WB-LT	0.55	12.8	B	0.57	13.1	B	0.58	13.9	B
	SB-TR	1.21	134.5	F	1.23	140.3	F *	1.18	120.4	F
Columbus Ave. (SB) @ W. 60 th St. (E-W)	EB-R	1.28	181.5	F	1.42	239.2	F *	1.21	149.8	F
	WB-L	0.61	30.5	C	0.63	31.1	C	0.54	25.3	C
	WB-LT	0.21	22.6	C	0.21	22.6	C	0.19	19.6	B
	SB-TR	0.69	18.6	B	0.69	18.7	B	0.77	23.8	C
9th Ave. (SB) @ 57 th St. (E-W)	EB-TR	1.22	150.3	F	1.28	172.9	F *	1.16	123.6	F
	WB-DefL	0.86	48.7	D	0.86	47.7	D	0.86	46.1	D
	WB-T	1.01	62.6	E	1.06	78.6	E *	1.01	62.8	E
	SB-L	0.42	26.7	C	0.45	27.5	C	0.49	30.3	C
	SB-TR	0.70	27.3	C	0.70	27.4	C	0.75	29.9	C
Central Park W.										
Central Park W. (N-S) @ W. 66 th St. (WB)	WB-L	0.23	25.0	C	0.23	25.0	C	0.22	24.2	C
	WB-T	1.15	119.8	F	1.18	131.8	F *	1.14	113.9	F
	WB-R	1.02	82.1	F	1.02	82.1	F	0.98	71.2	E
	NB-LT	0.93	26.2	C	0.95	28.7	C	0.96	31.4	C
	SB-T							0.93	37.2	D
	SB-R							0.22	17.9	B
	SB-TR	1.03	57.8	E	1.04	63.3	E *	Approach	36.3	D
Freedom Place										
W.61st St. (E-W) @ Freedom Pl. (N-S) UN SIGNALIZED 2-WAY STOP Mitigation Diversion	EB-LTR				0.00	7.7	A	0.00	7.7	A
	WB-LTR				0.05	8.0	A	0.05	8.1	A
	NB-LTR				0.36	18.8	C	0.37	19.2	B
	SB-LTR				0.01	11.1	B	0.01	11.2	B

Notes:

EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound

L-Left, T-Through, R-Right, Df-Analysis considers a Defacto Left Lane on this approach

V/C Ratio - Volume to Capacity Ratio, sec. - Seconds

LOS - Level of Service

* -Denotes Impacted Location

(1) -Total approach delay (provided due to changes in lane configuration)

Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.4)

This table has been revised for the FSEIS

Table 22-3 (Continued)

2018 Mitigation Traffic Conditions

Level of Service for Mitigated Conditions - Sat MD Peak Hour

	LANE GROUP	NO BUILD SAT MD PEAK HOUR			BUILD SAT MD PEAK HOUR			Mitigation Sat MD PEAK HOUR		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
		RATIO	(sec.)		RATIO	(sec.)		RATIO	(sec.)	
Riverside Dr.										
Riverside Dr. (N-S) @ W. 72nd St. (E-W)	EB-L	0.21	22.2	C	0.26	23.2	C	0.28	25.4	C
	EB-T	0.04	19.1	B	0.06	19.3	B	0.06	20.7	C
	WB-T	0.20	20.6	C	0.22	20.7	C	0.23	22.2	C
	WB-R	0.12	2.0	A	0.14	2.1	A	0.14	2.2	A
	SB-LR	0.72	30.3	C	0.92	50.8	D *	0.87	41.6	D
Riverside Blvd.										
Riverside Blvd. (N-S) @ W. 61st St. (WB) UN SIGNALIZED 2-WAY STOP Mitigation Diversion	WB-LR	NA	7.9	A	NA	8.7	A	NA	8.7	A
	NB-TR	NA	8.5	A	NA	10.1	B	NA	10.3	B
	SB-LT	NA	7.7	A	NA	9.1	A	NA	9.2	A
Riverside Blvd. (N-S) @ W. 70th St. (WB) UN SIGNALIZED ALL-WAY STOP	WB-LR	NA	9.4	A	NA	10.5	B	NA	10.4	B
	NB-TR	NA	10.9	B	NA	17.2	C	NA	13.4	B
	NB-T							NA	15.2	C
	NB-R							NA	8.3	A
	SB-LT	NA	8.8	A	NA	10.2	B	NA	10.3	B
12th Avenue										
12th Ave. (NB) @ W. 59th St. (WB) UN SIGNALIZED 2-WAY STOP	EB-LT	0.00	8.5	A	0.00	8.6	A	0.02	20.2	C
	WB-TR							0.54	27.8	C
	NB-LTR	1.05	79.5	F	1.11	96.8	F *	0.64	17.1	B
Signalized										
12th Ave. (N-S) @ W. 56th St. (EB)	NB-T	0.70	11.7	B	0.73	12.3	B	0.76	14.5	B
	SB-L	0.73	51.5	D	0.86	60.0	E *	0.77	50.7	D
	NB-TR Service	0.20	6.5	A	0.20	6.5	A	0.21	7.6	A
12th Ave. (N-S) @ W. 52nd St. (EB)	EB-LTR	0.53	43.0	D	0.53	43.0	D	0.55	44.3	D
	NB-TR	0.97	37.7	D	1.01	46.8	D *	1.00	42.2	D
	SB-L	0.75	77.9	E	0.75	77.9	E	0.75	77.9	E
	SB-T	0.77	14.6	B	0.80	15.5	B	0.79	14.7	B
12th Ave. (N-S) @ W. 42 nd St. (E-W)	EB-LTR	0.09	32.6	C	0.09	32.6	C	0.10	34.1	C
	WB-L	0.51	42.0	D	0.51	42.0	D	0.55	45.1	D
	WB-R	0.61	24.2	C	0.64	25.5	C	0.67	28.3	C
	NB-T	1.15	153.5	F	1.20	173.4	F *	1.15	148.4	F
	NB-R	0.13	25.2	C	0.13	25.2	C	0.12	23.9	C
	SB-L	0.55	45.0	D	0.55	45.0	D	0.55	45.0	D
	SB-T	0.82	19.1	B	0.85	20.6	C	0.83	18.5	B
12th Ave. (N-S) @ W. 41 st St. (E-W)	EB-LR	0.02	24.9	C	0.02	24.9	C	0.02	26.2	C
	WB-L	0.06	37.5	D	0.06	37.5	D	0.06	39.1	D
	WB-R	0.37	42.0	D	0.40	42.6	D	0.44	44.9	D
	NB-T	1.03	60.2	E	1.06	72.6	E *	1.02	57.4	E
	SB-T	1.04	81.2	F	1.09	97.4	F *	1.05	83.2	F
12th Ave. (N-S) @ W. 37 th St. (EB)	EB-LR	0.16	43.3	D	0.16	43.3	D	0.19	46.4	D
	EB-R	0.10	42.7	D	0.10	42.7	D	0.11	45.8	D
	NB-L	0.26	51.6	D	0.26	51.6	D	0.26	51.6	D
	NB-T	0.83	21.7	C	0.86	22.9	C	0.83	19.7	B
	SB-TR	1.06	110.4	F	1.11	129.8	F *	1.07	107.2	F

Table 22-3 (Continued)

2018 Mitigation Traffic Conditions

Level of Service for Mitigated Conditions - Sat MD Peak Hour

	LANE GROUP	NO BUILD SAT MD PEAK HOUR			BUILD SAT MD PEAK HOUR			Mitigation Sat MD PEAK HOUR		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
		RATIO	(sec.)		RATIO	(sec.)		RATIO	(sec.)	
11th Avenue/West End Avenue										
West End Ave. (N-S) @ W. 79th St. (E-W)	EB-LTR	1.09	92.8	F	1.09	92.8	F	1.09	92.8	F
	WB-LTR	0.60	30.5	C	0.60	30.5	C	0.60	30.5	C
	NB-LTR	0.54	19.6	B	0.57	20.3	C	0.55	15.9	B
	SB-LTR	0.57	19.8	B	0.59	20.3	C	0.59	20.3	C
West End Ave. (N-S) @ W. 70th St. (EB)	EB-LTR	0.47	26.1	C	0.49	26.6	C	0.53	29.0	C
	NB-LTR	0.40	16.2	B	0.43	16.7	B	0.42	15.2	B
	SB-LTR	1.00	49.5	D	1.04	63.0	E *	1.00	48.1	D
West End Ave. (N-S) @ W. 61 st St. Mitigation Diversion	EB-LTR	0.03	19.6	B	0.10	20.4	C	0.14	20.9	C
	NB-T	0.31	11.8	B	0.33	11.9	B	0.33	11.9	B
	NB-R	0.04	9.7	A	0.04	9.7	A	0.04	9.7	A
	SB-L	0.18	11.5	B	0.19	11.6	B	0.19	11.6	B
	SB-TR	0.62	16.0	B	0.69	17.7	B	0.69	17.7	B
West End Ave. (N-S) @ W. 60 th St. (EB) Mitigation Diversion	EB-LTR	0.10	19.9	B	0.26	22.1	C	0.26	22.1	C
	NB-L	0.06	10.2	B						
	NB-TR	0.46	13.6	B	0.47	13.8	B	0.49	14.0	B
	SB-L	0.24	12.9	B	0.25	13.2	B	0.34	15.2	B
	SB-TR	0.58	15.3	B						
	SB-T				0.56	14.9	B	0.54	14.7	B
West End Ave. (N-S) @ W. 59 th St. (E-W) Mitigation Diversion	EB-LT				0.26	26.6	C			
	EB-L							0.26	30.9	C
	EB-R				0.20	26.1	C	0.20	26.1	C
	EB-LTR	0.28	26.8	C		26.4	C			
	EB-LR							Approach	27.6	C
	WB-L							0.25	26.8	C
	WB-TR							0.88	54.9	D
	WB-LTR	0.83	48.2	D	1.10	107.4	F *	Approach	48.9	D
	NB-L	0.16	9.0	A	0.38	13.3	B	0.38	13.3	B
	NB-T	0.30	8.8	A	0.30	8.8	A	0.29	8.8	A
	NB-TR	0.05	7.3	A	0.05	7.3	A			
	SB-L									
SB-TR	0.49	10.7	B	0.50	11.0	B	0.50	11.0	B	
11th Ave. (N-S) @ W. 58 th St. (EB) Mitigation Diversion	EB-LTR	0.14	24.6	C	0.14	24.6	C	0.22	25.6	C
	NB-TR	0.40	9.7	A	0.43	10.1	B	0.43	10.1	B
	SB-L	0.29	10.4	B	0.35	11.5	B	0.35	11.5	B
	SB-TR	0.44	10.1	B	0.47	10.5	B	0.47	10.5	B
10th Avenue/Amsterdam Avenue										
Amsterdam Ave. (NB) @ W. 61 st St. (E-W) Mitigation Diversion	EB-LT	0.28	23.4	C	0.28	23.5	C	0.33	24.3	C
	WB-R	0.09	21.1	C	0.09	21.1	C	0.09	21.1	C
	NB-TR	0.45	8.5	A	0.46	8.5	A	0.45	8.5	A
Amsterdam Ave. (NB) @ W. 60 th St. (EB) Mitigation Diversion	EB-LT	0.32	23.4	C	0.44	25.5	C	0.53	27.6	C
	WB-R	0.25	22.6	C	0.25	22.6	C	0.25	22.6	C
	NB-TR	0.48	9.4	A	0.49	9.4	A	0.47	9.2	A
Amsterdam Ave. (NB) @ W. 59 th St. (E-W) Mitigation Diversion	EB-L	0.35	26.3	C	0.43	29.0	C			
	WB-T	0.28	22.5	C	0.31	22.9	C	0.31	22.9	C
	WB-R	0.06	20.1	C	0.06	20.1	C	0.06	20.1	C
	NB-LT	0.49	9.4	A	0.50	9.5	A	0.52	9.7	A
10th Ave. (NB) @ W. 58 th St. (EB) Mitigation Diversion	EB-LT	0.29	23.0	C	0.31	23.2	C	0.37	24.1	C
	NB-TR	0.51	9.0	A	0.53	9.1	A	0.53	9.1	A

