A. INTRODUCTION

This chapter of the EIS describes the traffic and parking characteristics and potential impacts associated with the proposed project. As described in Chapter 1, "Project Description," the proposed project would include 900 dwelling units (DUs), 8,800 gsf of local retail space, 330,000 gsf of auto showroom and maintenance, a 20,000 gsf public health club, 36,000 gsf NYPD stables, and 225 accessory parking spaces. Vehicle access to the site would be via curb cuts along W. 53rd Street and W. 54th Street (see Figure 1-6, in Chapter 1).

The project site is presently vacant and undergoing as-of-right foundation work and is conservatively assumed to be vacant under No-Build conditions. The primary vehicle routes to and from the site are expected to be Twelfth Avenue/Miller Highway (Route 9A), Eleventh Avenue, and Tenth Avenue, with local access via W. 53rd and W. 54th Streets. Public transit in the vicinity of the site consists of three local bus routes, the north-south running M11, and cross-town service provided by the M31 and M57. Subway service on both IRT and IND lines is available at the W. 59th Street-Columbus Circle subway station, located approximately one-half mile to the east of the site with an entrance at W. 57th Street and Eighth Avenue. Other nearby subway stations are at W. 50th/ 51st Streets at Seventh and Eighth Avenues and W. 53rd Street at Broadway. Pedestrian activity is relatively light on sidewalks immediately adjacent to the site. Sidewalks on blocks to the east experience progressively higher volumes. Refer to Chapter 14, "Transit and Pedestrians," for more details.

B. METHODOLOGY

The study area selected for the traffic analysis is shown in Figure 13-1. The area was selected to encompass those roadways and other facilities most likely to be used by the majority of persons and vehicles traveling to and from the site. The study area is bounded on the north by W. 57th Street, on the south by W. 51st Street, on the east by Tenth Avenue, and on the west by Twelfth Avenue. Sixteen intersections within the study area are analyzed for vehicular traffic during the weekday AM (8-9 AM), weekday midday (12-1 PM), weekday PM (5-6 PM), and Saturday midday (1-2 PM) peak hours. All sixteen of these are signal-controlled intersections. As the proposed project's 225 parking space accessory garage would not fully accommodate projected demand, the analysis also includes an evaluation off-street public parking facilities in the area.

This chapter describes in detail the 2008 existing conditions for traffic and parking in the study area. The 2011 future conditions without the project (the No-Build condition) are then determined, including additional transportation-system demand and any changes in the roadways and parking systems expected by 2011. The increase in travel demand resulting from the proposed project is then projected and added to future No-Build conditions to develop the 2011 Build condition for detailed analysis. Significant impacts from project generated demands are then identified. Chapter 19 of this EIS presents proposed measures to mitigate any transportation or other impacts associated with the proposed project.

B. EXISTING CONDITIONS

The existing 2008 traffic conditions in the study area were developed from data collected in May and June 2007 and Saturday midday data collected in October 2007. This data collection included turning movement counts, automatic traffic recorder (ATR) data, and vehicle classification counts. This data was updated in May 2008 with additional counts along Tenth and Eleventh Avenues, and at the access points to Pier 92/94 to account for a large trade show, and new network wide ATR counts. Lastly, the 2008 network was supplemented with a cruise vessel in port along with the above-mentioned trade show. Accordingly, the existing 2008 traffic network presented in this chapter conservatively shows conditions that occurs when a large trade show is in operation and there is a cruise ship in port. Parking data collection took place in June, October and November 2007, and April, May and October 2008 . Secondary sources, such as the *534 West 49th Street EAS*, 2007 (CEQR no. 07DCP043M), *West 61st Street Rezoning and City-wide General Large-Scale Development Text Amendment FEIS,* 2006 (CEQR no. 05DCP063Y), *Clinton Green EAS*, 2004 (CEQR no. 04HPD011M), were also consulted. Figures 13-2, 13-3, 13-4, and 13-5 show the resultant traffic volumes for existing conditions during the weekday AM, midday, PM, and Saturday midday peak hours, respectively.

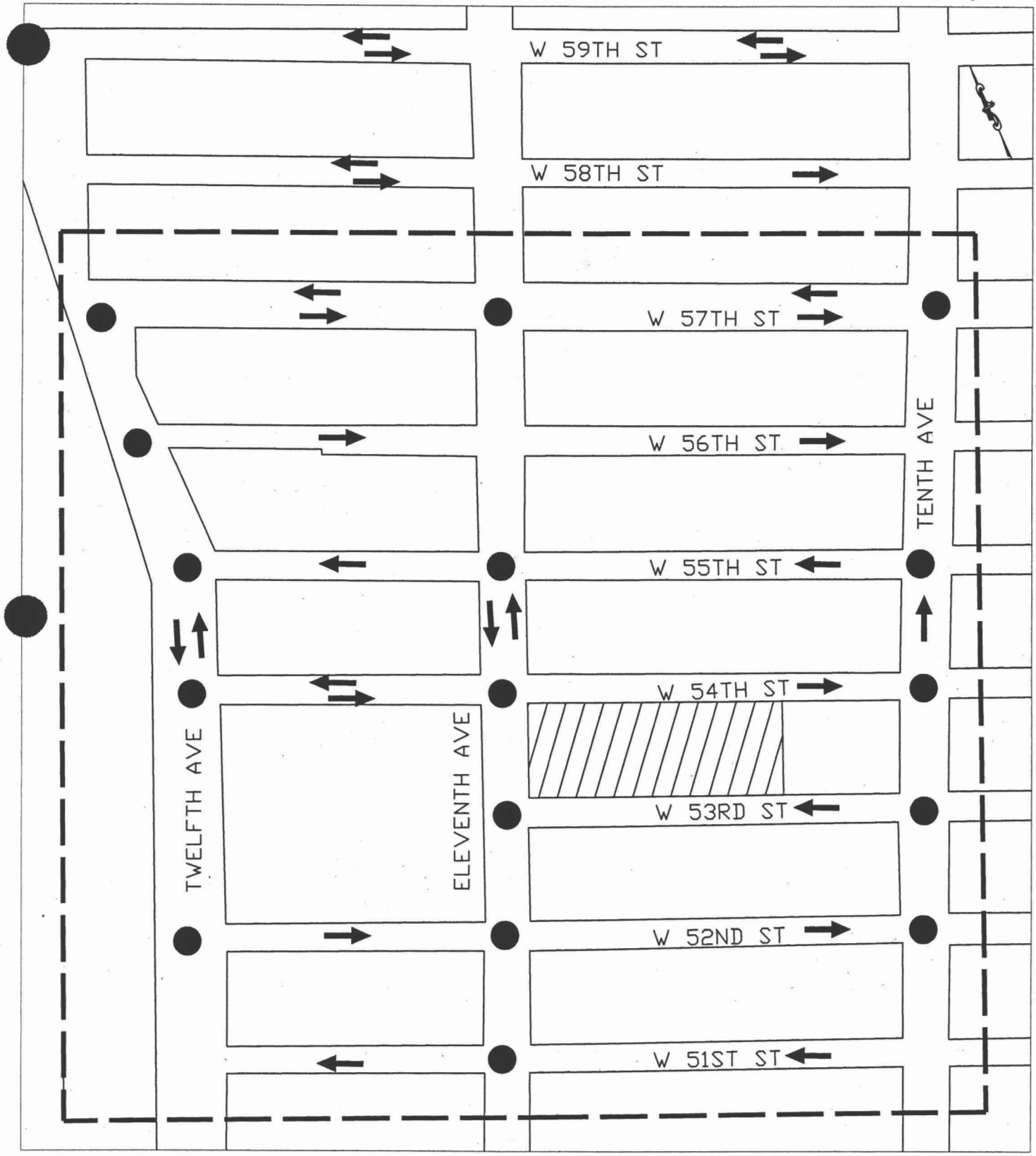
Vehicular Traffic

The study area is typical of the Manhattan grid, composed of major north-south avenues and principal and minor east-west cross-streets. To the east, Broadway traverses the grid diagonally, intercepting the pattern at W. 65th Street/Columbus Avenue and W. 59th Street/Columbus Circle. On the western edge of the grid is Twelfth Avenue/Route 9A, which extends from the Henry Hudson and George Washington bridges in the north to South Ferry at the southern tip of Manhattan. Twelfth Avenue, which is two-way, generally has six to eight lanes. There are protected left-turn bays at most cross-streets. Twelfth Avenue serves as a distribution roadway for highway traffic, as well as serving as the western-most express arterial in Manhattan. Twelfth Avenue two-way peak hour traffic volumes vary from approximately 5,400 vph to 6,100 vph near W. 55th Street. The avenue does not host any NYCT bus routes along its length.

The Manhattan Cruise Terminal (formerly the New York Passenger Ship Terminal) is located on the west side of Twelfth Avenue between W. 54th and W. 46th Streets. The terminal generates substantial traffic when one or more vessels are in port. During the data collection for this project, cruise vessels were in port. Specifically, when weekday data was collected, one vessel, the MS Silver Shadow was in port, while during the Saturday data collection, three vessels, Carnival Miracle, MS Noordam, and Norwegian Spirit were in port. In addition, along Twelfth Avenue supplemental data collection was conducted during a major trade show at the Pier 92/94 to identify traffic patterns during a major event at the existing conference center located there.

East of Twelfth Avenue is Eleventh Avenue, a two-way arterial with two lanes in each direction plus parking. Parking is typically restricted, especially southbound in AM peak hour. The avenue, which is 70 feet wide, provides left-turn lanes at most intersections. Southbound volumes range from 900 to1,250 vph in the AM peak period and from 400 to 550 vph northbound in the PM peak period. Because Eleventh Avenue commences northbound traffic flow just south of the study area at W. 44th Street, the northbound volume is substantially lower than southbound volumes in most peak periods.

