Chapter 16: Traffic and Parking

A. INTRODUCTION

This chapter assesses the Proposed Project's potential impact on traffic and parking facilities in the vicinity of the project site. The Proposed Project, a complex of five mixed-use buildings, would generate new demand to the surrounding streets and would create new parking demand.

The proposed site plan includes the extension of West 60th Street and Freedom Place South through to the project site. Vehicle access to below grade parking facilities would be provided via curb cuts along West 59th Street and Freedom Place South (see Figure 1-6, in Chapter 1, "Project Description").

The primary vehicle routes to and from the site are expected to be Twelfth Avenue/Route 9A, Riverside Boulevard, West End/Eleventh Avenue, and Amsterdam/Tenth Avenue, with local access via West 59th and West 61st Streets. Pedestrian activity is presently relatively light on sidewalks immediately adjacent to the site. The project site presently includes two public parking facilities containing 2,387 spaces.

Trip generation analyses were performed to determine which of the Reasonable Worst Case Development Scenarios (RWCDS) maximizes the potential for traffic and parking impacts. That analysis showed that the maximum retail/office scenarios maximized the potential for traffic impacts, while the maximum residential scenario maximized the potential for parking impacts. Therefore, the traffic analysis for the weekday midday, PM, and Saturday midday peak hours is based upon RWCDS 3b (see Chapter 1, "Project Description"), which assumes 2,100 residential units, 1,012 hotel rooms, 151,598 gross square feet (gsf) of community facility (a 1,332-seat public school), 325,022 gsf of retail, 52,209 gsf of office and 276,011 gsf of auto showroom. The weekday AM traffic analysis is based on RWCDS 3d, which is a slight variation on that program. In RWCDS 3d, the gross square feet of retail space is reduced to 165,938 gsf and the office space is increased to 211,293 gsf, with all other components of the project remaining constant. The parking analysis is based upon RWCDS 1, which assumes 3,000 residential units, 151,598 gsf of community facility (a 1,332-seat public school), 140,168 gsf of retail, 104,432 gsf of office and 276,011 gsf of auto showroom, and a total of 1,800 parking spaces. RWCDS 1 had the largest project parking demand.

In May 2010, shortly prior to the completion of the Draft SEIS, a substantive update to the 2001 *CEQR Technical Manual* was released. Prior to the public hearing for the Proposed Project, a Technical Memorandum was prepared (published on DCP's website in September 2010) that considered whether one or more analyses contained in the Draft SEIS should be revised in the Final SEIS in light of the updated guidance set forth in the 2010 *CEQR Technical Manual.* This chapter reflects updated 2010 *CEQR Technical Manual* guidance with respect to traffic analysis.

PRINCIPAL CONCLUSIONS

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 for this predominantly residential project. The traffic analysis found that the Proposed Project would generate 657, 727, 811, and 899 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 during one or more time periods at 24 intersections. Specifically, significant traffic impacts would occur at 17, 13, 12, and 13 intersections during the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours, respectively. Mitigation measures to address these traffic impacts are described in Chapter 22, "Mitigation."

The parking analysis found that the Proposed Project would generate peak parking demand of 1,374 spaces. That demand, along with the parking demand for some of the displaced parkers currently using the project site, would be accommodated within the Proposed Project's 1,800-space garage. The remainder of the displaced parkers would be accommodated in nearby parking facilities. This would increase the 2018 parking utilization rate within the ¼-mile study area to approximately 102.3 percent during the weekday midday, 90.9 percent during the overnight, and 80.4 percent during the Saturday midday peak periods. Since there would not be sufficient capacity available at public parking facilities within ¼ mile of the project site to accommodate project-generated parking demand as well as displaced parkers during the weekday midday, a secondary study area analysis of parking facilities within ½ mile was conducted. Within ½ mile of the project site there would be sufficient parking to accommodate project-generated parking demand as well as displaced parkers and the 2018 parking utilization would be approximately 93.4 percent during the weekday midday. Therefore, no parking shortfall would be anticipated.

B. SUMMARY OF 1992 FEIS FINDINGS

VEHICULAR TRAFFIC

The analysis of vehicular traffic in the 1992 Final Environmental Impact Statement (FEIS) examined the potential for impacts in a primary study area extending from West 51st and West 55th Streets on the south to West 79th Street on the north, and from Central Park West/Eighth Avenue on the east to the Hudson River on the west. Additional intersections in an extended study area encompassing the Twelfth Avenue corridor, the Ninth/Tenth Avenue corridor, the East 65th/East 66th Street corridor, the West 86th Street corridor and the West 57th Street corridor were also assessed.

The analysis assumed construction of an on-site roadway system of public and private streets extending westward generally along the Manhattan grid to a new 45-foot-wide extension of north-south Riverside Drive running from West 59th Street to West 72nd Street. It was also assumed that the new roadway system would include street connections to the external grid at West 61st, West 63rd, West 64th, West 66th and West 70th Streets, all providing access to/from West End Avenue. In addition to the new Riverside Drive Extension, the proposed street system was to include an additional north-south street—Freedom Place South—connecting to West 61st and West 64th Streets and providing internal circulation for the site.

In addition to the new street system, the FEIS assumed that the Proposed Project would include modifications to the following elements of the existing roadway system:

- The permanent closure of the northbound Miller Highway exit ramp at West 72nd Street;
- Narrowing of the roadbed of Freedom Place from 50 feet to 35 feet between West 66th Street and West 70th Street and its conversion to one-way northbound operation; and
- Narrowing the mapped but un-built segment of West 64th Street between the project site and West End Avenue from 55 feet to 44 feet and designating it for one-way eastbound operation, thereby completing the West 63rd Street (in)/West 64th Street (out) couplet.

Since the potential relocation of the Miller Highway was under consideration at the time the 1992 FEIS was prepared, the traffic analyses in the FEIS also assessed future conditions with implementation of the Basic Reconstruction Alternative for this highway relocation.

Based on the projected vehicular demand generated by full build-out of the 1992 Riverside South project and changes to the street system (and associated traffic diversions) then planned as part of the Proposed Project, the 1992 FEIS analysis determined that intersections along the proposed new street system would not experience congestion. Outside of the project site, however, project-generated traffic would result in significant adverse traffic impacts in one or more peak hours at 25 intersection approaches in the primary traffic study area and 23 intersection approaches in the extended study area. No additional significant adverse traffic impacts were identified under conditions with the relocation of the Miller Highway.

A combination of physical and operational changes to the street system was proposed to mitigate the Proposed Project's significant adverse traffic impacts. The traffic mitigation plan for the primary study area included four elements:

- West End Avenue Improvement Plan (WIP)—Repaving and restriping West End Avenue from West 62nd Street to West 70th Street to remove the median and use the curb lanes for parking only when not needed for traffic flow;
- Making West 61st Street one-way westbound and West 64th Street one-way eastbound between Amsterdam and West End Avenues;
- Retiming traffic signals and upgrading selected intersection controllers to allow different signal plans for different peak hours; and
- Eliminating curbside parking where necessary in selected peak hours to improve traffic flow.

In the extended traffic study area, the mitigation plan also included geometric changes along Twelfth Avenue between West 26th and West 16th Streets to mitigate traffic impacts at the West 23rd Street and Eleventh Avenue intersections.

It was determined that the mitigation measures proposed in the 1992 FEIS would fully mitigate all of the Proposed Project's significant adverse traffic impacts in both the primary and extended traffic study areas, irrespective of the relocation of the Miller Highway.

Since publication of the 1992 FEIS, the on-site roadway system north of West 63rd Street has been constructed concurrent with the development of adjacent parcels. It is expected that additional on-site roadway segments to the south of West 63rd Street will be implemented as construction on additional sites advances. Of the proposed modifications to the existing street system, the closure of the northbound Miller Highway exit ramp at West 72nd Street, and the narrowing of the Freedom Place travelway to 35 feet between West 66th Street and West 70th Street and its conversion to one-way northbound operation have been implemented. West 64th Street has been constructed with a 34-foot-wide travelway between the project site and West

End Avenue and is currently operating one-way eastbound between Riverside Boulevard and Freedom Place, and two-way between Freedom Place and West End Avenue. (Future conversion of this two-way segment of West 64th Street to one-way eastbound operation is still planned.) In addition, relocation of the Miller Highway has not been undertaken but is still under consideration.

With respect to the Proposed Project's traffic mitigation measures, the West End Avenue Improvement Plan was implemented, as was the conversion of West 64th Street to one-way eastbound operation between Amsterdam and West End Avenues. The conversion of West 61st Street to one-way westbound operation has not been implemented and is no longer under consideration by the New York City Department of Transportation (NYCDOT). All traffic signals in Manhattan are now under computer control that accommodates different signal plans for different peak hours, and NYCDOT has adjusted signal timing/phasing and curbside parking regulations in the area to reflect prevailing traffic conditions. In the extended traffic study area, Twelfth Avenue (Route 9A) has been fully reconstructed by the New York State Department of Transportation (NYSDOT).

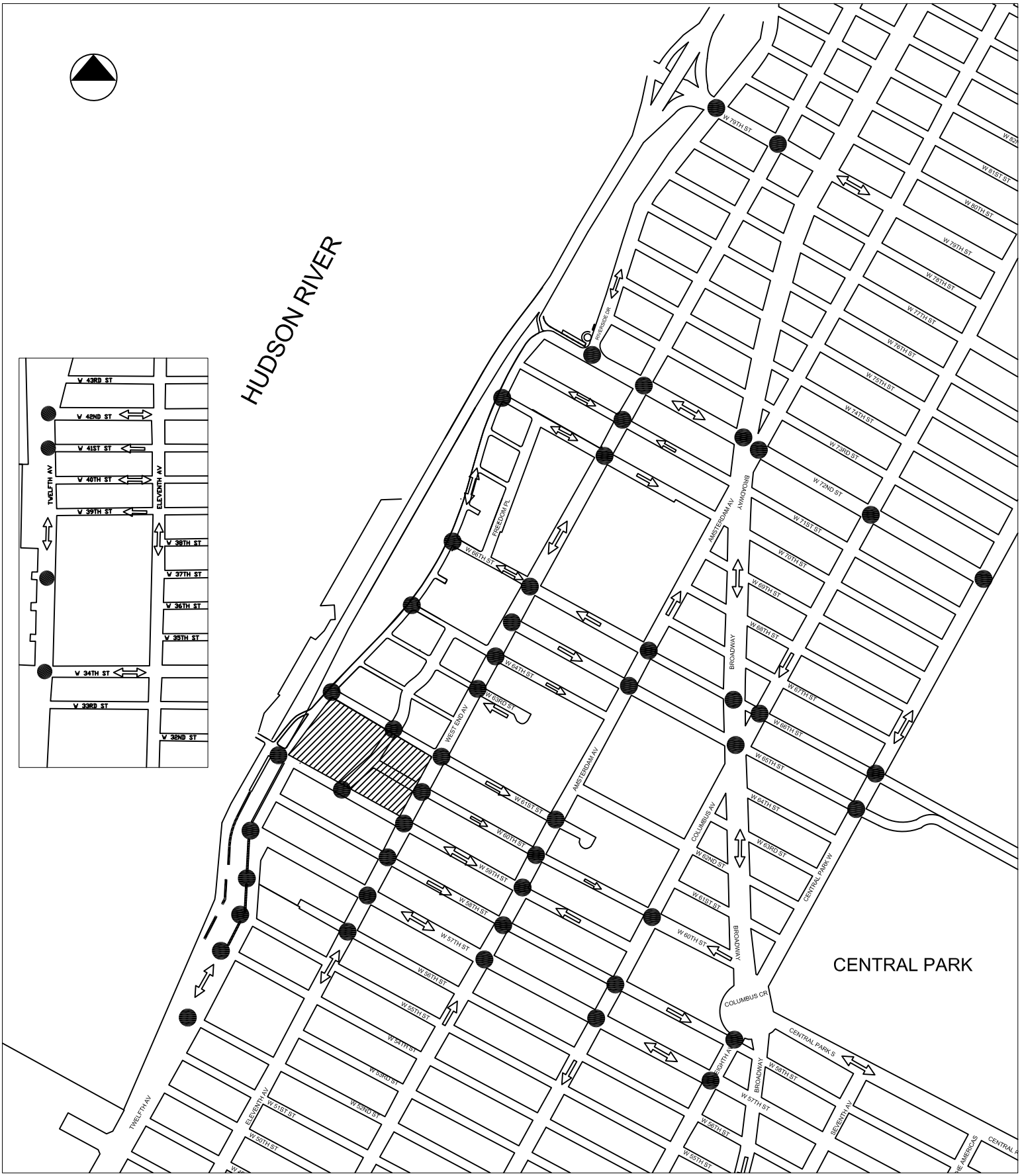
PARKING

The analysis of parking conditions in the 1992 FEIS assumed that the Proposed Project would include 3,500 off-street parking spaces (327 private and 3,173 public) in 12 separate garages located throughout the project site, and that an additional 150 to 200 on-street parking spaces would be created along the new on-site street system. An existing 850-space public parking lot and 150-space private lot at the southern end of the lot were to be displaced. This amount of new off- and on-street capacity was determined to be sufficient to accommodate all project-generated parking demand as well as demand displaced from curbside spaces that would be eliminated under the Proposed Project's traffic mitigation plan.

C. METHODOLOGY

The study area selected for the traffic analysis is shown in **Figure 16-1**. 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 West 79th Street, on the south by West 34th Street, on the east by Central Park West, and on the west by Twelfth Avenue/Route 9A. 55 intersections within the study area were analyzed for vehicular traffic during four time periods—the weekday AM (8–9 AM), weekday midday (12–1 PM), weekday PM (5–6 PM), and Saturday midday (1–2 PM) peak hours. Within the study area, 46 intersections will be signal-controlled in the future No Build condition. The existing conditions include three intersections along Riverside Boulevard (at West 70th, 66th, and 59th Streets) that are currently unsignalized. There are also three intersections along Riverside Boulevard (at West 64th and West 61st Streets and in the southbound direction of Riverside Boulevard at West 59th Street) that have yet to be built, but which are analyzed in the future No Build condition as unsignalized intersections. The Proposed Project would displace existing public parking, and the analysis also includes an evaluation of off-street public parking facility availability in the study area.

This chapter begins by describing in detail existing conditions in the year 2008 for traffic and parking in the study area. The 2018 conditions in the Future Without the Proposed Project (the No Build condition) are then determined, including additional transportation-system demand and changes in the roadways and parking systems expected by 2018; and then 2018 conditions in the Future With the Proposed Project (the Build condition) are determined. The Build condition



This figure has been revised for the FSEIS

LEGEND

Project Site

Analyzed Intersections

Figure 16-1
Traffic Study Area

analyzes the increase in travel demand resulting from the Proposed Project along with the street changes that would be made in connection with the Proposed Project and adds these changes to the future No Build condition. Significant impacts from project-generated demands are then identified. Chapter 22, "Mitigation," presents proposed measures to mitigate any significant adverse traffic or parking impacts associated with the Proposed Project.

Two future baseline conditions were considered under "The Future Without the Proposed Project":

1. No Build Scenario 1—Assumes that in the 2018 Future Without the Proposed Project, the original program for Parcels L, M, and N that was approved in the FEIS would be completed.
2. No Build Scenario 2—Assumes that in the 2018 Future Without the Proposed Project, the original FEIS approved program for Parcels L and M would be completed, but Parcel N would remain in its current parking use.

The second No Build scenario is being considered because, subsequent to the completion of the Riverside South FEIS, the City Council modified the project approvals to provide that future development on Parcel N would require the submission of revised plans and supplementary environmental analyses. Development on Parcels L and M would not require any additional approvals. Since Parcel N would require additional review and approvals before it could be developed as proposed in the FEIS, the second No Build scenario accounts for a condition in which Parcels L and M are developed as proposed in the original FEIS, and Parcel N is not redeveloped but instead continues in its existing condition. The detailed quantified traffic analysis is presented for the Future Without the Proposed Project uses No Build Scenario 2 because this scenario would result in the largest increment for the proposed project.

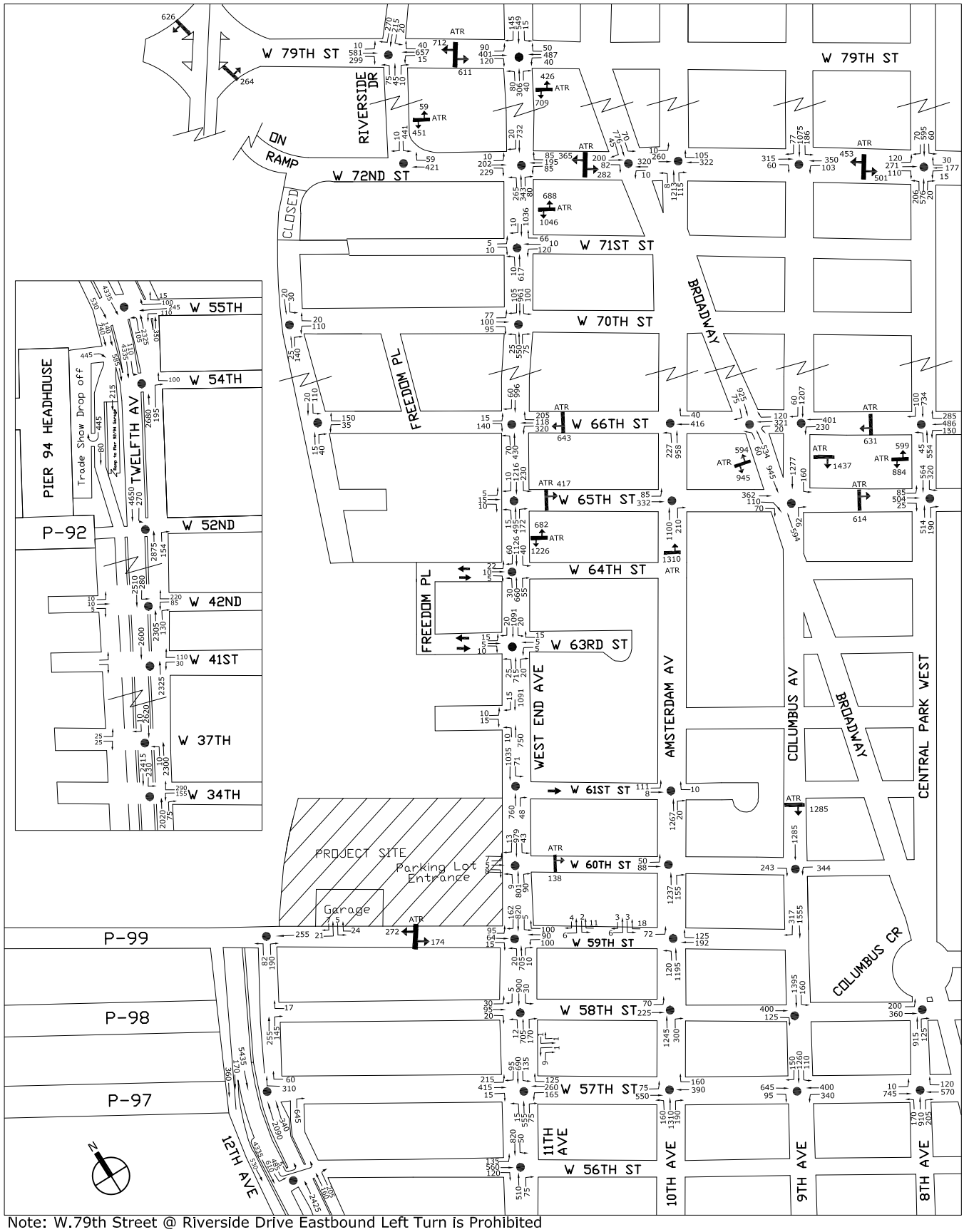
All implemented mitigation measures required for the original project are considered as part of the existing and/or No Build conditions. These include the West End Avenue Improvement Plan. Both No Build scenarios would include the extension of Riverside Boulevard to the west and West 61st Street to the north of the project site. A separate analysis is presented at the end of this chapter which examines project impacts if the current Miller Highway is relocated below grade.

D. EXISTING CONDITIONS

Existing 2008 traffic conditions in the study area were developed from data primarily collected in September 2008 and March 2009. This data collection included turning movement counts, automatic traffic recorder (ATR) data, and vehicle classification counts. The 2008 network was supplemented with the 2008 traffic network from West 57th Street to West 34th Street developed as part of the *Western Railyards Draft EIS (DEIS)*. Parking data collection took place in September 2008. Other sources, such as the *West 61st Street Rezoning and City-wide General Large-Scale Development Text Amendment FEIS* (2006, City Environmental Quality Review [CEQR] no. 05DCP063Y), the *770 Eleventh Avenue FEIS* and the *Fordham Lincoln Center FEIS*, were also utilized. **Figures 16-2 through 16-5** show the resultant traffic volumes for 2008 existing conditions during the weekday AM, midday, PM, and Saturday midday peak hours, respectively.

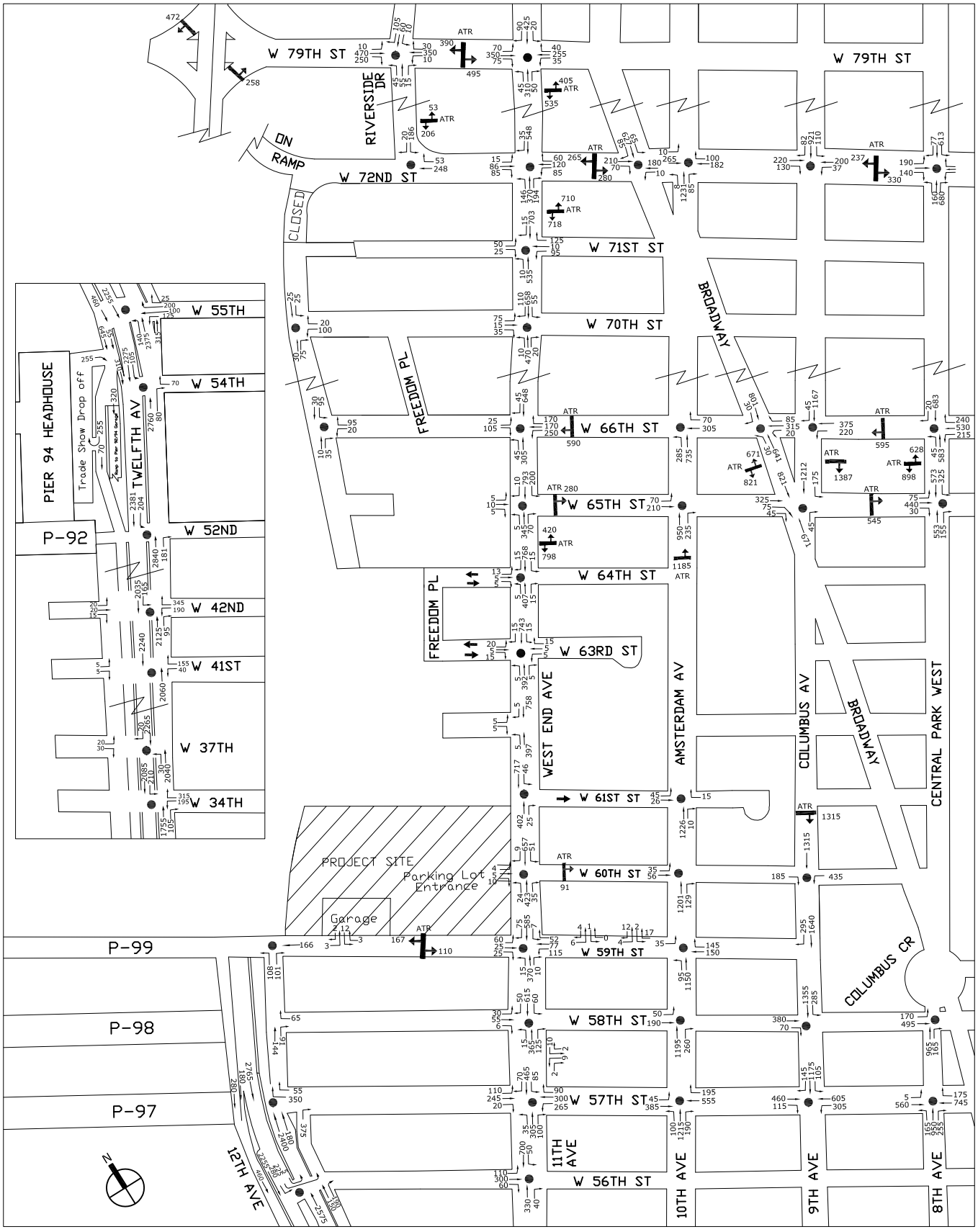
VEHICULAR TRAFFIC

The study area is typical of the Manhattan grid, composed of major north-south avenues and principal as well as minor east-west cross-streets. In addition, the study area includes an