Table 22-3 (Continued)

2018 Mitigation Traffic Conditions

Level of Service for Mitigated Conditions - Sat MD Peak Hour

	LANE GROUP	NO BUILD SAT MD PEAK HOUR			BUILD SAT MD PEAK HOUR			Mitigation Sat MD PEAK HOUR		
		V/C	Delay	LOS	V/C	Delay	LOS	V/C	Delay	LOS
		RATIO	(sec.)		RATIO	(sec.)		RATIO	(sec.)	
9th Avenue/Columbus Avenue										
Columbus Ave. (SB) @ W. 66 th St. (E-W)	WB-LT	0.50	12.1	B	0.52	12.4	B	0.54	13.1	B
	SB-TR	1.04	68.9	E	1.06	73.7	E *	1.02	60.7	E
Columbus Ave. (SB) @ W. 60 th St. (E-W)	EB-R	0.88	54.8	D	1.02	84.7	F *	0.90	54.0	D
	WB-L	0.29	23.2	C	0.31	23.4	C	0.27	20.9	C
	WB-LT	0.19	22.3	C	0.19	22.3	C	0.18	20.1	C
	SB-TR	0.61	20.3	C	0.62	20.3	C	0.67	23.1	C
9th Ave. (SB) @ W. 57 th St. (E-W)	EB-TR	0.86	47.7	D	0.90	52.2	D	0.82	42.5	D
	WB-DefL	0.80	33.2	C	0.81	35.0	C	0.77	30.1	C
	WB-T	1.00	59.8	E	1.06	77.2	E *	1.01	61.4	E
	SB-L	0.29	23.0	C	0.31	23.3	C	0.33	25.0	C
	SB-T				0.66	25.5	C	0.70	28.1	C
	SB-R				0.36	24.3	C	0.39	26.2	C
Central Park W.										
Central Park W. (N-S) @ W. 66 th St. (WB)	WB-L	0.36	27.4	C	0.36	27.4	C	0.33	25.3	C
	WB-T	1.12	108.1	F	1.18	131.7	F *	1.10	99.7	F
	WB-R	0.94	66.3	E	0.94	66.3	E	0.86	50.6	D
	NB-LT	0.73	12.2	B	0.74	12.6	B	0.75	14.3	B
	SB-T							0.60	19.6	B
	SB-R							0.23	18.0	B
	SB-TR	0.70	20.5	C	0.72	21.0	C	Approach	19.4	B
Freedom Place										
W.61st St. (E-W) @ Freedom Pl. (N-S) UN SIGNALIZED 2-WAY STOP Mitigation Diversion	EB-LTR				0.00	7.7	A	0.00	7.7	A
	WB-LTR				0.07	8.1	A	0.05	8.1	A
	NB-LTR				0.33	18.6	C	0.34	19.3	C
	SB-LTR				0.01	10.4	B	0.01	10.4	B

Notes:

- EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
 - L-Left, T-Through, R-Right, Dfl-Analysis considers a Defacto Left Lane on this approach
 - V/C Ratio - Volume to Capacity Ratio, sec. - Seconds
 - LOS - Level of Service
 - * -Denotes Impacted Location
 - (1) -Total approach delay (provided due to changes in lane configuration)
- Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.4)
 This table has been revised for the FSEIS

TWELFTH AVENUE AND WEST 57TH STREET

This intersection consists of the two-way (east-west) West 57th Street and the two-way (north-south) Twelfth Avenue. The northbound approach (service road) would be impacted during the weekday AM peak hour. As shown in **Table 22-2**, the proposed mitigation at this intersection is to of green time from the westbound only phase to the northbound only transfer one second phase during the AM peak period. As shown in **Table 22-3**, with the proposed mitigation, the northbound approach delay would be reduced to 44.3 seconds (LOS D) in comparison to 28.2 (LOS C) during the weekday AM peak hour under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

TWELFTH AVENUE AND WEST 56TH STREET

This intersection consists of the two-way (east-west) West 56th Street and the two-way (north-south) Twelfth Avenue. The northbound approach would be impacted during the weekday AM and PM peak periods while the southbound approach would be impacted during the weekday AM, midday, PM and Saturday midday peak periods. As shown in **Table 22-2**, the proposed mitigation at this intersection is to transfer three seconds of green time from the northbound only phase to the southbound only phase during the weekday midday and Saturday midday periods, which would fully mitigate the significant adverse impacts during these peak hours. However, the significant adverse impacts to the northbound and southbound approaches during the weekday AM and PM peak hours would remain unmitigated. Mitigation measures were evaluated to fully address the AM and PM peak hour impacts at this intersection, however, signal timing adjustments to return these movements to their No Build condition during these periods would be impractical as they would result in new or worsened impacts on other movements. NYSDOT is currently reviewing additional proposed mitigation measures that consist of removing prohibitive striping along the eastside of the northbound approach. The removal of this striping would allow for a fifth northbound travel lane, eliminating the significant impact at this location. However, if NYSDOT decides to not implement this mitigation measure, then the significant impact would remain. As shown in **Table 22-3**, with the proposed mitigation, the northbound approach delay would be 111.2 seconds (LOS F) in the weekday AM peak hour as compared with 96.1 (LOS F) under No Build conditions, and 49.3 seconds (LOS D) during the PM peak hour as compared with 35.8 (LOS D) under No Build conditions. The southbound approach delay would be 50.0 seconds (LOS D) during the weekday AM peak hour as compared with 42.9 seconds (LOS D) under No Build conditions, 103.6 seconds (LOS F) in the weekday midday peak hour as compared with 115.6 (LOS F) under No Build conditions, 128.7 seconds in the weekday PM peak hour as compared with 96.1 (LOS F) under No Build conditions and 50.7 seconds (LOS D) in the Saturday midday peak hour as compared with 51.5 (LOS D) under No Build conditions. If NYSDOT agrees to implement the proposed mitigation measure, then the impact at this intersection would be mitigated. Otherwise the significant impact at this intersection would remain.

TWELFTH AVENUE AND WEST 54TH STREET

This intersection consists of the two-way (east-west) West 54th Street and the two-way (north-south) Twelfth Avenue. West 54th Street is only two-way between Eleventh and Twelfth Avenues. During the weekday PM peak hour, the northbound approach would be impacted. Shifting one second of green time from the current southbound left and westbound right-turn phase to the north-south phase during the PM peak period could help to mitigate the impact, but

does not fully mitigate this significant adverse impact. Mitigation measures were evaluated to fully address the impacts at this intersection; however, further signal timing adjustments would be impractical as they would result in new or worsened impacts on other movements and increasing capacity through changes to curbside regulations or modifications to lane striping was also found to be ineffective, as were other mitigation measures. With the proposed limited mitigation, the northbound approach delay would be reduced to 48.2 seconds (LOS D) from 52.9 seconds (LOS D) in the Build condition, compared with 40.1 seconds (LOS D) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be partially mitigated.

TWELFTH AVENUE AND WEST 52ND STREET

This intersection consists of the one-way eastbound West 52nd Street and the two-way (north-south) Twelfth Avenue. Without mitigation, the northbound approach would be impacted during the weekday AM, midday, PM and Saturday midday peak hours. As shown on **Table 22-2**, the proposed mitigation at this intersection is to transfer two seconds from the eastbound only phase to the north-south phase during the weekday midday period and transfer one second from the eastbound only phase to the north-south phase during the Saturday midday peak hour, fully mitigating the significant adverse impacts during these peak hours. However, the significant adverse impacts to the northbound approach during the weekday AM and PM peak hours would remain unmitigated. Mitigation measures were evaluated to fully address the AM and PM peak hour impacts at this intersection, however, signal timing adjustments to return these movements to their No Build condition would be impractical during these periods as they would result in new or worsened impacts on other movements. Increasing capacity through changes to curbside regulations or modifications to lane striping, as well as other practicable measures were also found to be ineffective. With the proposed mitigation, the northbound approach delay during the AM peak hour would remain 63.8 seconds (LOS E) as compared with 54.5 (LOS D) under No Build conditions, during the midday peak hour it would be reduced to 86.8 seconds (LOS F) as compared with 89.2 seconds (LOS F) under No Build conditions, during the PM peak hour it would remain 99.4 seconds (LOS F) as compared with 85.1 (LOS F) under No Build conditions, and during the Saturday midday peak hour it would be reduced to 42.2 seconds (LOS D) as compared with 37.7 seconds (LOS D) under No Build conditions. With the proposed mitigation measures, the impacts at this intersection during the AM and PM peak hours would be partially mitigated, and the impacts at this intersection during the midday and Saturday midday would be fully mitigated.