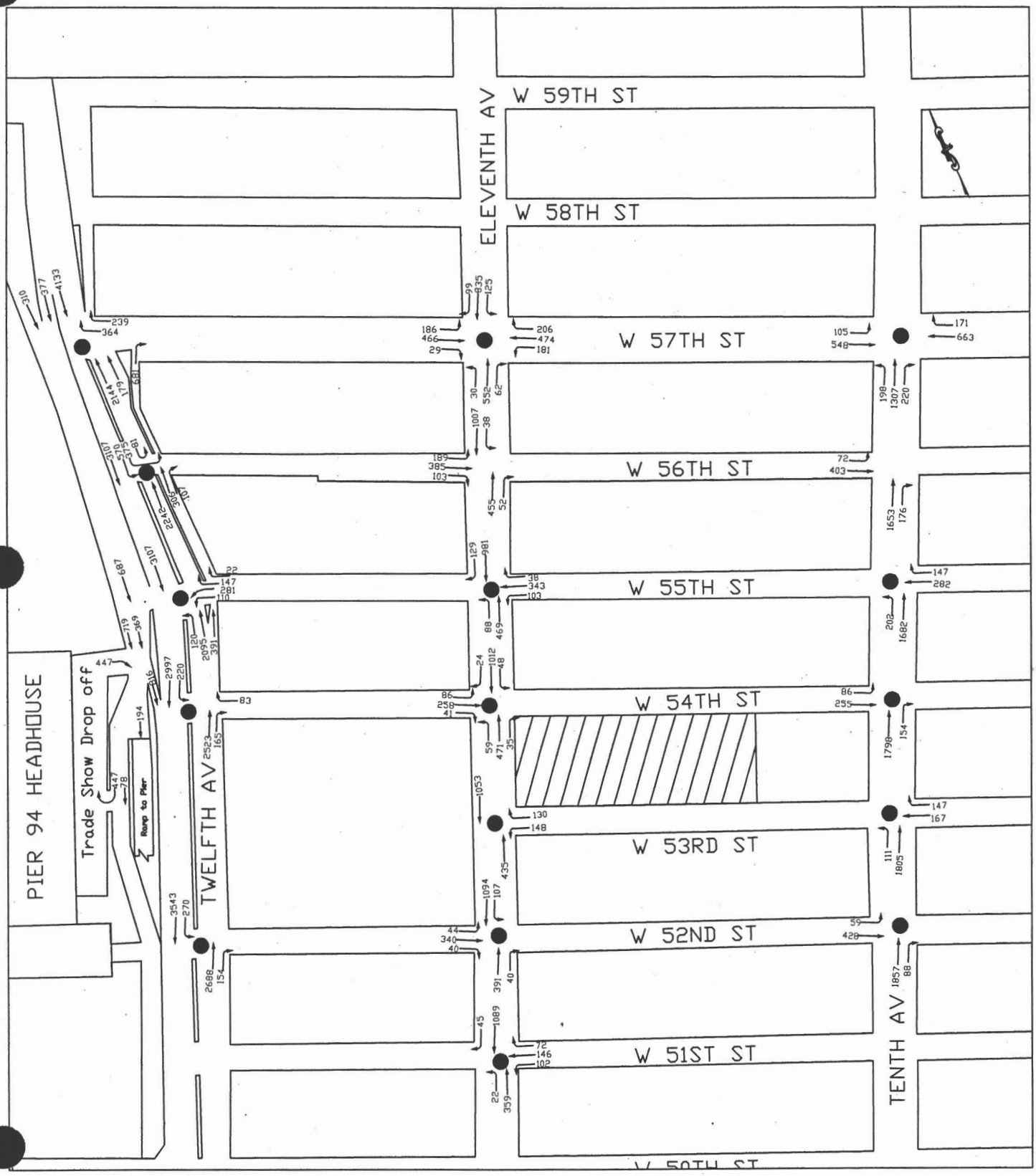
Figure 13-1
Traffic Study Area



Legend

Traffic Study Area Intersection Analysed

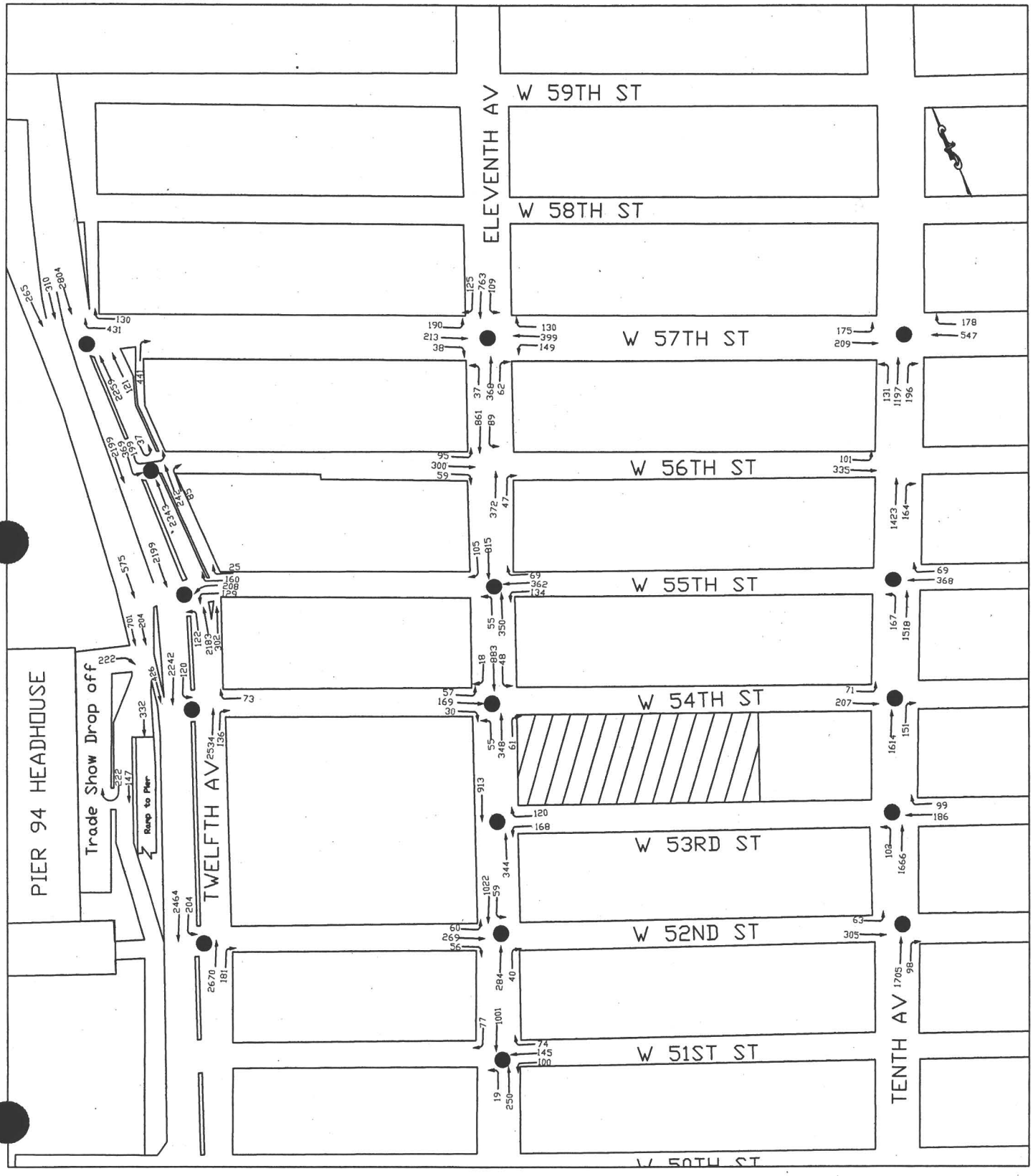
2008 Existing AM Traffic Volumes



LEGEND: ● Analyzed Intersection

Figure 13-3

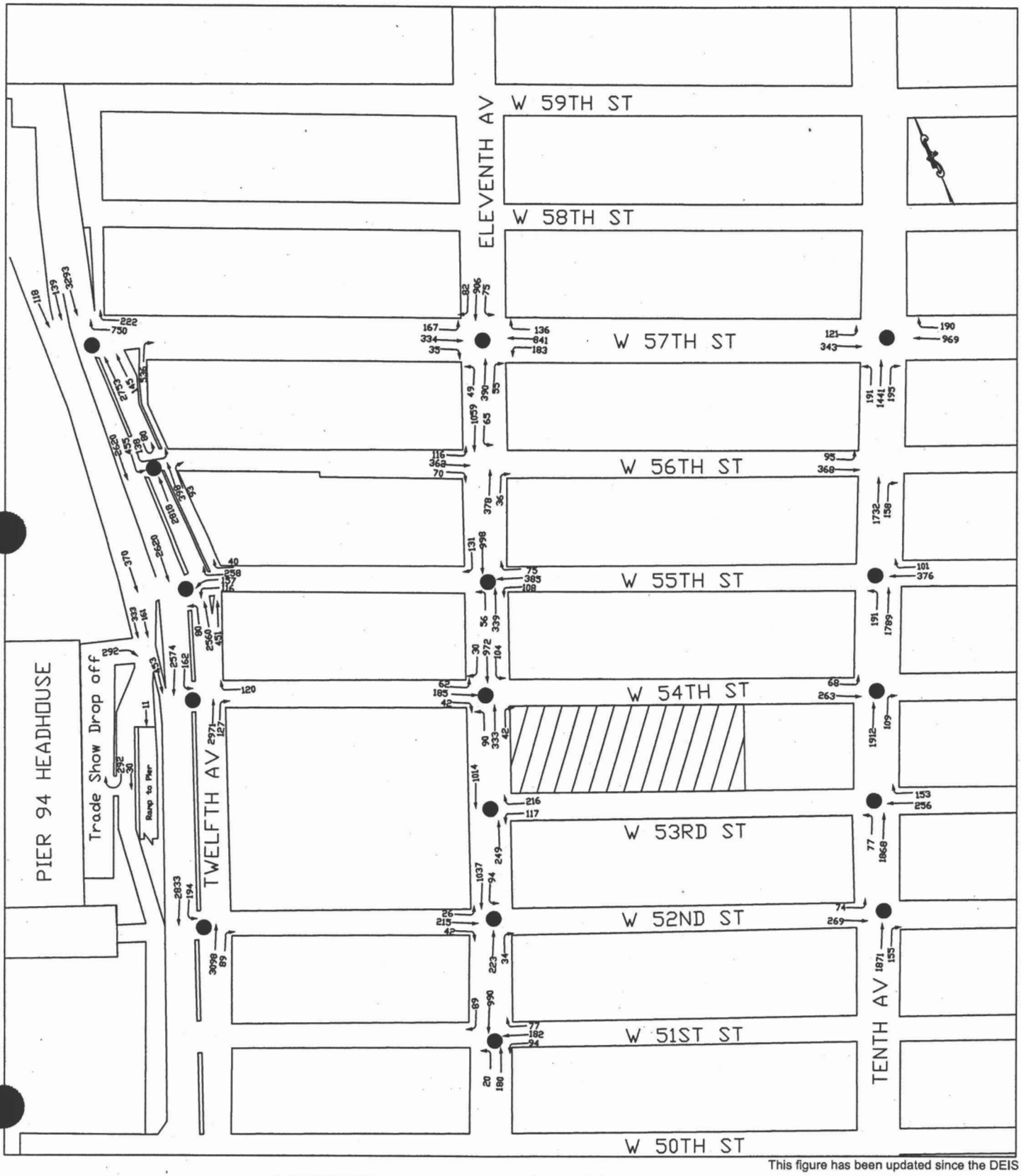
2008 Existing MD Traffic Volumes



LEGEND: ● Analyzed Intersection

Figure 13-4

2008 Existing PM Traffic Volumes



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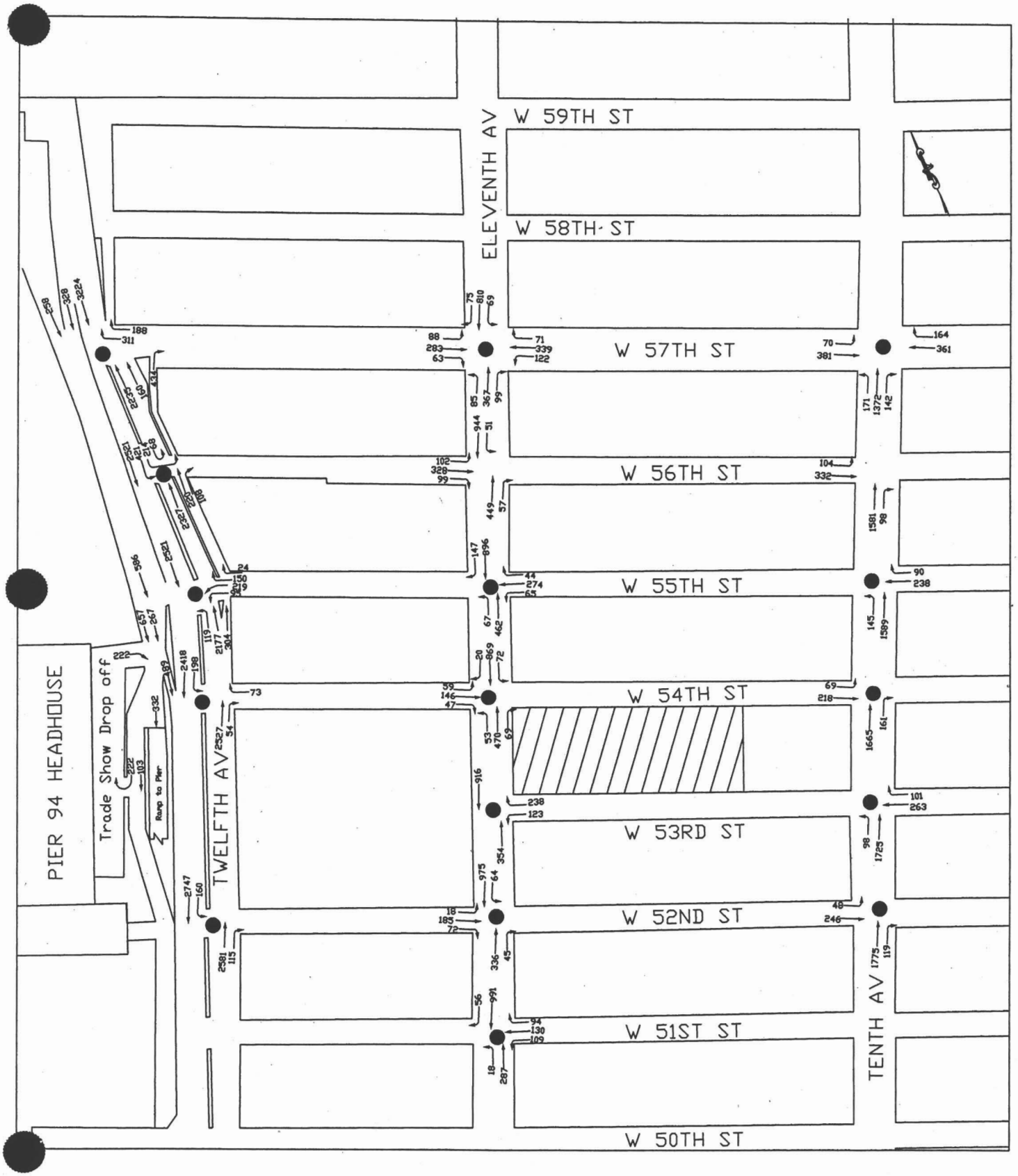
LEGEND: ● Analyzed Intersection

Figure 13-5

2008 Existing Sat MD Traffic Volumes



LEGEND: ● Analyzed Intersection

Eleventh Avenue south of W. 57th Street does not have a regular NYCT bus route however, M31 route ends with a turn-around at the avenue (see discussion in Chapter 14).

Tenth Avenue and Ninth Avenue are adjacent one-way arterials forming a main north-south arterial couplet and truck routes on the West Side. Tenth Avenue is northbound, has five traffic lanes plus parking, and has its heaviest peak traffic flow in the PM period with peak hour volumes ranging from 1,800 to 2,000 vph in the study area. Ninth Avenue just east of the study area is southbound and contains four traffic lanes plus parking in the study area. Traffic on Ninth Avenue peaks in the AM with peak hour volumes ranging between 1,700 and 2,200 vph.

The principal cross-street in the study area is W. 57th Street. W. 57th Street, which is the northern boundary of the study area, has a 60-foot-travelway that provides two travel lanes in each direction plus parking. It commences at Twelfth Avenue and is therefore an attractive cross-street for through traffic flows. W. 57th Street carries a two-way volume between 1,150 vph to 1,300vph, in the study area. This major cross-street also hosts the M57 and M31 bus routes in the study area.

Adjacent to the project site are W. 53rd Street and W. 54th Street, both local streets on the Manhattan grid. Each roadway is 30 to 32 feet in width between Eleventh and Tenth Avenues, with W. 53rd Street one-way westbound and W. 54th Street one-way eastbound. However, W. 54th Street is two-way for the one block segment between Eleventh and Twelfth Avenues. W. 53rd Street ends directly west of the project site in a T-intersection at Eleventh Avenue, as De Witt Clinton Park occupies a two-square block area bounded by W. 54th Street, Eleventh Avenue, W. 52nd Street, and Twelfth Avenue. Both of these cross-streets have low traffic volumes with peak hour volumes ranging between 300 and 500 vehicles per hour.

Capacity Analysis

The capacity analyses at study area intersections are based on the methodology presented in the *Highway Capacity Software Version HCS+ 5.23*. Traffic data required for these analyses includes volumes on each approach, as well as various other physical and operational characteristics. Signal timing plans for each intersection were obtained from NYCDOT. Field inventories were also conducted to document curbside parking regulations, vehicle classifications, and other relevant characteristics.

The HCM methodology expresses quality of flow in terms of level of service (LOS), which is based on the amount of delay that a driver typically experiences at an intersection. Levels of service range from A, with minimal delay, to F, which represents long delays and congestion. Generally, congestion and poor service are characterized by both LOS E and F. The following defines the LOS/delay relationship for the HCM methodology for signalized intersections

Intersection Level of Service Criteria

Level of Service (LOS)	Average Delay per Vehicle (seconds) Signalized Intersections	Unsignalized Intersections
A	less than 10.1	less than 10.1
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	greater than 80.0	greater than 50.0

Source:*2000 Highway Capacity Manual.*

The methodology also provides a volume-to-capacity (v/c) ratio for intersection traffic movements. A ratio of under 0.85 is generally considered to represent non-congested conditions in Manhattan, whereas above this value, congestion increases. At a v/c ratio of between 0.95 and 1.0, near-capacity conditions are reached and delays can become substantial. Ratios of greater than 1.05 indicate saturated conditions with queuing.

There is also one stop-controlled, unsignalized intersection approach analyzed in the study area.

For unsignalized intersections, the HCM methodology generally assumes that major street traffic is not affected by minor street flows. Left turns from the major street are assumed to be affected by minor street f lows. Left turns from the major street are assumed to ve affected by the opposing, or oncoming, major street flow. Minor street traffic is obviously affected by all conflicting movements . Similar to signalized intersections, the HCM methodology expresses the quality of flow at unsignalized intersections in terms of LOS based on the amount of delay that a driver experiences. This relationship differs somewhat from the criteria used for signalized intersections, primarily because drivers expect different levels of performance from the two different kinds of transportation facilities. For unsignalized intersections, levels of service range from A, with minimal delay (10 seconds or less per vehicle), to F, which represents long delays (over 50 seconds per vehicle.)

Table 13-1 shows the results of the capacity analysis at sixteen study area intersections analyzed in the four peak hours. The table highlights (with an asterisk *) those intersection movements that operate at LOS E or F and/or have a high v/c ratio (generally 0.90 and above), and are therefore considered to be congested. Table 13-1 shows that 13 of the 16 study area intersections have one or more congested movements in one of more of the analyzed peak hours. There are 9 intersections with one or more congested movements in the weekday AM peak hour,8 in the weekday midday, 9 in the weekday PM, and 7 in the Saturday peak hours. These are discussed in more detail below.

Table 13-1, 2008 Existing Traffic Conditions

SIGNALIZED INTERSECTIONS	LANE GROUP	AM PEAK HOUR V/C RATIO	AM PEAK HOUR Delay (sec.)	AM PEAK HOUR LOS	MD PEAK HOUR V/C RATIO	MD PEAK HOUR Delay (sec.)	MD PEAK HOUR LOS	PM PEAK HOUR V/C RATIO	PM PEAK HOUR Delay (sec.)	PM PEAK HOUR LOS	Sat MD PEAK HOUR V/C RATIO	Sat MD PEAK HOUR Delay (sec.)	Sat MD PEAK HOUR LOS
10th Avenue													
10th Ave. (NB) @ 52nd St. (EB)	EB-LT	0.93	51.7	D *	0.68	32.0	C	0.65	31.0	C	0.54	28.0	C
	NB-TR	0.60	9.8	A	0.71	11.4	B	0.50	8.7	A	0.70	11.1	B
10th Ave. (NB) @ 53rd St. (WB)	WB-TR	0.70	33.7	C	0.56	28.8	C	0.83	41.7	D	0.81	41.1	D
	NB-LT	0.59	9.7	A	0.69	11.1	B	0.47	8.5	A	0.66	10.7	B
10th Ave. (NB) @ 54th St. (EB)	EB-LT	0.75	36.4	D	0.60	30.1	C	0.72	34.7	C	0.62	30.8	C
	NB-TR	0.61	9.9	A	0.70	11.3	B	0.49	8.6	A	0.67	10.8	B
10th Ave. (NB) @ 55th St. (WB)	WB-TR	1.01	72.5	E *	0.89	48.7	D	0.85	41.4	D	0.83	44.2	D
	NB-LT	0.59	9.7	A	0.66	10.8	B	0.49	8.6	A	0.63	10.3	B
10th Ave. (NB) @ 57th St. (E-W)	EB-Defl.				1.05	107.1	F *	1.05	124.2	F *			
	EB-T				0.45	23.2	C	0.70	31.2	C			
	EB-LT	1.05	74.0	E *							0.60	25.1	C
	WB-TR	0.85	32.5	C	0.81	32.0	C	1.05	69.3	E *	0.57	23.9	C
	NB-LTR	0.66	16.6	B	0.69	15.0	B	0.53	12.3	B	0.70	14.9	B
11th Avenue													
11 Ave. (N-S) @ 51st St. (WB)	WB-LTR	0.75	34.0	C	1.05	96.0	F *	1.05	94.1	F *	1.05	97.4	F *
	NB-L	0.21	16.4	B	0.09	6.7	A	0.09	6.7	A	0.08	6.7	A
	NB-T	0.31	10.8	B	0.16	3.1	A	0.11	2.9	A	0.18	3.2	A
	SB-TR	0.93	29.0	C *	0.66	6.5	A	0.67	6.6	A	0.64	6.3	A
11 Ave. (N-S) @ 52th St. (EB)	EB-LTR	0.80	35.0	C	1.05	92.4	F *	0.83	51.5	D	0.83	51.8	D
	NB-TR	0.38	11.5	B	0.21	3.3	A	0.16	3.1	A	0.25	3.4	A
	SB-L	0.36	13.7	B	0.13	3.4	A	0.19	3.8	A	0.15	3.5	A
	SB-T	0.89	24.5	C	0.61	5.9	A	0.63	6.1	A	0.59	5.6	A
11 Ave. (N-S) @ 53th St. (WB)	WB-L	0.40	25.1	C	0.64	41.3	D	0.46	34.3	C	0.48	34.7	C
	WB-R	0.39	25.3	C	0.51	36.6	D	0.94	76.6	E *	1.03	98.9	F *
	NB-T	0.35	8.6	A	0.22	3.3	A	0.15	3.0	A	0.22	3.3	A
	SB-T	0.78	15.6	B	0.55	5.2	A	0.61	5.9	A	0.55	5.3	A
11 Ave. (N-S) @ 54th St. (EB)	EB-LTR	0.48	24.9	C	0.42	30.6	C	0.49	31.8	C	0.43	30.8	C
	NB-L	0.40	15.1	B	0.21	4.7	A	0.36	7.3	A	0.20	4.6	A
	NB-TR	0.40	9.1	A	0.27	3.5	A	0.23	3.3	A	0.35	3.9	A
	SB-L	0.15	7.9	A	0.11	3.3	A	0.22	4.1	A	0.19	3.9	A
	SB-TR	0.70	13.0	B	0.54	5.2	A	0.61	5.9	A	0.54	5.2	A

Table 13-1, 2008 Existing Traffic Conditions

SIGNALIZED INTERSECTIONS	LANE GROUP	AM PEAK HOUR V/C RATIO	AM PEAK HOUR Delay (sec.)	AM PEAK HOUR LOS		MD PEAK HOUR V/C RATIO	MD PEAK HOUR Delay (sec.)	MD PEAK HOUR LOS		PM PEAK HOUR V/C RATIO	PM PEAK HOUR Delay (sec.)	PM PEAK HOUR LOS		Sat MD PEAK HOUR V/C RATIO	Sat MD PEAK HOUR Delay (sec.)	Sat MD PEAK HOUR LOS	
11 Ave. (N-S) @ 55th St. (WB)	WB-LTR	1.05	82.3	F	*	1.05	85.4	F	*	0.65	34.0	C		0.99	74.1	E	*
	NB-L	0.60	24.5	C		0.22	4.9	A		0.26	5.9	A		0.28	5.8	A	
	NB-T	0.37	8.8	A		0.22	3.3	A		0.20	3.2	A		0.26	3.4	A	
	SB-TR	0.54	10.1	B		0.37	3.8	A		0.45	4.2	A		0.38	3.8	A	
11 Ave. (N-S) @ 57th St. (E-W)	EB-L	0.79	52.2	D		0.64	36.7	D		0.69	48.0	D		0.27	21.6	C	
	EB-TR	1.05	87.7	F	*	0.72	39.4	D		1.05	89.0	F	*	1.05	91.5	F	*
	WB-L	0.70	47.9	D		0.47	27.2	C		0.71	44.9	D		0.47	32.6	C	
	WB-TR	0.96	56.2	E	*	0.77	35.9	D		1.05	74.8	E	*	0.57	29.5	C	
	NB-L	0.26	17.9	B		0.26	17.5	B		0.50	31.1	C		0.66	38.6	D	
	NB-TR	0.39	14.9	B		0.25	13.6	B		0.28	13.7	B		0.29	13.9	B	
	SB-L	0.55	27.1	C		0.37	20.1	C		0.28	18.2	B		0.25	17.7	B	
	SB-TR	0.76	22.2	C		0.72	20.8	C		0.84	25.6	C		0.73	21.0	C	
12th Avenue																	
12 Ave. (N-S) @ 52th St. (EB)	NB-TR	0.80	17.2	B		0.87	19.9	B		0.88	17.2	B		0.81	17.8	B	
	SB-L	1.05	133.8	F	*	1.05	131.5	F	*	1.01	132.4	F	*	1.05	138.4	F	*
	SB-T	0.74	3.4	A		0.57	4.7	A		0.61	2.6	A		0.66	5.3	A	
12 Ave. (N-S) @ 54th St. (EB)	WB-R	0.37	55.9	E	*	0.25	38.6	D		0.52	61.9	E	*	0.25	38.7	D	
	NB-TR	0.58	2.6	A		0.64	5.1	A		0.68	3.1	A		0.60	4.9	A	
	SB-L	0.66	64.4	E	*	0.30	39.0	D		0.51	59.6	E	*	0.50	43.3	D	
	SB-T	0.64	2.9	A		0.52	4.3	A		0.57	2.5	A		0.58	4.7	A	
	SB-T (Service Road)	0.63	4.5	A		0.36	4.2	A		0.36	2.3	A		0.42	4.6	A	
12 Ave. (N-S) @ 55th St. (WB)	WB-L	1.05	117.3	F	*	0.86	62.9	E	*	0.90	87.0	F	*	0.79	55.4	E	*
	WB-R	0.40	55.3	E	*	0.32	38.7	D		0.64	61.7	E	*	0.30	38.5	D	
	NB-L	1.05	166.7	F	*	0.88	101.6	F	*	0.38	45.1	D		0.84	95.7	F	*
	NB-T	0.45	2.0	A		0.52	4.8	A		0.57	2.5	A		0.51	4.8	A	
	SB-T	0.76	10.1	B		0.72	16.5	B		0.67	10.0	A		0.75	17.0	B	
	NB-T	0.30	2.1	A		0.26	4.0	A		0.36	2.4	A		0.26	4.0	A	
	SB-T (Service Road)	0.34	12.9	B		0.36	16.7	B		0.13	11.5	B		0.35	16.6	B	
12 Ave. (N-S) @ 56th St. (WB)	NB-T	0.77	30.6	C		0.53	2.6	A		0.67	5.5	A		0.52	2.6	A	
	SB-L	0.64	27.4	C		0.92	66.2	E	*	0.86	65.8	E	*	0.99	77.5	E	*
	NB-TR (Service Road)	0.29	21.9	C		0.15	1.7	A		0.23	3.3	A		0.15	1.7	A	
12 Ave. (N-S) @ 57th St. (WB)	WB-R	0.39	32.8	C		0.56	39.3	D		1.04	95.1	F	*	0.50	38.2	D	
	NB-T	0.54	16.8	B		0.47	5.4	A		0.55	4.5	A		0.46	5.4	A	

UNSIGNALIZED INTERSECTIONS	LANE GROUP	AM PEAK HOUR V/C RATIO	AM PEAK HOUR Delay (sec.)	AM PEAK HOUR LOS	MD PEAK HOUR V/C RATIO	MD PEAK HOUR Delay (sec.)	MD PEAK HOUR LOS	PM PEAK HOUR V/C RATIO	PM PEAK HOUR Delay (sec.)	PM PEAK HOUR LOS	Sat MD PEAK HOUR V/C RATIO	Sat MD PEAK HOUR Delay (sec.)	Sat MD PEAK HOUR LOS
12 Ave. (NB) Service Road @ 57th St. (WB)	NB-R	0.75	18.9	C	0.48	12.2	B	0.59	14.0	B	0.48	12.1	B

Tenth Avenue Corridor

Along the Tenth Avenue corridor, in the weekday AM peak hour there are three intersection that have a congested movement. The eastbound movement at Tenth Avenue and W. 52nd Street operates with a v/c ratio of 0.93 (though it operates with a minimally acceptable LOS D). The westbound movement at Tenth Avenue and W. 55th Street operates at LOS E, with 72.5 seconds of delay and a v/c ratio of 1.01. The eastbound movement at Tenth Avenue and W. 57th Street operates at LOS E, with 74.0 seconds of delay and a v/c ratio of 1.05.

In the weekday midday peak, there is only intersection with a congested movement. At the intersection of Tenth Avenue and W. 57th Street, the eastbound (de-facto) left operates at LOS F, with 107.1 seconds of delay, and a v/c ratio of 1.05.

In the weekday PM peak hour, there is one intersection with a congested movement. The westbound movement at Tenth Avenue and W. 57th Street operates at LOS E with 69.3 seconds of delay with a v/c ratio of 1.05 and the eastbound (de-facto) left operates at LOS F, with 124.2 seconds of delay and a v/c ratio of 1.05. There are no congested intersections in the Tenth Avenue corridor in the Saturday midday peak hour.

Eleventh Avenue Corridor

Along the Eleventh Avenue corridor, there are three intersections with congested movements in the weekday AM peak hour. At Eleventh Avenue and W. 51st Street, the southbound movement operates at LOS C, but has a v/c ratio of 0.93. This indicates that the southbound volumes are heavy along this corridor but flow at relatively acceptable levels of service. Further north along this corridor, the westbound movement at the intersection of Eleventh Avenue and W. 55th Street operates at LOS F, with 82.3 seconds of delay, with a v/c ratio of 1.05. At Eleventh Avenue and W. 57th Street the eastbound through-right movement operates at LOS F, with 87.7 seconds of delay, and a v/c ratio of 1.05 and the westbound through-right movement operates at LOS E, with 56.2 seconds of delay and a v/c ratio of 0.96.

During the weekday midday peak hour, there are three intersections with congested movements. At the intersection of Eleventh Avenue and W. 51st Street the westbound movement operates at LOS F with 96.0 seconds of delay and v/c ratio of 1.05. At the intersection of Eleventh Avenue and W. 52nd Street, the eastbound movement operates at LOS F, with 92.4 seconds of delay and v/c ratio of 1.05. The westbound movement at Eleventh Avenue and W. 55th Street is congested, operating at LOS F, with 85.4 seconds of delay and a v/c ratio of 1.05.

During the weekday PM peak hour, there are three intersections with congested movements, all on cross-street approaches. At Eleventh Avenue and W. 51st Street, the westbound movement operates at LOS F, with 94.1 seconds of delay, and a v/c ratio of 1.05. At Eleventh Avenue and W. 53rd Street, the westbound right operates at LOS E, with 76.6 seconds of delay, and a v/c ratio of 0.94. At Eleventh Avenue and W. 57th Street, the eastbound through-right movement operates at LOS F, with 89.0 seconds of delay, and a v/c ratio of 1.05 and the westbound through-right movement operates at LOS E with 74.8 seconds of delay and a v/c ratio of 1.05.