Note: W.79th Street @ Riverside Drive Eastbound Left Turn is Prohibited

2008 Existing Conditions - Weekday AM Peak Hour

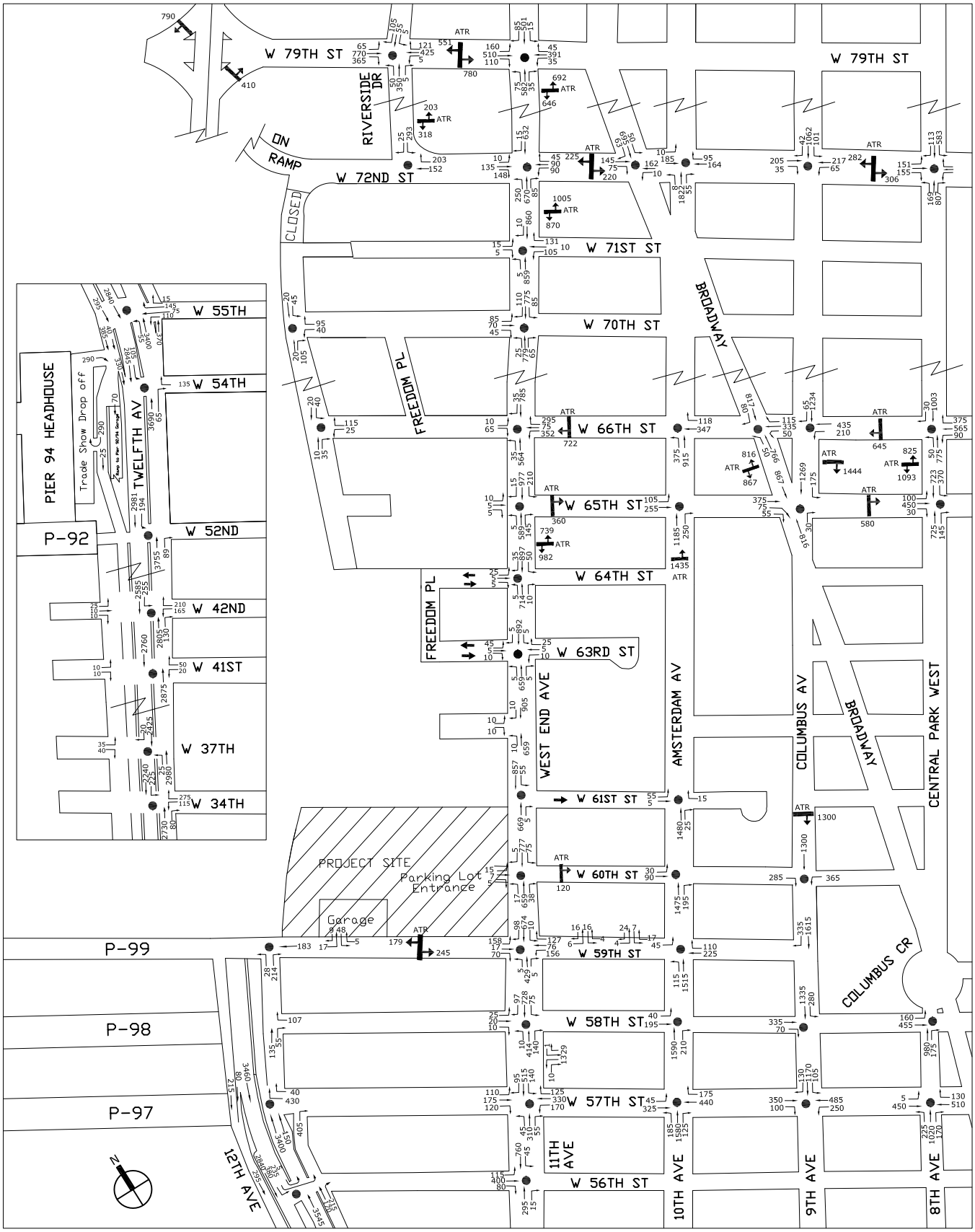


Note: W.79th Street @ Riverside Drive Eastbound Left Turn is Prohibited

2008 Existing Conditions - Weekday MD Peak Hour

RIVERSIDE CENTER

Figure 16-3

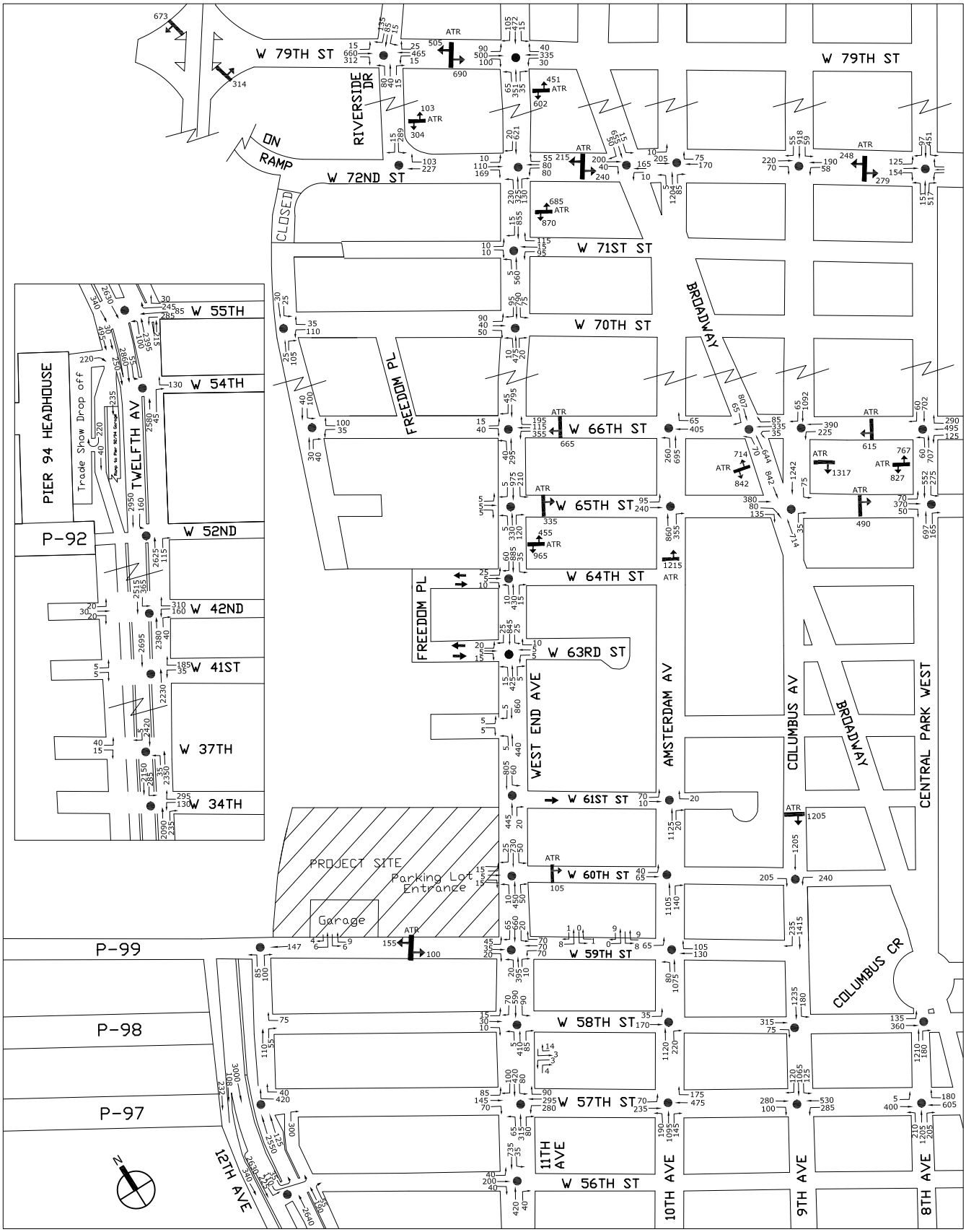


Note: W.79th Street @ Riverside Drive Eastbound Left Turn is Prohibited

2008 Existing Conditions - Weekday PM Peak Hour

RIVERSIDE CENTER

Figure 16-4



Note: W.79th Street @ Riverside Drive Eastbound Left Turn is Prohibited

2008 Existing Conditions - Sat MD Peak Hour

evolving street network west of West End Avenue in conjunction with the Riverside South development. To the east is Central Park West, which is a two-way street from West 62th Street to the north. South of Columbus Circle, Eighth Avenue is a one-way northbound avenue that extends south to Bleecker Street where it joins with Hudson Street. 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. The two-way highway has six lanes (north of West 57th Street) and is restricted to passenger cars. To the south, Twelfth Avenue/Route 9A generally has six to eight lanes and has left-turn bays at most cross-streets. Twelfth Avenue/Route 9A has two-way peak hour traffic volumes, which vary from approximately 5,805 to 8,395 at West 57th Street. Twelfth Avenue/Route 9A does not carry any New York City Transit (NYCT) bus routes along its length in the study area.

East of Twelfth Avenue/Route 9A is Riverside Drive and Riverside Boulevard. Riverside Drive extends from the George Washington Bridge to West 72nd Street, where Riverside Boulevard commences. In the study area, both roadways are 45 feet wide and carry one lane of traffic in each direction, plus parking. Riverside Drive just north of West 72nd Street carries 259 vph to 521 vph depending on the peak hour, while Riverside Boulevard, now under construction at its north and south ends, carries only local Riverside South development traffic (approximately 100 vph). Riverside Drive hosts the M5 bus along its length; Riverside Boulevard is at the western terminus of the M66 and M72 bus routes.

East of Riverside Drive is West End Avenue/Eleventh Avenue, a two-way arterial with two lanes in each direction, plus parking. Parking is typically restricted, especially southbound in the AM peak hour and northbound in the PM peak. The avenue provides left-turn lanes at most intersections south of West 66th Street. Two-way traffic volumes just south of West 66th Street range from 1,353 vph to 1,956 vph, with the heaviest traffic coming in the AM peak hour. West End Avenue hosts the M57 bus within the study area.

Amsterdam Avenue/Tenth Avenue and Columbus Avenue/Ninth Avenue are adjacent one-way arterials forming the main north-south arterial couplet and truck routes in the study area. Amsterdam Avenue/Tenth Avenue is northbound, and has four traffic lanes plus parking. Its heaviest peak traffic flow is in the PM period, with peak hour volumes ranging from 1,185 to 1,435 vph just north of West 64th Street. Broadway interrupts Amsterdam Avenue at West 71st Street creating a northbound constraint due to the three-phased signal at that location. The M11 bus runs northbound on the avenue.

Columbus Avenue/Ninth Avenue just east is southbound and contains four traffic lanes plus parking lanes in the study area. Traffic on this avenue peaks southbound in the AM with peak hour volumes ranging between 1,205 and 1,315 vph just north of West 60th Street. Columbus Avenue is also interrupted by Broadway, resulting in a southbound constraint at West 65th Street where there is a three-phased signal. In the study area, the avenue hosts the southbound M11 bus route, as well as the M7 bus route north of West 71st Street.

Broadway is a four-lane plus parking, two-way arterial traversing diagonally through the study area. The diagonal configuration creates north-south traffic constraints on the major avenues and creates Columbus Circle at the West 59th Street/Eighth Avenue intersection. South of Columbus Circle, Broadway becomes one-way southbound to the southern tip of Manhattan. Just south of West 66th Street, Broadway carries two-way traffic volumes of 1,492 to 1,683 vph in peak periods, with heaviest flows typically in the southbound direction. The M5, M7, M10, M20, and M104 buses traverse portions of Broadway in the study area.

The principal cross-streets are West 79th, West 72nd, and West 57 Streets. All three roadways have an approximately 60 feet wide two-way travelway with two lanes in each direction, plus curbside parking/loading. All three roadways also interface with Twelfth Avenue/Route 9A along the western edge of the study area. Just west of West End Avenue, West 79th Street carries weekday two way peak hour volumes between 885 vph and 1,331 vph, while West 72nd Street carries between 487 vph and 921 vph, and West 57th Street east of Twelfth Avenue carries between 760 vph and 1,015 vph. All three major crosstown roadways also carry individual bus routes, including the M79, the M72, the M57, and the M31 (along West 57th Street).

While each of the three above-mentioned cross-streets connects the study area directly or indirectly to Manhattan's East Side, the main West Side/East Side connector is the West 65th-West 66th Street river-to-river couplet traversing from Riverside Boulevard to York Avenue, through Central Park. These two cross-streets typically provide one to two lanes in each direction plus parking/loading. Approaching Amsterdam Avenue, eastbound West 65th Street carries 280 vph to 417 vph in the weekday peak hours, while westbound West 66th Street carries 590 vph to 722 vph approaching West End Avenue. The M66 bus route utilizes this couplet in the study area.

The remaining cross-streets in the study area mainly serve local access functions. Several of these cross-streets are interrupted by super-block developments. Along the southern edge of the project site is the two-way West 59th Street, which also distributes traffic to/from the Twelfth Avenue/Route 9A service roads. West 61st Street, at the project site's northern edge, is presently under construction and when completed, will also have two-way traffic with one lane plus parking in each direction.

CAPACITY ANALYSIS

The capacity analyses at study area intersections are based on the methodology presented in the *Highway Capacity Software Version HCS+ 5.4.* Traffic data required for these analyses include 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. **Table 16-1** defines the LOS/delay relationship for the HCM methodology for signalized intersections.

Table 16-1
Intersection Level of Service Criteria

Level of Service (LOS)	Average Delay per Vehicle (seconds)	
	Signalized Intersections	Unsignalized Intersections
A	≤10	0 - 10
B	> 10 - 20	> 10 - 15
C	> 20 - 35	> 15 - 25
D	> 35 - 55	> 25 - 35
E	>55 - 80	> 35 - 50
F	> 80	> 50

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.

Table 16-2 shows the results of the capacity analysis at the 49 study area intersections analyzed in the four peak hours for the existing conditions (4 of the 55 intersections analyzed for No Build and Build conditions have not been built yet and the two intersections along Freedom Place are built with the project). 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 16-2** shows that 21 of the 49 study area intersections have one or more congested movements in one of more of the analyzed peak hours. There are 17 intersections with one or more congested movements in the AM peak hour, 12 in the midday, 18 in the PM, and 11 in the Saturday peak hours. These are discussed in more detail below.

TWELFTH AVENUE/ROUTE 9A

During the weekday AM peak hour, there are seven intersections with congested movements in the Twelfth Avenue corridor. The northbound through movement at Twelfth Avenue and West 56th Street operates at LOS D, with 52.9 seconds of delay and a v/c ratio of 0.98. At Twelfth Avenue and West 55th Street, the westbound right movement operates at LOS E, with 56.6 seconds of delay but with a v/c ratio of 0.39, the westbound left turn movement operates at LOS F, with 119.9 seconds of delay and a v/c ratio of 1.05, the northbound left turn movement also operates at LOS F, with a 169.1 seconds of delay, and a v/c ratio of 1.05, and the southbound through movement operates at minimally acceptable LOS D but with a v/c ratio of 1.05. The southbound left turn movement at Twelfth Avenue and West 54th Street operates at LOS E, with 59.4 seconds of delay. However it operates with a v/c ratio of 0.51 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 60.0 seconds of delay, but with a v/c ratio of 0.48. Conversely, the southbound through movement on the main roadway operates at a minimally acceptable LOS D, but with a v/c ratio of 1.05 reflecting heavy volumes. At Twelfth Avenue and West 52nd Street, the southbound left turn movement operates at LOS F, with 131.1 seconds of delay and a v/c ratio of 1.05 and the southbound through movement operates at LOS C but with a v/c ratio of 1.01. Also at this intersection the northbound through-right movement also operates at LOS C but with a v/c ratio of 0.93. At Twelfth Avenue and West 41st Street, the northbound through movement operates at LOS F, with 95.7 seconds of delay and a v/c ratio of 1.01 and the southbound through movement operates at LOS F, with 80.4 seconds of delay and a v/c ratio of 1.05. At Twelfth Avenue and West 37th Street, the northbound left turn movement operates at LOS E, with 63.7 seconds of delay and a v/c ratio of 0.10 and the southbound through-right movement operates at LOS F, with 102.2 seconds of delay and a v/c ratio of 1.04. At Twelfth Avenue and West 34th Street, the westbound left turn movement operates at LOS E, with 62.1 seconds of delay and a v/c ratio of 0.52 and the westbound left-right turning lane operates at LOS E, with 62.3 seconds of delay and a v/c ratio of 0.52. The southbound left turn movement operates at LOS E, with 59.3 seconds of delay and a v/c ratio of 0.47.

	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
Riverside Dr.													
Riverside Dr. (N-S) @	EB-LTR	0.46	15.4	B	0.40	14.6	B	0.69	19.3	B	0.51	16.0	B
W. 79th St. (E-W)	WB-LTR	0.35	14.1	B	0.20	12.7	B	0.28	13.4	B	0.25	13.1	B
	NB-LTR	0.38	22.7	C	0.23	19.5	B	0.68	26.4	C	0.32	20.9	C
	SB-LTR	0.91	43.7	D *	0.33	20.8	C	0.31	20.5	C	0.43	22.5	C
Riverside Dr. (SB) @	WB-T	0.60	31.5	C	0.30	21.7	C	0.16	20.2	C	0.26	21.2	C
W. 72nd St. (WB)	WB-R	0.08	1.7	A	0.07	1.7	A	0.26	2.6	A	0.20	2.5	A
	SB-LR	0.79	25.0	C	0.41	21.3	C	0.69	26.6	C	0.68	28.7	C
Riverside Blvd.													
Riverside Blvd. (N-S) @	WB-LR	0.21	12.1	B	0.18	11.4	B	0.17	10.2	B	0.24	11.9	B
W. 70th St. (WB)													
UNSIGNALIZED 2-WAY STOP	SB-LT	0.02	7.6	A	0.02	7.5	A	0.03	7.6	A	0.02	7.5	A
Riverside Blvd. (N-S) @	WB-RL	NA	8.3	A	NA	7.7	A	NA	7.5	A	NA	8.0	A
W. 66th St. (WB)	NB-TR	NA	7.5	A	NA	7.2	A	NA	7.1	A	NA	7.5	A
UNSIGNALIZED 4-WAY STOP	SB-LT	NA	8.8	A	NA	8.4	A	NA	7.8	A	NA	8.6	A
12th Avenue													
12th Ave. (NB) @													
W. 59th St. (WB)	NB-LR	0.40	13.3	B	0.34	12.8	B	0.31	11.4	B	0.28	11.8	B
UNSIGNALIZED 2-WAY STOP													
12th Ave. (N-S) @	NB-T Main Line	0.69	26.9	C	0.75	16.4	B	0.89	10.1	B	0.71	15.3	B
W. 57th St. (E-W)	NB-T Service	0.41	22.1	C	0.20	9.3	A	0.14	3.1	A	0.13	8.6	A
	WB-R	0.25	30.3	C	0.43	37.2	D	0.53	50.6	D	0.49	38.1	D
UNSIGNALIZED 2-WAY STOP	NB-R Service	0.77	21.4	C	0.54	15.9	C	0.59	17.0	C	0.50	15.1	C
12th Ave. (N-S) @	NB-T	0.98	52.9	D *	0.69	11.3	B	0.95	14.1	B *	0.65	10.8	B
W. 56th St. (EB)	SB-L	0.82	34.4	C	0.97	77.6	E *	0.89	70.5	E *	0.61	47.4	D
	NB-TR Service	0.50	30.9	C	0.21	6.6	A	0.24	3.4	A	0.14	6.1	A
12th Ave. (N-S) @	WB-L	1.05	119.9	F *	0.62	48.1	D	0.60	61.7	E *	0.99	87.1	F *
W. 55th St. (WB)	WB-R	0.39	56.6	E *	0.59	46.7	D	0.55	61.4	E *	0.72	52.7	D
	NB-L	1.05	169.1	F *	1.05	141.8	F *	0.72	104.7	F *	1.02	141.3	F *
	NB-T	0.69	12.2	B	0.68	13.8	B	0.84	5.1	A	0.63	12.8	B
	SB-T	1.05	40.6	D *	0.78	24.4	C	0.85	24.8	C	0.88	28.6	C
	NB-T Service	0.37	8.5	A	0.31	9.5	A	0.32	8.0	A	0.23	8.8	A
	SB-T Service	0.32	12.7	B	0.28	15.8	B	0.15	11.7	B	0.24	15.3	B
12th Ave. (N-S) @	WB-R	0.48	60.0	E *	0.26	39.1	D	0.62	67.4	E *	0.48	44.7	D
W. 54th St. (EB)	NB-TR	0.80	15.1	B	0.82	17.0	B	0.93	8.4	A *	0.69	13.4	B
	SB-L	0.51	59.4	E *	0.37	40.8	D	0.42	57.6	E *	0.20	37.4	D
	SB-T	1.05	37.2	D *	0.63	12.3	B	0.72	12.4	B	0.77	15.1	B
	SB-T Service	0.54	3.7	A	0.30	9.0	A	0.28	7.3	A	0.27	8.7	A
12th Ave. (N-S) @	EB-LTR		NA			NA			NA			NA	
W. 52nd St. (EB)	NB-TR	0.93	34.9	C *	1.05	58.7	E *	1.05	46.9	D *	0.90	29.4	C *
	SB-L	1.05	131.1	F *	1.05	132.9	F *	1.05	142.2	F *	1.05	138.4	F *
	SB-T	1.01	21.4	C *	0.66	12.8	B	0.74	12.0	B	0.79	15.8	B
12th Ave. (N-S) @	EB-LTR	0.04	46.2	D	0.07	32.4	C	0.08	46.7	D	0.09	32.5	C
W. 42 nd St. (E-W)	WB-L	0.33	52.6	D	0.59	44.8	D	0.64	64.3	E *	0.49	41.2	D
	WB-R	0.52	32.5	C	0.62	24.4	C	0.65	50.0	D	0.59	23.5	C
	NB-T	0.87	40.2	D	0.97	49.6	D *	0.84	19.2	B	1.05	111.0	F *
	NB-R	0.28	26.4	C	0.29	28.1	C	0.22	10.6	B	0.12	25.0	C
	SB-L	0.46	53.6	D	0.26	39.9	D	0.85	89.3	F *	0.54	44.7	D
	SB-T	0.73	4.4	A	0.74	16.8	B	0.75	15.2	B	0.81	18.8	B
12th Ave. (N-S) @	EB-LR	0.00	38.2	D	0.02	24.9	C	0.06	47.3	D	0.02	24.9	C
W. 41 st St. (E-W)	WB-L	0.07	50.5	D	0.08	37.7	D	0.06	59.7	E *	0.06	37.4	D
	WB-R	0.30	54.6	D	0.37	42.3	D	0.19	61.7	E *	0.36	41.9	D
	NB-T	1.01	95.7	F *	0.94	42.1	D *	0.89	14.0	B	0.93	40.4	D *
	SB-T	1.05	80.4	F *	0.91	31.0	C *	0.89	21.3	C	1.03	77.4	E *
12th Ave. (N-S) @	EB-LR	0.12	52.5	D	0.13	43.0	D	0.24	60.4	E *	0.16	43.2	D
W. 37 th St. (EB)	EB-R	0.12	53.1	D	0.13	43.5	D	0.25	61.9	E *	0.10	42.7	D
	NB-L	0.10	63.7	E *	0.19	50.3	D	0.29	72.4	E *	0.25	51.5	D
	NB-T	0.83	28.2	C	0.69	17.6	B	0.77	4.2	A	0.75	19.0	B
	SB-TR	1.04	102.2	F *	0.97	37.3	D *	0.84	21.4	C	1.05	106.4	F *
12th Ave. (N-S) @	WB-L	0.52	62.1	E *	0.46	43.5	D	0.44	58.6	E *	0.38	41.2	D
W. 34 th St. (WB)	WB-LR	0.52	62.3	E *	0.47	43.5	D	0.45	59.0	E *	0.38	41.3	D
	WB-R	0.52	39.1	D	0.47	29.1	C	0.44	44.6	D	0.37	26.9	C
	NB-T	0.76	29.5	C	0.69	24.4	C	0.84	15.0	B	0.76	26.2	C
	NB-R	0.15	18.2	B	0.21	17.5	B	0.11	6.8	A	0.40	20.5	C
	SB-L	0.47	59.3	E *	0.59	55.7	E *	1.04	282.8	F *	0.73	61.2	E *
	SB-T	0.78	4.4	A	0.68	13.3	B	0.67	11.5	B	0.73	14.5	B

	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	
11th Ave/West End Ave																	
West End Ave. (N-S) @ W. 79th St. (E-W)	EB-LTR	1.05	81.1	F	*	0.73	34.5	C		1.05	76.2	E	*	1.05	79.3	E	*
	WB-LTR	0.79	37.2	D		0.47	27.8	C		0.60	27.6	C		0.58	30.0	C	
	NB-LTR	0.51	19.5	B		0.4	17.4	B		0.82	28.8	C		0.47	18.5	B	
	SB-LTR	0.62	17.7	B		0.48	18.4	B		0.59	22.9	C		0.52	19.0	B	
West End Ave. (N-S) @ W. 72nd St. (E-W)	EB-LTR	0.58	31.4	C		0.27	30.6	C		0.46	33.6	C		0.52	35.1	D	
	EB-R	0.74	46.7	D		0.59	50.8	D		0.49	40.4	D		0.61	46.2	D	
	WB-LTR	0.89	54.0	D		1.03	92.1	F	*	0.72	45.7	D		0.64	41.1	D	
	NB-L	1.00	82.6	F	*	0.50	29.7	C		0.60	28.6	C		0.77	45.2	D	
	NB-TR	0.39	16.0	B		0.51	17.9	B		0.57	12.3	B		0.39	16.0	B	
	SB-TR	0.56	24.2	C		0.72	32.5	C		0.68	34.6	C		0.77	34.3	C	
West End Ave. (N-S) @ W. 71st St. (E-W)	EB-LR	0.04	16.7	B		0.26	20.1	C		0.06	17.0	B		0.06	17.0	B	
	WB-LTR	0.50	24.9	C		0.64	30.2	C		0.35	20.7	C		0.59	27.9	C	
	NB-LT	0.58	17.8	B		0.46	15.7	B		0.50	12.4	B		0.48	16.1	B	
	SB-TR	0.52	12.6	B		0.55	17.2	B		0.63	18.5	B		0.68	19.7	B	
West End Ave. (N-S) @ W. 70th St. (EB)	EB-LTR	0.67	32.6	C		0.36	24.1	C		0.50	26.9	C		0.44	25.4	C	
	NB-LTR	0.67	21.3	C		0.45	16.9	B		0.57	14.9	B		0.47	17.1	B	
	SB-LTR	0.84	22.1	C		0.80	25.9	C		1.05	66.2	E	*	0.96	42.5	D	*
West End Ave. (N-S) @ W. 66 th St. (E-W)	EB-LR	0.45	26.2	C		0.40	25.2	C		0.22	21.8	C		0.16	20.9	C	
	WB-L	0.57	30.2	C		0.50	28.3	C		0.55	29.6	C		0.62	32.1	C	
	WB-LT	0.51	27.4	C		0.53	27.9	C		0.54	28.3	C		0.60	29.8	C	
	WB-R	0.57	30.4	C		0.46	27.0	C		0.81	43.9	D		0.54	28.8	C	
	NB-L	0.56	34.4	C		0.24	18.3	B		0.22	13.7	B		0.29	20.9	C	
	NB-T	0.39	17.7	B		0.26	16.3	B		0.34	12.1	B		0.26	16.2	B	
	SB-TR	0.60	17.4	B		0.60	21.3	C		0.69	21.4	C		0.74	24.7	C	
West End Ave. (N-S) @ W. 65 th St. (WB)	EB-LTR	0.09	26.2	C		0.06	25.8	C		0.06	25.8	C		0.04	25.6	C	
	NB-L	0.11	13.9	B		0.02	12.1	B		0.03	9.7	A		0.02	12.1	B	
	NB-TR	0.59	18.5	B		0.36	15.2	B		0.46	12.6	B		0.39	15.5	B	
	SB-L	0.67	17.9	B		0.46	10.5	B		0.71	20.3	C		0.49	11.1	B	
	SB-TR	0.48	4.3	A		0.49	9.4	A		0.65	11.7	B		0.59	10.7	B	
West End Ave. (N-S) @ W. 64 th St. (EB)	EB-LTR	0.10	24.1	C		0.06	23.6	C		0.10	24.0	C		0.11	24.1	C	
	NB-L	0.17	9.6	A		0.02	7.0	A		0.03	4.0	A		0.05	7.5	A	
	NB-TR	0.48	10.6	B		0.29	8.7	A		0.35	5.1	A		0.29	8.7	A	
	SB-L	0.14	8.4	A		0.04	7.1	A		0.20	9.3	A		0.09	7.6	A	
	SB-TR	0.49	6.0	A		0.48	10.6	B		0.64	13.2	B		0.57	11.8	B	
West End Ave. (N-S) @ W. 63 rd St. (E-W)	EB-LTR	0.07	19.6	B		0.10	19.9	B		0.16	20.7	C		0.10	19.9	B	
	WB-LTR	0.06	20.0	B		0.06	19.9	B		0.09	20.3	C		0.04	19.8	B	
	NB-L	0.20	13.5	B		0.03	9.7	A		0.03	6.9	A		0.09	10.8	B	
	NB-TR	0.57	15.3	B		0.32	11.9	B		0.33	8.3	A		0.32	11.9	B	
	SB-L	0.09	7.6	A		0.04	9.8	A		0.02	9.6	A		0.07	10.1	B	
	SB-TR					0.60	15.7	B		0.71	18.1	B		0.65	16.7	B	
	SB-T	0.79	15.5	B													
	SB-R	0.03	9.6	A													
West End Ave. (N-S) @ W. 61 st St.	NB-TR									0.30	4.9	A					
	NB-T	0.52	11.1	B		0.27	8.5	A						0.30	8.8	A	
	NB-R	0.09	7.4	A		0.04	7.1	A						0.04	7.1	A	
	SB-L	0.31	7.9	A		0.11	7.8	A		0.19	9.1	A		0.16	8.4	A	
	SB-T	0.71	9.3	A		0.50	10.9	B		0.60	12.4	B		0.53	11.3	B	
West End Ave. (N-S) @ W. 60 th St. (EB)	EB-LTR	0.06	23.6	C		0.05	23.5	C		0.07	23.7	C		0.12	24.3	C	
	NB-L	0.05	7.5	A		0.09	7.8	A		0.07	4.4	A		0.04	7.3	A	
	NB-TR	0.67	13.9	B		0.33	9.1	A		0.31	4.9	A		0.38	9.5	A	
	SB-L	0.24	7.2	A		0.14	8.2	A		0.27	10.3	B		0.15	8.3	A	
	SB-TR	0.68	8.7	A		0.47	10.5	B		0.55	11.6	B		0.5	10.9	B	
West End Ave. (N-S) @ W. 59 th St. (E-W)	EB-LTR	0.89	64.0	E	*	0.39	29.0	C		1.05	97.2	F	*	0.35	28.3	C	
	WB-LTR	0.87	54.2	D		0.62	34.1	C		1.05	94.1	F	*	0.66	36.5	D	
	NB-L	0.11	8.3	A		0.05	7.3	A		0.02	3.9	A		0.08	7.7	A	
	NB-TR	0.53	11.4	B		0.27	8.6	A		0.19	4.4	A		0.30	8.8	A	
	SB-L	0.02	3.9	A		0.02	6.9	A		0.02	7.0	A		0.05	7.2	A	
	SB-TR	0.70	9.1	A		0.43	10.1	B		0.51	11.1	B		0.47	10.6	B	
11th Ave. (N-S) @ W. 58 th St. (EB)	EB-LTR	0.40	28.7	C		0.23	25.8	C		0.15	24.7	C		0.16	24.7	C	
	NB-L	0.06	7.5	A		0.05	7.3	A		0.04	4.1	A		0.02	7.0	A	
	NB-TR	0.68	14.2	B		0.37	9.5	A		0.26	4.7	A		0.38	9.5	A	
	SB-L	0.16	5.9	A		0.16	8.4	A		0.22	9.3	A		0.26	9.8	A	
	SB-TR	0.61	7.7	A		0.43	10.1	B		0.55	11.7	B		0.43	10.1	B	
11th Ave. (N-S) @ W. 57 th St. (E-W)	EB-L	0.97	80.5	F	*	0.51	25.6	C		0.58	30.4	C		0.37	21.4	C	
	EB-TR	1.05	86.9	F	*	0.72	39.5	D		0.91	60.6	E	*	0.62	34.5	C	
	WB-L	0.83	49.0	D		0.92	63.0	E	*	0.62	26.6	C		0.89	54.1	D	
	WB-TR	0.99	73.5	E	*	0.96	65.6	E	*	1.05	86.8	F	*	0.94	61.3	E	*
	NB-L	0.09	15.5	B		0.15	16.2	B		0.22	15.2	B		0.28	18.6	B	
	NB-TR	0.57	20.5	C		0.38	17.7	B		0.33	14.5	B		0.37	17.6	B	
	SB-L	0.69	33.8	C		0.31	19.0	B		0.47	22.7	C		0.29	18.5	B	
	SB-TR	0.72	21.1	C		0.50	19.4	B		0.57	20.6	C		0.49	19.3	B	