TWELFTH AVENUE AND WEST 42ND STREET

This intersection consists of the two-way (east-west) West 42nd Street and the two-way (north-south) Twelfth Avenue. Without mitigation, the northbound approach would be impacted in the weekday AM, midday, and Saturday midday peak hours. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer one second of green time from the east-west phase to the north-south phase during the weekday AM, and two seconds of green time from the east-west phase to the north-south phase during the midday and Saturday midday peak periods. As shown in **Table 22-3**, with this signal timing adjustment, the northbound approach delay in the AM peak hour would be reduced to 58.0 seconds (LOS E) as compared with 54.7 seconds (LOS D) under No Build conditions, in the midday peak hour it would be reduced to 77.1 seconds (LOS E) as compared with 82.4 seconds (LOS F) under No Build conditions, and in the Saturday midday peak hour it would be reduced to 148.4 seconds of delay (LOS F) as compared

with 153.5 (LOS F) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

TWELFTH AVENUE AND WEST 41ST STREET

This intersection consists of the one-way westbound West 41st Street and the two-way (north-south) Twelfth Avenue. West 41st Street also has eastbound traffic that exits the Pier 81 parking lot. Without mitigation, the northbound approach would be impacted in the weekday AM, midday and Saturday midday peak hours and the southbound approach would also be impacted during the AM and Saturday midday peak hours. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer one second of green time from the east-west phase to the north-south phase during the weekday midday peak period and to transfer three seconds of green time during the weekday AM and two seconds during the Saturday midday peak periods. As shown in **Table 22-3**, with these signal timing adjustments, the northbound approach delay in the AM peak hour would be reduced to 140.1 seconds (LOS F) as compared with 150.7 seconds (LOS F) under No Build conditions, in the midday peak hour it would be reduced to 71.6 seconds of delay (LOS E) as compared with 68.8 seconds (LOS E) under No Build conditions, and in the Saturday midday peak hour it would be reduced to 57.4 seconds of delay (LOS E) as compared with 60.2 seconds (LOS E) under No Build conditions. The proposed mitigation would also reduce the southbound approach delay during the AM peak hour to 83.7 seconds (LOS F) as compared with 84.1 seconds (LOS F) under No Build conditions, and during the Saturday midday peak hour it would be reduced to 83.2 seconds of delay (LOS F) as compared with 81.2 seconds (LOS F) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

TWELFTH AVENUE AND WEST 37TH STREET

This intersection consists of the one-way eastbound West 37th Street (from the ferry terminal) and the two-way (north-south) Twelfth Avenue. Without mitigation, the southbound approach would be impacted in the weekday AM, midday and Saturday midday peak hours. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer three seconds of green time from the eastbound only phase to the north-south phase during the weekday AM and Saturday midday peak periods, with one second transferred during the midday peak period. As shown in **Table 22-3**, with this signal timing adjustment, the southbound approach delay in the AM peak hour would be reduced to 103.9 seconds (LOS F) as compared with 105.8 seconds (LOS F) under No Build conditions, in the midday peak hour it would be reduced to 44.4 seconds of delay (LOS D) as compared with 39.5 seconds (LOS D) under No Build conditions, and in the Saturday midday peak hour it would be reduced to 107.2 seconds of delay (LOS F) as compared with 110.4 seconds (LOS F) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

RIVERSIDE DRIVE AND WEST 79TH STREET

This intersection consists of the two-way (north south) Riverside Drive and the two-way (east-west) West 79th Street. Without mitigation, the southbound left-turn movement would be impacted in the weekday AM peak hour. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer one second of green time from the east-west phase to the southbound phase during the weekday AM peak hour. As shown in **Table 22-3**, with this signal timing adjustment, the southbound left-turn movement in the AM peak hour would be reduced to

58.4 seconds (LOS E) as compared with 62.7 seconds (LOS E) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

RIVERSIDE DRIVE AND WEST 72ND STREET

This intersection consists of the two-way (north-south) Riverside Drive and the two-way (east-west) West 72nd Street. Without mitigation, the southbound approach would be impacted in the Saturday midday peak hour. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer two seconds of green time from the east-west phase to the southbound and westbound phases during the Saturday midday peak period. As shown in **Table 22-3**, with this signal timing adjustment, the southbound approach delay during the Saturday midday peak hour would be reduced to 41.6 seconds (LOS D), which is less than the mid-LOS D (45.0 seconds) threshold. With the proposed mitigation measures the impacts at this intersection would be mitigated.

RIVERSIDE BOULEVARD AND WEST 70TH STREET

This unsignalized intersection consists of the two-way (north-south) Riverside Boulevard and the one-way westbound West 70th Street. Without mitigation, the northbound approach would be impacted in the weekday PM peak hour. As shown in **Table 22-2**, the PM peak hour impact could be mitigated by implementing a No Standing regulation for 100 feet, along the east curb of the northbound approach during the PM peak period (weekday evenings between 4PM-7PM). As shown in **Table 22-3**, with this parking regulation change, in the weekday PM peak hour the northbound approach would be reduced to 19.6 seconds (LOS C), which is less than the mid-LOS D (30.0 seconds) threshold for unsignalized intersections. With the proposed mitigation measures the impacts at this intersection would be mitigated.

WEST END AVENUE AND WEST 79TH STREET

This intersection consists of the two-way (east-west) West 79th Street and the two-way (north-south) West End Avenue. Without mitigation, the northbound approach would be impacted in the weekday PM peak hour. As shown in **Table 22-2**, the PM peak hour impact could be mitigated by restriping the northbound approach to one 11 foot left-through lane and one 19 foot through-right lane with parking. With the proposed mitigation, the northbound approach delay during the PM peak hour would be reduced to 43.0 seconds (LOS D), compared with 41.9 seconds (LOS D) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

WEST END AVENUE AND WEST 72ND STREET

This intersection consists of the two-way (east-west) West 72nd Street and the two-way (north-south) West End Avenue. Without mitigation, the westbound approach would be impacted in the weekday AM and midday peak periods. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer one second of green time from the north-south phase to the east-west phase during the weekday AM peak period, and also transferring one second of green time from the east-west phase to the north-south phase during the weekday midday peak period. As shown in **Table 22-3**, with these signal timing adjustments, the westbound approach delay in the weekday AM midday peak hour would be reduced to 49.2 seconds (LOS D) as compared with 47.3 (LOS D) under No Build conditions, and in the weekday midday peak hour the southbound approach delay would be reduced to 77.6 seconds (LOS E) as compared with 79.2 seconds (LOS

E) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

WEST END AVENUE AND WEST 70TH STREET

This intersection consists of the two-way West 70th Street (to the east) and the two-way (north-south) West End Avenue. Without mitigation, the southbound approach would be impacted in the weekday PM and Saturday midday peak hours. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer two seconds of green time from the eastbound phase to the north-south phase during the weekday PM and Saturday midday peak periods. As shown in **Table 22-3**, with this signal timing adjustment, the southbound approach delay in the weekday PM peak hour would be reduced to 66.4 seconds (LOS E) as compared with 70.8 (LOS F) under No Build conditions, and in the Saturday midday peak hour it would be reduced to 48.1 seconds (LOS D) as compared with 49.5 seconds (LOS D) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

WEST END AVENUE AND WEST 66TH STREET

This intersection consists of the two-way West 66th Street (to the west) and the two-way (north-south) West End Avenue. Without mitigation, the westbound left turn lane group would be impacted in the weekday AM peak hour. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer one second of green time from the east-west phase to the north-southbound phase during the weekday AM peak period. As shown in **Table 22-3**, with this signal timing adjustment, in the AM peak hour the westbound left-turn movement would be reduced to 71.2 seconds of delay (LOS E) as compared with 68.5 (LOS E) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

WEST END AVENUE AND WEST 59TH STREET

This intersection consists of the two-way (east-west) West 59th Street and the two-way (north-south) West End Avenue. Without mitigation, the westbound approach would be impacted in the weekday AM, midday, PM and Saturday midday peak hours. As shown in **Table 22-2**, the proposed mitigation at this intersection is to convert the two-way operation of West 59th Street between West End Avenue and Amsterdam Avenue to one-way westbound operation along with transferring three seconds of green time from the north-south phase to the east-west phase during the weekday AM peak hour periods. West 59th Street would be restriped to include one 13-foot shared through-right turn lane and one 22-foot left turn lane with parking. As shown in **Table 22-3**, with the conversion from two-way to one-way operation and the signal timing adjustment, the westbound approach delay in the weekday AM peak hour would be reduced to 45.8 seconds (LOS D) as compared with 114.4 (LOS F) under No Build conditions, during the midday peak hours be reduced to 34.5 seconds (LOS C) as compared with 44.8 seconds (LOS D) and in the PM peak hour the westbound approach delay would be reduced to 100.2 seconds (LOS F) as compared with 212.5 seconds (LOS F) under No Build conditions. This mitigation measure would also reduce westbound approach delay during the Saturday midday peak hour to 48.9 seconds (LOS D) as compared with 48.2 seconds (LOS D) under No Build conditions. In addition, Table 22-3 shows the traffic analysis for each intersection that would be affected by the diversion of vehicles from the conversion of West 59th Street and shows that no new impacts would occur. With the proposed mitigation measures the impacts at this intersection would be mitigated.