During the Saturday midday peak hour, there are four intersections with congested movements, all on cross-street approaches. At Eleventh Avenue and W. 51st Street, the westbound movement operates at LOS F, with 97.4 seconds of delay, and a v/c ratio of 1.05. At Eleventh Avenue and W. 53rd Street, the westbound right lane group operates at LOS F, with 98.9 seconds of delay, and a v/c ratio of 1.03. At Eleventh Avenue and W. 55th Street, the westbound movement also operates at LOS E, with 74.1 seconds of delay, and a v/c ratio of 0.99. At Eleventh Avenue and W. 57th Street, the eastbound through-right movement also operates at LOS F, with 91.5 seconds of delay, and a v/c ratio of 1.05

As noted previously in this chapter, cruise activity at the nearby Manhattan Cruise Terminal was high during the data collection phase, reflected in the above findings along Eleventh Avenue cross-streets.

Twelfth Avenue

During the weekday AM peak hour, there are three intersections with congested movements in the Twelfth Avenue corridor. The southbound left turn movement at Twelfth Avenue and W. 54th Street operates at LOS E, with 64.4 seconds of delay. However it operates with a v/c ratio of 0.66 which reflects the limited green time provided to this movement's protected phase during the signal cycle. Also at this intersection, the westbound right movement operates at LOS E, with 55.9 seconds of delay, but with a v/c ratio of 0.37. At Twelfth Avenue and W. 52nd Street, the southbound left turn movement operates at LOS F, with 133.8 seconds of delay and a v/c ratio of 1.05. At Twelfth Avenue and W. 55th Street, the westbound right movement operates at LOS E, with 55.3 seconds of delay, the westbound left turn movement operates at LOS F, with 117.3 seconds of delay and a v/c ratio of 1.05 and the northbound left turn movement also operates at LOS F, with a 166.7 seconds of delay, and a v/c ratio of 1.05.

During the weekday midday peak hour, there are three intersections with congested movements, all left turns. At Twelfth Avenue and W. 52nd Street, the southbound left turn operates at LOS F, with 131.5 seconds of delay, and a v/c ratio of 1.05. At Twelfth Avenue and W. 56th Street, the southbound left turn operates at LOS E, with 66.2 seconds of delay, with a 0.92 v/c ratio. At Twelfth Avenue and W. 55th Street, the northbound left operates at LOS F, with 101.6 seconds of delay, but with a 0.88 v/c ratio. Also at this intersection, the westbound left operates at LOS E, with 62.9 seconds of delay but with a v/c ratio of 0.86.

During the weekday PM peak hour, each of the five analyzed study area intersections in this corridor has one or more congested movements. At Twelfth Avenue and W. 52nd Street, the southbound left turn operates at LOS F, with 132.4 seconds of delay, and a v/c ratio of 1.01. At Twelfth Avenue and W. 54th Street, the westbound right turn movement operates at LOS E, with 61.9 seconds of delay and the southbound left operates at LOS E, with 59.6 seconds of delay but with a 0.51 v/c ratio. At Twelfth Avenue and W. 55th Street, westbound left turn movement operates at LOS F, with 87.0 seconds of delay, and a v/c ratio of 0.90, and the westbound right movement operates at LOS E, with 61.7 seconds of delay, but with a v/c ratio of 0.64. At Twelfth Avenue and W. 56th Street, the southbound left turn movement operates at LOS E, with 65.8 seconds of delay, and a 0.86 v/c ratio. At Twelfth Avenue and W. 57th Street, the westbound movement operates at LOS F, with 95.1 seconds of delay and a v/c ratio of 1.04.

During the Saturday midday peak hour, similar to the weekday midday, there are three intersections with congested movements. At Twelfth Avenue and W. 52nd Street, the southbound left turn operates at LOS F with 138.4 seconds of delay, and the v/c ratio is 1.05. At Twelfth Avenue and W. 55th Street, the northbound left turn operates at LOS F, with 95.7 seconds, but with a v/c ratio of 0.84 and the westbound left turn movement operates at LOS E, with 55.4 seconds of delay, and a v/c ratio of 0.79. At Twelfth Avenue and W. 56th Street the southbound left operates at LOS E with 77.5 seconds of delay and a v/c ratio of 0.99.

Parking

The proposed project would have a 225-space accessory garage on the project site. However, the project's forecasted peak parking demand is expected to exceed the accessory supply. Therefore off-street public parking facilities within approximately a quarter-mile of the site were assessed for their capacities and approximate utilization during the weekday AM, weekday Midday, weekday PM, overnight, and Saturday Midday peak periods. Figure 13-6 shows the locations of these facilities and Table 13-2 shows their capacity and estimated utilization levels for 2008 Existing conditions.

The *CEQR Technical Manual* states that a quarter-mile walk is generally considered the maximum distance from primary off-site parking facilities tot the project site, although if a quarter-mile area should prove insufficient to accommodate the peak parking demand consideration should be given to extending a parking study area to a half-mile radius of the project site.

Table 13-2 shows that there are 15 off-street public parking facilities with a total of 2,844 spaces within a quarter-mile of the project site. During the overnight and weekend periods, one of these facilities is closed; as a result during those periods there are 14 public off-street parking facilities with a capacity of 2,766 spaces. Overall, utilization of these facilities was found to be approximately 90 percent, 76 percent, 80 percent, 41 percent, and 45 percent, in the weekday AM, weekday midday, weekday PM, overnight, and Saturday midday periods, respectively. As shown in the table, utilization peaks in the morning and remains moderately high during the day, before declining late at night and on weekends.

Curbside parking regulations in the vicinity of the site typically restrict parking on the avenues in the AM and/ or PM peak periods while the cross-streets have a wide variety of regulations ranging from alternate side parking to bus staging regulations. These include the south side of W. 54th Street east of Eleventh Avenue, the NYCT M31 bus ends its route on this street and lays over adjacent to the project site. Based on field observations, utilization of on-street parking supply in the study area generally is high throughout the day. Prior to the initiation of the ongoing excavation of the project site, parking regulations in the vicinity of the project site were a mix of 1-hour and 2-hour metered parking along Tenth and Eleventh Avenues with some peak period no parking regulations, and no parking 8 AM to 6 PM, Monday through Saturday, along cross-streets. On-site parking regulations within a quarter-mile radius of the project site are presented in Figure 13-7.

Table 13-2, 2008 Existing Off-street Public Parking Inventory and Utilization

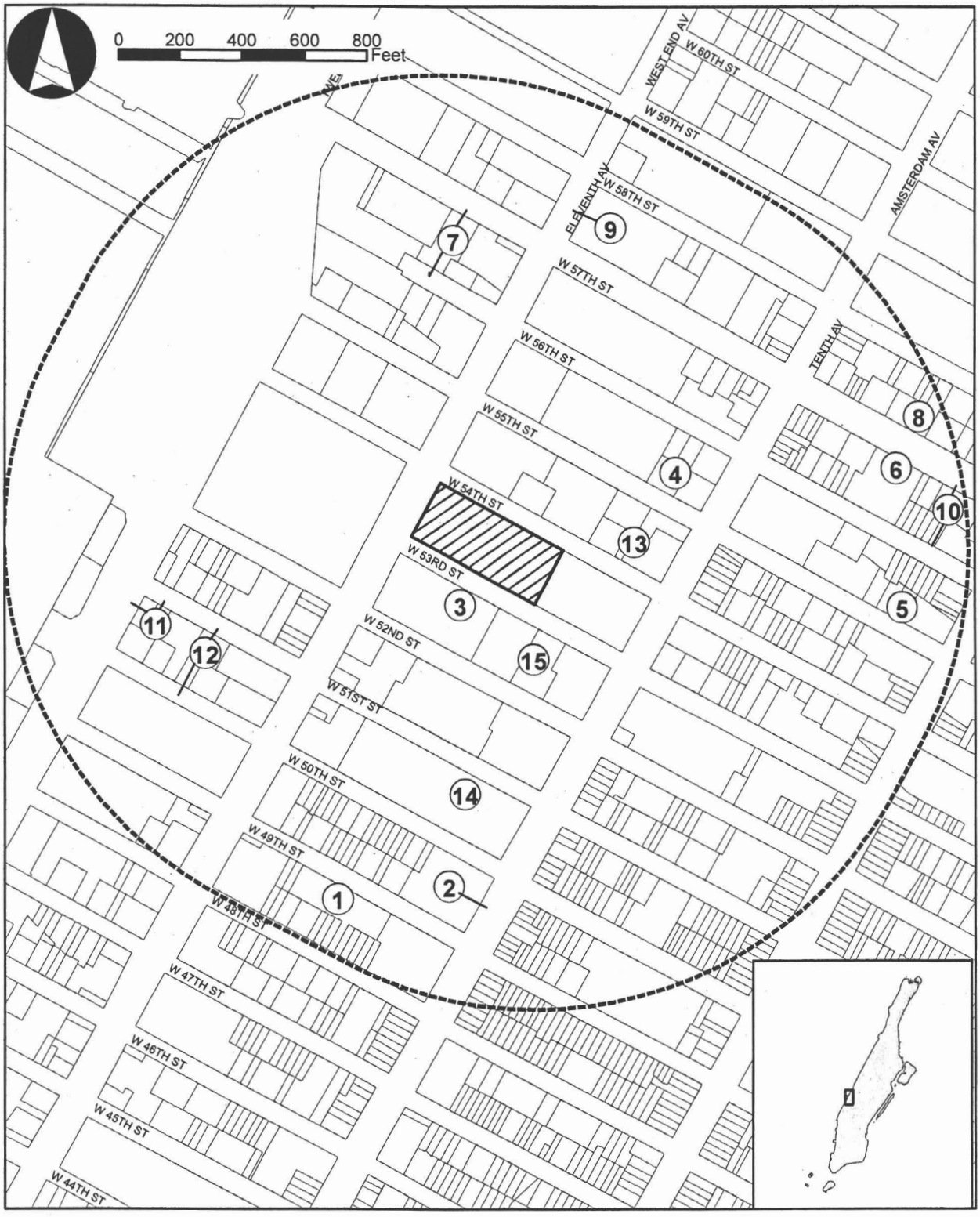
Map #	Name & Address	License No.	License Capacity	Utilization Rate					Demand					Available Spaces				
				AM	MD	PM	LATE	SAT	AM	MD	PM	LATE	SAT	AM	MD	PM	LATE	SAT
1	MTP Operating Corp.(1) 514-540 W. 49th St.	1013511	125	60%	50%	40%	40%	20%	75	63	50	50	25	50	62	75	75	100
2	Primary Parking LLC 721-735 10th Av.	780839	181	75%	90%	80%	50%	40%	136	163	145	91	72	45	18	36	90	109
3	Rex Parking Corp. 532 W. 53rd St.	429832	78	80%	80%	50%	closed	closed	62	62	39	closed	closed	16	16	39	closed	closed
4	Worthy Pakring 841 10th Ave. (W. 55th St.)	1148650	86	90%	90%	75%	50%	50%	77	77	65	43	43	9	9	21	43	43
5	411 W. 55th Corp. 411 W. 55th St.	427688	188	80%	85%	70%	60%	50%	150	160	132	113	94	38	28	56	75	94
6	Apex Parking, LLC 440 W. 57th St.	368300	378	85%	85%	85%	60%	60%	321	321	321	227	227	57	57	57	151	151
7	57 & 11 Parking Corp. (GMC) 622 W. 57th St.	429031	1,000	100%	60%	100%	35%	50%	1,000	600	1,000	350	500	0	400	0	650	500
8	Effective Parking LLC 435 W. 57th St.	368157	55	75%	80%	70%	40%	20%	41	44	39	22	11	14	11	16	33	44
9	Kinney Systems 838-852 11th Av. & 543-5 W. 57th St.	1137953	84	85%	80%	75%	35%	30%	71	67	63	29	25	13	17	21	55	59
10	56 - 57 Holding Corp. 408 W. 57th St.	1113944	80	80%	100%	75%	50%	20%	64	80	60	40	16	16	0	20	40	64
11	K Park Group LLC 680 12th Av.	1186413	170	100%	90%	60%	10%	10%	170	153	102	17	17	0	17	68	153	153
12	50-51 Operating Corp. 622-630 W. 51st St.	1189161	181	100%	85%	50%	10%	50%	181	154	91	18	91	0	27	90	163	90
13	815 Tenth Parking LLC 815 10th Av. (W. 54th St.)	1179523	48	100%	100%	85%	60%	50%	48	48	41	29	24	0	0	7	19	24
14	Hudson View Parking LLC 747 10th Av. (W. 51st St.)	769937	107	85%	85%	70%	50%	50%	91	91	75	54	54	16	16	32	53	53
15	Clinton 53 Parking LLC 515 W. 52nd St.	1263170	83	85%	85%	70%	50%	40%	71	71	58	42	33	12	12	25	41	50
	TOTAL		2,844	90%	76%	80%	41%	45%	2,558	2,154	2,281	1,125	1,232	286	690	563	1,641	1,534

Notes on time periods - AM: 8 to 9 AM; MD: 12 noon to 1 PM; PM 5 to 6 PM; LATE: overnight; SAT: peak Saturday demand.

Source: PHA surveys October and November 2007, and October 2008; also AKRF surveys June 2007, April and May 2008

(1) MTP Operating Corp. garage has a licensed capacity of 240, however this garage only operates with approximately 125 spaces. (see *534 W. 49th St. EAS*, 2007 (CEQR #07DCP043M)

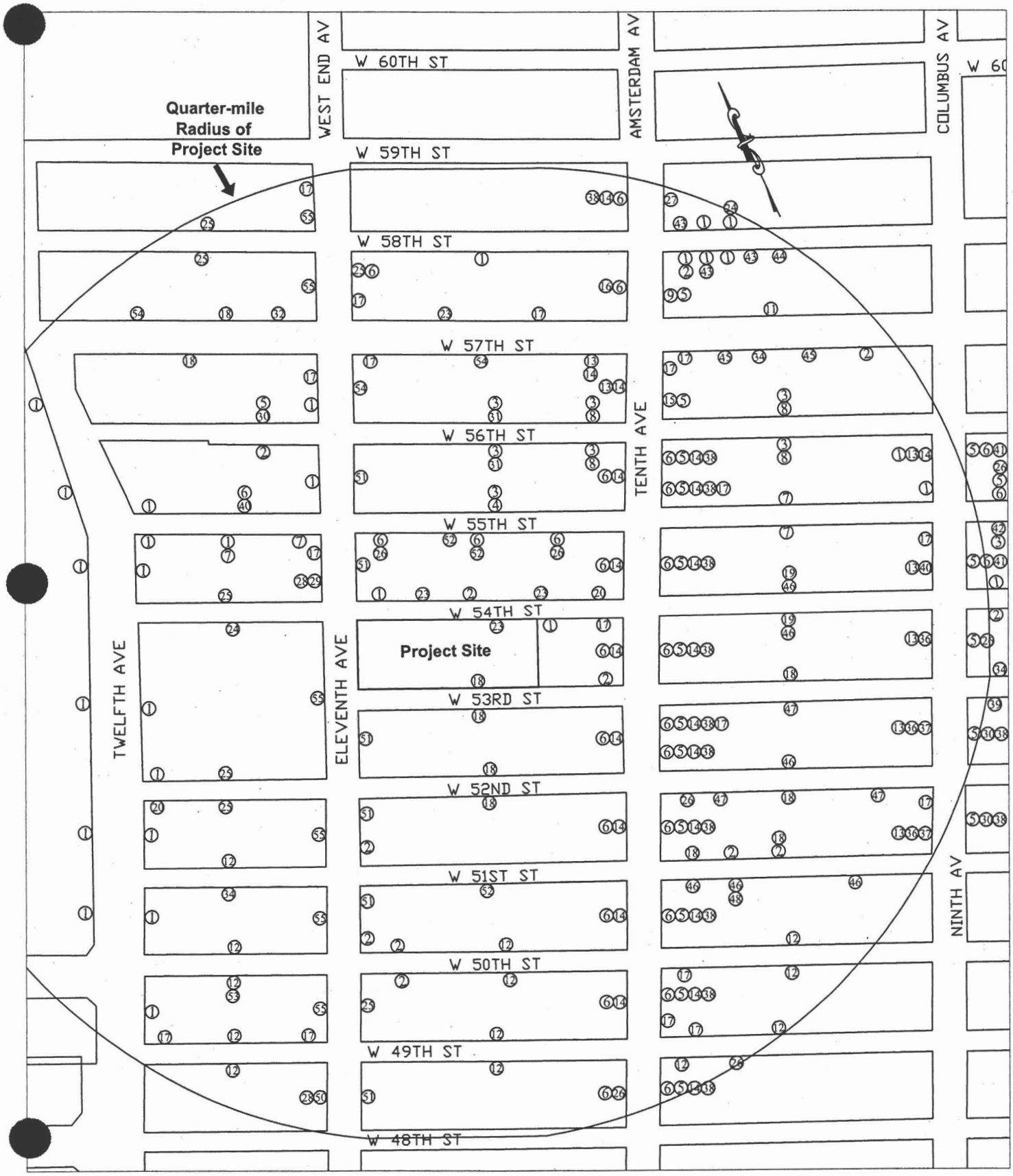
Off-street Public Parking in Vicinity of Study Area



Legend

- Project Site
- Quarter Mile Radius
- (7) Off-street Parking Facility and Driveway Direction

Figure 13-7
On-street Parking Regulations



Refer to Key on Following Page

ON-STREET PARKING REGULATION CODES

① No Standing Anytime
② No Parking Anytime
③ No Parking 8am to 7pm Monday through Friday
④ No Standing 5pm to 7pm Monday thru Friday
⑤ No Standing 7am to 10am Monday though Friday
⑥ No Standing 4pm to 7pm Monday though Friday
⑦ No Standing Except Trucks Loading and Unloading 7am to 7pm Monday through Friday
⑧ No Standing 8am to 9:30am Monday through Friday
⑨ 1 Hour Parking 10am to 7pm Monday through Friday 9am to 7pm Saturday
⑩ No Parking 8:30am to 9am Except Sunday
⑪ 1 Hour Parking 9am to 7pm Except Sunday
⑫ No Standing 7am to 7pm Except Trucks Except Sunday
⑬ No Standing 4pm to 7pm Except Sunday
⑭ 1 Hour Parking 9am to 4pm Except Sunday
⑮ No Standing Except NYP Plates
⑯ 1 Hour Parking 9am to 4pm Monday through Friday 9am to 7pm Saturday
⑰ No Standing Bus Stop
⑱ No Parking 8am to 6pm Except Sunday
⑲ No Standing 11pm to 6am Including Sunday
⑳ No Standing Except Trucks Loading and Unloading 8am to 6pm Monday through Friday
㉑ No Parking 8am to 8:30am Except Sunday
㉒ No Parking 7:30am to 8am Except Sunday
㉓ No Parking 8am to 6pm Monday through Friday
㉔ No Standing 7am to 7pm Except Sunday
㉕ No Parking 8am to 6pm Monday through Friday
㉖ No Parking 7am to 7pm Monday through Friday
㉗ No Standing 7am to 7pm Monday through Friday
㉘ No Standing 6am to 11am Monday through Friday
㉙ 2 Hour Parking 11am to 7pm Monday through Friday
㉚ No Parking 10am to 7pm Monday through Friday
㉛ No Standing 8am to 9:30am Monday though Friday
㉜ 2 Hour Parking 9am to 7pm Except Sunday
㉝ No Parking 8am to 8:50am Except Sunday
㉞ No Standing Anytime Taxi Stand
㉟ No Parking 9am to 10:30am Except Sunday
㊱ No Standing 7am to 4pm Monday through Friday
㊲ 1 Hour Parking 9am to 4pm Saturday
㊳ 1 Hour Parking 10am to 7pm Saturday
㊴ No Standing Except Commercial Vehicle Metered Parking 3 Hour Limit Except Sunday
㊵ No Standing Except Commercial Vehicle Metered Parking 3 Hour Limit 7am-4pm Except Sunday
㊶ 1 Hour Parking 10am to 4pm Except Sunday
㊷ No Standing 8am to 9:30am & 1pm to 7pm Monday through Friday
㊸ No Standing 7am to 7pm Except Authorized Vehicles
㊹ No Standing 8am to 5pm School Days
㊺ 1 Hour Parking 8:30am to 7pm Except Sunday
㊻ No Parking 8am to Midnight Except Sunday
㊼ No Standing 8am to 6pm Monday through Friday Except Authorized Vehicles
㊽ No Standing Except Truck Loading & Unloading
㊾ No Standing Hotel Loading Zone
㊿ No Standing Except Truck Loading & Unloading 11am to 7pm Monday through Friday
(51) 2 Hour Parking 8:30am to 7pm Except Sunday
(52) No Parking 7am to 4pm School Days
(53) No Parking 7pm to Midnight Monday through Friday
(54) No Standing Anytime Except NYP Plates
(55) 2 Hour Parking 8am to 7pm Except Sunday

On-street parking is presently not permitted along the curbs bordering the project site due to ongoing excavation on the project site. Prior to this construction there were approximately 7, 21, and 12 legal auto parking spaces adjacent to the project site on Eleventh Avenue, W. 53rd Street, and W. 54th Street, respectively. However, it should be noted that private buses were often observed parking along W. 53rd and W. 54th streets and thereby reducing the functional capacity.

C. FUTURE WITHOUT THE PROPOSED PROJECT

Between 2008 and 2011, it is expected that the transportation demands in the study area will increase due to development projects in the area as well as background growth. In order to forecast those future demands without the proposed project (the No Build condition), major development projects (along with any required mitigation) listed in Chapter 2, "Land Use, Zoning and Public Policy", were considered in addition to an annual background growth rate of 0.5 percent per year (2008 to 2011) applied to Existing conditions. This background growth rate, recommended in the *CEQR Technical Manual*, for projects in Manhattan, is applied to account for smaller projects and general increases in travel demand not attributable to specific development projects identified in Chapter 2. The project site is assumed to remain unoccupied.

