A. INTRODUCTION

The preceding chapters of this EIS presented detailed analysis of the potential for significant adverse impacts to result from the proposed action. The elementary schools analysis in Chapter 4, "Community Facilities," identified significant adverse impacts on elementary school in the half-mile radius study area. In addition, Chapter 4 identified the potential for significant adverse impacts on publicly-funded day care. Chapter 6, "Shadows," identified significant adverse shadows impacts on the stained glass rose window of Centro Maria, the former Saint Ambrose Roman Catholic Church located at 539 W. 54th Street, which is eligible for listing on the State and National Registers of Historic Places. Possible mitigation measures for these impacts are discussed below.

The vehicular traffic analysis in Chapter 13, "Traffic and Parking," identified potential significant adverse traffic impacts at several locations in the vicinity of the project site. Measures have been examined to eliminate the anticipated impacts. These mitigation measures are discussed below.

B. COMMUNITY FACILITIES

Elementary Schools

As discussed in Chapter 4, "Community Facilities," the demand for elementary school seats within a half-mile radius of the project site would increase to 118 percent utilization compared to No-Build conditions of 112 percent utilization. This would represent a 6-percentage point increase in the deficiency of available seats. The 108 elementary school students generated by the proposed project would increase the shortfall of available seats to 301 seats, up from 193 seats. This would constitute a significant adverse impact.

NYC Department Education (DOE) and NYC School Construction Authority (SCA) would continue to monitor trends in demand for school seats in the area. DOE/SCA responses to identified demand could take place in stages and include administrative actions and/or enlargement of existing schools, followed by the later construction or lease of new school facilities at an appropriate time.

To eliminate or alleviate this significant adverse impact, the following mitigation measures could be applied:

* DOE administrative actions such as adjusting school catchment areas (attendance zones) and/or reorganizing grade levels within schools; and/or
* Creating additional capacity in Zone 3 of CSD 2 by constructing a new school, building additional capacity at existing schools, or leasing additional school space
* Other mitigation options, to be determined, identified by DOE/SCA.

These preliminary mitigation options will be further explored with DOE/SCA between the DEIS and FEIS, and could include consideration of DOE's Five-Year Capital Plan, the primary vehicle for

capital planning and funding of new school facilities. As part of this process, the applicant is contacting the School Construction Authority to review these options. It should also be noted that any new school facility would be subject to its own separate environmental review.

Day Care Centers (Publicly Funded)

As also discussed in Chapter 4, new CEQR multipliers for day care analyses are in development, and are expected to be released between DEIS and FEIS. Since the new multipliers are not known at this time, but could result in a need for a detailed analysis, it is assumed for the purpose of this DEIS that the proposed project's 180 affordable units would cause a significant adverse impact on publicly funded day care facilities.

Once the new CEQR multipliers are confirmed, the analysis will be updated accordingly. If the significant adverse impact is confirmed on the basis of the new multipliers, appropriate mitigation measures will be explored with ACS. Mitigation for a significant day care impact, developed in consultation with the Agency for Children's Services, could include provision of space on-site or off-site for a day care center, an expansion of an existing facility, or some other measure deemed appropriate by ACS. If mitigation is determined not to be feasible, the action could result in an unavoidable significant adverse impact on daycare facilities.

If the updated analysis finds that the proposed project would have no significant adverse impact on publicly funded day care facilities, the FEIS will reflect that as a final determination.

C. SHADOWS

As discussed in Chapter 6, "Shadows," the proposed action would result in significant adverse shadows impacts on Centro Maria, the former Saint Ambrose Roman Catholic Church located at 539W. 54th Street. Incremental shadows cast by the proposed project would be cast on the stained glass rose window located at the second floor level above the building's entryway. Eliminating the proposed project or any other development with a streetwall on the project site along W. 54th Street would mitigate this impact. However, this is not considered feasible as such measures would decrease the amount of residential and commercial space developed, which would be inconsistent with the purpose and need for the proposed action. While no such impacts would occur under No-Build conditions analyzed in this EIS, as discussed in Chapter 20, "Alternatives," under as-of-right conditions the site could be developed with a building that would have a streetwall of 30 feet and a 170 foot tower. Similarly, any development on the project site with a similar streetwall or tower element in the vicinity of Centro Maria would generate some incremental shadow impacts on it, however they would be less than the proposed action. The feasibility of an alternative design configuration of the building will be further explored between Draft and Final EIS to reduce or eliminate the shadow impact. A potential mitigation measure for these impacts would be to simulate the sunlit condition with artificial lighting. The provision of indirectly mounted lighting could simulate lost sunlight conditions at stained glass windows. This would require lighting mounted at the stained glass window facades either on the building or on the facing building developed on the project site. Alternatively, lighting for Centro Maria could be directed at the south facade from the north facade of the future building on the project site. The lighting could be directed at the stained glass windows, but diffuse in nature and color-corrected so that it would be more similar to sunlight. The Department of City Planning, in consultation with the NYC Landmarks Preservation