ELEVENTH AVENUE AND WEST 57TH STREET

This intersection consists of the two-way (east-west) West 57th Street and the two-way (north-south) Eleventh Avenue. Without mitigation, the southbound left-turn movement would be impacted in the weekday AM peak hour. As shown in **Table 22-2**, the AM peak hour impacts could be mitigated by implementing a No Standing regulation for 100 feet, along the east curb of the northbound approach during the AM peak period (weekday mornings between 7AM-10AM). The existing parking regulation along the east side of the northbound approach is “No Parking Except NYP Plates”, therefore approximately two New York press parking spaces would be eliminated during the weekday AM period between 7AM-10AM with the proposed parking regulation change. Additionally, impacts could be mitigated by changing the northbound approach from one-left turn lane and two through-right lanes to one left turn lane and three through-right lanes during the weekday AM peak period. As shown in **Table 22-3**, with these parking regulation changes, in the weekday AM peak hour the southbound left-turn movement delay would be reduced to 46.5 seconds (LOS D) as compared with 48.3 seconds (LOS D) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

AMSTERDAM AVENUE AND WEST 59TH STREET

This intersection consists of the two-way (east-west) West 59th Street and the one-way northbound Amsterdam Avenue. Without mitigation, the eastbound movement would be impacted in the weekday AM peak hour. As shown in **Table 22-2**, the proposed mitigation at this intersection would eliminate the eastbound left turn. As shown in **Table 22-3**, with the conversion of West 59th Street to one-way westbound between Amsterdam Avenue and West End Avenue, the eastbound movement has been eliminated. With the proposed mitigation measures the impacts at this intersection would be mitigated.

TENTH AVENUE AND WEST 57TH STREET

This intersection consists of the two-way (east-west) West 57th Street and the one-way northbound Tenth Avenue. Without mitigation, the eastbound approach would be impacted in the weekday AM peak hour. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer one second of green time from the northbound phase to the east-west phase during the weekday AM peak period. As shown in **Table 22-3**, with this signal timing adjustment, the eastbound movement delay in the weekday AM peak hour would be reduced to 45.6 seconds (LOS D) as compared with 46.0 (LOS D) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

COLUMBUS AVENUE AND WEST 66TH STREET

This intersection consists of the one-way westbound West 66th Street and the one-way southbound Columbus Avenue. Without mitigation, the southbound approach would be impacted in the weekday midday, and PM peak periods as well as Saturday midday peak hours. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer one second of green time from the westbound only phase to the southbound only phase during the weekday midday, PM and Saturday midday peak hours. As shown in **Table 22-3**, with this signal timing adjustment, the southbound approach delay in the weekday midday peak hour would be reduced to 108.5 seconds (LOS F) as compared with 121.5 seconds (LOS F) under No Build conditions, in the PM peak hour the delay would be reduced to 120.4 seconds (LOS F) as compared with

134.5 seconds (LOS F) under No Build conditions, and in the Saturday midday peak hour it would be reduced to 60.7 seconds (LOS E) as compared with 68.9 seconds (LOS E) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

COLUMBUS AVENUE AND WEST 60TH STREET

This intersection consists of the one-way eastbound West 60th Street and the one-way southbound Columbus Avenue. Without mitigation, the eastbound right turn movement would be impacted in the weekday AM, midday, and PM peak periods as well as Saturday midday peak hours. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer two seconds of green time from the southbound only phase to the eastbound only phase during the weekday AM peak hours and transfer three seconds of green time during the midday, PM and Saturday midday periods. As shown in **Table 22-3**, with this signal timing adjustment, the eastbound right turn movement delay in the weekday AM peak hour would be reduced to 123.9 seconds (LOS F) as compared with 128.6 seconds (LOS F) under No Build conditions, in the midday peak hours the delay would be reduced to 53.4 seconds (LOS D) as compared with 55.7 seconds (LOS E) under No Build conditions, in the PM peak hour it would be reduced to 167.8seconds (LOS F) as compared with 181.5seconds (LOS F) under No Build conditions, and in the Saturday midday peak hour it would be reduced to 54.0 seconds (LOS D) as compared with 54.8 seconds (LOS D) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

NINTH AVENUE AND WEST 57TH STREET

This intersection consists of the two-way (east-west) West 57th Street and the one-way southbound Ninth Avenue. Without mitigation, the eastbound approach would be impacted in the weekday AM, midday, and PM peak hours, the westbound left turn would be impacted in the weekday AM and the westbound through movement would be impacted in the midday, PM, and Saturday midday peak hours. As shown in **Table 22-2**, the weekday AM, midday, PM and Saturday midday peak period impact could be mitigated by transferring one second of green time from the southbound only phase to the east-west phase during the weekday AM peak period and transferring two seconds of green time from the southbound only phase to the east-west phase in the weekday midday, weekday PM and Saturday midday peak periods. As shown in **Table 22-3**, with the proposed mitigation, the eastbound approach delay during the weekday AM peak hour would be reduced to 150.7 seconds (LOS F) as compared with 164.7 seconds (LOS F) under No Build conditions, in the weekday midday peak hour it would be reduced to 127.6 seconds (LOS F) as compared with 157.3 seconds (LOS F) under No Build conditions, in the weekday PM peak hour it would be reduced to 123.6 seconds (LOS F) as compared with 150.3 seconds (LOS F) under No Build conditions, and in the Saturday midday peak hour it would be reduced to 40.3 seconds (LOS D) as compared with 49.3 seconds (LOS D) under No Build conditions. The westbound left turn movement delay during the weekday AM peak hour would be reduced to 74.9 seconds (LOS E) the same as under No Build conditions. The westbound through movement during the midday peak hour would be reduced to 110.9 seconds (LOS F) as compared with 112.8 seconds (LOS F) under No Build conditions, in the weekday PM peak hour it would be reduced to 62.8 seconds (LOS E) as compared with 62.6 seconds (LOS E) under No Build conditions, and in the Saturday midday peak hour it would be reduced to 61.4 seconds (LOS E) as compared with 59.8 seconds (LOS E) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

CENTRAL PARK WEST AND WEST 72ND STREET

This intersection consists of the two-way (east-west) West 72nd Street and the two-way (north-south) Central Park West. Without mitigation, the northbound approach would be impacted in the weekday midday peak hour. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer one second of green time from the east-west phase to the north-south phase during the weekday midday peak period. As shown in **Table 22-3**, with this signal timing adjustment, the northbound approach delay in the weekday midday peak hour would be reduced to 74.9 seconds (LOS E) as compared with 79.8 seconds (LOS E) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

CENTRAL PARK WEST AND WEST 66TH STREET

This intersection consists of the two-way (east-west) West 66th Street and the two-way (north-south) Central Park West. Without mitigation, the westbound through movement would be impacted in the weekday AM, midday, PM and Saturday midday peak periods and the southbound approach would be impacted in the weekday PM peak hour. As shown in **Table 22-2**, the proposed mitigation at this intersection would transfer one second of green time from the east-west phase to the north-south phase during the weekday AM, midday, PM and Saturday midday peak periods. Additional mitigation at this intersection consists of implementing a No Standing Anytime regulation for 125 feet along the west curb of the southbound approach and changing the southbound approach from two through-right lanes to one right-turn lane and two through lanes. In addition, the south curb of West 66th Street is proposed to include No Standing Anytime for 40' west of the intersection. As shown in **Table 22-3**, with this mitigation, the west bound approach delay in the AM peak hour would be reduced to 119.5 seconds of delay (LOS F) as compared with 124.2 (LOS F) under No Build conditions, in the midday peak hour it would be reduced to 102.4 seconds (LOS F) as compared with 107.7 (LOS F) under No Build conditions, in the weekday PM peak hour it would be reduced to 113.9 seconds (LOS F) as compared with 119.8 (LOS F) under No Build conditions, and in the Saturday midday peak hour it would be reduced to 99.7 seconds (LOS F) as compared with 108.1 (LOS F) under No Build conditions. Additionally, the southbound approach delay during the weekday PM hour would be reduced to 36.3 seconds (LOS D) as compared with 57.8 (LOS E) under No Build conditions. With the proposed mitigation measures the impacts at this intersection would be mitigated.

FUTURE CONDITIONS WITH THE MILLER HIGHWAY RELOCATION

In the event the Miller Highway was relocated, none of the analyzed intersections would experience new significant impacts compared with the 2018 Build condition without the relocation of the Miller Highway. However, there are two intersections that would be impacted in the Build condition and they would still experience significant adverse impacts with the traffic diversions resulting from the relocation of the Miller Highway. These intersections are West 59th Street at both Riverside Boulevard and West End Avenue. The same mitigation measures proposed above for these two intersections in the 2018 Build condition, would mitigate the impacts at these locations if the Miller Highway were relocated.

PROPOSED IMPLEMENTATION SCHEDULE FOR TRAFFIC MITIGATION MEASURES

An analysis was performed to determine when the proposed traffic mitigation measures discussed above would need to be implemented. The analysis was based upon proportioning

build-by-building trip generation to the total number of trips and determining trigger points when completion of a building would result in significant traffic impacts. Buildings 2 and 5 are considered to be the first part of the project completed and contain approximately 73% of the total vehicle trip demand projected in the future with the proposed development. Therefore, all mitigation measures would need to be implemented upon completion of these two buildings. Riverside Boulevard between West 59th and West 61st Streets is not expected to become an operational street until 2018, when construction of the Proposed Project is completed. Consequently, mitigation measures proposed for intersections at these locations would not be implemented until such time as the street becomes operational and functions as a through street.

As part of the traffic mitigation, the applicant has committed to conduct a traffic monitoring program (TMP). Such monitoring will be conducted in two phases: at an interim milestone and upon completion (full buildout) of the Proposed Project. The applicant will submit for NYCDOT's review and approval a TMP for a proposed scope for the monitoring of the interim and full buildout conditions. The Restrictive Declaration will include provisions necessary to implement this measure.

EFFECTS OF PROPOSED PEDESTRIAN MITIGATION

As discussed in further detail below, as part of the proposed pedestrian mitigation at the intersection of West 60th Street and Amsterdam Avenue, it is proposed to adjust the signal timing by taking one second from the northbound signal and reassigning the one second to the eastbound signal during the PM peak period. **Table 22-4** shows that the proposed signal timing changes would not significantly affect vehicular traffic during the affected peak periods.