In addition to the effects of major developments listed in Chapter 2, the analysis also considered the effects on study area traffic flows of traffic generated by development and traffic mitigation associated with the W. 61st Street rezoning which was adopted by the City in 2007. (This development is located outside the land use study area but would have effects on traffic conditions in the traffic study area.)

Vehicular Traffic

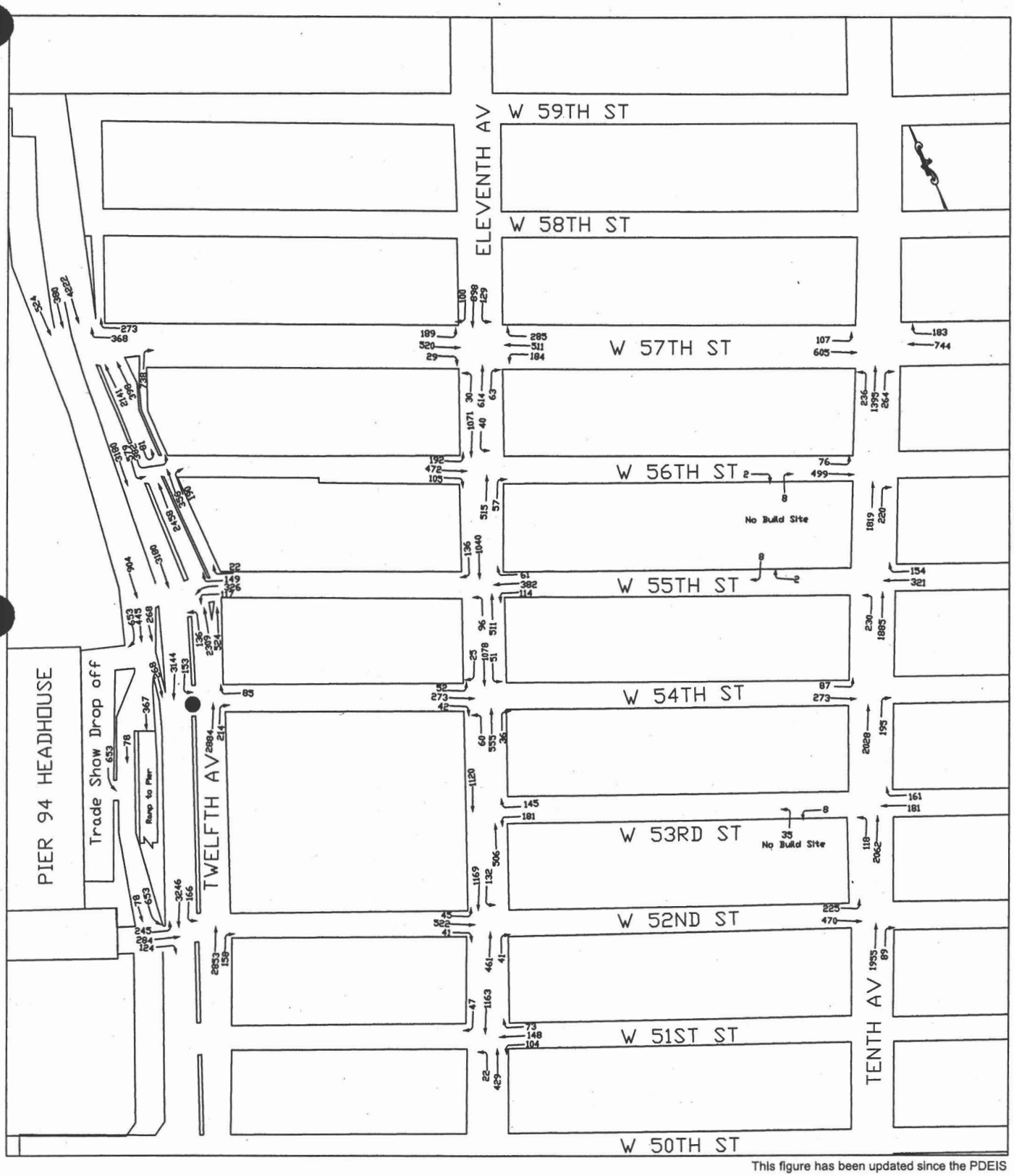
Traffic forecasts were made for each of the four peak hours analyzed, and Figures 13-8 through 13-11 show the anticipated weekday AM, midday, PM, and Saturday midday peak hour traffic volumes in the study area for the 2011 future without the proposed project. Capacity analyses were then prepared for each intersection. Table 13-3 shows the result of these analyses. The table shows that under 2011 No-Build conditions, 14 of the 16 intersections will experience congestion in one or more of the peak hours, as compared to 13 under existing 2008 conditions. There will be 10, 9, 13, and 9 intersections experiencing congestion on one or more approaches in the weekday AM, midday, PM, and Saturday midday peak hours, respectively. By comparison, during these peak hours there 9, 7, 9, and 8 intersections with congested movements under existing conditions. While under existing conditions there are 6, 4, 5, and 4 intersections with a movement having a v/c ratio of more than 1.0 in the weekday AM, midday, PM, and Saturday midday peak hours, respectively, under 2011 No-Build conditions there will be 8, 6, 8, and 6 such intersections in the respective peak hours.

Among the intersections that will experience congestion or further deterioration of already congested conditions, there are several of particular concern given the expected distribution of project generated demand. At Eleventh Avenue and W. 51st Street in the AM peak hour, the southbound movement will deteriorate from LOS C, with a v/c ratio of 0.93 under existing conditions to LOS D, with a v/c ratio of 0.99 under No-Build. At Eleventh Avenue and W. 52nd Street in the AM peak hour, the eastbound movement will deteriorate from LOS C, with a v/c ratio of 0.80 under existing

Table 13-3, 2011 No-Build Traffic Conditions

SIGNALIZED INTERSECTIONS	LANE GROUP	EXISTING AM PEAK HOUR			NO BUILD AM PEAK			EXISTING MD PEAK HOUR			NO BUILD MD PEAK HOUR			EXISTING PM PEAK HOUR			NO BUILD PM PEAK HOUR			EXISTING Sat MD PEAK HOUR			NO BUILD Sat MD PEAK		
		V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	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-LT	0.93	51.7	D *	1.43	235.5	F *	0.68	32.0	C	0.92	52.0	D *	0.65	31.0	C	1.00	67.8	E *	0.54	28.0	C	0.80	38.3	D
	NB-TR	0.60	9.8	A	0.64	10.2	B	0.71	11.4	B	0.74	12.1	B	0.50	8.7	A	0.52	8.9	A	0.70	11.1	B	0.72	11.5	B
10th Ave. (NB) @ 53rd St. (WB)	WB-TR	0.70	33.7	C	0.76	36.8	D	0.56	28.8	C	0.64	31.0	C	0.83	41.7	D	0.97	61.2	E *	0.81	41.1	D	0.96	61.0	E *
	NB-LT	0.59	9.7	A	0.68	10.7	B	0.69	11.1	B	0.76	12.5	B	0.47	8.5	A	0.53	8.9	A	0.66	10.7	B	0.71	11.4	B
10th Ave. (NB) @ 54th St. (EB)	EB-LT	0.75	36.4	D	0.83	42.2	D	0.60	30.1	C	0.63	31.3	C	0.72	34.7	C	0.77	37.4	D	0.62	30.8	C	0.65	31.9	C
	NB-TR	0.61	9.9	A	0.70	11.0	B	0.70	11.3	B	0.77	12.7	B	0.49	8.6	A	0.55	9.1	A	0.67	10.8	B	0.73	11.7	B
10th Ave. (NB) @ 55th St. (WB)	WB-TR	1.01	72.5	E *	1.11	103.4	F *	0.89	48.7	D	1.02	73.0	E *	0.85	41.4	D	0.91	48.6	D *	0.83	44.2	D	0.88	50.3	D
	NB-LT	0.59	9.7	A	0.66	10.5	B	0.66	10.8	B	0.71	11.5	B	0.49	8.6	A	0.53	8.9	A	0.63	10.3	B	0.68	10.9	B
10th Ave. (NB) @ 57th St. (E-W)	EB-DefL							1.05	107.1	F *	1.21	164.4	F *	1.05	124.2	F *	1.03	117.1	F *						
	EB-T							0.45	23.2	C	0.56	25.8	C	0.70	31.2	C	0.83	38.2	D						
	EB-LT	1.05	74.0	E *	1.12	96.1	F *													0.60	25.1	C	0.67	27.2	C
	WB-TR	0.85	32.5	C	0.90	34.7	C *	0.81	32.0	C	0.87	36.0	D	1.05	69.3	E *	1.08	77.5	E *	0.57	23.9	C	0.60	24.8	C
	NB-LTR	0.66	16.6	B	0.78	20.5	C	0.69	15.0	B	0.75	16.1	B	0.53	12.3	B	0.59	13.6	B	0.70	14.9	B	0.74	15.9	B
11th Avenue																									
11 Ave. (N-S) @ 51st St. (WB)	WB-LTR	0.75	34.0	C	0.76	34.6	C	1.05	96.0	F *	1.06	100.7	F *	1.05	94.1	F *	1.03	86.8	F *	1.05	97.4	F *	1.07	101.9	F *
	NB-L	0.21	16.4	B	0.25	18.5	B	0.09	6.7	A	0.09	6.9	A	0.09	6.7	A	0.10	6.9	A	0.08	6.7	A	0.09	6.9	A
	NB-T	0.31	10.8	B	0.37	11.4	B	0.16	3.1	A	0.19	3.2	A	0.11	2.9	A	0.14	3.0	A	0.18	3.2	A	0.20	3.2	A
	SB-TR	0.93	29.0	C *	0.99	40.0	D *	0.66	6.5	A	0.70	7.1	A	0.67	6.6	A	0.72	7.5	A	0.64	6.3	A	0.67	6.7	A
11 Ave. (N-S) @ 52nd St. (EB)	EB-LTR	0.80	35.0	C	1.13	106.8	F *	1.05	92.4	F *	1.29	183.2	F *	0.83	51.5	D	1.20	145.7	F *	0.83	51.8	D	1.10	109.7	F *
	NB-TR	0.38	11.5	B	0.44	12.2	B	0.21	3.3	A	0.24	3.4	A	0.16	3.1	A	0.19	3.2	A	0.25	3.4	A	0.26	3.5	A
	SB-L	0.36	13.7	B	0.49	17.2	B	0.13	3.4	A	0.17	3.7	A	0.19	3.8	A	0.24	4.2	A	0.15	3.5	A	0.19	3.9	A
	SB-T	0.89	24.5	C	0.95	31.4	C *	0.61	5.9	A	0.65	6.4	A	0.63	6.1	A	0.68	6.8	A	0.59	5.6	A	0.62	5.9	A
11 Ave. (N-S) @ 53rd St. (WB)	WB-L	0.40	25.1	C	0.48	27.0	C	0.64	41.3	D	0.73	46.6	D	0.46	34.3	C	0.56	37.6	D	0.48	34.7	C	0.57	38.1	D
	WB-R	0.39	25.3	C	0.44	26.3	C	0.51	36.6	D	0.55	38.1	D	0.94	76.6	E *	1.00	89.7	F *	1.03	98.9	F *	1.09	115.5	F *
	NB-T	0.35	8.6	A	0.40	9.1	A	0.22	3.3	A	0.25	3.4	A	0.15	3.0	A	0.18	3.2	A	0.22	3.3	A	0.24	3.4	A
	SB-T	0.78	15.6	B	0.83	17.6	B	0.55	5.2	A	0.58	5.6	A	0.61	5.9	A	0.67	6.5	A	0.55	5.3	A	0.58	5.5	A
11 Ave. (N-S) @ 54th St. (EB)	EB-LTR	0.48	24.9	C	0.45	24.5	C	0.42	30.6	C	0.41	30.5	C	0.49	31.8	C	0.49	31.7	C	0.43	30.8	C	0.43	30.7	C
	NB-L	0.40	15.1	B	0.45	17.8	B	0.21	4.7	A	0.23	5.0	A	0.36	7.3	A	0.40	8.5	A	0.20	4.6	A	0.22	4.8	A
	NB-TR	0.40	9.1	A	0.47	9.8	A	0.27	3.5	A	0.30	3.7	A	0.23	3.3	A	0.26	3.5	A	0.35	3.9	A	0.37	4.0	A
	SB-L	0.15	7.9	A	0.18	8.4	A	0.11	3.3	A	0.12	3.4	A	0.22	4.1	A	0.25	4.4	A	0.19	3.9	A	0.20	4.1	A
	SB-TR	0.70	13.0	B	0.74	14.1	B	0.54	5.2	A	0.58	5.5	A	0.61	5.9	A	0.66	6.6	A	0.54	5.2	A	0.56	5.4	A
11 Ave. (N-S) @ 55th St. (WB)	WB-LTR	1.05	82.3	E *	1.22	144.8	F *	0.96	68.0	E *	1.17	130.7	F *	0.65	34.0	C	0.72	35.7	D	0.99	74.1	E *	1.08	100.9	F *
	NB-L	0.60	24.5	C	0.71	35.1	D	0.22	4.9	A	0.26	5.6	A	0.26	5.9	A	0.32	7.6	A	0.28	5.8	A	0.31	6.5	A
	NB-T	0.37	8.8	A	0.40	9.1	A	0.22	3.3	A	0.24	3.4	A	0.20	3.2	A	0.22	3.3	A	0.26	3.4	A	0.27	3.5	A
	SB-TR	0.54	10.1	B	0.57	10.5	B	0.37	3.8	A	0.40	3.9	A	0.45	4.2	A	0.50	4.5	A	0.38	3.8	A	0.40	3.9	A

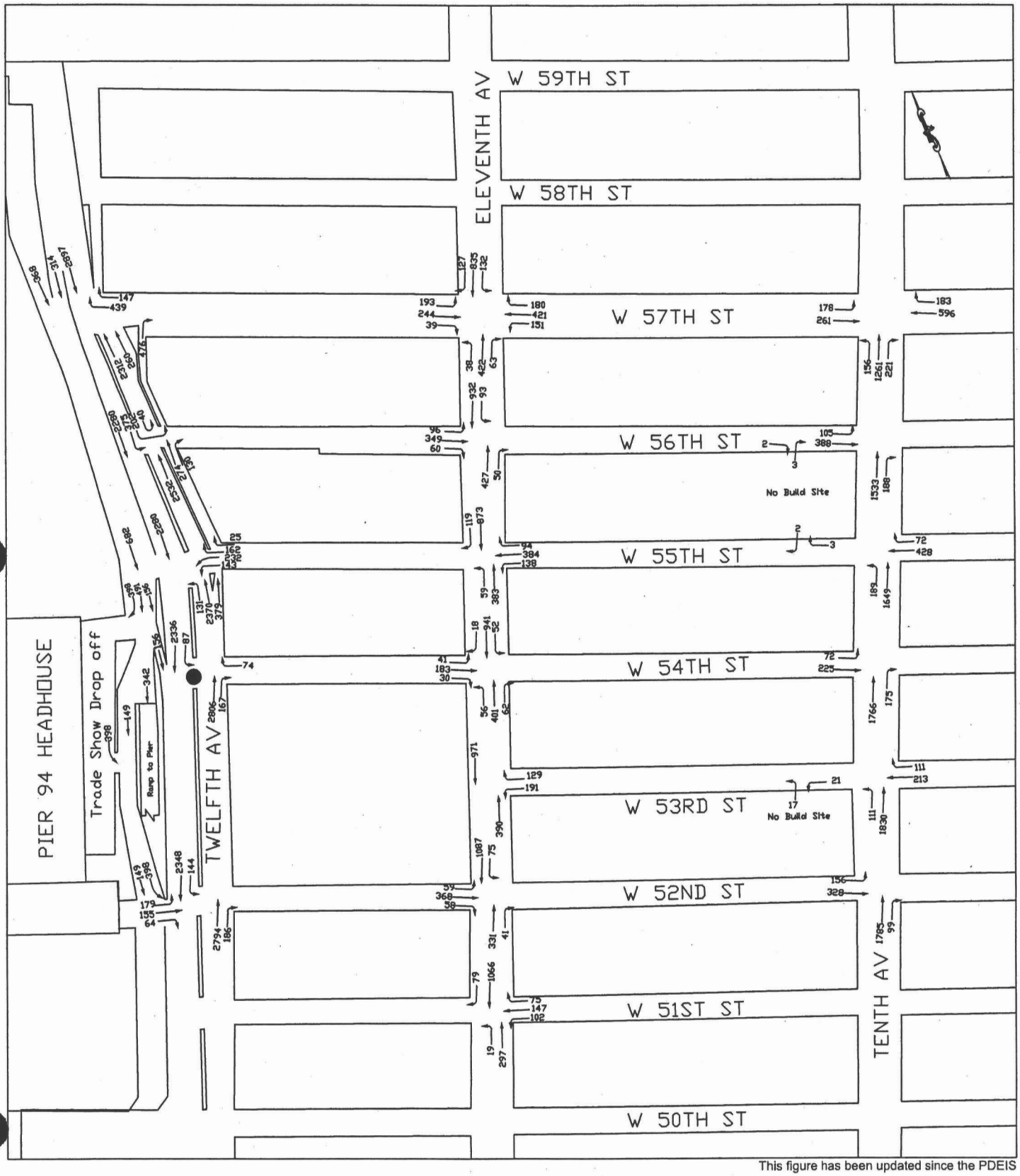
Figure 13-8
2011 No-Build AM Traffic Volumes