Commission and the State Historic Preservation Commission and the State Historic Preservation Office, will explore this mitigation measure and other potential mitigation measures between the Draft and Final EIS. If no feasible or practicable mitigation measures are identified, the significant adverse impact would remain unmitigated.

D. TRAFFIC

As discussed in Chapter 13, the proposed project would result in significant adverse impacts at six study area intersections in one or more analyzed peak hours. Specifically, 4, 3, 4, and 3 intersections would be impacted in the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours, respectively. To alleviate these impacts, feasible mitigation measures were explored. The mitigation analysis results and recommendations are discussed below.

Recommended Mitigation Measures

Measures to mitigate project-generated traffic impacts would consist of minor adjustments to signal timing in order to increase green time for impacted movements. These changes, ranging from 1 to 3 seconds indicate that the impacts are not severe but can be accommodated by normal periodic adjustments that would typically be undertaken by the NYC Department of Transportation. The operational changes incorporated into the mitigation analyses are presented in Table 19-1 and discussed below. Table 19-2 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 hours, respectively.

Tenth Avenue and W. 52nd Street

This intersection is intersected by the one-way eastbound W. 52nd Street and the one-way northbound Tenth Avenue. The eastbound approach at this intersection would be impacted in the weekday AM, midday, and PM peak hours. As shown in Table 19-1, the proposed mitigation at this intersection is transferring 2 seconds of green time from the northbound phase to the eastbound phase the weekday AM, midday, and PM peak hours. As shown in Table 19-2, with this signal timing adjustment, in the AM peak hour the eastbound approach would be reduced to 216.9 seconds of delay (LOS F) as compared to 235.5 (LOS F) seconds under No-Build conditions, in the midday peak hour it would be reduced to 47.6 seconds of delay (LOS D) as compared to 52.0 (LOS D) seconds under No-Build conditions, and in the PM peak hour it would be reduced to 61.7 seconds of delay (LOS E) as compared to 67.8 (LOS E) seconds under No-Build conditions.

Tenth Avenue and W. 53rd Street

This intersection is intersected by the one-way westbound W. 53rd Street and the one-way northbound Tenth Avenue. It would be one of the principal intersections traversed by project-generated vehicles approaching the site, as the accessory garage entrance along with the NYPD Stable and an entry for the auto dealership would be located a half-block to the west. Without mitigation, the westbound approach would be impacted in the weekday PM and Saturday midday peak hours.

Table 19-1,
Proposed 2011 Traffic Mitigation Measures

Intersection	Approach	No-Build Signal Timing (Seconds) (1)	Proposed Mitigation	
			Mitigation Signal Timing (Seconds) (1)	Description of Mitigation
10th Avenue (NB) @	NB	55 (all times)	53/53/53/55	Transfer 2 sec from NB phase to EB in AM , MD & PM
W. 52nd Street (EB)	EB	35 (all times)	37/37/37/35	
10th Avenue (NB) @	NB	55 (all times)	55/55/54/53	Transfer 1 sec from NB phase to WB in PM
W. 53rd Street (WB)	WB	35 (all times)	35/35/36/37	Transfer 2 sec from NB phase to WB in Sat MD
10th Avenue (NB) @	NB/SB	55 (all times)	53/55/55/55	Transfer 2 sec from NB phase to EB in AM
W. 54th Street (EB)	EB	35 (all times)	37/35/35/35	
11th Avenue (NB/SB) @	NB/SB	50/63/63/63	51/63/63/63	Transfer 1 sec from WB phase to NB/SB in AM
W. 51st Street (WB)	WB	40/27/27/27	39/27/27/27	
11th Avenue (NB/SB) @	NB/SB	50/63/63/63	49/62/62/62	Transfer 1 sec from NB/SB phase to EB in AM, MD, PM & Sat MD
W. 52nd Street (EB)	EB	40/27/27/27	41/28/28/28	
11th Avenue (NB/SB) @	NB/SB	54/63/63/63	54/60/60/61	Transfer 3 sec from NB/SB phase to WB in MD & PM
W. 53rd Street (WB)	WB	36/27/27/27	36/30/30/29	Transfer 2 sec from NB/SB phase to WB in Sat MD