	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
11th Ave. (N-S) @	EB-LTR	0.84	35.4	D	0.86	43.2	D	1.05	78.6	E *	0.55	27.9	C
W. 56 th St. (EB)	NB-TR	0.42	13.1	B	0.27	11.4	B	0.22	7.7	A	0.34	12.1	B
	SB-L	0.17	8.4	A	0.14	10.8	B	0.11	10.5	B	0.11	10.5	B
	SB-T	0.38	8.6	A	0.33	11.7	B	0.35	12.0	B	0.34	11.9	B
Amsterdam Ave/10th Avenue													
Amsterdam Ave. (NB) @	EB-T	0.38	26.4	C	0.38	26.4	C	0.27	24.9	C	0.34	25.7	C
W. 72 nd St. (E-W)	WB-TR	0.41	26.3	C	0.36	25.7	C	0.29	24.9	C	0.24	24.4	C
	NB-L	0.02	7.7	A	0.02	7.7	A	0.02	7.7	A	0.02	7.7	A
	NB-TR	0.51	7.1	A	0.50	7.1	A	0.70	9.1	A	0.49	7.0	A
Amsterdam Ave. (NB) @	WB-TR	0.48	22.2	C	0.4	21.1	C	0.50	22.8	C	0.51	22.8	C
W. 66 th St. (WB)	NB-LT	0.50	12.2	B	0.44	11.6	B	0.54	12.6	B	0.38	11.1	B
Amsterdam Ave. (NB) @	EB-LT	0.48	23.7	C	0.32	21.4	C	0.41	22.6	C	0.31	21.1	C
W. 65 th St. (EB)	NB-TR	0.45	10.3	B	0.53	11.2	B	0.47	10.4	B	0.48	10.7	B
Amsterdam Ave. (NB) @	EB-LT	0.24	22.9	C	0.14	21.5	C	0.16	21.9	C	0.22	22.7	C
W. 61 st St. (E-W)	WB-R	0.03	20.4	C	0.05	20.7	C	0.06	20.7	C	0.07	20.8	C
	NB-TR	0.41	8.1	A	0.52	9.1	A	0.49	8.7	A	0.43	8.3	A
Amsterdam Ave. (NB) @	EB-LT	0.38	24.6	C	0.22	22.0	C	0.27	22.6	C	0.29	23.0	C
W. 60 th St. (EB)	NB-TR	0.47	9.1	A	0.58	10.4	B	0.57	10.0	B	0.49	9.4	A
Amsterdam Ave. (NB) @	EB-L	0.48	31.2	C	0.19	22.6	C	0.31	26.1	C	0.33	25.6	C
W. 59 th St. (E-W)	WB-T	0.36	23.7	C	0.27	22.4	C	0.39	24.2	C	0.26	22.2	C
	WB-R	0.39	25.3	C	0.43	26.2	C	0.31	23.9	C	0.35	24.3	C
	NB-LT	0.42	8.7	A	0.40	8.6	A	0.44	8.8	A	0.44	9.0	A
10th Ave. (NB) @	EB-LT	0.42	24.8	C	0.30	23.1	C	0.30	23.1	C	0.28	22.8	C
W. 58 th St. (EB)	NB-TR	0.49	8.7	A	0.59	9.9	A	0.60	9.6	A	0.47	8.7	A
10th Ave. (NB) @	EB-LT	0.73	26.8	C	0.56	24.3	C	0.43	21.7	C	0.44	22.2	C
W. 57 th St. (E-W)	WB-TR	0.55	21.5	C	0.80	30.9	C	0.64	25.6	C	0.68	26.7	C
	NB-LTR	0.67	16.5	B									
	NB-LT				0.56	12.9	B	0.55	12.5	B	0.52	12.4	B
	NB-R				0.38	16.1	B	0.24	13.9	B	0.28	14.3	B
Broadway													
Broadway (SB) @	EB-TR	0.48	28.3	C	0.46	27.8	C	0.37	26.6	C	0.43	27.2	C
W. 72 nd St. (E-W)	WB-LT	0.34	25.4	C	0.24	24.3	C	0.18	23.7	C	0.18	23.7	C
	SB-LTR	0.46	7.0	A	0.42	6.7	A	0.42	6.7	A	0.37	6.4	A
Broadway (N-S) @	WB-LTR	0.41	23.5	C	0.36	22.9	C	0.45	24.1	C	0.39	23.2	C
W. 66 th St. (WB)	NB-LT	0.39	12.6	B	0.40	12.6	B	0.48	9.6	A	0.42	12.8	B
	SB-TR	0.46	15.4	B	0.37	17.1	B	0.40	17.4	B	0.37	17.1	B
Broadway (NB-SB1) / Columbus Ave.(SB2)	EB-TR	0.52	31.4	C	0.44	30.0	C	0.52	31.3	C	0.69	35.6	D
@ W. 65 th St. (EB)	EB-R	0.85	62.8	E *	0.56	38.9	D	0.64	43.5	D	0.64	42.6	D
	NB-TR	0.84	41.4	D	0.84	41.6	D	0.98	58.2	E *	0.78	37.1	D
	SB1-T	0.73	34.2	C	0.66	32.5	C	0.62	31.7	C	0.61	31.4	C
	SB2-L	0.23	25.6	C	0.27	26.6	C	0.26	26.3	C	0.23	25.9	C
	SB2-LT	0.87	37.1	D	0.86	36.5	D	0.88	37.3	D	0.74	31.9	C
Columbus Ave/9th Avenue													
Columbus Ave. (SB) @	EB-T	0.31	19.9	B	0.22	18.8	B	0.19	18.5	B	0.23	18.9	B
W. 72 nd St. (E-W)	EB-R	0.17	19.0	B	0.44	24.6	C	0.11	18.2	B	0.27	21.2	C
	WB-LT	0.66	27.2	C	0.29	19.9	B	0.39	21.3	C	0.39	21.2	C
	SB-LTR	0.59	13.2	B	0.67	15.0	B	0.72	15.8	B	0.62	17.8	B
Columbus Ave. (SB) @	WB-LT	0.50	12.1	B	0.46	11.6	B	0.51	12.2	B	0.47	11.6	B
W. 66 th St. (WB)	SB-TR	0.84	34.6	C	0.81	33.4	C	0.84	34.4	C	0.71	30.2	C
Columbus Ave. (SB) @	EB-R	1.04	103.7	F *	0.75	49.9	D	1.05	103.5	F *	0.60	41.4	D
W. 60 th St. (E-W)	WB-L	1.05	97.6	F *	0.61	33.7	C	1.05	96.9	F *	0.21	16.8	B
	SB-T	0.67	21.7	C	0.64	20.9	C	0.55	19.4	B	0.62	22.8	C
9th Ave. (SB) @	EB-TR	0.79	35.5	D	0.62	29.4	C	0.57	28.3	C	0.54	27.5	C
W. 58 th St. (EB)	SB-LT	0.64	9.8	A	0.70	10.6	B	0.50	8.2	A	0.53	8.5	A
9th Ave. (SB) @	EB-TR	1.05	80.7	F *	1.04	82.3	F *	0.85	46.9	D	0.66	36.9	D
W. 57 th St. (E-W)	WB-DefL	1.05	88.7	F *	0.93	56.8	E *	0.70	27.0	C	0.70	25.9	C
	WB-T	0.65	23.0	C	1.04	70.8	E *	0.85	35.6	D	0.88	38.0	D
	SB-L		NA			NA		0.31	23.9	C		NA	
	SB-TR		NA			NA		0.64	26.2	C		NA	
	SB-LTR	0.78	27.6	C	1.01	52.6	D *		NA		0.80	29.2	C
	SB-T		NA			NA			NA			NA	
	SB-R		NA			NA			NA			NA	

Table 16-2

2008 Existing Traffic Conditions **Existing LOS Table**

	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	
Central Park W.																	
Central Park W. (N-S) @	EB-LT	0.53	24.9	C													
W. 72 nd St. (E-W)	EB-L					0.21	20.1	C		0.15	19.4	B		0.16	21.5	C	
	EB-R	0.35	23.7	C		0.45	26.0	C		0.44	25.2	C		0.66	38.3	D	
	WB-LTR	0.24	20.4	C													
	NB-LTR	1.04	67.2	E	*												
	NB-LT					1.05	68.9	E	*	1.05	67.7	E	*	0.86	31.7	C	
	SB-LTR	0.89	30.9	C													
	SB-TR					0.63	18.0	B		0.64	18.2	B		0.47	16.5	B	
Central Park W. (N-S) @	WB-L	0.43	28.8	C		0.57	32.6	C		0.23	24.9	C		0.35	27.2	C	
W. 66 th St. (WB)	WB-T	1.05	85.6	F	*	1.05	83.4	F	*	1.05	84.1	F	*	1.05	86.5	F	*
	WB-R	0.83	48.1	D		0.67	37.0	D		1.00	76.1	E	*	0.91	60.7	E	*
	NB-LT	0.62	14.6	B		0.55	13.1	B		0.89	21.1	C		0.70	11.3	B	
	SB-TR	0.80	24.2	C		0.62	21.7	C		0.99	47.6	D	*	0.66	19.6	B	
Central Park W. (N-S) @	EB-L	0.25	26.2	C		0.24	26.2	C		0.39	30.0	C		0.23	26.0	C	
W. 65 th St. (EB)	EB-TR	0.72	34.6	C		0.62	31.4	C		0.64	32.0	C		0.58	30.4	C	
	NB-TR	0.85	36.3	D		0.89	40.1	D		0.97	49.2	D	*	0.99	57.1	E	*
	SB-DefL	0.76	35.8	D		0.74	35.1	D		0.95	61.3	E	*	0.64	32.3	C	
	SB-T	0.64	10.0	B		0.63	14.8	B		0.85	24.3	C		0.58	13.7	B	
8th Avenue																	
8th Ave. (NB) @	EB-L	0.56	27.1	C		0.36	21.5	C		0.33	21.0	C		0.27	20.0	B	
W. 58 th St. (EB)	EB-T	0.37	20.6	C		0.52	22.9	C		0.47	22.1	C		0.36	20.4	C	
	NB-TR	0.34	10.6	B		0.37	10.9	B		0.35	10.7	B		0.40	11.1	B	
8th Ave. (NB) @	EB-LT	0.78	30.2	C		0.63	25.5	C		0.54	23.5	C		0.44	21.8	C	
W. 57 th St. (E-W)	WB-TR	0.58	24.1	C		0.71	27.3	C		0.50	22.5	C		0.56	23.5	C	
	WB-R	0.31	21.1	C		0.43	23.5	C		0.32	21.3	C		0.43	23.3	C	
	NB-LTR	0.46	11.7	B		0.53	12.4	B		0.48	11.8	B		0.54	12.4	B	

Notes:

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

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

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

LOS - Level of Service

* - Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.9)

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

During the weekday midday peak hour, there are seven intersections with congested movements. At Twelfth Avenue and West 56th Street, the southbound left turn operates at LOS E, with 77.6 seconds of delay, with a 0.97 v/c ratio. At Twelfth Avenue and West 55th Street, the northbound left operates at LOS F, with 141.8 seconds of delay and with a 1.05 v/c ratio. At Twelfth Avenue and West 52nd Street, the southbound left turn operates at LOS F, with 132.9 seconds of delay and a v/c ratio of 1.05, and the northbound through-right movement operates at LOS E, with 58.7 seconds of delay and a v/c ratio of 1.05. At Twelfth Avenue and West 42nd Street, the northbound through movement operates at LOS D, but with a v/c ratio of 0.97. At Twelfth Avenue and West 41st Street, the northbound through movement operates at LOS D, with 42.1 seconds of delay and with a 0.94 v/c ratio, and the southbound though movement operates at LOS C, but with a v/c ratio of 0.91. At Twelfth Avenue and West 37th Street, the southbound through-right movement operates at LOS D, but with a v/c ratio of 0.97. At Twelfth Avenue and West 34th Street, the southbound left turn movement operates at LOS E, with 55.7 seconds of delay and with a 0.59 v/c ratio.

During the weekday PM peak hour, eight of the ten analyzed study area intersections in this corridor have at least one congested movement. At Twelfth Avenue and West 56th Street, the southbound left turn movement operates at LOS E, with 70.5 seconds of delay, and a 0.89 v/c ratio, and the northbound through movement operates at LOS B, but with a v/c ratio of 0.95. At Twelfth Avenue and West 55th Street, the westbound left turn movement operates at LOS E, with 61.7 seconds of delay, but with a v/c ratio of 0.60, the westbound right movement operates at LOS E, with 61.4 seconds of delay, but with a v/c ratio of 0.55, and the northbound left movement operates at LOS F with 104.7 seconds of delay and a v/c ratio of 0.72. At Twelfth Avenue and West 54th Street, the westbound right turn movement operates at LOS E, with 67.4 seconds of delay, but with a v/c ratio of 0.62, the northbound through-right movement operates at LOS A but with a v/c ratio of 0.93, and the southbound left operates at LOS E, with 57.6 seconds of delay but with a 0.42 v/c ratio. At Twelfth Avenue and West 52nd Street, the southbound left turn operates at LOS F, with 142.2 seconds of delay and a v/c ratio of 1.05, and the northbound through-right movement operates at LOS D, but with a v/c ratio of 1.05. At Twelfth Avenue and West 42nd Street, the westbound left turn operates at LOS E, with 64.3 seconds of delay and a v/c ratio of 0.64, and the southbound left turn movement operates at LOS F, with 89.3 seconds of delay and a v/c ratio of 0.85. At Twelfth Avenue and West 41st Street, the westbound left turn operates at LOS E, with 59.7 seconds of delay and a v/c ratio of 0.06, and the westbound right turn movement operates at LOS E, but with a v/c ratio of 0.19. At Twelfth Avenue and West 37th Street, the eastbound left-right turn movement operates at LOS E, with 60.4 seconds of delay and a v/c ratio of 0.24, the eastbound right turn movement operates at LOS E, with 61.9 seconds of delay and a v/c ratio of 0.25, and the northbound left turn movement operates at LOS E, but with a v/c ratio of 0.29. At Twelfth Avenue and West 34th Street, the westbound left turn operates at LOS E, with 58.6 seconds of delay and a v/c ratio of 0.44, the westbound left-right turning lane operates at LOS E, but with a v/c ratio of 0.45, and the southbound left turn lane operates at LOS F, with 282.8 seconds of delay and a v/c ratio 1.04.

During the Saturday midday peak hour, there are six intersections with congested movements. At Twelfth Avenue and West 52nd Street, the southbound left turn operates at LOS F with 138.4 seconds of delay, and the v/c ratio is 1.05 and the northbound through-right movement operates at LOS C but with a v/c ratio of 0.90. At Twelfth Avenue and West 55th Street, the northbound left turn operates at LOS F, with 141.3 seconds of delay and with a v/c ratio of 1.02 and the westbound left turn movement operates at LOS F, with 87.1 seconds of delay, and a v/c ratio of 0.99. At Twelfth Avenue and West 42nd Street, the northbound through movement operates at LOS F, with 111.0 seconds of delay and a v/c ratio of 1.05. At Twelfth Avenue and West 41st Street, the southbound

through movement operates at LOS E, with 77.4 seconds of delay and a v/c ratio of 1.03, and the northbound through movement operates at a minimally acceptable LOS D, but with a v/c ratio of 0.93. At Twelfth Avenue and West 37th Street, the southbound through-right movement operates at LOS F, with 106.4 seconds of delay and a v/c ratio of 1.05. At Twelfth Avenue and West 34th Street, the southbound left turn operates at LOS E, with 61.2 seconds of delay and a v/c ratio of 0.73.

RIVERSIDE DRIVE/BOULEVARD

There are four intersections along the Riverside Drive/Boulevard corridor that are analyzed in the existing conditions. (Two additional intersections, at West 61st Street and West 64th Street, will be built in the future and are therefore incorporated in the No Build and Build conditions.) The only intersection with a congested movement occurs during the AM peak hour, at Riverside Drive and West 79th Street, where the southbound left-through-right movement operates at LOS D, with 43.7 seconds of delay and a v/c ratio of 0.91.

WEST/END AVENUE/ELEVENTH AVENUE

Along the Eleventh Avenue/West End Avenue corridor, there are four intersections with congested movements in the weekday AM peak hour. The eastbound left-through-right movement at the intersection of West End Avenue and West 79th Street operates at LOS F, with 81.1 seconds of delay and a v/c ratio of 1.05. The northbound left turn at the intersection of West End Avenue and West 72nd Street operates at LOS F, with 82.6 seconds of delay and a v/c ratio of 1.00. At Eleventh Avenue and West 59th Street the eastbound left-through-right movement operates at LOS E, with 64.0 seconds of delay and a v/c ratio of 0.89. At Eleventh Avenue and West 57th Street the eastbound through-right movement operates at LOS F, with 86.9 seconds of delay, and a v/c ratio of 1.05 and the eastbound left movement operates at LOS F, with 80.5 seconds of delay, and a v/c ratio of 0.97. The westbound through-right movement operates at LOS E, with 73.5 seconds of delay and a v/c ratio of 0.99.

During the weekday midday peak hour, there are two intersections with congested movements. At the intersection of Eleventh Avenue and West 57th Street, the westbound left movement operates at LOS E, with 63.0 seconds of delay and a v/c ratio of 0.92, and the westbound through-right movement operates at LOS E, with 65.6 seconds of delay and a v/c ratio of 0.96 seconds of delay. At West End Avenue and West 72nd Street, the westbound left-though-right movement operates at LOS F, with 92.1 seconds of delay and a v/c ratio of 1.03.

During the weekday PM peak hour, there are five intersections with congested movements. At Eleventh Avenue and West 56th Street, the eastbound left-through-right movement operates at LOS E, with 78.6 seconds of delay and a v/c ratio of 1.05. At Eleventh Avenue and West 57th Street, the eastbound through-right movement operates at LOS E, with 60.6 seconds of delay and a v/c ratio of 0.91 and the westbound through-right movement operates at LOS F with 86.8 seconds of delay and a v/c ratio of 1.05. At West End Avenue and West 59th Street, the eastbound left-through-right movement operates at LOS F, with 97.2 seconds of delay and a v/c ratio of 1.05, and the westbound left-through-right movement operates at LOS F, with 94.1 seconds of delay and a v/c ratio of 1.05. At West End Avenue and West 70th Street, the southbound movement operates at LOS E, with 66.2 seconds of delay and a v/c ratio of 1.05. At West End Avenue and West 79th Street, the eastbound left-through-right movement operates at LOS E, with 76.2 seconds of delay and a v/c ratio of 1.05.

During the Saturday midday peak hour, there are three intersections with congested movements. At West End Avenue and West 79th Street, the eastbound left-through-right movement operates

at LOS E, with 79.3 seconds of delay, and a v/c ratio of 1.05. At West End Avenue and West 70th Street, the southbound left-through-right movement operates at a minimally acceptable LOS D, but with a v/c ratio of 0.96. At Eleventh Avenue and West 57th Street, the westbound through-right movement operates at LOS E, with 61.3 seconds of delay, and a v/c ratio of 0.94.

AMSTERDAM/TENTH AVENUE

Along the Tenth/Amsterdam Avenue corridor there are no intersections that have a congested movement during any of the peak hours.

COLUMBUS AVENUE/NINTH AVENUE

Along the Ninth/Columbus Avenue corridor, there are two intersections with congested movements in the weekday AM peak hour. At Ninth Avenue at West 57th Street, eastbound through-right movement operates at LOS F, with 80.7 seconds of delay and a v/c ratio of 1.05, and the westbound de-facto left turn movement operates at LOS F, with 88.7 seconds of delay and a v/c ratio of 1.05. At Columbus Avenue and 60th Street, eastbound right turn movement operates at LOS F, with 103.7 seconds of delay and a v/c ratio of 1.04, the westbound left turn movement operates at LOS F, with 97.6 seconds of delay and a v/c ratio of 1.05.

During the weekday midday peak hour, the only intersection with a congested movement is at Ninth Avenue and West 57th Street. The eastbound through-right movement operates at LOS F, with 82.3 seconds of delay and a v/c ratio of 1.04, the westbound de-facto left turn movement operates at LOS E, with 56.8 seconds of delay and a v/c ratio of 0.93, the westbound through movement operates at LOS E, with 70.8 seconds of delay and a v/c ratio of 1.04, and the southbound left-through-right movement operates at LOS D, with 52.6 seconds of delay with a v/c ratio of 1.01.

During the weekday PM peak hour, the only intersection with a congested movement is at Columbus Avenue and West 60th Street. The eastbound right turn movement operates at LOS F, with 103.5 seconds of delay and a v/c ratio of 1.05, and the westbound left turn movement operates at LOS F, with 96.9 seconds of delay and a v/c ratio of 1.05.

Along the Ninth/Columbus Avenue corridor, there are no congested movements during the Saturday midday peak hour.

CENTRAL PARK WEST

There are three intersections along the Central Park West corridor that include congested locations. During the weekday AM peak hour, there are two intersections with congested movements. Central Park West at West 72nd Street at the northbound left-through-right movement operates at LOS E, with 67.2 seconds of delay and a v/c ratio of 1.04. At Central Park West and West 66th Street the westbound through movement operates at LOS F, with 85.6 seconds of delay and a v/c ratio of 1.05.

In the weekday midday peak hour, there are two intersections with congested movements. At Central Park West and West 72nd Street the northbound left-through movement operates at LOS E, with 68.9 seconds of delay and a v/c ratio of 1.05. At Central Park West and West 66th Street, westbound through movement operates at LOS F, with 83.4 seconds of delay and a v/c ratio of 1.05.

During the weekday PM peak hour, there are three intersections with congested movements. At Central Park West and 72nd Street, the northbound left-through movement operates at LOS E, with 67.7 seconds of delay and a v/c ratio of 1.05. At Central Park West at West 66th Street, westbound

through movement operates at LOS F, with 84.1 seconds of delay with a v/c ratio of 1.05, the westbound right turn movement operates at LOS E, with 76.1 seconds of delay and a v/c ratio of 1.00, and the southbound through-right movement operates at LOS D, with 47.6 seconds of delay and a v/c ratio of 0.99. Central Park West at West 65th Street at the northbound through-right movement operates at a minimally acceptable LOS D, but with a v/c ratio of 0.97 and the southbound de-facto left turn operates at LOS E, with 61.3 seconds of delay and a v/c ratio of 0.95.

During the Saturday midday peak hour, there are two intersections with congested movements. At Central Park West and West65th Street, the northbound through-right movement operates at LOS E, with 57.1 seconds of delay and a v/c ratio of 0.99. At Central Park West and West 66th Street, westbound through movement operates at LOS F, with 86.5 seconds of delay and a v/c ratio of 1.05, and the westbound right turn movement operates at LOS E, with 60.7 seconds of delay and a v/c ratio of 0.91.

BROADWAY

Along the Broadway corridor, the three-way intersection of West 65th Street and Columbus Avenue is the only intersection that has any congested movements. During the weekday AM peak hour, the eastbound right turn movement operates at LOS E, with 62.8 seconds of delay and a v/c ratio of 0.85. During the weekday PM peak hour, the northbound through-right movement operates at LOS E, with 58.2 seconds of delay and a v/c ratio of 0.98.

EIGHTH AVENUE

Along the Eighth Avenue corridor there are no intersections that have a congested movement during any of the peak hours.

PARKING

The Proposed Project would have a 1,800-space public parking garage to accommodate both accessory needs and some public parking. There are currently approximately 2,387 public parking spaces on the project site, which would be displaced. Therefore, off-street public parking facilities within approximately a ¼ mile of the site were assessed for their capacities and approximate utilization during the weekday midday and overnight, as well as Saturday midday peak periods. **Figure 16-6** shows the locations of these facilities and **Table 16-3** shows their capacity and estimated utilization levels for 2008 existing conditions. There are 13 off-street public parking facilities within ¼ mile of the project site.

The *CEQR Technical Manual* states that a ¼-mile walk is generally considered the maximum distance from primary off-site parking facilities to the project site, although if a ¼-mile area should prove insufficient to accommodate the peak parking demand consideration should be given to extending a parking study area to a ½-mile radius of the project site.

Table 16-3 shows that the 13 off-street public parking facilities located within ¼ mile of the project site have a total of 5,224 spaces. Overall, utilization of these facilities was found to be approximately 74 percent, 52 percent, and 51 percent, during the weekday midday, weekday overnight, and Saturday midday periods, respectively. As shown in the table, utilization peaks in the weekday midday, before declining late at night and on weekends. **Tables 16-4 and 16-5** show the weekday and weekend 24 hour accumulation of both parking facilities located on site, respectively. These two facilities have a peak midday accumulation of approximately 1645 vehicles, and a nighttime accumulation of approximately 1,445 vehicles.

1 - Existing Parking Lot Locations

- Project Site

Existing Public Parking Lots Within 1/4 Mile

Table 16-3
2008 Existing Conditions Off-Street Parking Utilization

Map No	Garage Name	Address	License #	Capacity	Utilization Rate (%)					Utilized Spaces					Available Spaces				
					AM	MD	P/T	O/N	SAT	AM	MD	P/T	O/N	SAT	AM	MD	P/T	O/N	SAT
1	64th West End Parking	110 West End Ave	761016	106	42	91	72	41	65	45	96	76	43	69	61	10	30	63	37
2	101 West End Parking	101 West End Ave	1061198	166	28	71	33	31	60	47	118	55	51	100	119	48	111	115	66
3	Alfred Car Park	West 61st Street	1157186	130	54	90	65	40	75	70	117	85	52	98	60	13	45	78	33
4	**Central Parking System**	**1-15 West End Ave**	**964023**	**1850**	**63**	**65**	**61**	**59**	**40**	**1,170**	**1,203**	**1,130**	**1,096**	**740**	**680**	**648**	**720**	**754**	**1,110**
5	MP10 West End Ave	10 West End Ave	1307111	150	57	80	67	46	50	85	120	100	69	75	65	30	50	81	75
6	Concerto Garage Corp	200 W 66th Street	884653	265	22	71	42	26	30	58	188	112	69	80	207	77	153	196	186
7	Propak America NY	515 W 59th Street	1171649	190	21	56	43	16	37	40	106	81	30	70	150	84	109	160	120
8	**M & P 59th Street LLC**	**641 W 59th Street**	**1097071**	**537**	**73**	**85**	**61**	**64**	**45**	**394**	**456**	**327**	**346**	**242**	**143**	**81**	**210**	**191**	**295**
9	Kinney Parking System	838-852 11th Ave	1137953	84	87	81	79	36	53	73	68	66	30	45	11	16	18	54	39
10	GMC 57&11 Parking	622 W 57th Street	923714	1000	100	81	65	75	75	1,000	810	650	750	750	0	190	350	250	250
11	John Jay College Parking	425 W 59th Street	813398	125	20	71	40	16	30	25	89	50	20	38	100	36	75	105	88
12	West End Towers Garage	35-101 West End Ave	948832	441	39	71	51	16	50	170	313	225	71	221	271	128	216	370	221
13	Element	555 West 59th Street	1300924	180	85	90	90	60	65	153	162	162	108	117	27	18	18	72	63
Total				**5,224**	**64**	**74**	**60**	**52**	**51**	**3,330**	**3,847**	**3,119**	**2,736**	**2,642**	**1,894**	**1,377**	**2,105**	**2,488**	**2,582**

Source: PHA On-Site Parking Garage Survey, 2008
Fordham FEIS, 2009

Bold Parking Facilities are on-site

Legend: P/T- Pre-Theater Peak Hour
O/N - Overnight Period
SAT - Saturday Midday Peak Hour

Table 16-4

WEEKDAY ON-SITE ACCUMULATION

Parking Lot 1-15 West End Ave. West End and W.60th Street Capacity = 1850				**Parking Garage 641 W.59th Street** W.59th Street btw 11th Ave and 12th Ave Capacity = 537				**Total Accumulation**			
	#In	#Out	Accum- ulation		#In	#Out	Accum- ulation		#In	#Out	Accum- ulation
12-1 AM	3	0	1099	12-1 AM	2	0	348	12-1 AM	5	0	1447
1-2	0	0	1099	1-2	0	0	348	1-2	0	0	1447
2-3	0	0	1099	2-3	0	0	348	2-3	0	0	1447
3-4	4	0	1103	3-4	0	0	348	3-4	4	0	1451
4-5	15	0	1118	4-5	0	0	348	4-5	15	0	1466
5-6	22	0	1140	5-6	11	0	359	5-6	33	0	1499
6-7	24	0	1164	6-7	19	0	378	6-7	43	0	1542
7-8 AM	28	22	1170	7-8	21	5	394	7-8	49	27	1564
8-9	22	20	1172	8-9	45	12	427	8-9	67	32	1599
9-10	20	10	1182	9-10	35	15	447	9-10	55	25	1629
10-11	29	26	1185	10-11	27	18	456	10-11	56	44	1641
11-12	27	28	1184	11-12	19	22	453	11-12	46	50	1637
12-1 PM	33	19	1198	12-1 PM	6	14	445	12-1 PM	39	33	1643
1-2	21	16	1203	1-2	5	8	442	1-2	26	24	1645
2-3	28	35	1196	2-3	12	18	436	2-3	40	53	1632
3-4	26	40	1182	3-4	21	35	422	3-4	47	75	1604
4-5	25	23	1184	4-5	10	26	406	4-5	35	49	1590
5-6	22	27	1179	5-6	22	57	371	5-6	44	84	1550
6-7	20	49	1150	6-7	10	32	349	6-7	30	81	1499
7-8	19	39	1130	7-8	9	31	327	7-8	28	70	1457
8-9	10	30	1110	8-9	14	14	327	8-9	24	44	1437
9-10	8	19	1099	9-10	11	3	335	9-10	19	22	1434
10-11	7	10	1096	10-11	9	1	343	10-11	16	11	1439
11-12	5	5	1096	11-12	3	0	346	11-12	8	5	1442
	418	418			311	311					

Notes:

Source from PHA Survey in 2008 of existing public parking facilities

Table 16-5

SATURDAY ON-SITE ACCUMULATION

	Parking Lot 1-15 West End Ave. West End and W.60th Street Capacity = 1850			**Parking Garage 641 W.59th Street** W.59th Street btw 11th Ave and 12th Ave Capacity =537			**Total Accumulation**		
	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation
12-1 AM	0	0	758	0	0	249	0	0	1007
1-2	0	0	758	0	0	249	0	0	1007
2-3	0	0	758	0	0	249	0	0	1007
3-4	0	0	758	0	0	249	0	0	1007
4-5	0	0	758	0	0	249	0	0	1007
5-6	8	4	762	0	0	249	8	4	1011
6-7	18	7	773	0	0	249	18	7	1022
7-8	25	10	788	0	0	249	25	10	1037
8-9	25	15	798	1	1	249	26	16	1047
9-10	33	35	796	4	4	249	37	39	1045
10-11	31	36	791	13	12	250	44	48	1041
11-12	23	40	774	14	7	257	37	47	1031
12-1 PM	19	49	744	10	16	251	29	65	995
1-2	35	35	744	15	10	256	50	45	1000
2-3	25	18	751	7	10	253	32	28	1004
3-4	21	41	731	7	4	256	28	45	987
4-5	25	32	724	8	13	251	33	45	975
5-6	20	20	724	6	7	250	26	27	974
6-7	22	14	732	2	3	249	24	17	981
7-8	15	8	739	1	2	248	16	10	987
8-9	12	5	746	1	1	248	13	6	994
9-10	9	1	754	1	0	249	10	1	1003
10-11	5	2	757	0	0	249	5	2	1006
11-12	2	1	758	0	0	249	2	1	1007

Notes :

Source from PHA survey in 2008 of existing public parking facilities.