**Table 22-4
Traffic Analysis for Pedestrian Improvements**

Intersection	Period	Lane Group	Build			Mitigation		
			V/C Ratio	Delay (sec.)	LOS	V/C Ratio	Delay (sec.)	LOS
Amsterdam Avenue (NB) & West 60th Street (E/W)	AM	EB-LT	0.52	27.6	C	0.50	26.4	C
		WB-R	0.41	26.4	C	0.40	25.3	C
		NB-TR	0.45	9.0	A	0.46	9.8	A
Amsterdam Avenue (NB) & West 60th Street (E/W)	PM	EB-LT	0.39	24.5	C	0.34	21.0	C
		WB-R	0.29	23.2	C	0.25	19.9	B
		NB-TR	0.56	10.0	A	0.61	13.3	B
Amsterdam Avenue (NB) & West 60th Street (E/W)	Sat MD	EB-LT	0.44	25.5	C	0.41	23.5	C
		WB-R	0.25	22.6	C	0.23	20.9	C
		NB-TR	0.49	9.4	A	0.51	10.9	B
Columbus Avenue (SB) & West 60th Street (E/W)	AM	EB-R	1.23	164.0	F	1.05	93.3	C
		WB-L	0.55	28.5	C	0.47	23.7	C
		WB-LT	0.23	22.8	C	0.20	19.7	C
		SB-TR	0.67	18.2	B	0.74	23.1	B
Columbus Avenue (SB) & West 60th Street (E/W)	PM	EB-R	1.42	239.2	F	1.21	149.8	C
		WB-L	0.63	31.3	C	0.54	25.3	C
		WB-LT	0.21	22.6	C	0.19	19.6	C
		SB-TR	0.69	18.7	B	0.77	23.8	B

Note: This table has been revised for the FSEIS.

E. TRANSIT AND PEDESTRIANS

OVERVIEW

As discussed in Chapter 17, “Transit and Pedestrians,” the Proposed Project would result in impacts to two of the analyzed bus routes during the AM peak hour and three of the analyzed bus routes during the PM peak hour. The Proposed Project would also result in significant adverse impacts at five crosswalk locations during one or more analyzed peak hours. To alleviate these impacts, the feasibility of implementing mitigation measures was explored. The mitigation analysis results and recommendations are discussed below.

BUS SERVICE

As discussed in Chapter 17, “Transit and Pedestrians,” under current New York City Transit (NYCT) guidelines, eastbound M31 and M57 local bus service would be significantly adversely impacted by project-generated demand in the AM peak hour, and northbound M11 and westbound M31 and M57 service would be significantly impacted in the PM peak hour. As shown in Table 17-21, in the AM peak hour, in the future with the Proposed Project, eastbound M31 and M57 buses would be operating with capacity shortfalls of 11 spaces and 143 spaces, respectively. This compares to capacity surpluses of 43 spaces and 7 spaces, respectively, in the eastbound direction in the AM peak hour in the future without the Proposed Project. In the PM peak hour, in the future with the Proposed Project, northbound M11 service would operate with a capacity shortfall of 36 spaces, while westbound M31 and M57 buses would operate with capacity shortfalls of 95 spaces and 207 spaces, respectively. This compares to capacity surpluses of 7 spaces on the northbound M11 and 9 spaces and 34 spaces on westbound M31 and M57 buses, respectively, in the PM peak hour in the future without the Proposed Project.

According to current NYCT guidelines, increases in bus load levels to above their maximum capacity at any load point is considered a significant impact as it would necessitate the addition of more bus service along that route. 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, comprehensive service plans are generated to respond to specific known needs with capital and/or operational improvements where fiscally feasible 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, subject to operational and financial feasibility.

If the M31 route were modified to better serve the project site (at West 59th Street between Twelfth Avenue and West End Avenue), it is expected that passengers using the M57 to travel to the Columbus Circle subway station would use either the M31 or the M57. As a result, subway riders utilizing the buses were assigned to both bus routes as opposed to solely the M57, which would be the case before the M31 route modification. With the modification to the route, the same number of total additional buses would need to be added to the M31 and M57 routes in the Build (when compared with the No Build) to provide for the expected demand: four total buses would be assigned to the M31 and M57 routes in the AM peak hour and six total buses would be assigned to the two routes in the PM peak hour. The route modification would mean the addition of two buses to both the eastbound M31 and M57 routes in the AM peak hour and the addition of three buses to both the westbound M31 and M57 routes in the PM peak hour. This is in comparison to the addition of one bus to the eastbound M31 route and three buses to the eastbound M57 route in the AM peak hour without the route modifications and the addition of

two buses to the westbound M31 route and four buses to the westbound M57 route in the PM peak hour without the route modifications.

The implementation of the M31 route modification would result in the passengers who currently access the bus near the western terminal of the route having to walk three additional blocks to access the M31 bus route.

NYCT would extend the M31 bus to the project site contingent upon installation of a bus stop and necessary pedestrian control measures to safely access the bus stop along West 59th Street.

PEDESTRIANS

The Proposed Project would create new pedestrian demand along the West 60th Street corridor between the project site and the 59th Street-Columbus Circle subway station and that these new demands would result in significant adverse impacts at a total of five crosswalks in the project area. Table 17-23 in Chapter 17, “Transit and Pedestrians,” shows the peak hours during which the impacts occur at each of the five crosswalks. Through a combination of crosswalk widening and adjusting signal timing, all the Proposed Project’s significant adverse impacts at crosswalks would be mitigated.

As stated above under “Traffic,” as part of the traffic mitigation, the project sponsor has committed to conduct a traffic monitoring program (TMP). This TMP will also include provisions for the monitoring of pedestrian conditions. Such monitoring will be conducted in two phases: at an interim milestone and upon completion (full buildout) of the Proposed Project. The applicant will submit for NYCDOT’s review and approval a TMP for a proposed scope for the monitoring of the interim and full buildout conditions. The Restrictive Declaration will include provisions necessary to implement this measure.

PROPOSED MITIGATION MEASURES

A significant adverse pedestrian impact is considered mitigated if measures implemented return projected future conditions to what they would be if a Proposed Project were not in place, or to acceptable levels. For a No Build LOS D, E or F, mitigation back to the No Build condition is required; for No Build Los A, B or C, mitigation to mid-LOS D is required (greater than 19.5 square feet per pedestrian for corners and crosswalks). Proposed mitigation measures for the five significant crosswalk impacts resulting from the Proposed Project are discussed below. The crosswalk conditions for the No Build, Build and Build with Mitigation conditions are summarized in **Table 22-5.**

North Crosswalk on Amsterdam Avenue at West 60th Street

Pedestrian demand from the Proposed Project would significantly adversely impact the north crosswalk on Amsterdam Avenue at West 60th Street in the AM and PM peak hours. The level of service on this crosswalk would deteriorate from LOS C during both periods in the No Build condition, to LOS E in both periods in the Build condition. To address these impacts, it is proposed to widen this crosswalk to 16.9 feet in width from 12.8 feet in width in the future with the Proposed Project. Additionally, a signal timing change is also proposed; it is also proposed to transfer one second of green time from the northbound phase to the east/west phase at this location during the AM peak period and four seconds of green time from the northbound phase

Table 22-5

2018 Build Crosswalk Conditions with Mitigation

Location		NO BUILD								BUILD								BUILD W/ MITIGATION							
		Average Pedestrian Space (sq-ft/ped)				Level of Service				Average Pedestrian Space (sq-ft/ped)				Level of Service				Average Pedestrian Space (sq-ft/ped)				Level of Service			
		AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD	AM	MD	PM	Sat MD
West 60th Street and Amsterdam Ave.	North	28.8	50.5	27.6	87.1	C	B	C	A	13.7	19.7	11.9	19.6	E * D	E * D	19.8	27.0	19.6	29.2	D	C	D	C		
	West	43.1	45.3	48.4	58.5	B	B	B	B	39.4	41.1	41.8	49.8	B	B	B	B	38.5	41.1	31.5	47.4	C	B	C	B
	South	38.2	59.5	34.4	53.7	C	B	C	B	15.9	20.4	12.5	15.6	D * D	E * D *	22.1	26.9	19.6	22.5	D	C	D	D		
	East	47.3	65.2	49.1	149.6	B	B	B	A	38.1	51.0	38.2	64.9	C	B	C	A	37.0	51.0	34.1	61.6	C	B	C	A
West 60th Street and Columbus Ave.	North	16.5	20.9	12.0	36.7	D	D	E	C	11.4	19.7	8.6	19.5	E * D	E * D *	16.0	26.5	12.2	26.1	D	C	E	C		
	West	38.5	30.9	23.9	40.1	C	C	D	B	31.9	34.0	20.4	32.2	C	C	D	C	31.0	34.1	19.8	32.2	C	C	D	C
	South	12.7	20.8	13.4	47.5	E	D	E	B	9.2	18.1	8.1	17.1	E * D *	E * D *	15.2	28.4	13.5	26.4	D	C	E	C		
	East	111.6	96.2	67.3	91.0	A	A	A	A	80.6	91.5	49.4	63.5	C	C	B	A	72.5	84.8	44.3	58.7	C	C	B	B
West 59th Street and West End Avenue	North	101.5	152.9	102.2	93.5	A	A	A	A	19.4	33.5	17.2	17.4	D * C	D * D *	26.7	38.8	19.7	20.1	C	C	D	D		
	West	184.8	267.7	63.7	52.2	A	A	A	B	73.4	162.5	45.1	37.0	A	A	B	C	68.5	162.5	45.1	37.0	A	A	B	C

Note:

* Denotes a significant adverse impact based on CEQR Technical Manual criteria.

This table has been revised for the FSEIS.

to the east/west phase at this location during the PM peak period. With the proposed widening and signal timing changes, this crosswalk would operate at LOS D during both peak periods, with an average of 19.8 and 19.6 square feet per pedestrian in the AM and PM peak hours, respectively and the Proposed Project's significant adverse impacts would be fully mitigated in the AM and PM peak hours. The project sponsor will incur the costs associated with the implementation of this mitigation measure (i.e., restriping and the relocation of structures such as street furniture and lamp posts that may impede pedestrian flow, to the extent relocation is required by NYCDOT at the time of implementation).