Notes:

(1) Signal timings shown indicate green plus yellow (including all-red) for each phase. AM/MD/PM/Sat 1-2PM

Table 19-2, 2011 Traffic Mitigation, Weekday AM Peak Hour

SIGNALIZED INTERSECTIONS	LANE GROUP	No 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
10th Avenue										
10th Ave. (NB) @ 52nd St. (EB)	EB-L	1.43	235.5	F *	1.49	261.9	F *	1.40	216.9	F
	NB-TR	0.64	10.2	B	0.64	10.4	B	0.67	12.0	B
10th Ave. (NB) @ 54th St. (EB)	EB-LT	0.83	42.2	D	0.90	50.4	D *	0.84	41.4	D
	NB-TR	0.70	11.0	B	0.70	11.0	B	0.73	13.0	B
11th Avenue										
11 Ave. (N-S) @ 51st St. (WB)	WB-LTR	0.76	34.6	C	0.79	36.7	D	0.82	39.7	D
	NB-L	0.25	18.5	B	0.27	20.6	C	0.26	18.7	B
	NB-T	0.37	11.4	B	0.38	11.4	B	0.37	10.7	B
	SB-TR	0.99	40.0	D *	1.03	50.5	D *	1.01	43.5	D
11 Ave. (N-S) @ 52nd St. (EB)	EB-LTR	1.13	106.8	F *	1.16	114.7	F *	1.12	101.4	F
	NB-TR	0.44	12.2	B	0.45	12.3	B	0.46	13.1	B
	SB-L	0.49	17.2	B	0.54	19.1	B	0.56	20.7	C
	SB-T	0.95	31.4	C *	0.98	37.8	D	1.00	44.3	D

Key: * Congested intersection in No-Build (asterisk, no shading)
* Impacted intersection in Build without mitigation (asterisk, shading)

Table 19-2, 2011 Traffic Mitigation, Weekday Midday Peak Hour

SIGNALIZED INTERSECTIONS	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
10th Avenue										
10th Ave. (NB) @ 52nd St. (EB)	EB-L	0.92	52.0	D *	0.97	61.5	E *	0.91	47.6	D
	NB-TR	0.74	12.1	B	0.74	12.1	B	0.77	14.3	B
11th Avenue										
11 Ave. (N-S) @ 52nd St. (EB)	EB-LTR	1.29	183.2	F *	1.32	194.2	F *	1.26	167.2	F
	NB-TR	0.24	3.4	A	0.25	3.4	A	0.25	3.9	A
	SB-L	0.17	3.7	A	0.20	3.9	A	0.20	4.4	A
	SB-T	0.65	6.4	A	0.67	6.7	A	0.68	7.4	A
11 Ave. (N-S) @ 53rd St. (WB)	WB-L	0.73	46.6	D	0.88	62.2	E *	0.74	43.4	D
	WB-R	0.55	38.1	D	0.64	42.4	D	0.55	34.7	C
	NB-T	0.25	3.4	A	0.25	3.4	A	0.26	4.8	A
	SB-T	0.58	5.6	A	0.59	5.6	A	0.62	7.7	A

Key: * Congested intersection in No-Build (asterisk, no shading)
* Impacted intersection in Build without mitigation (asterisk, shading)