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 loading/unloading regulations. **Figure 16-7** shows the curbside parking regulations west of Amsterdam Avenue/Tenth Avenue and from West 55th to West 66th Streets. These regulations also include those along Riverside Boulevard north of West 64th Street. Overall, of the 370 curbside parking spaces in the ¼-mile radius of the project site during the weekday midday (of which there are 139 metered spaces) approximately 15 (including 11 metered spaces) are available. Therefore, utilization was observed to be nearly 96 percent during the weekday midday period. During the Saturday midday there are many more parking spaces as loading zone restrictions are lifted during the weekend. Therefore, of the 866 parking spaces within ¼-mile radius during the Saturday midday peak period (including 139 metered spaces), 820 (including 109 metered spaces) were occupied for 95 percent utilization.

E. THE FUTURE WITHOUT THE PROPOSED PROJECT

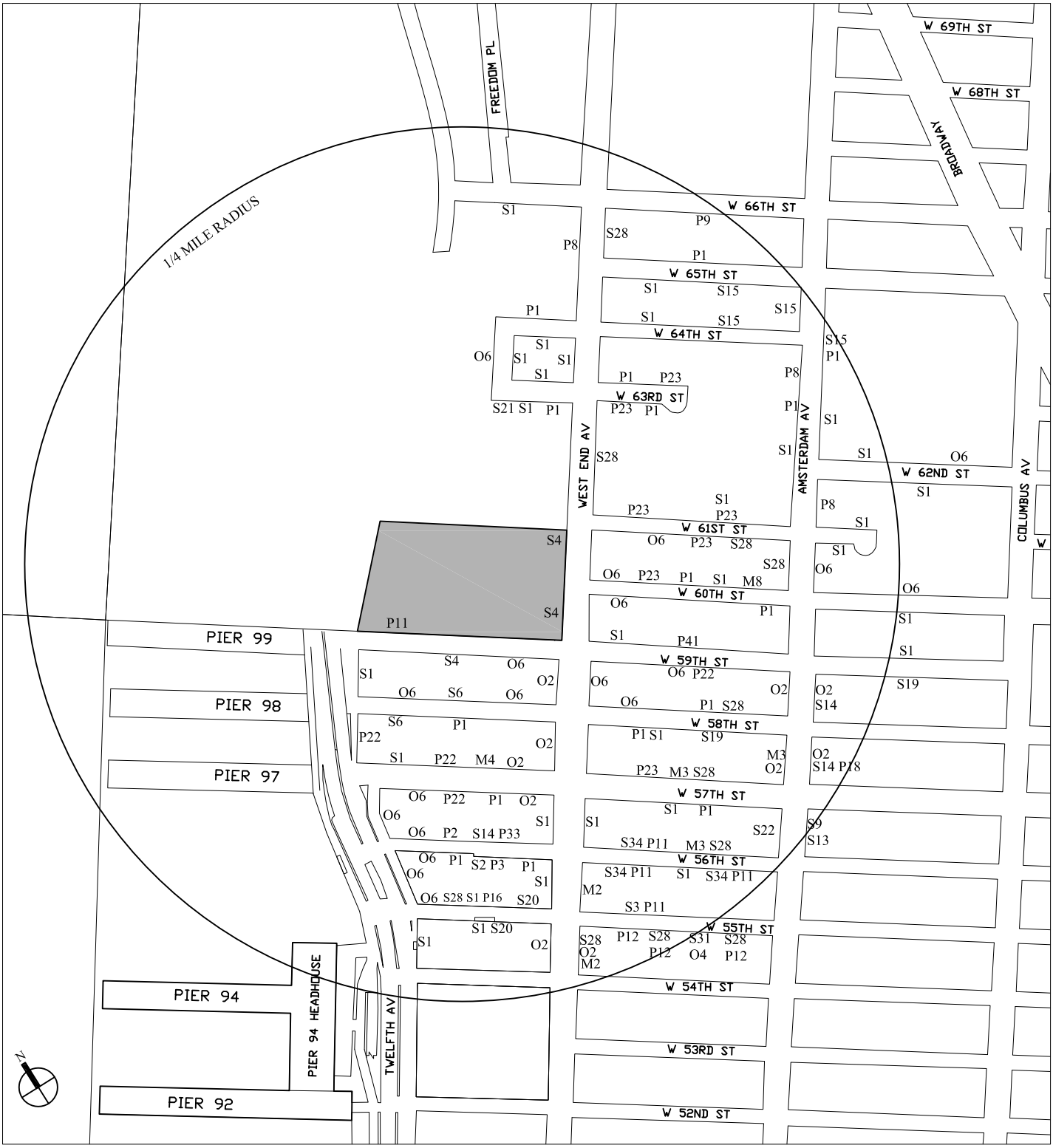
In order to determine future 2018 No Build conditions, traffic due to the major development projects (taking into account any project associated mitigation) listed in Chapter 2, "Land Use, Zoning and Public Policy," along with an annual background growth rate of 0.25 percent per year for the first five years (2008 to 2013) then 0.125 for the remaining five years (2013-2018) were used to adjust 2008 existing conditions. In addition to the list of No Build Site Developments in Chapter 2, the traffic demand from the Western Rail Yard Project was included in the traffic analysis as a No Build site.

In addition to the development traffic growth, major changes are expected due to construction on the Riverside South site by the year 2018. Riverside Boulevard would be expected to be completed from West 72nd Street to West 59th Street, significantly reducing traffic in the West End Avenue corridor. Furthermore, West 61st Street would be expected to be completed west of West End Avenue and the northbound left-turn at the intersection of the West End Avenue would be banned due to the installation of a pedestrian refuge island on the south crosswalk as part of the Safe Streets for Seniors campaign (discussed further in the "Traffic Safety" section of this chapter). Public bus routes along the new Riverside Boulevard have also been assumed to be rerouted from West End Avenue. Appendix E shows the assumed bus routes of the M72, M66, and M31 in the Future Without the Proposed Project.

Also, as described above under "Methodology," two No Build scenarios were considered for analysis. However, since No Build Scenario 2 would result in the largest increment for the proposed project, a detailed quantified traffic analysis was only prepared for this scenario. That is, No Build Scenario 2 assumes the original FEIS approved program for Parcels L and M would be completed, but Parcel N would remain in its current parking use. Therefore, Parcels L and M would be constructed as approved with a total of 577 dwelling units, 20,370 square feet of office space and 301 parking spaces. Lastly, with the construction of Parcels L and M, approximately 537 public parking spaces would be eliminated from the project site resulting in a net loss of 236 parking spaces on the project site (i.e., 537 minus 301 parking spaces).

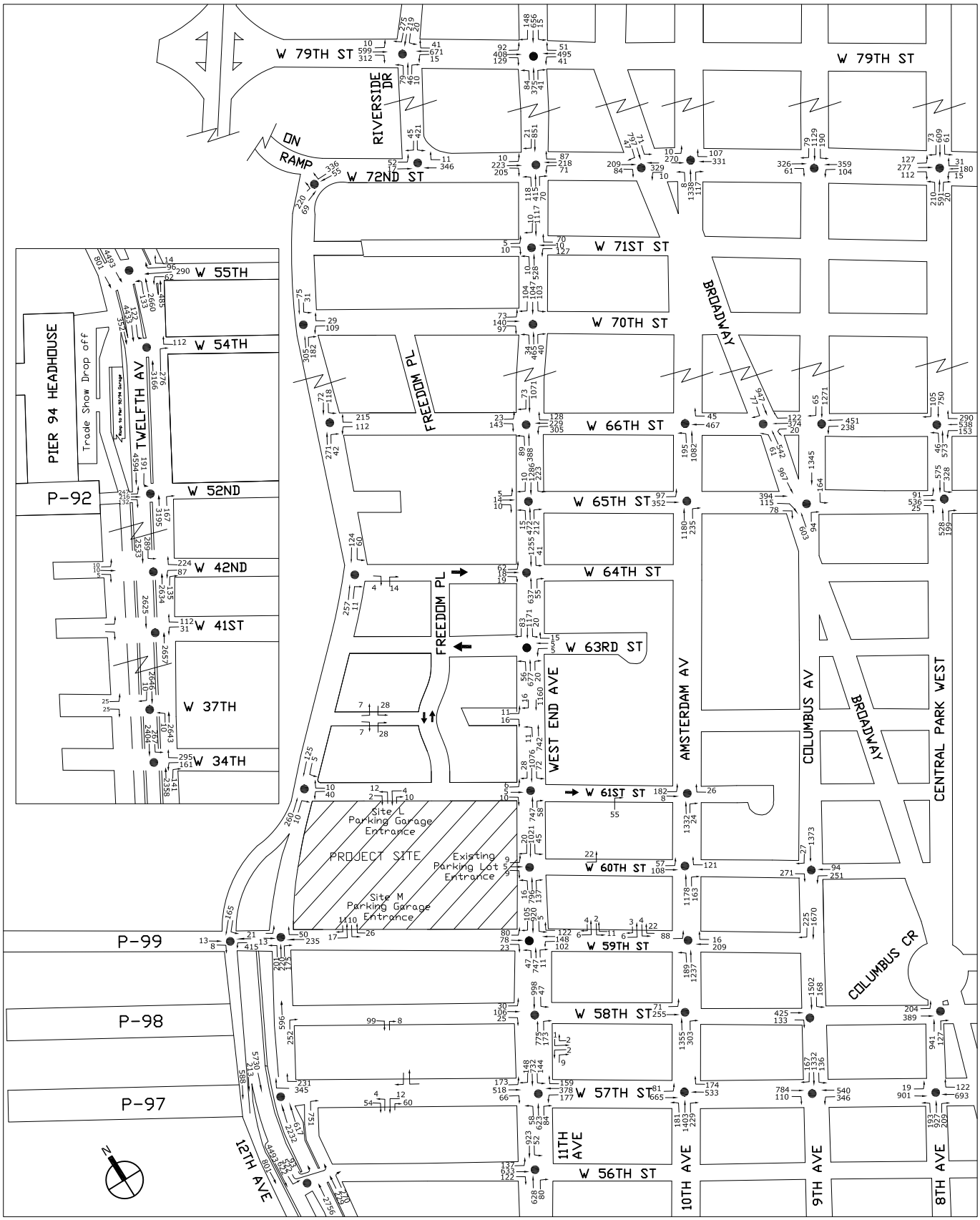
VEHICULAR TRAFFIC

Traffic forecasts were made for each of the four peak hours analyzed, and **Figures 16-8 through 16-11** show the anticipated weekday AM, midday, PM, and Saturday midday peak hour traffic volumes in the study area for 2018 No Build conditions. Capacity analyses were then prepared for each intersection. **Table 16-6** shows the result of these analyses. The table shows that with



Project Site

On-Street Parking Regulations



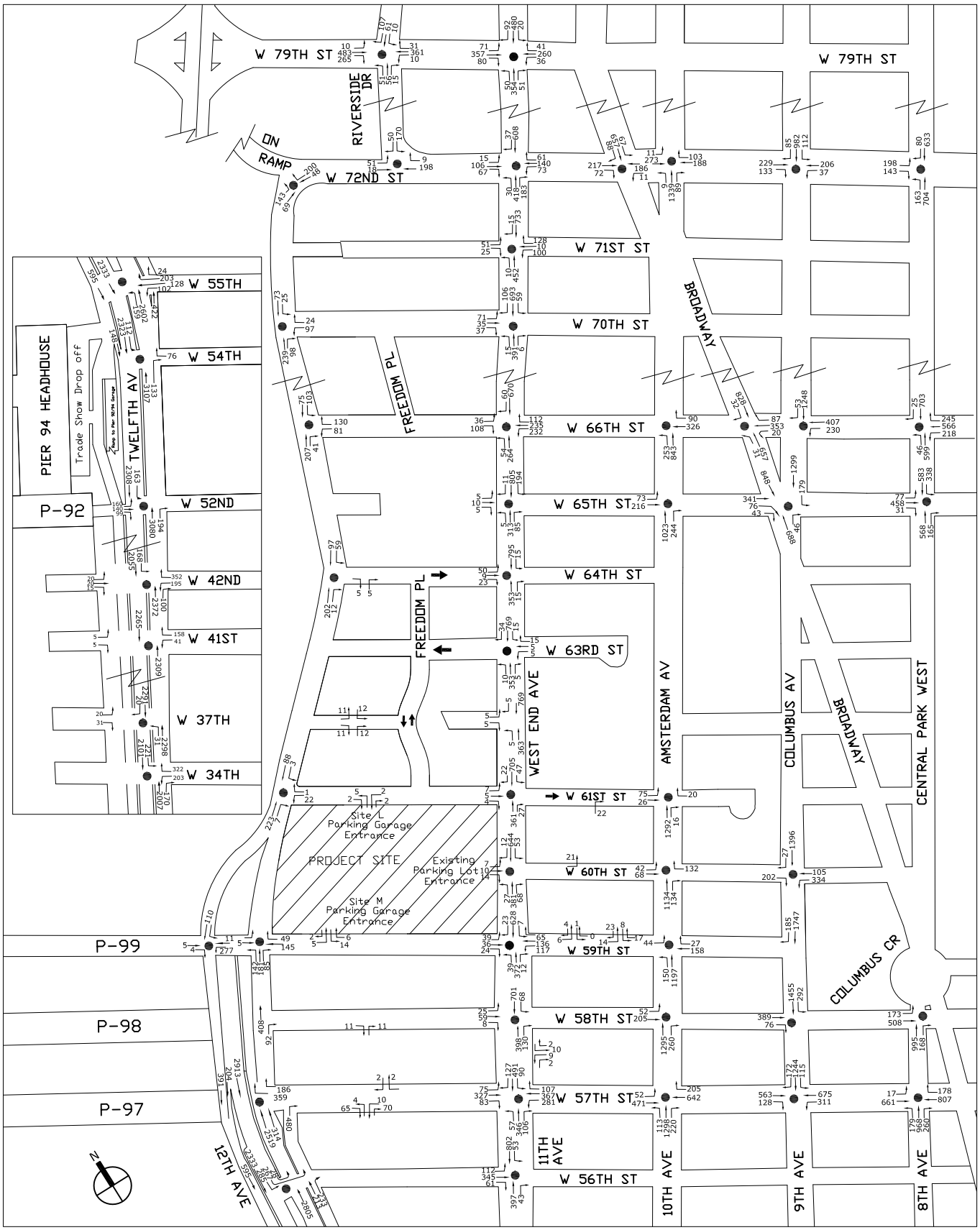
Note: W.79th Street @ Riverside Drive Eastbound Left Turn is Prohibited

No Build Conditions - Weekday AM Peak Hour

RIVERSIDE CENTER

Figure 16-8

This Figure has been revised for the FSEIS



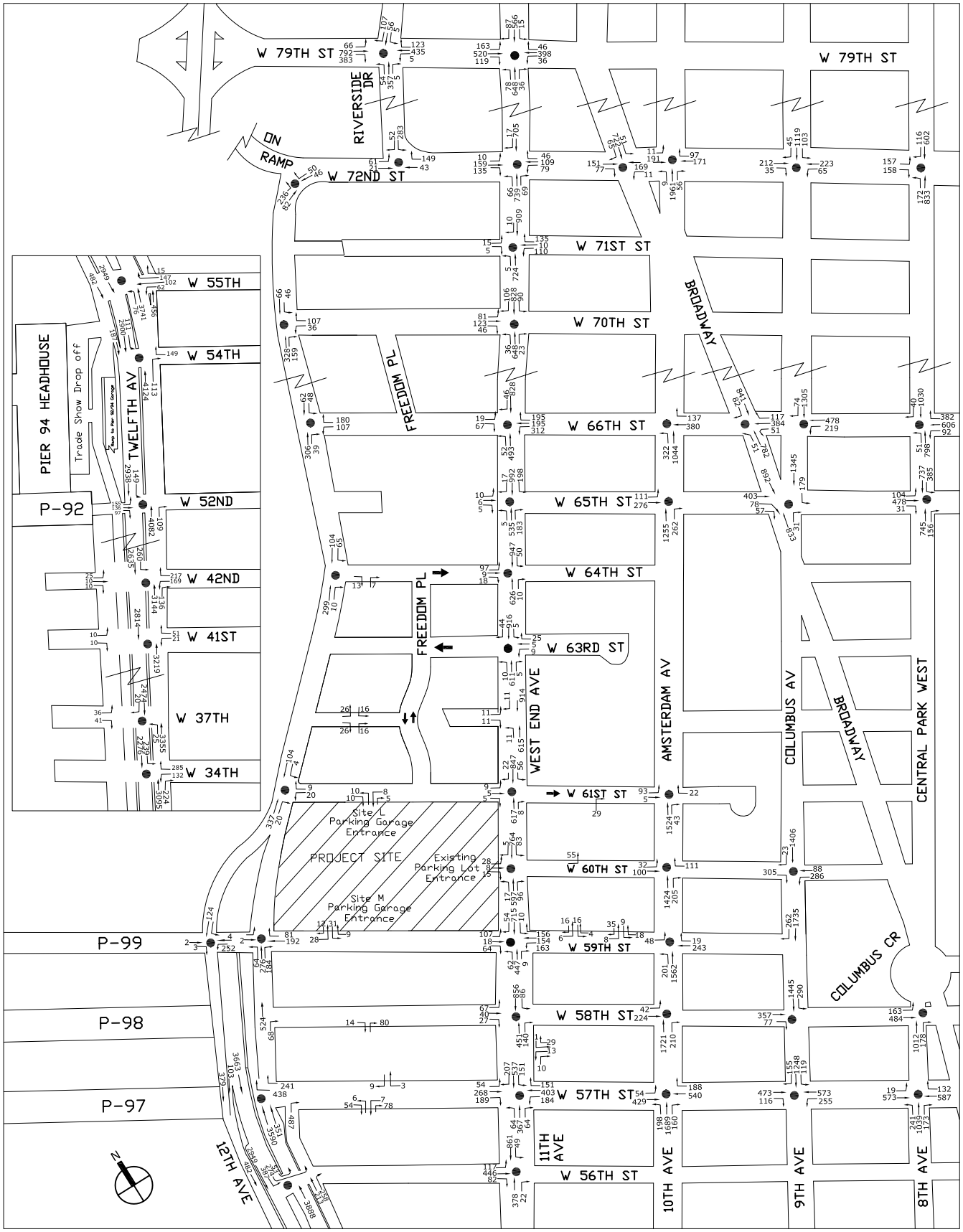
Note: W.79th Street @ Riverside Drive Eastbound Left Turn is Prohibited

No Build Conditions - Weekday MD Peak Hour

RIVERSIDE CENTER

Figure 16-9

This Figure has been revised for the FSEIS



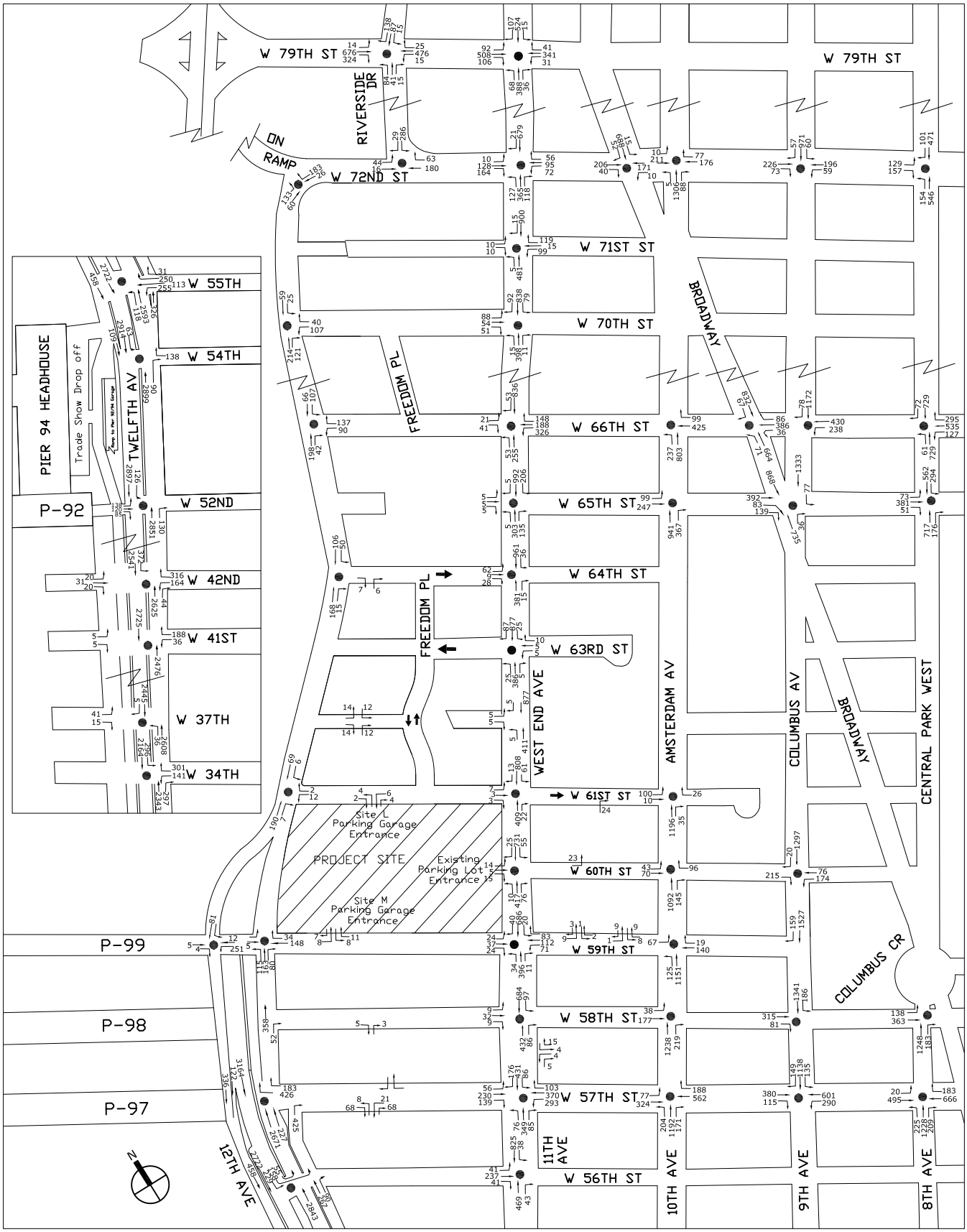
Note: W.79th Street @ Riverside Drive Eastbound Left Turn is Prohibited

No Build Conditions - Weekday PM Peak Hour

RIVERSIDE CENTER

Figure 16-10

This Figure has been revised for the FSEIS



Note: W.79th Street @ Riverside Drive Eastbound Left Turn is Prohibited

No Build Conditions - Sat MD Peak Hour

RIVERSIDE CENTER

Figure 16-11

This Figure has been revised for the FSEIS

2018 No Build conditions, 27 of the 55 analysis intersections would be expected to experience congestion in one or more of the peak hours, as compared to 21 under 2008 existing conditions. There would be 23, 17, 21, and 16 intersections experiencing congestion on one or more approaches in the weekday AM, midday, PM, and Saturday midday peak hours, respectively. By comparison, during these same peak hours there would be 17, 12, 18, and 11 intersections with congested movements for 2008 existing conditions. Locations where reductions in traffic are predicted to occur are mainly due to diverted traffic due to the completed connection of Riverside Boulevard between West 59th Street to West 72nd Street.

During the weekday AM peak hour, there are 15 intersections that have movements that are or would be congested for both Existing and No Build conditions, 8 intersections that would have movements that would be congested for No Build conditions (and not congested for Existing conditions), and two intersections which have congestion with Existing conditions and would not have congestion for No Build conditions. Newly congested intersections for the 2018 No Build conditions include Twelfth Avenue and West 59th Street, where the northbound approach operates at LOS F, with 144.7 seconds of delay. At Twelfth Avenue and West 57th Street, the northbound right turn along the service road operates at LOS E, with 35.9 seconds of delay and a v/c ratio of 0.92. At Twelfth Avenue and West 42nd Street, the northbound through movement operates at LOS D, with 54.7 seconds of delay and a v/c ratio of 0.99. At Twelfth Avenue and West 37st Street, the northbound left approach operates at LOS E with a 63.7 second delay and a v/c ratio of 0.10; the northbound through movement operates at LOS D and has a 37.8 second delay with a v/c ratio of 0.95. At West End Avenue and West 66th Street, the northbound left turn movement operates at LOS E, with 68.5 seconds of delay and with a v/c ratio of 0.83. At Eleventh Avenue and West 56th Street, the eastbound movement operates at a minimally acceptable LOS D, but with a v/c ratio of 0.91. At Tenth Avenue and West 57th Street, the eastbound left-through movement operates at LOS D, with 46.0 seconds of delay and a v/c ratio of 0.95. At Eighth Avenue and West 57th Street, the eastbound left-through movement also operates at LOS D, with 48.7 seconds of delay and a v/c ratio of 0.97.