This figure has been updated since the PDEIS

LEGEND: ● Analyzed Intersection

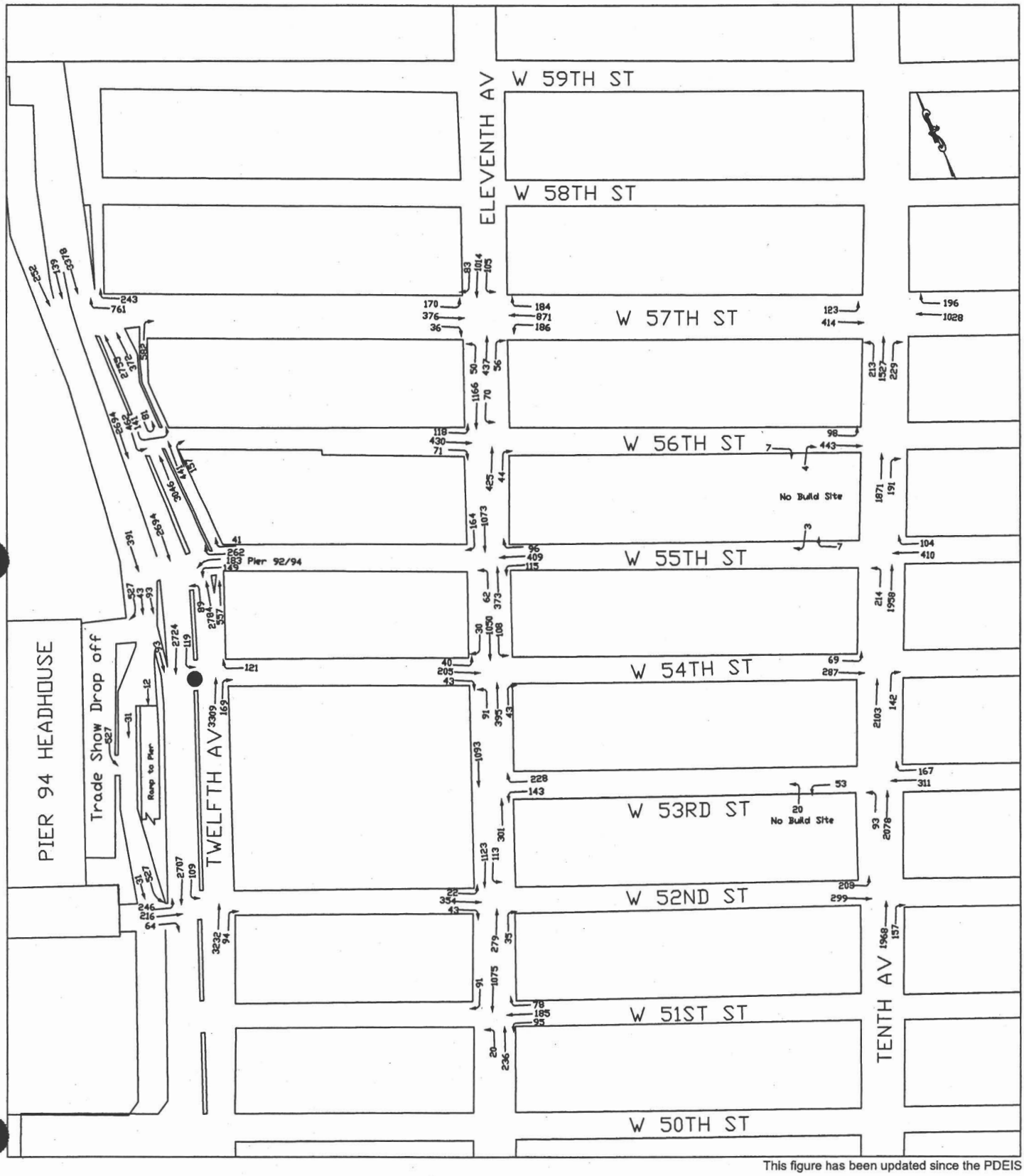
2011 No-Build MD Traffic Volumes



This figure has been updated since the PDEIS

LEGEND: ● Analyzed Intersection

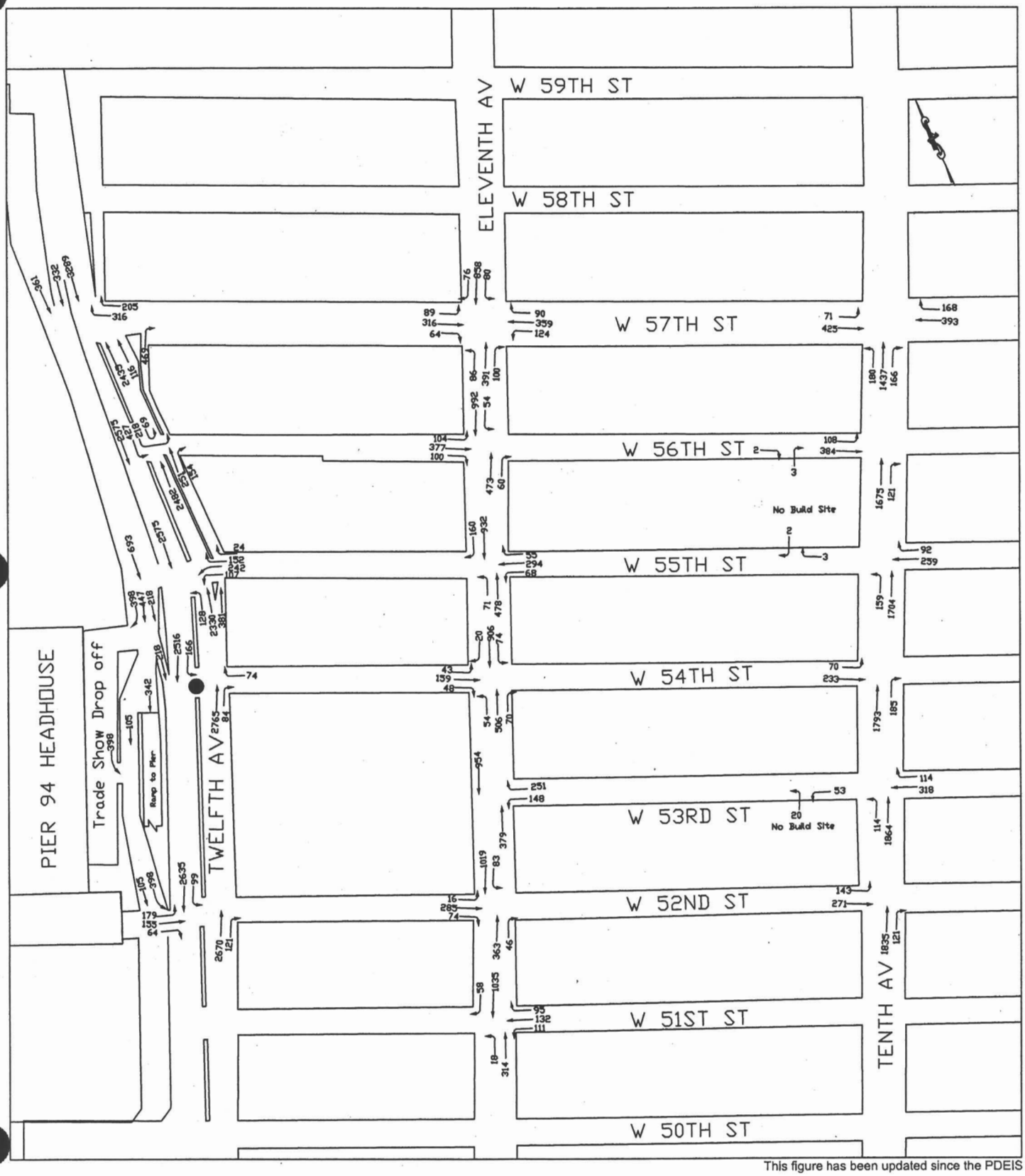
Figure 13-10
2011 No-Build PM Traffic Volumes



This figure has been updated since the PDEIS

LEGEND: ● Analyzed Intersection

Figure 13-11
2011 No-Build Sat. MD Traffic Volumes



This figure has been updated since the PDEIS

LEGEND: ● Analyzed Intersection

Table 13-3, 2011 No-Build Traffic Conditions

SIGNALIZED INTERSECTIONS	LANE GROUP	EXISTING AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD AM PEAK V/C RATIO	Delay (sec.)	LOS	EXISTING MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	EXISTING PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	EXISTING Sat MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD Sat MD PEAK V/C RATIO	Delay (sec.)	LOS
11 Ave. (N-S) @ 57th St. (E-W)	EB-L	0.79	52.2	D	0.81	57.4	E *	0.64	36.7	D	0.70	41.9	D	0.69	48.0	D	0.70	43.5	D	0.27	21.6	C	0.28	22.7	C
	EB-TR	1.05	87.7	F *	1.17	127.9	F *	0.72	39.4	D	0.81	45.8	D	1.05	89.0	F *	1.17	129.5	F *	1.05	91.5	F *	1.15	124.4	F *
	WB-L	0.70	47.9	D	0.71	48.8	D	0.47	27.2	C	0.50	29.5	C	0.71	44.9	D	0.78	52.4	D	0.47	32.6	C	0.51	36.0	D
	WB-TR	0.96	56.2	E *	1.15	115.2	F *	0.77	35.9	D	0.88	44.9	D	1.05	74.8	E	1.15	112.8	F	0.57	29.5	C	0.63	30.9	C
	NB-L	0.26	17.9	B	0.30	20.1	C	0.26	17.5	B	0.31	19.7	B	0.50	31.1	C	0.70	57.4	E *	0.66	38.6	D	0.74	50.1	D
	NB-TR	0.39	14.9	B	0.43	15.3	B	0.25	13.6	B	0.29	13.8	B	0.28	13.7	B	0.30	14.0	B	0.29	13.9	B	0.31	14.0	B
	SB-L	0.55	27.1	C	0.62	31.6	C	0.37	20.1	C	0.47	22.9	C	0.28	18.2	B	0.41	21.4	C	0.25	17.7	B	0.30	18.6	B
	SB-TR	0.76	22.2	C	0.81	23.9	C	0.72	20.8	C	0.78	22.7	C	0.84	25.6	C	0.93	33.6	C *	0.73	21.0	C	0.77	22.3	C
12th Avenue																									
12 Ave. (N-S) @ 52nd St. (EB)	EB-LTR				1.06	112.2	F *				0.47	40.8	D				0.84	71.7	E *				0.49	41.1	D
	NB-TR	0.80	17.2	B	0.85	18.7	B	0.87	18.8	B	0.91	21.9	C *	0.88	17.2	B	0.92	19.3	B *	0.88	17.2	B	0.84	18.7	B
	SB-L	1.05	133.8	F *	0.65	72.6	E *	0.99	131.0	F *	0.74	73.8	E *	1.01	132.4	F *	0.57	73.4	E *	1.01	132.4	F *	0.65	70.8	E *
	SB-T	0.74	3.4	A	0.68	2.9	A	0.57	4.7	A	0.55	4.5	A	0.61	2.6	A	0.58	2.4	A	0.61	2.6	A	0.63	5.1	A
12 Ave. (N-S) @ 54th St. (WB)	WB-R	0.37	55.9	E *	0.38	56.1	E *	0.25	38.6	D	0.25	38.7	D	0.52	61.9	E *	0.53	62.1	E *	0.52	61.9	E *	0.26	38.8	D
	NB-TR	0.58	2.6	A	0.67	3.1	A	0.66	5.1	A	0.71	5.8	A	0.68	3.1	A	0.77	3.8	A	0.68	3.1	A	0.67	5.4	A
	SB-L	0.66	64.4	E *	0.45	57.0	E *	0.30	42.0	D	0.22	37.6	D	0.51	59.6	E *	0.38	55.8	E *	0.51	59.6	E *	0.42	41.3	D
	SB-T	0.64	2.9	A	0.67	3.1	A	0.52	4.3	A	0.55	4.5	A	0.57	2.5	A	0.60	2.6	A	0.57	2.5	A	0.60	4.9	A
	SB-T (Service Road)	0.63	4.5	A	0.21	1.7	A	0.36	4.2	A	0.13	3.0	A	0.36	2.3	A	0.07	1.3	A	0.36	2.3	A	0.19	3.3	A
12 Ave. (N-S) @ 55th St. (WB)	WB-L	1.05	117.3	F *	1.19	166.5	F *	0.86	62.9	E *	0.95	78.2	E *	0.90	87.0	E *	1.09	135.9	F *	0.90	87.0	F *	0.88	64.4	E *
	WB-R	0.40	55.3	E *	0.40	55.3	E *	0.32	38.7	D	0.32	38.7	D	0.64	61.7	E *	0.67	63.2	E *	0.64	61.7	E *	0.31	38.5	D
	NB-L	1.05	166.7	F *	1.19	213.1	F *	0.88	101.6	F *	0.95	114.0	F *	0.38	45.1	D	0.43	48.9	D	0.38	45.1	D	0.91	108.2	F *
	NB-T	0.45	2.0	A	0.49	2.2	A	0.52	4.8	A	0.57	5.1	A	0.57	2.5	A	0.62	2.7	A	0.57	2.5	A	0.55	5.0	A
	SB-TR	0.76	10.1	B	0.77	10.4	B	0.72	16.5	B	0.75	17.1	B	0.67	10.0	A	0.69	10.3	B	0.67	10.0	A	0.77	17.4	B
	NB-T	0.30	2.1	A	0.41	2.6	A	0.26	4.0	A	0.33	4.4	A	0.36	2.4	A	0.45	2.8	A	0.36	2.4	A	0.33	4.4	A
	SB-T (Service Road)	0.34	12.9	B	0.45	14.3	B	0.36	16.7	B	0.42	17.6	B	0.13	11.5	B	0.20	12.2	B	0.13	11.5	B	0.41	17.4	B
12 Ave. (N-S) @ 56th St. (WB)	NB-T	0.77	30.6	C	0.84	33.2	C	0.53	2.6	A	0.57	2.8	A	0.67	5.5	A	0.72	6.0	A	0.67	5.5	A	0.55	2.7	A
	SB-L	0.64	27.4	C	0.65	27.7	C	0.89	63.7	E *	0.93	68.8	E *	0.86	65.8	E *	0.87	67.0	E *	0.86	65.8	E *	1.01	81.3	F *
	NB-TR (Service Road)	0.18	20.6	C	0.38	23.3	C	0.19	1.7	A	0.18	1.8	A	0.23	3.3	A	0.28	3.5	A	0.23	3.3	A	0.18	1.8	A
12 Ave. (N-S) @ 57th St. (WB)	WB-R	0.39	32.8	C	0.42	33.2	C	0.56	39.3	D	0.59	39.9	D	1.04	95.1	F *	1.08	107.2	F *	0.50	38.2	D	0.53	38.6	D
	NB-T	0.54	16.8	B	0.59	17.6	B	0.47	5.4	A	0.50	5.6	A	0.55	4.5	A	0.59	4.8	A	0.46	5.4	A	0.49	5.6	A

UNSIGNALIZED INTERSECTIONS	LANE GROUP	EXISTING AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD AM PEAK V/C RATIO	Delay (sec.)	LOS	EXISTING MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	EXISTING PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	EXISTING Sat MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD Sat MD PEAK V/C RATIO	Delay (sec.)	LOS
12 Ave. (N-S) @ 57th St. (WB)	NB-R	0.75	18.9	C	0.81	22.5	C	0.48	12.2	B	0.52	12.8	B	0.59	14.0	B	0.64	15.1	C	0.48	12.1	B	0.51	12.7	B

conditions to LOS F, with a v/c ratio of 1.13 under No-Build. At Tenth Avenue and W. 52nd Street in the weekday midday peak hour, the eastbound movement will deteriorate from LOS C and a v/c ratio of 0.68 under existing conditions to LOS D with 52.0 seconds of delay, with a v/c ratio of 0.92. At this same intersection in the PM peak, the eastbound movement would deteriorate from LOS C with a v/c ratio of 0.65 under existing conditions, to LOS E with a v/c ratio of 1.00.

At Tenth Avenue and W. 53rd Street in the PM peak hour, the westbound movement will deteriorate from LOS D, with a v/c ratio of 0.83, to LOS E with a v/c ratio of 0.97. At Tenth Avenue and W. 53rd Street in the Saturday midday, the westbound movement will deteriorate from LOS D with a v/c ratio of 0.81 to LOS E with a v/c ratio of 0.96.

Parking

Changes in Parking Supply

In the future without the proposed action by 2011, there would be some changes to the supply of off-street public parking facilities. Two existing public parking facilities are expected to be replaced by No-Build developments. The 125-space MTP Operating Corp. garage at 514-540 W. 49th Street (no. 1 in Table 13-2) will be replaced by a new residential development (refer to Chapter 2, "Land Use, Zoning, and Public Policy," Table 2-4, No-Build development no. 12). This No-Build development will include 31 accessory spaces as well as 57 public parking spaces. As a result there would be a net decrease of 68 public parking spaces on that site. In addition, the 78-space Rex Parking Corp. public parking lot located across the street from the project site at 532 W. 53rd Street would be replaced by a new residential development (No-Build development no. 20 in Table 2-4) and is not expected to include any public parking spaces.

With these changes in public parking supply, in the future without the proposed action in 2011 the total number of public parking spaces in the study area will decrease from 2,844 to 2,698.

Several of the expected No-Build developments will include accessory parking spaces. These spaces are not included in the No-Build parking inventory as public parking may not be permitted at these facilities and furthermore many of these facilities are expected to be at full utilization as they are not expected to accommodate the peak parking demand generated by the developments to which they are accessory.

Changes in Parking Demand

Demand for public parking is expected to increase in the study area. There are several new No-Build developments which are expected to result in new parking demand that either will provide no on-site parking or will provide on-site parking which is not sufficient to accommodate expected peak parking demand. In addition, due to general trends, existing parking demand is expected to increase as reflected by applying a background growth rate of 0.5 percent per year to existing demand levels. These increased demands for public parking in the future without the proposed action are reflected in Table 13-4.

Table 13-4, 2011 No-Build Public Off-Street Parking Conditions

		2008 Existing Conditions	Change	2011 No-Build Conditions
AM	Capacity	2,844	-146	2,698
	Public Parking Demand	2,558	344	2,902
	Available Spaces	286	-	-204
	Utilization	90%	-	108%
MD	Capacity	2,844	-146	2,698
	Public Parking Demand	2,154	313	2,467
	Available Spaces	690	-	231
	Utilization	76%	-	91%
PM	Capacity	2,844	-146	2,698
	Public Parking Demand	2,281	385	2,666
	Available Spaces	563	-	32
	Utilization	80%	-	99%
LATE	Capacity	2,766	-68	2,698
	Public Parking Demand	1,125	389	1,514
	Available Spaces	1641	-	1,184
	Utilization	41%	-	56%
SAT MD	Capacity	2,,766	-68	2,698
	Public Parking Demand	1,232	295	1,527
	Available Spaces	1,534	-	1,171
	Utilization	45%	-	57%

Parking Utilization

With the changes to public parking supply and demand, utilization of study area public parking is expected to increase in the future without the proposed action. As shown in Table 13-4, utilization is expected to increase in the analyzed peak periods, rising from 90 percent to 108 percent in the weekday AM, from 76 percent to 91 percent in the weekday midday, from 80 percent to 99 percent in the weekday PM, from 41 percent to 56 percent in the overnight, and from 45 percent to 57 percent in the Saturday midday. As noted, demand will be highest in the AM peak period, with demand exceeding supply by approximately204 spaces, while in the other periods analyzed the number of available spaces will range from 32 in the weekday PM period to 1,184 in the overnight period.

D. FUTURE WITH THE PROPOSED ACTION

The proposed project includes several components that would generate travel demand, including 900 DUs, 8,800 gsf of local retail, 20,000 gsf of public health club space, 330,000 gsf of automobile sales, preparation, and repairs space, and 36,000 gsf of NYPD Mounted Unit facility, including stable and related space. In addition, the development would have up to 225 accessory parking spaces to serve site-generated parking demand. As shown on the proposed project's site plan (Figure 1-5, in Chapter 1, "Project Description," the project would have several curb cuts along W. 53rd Street and W. 54th Street for ramps and loading docks. These would include a driveway for the accessory garage on W. 53rd Street, a driveway/loading area for the NYPD stable also on W. 53rd Street, driveways for the auto dealership on W. 53rd and W. 54th Streets, and a commercial loading dock on W. 53rd Street. There would be no curb cuts on Eleventh Avenue. For pedestrian access, there would be residential lobby entrances accessible from both W. 53rd and W. 54th Street and access points for the commercial uses spread across the site's three frontages.

Table 13-5 shows the transportation planning assumptions used to estimate the weekday and Saturday demand for each of the project components. The table shows the overall daily generation rates, hourly peaking patterns, mode choice and vehicle occupancy. The planning assumptions in Table 13-5 are based on accepted travel demand criteria, many used for other West Side developments, as well as census (journey-to-work and reverse journey-to-work) and empirical data collected for this project (e.g., NYPD Stable).

Table 13-6 shows the peak hour person-trip and vehicle-trip forecasts for each component of the proposed project for the four analyzed peak hours. As the project site is assumed to remain vacant under No-Build conditions for analysis purposes, there is no credit for removing previous uses or uses that could be developed as-of-right in future without the proposed action. As shown in the table, the proposed project would generate an estimated 222, 182, 237, and 190 vehicle trips (in and out combined) in the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours, respectively. Peak hour transit and pedestrian trips are discussed in Chapter 14, "Transit and Pedestrians." As the above travel demand demonstrates, the proposed project would have its heaviest demand in the weekday PM peak hour due to the heavier residential and health club demand in that period.

Project-generated vehicle trips would consist of those made by auto, taxi and truck. Origin and destination patterns for project-generated vehicular trips were developed based on local traffic patterns and the location of major employment centers. Based on their origins or destinations, project-generated vehicle trips were then assigned to study area portals and to study area intersections based on logical routes of travel. Auto trips were assigned to either the project site, or for vehicles which could not be accommodated on-site, to nearby off-street public parking garages expected to have available capacity. This includes some facilities located outside the traffic study area as the number of public parking facilities and availability of space close to the site are limited. Taxi trips were assigned to one of the site's three block faces.

TABLE 13-5
TRANSPORTATION PLANNING ASSUMPTIONS

	Uses Generated by the Proposed Action				
Land Use:	Residential	Health Club	Retail	Auto Dealership	NYPD Mounted Unit
Size/Units:	900 DUs	20,000 gsf	8,800 gsf	330,000 gsf	36,000 gsf
	(1)	(2)	(1)	(3)	(4)
Trip Generation: WKDY	8.075	44.7	205.0	2.63	7.44
SAT	8.075	29.5	205.0	2.63	7.44
	per DU	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf
Temporal Distribution:	(1)	(2)	(1)	(3)	(4)
WKDY AM	9.1%	4.8%	3.1%	12.0%	15.0%
WKDY MD	4.7%	5.6%	19.0%	12.0%	3.0%
WKDY PM	10.7%	13.2%	9.6%	9.0%	16.0%
SAT MD	7.0%	9.8%	9.5%	12.0%	2.0%
	(5)	(6)	(7)	(3)	(4)
Modal Splits:	AM/MD/PM	AM/MD/PM	AM/MD/PM	AM/MD/PM	AM/PM
Auto	9.0%	35.0%	2.0%	100.0%	38.0%
Taxi	6.0%	3.0%	3.0%	0.0%	0.0%
Subway	31.0%	41.0%	6.0%	0.0%	0.0%
Bus	20.0%	12.0%	6.0%	0.0%	0.0%
Walk	34.0%	9.0%	83.0%	0.0%	5.0%
Other	0.0%	0.0%	0.0%	0.0%	57.0%
	100.0%	100.0%	100.0%	100.0%	100.0%
	(1)	(2)	(7)	(3)	(4)
In/Out Splits:	In Out	In Out	In Out	In Out	In Out
WKDY AM	15% 85%	41% 59%	50% 50%	67% 33%	80% 20%
WKDY MD	50% 50%	54% 46%	50% 50%	50% 50%	35% 65%
WKDY PM	70% 30%	75% 25%	50% 50%	15% 85%	5% 95%
SAT MD	50% 50%	54% 46%	50% 50%	50% 50%	20% 80%
Vehicle Occupancy:	(5),(2)	(2)	(7)	(3)	(4)
Auto	1.26	1.40	1.6	1.3	1.0
Taxi	1.40	1.40	1.2	1.5	1.0
Truck Trip Generation:	(8)	(2)	(7)	(3)	(4)
WKDY	0.064	0.19	0.35	0.15	0.15
SAT	0.004	0.01	0.018	0.15	0.15
	per DU	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf
	(8)	(2)	(7)	(3)	(4)
WKDY AM	6.0%	6.0%	7.7%	9.6%	6.0%
WKDY MD	11.0%	11.0%	11.0%	11.0%	11.0%
WKDY PM	1.0%	1.0%	1.0%	1.0%	1.0%
SAT MD	7.9%	7.6%	11.0%	11.0%	11.0%
	(8)	(2)	(7)	(3)	(4)
	In Out	In Out	In Out	In Out	In Out
AM/MD/PM	50% 50%	50% 50%	50% 50%	50% 50%	50% 50%

Sources:

(1) Pushkarev & Zupan, *Urban Space for Pedestrians* (1975).

(2) Coliseum Redevelopment FEIS (1997)

(3) W. 57th Street Rezoning FEIS (2001)

(4) Daily trip rate, temporal distribution, and directional split are derived from driveway count conducted by PHA at existing NYPD Stable facility on Hudson River Pier 76. Other trips walking or by horse. The calculated number of vehicle trips in Table 13-6 match the vehicle count data at the existing facility.