Table 19-2 continued), 2011 Traffic Mitigation, Weekday PM Peak Hour

SIGNALIZED INTERSECTIONS	LANE GROUP	V/C RATIO	Delay (sec.)	LOS		V/C RATIO	Delay (sec.)	LOS		V/C RATIO	Delay (sec.)	LOS
10th Avenue												
10th Ave. (NB) @ 52nd St. (EB)	EB-L	1.00	67.8	E	*	1.05	83.0	F	*	0.98	61.7	E
	NB-TR	0.52	8.9	A		0.53	9.4	A		0.55	10.4	B
10th Ave. (NB) @ 53rd St. (WB)	WB-TR	0.97	61.2	E	*	1.00	67.6	E	*	0.96	58.7	E
	NB-LT	0.53	8.9	A		0.54	9.0	A		0.55	9.8	A
11th Avenue												
11 Ave. (N-S) @ 52nd St. (EB)	EB-LTR	1.20	145.7	F	*	1.25	168.2	F	*	1.20	144.5	F
	NB-TR	0.19	3.2	A		0.19	3.2	A		0.20	3.6	A
	SB-L	0.24	4.2	A		0.27	4.5	A		0.27	5.0	A
	SB-T	0.68	6.8	A		0.71	7.2	A		0.72	8.1	A
11 Ave. (N-S) @ 53rd St. (WB)	WB-L	0.56	37.6	D		0.76	48.8	D	*	0.64	37.7	D
	WB-R	1.00	89.7	F	*	1.13	132.0	F	*	0.96	75.6	E
	NB-T	0.18	3.2	A		0.18	3.2	A		0.19	4.5	A
	SB-T	0.67	6.5	A		0.67	6.6	A		0.70	9.1	A

Key: * Congested intersection in No-Build (asterisk, no shading)
* Impacted intersection in Build without mitigation (asterisk, shading)

Table 19-2 (continued), 2011 Traffic Mitigation, Saturday Midday Peak Hour

SIGNALIZED INTERSECTIONS	LANE GROUP	NO BUILD Sat MD PEAK HOUR				BUILD Sat MD PEAK HOUR				Mitigation Sat MD PEAK		
		V/C RATIO	Delay (sec.)	LOS		V/C RATIO	Delay (sec.)	LOS		V/C RATIO	Delay (sec.)	LOS
10th Avenue												
10th Ave. (NB) @ 53rd St. (WB)	WB-TR	0.96	61.0	E	*	1.01	72.4	E	*	0.94	55.1	E
	NB-LT	0.71	11.4	B		0.74	11.8	B		0.76	13.7	B
11th Avenue												
11 Ave. (N-S) @ 52nd St. (EB)	EB-LTR	1.10	109.7	F	*	1.14	124.6	F	*	1.09	104.8	F
	NB-TR	0.19	3.5	A		0.27	3.5	A		0.27	4.0	A
	SB-L	0.20	3.9	A		0.22	4.1	A		0.22	4.6	A
	SB-T	0.62	5.9	A		0.70	5.6	A		0.65	7.0	A
11 Ave. (N-S) @ 53rd St. (WB)	WB-L	0.57	38.1	D		0.73	46.7	D	*	0.65	39.4	D
	WB-R	1.09	115.5	F	*	1.18	148.4	F	*	1.05	100.8	F
	NB-T	0.24	3.4	A		0.24	3.4	A		0.25	4.3	A
	SB-T	0.58	5.5	A		0.58	5.6	A		0.60	6.9	A

Key: * Congested intersection in No-Build (asterisk, no shading)
* Impacted intersection in Build without mitigation (asterisk, shading)

These impacts could be mitigated by shifting 1 second of green time from the northbound phase to the westbound phase in the weekday PM peak hour and 2 seconds of green time from the northbound phase to the westbound phase in the Saturday midday peak hour. As shown in Table 19-2, with this proposed signal timing adjustment, in the weekday PM peak hour the westbound approach congestion would be reduced to 58.7 seconds of delay (LOS E) as compared to 61.2 seconds (LOS E) under No-Build conditions, and in the Saturday midday peak hour it would be reduced to 55.1 seconds of delay (LOS E) as compared to 61.0 seconds of delay (LOS E) under No-Build conditions.

Tenth Avenue and W. 54th Street

At this intersection, which would be traversed by vehicles exiting the project site via the one-way eastbound W. 54th Street, the eastbound approach in the weekday AM would be impacted.

These impacts could be mitigated in the weekday AM peak hour by shifting 2 seconds of green time from the northbound phase to eastbound phase in the AM peak hour. With the proposed mitigation, delay would be reduced to 41.4 seconds (LOS D), i.e., less than mid-level LOS D (45.0 seconds).

Eleventh Avenue and W. 51st Street

This intersection is located two blocks south of the project site and is intersected by the two-way Eleventh Avenue and the one-way westbound W. 51st Street. At this location the southbound movement would be impacted in the AM peak hour.