During the weekday midday peak hour, there are twelve intersections that have movements that are or would be congested for both Existing and No Build conditions, and five intersections that would have movements that would be congested for No Build conditions (and not congested for Existing conditions). Newly congested intersections for the 2018 No Build Conditions include Twelfth Avenue and West 54th Street, where the northbound through-right movement operates at an acceptable LOS C, but with a v/c ratio of 0.95. At Columbus Avenue and West 66th Street, southbound through-right movement operates at LOS F, with a delay of 121.5 seconds and a v/c ratio of 1.18. At Columbus Avenue and West 60th Street, eastbound right turn movement operates at LOS E, with 55.7 seconds of delay and a v/c ratio of 0.85. At the triangle intersection of Broadway, Columbus Avenue and West 65th Street, the southbound movement of Columbus Avenue operates at LOS E, with 71.0 seconds of delay and a v/c ratio of 1.05. At Central Park West and West 65th Street, the northbound through-right movement operates at LOS D, with 44.2 seconds of delay and a v/c ratio of 0.92.

	LANE GROUP	EXISTING AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD AM PEAK HOUR 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 HOUR V/C RATIO	Delay (sec.)	LOS
Riverside Dr.																									
Riverside Dr. (N-S) @	EB-LTR	0.46	15.4	B	0.46	14.3	B	0.40	14.6	B	0.40	13.5	B	0.69	19.3	B	0.69	18.0	B	0.51	16.0	B	0.50	14.7	B
W. 79th St. (E-W)	WB-LTR	0.35	14.1	B	0.34	12.9	B	0.20	12.7	B	0.20	11.7	B	0.28	13.4	B	0.28	12.3	B	0.25	13.1	B	0.24	12.0	B
	NB-LTR	0.38	22.7	C	0.46	26.5	C	0.23	19.5	B	0.27	21.3	C	0.68	26.4	C	0.75	31.3	C	0.32	20.9	C	0.37	23.3	C
	SB-LTR	0.91	43.7	D *	0.99	62.7	E *	0.33	20.8	C	0.36	22.6	C	0.31	20.5	C	0.34	22.3	C	0.43	22.5	C	0.48	24.7	C
Riverside Dr. (SB) @	EB-L				0.33	30.7	C				0.18	21.1	C				0.20	21.5	C				0.21	22.2	C
W. 72nd St. (WB)	EB-T				0.05	24.1	C				0.04	19.1	B				0.05	19.2	B				0.04	19.1	B
	WB-T	0.60	31.5	C	0.55	30.8	C	0.30	21.7	C	0.24	21.0	C	0.16	20.2	C	0.05	19.1	B	0.26	21.2	C	0.20	20.6	C
	WB-R	0.08	1.7	A	0.01	1.5	A	0.07	1.7	A	0.01	1.5	A	0.26	2.6	A	0.19	2.2	A	0.20	2.5	A	0.12	2.0	A
	SB-LR	0.79	25.0	C	0.83	28.0	C	0.41	21.3	C	0.45	22.1	C	0.69	26.6	C	0.74	29.2	C	0.68	28.7	C	0.72	30.3	C
Riverside Blvd.																									
Riverside Blvd. (N-S) @	NB-L				0.22	9.1	A				0.12	8.1	A				0.18	7.9	A				0.10	8.0	A
W. 72nd St On-Ramp (WB)																									
UNSIGNALIZED 2-WAY STOP																									
Riverside Blvd. (N-S) @	WB-LR	0.21	12.1	B	NA	9.9	A	0.18	11.4	B	NA	9.3	A	0.17	10.2	B	NA	9.6	A	0.24	11.9	B	NA	9.4	A
W. 70th St (WB)	NB-TR				NA	14.6	B				NA	11.0	B				NA	16.1	C				NA	10.9	B
UNSIGNALIZED 2-WAY STOP	SB-LT	0.02	7.6	A	NA	9.2	A	0.02	7.5	A	NA	8.8	A	0.03	7.6	A	NA	9.4	A	0.03	7.6	A	NA	8.8	A
					UNSIGNALIZED 4-WAY STOP						UNSIGNALIZED 4-WAY STOP						UNSIGNALIZED 4-WAY STOP						UNSIGNALIZED 4-WAY STOP		
Riverside Blvd. (N-S) @	WB-LR	NA	8.3	A	NA	14.2	B	NA	7.7	A	NA	10.3	B	NA	7.5	A	NA	11.8	B	NA	8.0	A	NA	10.5	B
W. 66th St. (WB)	NB-TR	NA	7.5	A	NA	14.1	B	NA	7.2	A	NA	10.7	B	NA	7.1	A	NA	13.8	B	NA	7.5	A	NA	10.6	B
UNSIGNALIZED All-WAY STOP	SB-LT	NA	8.8	A	NA	12.0	B	NA	8.4	A	NA	10.2	B	NA	7.8	A	NA	9.9	A	NA	8.6	A	NA	10.2	B
Riverside Blvd. (N-S) @	SB-LT				0.06	8.2	A				0.05	8.0	A				0.07	8.5	A				0.04	7.9	A
W. 64th St. (WB)																									
UNSIGNALIZED 2-WAY STOP																									
Riverside Blvd. (N-S) @	WB-LR				NA	8.5	A				NA	7.2	A				NA	8.4	A				NA	7.9	A
W. 61st St. (WB)	NB-TR				NA	9.6	A				NA	8.7	A				NA	10.7	B				NA	8.5	A
UNSIGNALIZED All-WAY STOP	SB-LT				NA	8.5	A				NA	7.8	A				NA	8.3	A				NA	7.7	A
12th Avenue																									
12th Ave. (NB) @	EB-LT				0.00	8.5	A				0.00	8.2	A				0.00	8.5	A				0.00	8.5	A
W. 59th St. (WB)	WB-TR																								
UNSIGNALIZED 2-WAY STOP	NB-LR	0.40	13.3	B				0.34	12.8	B				0.31	11.4	B				0.28	11.8	B			
	NB-LTR				1.23	144.7	F *				0.78	29.2	D				1.05	79.5	F *				1.05	79.5	F *
12th Ave. (SB) @	WB-LT				0.37	9.6	A				0.25	8.8	A				0.22	8.7	A				0.22	8.7	A
W. 59th St. (WB)	SB-L				0.00	26.8	D				0.00	16.3	C				0.00	15.1	C				0.00	15.1	C
UNSIGNALIZED 2-WAY STOP	SB-R				0.18	9.2	A				0.12	8.9	A				0.13	8.9	A				0.09	8.7	A
12th Ave. (N-S) @	NB-T Main Line	0.69	26.9	C	0.73	28.2	C	0.75	16.4	B	0.79	17.4	B	0.89	10.1	B	0.94	13.3	B *	0.71	15.3	B	0.74	16.1	B
W. 57th St. (E-W)	NB-T Service	0.41	22.1	C	0.74	32.0	C	0.20	9.3	A	0.36	11.0	B	0.14	3.1	A	0.34	4.1	A	0.13	8.6	A	0.23	9.5	A
	WB-R	0.25	30.3	C	0.38	32.6	C	0.43	37.2	D	0.58	40.0	D	0.53	50.6	D	0.77	58.1	E *	0.49	38.1	D	0.64	41.5	D
	NB-R Service unsignalized	0.77	21.4	C	0.92	35.9	E *	0.54	15.9	C	0.71	21.9	C	0.59	17.0	C	0.72	22.4	C	0.50	15.1	C	0.73	22.7	C
12th Ave. (N-S) @	NB-T	0.98	52.9	D *	1.08	82.2	F *	0.69	11.3	B	0.75	12.6	B	0.95	14.1	B *	1.04	35.8	D *	0.65	10.8	B	0.70	11.7	B
W. 56th St. (EB)	SB-L	0.82	34.4	C	0.95	48.8	D *	0.97	77.6	E *	1.10	115.6	F *	0.89	70.5	E *	1.02	96.1	F *	0.61	47.4	D	0.73	51.5	D
	NB-TR Service	0.50	30.9	C	0.65	33.9	C	0.21	6.6	A	0.27	7.0	A	0.24	3.4	A	0.29	3.7	A	0.14	6.1	A	0.20	6.5	A
12th Ave. (N-S) @	WB-L	1.05	119.9	F *	0.78	73.2	E *	0.62	48.1	D	0.46	42.7	D	0.60	61.7	E *	0.42	55.7	E *	0.99	87.1	F *	0.66	48.7	D
W. 55th St. (WB)	WB-LR				0.71	74.0	E *				0.62	50.5	D				0.75	85.0	F *				0.81	63.5	E *
	WB-R	0.39	56.6	E *	0.36	60.0	E *	0.59	46.7	D	0.58	50.7	D	0.55	61.4	E *	0.49	63.7	E *	0.72	52.7	D	0.79	66.8	E *
	NB-L	1.05	169.1	F *	1.09	169.9	F *	1.05	141.8	F *	0.99	118.4	F *	0.72	104.7	F *	0.77	101.7	F *	1.02	141.3	F *	1.00	126.8	F *
	NB-T	0.69	12.2	B	0.78	13.4	B	0.68	13.8	B	0.75	15.3	B	0.84	5.1	A	0.92	7.9	A *	0.63	12.8	B	0.68	13.7	B
	SB-T	1.05	40.6	D *	1.09	55.6	E *	0.78	24.4	C	0.83	27.5	C	0.85	24.8	C	0.91	30.2	C *	0.88	28.6	C	0.94	34.8	C *
	NB-T Service	0.37	8.5	A	0.50	9.5	A	0.31	9.5	A	0.41	10.8	B	0.32	8.0	A	0.39	8.8	A	0.23	8.8	A	0.35	10.0	B
	SB-T Service	0.32	12.7	B	0.49	15.0	B	0.28	15.8	B	0.38	18.1	B	0.15	11.7	B	0.26	14.1	B	0.24	15.3	B	0.33	17.4	B

	LANE GROUP	EXISTING AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS		NO BUILD AM PEAK HOUR 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 HOUR V/C RATIO	Delay (sec.)	LOS	
12th Ave. (N-S) @	WB-R	0.48	60.0	E	*	0.53	62.3	E	*	0.26	39.1	D		0.28	39.5	D		0.62	67.4	E	*	0.69	71.7	E	*	0.48	44.7	D		0.51	45.6	D	
W. 54th St. (EB)	NB-TR	0.80	15.1	B		0.97	27.1	C	*	0.82	17.0	B		0.95	25.3	C	*	0.93	8.4	A	*	1.06	40.1	D	*	0.69	13.4	B		0.80	16.1	B	
	SB-L	0.51	59.4	E	*	0.56	61.5	E	*	0.37	40.8	D		0.40	41.4	D		0.42	57.6	E	*	0.45	58.3	E	*	0.20	37.4	D		0.23	37.9	D	
	SB-T	1.05	37.2	D	*	1.07	48.1	D	*	0.63	12.3	B		0.64	12.5	B		0.72	12.4	B		0.74	12.8	B		0.77	15.1	B		0.78	15.5	B	
	SB-T Service	0.54	3.7	A		0.32	2.3	A		0.30	9.0	A		0.14	7.6	A		0.28	7.3	A		0.16	6.3	A		0.27	8.70	A		0.12	7.4	A	
12th Ave. (N-S) @	EB-LTR					1.05	109.4	F	*					0.65	45.8	D						0.86	77.0	E	*					0.53	43.0	D	
W. 52nd St. (EB)	NB-TR	0.93	34.9	C	*	1.03	54.5	D	*	1.05	58.7	E	*	1.13	89.2	F	*	1.05	46.9	D	*	1.15	85.1	F	*	0.90	29.4	C	*	0.97	37.7	D	*
	SB-L	1.05	131.1	F	*	0.87	96.8	F	*	1.05	132.9	F	*	0.84	86.4	F	*	1.05	142.2	F	*	0.80	91.6	F	*	1.05	138.4	F	*	0.75	77.9	E	*
	SB-T	1.01	21.4	C	*	1.03	27.4	C	*	0.66	12.8	B		0.64	12.4	B		0.74	12.0	B		0.73	11.8	B		0.79	15.8	B		0.77	14.6	B	
12th Ave. (N-S) @	EB-LTR	0.04	46.2	D		0.04	46.2	D		0.07	32.4	C		0.07	32.4	C		0.08	46.7	D		0.08	46.7	D		0.09	32.5	C		0.09	32.6	C	
W. 42 nd St. (E-W)	WB-L	0.33	52.6	D		0.35	53.2	D		0.59	44.8	D		0.61	45.9	D		0.64	64.3	E	*	0.67	65.9	E	*	0.49	41.2	D		0.51	42.0	D	
	WB-R	0.52	32.5	C		0.54	33.2	C		0.62	24.4	C		0.64	25.3	C		0.65	50.0	D		0.68	52.1	D		0.59	23.5	C		0.61	24.2	C	
	NB-T	0.87	40.2	D		0.99	54.7	D	*	0.97	49.6	D	*	1.08	82.4	F	*	0.84	19.2	B		0.94	25.2	C	*	1.05	111.0	F	*	1.15	153.5	F	*
	NB-R	0.28	26.4	C		0.29	26.7	C		0.29	28.1	C		0.31	28.5	C		0.22	10.6	B		0.23	10.7	B		0.12	25.0	C		0.13	25.2	C	
	SB-L	0.46	53.6	D		0.47	53.9	D		0.26	39.9	D		0.26	40.0	D		0.85	89.3	F	*	0.87	91.6	F	*	0.54	44.7	D		0.55	45.0	D	
	SB-T	0.73	4.4	A		0.74	4.4	A		0.74	16.8	B		0.75	17.0	B		0.75	15.2	B		0.77	15.7	B		0.81	18.8	B		0.82	19.1	B	
12th Ave. (N-S) @	EB-LR	0.00	38.2	D		0.00	38.2	D		0.02	24.9	C		0.02	24.9	C		0.06	47.3	D		0.06	47.3	D		0.02	24.9	C		0.02	24.9	C	
W. 41 st St. (E-W)	WB-L	0.07	50.5	D		0.07	50.6	D		0.08	37.7	D		0.08	37.7	D		0.06	59.7	E	*	0.06	59.7	E	*	0.06	37.4	D		0.06	37.5	D	
	WB-R	0.30	54.6	D		0.31	54.7	D		0.37	42.3	D		0.37	42.5	D		0.19	61.7	E	*	0.19	61.8	E	*	0.36	41.9	D		0.37	42.0	D	
	NB-T	1.01	95.7	F	*	1.16	150.7	F	*	0.94	42.1	D	*	1.05	68.8	E	*	0.89	14.0	B		0.99	25.4	C	*	0.93	40.4	D	*	1.03	60.2	E	*
	SB-T	1.05	80.4	F	*	1.06	84.1	F	*	0.91	31.0	C	*	0.92	31.9	C	*	0.89	21.3	C		0.91	22.6	C	*	1.03	77.4	E	*	1.04	81.2	F	*
12th Ave. (N-S) @	EB-LR	0.12	52.5	D		0.12	52.5	D		0.13	43.0	D		0.14	43.1	D		0.24	60.4	E	*	0.25	60.6	E	*	0.16	43.2	D		0.16	43.3	D	
W. 37 th St. (EB)	EB-R	0.12	53.1	D		0.13	53.1	D		0.13	43.5	D		0.14	43.7	D		0.25	61.9	E	*	0.25	62.0	E	*	0.10	42.7	D		0.10	42.7	D	
	NB-L	0.10	63.7	E	*	0.10	63.7	E	*	0.19	50.3	D		0.20	50.4	D		0.29	72.4	E	*	0.29	72.4	E	*	0.25	51.5	D		0.26	51.6	D	
	NB-T	0.83	28.2	C		0.95	37.8	D	*	0.69	17.6	B		0.78	19.8	B		0.77	4.2	A		0.87	6.1	A		0.75	19.0	B		0.83	21.7	C	
	SB-TR	1.04	102.2	F	*	1.05	105.8	F	*	0.97	37.3	D	*	0.98	39.5	D	*	0.84	21.4	C		0.86	22.3	C		1.05	106.4	F	*	1.06	110.4	F	*
12th Ave. (N-S) @	WB-L	0.52	62.1	E	*	0.54	63.0	E	*	0.46	43.5	D		0.48	44.0	D		0.44	58.6	E	*	0.51	60.9	E	*	0.38	41.2	D		0.41	42.0	D	
W. 34 th St. (WB)	WB-LR	0.52	62.3	E	*	0.53	62.8	E	*	0.47	43.5	D		0.48	43.9	D		0.45	59.0	E	*	0.47	59.6	E	*	0.38	41.3	D		0.39	41.5	D	
	WB-R	0.52	39.1	D		0.53	39.4	D		0.47	29.1	C		0.48	29.3	C		0.44	44.6	D		0.46	45.1	D		0.37	26.9	C		0.38	27.0	C	
	NB-T	0.76	29.5	C		0.89	35.8	D		0.69	24.4	C		0.79	27.3	C		0.84	15.0	B		0.95	21.8	C	*	0.76	26.2	C		0.86	29.7	C	
	NB-R	0.15	18.2	B		0.27	20.2	C		0.21	17.5	B		0.34	19.6	B		0.11	6.8	A		0.32	8.7	A		0.40	20.5	C		0.50	22.8	C	
	SB-L	0.47	59.3	E	*	0.54	61.0	E	*	0.59	55.7	E	*	0.62	56.6	E	*	1.04	282.8	F	*	1.11	303.6	F	*	0.73	61.2	E	*	0.76	62.9	E	*
	SB-T	0.78	4.4	A		0.77	4.4	A		0.68	13.3	B		0.68	13.4	B		0.67	11.5	B		0.68	11.7	B		0.73	14.5	B		0.74	14.6	B	
West End Ave/11th Avenue																																	
West End Ave. (N-S) @	EB-LTR	1.05	81.1	F	*	1.09	96.4	F	*	0.73	34.5	C		0.76	35.8	D		1.05	76.2	E	*	1.09	87.2	F	*	1.05	79.3	E	*	1.09	92.8	F	*
W. 79th St. (E-W)	WB-LTR	0.79	37.2	D		0.82	39.0	D		0.47	27.8	C		0.49	28.2	C		0.60	27.6	C		0.62	28.2	C		0.58	30.0	C		0.60	30.5	C	
	NB-LTR	0.51	19.5	B		0.63	22.3	C		0.40	17.4	B		0.46	18.2	B		0.82	28.8	C		0.95	41.9	D	*	0.47	18.5	B		0.54	19.6	B	
	SB-LTR	0.62	17.7	B		0.71	19.8	B		0.48	18.4	B		0.53	19.2	B		0.59	22.9	C		0.66	24.4	C		0.52	19.0	B		0.57	19.8	B	
West End Ave. (N-S) @	EB-LT	0.58	31.4	C		0.53	30.0	C		0.27	30.6	C		0.28	29.9	C		0.46	33.6	C		0.46	32.8	C		0.52	35.1	D		0.53	34.2	C	
W. 72nd St. (E-W)	EB-R	0.74	46.7	D		0.51	34.3	C		0.59	50.8	D		0.44	40.4	D		0.49	40.4	D		0.43	37.0	D		0.61	46.2	D		0.57	42.8	D	
	WB-LTR	0.89	54.0	D		0.85	47.3	D		1.03	92.1	F	*	0.99	79.2	E	*	0.72	45.7	D		0.68	42.1	D		0.64	41.1	D		0.62	39.2	D	
	NB-L	1.00	82.6	F	*	0.50	30.6	C		0.50	29.7	C						0.60	28.6	C						0.77	45.2	D		0.46	31.6	C	
	NB-TR	0.39	16.0	B		0.44	16.7	B		0.51	17.9	B						0.57	12.3	B						0.39	16.0	B		0.42	16.3	B	
	NB-LTR													0.44	16.5	B						0.41	3.6	A									
	SB-TR	0.56	24.2	C		0.64	25.8	C		0.72	32.5	C		0.79	35.6	D		0.68	34.6	C		0.76	37.0	D		0.77	34.3	C		0.84	38.2	D	
West End Ave. (N-S) @	EB-LR	0.04	16.7	B		0.04	16.7	B		0.26	20.1	C		0.26	20.2	C		0.06	17.0	B		0.06	17.0	B		0.06	17.0	B		0.06	17.0	B	
W. 71st St. (E-W)	WB-LTR	0.50	24.9	C		0.53	25.8	C		0.64	30.2	C		0.67	31.4	C		0.35	20.7	C		0.37	20.9	C		0.59	27.9	C		0.62	28.8	C	
	NB-LT	0.58	17.8	B		0.50	16.4	B		0.46	15.7	B		0.39	14.8	B		0.50	12.4	B		0.42	11.6	B		0.48	16.1	B		0.41	15.1	B	
	SB-TR	0.52	12.6	B		0.56	13.1	B		0.55	17.2	B		0.58	17.6	B		0.63	18.5	B		0.66	19.2	B		0.68	19.7	B		0.71	20.7	C	
West End Ave. (N-S) @	EB-LTR	0.67	32.6	C		0.76	37.2	D		0.36	24.1	C		0.40	25.0	C		0.50	26.9	C		0.62	30.4	C		0.44	25.4	C		0.47	26.1	C	
W. 70th St. (EB)	NB-LTR	0.67	21.3	C		0.60	19.7	B		0.45	16.9	B		0.38	15.9	B		0.57	14.9	B		0.49	14.0	B		0.47	17.1	B		0.40	16.2	B	
	SB-LTR	0.84	22.1	C		0.87	23.5	C		0.80	25.9	C		0.82	27.2	C		1.05	66.2	E	*	1.07	70.8	E	*	0.96	42.5	D	*	1.00	49.5	D	*

	LANE GROUP	EXISTING AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD AM PEAK HOUR 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 HOUR V/C RATIO	Delay (sec.)	LOS
West End Ave. (N-S) @ W. 66 th St. (E-W)	EB-LR	0.45	26.2	C	0.51	27.9	C	0.40	25.2	C	0.50	28.4	C	0.22	21.8	C	0.27	22.6	C	0.16	20.9	C	0.20	21.4	C
	WB-L	0.57	30.2	C	0.55	29.6	C	0.50	28.3	C	0.48	27.7	C	0.55	29.6	C	0.49	28.1	C	0.62	32.1	C	0.59	30.7	C
	WB-LT	0.51	27.4	C	0.73	35.4	D	0.53	27.9	C	0.66	31.8	C	0.54	28.3	C	0.74	35.9	D	0.60	29.8	C	0.72	34.6	C
	WB-R	0.57	30.4	C	0.36	24.8	C	0.46	27.0	C	0.31	23.7	C	0.81	43.9	D	0.54	29.4	C	0.54	28.8	C	0.41	25.6	C
	NB-L	0.56	34.4	C	0.83	68.5	E *	0.24	18.3	B	0.30	20.1	C	0.22	13.7	B	0.41	20.2	C	0.29	20.9	C	0.43	26.9	C
	NB-T	0.39	17.7	B	0.35	17.3	B	0.26	16.3	B	0.23	15.9	B	0.34	12.1	B	0.29	11.8	B	0.26	16.2	B	0.23	15.9	B
	SB-TR	0.60	17.4	B	0.65	18.3	B	0.60	21.3	C	0.64	22.1	C	0.69	21.4	C	0.74	22.8	C	0.74	24.7	C	0.78	26.4	C
West End Ave. (N-S) @ W. 65 th St. (WB)	EB-LTR	0.09	26.2	C	0.08	23.1	C	0.06	25.8	C	0.05	22.8	C	0.06	25.8	C	0.05	22.7	C	0.04	25.6	C	0.03	22.6	C
	NB-L	0.11	13.9	B	0.13	16.8	B	0.02	12.1	B	0.02	14.3	B	0.03	9.7	A	0.04	12.3	B	0.02	12.1	B	0.03	14.4	B
	NB-TR	0.59	18.5	B	0.67	23.2	C	0.36	15.2	B	0.39	17.9	B	0.46	12.6	B	0.50	16.1	B	0.39	15.5	B	0.43	18.3	B
	SB-L	0.67	17.9	B	0.73	23.8	C	0.46	10.5	B	0.48	12.9	B	0.71	20.3	C	0.72	23.2	C	0.49	11.1	B	0.53	13.8	B
	SB-TR	0.48	4.3	A	0.54	7.0	A	0.49	9.4	A	0.54	12.0	B	0.65	11.7	B	0.71	15.2	B	0.59	10.7	B	0.65	13.7	B
West End Ave. (N-S) @ W. 64 th St. (EB)	EB-LTR	0.10	24.1	C	0.33	24.0	C	0.06	23.6	C	0.27	22.7	C	0.10	24.0	C	0.44	26.7	C	0.11	24.1	C	0.32	23.6	C
	NB-L	0.17	9.6	A				0.02	7.0	A				0.03	4.0	A				0.05	7.5	A			
	NB-TR	0.48	10.6	B	0.52	14.4	B	0.29	8.7	A	0.28	11.5	B	0.35	5.1	A	0.34	8.3	A	0.29	8.7	A	0.29	11.6	B
	SB-L	0.14	8.4	A	0.16	11.6	B	0.04	7.1	A	0.04	9.7	A	0.20	9.3	A	0.20	12.1	B	0.09	7.6	A	0.10	10.3	B
	SB-T				0.57	10.5	B				0.54	14.6	B				0.73	18.7	B				0.64	16.4	B
	SB-TR	0.49	6.0	A				0.48	10.6	B				0.64	13.2	B				0.57	11.8	B			
West End Ave. (N-S) @ W. 63 rd St. (E-W)	EB-LTR	0.07	19.6	B				0.10	19.9	B				0.16	20.7	C				0.10	19.9	B			
	WB-LTR	0.06	20.0	B	0.06	20.0	C	0.06	19.9	B	0.06	19.9	B	0.09	20.3	C	0.09	20.3	C	0.04	19.8	B	0.04	19.8	B
	NB-L	0.20	13.5	B	0.51	27.2	C	0.03	9.7	A	0.06	10.2	B	0.03	6.9	A	0.07	7.5	A	0.09	10.8	B	0.17	12.7	B
	NB-TR	0.57	15.3	B	0.54	14.8	B	0.32	11.9	B	0.29	11.6	B	0.33	8.3	A	0.30	8.1	A	0.32	11.9	B	0.30	11.6	B
	SB-L	0.09	7.6	A	0.09	7.5	A	0.04	9.8	A	0.04	9.8	A	0.02	9.6	A	0.02	9.6	A	0.07	10.1	B	0.07	10.0	B
	SB-TR							0.60	15.7	B	0.63	16.4	B	0.71	18.1	B	0.76	19.9	B	0.65	16.7	B	0.73	18.8	B
	SB-T	0.79	15.5	B	0.85	17.9	B																		
	SB-R	0.03	9.6	A	0.13	10.4	B																		
West End Ave. (N-S) @ W. 61 st St.	EB-LR				0.06	20.0	C				0.04	19.7	B				0.04	19.8	B				0.03	19.6	B
	NB-L																								
	NB-T	0.52	11.10	B	0.58	15.2	B	0.27	8.50	A	0.27	11.4	B							0.30	8.8	A	0.31	11.8	B
	NB-R	0.09	7.40	A	0.12	10.4	B	0.04	7.10	A	0.06	9.9	A							0.04	7.1	A	0.04	9.7	A
	NB-TR													0.30	4.9	A	0.31	8.1	A						
	SB-L	0.31	7.9	A	0.39	17.3	B	0.11	7.8	A	0.14	11.0	B	0.19	9.1	A	0.21	12.2	B	0.16	8.4	A	0.18	11.5	B
	SB-T	0.71	9.3	A				0.50	10.9	B				0.60	12.4	B				0.53	11.3	B			
	SB-TR				0.86	19.1	B				0.58	15.4	B				0.69	17.8	B				0.62	16.0	B
West End Ave. (N-S) @ W. 60 th St. (EB)	EB-LTR	0.06	23.6	C	0.06	19.4	B	0.05	23.5	C	0.07	19.5	B	0.07	23.7	C	0.11	20.0	C	0.12	24.3	C	0.10	19.9	B
	NB-L	0.05	7.5	A	0.13	11.9	B	0.09	7.8	A	0.14	11.4	B	0.07	4.4	A	0.10	7.8	A	0.04	7.3	A	0.06	10.2	B
	NB-TR	0.67	13.9	B	0.84	23.5	C	0.33	9.1	A	0.40	12.9	B	0.31	4.9	A	0.38	8.7	A	0.38	9.5	A	0.46	13.6	B
	SB-L	0.24	7.2	A	0.36	15.1	B	0.14	8.2	A	0.22	12.4	B	0.27	10.3	B	0.41	17.4	B	0.15	8.3	A	0.24	12.9	B
	SB-TR	0.68	8.7	A	0.81	16.6	B	0.47	10.5	B	0.52	14.4	B	0.55	11.6	B	0.61	15.9	B	0.50	10.9	B	0.58	15.3	B
West End Ave. (N-S) @ W. 59 th St. (E-W)	EB-LTR	0.89	64.0	E *	0.97	82.6	F *	0.39	29.0	C	0.34	27.8	C	1.05	97.2	F *	0.82	52.6	D	0.35	28.3	C	0.28	26.8	C
	WB-LTR	0.87	54.2	D	1.12	114.4	F *	0.62	34.1	C	0.81	44.8	D	1.05	94.1	F *	1.36	212.5	F *	0.66	36.5	D	0.83	48.2	D
	NB-L	0.11	8.3	A	0.29	11.9	B	0.05	7.3	A	0.15	8.6	A	0.02	3.9	A	0.28	7.3	A	0.08	7.7	A	0.16	9.0	A
	NB-TR	0.53	11.4	B	0.56	11.8	B	0.27	8.6	A	0.27	8.6	A	0.19	4.4	A	0.20	4.4	A	0.30	8.8	A	0.30	8.8	A
	SB-L	0.02	3.9	A	0.02	4.0	A	0.02	6.9	A	0.02	6.9	A	0.02	7.0	A	0.03	7.0	A	0.05	7.2	A	0.05	7.3	A
	SB-TR	0.70	9.1	A	0.74	9.9	A	0.43	10.1	B	0.42	10.0	B	0.51	11.1	B	0.52	11.3	B	0.47	10.6	B	0.49	10.7	B
11th Ave. (N-S) @ W. 58 th St. (EB)	EB-LTR	0.40	28.7	C	0.46	30.1	C	0.23	25.8	C	0.24	26.0	C	0.15	24.7	C	0.39	28.7	C	0.16	24.7	C	0.14	24.6	C
	NB-L	0.06	7.5	A				0.05	7.3	A				0.04	4.1	A				0.02	7.0	A			
	NB-TR	0.68	14.2	B	0.74	15.7	B	0.37	9.5	A	0.40	9.8	A	0.26	4.7	A	0.28	4.8	A	0.38	9.5	A	0.40	9.7	A
	SB-L	0.16	5.9	A	0.29	8.7	A	0.16	8.4	A	0.19	8.9	A	0.22	9.3	A	0.26	10.0	B	0.26	9.8	A	0.29	10.4	B
	SB-TR	0.61	7.7	A				0.43	10.1	B				0.55	11.7	B				0.43	10.1	B			
	SB-T				0.68	8.7	A				0.45	10.3	B				0.56	11.7	B				0.44	10.1	B
11th Ave. (N-S) @ W. 57 th St. (E-W)	EB-L	0.97	80.5	F *	0.71	32.7	C	0.51	25.6	C	0.28	17.3	B	0.58	30.4	C	0.23	17.7	B	0.37	21.4	C	0.21	16.9	B
	EB-TR	1.05	86.9	F *	0.67	31.0	C	0.72	39.5	D	0.58	29.9	C	0.91	60.6	E *	0.65	31.9	C	0.62	34.5	C	0.49	28.1	C
	WB-L	0.83	49.0	D	0.76	37.5	D	0.92	63.0	E *	0.95	67.7	E *	0.62	26.6	C	0.67	33.9	C	0.89	54.1	D	0.98	76.2	E *
	WB-TR	0.99	73.5	E *	0.72	33.7	C	0.96	65.6	E *	0.61	30.4	C	1.05	86.8	F *	0.67	31.7	C	0.94	61.3	E *	0.60	30.2	C
	NB-L	0.09	15.5	B	0.40	24.5	C	0.15	16.2	B	0.28	19.7	B	0.22	15.2	B	0.37	19.9	B	0.28	18.6	B	0.36	20.9	C
	NB-TR	0.57	20.5	C	0.63	21.8	C	0.38	17.7	B	0.43	18.9	B	0.33	14.5	B	0.39	15.1	B	0.37	17.6	B	0.40	17.9	B
	SB-L	0.69	33.8	C	0.81	48.3	D	0.31	19.0	B	0.35	20.7	C	0.47	22.7	C	0.52	24.5	C	0.29	18.5	B	0.31	19.0	B
	SB-TR	0.72	21.1	C	0.75	21.8	C	0.50	19.4	B	0.55	20.9	C	0.57	20.6	C	0.66	22.4	C	0.49	19.3	B	0.58	20.9	C
11th Ave. (N-S) @ W. 56 th St. (EB)	EB-LTR	0.84	35.4	D	0.91	42.0	D *	0.86	43.2	D	0.88	43.6	D	1.05	78.6	E *	1.06	79.7	E *	0.55	27.9	C	0.62	30.0	C
	NB-TR	0.42	13.1	B	0.51	14.2	B	0.27	11.4	B	0.33	13.1	B	0.22	7.7	A	0.30	9.4	A	0.34	12.1	B	0.37	12.5	B
	SB-L	0.17	8.4	A	0.21	9.2	A	0.14	10.8	B	0.17	12.4	B	0.11	10.5	B	0.14	12.0	B	0.11	10.5	B	0.12	10.8	B
	SB-T	0.38	8.6	A	0.43	9.0	A	0.33	11.7	B	0.39	13.4	B	0.35	12.0	B	0.42	13.7	B	0.34	11.9	B	0.38	12.3	B