(5) 2000 Census for NY County tract 135, Journey to Work data (adjusted to exclude "worked at home")

(6) 2000 Census for N Y County tract 135, Reverse Journey to Work data (adjusted to exclude "worked at home")

(7) Hudson Yards FGEIS (2004)

(8) Clinton Green Mixed Use Development EAS (2004)

Note: Gross floor area numbers are approximate.

TABLE 13-6
TRANSPORTATION PLANNING CALCULATIONS

		Uses Generated by the Proposed Action										Subtotal,		
Land Use:		Residential		Health Club		Retail		Auto Dealership		NYPD Mounted Unit		Build Scenario		
Size/Units:		900 DUs		20,000 gsf		8,800 gsf		330,000 gsf		36,000 gsf				
Peak Hour Trips:														
WKDAY AM		661		64		56		104		40		926		
WKDY MD		342		75		343		104		8		872		
WKDY PM		778		177		173		78		43		1,249		
SAT MD		509		87		171		104		5		876		
Person Trips:														
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
W AM	Auto	9	51	9	13	1	1	70	34	12	3	101	102	203
	Taxi	6	34	1	1	1	1	0	0	0	0	8	36	43
	Subway	31	174	11	16	2	2	0	0	0	0	43	192	235
	Bus	20	112	3	5	2	2	0	0	0	0	25	119	143
	Walk	34	191	2	3	23	23	0	0	2	0	61	218	279
	Other	0	0	0	0	0	0	0	0	18	5	18	5	23
	Total	99	562	26	38	28	28	70	34	32	8	255	670	926
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
W MD	Auto	15	15	14	12	3	3	52	52	1	2	86	85	171
	Taxi	10	10	1	1	5	5	0	0	0	0	17	16	33
	Subway	53	53	17	14	10	10	0	0	0	0	80	77	157
	Bus	34	34	5	4	10	10	0	0	0	0	49	49	98
	Walk	58	58	4	3	142	142	0	0	0	0	204	204	408
	Other	0	0	0	0	0	0	0	0	2	3	2	3	5
	Total	171	171	41	35	171	171	52	52	3	5	438	434	872
		In	Out	In	Out	In	Out	In	Out		Out	In	Out	Total
W PM	Auto	49	21	46	15	2	2	12	66	1	15	110	120	230
	Taxi	33	14	4	1	3	3	0	0	0	0	39	18	57
	Subway	169	72	54	18	5	5	0	0	0	0	228	96	324
	Bus	109	47	16	5	5	5	0	0	0	0	130	57	187
	Walk	185	79	12	4	72	72	0	0	0	2	269	157	426
	Other	0	0	0	0	0	0	0	0	1	23	1	23	24
	Total	544	233	133	44	87	87	12	66	2	41	778	471	1,249
												In	Out	Total
S MD	Auto	23	23	16	14	2	2	52	52	0	2	93	92	186
	Taxi	15	15	1	1	3	3	0	0	0	0	19	19	38
	Subway	79	79	19	16	5	5	0	0	0	0	103	100	204
	Bus	51	51	6	5	5	5	0	0	0	0	62	61	122
	Walk	86	86	4	4	71	71	0	0	0	0	162	161	323
	Other	0	0	0	0	0	0	0	0	1	2	1	2	3
	Total	254	254	47	40	86	86	52	52	1	4	440	436	876
Vehicle Trips :														
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
W AM	Auto (Total)	7	40	7	9	0	0	54	26	12	3	80	78	158
	Taxi	4	24	1	1	1	1	0	0	0	0	6	26	31
	Taxi (Bal.)											28	28	56
	Truck	2	2	0	0	0	0	2	2	0	0	4	4	8
	TOTAL											112	110	222
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
W MD	Auto (Total)	12	12	10	9	2	2	40	40	1	2	65	65	130
	Taxi	7	7	1	1	4	4	0	0	0	0	12	12	25
	Taxi (Bal.)											19	19	38
	Truck	4	4	0	0	0	0	3	3	0	0	7	7	14
	TOTAL											91	91	182
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
W PM	Auto (Total)	39	17	33	11	1	1	9	51	1	15	83	95	178
	Taxi	23	10	3	1	2	2	0	0	0	0	28	13	41
	Taxi (Bal.)											28	28	56
	Truck	1	1	0	0	0	0	0	0	0	0	1	1	2
	TOTAL											112	125	237
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	Total
S MD	Auto (Total)	18	18	12	10	1	1	40	40	0	2	71	71	142
	Taxi	11	11	1	1	2	2	0	0	0	0	14	14	28
	Taxi (Bal.)											21	21	42
	Truck	0	0	0	0	0	0	3	3	0	0	3	3	6
	TOTAL											95	95	190

Vehicular Traffic

Figures 13-12 through 13-15 show the incremental vehicular traffic (autos, taxis and trucks) generated by the proposed project during the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours. Figures 13-16 through 13-19 show the Build condition traffic in the study area during these peak hours, which is a combination of the incremental project traffic and the traffic volumes in the future without the project. Peak hour traffic volumes would experience increases along the primary access and egress routes for the project site.

Capacity and level of service analyses were performed for the study area intersections using the future Build peak hour traffic volumes. Table 13-7 compares the 2011 No-Build and Build operating conditions for these intersections.

Based on the thresholds established for signalized intersections in the *CEQR Technical Manual*, if a No-Build LOS of A, B, or C deteriorates to an unacceptable LOS D, E, or F under Build conditions, then a significant impact is deemed to have occurred. The *CEQR Technical Manual* further states that for a No-Build LOS A, B, or C that operates at LOS D under Build conditions, mitigation to mid-LOS D is required. Therefore, any such Build LOS change with a delay of 45 seconds (mid-LOS D) or less, is not considered an impact for the purposes of this analysis. For a No-Build LOS D, an increase of Build delay by 5 or more seconds is considered a significant impact. For a No-Build LOS E, the threshold is a 4-second increase in Build delay, and for a No-Build LOS F, a 3-second increase in Build delay is considered significant. However, if a No-Build LOS F condition has a delay in excess of 120 seconds, an increase in Build delay of more than 1 second is considered significant, unless the proposed action would generate fewer than five vehicles through that lane group in the peak hour.

Table 13-7 identifies, with an asterisk and shading (*) the impacted intersections in the four analyzed peak hours, based on the above criteria. As shown in the table, there would be 4, 3, 4, and 3 intersections with one or more impacted movements in the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours, respectively. The following provides a discussion of the key impacted locations in the study area.

Tenth Avenue Corridor:

There are three intersections in this corridor which would have impacted locations in this corridor, all on cross-street movements.

The westbound movement at W. 53rd Street would be impacted in both the weekday PM and the Saturday midday peak hours. During the former, it would deteriorate by 6.4 seconds of delay, from 61.2 seconds (LOS E) to 67.6 seconds (LOS E), while during the latter, it would deteriorate by 11.4 seconds of delay, from 61.0 seconds (LOS E) to 72.4 seconds (LOS E).

The eastbound movement at W. 54th Street would be impacted in the weekday AM. It would deteriorate by 8.2 seconds of delay, from 42.2 seconds (LOS D) to 50.4 seconds (LOS D).

Table 13-7, 2011 Build Traffic Conditions

SIGNALIZED INTERSECTIONS	LANE GROUP	NO BUILD AM PEAK HOUR			BUILD AM PEAK HOUR			NO BUILD MD PEAK HOUR			BUILD MD PEAK HOUR			NO BUILD PM PEAK			BUILD PM PEAK HOUR			NO BUILD Sat MD PEAK HOUR			BUILD Sat MD PEAK HOUR			
		V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	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-LT	1.43	235.5	F	1.49	261.9	F	0.92	52.0	D	0.97	61.5	E	1.00	67.8	E	1.05	83.0	F	0.80	38.3	D	0.85	42.7	D	
	NB-TR	0.64	10.2	B	0.64	10.4	B	0.74	12.1	B	0.74	12.1	B	0.52	8.9	A	0.53	8.9	A	0.72	11.5	B	0.73	11.6	B	
10th Ave. (NB) @ 53rd St. (WB)	WB-TR	0.76	36.8	D	0.81	40.4	D	0.64	31.0	C	0.68	32.6	C	0.97	61.2	E	1.00	67.6	E	0.96	61.0	E	1.01	72.4	E	
	NB-LT	0.68	10.7	B	0.69	10.9	B	0.76	12.5	B	0.78	12.8	B	0.53	8.9	A	0.54	9.0	A	0.71	11.4	B	0.74	11.8	B	
10th Ave. (NB) @ 54th St. (EB)	EB-LT	0.83	42.2	D	0.90	50.4	D	0.63	31.3	C	0.69	33.4	C	0.77	37.4	D	0.84	43.0	D	0.65	31.9	C	0.71	34.4	C	
	NB-TR	0.70	11.0	B	0.70	11.0	B	0.77	12.7	B	0.77	12.7	B	0.55	9.1	A	0.55	9.1	A	0.73	11.7	B	0.73	11.7	B	
10th Ave. (NB) @ 55th St. (WB)	WB-TR	1.11	103.4	F	1.11	103.4	F	1.02	73.0	E	1.02	73.5	E	0.91	48.6	D	0.92	49.3	D	0.88	50.3	D	0.88	50.3	D	
	NB-LT	0.66	10.5	B	0.64	10.6	B	0.71	11.5	B	0.73	11.8	B	0.53	8.9	A	0.54	9.0	A	0.68	10.9	B	0.68	10.9	B	
10th Ave. (NB) @ 57th St. (E-W)	EB-DefL							1.21	164.4	F	1.22	170.3	F	1.03	117.1	F	1.03	117.1	F							5< No Impact MD
	EB-T							0.56	25.8	C	0.56	26.0	C	0.80	35.0	C	0.83	38.7	D							
	EB-LT	1.12	96.1	F	1.13	99.5	F													0.67	27.2	C	0.67	27.2	C	5< No Impact AM
	WB-TR	0.90	34.7	C	0.91	35.6	D	0.87	36.0	D	0.87	36.6	D	1.08	77.5	E	1.08	79.3	E	0.60	24.8	C	0.61	24.8	C	
	NB-LTR	0.78	20.5	C	0.79	20.7	C	0.75	16.1	B	0.75	16.2	B	0.59	13.6	B	0.59	13.7	B	0.74	15.9	B	0.75	16.0	B	
11th Avenue																										
11 Ave. (N-S) @ 51st St. (WB)	WB-LTR	0.76	34.6	C	0.79	36.7	D	1.06	100.7	F	1.07	102.5	F	1.03	86.8	F	1.07	99.9	F	1.07	101.9	F	1.07	102.8	F	5< No Impact PM
	NB-L	0.25	18.5	B	0.27	20.6	C	0.09	6.9	A	0.10	11.2	B	0.10	6.9	A	0.10	7.1	A	0.09	6.9	A	0.09	6.9	A	
	NB-T	0.37	11.4	B	0.38	11.4	B	0.19	3.2	A	0.19	3.2	A	0.14	3.0	A	0.14	3.0	A	0.20	3.2	A	0.20	3.2	A	
	SB-TR	0.99	40.0	D	1.03	50.5	D	0.70	7.1	A	0.72	7.5	A	0.72	7.5	A	0.75	8.2	A	0.67	6.7	A	0.70	7.1	A	
11 Ave. (N-S) @ 52nd St. (EB)	EB-LTR	1.13	106.8	F	1.16	114.7	F	1.29	183.2	F	1.32	194.2	F	1.20	145.7	F	1.25	168.2	F	1.10	109.7	F	1.14	124.6	F	
	NB-TR	0.44	12.2	B	0.45	12.3	B	0.24	3.4	A	0.25	3.4	A	0.19	3.2	A	0.19	3.2	A	0.26	3.5	A	0.27	3.5	A	
	SB-L	0.49	17.2	B	0.54	19.1	B	0.17	3.7	A	0.20	3.9	A	0.24	4.2	A	0.27	4.5	A	0.19	3.9	A	0.22	4.1	A	
	SB-T	0.95	31.4	C	0.98	37.8	D	0.65	6.4	A	0.67	6.7	A	0.68	6.8	A	0.71	7.2	A	0.62	5.9	A	0.64	6.2	A	
11 Ave. (N-S) @ 53rd St. (WB)	WB-L	0.48	27.0	C	0.60	30.5	C	0.73	46.6	D	0.88	62.2	E	0.56	37.6	D	0.76	48.8	D	0.57	38.1	D	0.73	46.7	D	
	WB-R	0.44	26.3	C	0.53	28.7	C	0.55	38.1	D	0.64	42.4	D	1.00	89.7	F	1.13	132.0	F	1.09	115.5	F	1.18	148.4	F	
	NB-T	0.40	9.1	A	0.41	9.2	A	0.25	3.4	A	0.25	3.4	A	0.18	3.2	A	0.18	3.2	A	0.24	3.4	A	0.24	3.4	A	
	SB-T	0.83	17.6	B	0.84	18.2	B	0.58	5.6	A	0.59	5.6	A	0.67	6.5	A	0.67	6.6	A	0.58	5.5	A	0.58	5.6	A	
11 Ave. (N-S) @ 54th St. (EB)	EB-LTR	0.45	24.5	C	0.48	24.9	C	0.41	30.5	C	0.43	30.8	C	0.49	31.7	C	0.49	31.9	C	0.43	30.7	C	0.45	31.0	C	
	NB-L	0.45	17.8	B	0.52	21.5	C	0.23	5.0	A	0.25	5.4	A	0.40	8.5	A	0.45	9.7	A	0.22	4.8	A	0.24	5.2	A	
	NB-TR	0.47	9.8	A	0.50	10.1	B	0.30	3.7	A	0.32	3.8	A	0.26	3.5	A	0.28	3.6	A	0.37	4.0	A	0.39	4.1	A	
	SB-L	0.18	8.4	A	0.22	9.0	A	0.12	3.4	A	0.14	3.6	A	0.25	4.4	A	0.27	4.6	A	0.20	4.1	A	0.22	4.3	A	
	SB-TR	0.74	14.1	B	0.75	14.3	B	0.58	5.5	A	0.58	5.6	A	0.66	6.6	A	0.67	6.6	A	0.56	5.4	A	0.57	5.4	A	
11 Ave. (N-S) @ 55th St. (WB)	WB-LTR	1.22	144.8	F	1.22	144.8	F	1.17	130.7	F	1.18	131.5	F	0.72	35.7	D	0.72	35.7	D	1.08	100.9	F	1.08	101.7	F	
	NB-L	0.71	35.1	D	0.77	42.4	D	0.26	5.6	A	0.28	5.9	A	0.32	7.6	A	0.35	8.3	A	0.31	6.5	A	0.33	6.9	A	
	NB-T	0.40	9.1	A	0.40	9.1	A	0.24	3.4	A	0.25	3.4	A	0.22	3.3	A	0.23	3.3	A	0.27	3.5	A	0.27	3.5	A	
	SB-TR	0.57	10.5	B	0.58	10.6	B	0.40	3.9	A	0.40	4.0	A	0.50	4.5	A	0.51	4.6	A	0.40	3.9	A	0.41	3.9	A	



LEGEND:

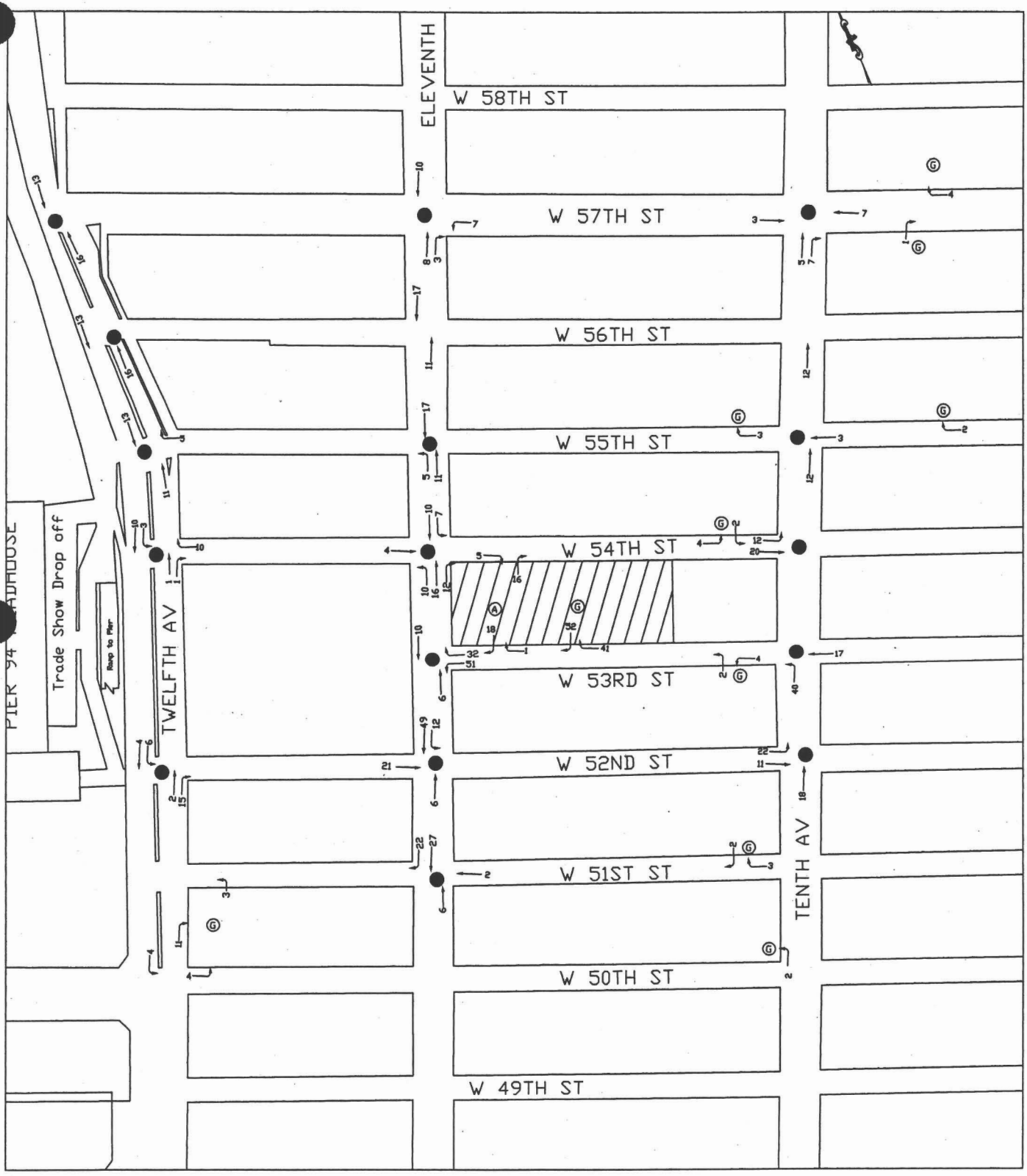
- ● Analyzed Intersection
- Ⓖ Parking Facilities Used by Project-Generated Vehicles
- Ⓐ Auto Dealership

Figure 13-13
Build Increment MD Traffic Volumes



LEGEND:

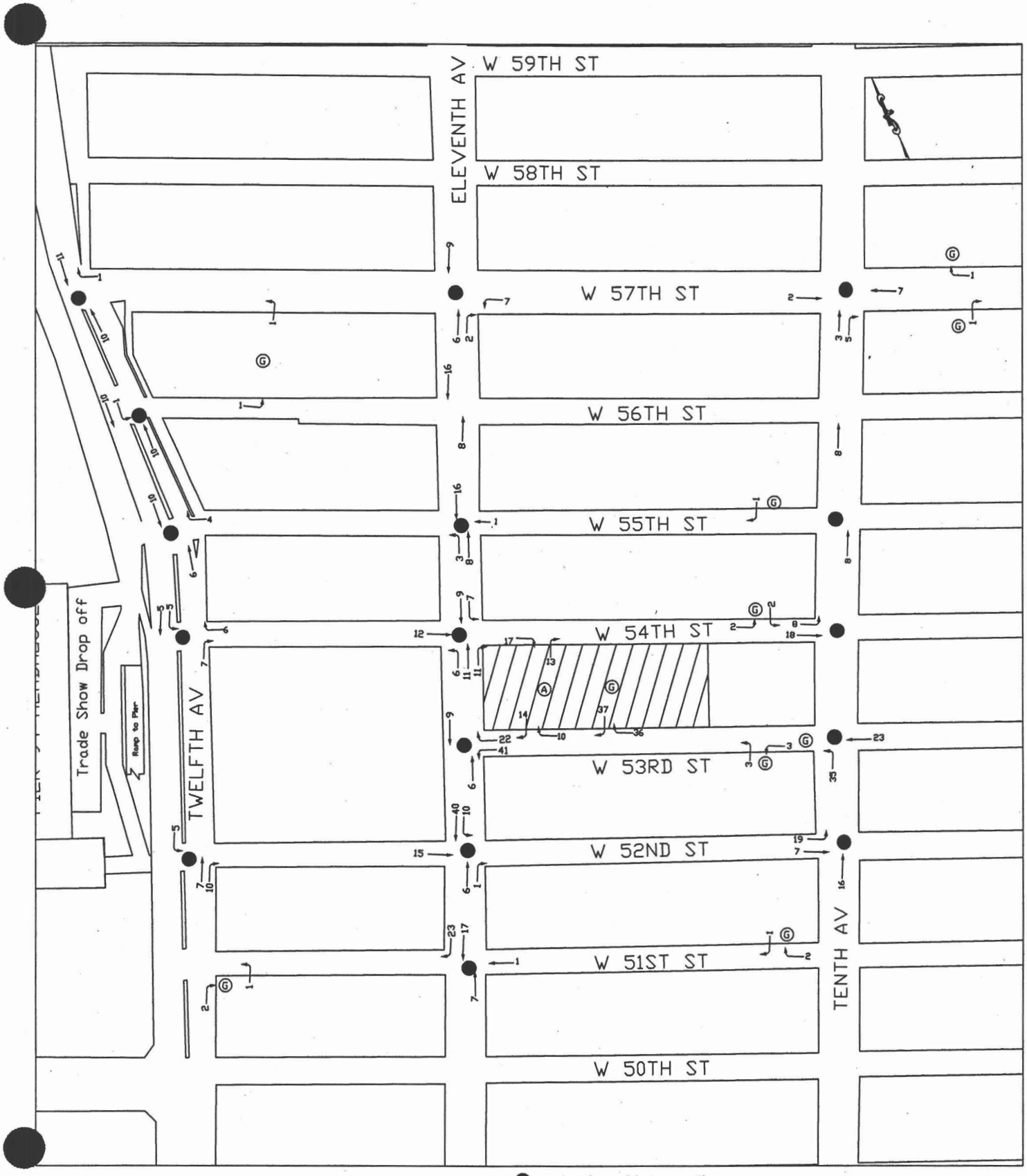
- ● Analyzed Intersection
- Ⓖ Parking Facilities Used by Project-Generated Vehicles
- Ⓐ Auto Dealership