South Crosswalk on Amsterdam Avenue at West 60th Street

Pedestrian demand from the Proposed Project would significantly adversely impact the south crosswalk on Amsterdam Avenue at West 60th Street in the weekday AM and PM peak hours and Saturday midday peak hour. The level of service on this crosswalk would deteriorate from LOS C in the AM and PM peak hours and LOS B in the Saturday midday peak hour in the No Build condition, to LOS D in the Build condition during the AM and Saturday midday peak hours and LOS E during the PM peak hour. To address these impacts, it is proposed to widen this crosswalk to 15.3 feet in width from 12 feet in width in the future with the Proposed Project. Additionally, a signal timing change is also proposed; it is also proposed to transfer one second of green time from the northbound phase to the east/west phase at this location during the AM peak period, four seconds of green time from the northbound phase to the east/west phase at this location during the PM peak period, and two seconds of green time from the northbound phase to the east/west phase at this location during the Saturday midday peak period. With this widening and signal timing changes, this crosswalk would operate at LOS D with an average of 22.1, 19.6 and 22.5 square feet per pedestrian in the AM, PM, and Saturday midday peak hours, respectively, and the Proposed Project's significant adverse impacts would be fully mitigated during the AM, PM, and Saturday midday peak periods. The project sponsor will incur the costs associated with the implementation of this mitigation measure (i.e., restriping and the relocation of structures such as street furniture and lamp posts that may impede pedestrian flow, to the extent relocation is required by NYCDOT at the time of implementation).

North Crosswalk on Columbus Avenue at West 60th Street

Pedestrian demand from the Proposed Project would significantly adversely impact the north crosswalk on Columbus Avenue at West 60th Street in the weekday AM and PM peak hours and the Saturday midday peak hour. To address these impacts, it is proposed to widen this crosswalk to 17.6 feet in width from 15 feet in width in the future with the Proposed Project. Additionally, a signal timing change is also proposed; it is also proposed to transfer four seconds of green time from the southbound phase to the east/west phase at this location during the AM and PM peak periods and three seconds of green time from the southbound phase to the east/west phase at this location during the Saturday midday peak period. With the proposed widening and signal timing changes, this crosswalk would operate at LOS D with an average of 16.0 square feet per pedestrian during the AM peak period, LOS E with an average of 12.2 square feet per pedestrian during the PM peak period and LOS C with an average 26.1 square feet per pedestrian during the Saturday midday peak period and the Proposed Project's significant adverse impact would be fully mitigated in the AM, PM and Saturday midday peak hours. The project sponsor will incur the costs associated with the implementation of this mitigation measure (i.e., restriping and the relocation of structures such as street furniture and lamp posts that may impede pedestrian flow, to the extent relocation is required by NYCDOT at the time of implementation).

South Crosswalk on Columbus Avenue at West 60th Street

Pedestrian demand from the Proposed Project would significantly adversely impact the south crosswalk on Columbus Avenue at West 60th Street in the weekday AM, midday and PM peak hours and the Saturday midday peak hour. To address these impacts, it is proposed to widen this crosswalk to 15.8 feet in width from 12 feet in width in the future with the Proposed Project. Additionally, a signal timing change is also proposed; it is proposed to transfer four seconds of green time from the southbound phase to the east/west phase at this location during the AM and PM peak periods and three seconds of green time from the southbound phase to the east/west phase at this location during the weekday midday and Saturday midday peak periods. With the proposed widening and signal timing changes, this crosswalk would operate at LOS D with an average of 15.2 square feet per pedestrian during the AM peak period, LOS C with an average of 28.4 square feet per pedestrian during the midday peak period, LOS E with an average of 13.5 square feet per pedestrian during the PM peak period and LOS C with an average of 26.4 square feet per pedestrian during the Saturday midday peak period and the proposed Project's significant adverse impacts would be fully mitigated in the AM, midday, PM and Saturday midday peak hours. The project sponsor will incur the costs associated with the implementation of this mitigation measure (i.e., restriping and the relocation of structures such as street furniture and lamp posts that may impede pedestrian flow, to the extent relocation is required by NYCDOT at the time of implementation).

West Crosswalk on Columbus Avenue at West 60th Street

The proposed mitigation at the intersection of Columbus Avenue and West 60th Street includes the widening of the west crosswalk to 14 feet in width from 13 feet in width. This widening would increase the average square feet per pedestrian, which would be reduced by the proposed signal timing changes for both traffic and pedestrian mitigation during all periods, and would avoid this crosswalk from becoming impacted due to the signal timing adjustments of four seconds of green time from the southbound phase to the east/west phase at this location during the AM and PM peak periods and three seconds of green time from the southbound phase to the east/west phase at this location during the weekday midday and Saturday midday peak periods.

North Crosswalk on West End Avenue at West 59th Street

Pedestrian demand from the Proposed Project would significantly adversely impact the north crosswalk on West End Avenue at West 59th Street in the AM, PM and Saturday midday peak hours. The proposed traffic mitigation measures for this intersection include a signal timing change that would transfer 3 seconds from the north/south phase to the east/west phase during the AM peak period, and the conversion of West 59th Street between Amsterdam Avenue and West End Avenue to a one-way westbound from a two-way operation. Additionally, it is proposed to widen this crosswalk to 12.5 feet in width from 10.8 feet in width. With the proposed mitigation, this crosswalk would operate at LOS C during the AM peak period and LOS D during the PM and Saturday midday peak periods, with an average of 26.7, 19.7 and 20.1 square feet per pedestrian in the AM, PM and Saturday midday peak hours, respectively, and the Proposed Project's significant adverse impact would be fully mitigated in the AM, PM and Saturday midday peak hours.

EFFECTS OF PROPOSED TRAFFIC MITIGATION MEASURES ON PROPOSED CROSSWALK MITIGATION MEASURES

As discussed above, measures developed to mitigate the Proposed Project’s significant adverse traffic impacts would primarily consist of minor signal timing adjustments and changes to curbside parking regulations. These proposed traffic mitigation measures are incorporated in the pedestrian mitigation analysis and are not expected to adversely affect pedestrian conditions on sidewalks, corner areas or crosswalks in the study area.

F. AIR QUALITY

EFFECTS OF PROPOSED TRAFFIC MITIGATION MEASURES

Chapter 18, “Air Quality,” presents the maximum predicted carbon monoxide (CO) and particulate matter (PM₁₀ and PM_{2.5}) concentrations related to traffic generated by the Proposed Project, and concludes that the Proposed Project would not result in significant adverse air quality impacts. Therefore, no air quality mitigation is required.

Since the proposed traffic mitigation measures described above would alter traffic conditions when compared with the Proposed Project, the localized air quality impacts with mitigation were modeled for each of the intersections analyzed in Chapter 18, “Air Quality.” The results of this modeling analysis (performed in accordance with methodologies described in Chapter 18, “Air Quality”) indicate that CO and particulate matter concentrations would not exceed National Ambient Air Quality Standards (NAAQS) or the city’s interim guidance criteria for PM_{2.5}, and therefore would not affect the conclusions in Chapter 18 (see **Tables 22-6 through 22-9**). Therefore, no significant adverse air quality impacts would occur as a result of the proposed traffic mitigation measures.

**Table 22-6
2018 Maximum Predicted 8-Hour Average No Build and Build CO Concentration with Traffic Mitigation**

Receptor Site	Location	Time Period	8-Hour Concentration (ppm)		
			No Build	Build	Build with Mitigation
1	West End Avenue and West 66th Street	AM	<u>3.3</u>	3.4	3.4
2	West End Avenue and West 61st Street	AM	<u>3.0</u>	<u>3.1</u>	<u>3.1</u>
3	West End Avenue and West 59th Street	AM	<u>3.0</u>	3.1	3.0
4	Eleventh Avenue and West 57th Street	AM	3.5	<u>3.5</u>	<u>3.5</u>
5	Twelfth Avenue and West 59th Street	AM	<u>4.1</u>	<u>4.2</u>	4.2
6	Twelfth Avenue and West 57th Street	PM	<u>4.9</u>	<u>5.0</u>	<u>5.0</u>
7	Twelfth Avenue and West 42nd Street	SAT MD	<u>5.9</u>	6.2	6.2
Note: 8-hour standard is 9 ppm.					

**Table 22-7
2018 Maximum Predicted 24-Hour Average No Build and Build PM₁₀ Concentrations with Traffic Mitigation**

Receptor Site	Location	24-Hour Concentration (µg/m ³)		
		No Build	Build	Build with Mitigation
3	West End Avenue and West 59th Street	<u>88.1</u>	89.0	<u>87.7</u>
6	Twelfth Avenue and West 57th Street	<u>110.2</u>	<u>111.6</u>	<u>111.6</u>
Note: National Ambient Air Quality Standard—24-hour, 150 µg/m ³ .				

Table 22-8

2018 Maximum Predicted 24-Hour Average PM_{2.5} Concentrations with Traffic Mitigation

Receptor Site	Location	24-Hour Concentration (µg/m ³)	
		Increment	Increment (with Mitigation)
3	West End Avenue and West 59th Street	0.02	0.001
6	Twelfth Avenue and West 57th Street	0.02	0.02

Note: PM_{2.5} interim guidance criteria—24-hour average, 2 µg/m³ (5 µg/m³ not-to-exceed value).

Table 22-9

2018 Maximum Predicted Annual Average PM_{2.5} Concentrations with Traffic Mitigation

Receptor Site	Location	Annual Concentration (µg/m ³)	
		Increment	Increment (with Mitigation)
3	West End Avenue and West 59th Street	0.005	0.004
6	Twelfth Avenue and West 57th Street	0.004	0.004

Note: PM_{2.5} interim guidance criteria—annual (neighborhood scale), 0.1 µg/m³.

G. NOISE

EFFECTS OF PROPOSED TRAFFIC MITIGATION MEASURES

Future noise levels with the Proposed Project and the proposed traffic mitigation measures were calculated using the methodology described in Chapter 19, “Noise,” for the 2018 analysis year. No Build values presented in Chapter 19 were used to assess impacts. Build values for 2018 with the proposed traffic mitigation measures in place are shown in **Table 22-10**.