These impacts could be mitigated by shifting 1 second of green time from the westbound phase to the northbound/southbound phase in the AM peak hour. With the proposed mitigation, the southbound movement would be reduced to 43.5 seconds of delay, i.e., below mid-level LOS D (45.0).

Eleventh Avenue and W. 52nd Street

This intersection would process project-generated vehicles both traveling to and from the project site, with vehicles traversing the eastbound, northbound, and southbound approaches. Without mitigation, the eastbound approach would be impacted in the weekday AM, midday, PM and Saturday midday peak hours.

Theses impacts could be mitigated by shifting 1 second of green time from the northbound/southbound phase to the eastbound phase in all peak hours. With this proposed mitigation, delay on the eastbound approach in the AM peak hour would be reduced to 101.4 seconds (LOS F) as compared to 106.8 seconds (LOS F) under No-Build conditions; in the midday peak hour delay would be reduced to 167.2 seconds (LOS F) as compared to 183.2 seconds (LOS F) under No-Build conditions; in the PM peak hour delay would be reduced to 144.5 (LOS F) as compared to 145.7 seconds (LOS F) under No-Build conditions; and in the Saturday midday peak hour delay would be reduced to 104.8 seconds (LOS F) as compared to 109.7 seconds (LOS F) under No-Build conditions.

Eleventh Avenue and W. 53rd Street

This T-intersection, located adjacent to the project site, would process the greatest number of project-generated vehicles. In particular, the westbound approach at this intersection would experience increased delays from project-generated vehicles, particularly vehicles exiting the accessory parking garage. Without mitigation, the westbound left turn and right turn movements would be impacted in the weekday PM, and Saturday midday peak hours and the westbound left turn movement also would be impacted in the weekday midday peak hour.

These impacts could be mitigated by shifting 3 seconds of green time from the northbound/southbound phase to the westbound phase in the weekday midday and PM peak hours, and shifting 2 seconds of green time from the northbound/southbound phase to the westbound phase in the Saturday midday peak hour. With the proposed mitigation, delay on the westbound left turn in the weekday midday would be reduced to 43.4 seconds (LOS D) as compared to 46.6 seconds (LOS D) under No-Build. In the PM peak hour, delay on the westbound left would be reduced to 37.7 seconds (LOS D), i.e., below mid-LOS D and on the westbound right would be reduced to 75.6 seconds (LOS E) as compared to 89.7 second (LOS F) under No-Build conditions. In the Saturday midday peak hour, delay on the westbound left would be reduced to 39.4 seconds of delay, i.e., below mid-level LOS D (45.0), and on the westbound right would be reduced to 100.8 seconds (LOS F) as compared to 115.5 seconds (LOS F) under No-Build conditions.

C. CONCLUSION

Elementary Schools

The proposed action will result in significant adverse impacts on elementary schools within the half-mile radius study area. Preliminary mitigation options to address this impact will be explored with DOE and SCA between the Draft and Final EIS.

Day Care

New CEQR multipliers for day care analyses are in development, and are expected to be released between DEIS and FEIS. Since the new multipliers are not known at this time, but could result in a need for a detailed analysis, it is assumed for the purpose of this DEIS that the proposed project's 180 affordable units would cause a significant adverse impact on publicly funded day care facilities.

Once the new CEQR multipliers are confirmed, the analysis will be updated accordingly. If mitigation is determined not to be feasible, the action could result in an unavoidable significant adverse impact on daycare facilities.

Shadows

The proposed action would result in significant adverse shadows impacts on the stained glass window located on Centro Maria, the former Saint Ambrose Church located at 539 W. 54th Street. This building is eligible State/National Register listing. Possible measures to partially or completely

mitigate this impact will be explored between the Draft and Final EIS. If mitigation is not identified, this impact would remain unmitigated.

Traffic

As noted in Chapter 13, "Traffic and Parking," the traffic data collection and resulting study area traffic conditions reflect operations when cruise vessels were calling at the Passenger Ship Terminal and a large trade show was held at Pier 92/94, and may be considered conservative for impact analysis purposes. However, the significant adverse traffic impacts identified at six study area intersections could be readily mitigated by minor adjustments to signal timing. With the implementation of these measures, all of the project's anticipated traffic impacts could be mitigated.