LEGEND:

- ● Analyzed Intersection
- Ⓖ Parking Facilities Used by Project-Generated Vehicles
- Ⓐ Parking Facilities Used by Project-Generated Vehicles

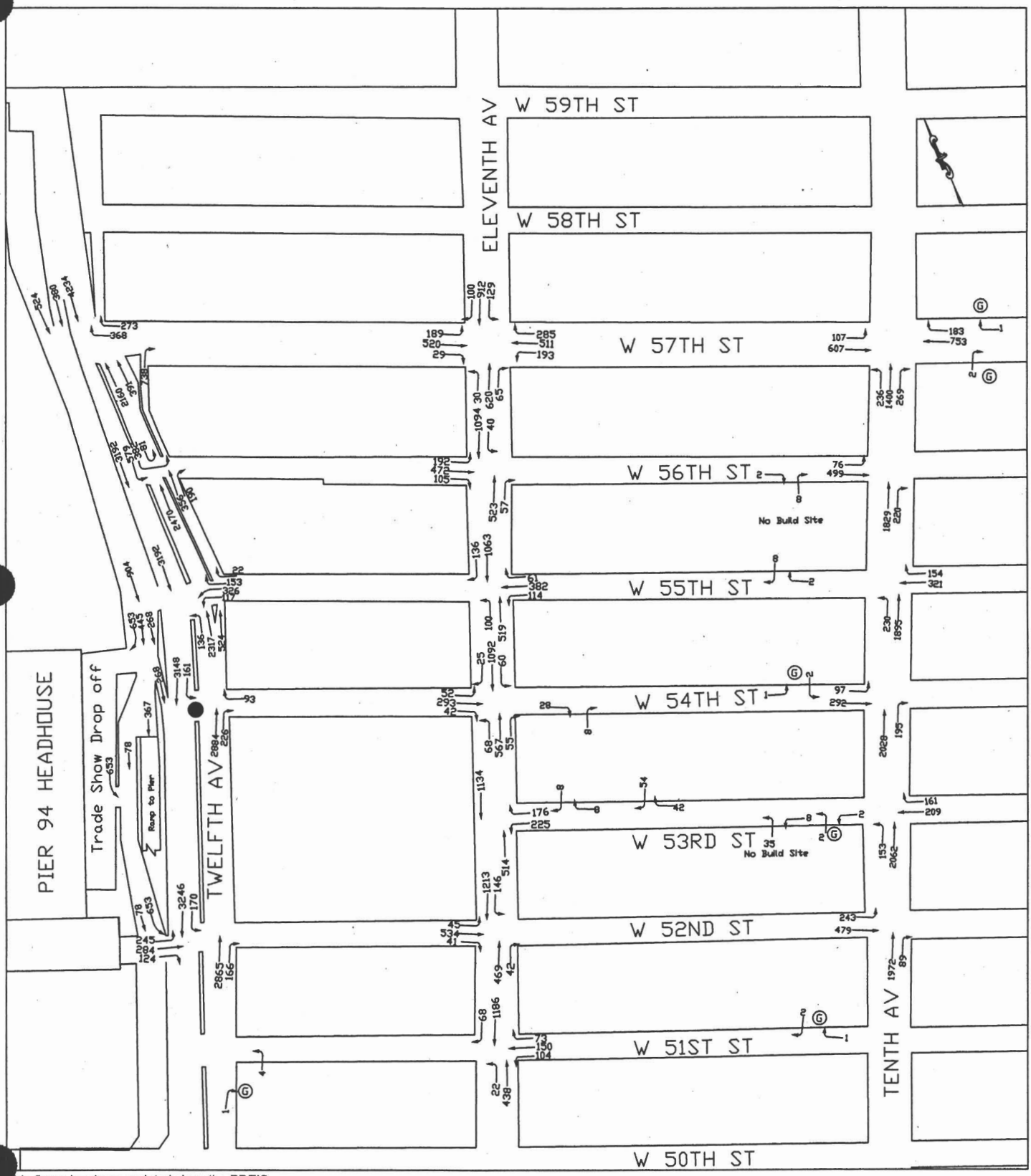
Build Increment Sat. MD Traffic Volumes



LEGEND:

- ● Analyzed Intersection
- Ⓖ Parking Facilities Used by Project-Generated Vehicles
- Ⓐ Auto Dealership

Figure 13-16
2011 Build AM Traffic Volumes

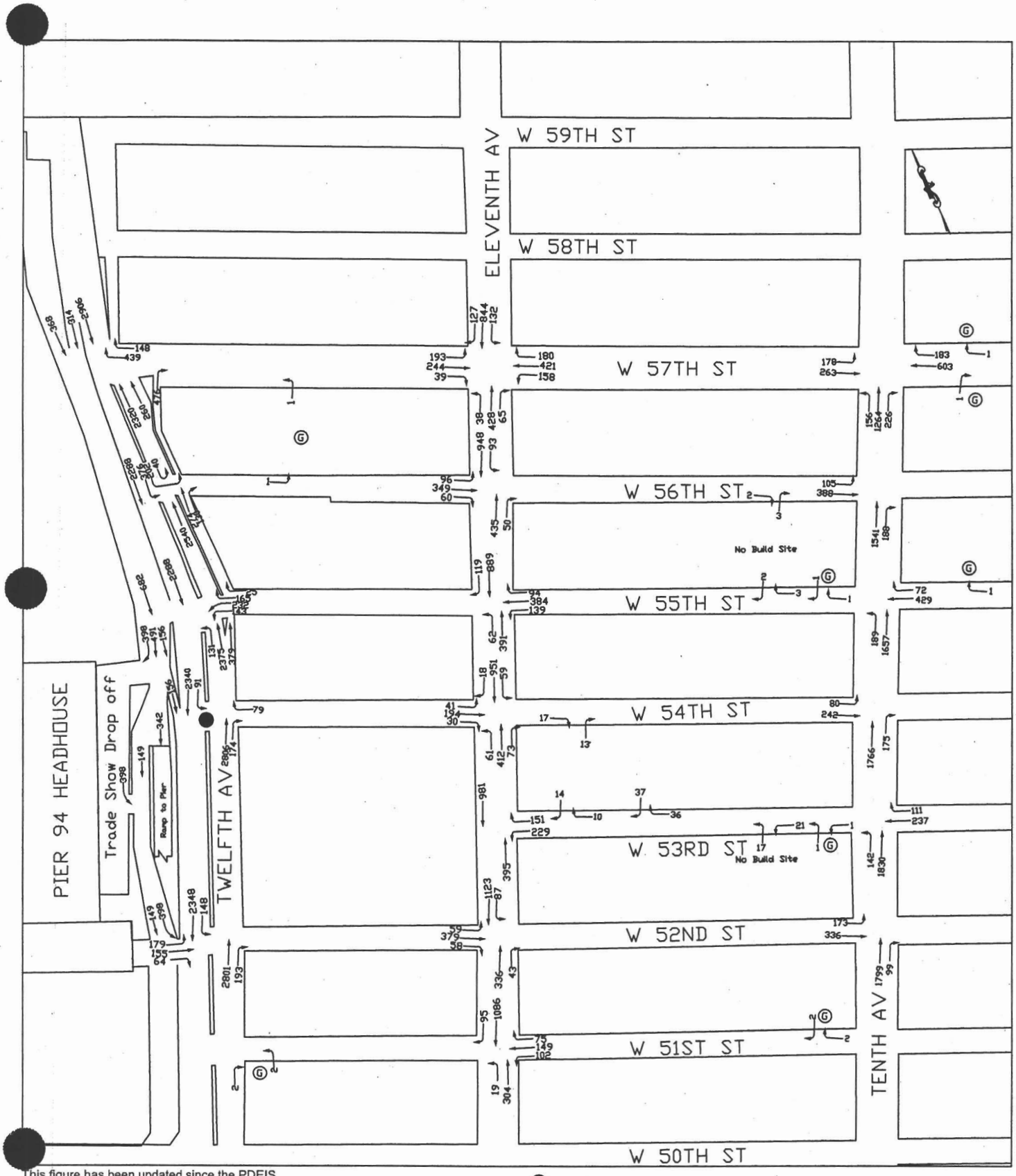


This figure has been updated since the PDEIS

LEGEND:

- ● Analyzed Intersection
- Ⓖ Parking Facilities Used by Project-Generated Vehicles
- Ⓐ Auto Dealership

2011 Build MD Traffic Volumes



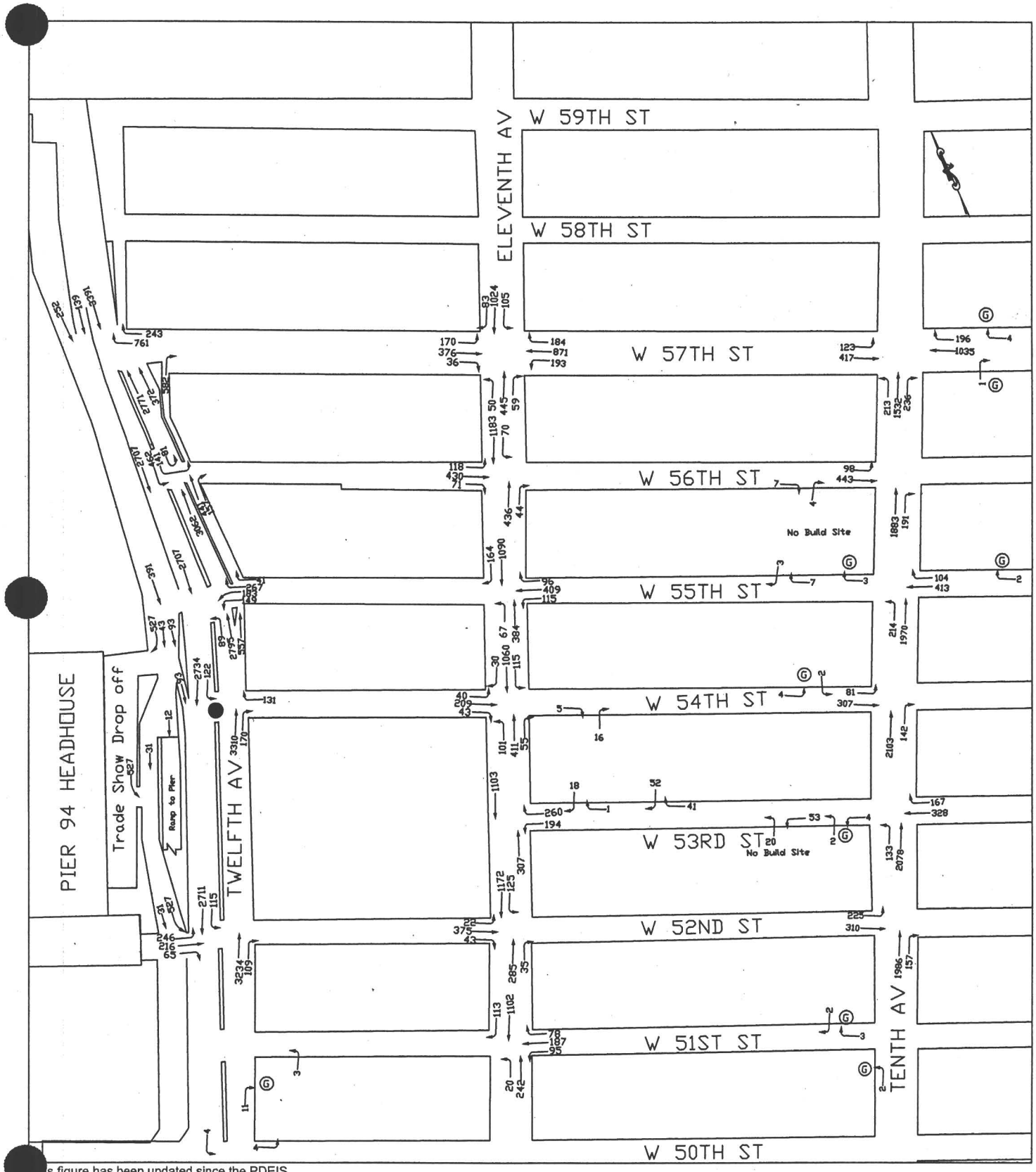
This figure has been updated since the PDEIS

LEGEND:

- ● Analyzed Intersection
- Ⓖ Parking Facilities Used by Project-Generated Vehicles
- Ⓐ Auto Dealership

Figure 13-18

2011 Build PM Traffic Volumes

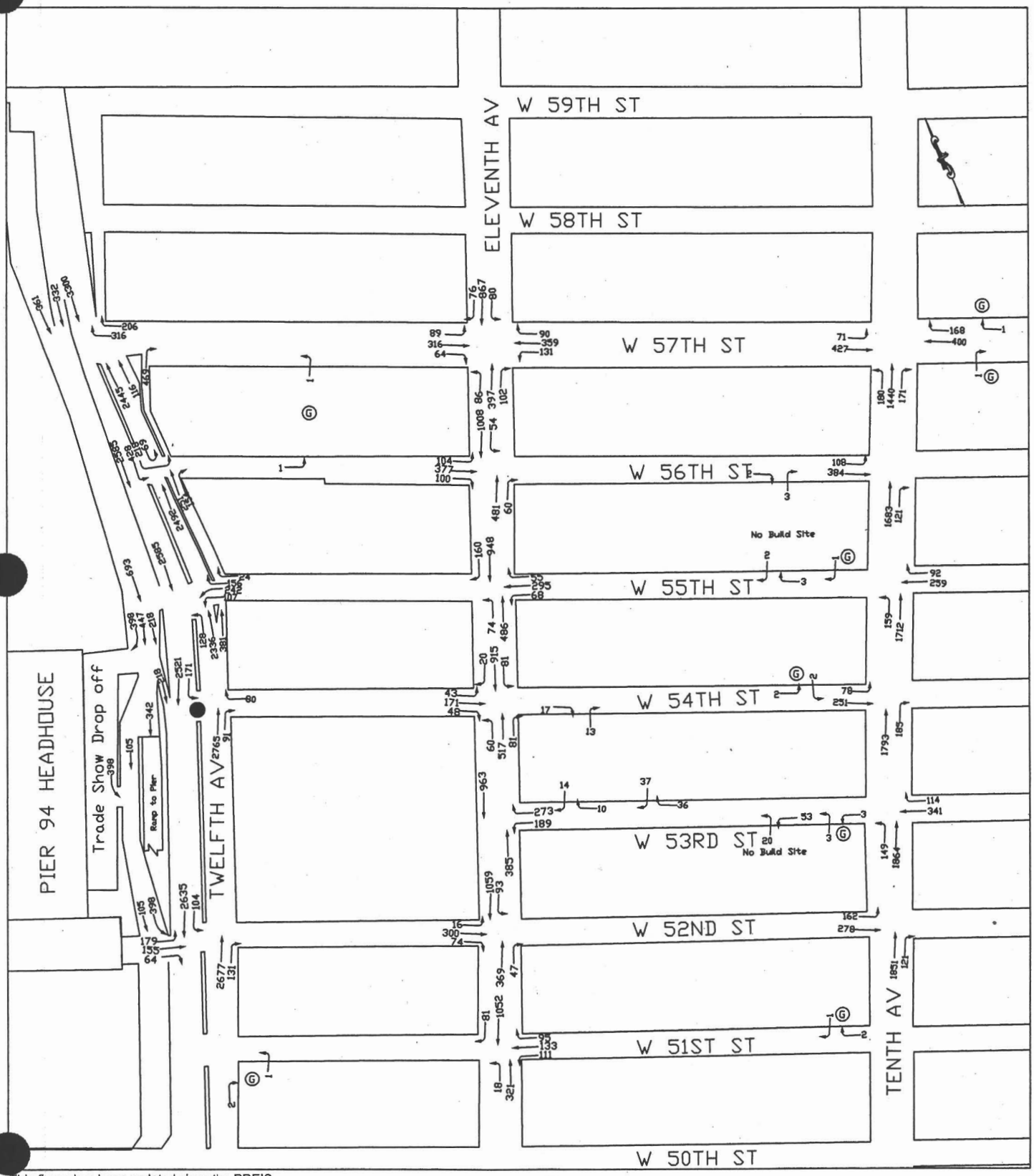


This figure has been updated since the PDEIS

LEGEND:

- ● Analyzed Intersection
- Ⓖ Parking Facilities Used by Project-Generated Vehicles
- Ⓐ Auto Dealership

2011 Build Sat MD Traffic Volumes



This figure has been updated since the PDEIS

LEGEND:

- ● Analyzed Intersection
- Ⓖ Parking Facilities Used by Project-Generated Vehicles
- Ⓐ Auto Dealership

Table 13-7, 2011 Build Traffic Conditions

SIGNALIZED INTERSECTIONS	LANE GROUP	NO BUILD AM PEAK HOUR			BUILD AM PEAK HOUR			NO BUILD MD PEAK HOUR			BUILD MD PEAK HOUR			NO BUILD PM PEAK			BUILD PM PEAK HOUR			NO BUILD Sat MD PEAK HOUR			BUILD Sat MD PEAK HOUR		
		V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS
11 Ave. (N-S) @ 57th St. (E-W)	EB-L	0.81	57.4	E	0.81	57.4	E	0.70	41.9	D	0.70	41.9	D	0.70	43.5	D	0.70	43.5	D	0.28	22.7	C	0.28	22.7	C
	EB-TR	1.17	127.9	F	1.17	127.9	F	0.81	45.8	D	0.81	45.8	D	1.17	129.5	F	1.17	129.5	F	1.15	124.4	F	1.15	124.4	F
	WB-L	0.71	48.8	D	0.74	51.1	D	0.50	29.5	C	0.52	30.4	C	0.78	52.4	D	0.80	55.3	E	0.51	36.0	D	0.53	36.9	D
	WB-TR	1.15	115.2	F	1.15	115.2	F	0.89	44.9	D	0.89	44.9	D	1.15	112.8	F	1.15	112.8	F	0.63	30.9	C	0.63	30.9	C
	NB-L	0.30	20.1	C	0.31	20.6	C	0.31	19.7	B	0.32	20.1	C	0.70	57.4	E	0.70	57.4	E	0.74	50.1	D	0.76	53.2	D
	NB-TR	0.43	15.3	B	0.44	15.3	B	0.29	13.8	B	0.29	13.9	B	0.30	14.0	B	0.31	14.1	B	0.31	14.0	B	0.31	14.1	B
	SB-L	0.62	31.6	C	0.63	32.0	C	0.47	22.9	C	0.48	23.1	C	0.41	21.4	C	0.42	21.6	C	0.30	18.6	B	0.30	18.7	B
	SB-TR	0.81	23.9	C	0.82	24.4	C	0.78	22.7	C	0.79	23.0	C	0.93	33.6	C	0.94	34.8	C	0.77	22.3	C	0.78	22.6	C
12th Avenue																									
12 Ave. (N-S) @ 52nd St. (EB)	EB-LTR	1.06	112.2	F	1.06	112.2	F	0.47	40.8	D	0.47	40.8	D	0.84	71.7	E	0.84	71.7	E	0.49	41.1	D	0.49	41.1	D
	NB-TR	0.85	18.7	B	0.85	18.9	B	0.91	21.9	C	0.91	22.2	C	0.92	19.3	B	0.92	19.7	B	0.84	18.7	B	0.84	18.9	B
	SB-L	0.65	72.6	E	0.66	73.4	E	0.74	73.8	E	0.76	75.6	E	0.57	73.4	E	0.59	74.1	E	0.65	70.8	E	0.68	73.7	E
	SB-T	0.68	2.9	A	0.66	2.9	A	0.55	4.5	A	0.55	4.5	A	0.58	2.4	A	0.58	2.4	A	0.63	5.1	A	0.63	5.1	A
12 Ave. (N-S) @ 54th St. (WB)	WB-R	0.38	56.1	E	0.41	57.1	E	0.25	38.7	D	0.27	39.0	D	0.53	62.1	E	0.57	64.0	E	0.26	38.8	D	0.28	39.2	D
	NB-TR	0.67	3.1	A	0.67	3.1	A	0.71	5.8	A	0.71	5.8	A	0.77	3.8	A	0.77	3.8	A	0.67	5.4	A	0.67	5.4	A
	SB-L	0.45	57.0	E	0.48	57.6	E	0.22	37.6	D	0.23	37.7	D	0.38	55.8	E	0.39	56.1	E	0.42	41.3	D	0.43	41.6	D
	SB-T	0.67	3.1	A	0.67	3.1	A	0.55	4.5	A	0.55	4.5	A	0.60	2.6	A	0.60	2.6	A	0.60	4.9	A	0.60	4.9	A
	SB-T (Service Road)	0.21	1.7	A	0.21	1.7	A	0.13	3.0	A	0.13	3.0	A	0.07	1.3	A	0.07	1.3	A	0.19	3.3	A	0.19	3.3	A
12 Ave. (N-S) @ 55th St. (WB)	WB-L	1.19	166.5	F	1.19	166.5	F	0.95	78.2	E	0.95	78.2	E	1.09	135.9	F	1.09	135.9	F	0.88	64.4	E	0.88	64.4	E
	WB-R	0.40	55.3	E	0.41	55.5	E	0.32	38.7	D	0.32	38.8	D	0.67	63.2	E	0.66	63.7	E	0.31	38.5	D	0.31	38.7	D
	NB-L	1.19	213.1	F	1.19	213.1	F	0.95	114.0	F	0.94	114.0	F	0.43	48.9	D	0.43	49.0	D	0.91	108.2	F	0.91	108.2	F
	NB-T	0.49	2.2	A	0.50	2.2	A	0.57	5.1	A	0.57	5.1	A	0.62	2.7	A	0.62	2.7	A	0.55	5.0	A	0.55	5.0	A
	SB-TR	0.77	10.4	B	0.78	10.5	B	0.75	17.1	B	0.75	17.1	B	0.69	10.3	B	0.69	10.3	B	0.77	17.4	B	0.77	17.4	B
	NB-T	0.41	2.6	A	0.41	2.6	A	0.33	4.4	A	0.33	4.4	A	0.45	2.8	A	0.45	2.8	A	0.33	4.4	A	0.33	4.4	A
	SB-T (Service Road)	0.45	14.3	B	0.45	14.3	B	0.42	17.6	B	0.42	17.6	B	0.20	12.2	B	0.20	12.2	B	0.41	17.4	B	0.41	17.4	B
12 Ave. (N-S) @ 56th St. (WB)	NB-T	0.84	33.2	C	0.85	33.4	C	0.57	2.8	A	0.57	2.8	A	0.72	6.0	A	0.72	6.1	A	0.55	2.7	A	0.55	2.7	A
	SB-L	0.65	27.7	C	0.65	27.7	C	0.93	68.8	E	0.93	69.0	E	0.87	67.0	E	0.87	67.0	E	1.01	81.3	F	1.01	81.7	F
	NB-TR (Service Road)	0.38	23.3	C	0.38	23.3	C	0.18	1.8	A	0.18	1.8	A	0.28	3.5	A	0.28	3.5	A	0.18	1.8	A	0.18	1.8	A
12 Ave. (N-S) @ 57th St. (WB)	WB-R	0.42	33.2	C	0.42	33.7	C	0.59	39.9	D	0.59	39.9	D	1.08	106.5	F	1.08	106.5	F	0.53	38.6	D	0.53	38.7	D
	NB-T	0.59	17.6	B	0.60	17.6	B	0.50	5.6	A	0.51	5.6	A	0.59	4.8	A	0.59	4.8	A	0.49	5.6	A	0.50	5.6	A