	LANE GROUP	EXISTING AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD AM PEAK HOUR 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 HOUR V/C RATIO	Delay (sec.)	LOS
Amsterdam Ave/10th Avenue																									
Amsterdam Ave. (NB) @	EB-T	0.38	26.4	C	0.34	23.0	C	0.38	26.4	C	0.35	23.1	C	0.27	24.9	C	0.24	21.8	C	0.34	25.7	C	0.31	22.6	C
W. 72 nd St. (E-W)	WB-TR	0.41	26.3	C	0.37	23.0	C	0.36	25.7	C	0.32	22.5	C	0.29	24.9	C	0.25	21.7	C	0.24	24.4	C	0.22	21.3	C
	NB-L	0.02	7.7	A	0.03	9.7	A	0.02	7.7	A	0.03	9.7	A	0.02	7.7	A	0.04	9.8	A	0.02	7.7	A	0.02	9.6	A
	NB-TR	0.51	7.1	A	0.59	10.5	B	0.50	7.1	A	0.58	10.4	B	0.70	9.1	A	0.81	14.2	B	0.49	7.0	A	0.57	10.2	B
Amsterdam Ave. (NB) @	WB-TR	0.48	22.2	C	0.53	23.2	C	0.40	21.1	C	0.44	21.8	C	0.50	22.8	C	0.56	23.9	C	0.51	22.8	C	0.58	24.1	C
W. 66 th St. (WB)	NB-LT	0.50	12.2	B	0.54	12.6	B	0.44	11.6	B	0.49	12.2	B	0.54	12.6	B	0.57	13.0	B	0.38	11.1	B	0.43	11.4	B
Amsterdam Ave. (NB) @	EB-LT	0.48	23.7	C	0.52	24.4	C	0.32	21.4	C	0.33	21.5	C	0.41	22.6	C	0.45	23.1	C	0.31	21.1	C	0.33	21.2	C
W. 65 th St. (EB)	NB-TR	0.45	10.3	B	0.48	10.6	B	0.53	11.2	B	0.56	11.6	B	0.47	10.4	B	0.50	10.7	B	0.48	10.7	B	0.52	11.0	B
Amsterdam Ave. (NB) @	EB-LT	0.24	22.9	C	0.40	25.3	C	0.14	21.5	C	0.20	22.2	C	0.16	21.9	C	0.24	23.0	C	0.22	22.7	C	0.28	23.4	C
W. 61 st St. (E-W)	WB-R	0.03	20.4	C	0.09	21.1	C	0.05	20.7	C	0.07	20.9	C	0.06	20.7	C	0.08	21.1	C	0.07	20.8	C	0.09	21.1	C
	NB-TR	0.41	8.1	A	0.43	8.2	A	0.52	9.1	A	0.55	9.4	A	0.49	8.7	A	0.51	8.8	A	0.43	8.3	A	0.45	8.5	A
Amsterdam Ave. (NB) @	EB-LT	0.38	24.6	C	0.45	26.0	C	0.22	22.0	C	0.25	21.9	C	0.27	22.6	C	0.30	23.0	C	0.29	23.0	C	0.32	23.4	C
W. 60 th St. (EB)	WB-R				0.41	26.4	C				0.44	26.4	C				0.29	23.2	C				0.25	22.6	C
	NB-TR	0.47	9.1	A	0.45	9.0	A	0.58	10.4	B	0.45	9.6	A	0.57	10.0	B	0.56	9.9	A	0.49	9.4	A	0.48	9.4	A
Amsterdam Ave. (NB) @	EB-L	0.48	31.2	C	0.61	38.4	D	0.19	22.6	C	0.25	23.8	C	0.31	26.1	C	0.35	27.5	C	0.33	25.6	C	0.35	26.3	C
W. 59 th St. (E-W)	WB-T	0.36	23.7	C	0.39	24.2	C	0.27	22.4	C	0.28	22.6	C	0.39	24.2	C	0.42	24.8	C	0.26	22.2	C	0.28	22.5	C
	WB-R	0.39	25.3	C	0.05	19.9	B	0.43	26.2	C	0.08	20.3	C	0.31	23.9	C	0.05	20.0	B	0.35	24.3	C	0.06	20.1	C
	NB-LT	0.42	8.7	A	0.46	9.1	A	0.40	8.6	A	0.43	8.9	A	0.44	8.8	A	0.47	9.1	A	0.44	9.0	A	0.49	9.4	A
10th Ave. (NB) @	EB-LT	0.42	24.8	C	0.47	25.5	C	0.30	23.1	C	0.32	23.4	C	0.30	23.1	C	0.34	23.6	C	0.28	22.8	C	0.29	23.0	C
W. 58 th St. (EB)	NB-TR	0.49	8.7	A	0.52	9.0	A	0.59	9.9	A	0.63	10.4	B	0.60	9.6	A	0.64	10.1	B	0.47	8.7	A	0.51	9.0	A
10th Ave. (NB) @	EB-LT	0.73	26.8	C	0.95	46.0	D *	0.56	24.3	C	0.74	30.1	C	0.43	21.7	C	0.61	25.4	C	0.44	22.2	C	0.61	25.9	C
W. 57 th St. (E-W)	WB-TR	0.55	21.5	C	0.65	23.6	C	0.80	30.9	C	0.84	33.0	C	0.64	25.6	C	0.71	27.2	C	0.68	26.7	C	0.74	28.1	C
	NB-LTR	0.67	16.5	B	0.73	17.7	B																		
	NB-LT							0.56	12.9	B	0.60	13.4	B	0.55	12.5	B	0.59	13.0	B	0.52	12.4	B	0.57	12.9	B
	NB-R							0.38	16.1	B	0.45	17.3	B	0.24	13.9	B	0.31	14.8	B	0.28	14.3	B	0.33	15.1	B
Broadway																									
Broadway (SB) @	EB-TR	0.48	28.3	C	0.43	24.5	C	0.46	27.8	C	0.41	24.1	C	0.37	26.6	C	0.33	23.1	C	0.43	27.2	C	0.38	23.6	C
W. 72 nd St. (E-W)	WB-T	0.34	25.4	C	0.30	22.2	C	0.24	24.3	C	0.22	21.3	C	0.18	23.7	C	0.17	20.8	C	0.18	23.7	C	0.16	20.7	C
	SB-LTR	0.46	7.0	A	0.51	9.9	A	0.42	6.7	A	0.47	9.6	A	0.42	6.7	A	0.47	9.5	A	0.37	6.4	A	0.42	9.1	A
Broadway (N-S) @	WB-LTR	0.41	23.5	C	0.46	24.2	C	0.36	22.9	C	0.40	23.3	C	0.45	24.1	C	0.50	24.8	C	0.39	23.2	C	0.42	23.5	C
W. 66 th St. (WB)	NB-LT	0.39	12.6	B	0.40	12.7	B	0.40	12.6	B	0.41	12.7	B	0.48	9.6	A	0.49	9.8	A	0.42	12.8	B	0.43	13.0	B
	SB-TR	0.46	15.4	B	0.48	15.6	B	0.37	17.1	B	0.39	17.2	B	0.40	17.4	B	0.42	17.6	B	0.37	17.1	B	0.38	17.2	B
Broadway (NB-SB1) / Columbus Ave.(SB2)	EB-TR	0.52	31.4	C	0.56	32.3	C	0.44	30.0	C	0.46	30.3	C	0.52	31.3	C	0.56	32.1	C	0.69	35.6	D	0.71	36.3	D
@ W. 65 th St. (EB)	EB-R	0.85	62.8	E *	0.91	74.2	E *	0.56	38.9	D	0.56	38.9	D	0.64	43.5	D	0.66	45.3	D	0.64	42.6	D	0.67	44.2	D
	NB-TR	0.84	41.4	D	0.73	33.4	C	0.84	41.6	D	0.74	33.8	C	0.98	58.2	E *	0.86	38.5	D	0.78	37.1	D	0.69	31.8	C
	SB1-T	0.73	34.2	C	0.66	30.2	C	0.66	32.5	C	0.60	29.3	C	0.62	31.7	C	0.57	28.6	C	0.61	31.4	C	0.55	28.4	C
	SB2-L	0.23	25.6	C	0.29	29.4	C	0.27	26.6	C	0.30	29.6	C	0.26	26.3	C	0.28	29.0	C	0.23	25.9	C	0.28	29.4	C
	SB2-LT	0.87	37.1	D	1.06	75.2	E *	0.86	36.5	D	1.05	71.0	E *	0.88	37.3	D	1.06	74.8	E *	0.74	31.9	C	0.90	41.3	D *

Table 16-6
No Build LOS Table

	LANE GROUP	EXISTING AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD AM PEAK HOUR 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 HOUR V/C RATIO	Delay (sec.)	LOS
Columbus Ave/9th Avenue																									
Columbus Ave. (SB) @	EB-T	0.31	19.9	B	0.33	20.1	C	0.22	18.8	B	0.23	18.9	B	0.19	18.5	B	0.19	18.6	B	0.23	18.9	B	0.23	19.0	B
W. 72 nd St. (E-W)	EB-R	0.17	19.0	B	0.18	19.1	B	0.44	24.6	C	0.45	25.1	C	0.11	18.2	B	0.11	18.2	B	0.27	21.2	C	0.28	21.4	C
	WB-LT	0.66	27.2	C	0.68	27.9	C	0.29	19.9	B	0.30	20.0	B	0.39	21.3	C	0.40	21.5	C	0.39	21.2	C	0.40	21.4	C
	SB-LTR	0.59	13.2	B	0.61	13.5	B	0.67	15.0	B	0.71	15.8	B	0.72	15.8	B	0.75	16.7	B	0.62	17.8	B	0.65	18.4	B
Columbus Ave. (SB) @	WB-LT	0.50	12.1	B	0.55	12.8	B	0.46	11.6	B	0.49	12.0	B	0.51	12.2	B	0.55	12.8	B	0.47	11.6	B	0.50	12.1	B
W. 66 th St. (WB)	SB-TR	0.84	34.6	C	0.89	37.4	D	0.81	33.4	C	1.18	121.5	F *	0.84	34.4	C	1.21	134.5	F *	0.71	30.2	C	1.04	68.9	E *
Columbus Ave. (SB) @	EB-R	1.04	103.7	F *	1.14	128.6	F *	0.75	49.9	D	0.85	55.7	E *	1.05	103.5	F *	1.28	181.5	F *	0.60	41.4	D	0.88	54.8	D
W. 60 th St. (E-W)	WB-L	1.05	97.6	F *	0.53	28.2	C	0.61	33.7	C	0.72	34.7	C	1.05	96.9	F *	0.61	30.5	C	0.21	16.8	B	0.29	23.2	C
	WB-LT				0.23	22.8	C				0.26	23.2	C				0.21	22.6	C				0.19	22.3	C
	SB-T	0.67	21.7	C				0.64	20.9	C				0.55	19.4	B				0.62	22.8	C			
	SB-TR				0.66	18.2	B				0.68	21.6	C				0.69	18.6	B				0.61	20.3	C
9th Ave. (SB) @	EB-TR	0.79	35.5	D	0.84	38.6	D	0.62	29.4	C	0.64	30.0	C	0.57	28.3	C	0.61	29.3	C	0.54	27.5	C	0.55	27.8	C
W. 58 th St. (EB)	SB-LT	0.64	9.8	A				0.70	10.6	B				0.50	8.2	A				0.53	8.5	A			
	SB-L				0.36	12.5	B				0.62	18.7	B				0.59	17.2	B				0.28	11.0	B
	SB-T				0.59	9.1	A				0.57	8.9	A				0.53	8.5	A				0.48	8.1	A
9th Ave. (SB) @	EB-TR	1.05	80.7	F *	1.27	164.7	F *	1.04	82.3	F *	1.24	157.3	F *	0.85	46.9	D	1.22	150.3	F *	0.66	36.9	D	0.86	47.7	D
W. 57 th St. (E-W)	WB-DefL	1.05	88.7	F *	1.03	74.9	E *	0.93	56.8	E *	0.93	58.2	E	0.70	27.0	C	0.86	48.7	D	0.70	25.9	C	0.80	33.2	C
	WB-T	0.65	23.0	C	0.87	36.3	D	1.04	70.8	E *	1.16	112.8	F *	0.85	35.6	D	1.01	62.6	E *	0.88	38.0	D	1.00	59.8	E *
	SB-L				0.48	28.3	C				0.43	27.3	C	0.31	23.9	C	0.42	26.7	C				0.29	23.0	C
	SB-TR													0.64	26.2	C	0.70	27.3	C						
	SB-T				0.77	27.7	C				0.77	28.3	C										0.65	25.3	C
	SB-LTR	0.78	27.6	C				1.01	52.6	D *										0.80	29.2	C			
	SB-R				0.66	36.5	D				0.76	45.9	D										0.36	24.3	C
Central Park W.																									
Central Park W. (N-S) @	EB-LT	0.53	24.9	C	0.55	25.4	C																		
W. 72 nd St. (E-W)	EB-L							0.21	20.1	C	0.22	20.2	C	0.15	19.4	B	0.15	19.4	B	0.16	21.5	C	0.16	21.5	C
	EB-R	0.35	23.7	C	0.37	24.0	C	0.45	26.0	C	0.47	26.5	C	0.44	25.2	C	0.45	25.5	C	0.66	38.3	D	0.68	39.5	D
	WB-LTR	0.24	20.4	C	0.25	20.4	C																		
	NB-LTR	1.04	67.2	E *	1.07	75.1	E *																		
	NB-DefL																								
	NB-TR																								
	NB-LT							1.05	68.9	E *	1.08	79.8	E *	1.05	67.7	E *	1.00	51.5	D *	0.86	31.7	C	0.92	37.4	D *
	SB-LTR	0.89	30.9	C	0.92	34.8	C *																		
	SB-TR							0.63	18.0	B	0.65	18.5	B	0.64	18.2	B	0.67	19.0	B	0.47	16.5	B	0.49	16.8	B
Central Park W. (N-S) @	WB-L	0.43	28.8	C	0.44	29.2	C	0.57	32.6	C	0.59	33.2	C	0.23	24.9	C	0.23	25.0	C	0.35	27.2	C	0.36	27.4	C
W. 66 th St. (WB)	WB-T	1.05	85.6	F *	1.16	124.2	F *	1.05	83.4	F *	1.12	107.7	F *	1.05	84.1	F *	1.15	119.8	F *	1.05	86.5	F *	1.12	108.1	F *
	WB-R	0.83	48.1	D	0.85	51.4	D	0.67	37.0	D	0.70	38.3	D	1.00	76.1	E *	1.02	82.1	F *	0.91	60.7	E *	0.94	66.3	E *
	NB-LT	0.62	14.6	B	0.64	15.2	B	0.55	13.1	B	0.57	13.6	B	0.89	21.1	C	0.93	26.2	C *	0.70	11.3	B	0.73	12.2	B
	SB-TR	0.80	24.2	C	0.83	25.3	C	0.62	21.7	C	0.65	22.2	C	0.99	47.6	D *	1.03	57.8	E *	0.66	19.6	B	0.70	20.5	C
Central Park W. (N-S) @	EB-L	0.25	26.2	C	0.27	26.6	C	0.24	26.2	C	0.25	26.4	C	0.39	30.0	C	0.42	30.8	C	0.23	26.0	C	0.24	26.2	C
W. 65 th St. (EB)	EB-TR	0.72	34.6	C	0.77	36.5	D	0.62	31.4	C	0.65	32.1	C	0.64	32.0	C	0.68	33.1	C	0.58	30.4	C	0.59	30.8	C
	NB-TR	0.85	36.3	D	0.88	38.6	D	0.89	40.1	D	0.92	44.2	D *	0.97	49.2	D *	1.01	57.6	E *	0.99	57.1	E *	1.03	67.1	E *
	SB-DefL	0.76	35.8	D	0.78	38.2	D	0.74	35.1	D	0.78	38.5	D	0.95	61.3	E *	1.00	74.7	E *	0.64	32.3	C	0.70	35.3	D
	SB-T	0.64	10.0	B	0.66	10.3	B	0.63	14.8	B	0.64	15.1	B	0.85	24.3	C	0.87	25.7	C	0.58	13.7	B	0.60	13.9	B
8th Avenue																									
8th Ave. (NB) @	EB-L	0.56	27.1	C	0.57	27.6	C	0.36	21.5	C	0.37	21.6	C	0.33	21.0	C	0.34	21.1	C	0.27	20.0	B	0.28	20.1	C
W. 58 th St. (EB)	EB-T	0.37	20.6	C	0.40	21.0	C	0.52	22.9	C	0.53	23.2	C	0.47	22.1	C	0.50	22.5	C	0.36	20.4	C	0.36	20.5	C
	NB-TR	0.34	10.6	B	0.51	12.3	B	0.37	10.9	B	0.55	12.8	B	0.35	10.7	B	0.53	12.5	B	0.40	11.1	B	0.61	13.4	B
8th Ave. (NB) @	EB-LT	0.78	30.2	C	0.97	48.7	D *	0.63	25.5	C	0.78	30.7	C	0.54	23.5	C	0.72	28.3	C	0.44	21.8	C	0.59	24.5	C
W. 57 th St. (E-W)	WB-TR	0.58	24.1	C	0.71	27.2	C	0.71	27.3	C	0.77	29.4	C	0.50	22.5	C	0.57	23.8	C	0.56	23.5	C	0.62	24.7	C
	WB-R	0.31	21.1	C	0.32	21.3	C	0.43	23.5	C	0.44	23.8	C	0.32	21.3	C	0.33	21.5	C	0.43	23.3	C	0.44	23.6	C
	NB-LTR	0.46	11.7	B				0.53	12.4	B				0.48	11.8	B				0.54	12.4	B			
	NB-L				0.31	14.4	B				0.31	14.5	B				0.37	15.2	B				0.34	14.7	B
	NB-TR				0.53	12.6	B				0.62	13.8	B				0.53	12.6	B				0.62	13.7	B

Notes:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, Dfl-Analysis considers a Defacto Left Lane on this approach
V/C Ratio - Volume to Capacity Ratio, sec. - Seconds
LOS - Level of Service
* - Denotes a congested movement (LOS of E or F, or V/C ratio greater than or equal to 0.9)
Analysis is based on the 2000 Highway Capacity Manual methodology (HCS+, version 5.4)
This table has been revised for the FSEIS

During the weekday PM peak hour, there are seventeen intersections that have movements that are or would be congested for both Existing and No Build conditions, one intersection which had congestion with Existing conditions and would not have congestion for No Build conditions, and four intersections that have movements that would be congested for No Build conditions (and not congested for Existing conditions). Newly congested intersections for the 2018 No Build Conditions include Twelfth Avenue and West 59th Street, where the northbound approach operates at LOS F, with 79.5 seconds of delay and a v/c ratio of 1.05. At Twelfth Avenue and West 57th Street, where the northbound through movement on the main line operates at LOS B, with 13.3 seconds of delay and a v/c ratio of 0.94, while the westbound right turn movement operates at LOS E with 58.1 seconds of delay and a v/c ratio of 0.77. At Columbus Avenue and West 66th Street, southbound through-right movement operates at LOS F, with 121.5 seconds of delay and a v/c ratio of 1.21. At Ninth Avenue and West 57th Street, the eastbound through-right movement operates at LOS F, with 150.3 seconds of delay and a v/c ratio of 1.22, and the westbound through movement operates at LOS E, with 62.6 seconds of delay and a v/c ratio of 1.01.

During the Saturday midday peak hour, there are 11 intersections that have movements that are or would be congested for both Existing and No Build conditions, and five intersections that would have movements that would be congested for No Build conditions (and not congested for Existing conditions). Newly congested intersections for the 2018 No Build Conditions include the intersection of Twelfth Avenue and West 59th Street that operates at LOS F and has a 79.5 second delay with a v/c ratio of 1.05. At the triangle intersection of Broadway, Columbus Avenue and West 65th Street, the southbound movement of Columbus Avenue operates at LOS D, with 41.3 seconds of delay and a v/c ratio of 0.90. At Columbus and West 60th Street, eastbound right turn movement operates at LOS D, with 54.8 seconds of delay and a v/c ratio of 0.88. At Ninth Avenue and West 57th Street, the westbound through movement operates at LOS E, with 59.8 seconds of delay and a v/c ratio of 1.00. At Central Park West and West 72nd Street, the northbound left-through movement operates at an acceptable LOS D, but with a v/c ratio of 0.92.

PARKING

In the 2018 No Build condition, 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. Those include one on the project site with a capacity of 537 spaces and one on the proposed 622 West 57th Street development site with a capacity of 1,000 spaces. This development site is proposing to add a 500 space parking garage as part of that project. No Build development in the study area will add 2,723 public parking spaces. Those include Riverside South buildings on Parcels I, J, and K north of West 61st Street, which will add up to 1,184 public and accessory parking spaces, while buildings on Parcels L and M on the project site would add an additional 301 public and accessory parking spaces. As shown in **Table 16-7**, there would be a net increase of 1,186 public parking spaces in the study area. With these changes in public parking supply, in the 2018 No Build condition the total number of public parking spaces in the study area will increase from 5,224 to 6,410.

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 not provide sufficient on-site parking 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 0.25 percent per year for the first five years (2008 to 2013) then 0.125 for the remaining five years (2013-2018) to existing demand levels. These increased demands for public parking in the 2018 No Build condition are reflected in **Table 16-7**.

Table 16-7

2018 No-Build Off-Street Parking Utilization

(Weekday AM, Midday, Pre Theater, Overnight and Saturday Midday)

2008 Existing Condition	
Existing Capacity (spaces)	**5,224**
AM Parking Demand (Spaces)	3,330
Available Spaces	1,894
AM Utilization	63.7%
Midday Parking Demand (Spaces)	3,847
Available Spaces	1,377
Midday Utilization	73.6%
Pre-Theater Parking Demand (Spaces)	3,119
Available Spaces	2,105
Pre-Theater Utilization	59.7%
Overnight Parking Demand	2,736
Available Spaces	2,488
Overnight Utilization	52.4%
Saturday Midday Parking Demand	2,642
Available Spaces	2,582
Saturday Midday Utilization	50.6%
2018 No-Build Condition	
New garages within 1/4 mile radius	
Riverside South Building I	253
Riverside South Building J	232
Riverside South Building K	699
Riverside South Building L	149
Riverside South Building M	152
Avalon Building-57th Street	500
Durst West 57th Street	399
243 West 60th Street	160
100 Riverside Boulevard	179
Closed garages within 1/4 mile radius	
M & P 59th Street LLC	537
GMC 57&11 Parking	1,000
No-Build Capacity (Spaces)	**6,410**
AM Parking Demand (Spaces)	
2008 Existing	3,330
Background Growth	63
No-Build Site's Demand	1,396
Total Demand	4,789
Available Spaces	1,621
Utilization	74.7%
Midday Parking Demand (Spaces)	
2008 Existing	3,847
Background Growth	73
No-Build Site's Residential Demand	1,283
Total Demand	5,202
Available Spaces	1,208
Utilization	81.2%
Pre Theater Parking Demand (Spaces)	
2008 Existing	3,119
Background Growth	59
No-Build Site's Residential Demand	1,559
Total Demand	4,737
Available Spaces	1,673
Utilization	73.9%
Overnight Parking Demand (Spaces)	
2008 Existing	2,736
Background Growth	52
No-Build Site's Residential Demand	1,624
Total Demand	4,411
Available Spaces	1,999
Utilization	68.8%
Saturday Midday Parking Demand (Spaces)	
2008 Existing	2,642
Background Growth	50
No-Build Site's Residential Demand	1,299
Total Demand	3,991
Available Spaces	2,419
Utilization	62.3%

No-Build Sites include **3,608** dwelling units within 1/4 mile radius of the project site.