At all locations and during all time periods, the increase in L_{eq(1)} noise levels in 2018 Build with Mitigation scenario as compared with the No Build scenario would be less than 1.1 dBA, which would be barely perceptible, and insignificant based upon City Environmental Quality Review (CEQR) criteria. At site 5 during the AM and midday (MD) time periods, noise levels would decrease slightly because of a decrease in traffic speed along West End Avenue.

In terms of CEQR noise exposure guidelines, future 2018 noise levels with the Proposed Project and proposed traffic mitigation measures would remain in the “marginally acceptable” category for receptor sites 4 and 8, and in the “marginally unacceptable” category for receptor sites 1, 2, 3, 5, 6, and 7. These values are based on the calculated L₁₀₍₁₎ values.

Consequently, noise levels with the proposed traffic mitigation would be nearly the same as those without traffic mitigation. In both cases the Proposed Project would not result in any significant adverse noise impacts. In addition, the noise attenuation levels shown in Table 19-10 would apply for Build conditions with the proposed traffic mitigation.

Table 22-10
2018 Build Noise Levels With Traffic Mitigation Measures (in dBA)

Site	Day	Time	2018 No Build $L_{eq(1)}$	2018 No Build $L_{10(1)}$	2018 Build $L_{eq(1)}$	2018 Build with Traffic Mitigation $L_{eq(1)}$	2018 Build with Traffic Mitigation Increment	2018 Build with Traffic Mitigation $L_{10(1)}$
1	Weekday	AM	<u>72.2</u>	<u>75.1</u>	<u>72.9</u>	<u>72.9</u>	0.7	<u>75.8</u>
	Weekday	MD	70.6	73.6	71.1	71.1	0.5	74.1
	Weekday	PM	<u>69.2</u>	<u>71.5</u>	<u>69.7</u>	<u>69.7</u>	0.5	<u>72.0</u>
	Saturday	MD	<u>69.9</u>	<u>72.3</u>	<u>70.6</u>	<u>70.6</u>	0.7	<u>73.0</u>
2	Weekday	AM	<u>72.7</u>	<u>75.5</u>	<u>73.2</u>	<u>73.2</u>	0.5	<u>76.0</u>
	Weekday	MD	74.0	77.9	74.3	74.3	0.3	78.2
	Weekday	PM	<u>71.5</u>	<u>74.8</u>	<u>71.9</u>	<u>71.9</u>	0.4	<u>75.2</u>
	Saturday	MD	<u>67.1</u>	<u>68.9</u>	<u>67.5</u>	<u>67.5</u>	0.4	69.3
3	Weekday	AM	70.9	73.8	<u>71.3</u>	<u>71.5</u>	0.6	74.4
	Weekday	MD	68.7	72.3	<u>69.1</u>	69.3	0.6	72.9
	Weekday	PM	63.5	64.8	<u>63.7</u>	<u>63.8</u>	0.3	65.1
	Saturday	MD	<u>64.2</u>	<u>66.0</u>	<u>64.6</u>	<u>64.7</u>	0.5	<u>66.5</u>
4	Weekday	AM	<u>66.7</u>	<u>68.4</u>	<u>67.0</u>	<u>67.2</u>	0.5	<u>68.9</u>
	Weekday	MD	62.9	65.4	<u>63.4</u>	<u>63.5</u>	0.6	<u>66.0</u>
	Weekday	PM	<u>61.5</u>	<u>63.6</u>	<u>62.4</u>	<u>62.6</u>	1.1	<u>64.7</u>
	Saturday	MD	<u>59.8</u>	<u>61.6</u>	<u>60.5</u>	<u>60.6</u>	0.8	<u>62.4</u>
5	Weekday	AM	<u>72.0</u>	<u>75.0</u>	<u>71.8</u>	<u>71.8</u>	-0.2	74.4
	Weekday	MD	<u>72.7</u>	<u>74.1</u>	<u>72.6</u>	<u>72.6</u>	-0.1	74.0
	Weekday	PM	<u>68.3</u>	<u>71.1</u>	<u>68.5</u>	<u>68.5</u>	0.2	<u>71.3</u>
	Saturday	MD	<u>68.0</u>	<u>70.3</u>	<u>68.2</u>	<u>68.2</u>	0.2	<u>70.5</u>
6	Weekday	AM	<u>69.6</u>	<u>71.1</u>	<u>70.1</u>	<u>69.6</u>	0.0	71.1
	Weekday	MD	65.9	68.0	<u>66.4</u>	<u>66.0</u>	0.1	<u>68.1</u>
	Weekday	PM	<u>67.4</u>	<u>70.3</u>	<u>67.8</u>	<u>67.7</u>	0.3	70.6
	Saturday	MD	64.4	67.9	<u>65.0</u>	<u>65.0</u>	0.6	<u>8.5</u>
7	Weekday	AM	<u>73.3</u>	<u>75.4</u>	<u>74.0</u>	<u>4.0</u>	0.7	<u>76.1</u>
	Weekday	MD	74.1	75.7	<u>74.3</u>	<u>74.5</u>	0.4	76.1
	Weekday	PM	<u>74.2</u>	<u>74.7</u>	<u>74.8</u>	<u>74.8</u>	0.6	<u>75.3</u>
	Saturday	MD	<u>69.3</u>	<u>71.6</u>	<u>69.6</u>	<u>69.6</u>	0.3	<u>71.9</u>
8	Weekday	AM	<u>67.7</u>	<u>69.2</u>	<u>67.9</u>	<u>67.9</u>	0.2	<u>69.4</u>
	Weekday	MD	67.3	69.1	<u>67.5</u>	<u>67.5</u>	0.2	<u>69.3</u>
	Weekday	PM	<u>66.1</u>	<u>67.6</u>	<u>66.5</u>	<u>66.5</u>	0.4	<u>68.0</u>
	Saturday	MD	<u>65.8</u>	<u>67.7</u>	<u>66.3</u>	<u>66.3</u>	0.5	68.2

H. CONSTRUCTION

TRAFFIC

As discussed in Chapter 20, “Construction,” significant adverse traffic impacts due to construction are predicted to occur at one intersection during the 6:00-7:00 AM peak hour and three intersections during the 3:00 – 4:00 PM peak hour. A combination of early implementation (i.e., during the construction period) of the project traffic mitigation strategies described above along with temporary mitigation strategies for construction proposed for the area adjacent to the project site, the construction-related significant traffic impacts at the three intersections cited above would be fully mitigated. The measures used to mitigate the impacts at these four intersections are discussed below and summarized in **Table 22-11**. At the intersection of Ninth Avenue and West 57th Street, early implementation of proposed 2018 mitigation would fully mitigate the PM peak hour construction traffic impact at this location. Proposed mitigation measures would include transferring three seconds of green time from the southbound-only phase to the east-west phase during the weekday PM peak period. As shown in **Table 22-12**, with this

signal timing change, the eastbound movement delay would be 72.0 seconds (LOS E) as compared with 80.7 seconds (LOS F) in the No Build.

- At the intersection of Columbus Avenue and West 60th Street, early implementation of proposed 2018 mitigation would also fully mitigate the expected PM peak hour construction traffic impact at this location. As shown in **Table 22-11**, mitigation at this intersection would consist of transferring three seconds of green time from the southbound phase to the east-west phase during the weekday PM period. With this signal timing adjustment, the eastbound delay would be 111.3 seconds (LOS F) as compared with 135.0 seconds (LOS F) in the No Build.
- At the intersection of West End Avenue and West 59th Street, early implementation of a portion of the proposed 2018 mitigation along with the implementation of temporary construction mitigation would fully mitigate the expected AM and PM peak hour traffic impacts at this location. Mitigation at this intersection would include the conversion of West 59th Street between Amsterdam Avenue and West End Avenue into a one way westbound street. A temporary construction mitigation measure at this intersection would consist of implementing a No Standing Anytime regulation for 100 feet along the south curb of the eastbound approach to allow for two travel lanes: one 12-foot-wide eastbound left-turn only lane and one 11-foot-wide right turn lane. The westbound approach would allow for two travel lanes: one 14-foot-wide westbound left-turn only lane and one 13 foot wide thru/right turn lane. Mitigation at this intersection would include also the early implementation of the transfer of three seconds of green time from the north-south phase to the east-west phase in the AM peak period. Another temporary construction mitigation measure at this intersection would include the transfer of two seconds of green time from the north-south phase to the east-west phase in the PM peak period. With this proposed mitigation, the eastbound delay would total 32.2 seconds (LOS C) in the AM peak hour and 173.1 seconds (LOS F) in the PM peak hour compared with 37.5 seconds (LOS D) and 174.3 seconds (LOS F) in the AM and PM peak periods, respectively, in the No Build. PM peak hour delay on the westbound approach would total 33.6 seconds (LOS D) under mitigated construction conditions compared with 108.2 seconds (LOS F) in the No Build.

NOISE

As described in Chapter 20, "Construction," construction activities would result in a significant adverse noise impact at receptor locations A1, A2, B2, C, D, E, F, H1, N1, N2, O, Q, R, U, and V with the podium approach and at receptor locations A2, C, D, E, N1, N2, U, and V with the individual basement approach. The exceedance of the 3-5 dBA CEQR impact criteria would be due principally to noise generated by the large amount of construction equipment operating on-site. However, with the exception of receptors B2, all receptor locations have double-glazed windows and have some form of alternative ventilation (i.e., central air conditioning or PTAC units), which would provide a significant amount of sound attenuation, and would result in interior noise levels during much of the time when project-related construction activities are occurring that are below 45 dBA L_{10} (the CEQR acceptable interior noise level criteria).

Receptor site B2 (i.e., the corner building at Amsterdam Houses), has double-glazed windows and some tenants have installed air conditioning units on some windows. To maintain an interior $L_{10(1)}$ noise level of 45 dBA (the CEQR acceptable interior noise level criteria), a minimum of 25-30 dBA window/wall attenuation would be required. At locations on this building where significant noise impacts are predicted to occur, if the podium approach is utilized, the project sponsor would provide window air conditioning units to mitigate these impacts. (Provision for these mitigation measures will be included in the Restrictive Declaration.) With the existing double-glazed windows and the alternative ventilation (provided by the project sponsor), interior noise levels during much, if not all, of the time when project construction activities are taking place, would be expected to be below 45 dBA $L_{10(1)}$ (the CEQR acceptable interior noise level criteria).