Key: Impacted intersection in Build without mitigation (asterisk, shading)

UNSIGNALIZED INTERSECTIONS	LANE GROUP	NO BUILD AM PEAK HOUR			BUILD AM PEAK HOUR			NO BUILD MD PEAK HOUR			BUILD MD PEAK HOUR			NO BUILD PM PEAK			BUILD PM PEAK HOUR			NO BUILD Sat MD PEAK HOUR			BUILD Sat MD PEAK HOUR		
		V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS	V/C RATIO	Delay (sec.)	LOS
12 Ave. (N-S) @ 57th St. (WB)	NB-R	0.81	22.5	C	0.81	22.5	C	0.52	12.8	B	0.52	12.8	B	0.64	15.1	C	0.64	15.1	C	0.51	12.7	B	0.51	12.7	B

The eastbound movement at W. 52nd Street would be impacted in the weekday AM, midday, and PM peak hours. In the AM it would deteriorate by 26.4 seconds of delay from 235.5 (LOS F) to 261.9 (LOS F). In the midday it would deteriorate by 9.5 seconds of delay from 52.0 (LOS D) seconds to 61.5 seconds (LOS E). In the PM it would deteriorate by 15.2 seconds from 67.8 seconds (LOS E) to 83.0 (LOS F).

Eleventh Avenue Corridor:

At W. 51st Street, the southbound movement in the AM peak hour would deteriorate by 10.5 seconds of delay, from 40.0 seconds (LOS D) to 50.5 seconds (LOS D).

At W. 52nd Street, the eastbound movement at this intersection would be impacted in all four analyzed peak hours. In the AM peak hour it would deteriorate by 7.9 seconds of delay from 106. 8 seconds of delay (LOS F) to 114.7 seconds of delay (LOS F). In the midday peak hour it would deteriorate by 11.0 seconds of delay from 183.2 seconds (LOS F) to 194.2 seconds (LOS F). In the PM peak hour, it would deteriorate by 22.5 seconds of delay, from 145.7 seconds (LOS F) to 168.2 seconds (LOS F). In the Saturday midday peak hour it would deteriorate by 12.9 seconds of delay, from 109.7 seconds (LOS F) to 124.6 seconds (LOS F).

At W. 53rd Street, both the westbound left turn and right turn movements would be impacted in the weekday PM and Saturday midday peak hours. In addition, the westbound left turn movement also would be impacted in the midday peak hour. On the left turn movement, in the weekday midday peak hour it would deteriorate by 15.6 seconds of delay, from 46.6 seconds (LOS D) to 62.2 seconds (LOS E). In the weekday PM peak hour, the left turn movement would deteriorate by 11.2 seconds of delay, from 37.6 seconds (LOS D) to 48.8 seconds (LOS D) and in the Saturday midday peak hour it would deteriorate by 8.6 seconds of delay, from 38.1 seconds (LOS D) to 46.7 seconds (LOS D). In addition, the westbound right turn movement in the weekday PM peak hour it would deteriorate by 42.3 seconds of delay, from 89.7 seconds (LOS F) to 132.0 seconds (LOS F) and in the Saturday midday peak hour it would deteriorate 32.9 seconds of delay 115.5 seconds (LOS F) to 148.4 seconds (LOS F).

Twelfth Avenue Corridor:

There would be no impacted intersections in the Twelfth Avenue corridor in any of the analyzed peak hours.

Overall, 6 of the 16 study area intersections would be impacted in one or more of the analyzed peak hours. Table 13-8 provides a summary of these impacted locations.

Mitigation measures for these impacts are presented in Chapter 19, "Mitigation."

Table 13-8, Summary of Impacted Intersections

IMPACTED INTERSECTION (1)	PEAK PERIOD: IMPACTED MOVEMENT			
	WKDY AM	WKDY MD	WKDY PM	SAT MD
10th Ave. & W. 52nd St.	EB-LT	EB-LT	EB-LT	--
10th Ave. & W. 53rd St.	--	--	WB-TR	WB-TR
10th Ave. & W. 54th St.	EB-LT	--	--	--
11th Ave. & W. 51st St.	SB-TR	--	--	--
11th Ave. & W. 52nd St.	EB-LTR	EB-LTR	EB-LTR	EB-LTR
11th Ave. & W. 53rd St.	--	WB-L	WB-L, WB-R	WB-L, WB-R

(1) The following intersections would not be impacted in any of the analyzed peak hours: 10th Ave. & W. 55th St.; 10th Ave. & W. 57th St.; 11th Ave. & W. 54th St.; 11th Ave. & W. 55th St.; 11th Ave. & W. 57th St.; 12th Ave. & W. 52nd St.; 12th Ave. & W. 54th St.; 12th Ave. & W. 55th St.; 12th Ave. & W. 56th St.; 12th Ave. & W. 57th St.

Traffic Safety

The annual number of pedestrians and bicyclists injured or killed in motor vehicle accidents from 2005 through 2007 at study area intersections is shown in Table 13-9. (The accident data do not distinguish injuries from fatalities.) Accidents resulting in injuries or fatalities to pedestrians or bicyclists often involve turning vehicles, with failure to yield the right-of-way to pedestrians in crosswalks frequently cited as a causal factor. The New York City Department of Transportation (NYCDOT) considers any intersection at which five or more pedestrians or cyclists are killed or injured per year as a high accident location. As shown in Table 1, three intersections experienced one or more years with 5 or more pedestrians or bicyclists killed or injured during the 2005 to 2007 study period.

These high accident location intersections include:

* Tenth Avenue at W. 57th Street -- there were 2 bicyclists and 9 pedestrians injured or killed in 2005; 2 bicyclists and 3 pedestrians injured or killed in 2006; and 6 pedestrians injured or killed in 2007.

* Eleventh Avenue at W. 57th Street -- there were 5 pedestrians injured or killed in 2005.

* Twelfth Avenue at W. 54th Street -- there were 4 bicyclists and 2 pedestrians injured or killed in 2007.

According to the *CEQR Technical Manual*, pedestrian safety is especially of concern at sensitive land use locations, such as hospitals, schools, parks, nursing homes, and elderly housing, where there would be substantial child or elderly activities. The intersection of W. 54th Street and Twelfth Avenue is adjacent to De Witt Clinton Park and Hudson River Park and therefore may attract child and/or elderly populations. In addition, the intersection of W. 57th Street and Tenth Avenue is

approximately one block from St. Luke's Roosevelt Hospital and therefore may be traversed by a higher than average number of children, elderly, or mobility impaired individuals.

Table 13-9, Annual Pedestrian and Bicycle Injuries/Fatalities at Study Area Intersections, 2005-2007

		Bicyclists Killed/Injured			Pedestrians Killed/Injured			Total, Pedestrians & Bicyclists Killed/Injured		
Intersection		2005	2006	2007	2005	2006	2007	2005	2006	2007
10th Ave. at	W. 52nd St.	0	0	1	0	1	0	0	1	1
	W. 53rd St.	1	0	1	1	0	0	2	0	1
	W. 54th St.	0	0	1	0	0	1	0	0	2
	W. 55th St.	0	0	0	1	4	2	1	4	2
	W. 56th St.	0	0	1	1	3	0	1	3	1
	W. 57th St.	2	2	0	9	3	6	**11**	**5**	**6**
11th Ave. at	W. 51st St.	0	0	0	1	0	3	1	0	3
	W. 52nd St.	1	0	0	1	0	0	2	0	0
	W. 53rd St.	1	0	1	0	0	0	1	0	1
	W. 54th St.	0	2	0	2	0	3	2	2	3
	W. 55th St.	0	1	0	0	0	1	0	1	1
	W. 56th St.	0	2	0	2	0	0	2	2	0
	W. 57th St.	0	2	1	5	0	0	**5**	2	1
12th Ave. at	W. 52nd St.	0	0	0	1	0	1	1	0	1
	W. 54th St.	0	2	4	1	0	2	1	2	**6**
	W. 55th St.	0	2	0	0	0	1	0	2	1
	W. 56th St.	0	0	0	3	0	0	3	0	0
	W. 57th St.	0	0	1	0	2	1	0	2	2

Source: NYCDOT data

The *Manual* further states that the key issue to be resolved in safety analyses is the extent to which vehicular and pedestrian exposure to accidents may reasonably be expected to increase with the proposed action in place. The proposed action will generate new vehicular, pedestrian, and bicycle trips through these intersections. However, as these intersections are not immediately adjacent to the site or parking or transit facilities that would be used by action-generated vehicle trips, the proposed action would not reasonably be expected to significantly increase the number of accidents at these locations.

Between the Draft and Final EIS, the applicant will work with NYCDOT, or in the case of 12th Avenue and W. 54th Street, NYSDOT, to identify and design pedestrian safety improvements for these intersections. This will include reviews of police accident reports and other information relevant to pedestrian safety at these locations. The options that will be explored include:

* Installation of high-visibility crosswalks, and repainting of existing crosswalks, to better delineate the pedestrian crossing area;
* Installation of pedestrian and vehicle warning signs;

Parking

Parking Supply Changes

The proposed project would provide up to 225 accessory parking spaces for use by building residents, employees, and visitors. This represents the maximum number of accessory parking spaces permitted as-of-right under the proposed zoning. Also, the proposed automobile dealership would provide space for vehicle servicing and storage and therefore would accommodate vehicles traveling to the site for servicing. In addition, parking demand generated by the proposed NYPD Stable facility would be accommodated within that facility.

The proposed project would not provide any public parking spaces.

As noted in the existing conditions section, on-street parking space is limited in the vicinity of the project site and utilization is typically very high throughout the day. Under the proposed project, there are no changes proposed to on-street parking regulations. However, with the creation of new curb cuts for the proposed development, the number of parking spaces in the area would be reduced moderately.

Parking Demand Changes

Total parking demand generated by the proposed project's various components would exceed the 225-space accessory parking supply. Table 13-10 shows the expected parking demand and accumulation for a typical weekday, but excludes NYPD Stable parking demand (accommodated in the stable) and auto dealership service-related trips (which would be accommodated within the dealership's service areas). Therefore, the table shows the parking demand that would need to be accommodated either by the on-site accessory garage or by off-street public parking facilities in the surrounding area.

As shown in the table, parking demand generated by the proposed project would exceed the supply provided by the 225-space accessory garage, with total demand at 232, 253, 302, and 263, during the weekday AM, weekday midday, weekday PM, and overnight periods, respectively. In addition, a parking demand forecast for the Saturday midday period, based on the accumulation patterns used in Table 13-10 and the travel demand assumptions in Table 13-5, also found that parking demand would exceed the on-site capacity. Specifically, it is expected that the project's parking demand would be approximately 236 spaces during the Saturday midday period. The weekend overnight demand likely would be similar to the weekday overnight demand.

Table 13-10, Parking Accumulation Calculations: Total Accessory and Public Parking Demand

	Residential (1)			Health Club (2)			Retail (Market) (3)			Auto Dealer (4)			Total Parking Demand (5)		
	519 vehicle trips 263 peak vehicles (1)			335 vehicle trips 0 min vehicles			23 vehicle trips 0 min vehicles			223 vehicle trips 0 min vehicles			1,100 vehicle trips 263 min vehicles		
	In	Out	accum	In	Out	accum	In	Out	accum	In	Out	accum	In	Out	accum
12-1 AM	1	1	263	0	0	0	0	0	0	0	0	0	1	1	263
1-2	1	1	263	0	0	0	0	0	0	0	0	0	1	1	263
2-3	1	1	263	0	0	0	0	0	0	0	0	0	1	1	263
3-4	1	1	263	0	0	0	0	0	0	0	0	0	1	1	263
4-5	1	1	263	0	0	0	0	0	0	0	0	0	1	1	263
5-6	2	5	260	0	0	0	0	0	0	0	0	0	2	5	260
6-7	4	16	248	0	0	0	0	0	0	0	0	0	4	16	248
7-8	5	16	237	15	3	12	0	0	0	13	4	9	33	23	258
8-9	7	40	204	7	9	10	0	0	0	18	9	18	32	58	232
9-10	9	14	199	9	3	16	1	0	1	14	6	26	33	23	242
10-11	9	16	192	6	3	19	1	0	2	8	3	31	24	22	244
11-12	10	14	188	12	3	28	1	1	2	7	4	34	30	22	252
12-1 PM	12	12	188	10	9	29	2	2	2	13	13	34	37	36	253
1-2	13	13	188	6	6	29	1	1	2	7	7	34	27	27	253
2-3	14	13	189	6	6	29	1	1	2	9	7	36	30	27	256
3-4	20	12	197	6	6	29	1	1	2	7	4	39	34	23	267
4-5	25	17	205	9	6	32	1	1	2	8	14	33	43	38	272
5-6	39	17	227	33	11	54	1	1	2	3	17	19	76	46	302
6-7	28	14	241	21	15	60	1	1	2	3	15	7	53	45	310
7-8	27	14	254	12	24	48	0	1	1	1	5	3	40	44	306
8-9	20	12	262	9	30	27	0	0	1	0	0	3	29	42	293
9-10	3	5	260	6	21	12	1	0	2	0	0	3	10	26	277
10-11	3	3	260	1	12	1	0	2	0	0	0	3	4	17	264
11-12	4	1	263	0	1	0	0	0	0	0	0	3	4	2	266
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
24 hr total	259	259	518	168	168	336	12	12	24	111	108	219	550	547	1,097

Notes:

(1) 2000 Census data from Census Tract 135 used for calculation of maximum residential vehicle demand. Accumulation pattern based on ABC West End Ave. Properties FEIS.

(2) Accumulation pattern based on Coliseum Redevelopment FEIS

(3) Accumulation attern based on PHA Survey of Manhattan College Pathmark

(4) 2/3 of auto dealer trips are service trips (vehicles go directly into auto dealer facility, 1/3 of auto dealer trips are sales & employee trips; assumed to use accessory garage (based on interview with an auto dealer manager). Accumulation pattern based on W. 57th St. Rezoning FEIS.

(5) All NYPD Mounted Unit parking demand accmmodated in the Stable facility. Not reflected in Total In, Out, & Accumulation

As a result, excess parking demand would have to be accommodated off-site. As on-street parking utilization is currently very high, to be conservative, the analysis assumes that all parking demand generated by the proposed project which cannot be accommodated on-site would have to be accommodated by the off-street public parking facilities in the surrounding area. Accordingly, an analysis was conducted to determine if the off-street public parking facilities within a quarter-mile radius of the project site could accommodate the public parking demand generated by the proposed project.

Table 13-11 shows the overall effect on the off-street public parking study area under the proposed project and compares it to the No-Build conditions. As shown in the table, with the proposed project utilization rates would increase. In the weekday AM peak period, which would experience a shortfall under No-Build conditions, the shortfall would increase by an additional 35 vehicles, a moderate increase in the shortfall from 204 to spaces to 239 spaces, an increase from 108 percent to 109 percent of capacity. In the PM peak period, which is near capacity under No-Build conditions, the proposed action would increase demand by 76 vehicles, resulting in a shortfall of 44 spaces. As a result, demand would increase from 99 percent to 102 percent of capacity. In the other peak hours, a shortfall in supply would not occur. Utilization would increase from 91 percent to 93 percent in the weekday midday peak period, from 56 percent to 58 percent in the overnight period, and from 57 percent to 58 percent in the Saturday midday peak period.

In summary, the proposed project's parking demand would be partly accommodated on-site and partly accommodated by public parking facilities. Utilization of off-street public parking facilities would increase as a result of the proposed project, with a shorftall in capacity in the weekday AM and PM peak periods. The shortfall in public parking spaces expected under No-Build conditions in the weekday AM peak period would increase slightly under Build conditions. The small availability of spaces under No-Build conditions in the weekday PM peak period would become a small shortfall under Build conditions. According to the *CEQR Technical Manual*, for proposed actions within the Manhattan Central Business District (defined as the area south of 61st Street), the inability of the proposed action or the surrounding area to accommodate projected future parking demands would be generally considered a parking shortfall, but is not deemed to be a significant impact. The unsatisfied demand for parking spaces in the AM and PM peak hours would result in vehicles parking outside of the quarter-mile study area and motorists walking greater distances to their destinations. As parking shortfalls do not constitute significant adverse impacts for *CEQR* purposes, mitigation is not required.

Table 13-11, 2011 Build Public Off-Street Parking Conditions

		2011 No-Build Conditions	Change	2011 Build Conditions
AM	Capacity	2,698	0	2,698
	Public Parking Demand	2,902	35	2,937
	Available Spaces	-204	-	-239
	Utilization	108%	-	109%
MD	Capacity	2,698	0	2,698
	Public Parking Demand	2,437	46	2,513
	Available Spaces	231	-	185
	Utilization	91%	-	93%
PM	Capacity	2,698	0	2,698
	Public Parking Demand	2,666	76	2,742
	Available Spaces	32	-	-44
	Utilization	99%	-	102%
LATE	Capacity	2,698	0	2,698
	Public Parking Demand	1,514	38	1,552
	Available Spaces	1,184	-	1,146
	Utilization	56%	-	58%
SAT MD	Capacity	2,698	0	2,698
	Public Parking Demand	1,527	37	1,564
	Available Spaces	1,171	-	1,134
	Utilization	57%	-	58%

E. CONCLUSION

The effects of the proposed project on area traffic and parking conditions were analyzed during the weekday AM, weekday midday, weekday PM, and Saturday midday peak periods. Overnight conditions for parking were also considered. Although the site could be developed as-of-right under the existing zoning and is currently undergoing as-of-right foundation work, the analysis conservatively assumes that in the future without the proposed action the project site would remain vacant. This will serve as the baseline for comparing the effects of the future without and with the proposed action. The traffic analysis found that the proposed project would generate 222, 182, 237, and 190 vehicles per hour (vph), in the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours respectively. This increased travel demand would result in significant adverse

traffic impacts at 5, 3, 5, and 3 intersections during the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours, respectively. Chapter 19, "Mitigation" describes mitigation measures to address the traffic impacts. The parking analysis found that the proposed project would generate peak parking demand in excess of the accessory parking spaces that would be provided on-site. An assessment found that there would be sufficient off-street public parking spaces available within a quarter-mile radius of the project site to accommodate the proposed project's public parking demand in the weekday midday, overnight, and Saturday midday peak periods. In the weekday AM and weekday PM peak periods there would be a shortfall with 1 and 3 percentage point increases in utilization in the AM and PM peak periods, respectively. As per *CEQR Technical Manual* guidelines, this parking shortfall would not be considered a significant adverse impact and no mitigation is required.