This table has been revised for the FSEIS

As shown in **Table 16-7**, with the changes to public parking supply and demand, utilization of study area public parking is expected to increase in the 2018 No Build condition. Comparing No Build with Existing condition, parking utilization would be expected to increase in the analyzed peak periods, rising from 73.6 percent to 81.2 percent during the weekday midday, 52.4 percent to 68.8 percent during the overnight, and from 50.6 percent to 62.3 percent during the Saturday midday. As noted, parking demand would be expected to be highest during the weekday midday peak period, with approximately 1,208 available spaces, while there would be 1,999 and 2,419 available public parking spaces in the weekday overnight period and Saturday midday period, respectively. **Tables 16-8 and 16-9** show the No Build weekday and weekend 24 hour accumulation for both the 301 space No Build parking garage located in Buildings L and M and the existing 1,850-space outdoor lot that remains on site. As shown on the tables, the two on-site parking facilities in the No Build condition would be expected to be able to accommodate all of the demand from the two parking facilities that currently operate on site, as well as the new parking demand from the residential buildings that would be located on Parcels L and M.

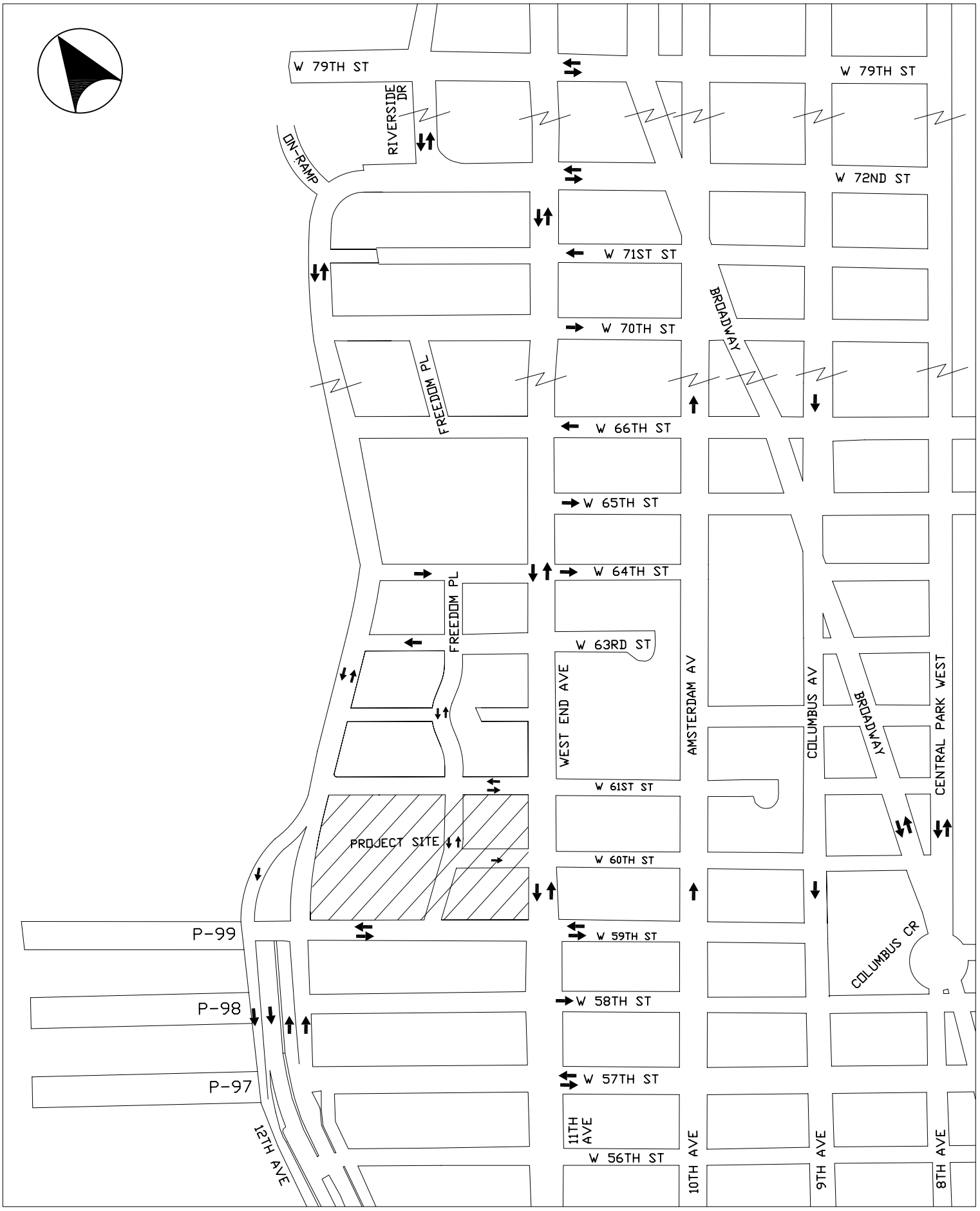
F. THE FUTURE WITH THE PROPOSED PROJECT

Based upon trip generation analyses which were performed to determine which of the RWCDS maximizes the potential for traffic and parking impacts, it was determined that the maximum retail/office scenarios maximized the potential for traffic impacts, and the maximum residential scenario maximized the potential for parking impacts. Specifically RWCDS 3b (see Chapter 1, "Project Description"), which assumes 2,100 residential units, 1,012 hotel rooms, 151,598 gross square feet (gsf) of community facility (a 1,332-seat public school), 325,022 gsf of retail, 52,209 gsf of office and 276,011 gsf of auto showroom, was used for the traffic analysis for the weekday midday, PM, and Saturday midday peak hours. RWCDS 3d, which is a slight variation on that program, was used for the traffic analysis for the weekday AM peak hour. In RWCDS 3d, the gross square feet of retail space is reduced to 165,938 gsf and the office space is increased to 211,293 gsf, with all other components of the project remaining constant. The parking analysis was based upon RWCDS 1, which assumes 3,000 residential units, 151,598 gsf of community facility (a 1,332-seat public school), 140,168 gsf of retail, 104,432 gsf of office and 276,011 gsf of auto showroom. A total of 1,800 parking spaces were used in the analyses. RWCDS 1 had the largest project parking demand which occurred during the overnight hours. It was assumed that 12 percent of the residential units would be affordable housing with the remaining being a mix of market rate condominiums and rental units. Also it was assumed that all No Build uses on the project site would be displaced.

As part of the Proposed Project, the extensions of Freedom Place South and West 60th Street into the site would be a Public Access Easements (PAEs). This designation would allow for these streets and the area below them to be privately owned and maintained, but look, function, and be regulated like mapped city streets. **Figure 16-12** shows the roadway plan for the project site.

ACCESS AND CIRCULATION

The following section describes the pedestrian and vehicular access points that are proposed as part of the site plan (see Figure 1-4 in Chapter 1, "Project Description"), and includes bike lanes and on-street parking where relevant. The actual parking regulations surrounding the site will be subject to DOT approval.



Riverside Center SEIS

Figure 16-12
Future Roadway Plan

Table16-8

NO BUILD WEEKDAY ON-SITE ACCUMULATION

Parcel L&M Parking Garage - Capacity 301 Public Parking Spaces										Existing Public Parking Lot				On-Site Parking Facilities			
No-Build Parcel L&M Parking Demand				Relocated Public Parking From The 537 Space Existing Garage (2)				Total				Parking Lot, 1-15 West End Ave. West End and W.60th Street Capacity = 1850				Total			
	#In	#Out	Accumulation		#In	#Out	Accumulation		#In	#Out	Accumulation		#In	#Out	Accumulation		#In	#Out	Accumulation
12-1 AM	0	0	260	12-1 AM	0	0	41	12-1 AM	0	0	301	12-1 AM	5	0	1406	12-1 AM	5	0	1707
1-2	0	0	260	1-2	0	0	41	1-2	0	0	301	1-2	0	0	1406	1-2	0	0	1707
2-3	0	0	260	2-3	0	0	41	2-3	0	0	301	2-3	0	0	1406	2-3	0	0	1707
3-4	0	0	260	3-4	0	0	41	3-4	0	0	301	3-4	4	0	1410	3-4	4	0	1711
4-5	0	1	259	4-5	0	0	41	4-5	0	1	300	4-5	15	0	1425	4-5	15	1	1725
5-6	1	6	254	5-6	6	0	47	5-6	7	6	301	5-6	27	0	1452	5-6	34	6	1753
6-7	3	12	245	6-7	8	0	55	6-7	11	12	300	6-7	35	0	1487	6-7	46	12	1787
7-8	4	19	230	7-8	13	5	63	7-8	17	24	293	7-8 AM	36	22	1501	7-8	53	46	1794
8-9	14	31	213	8-9	35	12	86	8-9	49	43	299	8-9	32	20	1513	8-9	81	63	1812
9-10	6	13	206	9-10	21	15	92	9-10	27	28	298	9-10	34	10	1537	9-10	61	38	1835
10-11	6	14	198	10-11	25	18	99	10-11	31	32	297	10-11	31	26	1542	10-11	62	58	1839
11-12	6	10	194	11-12	19	22	96	11-12	25	32	290	11-12	27	28	1541	11-12	52	60	1831
12-1 PM	9	9	194	12-1 PM	6	14	88	12-1 PM	15	23	282	12-1 PM	33	19	1555	12-1 PM	48	42	1837
1-2	8	8	194	1-2	5	8	85	1-2	13	16	279	1-2	21	16	1560	1-2	34	32	1839
2-3	8	9	193	2-3	12	18	79	2-3	20	27	272	2-3	28	35	1553	2-3	48	62	1825
3-4	12	9	196	3-4	21	35	65	3-4	33	44	261	3-4	26	40	1539	3-4	59	84	1800
4-5	16	13	199	4-5	10	26	49	4-5	26	39	248	4-5	25	23	1541	4-5	51	62	1789
5-6	33	23	209	5-6	22	35	36	5-6	55	58	245	5-6	22	49	1514	5-6	77	107	1759
6-7	24	12	221	6-7	10	24	22	6-7	34	36	243	6-7	20	57	1477	6-7	54	93	1720
7-8	19	11	229	7-8	9	16	15	7-8	28	27	244	7-8	19	54	1442	7-8	47	81	1686
8-9	14	7	236	8-9	14	7	22	8-9	28	14	258	8-9	10	37	1415	8-9	38	51	1673
9-10	13	2	247	9-10	11	3	30	9-10	24	5	277	9-10	8	19	1404	9-10	32	24	1681
10-11	13	2	258	10-11	9	1	38	10-11	22	3	296	10-11	7	10	1401	10-11	29	13	1697
11-12	3	1	260	11-12	3	0	41	11-12	6	1	301	11-12	5	5	1401	11-12	11	6	1702
	212	212			259	259			471	471			470	470					

Notes:

(1) Source for residential temporal distribution: 300 Central Park West Garage Survey conducted in July of 2005.

(2) Source from PHA Survey in 2008 of existing on-site public parking facility.

Table 16-9

NO BUILD SATURDAY ON-SITE ACCUMULATION

	Parcel L&M Parking Garage - Capacity 301 Public Parking Spaces									Existing Parking Lot			On-Site Parking Facilities		
	No-Build Parcel L&M Parking Demand			Relocated Public Parking From The 537 Space Existing Garage (2)			Total			Parking Lot 1-15 West End Ave West End and W.60th Street Capacity = 1850			Total		
	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation	In	Out	Accumulation
12-1 AM	1	1	260	0	0	41	1	1	301	0	0	966	1	1	1007
1-2	1	1	260	0	0	41	1	1	301	0	0	966	1	1	1007
2-3	1	1	260	0	0	41	1	1	301	0	0	966	1	1	1007
3-4	1	1	260	0	0	41	1	1	301	0	0	966	1	1	1007
4-5	1	1	260	0	0	41	1	1	301	0	0	966	1	1	1007
5-6	1	4	257	0	0	41	1	4	298	8	4	970	9	8	1008
6-7	3	12	248	0	0	41	3	12	289	18	7	981	21	19	1010
7-8	4	18	234	0	0	41	4	18	275	25	10	996	29	28	1011
8-9	4	24	214	0	0	41	4	24	255	26	16	1006	30	40	1001
9-10	6	16	204	1	1	41	7	17	245	36	38	1004	43	55	989
10-11	6	16	194	4	4	41	10	20	235	40	44	1000	50	64	975
11-12	6	14	186	4	2	43	10	16	229	33	45	988	43	61	957
12-1 PM	8	24	170	3	5	41	11	29	211	26	60	954	37	89	905
1-2	16	15	171	10	9	42	26	24	213	37	37	954	63	61	907
2-3	17	17	171	2	3	41	19	20	212	30	25	959	49	45	911
3-4	15	5	181	2	1	42	17	6	223	26	44	941	43	50	904
4-5	14	11	184	1	3	40	15	14	224	31	41	931	46	55	895
5-6	29	4	209	2	2	40	31	6	249	24	25	930	55	31	919
6-7	20	4	225	2	1	41	22	5	266	23	16	937	45	21	943
7-8	20	3	242	0	0	41	20	3	283	16	7	946	36	10	969
8-9	15	4	253	0	0	41	15	4	294	13	6	953	28	10	987
9-10	5	1	257	0	0	41	5	1	298	10	1	962	15	2	1000
10-11	3	1	259	0	0	41	3	1	300	5	2	965	8	3	1005
11-12	2	1	260	0	0	41	2	1	301	2	1	966	4	2	1007
	199	199		31	31		230	230		429	429		659	659	

Notes :

(1) Source for Saturday residential temporal distribution : Brooklyn Bridge Parking EIS.

(2) Source from PHA survey in 2008 of existing public parking facilities.

WEST END AVENUE

The avenue frontage would include pedestrian access for the local retail for both buildings 2 and 5. No vehicular curb cuts would be provided along the Avenue. On-street parking would likely be available along this portion of West End Avenue.

WEST 59TH STREET

The southern frontage of the site would include stair access to the central plaza and residential buildings on the southwestern corner of the site (Buildings 3 and 4). There would be three 22-foot-wide access ramps with 25-foot-wide curb cuts to underground garages on this street. Two of the entrances, the first located under Building 3 on the west side of West 59th Street and the other under Building 5 to the east of Freedom Place South, would access the public parking garage. The third vehicle entrance under Building 3 is for the auto dealership. Two loading dock elevators with a single 30-foot-wide curb-cut under Building 5 would also be accessed from this street. The north side of the street would include loading zones during the weekday midday period, as most of the project's services would be accessed from here. In addition, the street would be widened from 34' to 40' between West End Avenue and Riverside Boulevard. In addition, the parking regulations along the south curb would be changed from "Bus Layover Area No-Standing Anytime" to "No Standing Anytime" for 100' west of West End Avenue to allow for a new right turning lane at the eastbound approach of West 59th Street.

WEST 61ST STREET

The northern frontage of the site would include pedestrian access for the residential portion of Building 1 on the northwestern section of the site as well as the school on the northeastern corner of the site in Building 2. In addition, as planned for and approved as part of the 1992 approvals for Riverside South, traffic flow on West 61st Street would be converted to westbound between Amsterdam Avenue and West End Avenue to integrate with the new West 61st Street being developed north of the project site in the No Build condition. Building 1 would also include a loading dock that has access from West 61st Street with the potential for a second loading dock at this location as well. On-street parking would be available west of Freedom Place.

WEST 60TH STREET

This street would extend into the site approximately 250 feet as a 64-foot-wide eastbound (PAE). It would have pedestrian entrances to retail in Buildings 2 and 5. It would also have the main pedestrian entrance to the cinema in Building 5 on the south side of the street. No vehicular curb cuts would be provided on the 34-foot-wide travel way of West 60th Street. A bike lane would be located on the south side of the street, while the north side of the street would include on-street parking.

FREEDOM PLACE SOUTH

This street would also extend into the site as a two-way PAE with a width of 40' plus two 15' wide sidewalks on both sides, connecting West 61st and West 59th Streets. On its eastside, it would have the main pedestrian entrance to the hotel and residential lobby for Building 5. A private driveway with sidewalks, accessed from a 25-foot-wide curb cut, would extend westward from Freedom Place South and would provide the main vehicular and pedestrian access points for Building 4 (in the southwestern corner of the site). The driveway would also provide an access point to an underground garage via a 22-foot-wide two-way down ramp in front of

Building 4. North of West 60th Street, Freedom Place South would also contain two other vehicular access points to underground garages under Building 1 on the west side of the street and Building 2 on the east side of the street, both by means of a 22-foot-wide ramp to the underground parking levels. 25-foot-wide curb cuts would be provided to access both of the garage ramps. A bike lane would be located on both sides of the street, but there would be on-street parking only on the eastside.

RIVERSIDE BOULEVARD

The western frontage of the site would include pedestrian access into the site and would be the main access point for pedestrians going to and from Riverside Park South at the entrance at West 61st Street. The pedestrian crossing would be controlled by an all-way stop at West 61st Street. Adjacent to the project site, Riverside Boulevard would split into two roadways. The southbound portion would go under the highway for access to southbound Route 9A, while the existing northbound Twelfth Avenue service road would continue north from West 59th Street as Riverside Boulevard. No vehicular curb cuts would be provided on Riverside Boulevard.

TRANSPORTATION PLANNING ASSUMPTION AND DEMAND FORECASTS

Table 16-10 shows the RWCDS 3b transportation planning assumptions used in the travel demand forecasts for the weekday midday, weekday PM, and Saturday midday peak hours. The table provides the daily generation rates, mode choice, as well as hourly and directional patterns. These transportation planning assumptions were based on standard CEQR criteria, standard professional references, Census data, and recent surveys and studies that have been used in previous EASs and EISs for projects with similar uses and in the nearby neighborhoods of Clinton and West Midtown. **Table 16-11** provides the overall resulting net incremental trip generation for the RWCDS 3b program for the weekday midday, weekday PM, and Saturday midday peak hours for person trips for each mode of transportation and for vehicles trips for autos, taxis and trucks. This is the net incremental transportation demand over the No Build condition and is discussed in more detail below.

Table 16-12 shows the RWCDS 3d transportation planning assumptions used in the travel demand forecasts for the weekday AM and **Table 16-13** provides the overall resulting net incremental trip generation for the RWCDS 3d program for the weekday AM.

VEHICULAR TRAFFIC

As indicated on **Table 16-11** (RWCDS 3b) and **Table 16-13** (RWCDS 3d), the travel demand forecast indicates that during a typical weekday and Saturday the Proposed Project's RWCDS development program would generate a project increment traffic of approximately 657 (with RWCDS 3d) new vehicle trips per hour (vph) during the weekday AM peak hour, 727 new vph (with RWCDS 3b) during the weekday midday peak hour, 811 new vph (with RWCDS 3b) during the PM peak hour, and 899 new vph (with RWCDS 3b) during the Saturday midday peak hour. As also shown in **Table 16-11** and **Table 16-13**, the Proposed Project would generate 937 (with RWCDS 3d) and 1,299 (with RWCDS 3b) subway trips during the AM and PM peak hours respectively, and would generate 353 (with RWCDS 3d) and 656 (with RWCDS 3b) bus trips during the AM and PM peak hours, respectively (see Chapter 17, "Transit and Pedestrians," for detailed analysis).

Table 16-10

Riverside Center Transportation Planning Assumptions For RWCDS 3b - (Max Retail/Office)
Analyzed for Traffic during the Weekday MD, PM and Sat MD Peak Hours

Land Use:	**Residential***		**Retail**		**Auto Service Center**		**Hotel**			**School**		**Office**	
Size/Units:	1,523 DU (net)		325,022 GSF		276,011 GSF		1,012 rooms			151,598 GSF		31,839 GSF	
										1,332 Students	133 Staff		
Trip Generation Rate:	(1)		(6)		(7)		(8,10)			2	2	(1)	
Weekday	8.075		94.64		2.63		9.42			-	-	18.00	
Saturday	7.901		125.76		1.66		9.42					0.9	
	per du		per 1,000 sf		per 1,000 sf		per room					per 1,000 sf	
Temporal Distribution:	(1)		(6)		(7)		(9,10)			(10)	(10)	(1)	
AM	9.1%		2.2%		12.0%		7.5%			50.0%	5.0%	11.8%	
MD	4.7%		8.7%		12.0%		14.4%			0.0%	0.0%	15.0%	
PM	10.7%		8.9%		9.0%		12.8%			2.5%	2.5%	13.7%	
Sat MD	7.0%		11.5%		14.0%		7.5%			0.0%	0.0%	15.0%	
	(2)		(5)		(7)		(9,10)	(10)		(10)	(10)	(12)	
Modal Splits:	AM/MD/PM	Sat MD	AM/MD/PM	SAT MD	AM/MD/PM		AM/PM	MD		AM/PM		AM/PM	SAT/MD
Auto	10.8%	10.8%	10.0%	12.0%	100.0%		9.0%	8.0%	Drop-	6.2%	9.9%	22.1%	2.0%
Taxi	4.1%	4.1%	15.0%	15.0%			18.0%	15.0%	Off	1.7%	2.4%	2.2%	3.0%
Subway	41.8%	41.8%	20.0%	18.0%			24.0%	13.0%		0.0%	15.8%	56.6%	6.0%
City Bus/School Bus	14.7%	14.7%	20.0%	20.0%			3.0%	3.0%		3.9%	43.7%	10.6%	6.0%
Walk/Other	28.7%	28.7%	35.0%	35.0%			46.0%	61.0%		88.2%	28.2%	8.5%	83.0%
	100.1%	100.1%	100.0%	100.0%	100.0%		100.0%	100.0%		100.0%	100.0%	100.0%	100.0%
	(1)		(5)		(7)		(9,10)			(10)		(1)	
In/Out Splits:	In	Out	In	Out	In	Out	In	Out		In	Out	In	Out
AM	16.0%	84.0%	61.0%	39.0%	67.0%	33.0%	39.0%	61.0%		100.0%	0.0%	95.0%	5.0%
MD	50.0%	50.0%	55.0%	45.0%	50.0%	50.0%	54.0%	46.0%		50.0%	50.0%	48.0%	52.0%
PM	67.0%	33.0%	47.0%	53.0%	15.0%	85.0%	65.0%	35.0%		0.0%	100.0%	15.0%	85.0%
Sat MD	53.0%	47.0%	55.0%	45.0%	51.0%	49.0%	56.0%	44.0%		0.0%	0.0%	60.0%	40.0%
Vehicle Occupancy:	(2)		(5)		(3)		(10)			(10)		(12)	
Auto	1.26		2.00	2.00	1.00		1.9			1.7		1.17	
Taxi /School Bus	1.40		2.00	2.00	1.00		1.9		Bus	19.0		1.40	
Truck Trip Generation:	(4)		(4)		(4)		(4)			(11)		(4)	
	0.03		0.35		0.15		0.06			0.13		0.15	
	per du		per 1,000 sf		per 1000 sf		per 1,000 sf			Bus per 1,000 sf		per 1,000 sf	
	(4)		(4)		(4)		(4)			(11)		(4)	
AM	12.2%		7.7%		9.6%		12.2%			41.4%		9.6%	
MD	8.7%		11.0%		11.0%		8.7%					11.0%	
PM	1.0%		1.0%		1.0%		0.0%					1.0%	
Sat MD	0.0%		0.0%		0.0%		0.0%					0.5%	
	In	Out	In	Out	In	Out	In	Out		In	Out	In	Out
AM/MD/PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%

Notes :

(1) Pushkarev & Zupan, "Urban Space for Pedestrians," 1975. Saturday rate is based on ITE Trip Generation Land Use Code (220) Apartment rate proportion between weekday and Saturday.
(2) Based on 2000 Census journey-to-work data for Manhattan census tracts 147 and 151.
(3) PHA assumptions based on 770 Eleventh Avenue Mixed-use Development Rezoning EIS
(4) Federal Highway Administration, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981.
(5) West 57th Street Rezoning FEIS, March 2001
(6) ITE Trip Generation Land Use code (820, Shopping Center, which includes a cinema). Persons' trip rate obtained by ITE rate * veh. occupancy/auto share
(7) West 57th Street Rezoning FEIS, Saturday rate adjusted based on ratio between weekday
(8) Hotel Saturday trip generation rate assumed same as weekday as per NYCDOT 3-14-08, Expanded Moynihan/Penn Station Reevelopment Project
(9) Farley/Moynihan West FEIS, 2006, Table 13-1
(10) No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FGEIS, 2004.
(11) Convert the total number of school bus in per 1000 gsf
(12) Based on 2000 Census reverse journey-to-work data for Manhattan census tracts 147 and 151.
* Proposed project residential and office components reduced based on projected No-Build Sites L and M, which includes 577 residential units and 20,370sf of office space.

Table 16-11

Riverside Center Traffic Demand Forecast Summary for RWCDS 3b (Max Retail/Office)

Analyzed for Traffic during the Weekday MD, PM and Sat MD Peak Hours

Land Use:		Residential		*Retail		Auto Service Center		Hotel		School		Office		Total	
Size/Units:		1,523	DU	325,022	GSF	276,011	GSF	1,012	rooms	151,598	GSF	31,839	GSF		
Peak Hour Trips:										Students	Staff				
	AM	1,119		508		87		715		1,332	13	68			
	MD	578		2,007		87		1,373		0	0	86			
	PM	1,316		2,053		65		1,220		67	7	79			
	Sat MD	842		3,526		64		715		0	0	4			
Person Trips:															
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	**Auto**	19	102	31	20	58	29	25	39	84	0	14	1	232	190
	Taxi	7	39	46	30	0	0	50	79	23	0	1	0	128	147
	Subway	75	393	62	40	0	0	67	105	2	0	36	2	242	539
	Bus	26	138	62	40	0	0	8	13	58	0	7	0	161	191
	Walk/Other	51	270	108	69	0	0	128	201	1,179	0	5	0	1472	540
	Total	179	941	310	198	58	29	279	436	1,346	0	64	3	2236	1607
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
MD	**Auto**	31	31	110	90	44	44	59	51	0	0	1	1	245	217
	Taxi	12	12	166	135	0	0	111	95	0	0	1	1	290	243
	Subway	121	121	221	181	0	0	96	82	0	0	2	3	441	386
	Bus	42	42	221	181	0	0	22	19	0	0	2	3	288	245
	Walk/Other	83	83	386	316	0	0	452	385	0	0	34	37	956	821
	Total	289	289	1,104	903	44	44	741	632	0	0	41	45	2220	1912
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PM	**Auto**	95	47	97	109	10	56	71	38	0	5	3	15	276	269
	Taxi	36	18	145	163	0	0	143	77	0	1	0	1	324	260
	Subway	369	182	193	218	0	0	190	102	0	1	7	38	759	540
	Bus	130	64	193	218	0	0	24	13	0	6	1	7	348	308
	Walk/Other	253	125	338	381	0	0	365	196	0	62	1	6	957	770
	Total	883	435	966	1,089	10	56	793	427	0	75	12	67	2663	2147
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
SAT MD	**Auto**	48	43	233	190	33	31	36	28	0	0	1	0	350	293
	Taxi	18	16	291	238	0	0	72	57	0	0	0	0	381	311
	Subway	187	165	349	286	0	0	96	76	0	0	1	1	633	528
	Bus	66	58	388	317	0	0	12	9	0	0	0	0	466	385
	Walk/Other	128	114	679	555	0	0	184	145	0	0	0	0	991	814
	Total	447	396	1,939	1,586	33	31	400	315	0	0	3	2	2821	2331
Vehicle Trips :															
		In	Out	In	Out	In	Out	In	Out	In**	Out	In	Out	In	Out
AM	**Auto (Total)**	15	81	16	10	58	29	13	21	48	46	12	1	162	188
	Taxi	5	28	23	15	0	0	26	41	13	0	1	0	68	84
	Taxi (Balanced)	27	27	25	25	0	0	52	52	13	13	1	1	118	118
	Truck	3	3	4	4	2	2	4	4	4	4	0	0	17	17
	Total	45	111	45	39	60	31	69	77	65	63	13	2	297	323
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
MD	**Auto (Total)**	25	25	55	45	44	44	31	27	0	0	1	1	156	142
	Taxi	8	8	83	68	0	0	59	50	0	0	1	1	151	127
	Taxi (Balanced)	12	12	109	109	0	0	80	80	0	0	2	2	203	203
	Truck	2	2	6	6	2	2	3	3	0	0	0	0	13	13
	Total	39	39	170	160	46	46	114	110	0	0	3	3	372	358
		In	Out	In	Out	In	Out	In	Out	In**	Out	In	Out	In	Out
PM	**Auto (Total)**	76	37	48	54	10	56	38	20	3	4	2	13	177	184
	Taxi	26	13	73	82	0	0	75	40	0	1	0	1	174	137
	Taxi (Balanced)	26	26	118	118	0	0	78	78	1	1	1	1	224	224
	Truck	0	0	1	1	0	0	0	0	0	0	0	0	1	1
	Total	102	63	167	173	10	56	116	98	4	5	3	14	402	409
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Sat MD	**Auto (Total)**	38	34	116	95	33	31	19	15	0	0	0	0	206	175
	Taxi	13	12	145	119	0	0	38	30	0	0	0	0	196	161
	Taxi (Balanced)	19	19	191	191	0	0	49	49	0	0	0	0	259	259
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	57	53	307	286	33	31	68	64	0	0	0	0	465	434