Table 22-11
Construction Traffic Mitigation Measures

Intersection	Approach	Impacted Period	Build Signal Timing (Seconds) (1)	Proposed Improvement Plan	
				Mitigated Signal Timing (Seconds) (1)	Proposed Improvement Measures
West End Avenue					
West End Avenue (NS) @ W. 59th Street (EW)	EW NS	AM PM	30/30 60/60	33/33 57/57	Transfer 3s from NS to EW phase in weekday AM and PM periods. W. 59th Street between West End Avenue and Amsterdam Avenue to be converted to one-way westbound. Parking would be permitted on the south curb between West End Avenue and Amsterdam Avenue W. 59th Street WB approach would be restriped to include one 13' shared through-right turn lane and one 22' left lane with parking. W. 59th Street EB approach would be restriped to include one 12' left-turn only lane and one 11' right-turn lane.
9th Avenue/Columbus Avenue					
Columbus Avenue (SB) @ W. 60th Street (EW)	EW SB Only Peds Only	PM	35/35 45/45 10/10	35/38 45/42 10/10	Transfer 3s from SB Only to EW phase in PM period.
9th Avenue (NS) @ W. 57th Street (WB)	WB Only EW SB Only Peds Only	PM	21/21 26/26 36/36 7/7	21/21 26/28 36/34 7/7	Transfer 2s from SB only to EW in PM period.

Notes:

(1) Signal timings shown indicate Green plus Yellow (including All Red) for each phase

This table has been revised for the FSEIS.

Table 22-12
2012 Peak Construction With Mitigation LOS Table

Signalized Intersection	Lane Group	2012 No-Build Construction			2012 Peak Construction			2012 Peak Construction With Mitigation		
		V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
AM										
Riverside Blvd.										
Riverside Blvd. & W. 59th St Unsignalized (Diversion)	EB LT	0.00	8.2	A	0.00	8.2	A	0.00	8.2	A
	NB LTR	0.39	13.6	B	0.64	18.3	C	0.60	17.0	C
West End Avenue										
West End Avenue @ W.60th St (Diversion)	NB TR	--	--	--	--	--	--	0.59	12.3	B
	SB L	--	--	--	--	--	--	0.18	5.9	A
	SB TR	--	--	--	--	--	--	0.43	5.9	A
West End Avenue @ W. 59th St										
	EB LTR	0.62	37.5	D	1.11	122.8	F *		32.2	C
	EB L	--	--	--	--	--	--	0.53	34.5	C
	EB R	--	--	--	--	--	--	0.44	29.8	C
	WB LTR	0.52	32.1	C	0.67	37.7	D		28.0	C
	WB L	--	--	--	--	--	--	0.16	23.3	C
	WB TR	--	--	--	--	--	--	0.51	29.4	C
	NB L	0.06	7.5	A	0.24	10.2	B		12.2	B
	NB TR	0.35	9.2	A	0.41	9.8	A	--	--	--
	NB T	--	--	--	--	--	--	0.42	11.4	B
	SB L	0.01	3.8	A	0.05	4.1	A	--	--	--
	SB TR	0.46	6.2	A	0.47	6.3	A	0.34	6.7	A
11th Avenue										
11th Avenue @ W.58th St (Diversion)										
	EB LTR	0.31	27.0	C	0.40	28.8	C	0.46	30.0	C
	NB L	0.10	7.8	A	0.10	7.8	A	0.10	7.8	A
	NB TR	0.42	10.0	A	0.48	10.7	B	0.46	10.5	B
	SB L	0.06	4.2	A	0.07	4.3	A	0.07	4.3	A
	SB TR	0.39	5.6	A	0.40	5.7	A	0.41	5.7	A
Amsterdam Avenue										
Amsterdam Avenue @ W.60th St (Diversion)										
	EB LT	0.35	24.3	C	0.24	22.3	C	0.35	24.2	C
	WB T	0.25	23.3	C	0.25	23.3	C	0.25	23.3	C
	NB TR	0.52	9.6	A	0.30	8.0	A	0.26	7.7	A
Amsterdam Avenue @ W.59th St (Diversion)										
	EB L	0.26	23.9	C	0.30	24.8	C			
	WB T	0.22	21.7	C	0.26	22.3	C	0.24	22.0	C
	WB R	0.02	19.6	B	0.02	19.6	B	0.02	19.6	B
	NB LT	0.25	7.6	A	0.26	7.7	A	0.27	7.8	A
10th Avenue										
10th Avenue @ W.58th St (Diversion)										
	EB LT	0.25	22.5	C	0.25	22.5	C	0.31	23.3	C
	NB TR	0.29	7.3	A	0.30	7.4	A	0.29	7.4	A
PM										
Riverside Blvd.										
Riverside Blvd. & W. 59th St Unsignalized (Diversion)										
	EB LT	0.00	8.3	A	0.00	8.7	A	0.00	8.7	A
	NB LTR	0.50	14.6	B	0.54	15.9	C	0.53	15.7	C
West End Avenue										
West End Avenue @ W.60th St (Diversion)										
	EB LTR	0.06	19.4	B	-	-	-	-	-	-
	NB L	0.10	7.8	A	-	-	-	-	-	-
	NB TR	0.44	9.2	A	0.45	9.3	A	0.50	9.8	A
	SB L	0.46	20.1	C	0.59	26.4	C	0.76	41.7	D
	SB TR	0.63	16.4	B	0.67	17.3	B	0.67	17.2	B
West End Avenue @ W.59th St										
	EB LTR	1.26	174.3	F	1.40	230.4	F *		173.1	F
	EB L	--	--	--	--	--	--	1.44	257.6	F
	EB R	--	--	--	--	--	--	0.43	29.0	C
	WB LTR	1.10	108.2	F	1.37	215.7	F *		33.6	C
	WB L	--	--	--	--	--	--	0.42	28.3	C
	WB TR	--	--	--	--	--	--	0.69	36.9	D
	NB L	0.02	4.0	A	0.03	4.1	A	0.01	4.6	A
	NB TR	0.23	4.5	A	0.22	4.5	A	--	--	--
	NB T	--	--	--	--	--	--	0.24	5.5	A
	SB L	0.02	7.0	A	0.04	7.2	A	--	--	--
	SB TR	0.56	11.9	B	0.61	12.8	B	0.19	8.8	A

Table 22-12

2012 Peak Construction With Mitigation LOS Table

11th Avenue											
11th Avenue @ W.58th St (Diversion)		EB LTR	0.36	28.0	C	0.36	28.0	C	0.38	28.4	C
		NB L	0.05	4.2	A	0.05	4.2	A	0.05	4.2	A
		NB TR	0.27	4.7	A	0.26	4.7	A	0.27	4.8	A
		SB L	0.22	9.3	A	0.24	9.7	A	0.25	9.8	A
		SB TR	0.55	11.7	B	0.58	12.2	B	0.61	12.7	B
Amsterdam Avenue											
Amsterdam Avenue @ W.60th St (Diversion)		EB LT	0.27	22.7	C	0.30	23.2	C	0.42	25.2	C
		WB T	0.27	22.8	C	0.27	22.8	C	0.27	22.8	C
		NB TR	0.52	9.6	A	0.53	9.7	A	0.52	9.6	A
Amsterdam Avenue @ W.59th St (Diversion)		EB L	0.32	26.4	C	0.44	30.5	C			
		WB T	0.39	24.3	C	0.39	24.3	C	0.39	24.2	C
		WB R	0.03	19.7	B	0.03	19.7	B	0.03	19.7	B
		NB LT	0.43	8.7	A	0.43	8.7	A	0.43	8.7	A
10th Avenue											
10th Avenue @ W.58th St (Diversion)		EB LT	0.31	23.3	C	0.32	23.4	C	0.33	23.5	C
		NB TR	0.58	9.5	A	0.58	9.5	A	0.58	9.5	A
Columbus Avenue											
Columbus Ave @ W. 60th St		EB R	1.16	135.0	F	1.25	168.0	F *	1.10	111.3	F
		WB L	0.57	29.3	C	0.57	29.3	C	0.51	25.3	C
		WB LT	0.20	22.4	C	0.20	22.4	C	0.18	20.1	C
		SB T	0.61	17.4	B	0.61	17.4	B	0.66	20.6	C
9th Avenue											
9th Avenue @ W. 57th Street		EB TR	1.03	80.7	F	1.11	106.5	F *	1.01	72.0	E
		WB DefL	0.81	38.6	D	0.81	38.2	D	0.79	34.6	C
		WB T	0.90	40.8	D	0.90	41.1	D	0.86	34.6	C
		SB L	0.37	25.6	C	0.41	26.3	C	0.44	28.9	C
		SB TR	0.62	25.9	C	0.62	25.9	C	0.67	28.0	C

* - Impacted location under Peak Construction conditions

This table has been revised for the FSEIS.

Riverside Center FSEIS

With regard to the residential terrace locations (i.e., receptors A1, A2, D, F, H1, N1, and N2 for the podium approach and receptors A2, D, N1, and N2 for the individual basement approach), the highest $L_{10(1)}$ noise levels would range from approximately 73 to 79 dBA during some peak periods of construction activity. While even without construction, noise levels at these terraces would exceed the CEQR acceptable range (55 dBA $L_{10(1)}$) for an outdoor area requiring serenity and quiet, during the weekday daytime time periods when construction activities are predicted to significantly increase noise levels, construction activities would exacerbate these exceedances and result in significant adverse noise impacts at the terraces at these identified buildings.¹ There are no feasible mitigation measures that could be implemented to eliminate the significant noise impacts at these locations.

Absent the implementation of mitigation measures, the proposed action would have unmitigated significant noise impacts at the locations specified above for limited periods of time. *

¹ It should be noted that all or most of the buildings where these residential terraces are located did not exist at the time that the 1992 *Riverside South FEIS* was prepared, and consequently the significant impacts at these locations were not identified in that document.