*** Retail includes 25% linked trips that are not new to the area.**

**** Total AM Autos = 46 students being dropped off & 2 staff entering parking. Total PM Autos = 3 students being picked up & 1 staff leaving parking**

Table 16-12
Riverside Center Transportation Planning Assumptions For RWCDS 3d (Max Retail/Office)
Analyzed for Traffic during the Weekday AM Peak Hour

Land Use:	**Residential***		**Retail**		**Auto Service Center**		**Hotel**			**School**		**Office**	
Size/Units:	1,523 DU (net)		165,938 GSF		276,011 GSF		1,012 rooms			151,598 GSF 1332 Students	133 Staff	190,923 GSF	
Trip Generation Rate:	(1)		(6)		(7)		(8,10)			2	2	(1)	
Weekday	8.075 per du		119.74 per 1,000 sf		2.63 per 1,000 sf		9.42 per room			-	-	18.00 0.9 per 1,000 sf	
Saturday	7.901		161.28		1.66		9.42						
Temporal Distribution:	(1)		(6)		(7)		(9,10)			(10)	(10)	(1)	
AM	9.1%		2.2%		12.0%		7.5%			50.0%	5.0%	11.8%	
MD	4.7%		8.7%		12.0%		14.4%			0.0%	0.0%	15.0%	
PM	10.7%		8.9%		9.0%		12.8%			2.5%	2.5%	13.7%	
Sat MD	7.0%		11.5%		14.0%		7.5%			0.0%	0.0%	15.0%	
	(2)		(5)		(7)		(9,10)	(10)		(10)	(10)	(12)	
Modal Splits:	AM/MD/PM	Sat MD	AM/MD/PM	SAT MD	AM/MD/PM		AM/PM	MD		AM/PM		AM/PM	SAT/MD
Auto	10.8%	10.8%	10.0%	12.0%	100.0%		9.0%	8.0%	Drop-	6.2%	9.9%	22.1%	2.0%
Taxi	4.1%	4.1%	15.0%	15.0%			18.0%	15.0%	Off	1.7%	2.4%	2.2%	3.0%
Subway	41.8%	41.8%	20.0%	18.0%			24.0%	13.0%		0.0%	15.8%	56.6%	6.0%
City Bus/School Bus	14.7%	14.7%	20.0%	20.0%			3.0%	3.0%		3.9%	43.7%	10.6%	6.0%
Walk/Other	28.7%	28.7%	35.0%	35.0%			46.0%	61.0%		88.2%	28.2%	8.5%	83.0%
	100.1%	100.1%	100.0%	100.0%	100.0%		100.0%	100.0%		100.0%	100.0%	100.0%	100.0%
	(1)		(5)		(7)		(9,10)			(10)		(1)	
In/Out Splits:	In	Out	In	Out	In	Out	In	Out		In	Out	In	Out
AM	16.0%	84.0%	61.0%	39.0%	67.0%	33.0%	39.0%	61.0%		100.0%	0.0%	95.0%	5.0%
MD	50.0%	50.0%	55.0%	45.0%	50.0%	50.0%	54.0%	46.0%		50.0%	50.0%	48.0%	52.0%
PM	67.0%	33.0%	47.0%	53.0%	15.0%	85.0%	65.0%	35.0%		0.0%	100.0%	15.0%	85.0%
Sat MD	53.0%	47.0%	55.0%	45.0%	51.0%	49.0%	56.0%	44.0%		0.0%	0.0%	60.0%	40.0%
Vehicle Occupancy:	(2)		(5)		(3)		(10)			(10)		(12)	
Auto	1.26		2.00	2.00	1.00		1.9			1.7		1.17	
Taxi /School Bus	1.40		2.00	2.00	1.00		1.9		Bus	19.0		1.40	
Truck Trip Generation:	(4)		(4)		(4)		(4)			(11)		(4)	
	0.03 per du		0.35 per 1,000 sf		0.15 per 1000 sf		0.06 per 1,000 sf			0.13 Bus per 1,000 sf		0.15 per 1,000 sf	
	(4)		(4)		(4)		(4)			(11)		(4)	
AM	12.2%		7.7%		9.6%		12.2%			41.4%		9.6%	
MD	8.7%		11.0%		11.0%		8.7%					11.0%	
PM	1.0%		1.0%		1.0%		0.0%					1.0%	
Sat MD	0.0%		0.0%		0.0%		0.0%					0.5%	
	In	Out	In	Out	In	Out	In	Out		In	Out	In	Out
AM/MD/PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%

Notes :

(1) Pushkarev & Zupan, "Urban Space for Pedestrians," 1975. Saturday rate is based on ITE Trip Generation Land Use Code (220) Apartment rate proportion between weekday and Saturday.
(2) Based on 2000 Census journey-to-work data for Manhattan census tracts 147 and 151.
(3) PHA assumptions based on 770 Eleventh Avenue Mixed-use Development Rezoning EIS
(4) Federal Highway Administration, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981.
(5) West 57th Street Rezoning FEIS, March 2001
(6) ITE Trip Generation Land Use code (820, Shopping Center, which includes a cinema). Persons' trip rate obtained by ITE rate * veh. occupancy/auto share
(7) West 57th Street Rezoning FEIS, Saturday rate adjusted based on ratio between weekday
(8) Hotel Saturday trip generation rate assumed same as weekday as per NYCDOT 3-14-08, Expanded Moynihan/Penn Station Reevelopment Project
(9) Farley/Moynihan West FEIS, 2006, Table 13-1
(10) No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FGEIS, 2004.
(11) Convert the total number of school bus in per 1000 gsf
(12) Based on 2000 Census reverse journey-to-work data for Manhattan census tracts 147 and 151.
* Proposed project residential and office components reduced based on projected No-Build Sites L and M, which includes 577 residential units and 20,370sf of office space.

Table 16-13
Riverside Center Traffic Demand Forecast Summary for RWCDS 3d (Max Retail/Office)
Analyzed for Traffic during the Weekday AM Peak Hour

Land Use:		Residential		*Retail		Auto Service Center		Hotel		School		Office		Total	
Size/Units:		1,523	DU	165,938	GSF	276,011	GSF	1,012	rooms	151,598	GSF	190,923	GSF		
Peak Hour Trips:															
										Students	Staff				
	AM	1,119		328		87		715		1,332	13	406			
	MD	578		1,297		87		1,373		0	0	515			
	PM	1,316		1,326		65		1,220		67	7	471			
	Sat MD	842		2,308		64		715		0	0	26			
Person Trips:															
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	**Auto**	19	102	20	13	58	29	25	39	84	0	85	4	292	187
	Taxi	7	39	30	19	0	0	50	79	23	0	8	0	119	137
	Subway	75	393	40	26	0	0	67	105	2	0	218	11	402	535
	Bus	26	138	40	26	0	0	8	13	58	0	41	2	174	179
	Walk/Other	51	270	70	45	0	0	128	201	1,179	0	33	2	1461	517
	Total	179	941	200	128	58	29	279	436	1,346	0	385	20	2448	1554
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
MD	**Auto**	31	31	71	58	44	44	59	51	0	0	5	5	210	189
	Taxi	12	12	107	88	0	0	111	95	0	0	7	8	237	203
	Subway	121	121	143	117	0	0	96	82	0	0	15	16	375	336
	Bus	42	42	143	117	0	0	22	19	0	0	15	16	223	195
	Walk/Other	83	83	250	204	0	0	452	385	0	0	205	222	990	894
	Total	289	289	714	584	44	44	741	632	0	0	247	268	2035	1817
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PM	**Auto**	95	47	62	70	10	56	71	38	0	5	16	88	254	305
	Taxi	36	18	94	105	0	0	143	77	0	1	2	9	274	210
	Subway	369	182	125	141	0	0	190	102	0	1	40	227	724	652
	Bus	130	64	125	141	0	0	24	13	0	6	7	42	286	266
	Walk/Other	253	125	218	246	0	0	365	196	0	62	6	34	842	663
	Total	883	435	624	704	10	56	793	427	0	75	71	400	2380	2096
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
SAT MD	**Auto**	48	43	152	125	33	31	36	28	0	0	3	2	273	229
	Taxi	18	16	190	156	0	0	72	57	0	0	0	0	281	229
	Subway	187	165	229	187	0	0	96	76	0	0	9	6	520	434
	Bus	66	58	254	208	0	0	12	9	0	0	2	1	333	276
	Walk/Other	128	114	444	364	0	0	184	145	0	0	1	1	758	623
	Total	447	396	1,270	1,039	33	31	400	315	0	0	15	10	2165	1791
Vehicle Trips :															
		In	Out	In	Out	In	Out	In	Out	In**	Out	In	Out	In	Out
AM	**Auto (Total)**	15	81	10	7	58	29	13	21	48	46	73	4	217	188
	Taxi	5	28	15	10	0	0	26	41	13	0	6	0	65	79
	Taxi (Balanced)	23	23	16	16	0	0	54	54	13	13	6	6	112	112
	Truck	3	3	2	2	2	2	4	4	4	4	1	1	16	16
	Total	41	107	28	25	60	31	71	79	65	63	80	11	345	316
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
MD	**Auto (Total)**	25	25	36	29	44	44	31	27	0	0	4	5	140	130
	Taxi	8	8	53	44	0	0	59	50	0	0	5	6	125	108
	Taxi (Balanced)	12	12	70	70	0	0	80	80	0	0	9	9	171	171
	Truck	2	2	3	3	2	2	3	3	0	0	2	2	12	12
	Total	39	39	109	102	46	46	114	110	0	0	15	16	323	313
		In	Out	In	Out	In	Out	In	Out	In**	Out	In	Out	In	Out
PM	**Auto (Total)**	76	37	31	35	10	56	38	20	3	4	13	76	171	228
	Taxi	26	13	47	53	0	0	75	40	0	1	1	6	149	113
	Taxi (Balanced)	26	26	76	76	0	0	78	78	1	1	7	7	188	188
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	102	63	107	111	10	56	116	98	4	5	20	83	359	416
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Sat MD	**Auto (Total)**	38	34	76	62	33	31	19	15	0	0	3	2	169	144
	Taxi	13	12	95	78	0	0	38	30	0	0	0	0	146	120
	Taxi (Balanced)	19	19	125	125	0	0	49	49	0	0	0	0	193	193
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	57	53	201	187	33	31	68	64	0	0	3	2	362	337

*** Retail includes 25% linked trips that are not new to the area.**
**** Total AM Autos = 46 students being dropped off & 2 staff entering parking. Total PM Autos = 3 students being picked up & 1 staff leaving parking**

VEHICLE TRIP ASSIGNMENT AND CAPACITY ANALYSIS

The traffic assignments were prepared separately for the residential and non-residential components of the proposed development. The assignment for the residential components of the Proposed Project was based on U.S. Census patterns for journey to work and the original 1992 FEIS assumptions, while the assignments for the non-residential components of the Proposed Project were based on population in the market area, as well as the structure of the roadway systems accessing the site.

Figure 16-13 provides the peak hour assignment percentages of project traffic in the study area periphery. From these study area portals, project-generated traffic demand was assigned via the most direct routes to/from the project site. Auto trips were then assigned to the project site garage entrances along West 59th Street or Freedom Place South. Taxi trips were assigned to one of the site's numerous block faces, while truck trips were assigned via local truck routes to the loading facilities on West 59th Street and West 61st Street. **Figures 16-14 through 16-17** shows the incremental peak hour traffic assignment to the Build study area roadway network, while **Figures 16-18 through 16-21** show the Build condition volumes during the weekday AM, midday, PM, and Saturday midday peak hours, respectively.

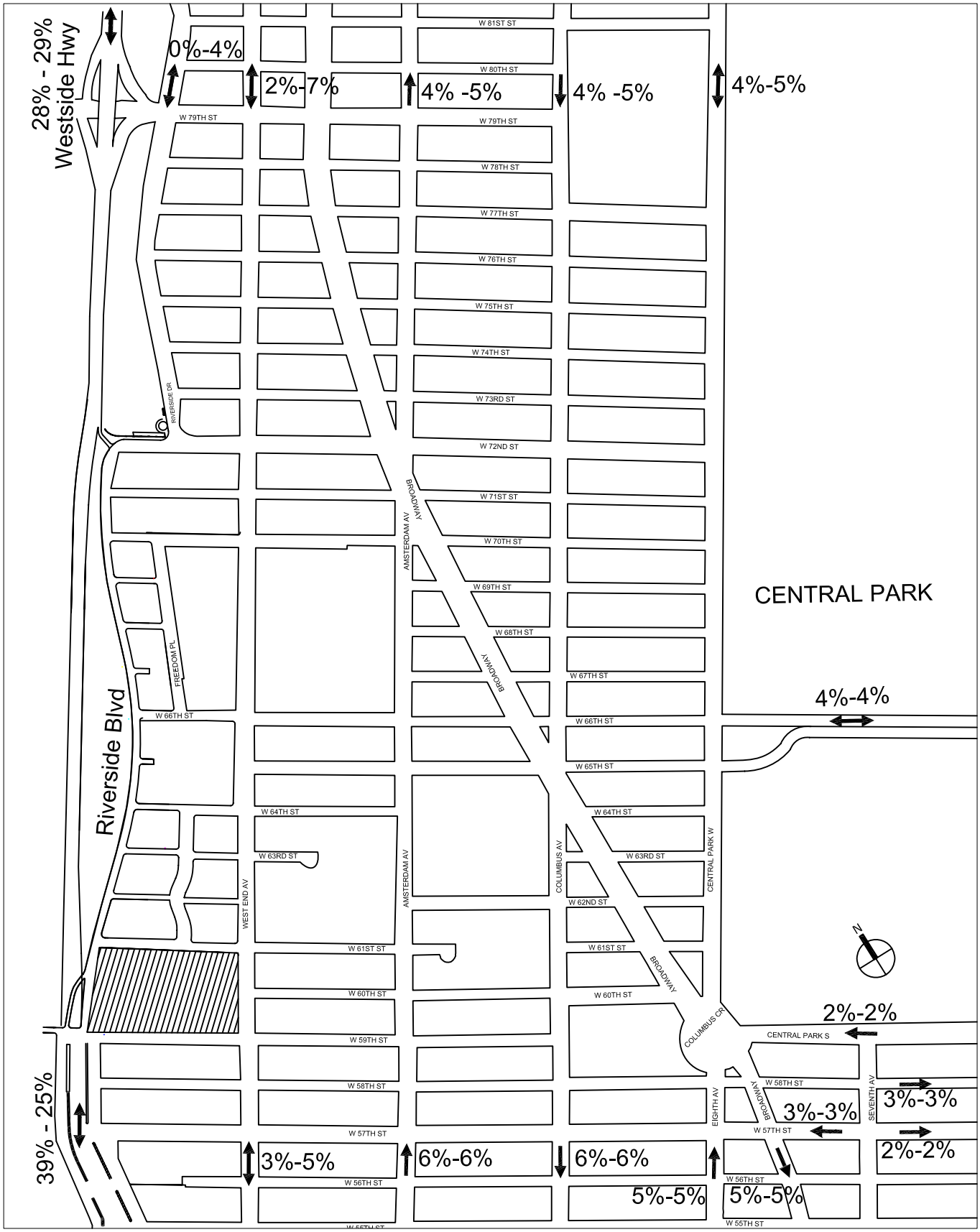
Capacity and level of service analyses were performed for the study area intersections using the future's Build peak hour traffic volumes. Based on the thresholds established for signalized intersections in the *CEQR Technical Manual,* if a No Build LOS of A, B, or C deteriorates to an unacceptable LOS D, E, or F under the Build condition, then a significant impact is deemed to have occurred. The *CEQR Technical Manual* further states that a No Build LOS A, B or C that operates at LOS D under the Build condition, mitigation to (mid-LOS D) or less, is not considered an impact for the purposes of this analysis. For a No Build LOS D, and 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 usually considered significant.

Table 16-14 compares the 2018 No Build and Build operating conditions for the 55 analysis intersections, however the two intersections along Freedom Place at W. 59th Street and W. 61st Street were only built as part of the build project. **Table 16-14** identifies, with an asterisk and shading (*) the intersections experiencing significant impacts in the four analyzed peak hours, based on the above criteria. As shown in the table, during one or more time periods, significant adverse traffic impacts would occur at 24 intersections, including 17, 13, 12, and 13 intersections with one or more impacted movements during the weekday AM, weekday midday, weekday PM, and Saturday midday peak hours, respectively. **Table 16-15** provides a summary of these impacted locations. The following provides a discussion of the impacted locations in the study area.

TWELFTH AVENUE/ROUTE 9A CORRIDOR

There are eight intersections in this corridor which would have significantly impacted movements.

The northbound movement at West 59th Street would experience significant impacts in the weekday AM, midday, PM and Saturday midday peak hours. During the weekday AM peak hour, it would deteriorate from 144.7 seconds (LOS F) to 320.7 seconds (LOS F) of delay, during the midday peak hour, it would deteriorate from 29.2 seconds (LOS D) to 109.3 seconds (LOS F), during the PM peak hour, it would deteriorate from 79.5 seconds (LOS F) to 262.0 seconds (LOS F), and during the Saturday midday peak hour, it would deteriorate from 79.5 seconds (LOS C) to 96.8 seconds (LOS F).



Project Site XX% - XX%: Residential - Non-Residential Assignment

Trip Assignment Distribution

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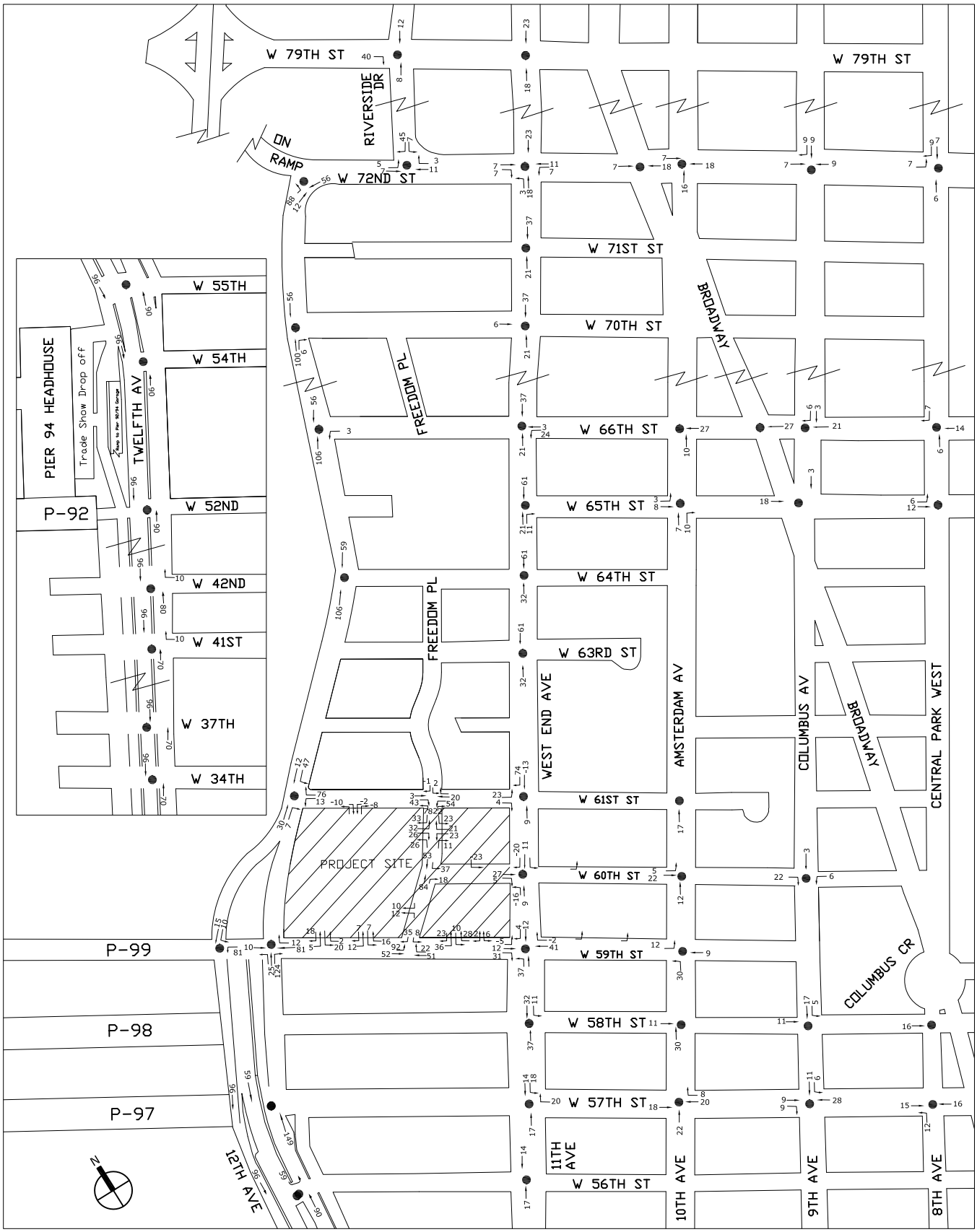
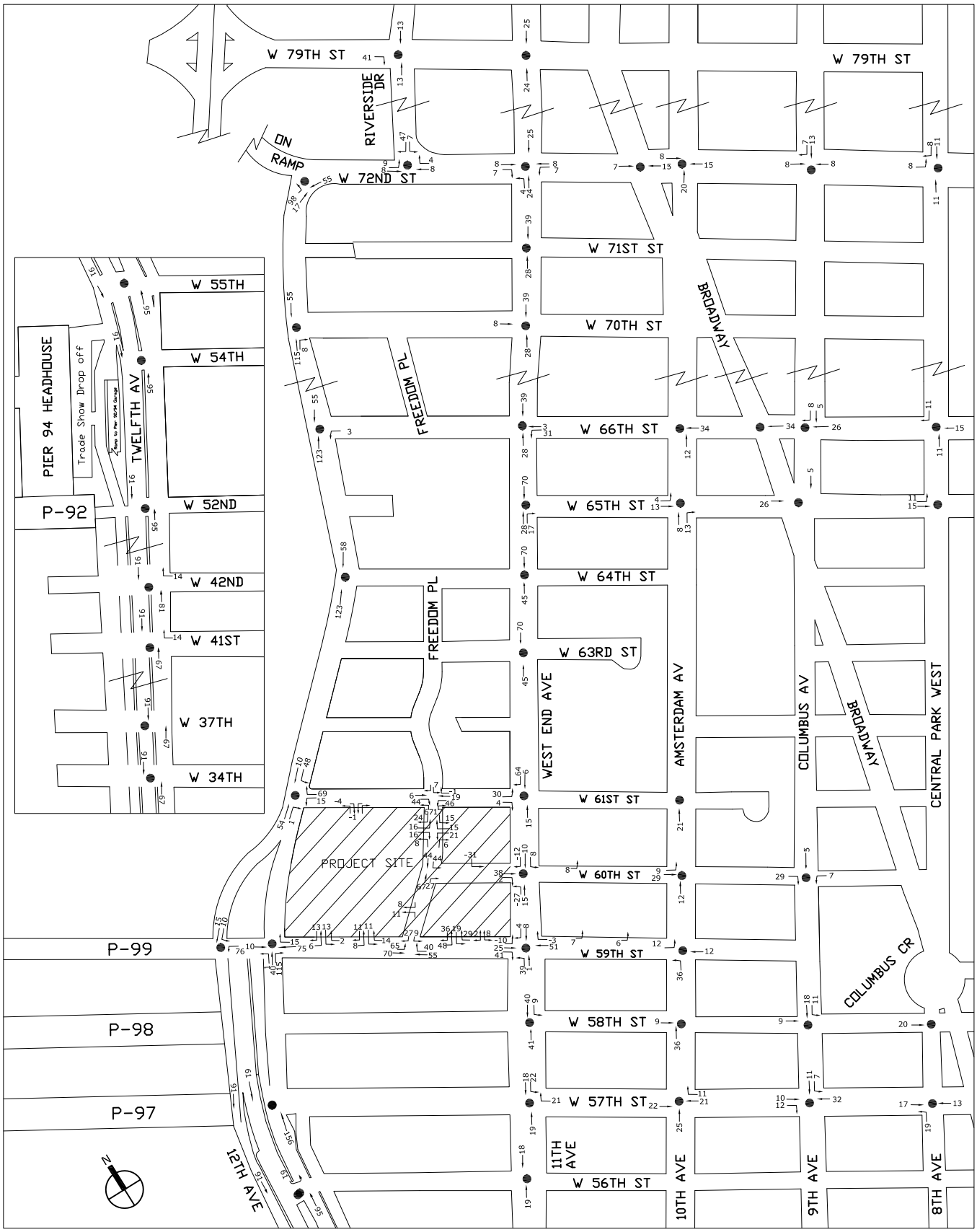
Figure 16-13



Increment Volumes - Weekday AM Peak Hour

RIVERSIDE CENTER
This figure has been revised for the FSEIS

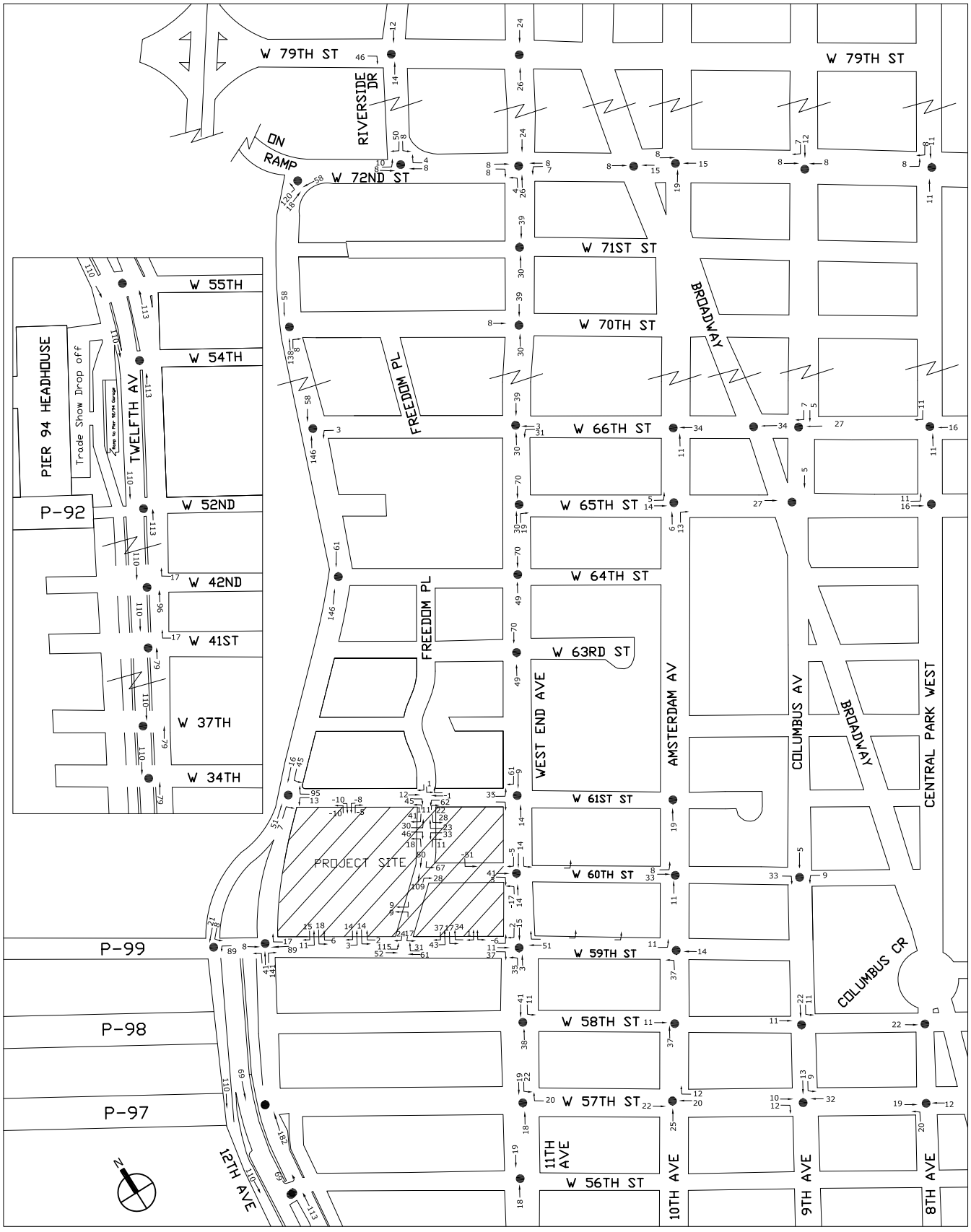
Figure 16-14



Increment Volumes - Weekday MD Peak Hour

RIVERSIDE CENTER
This figure has been revised for the FSEIS

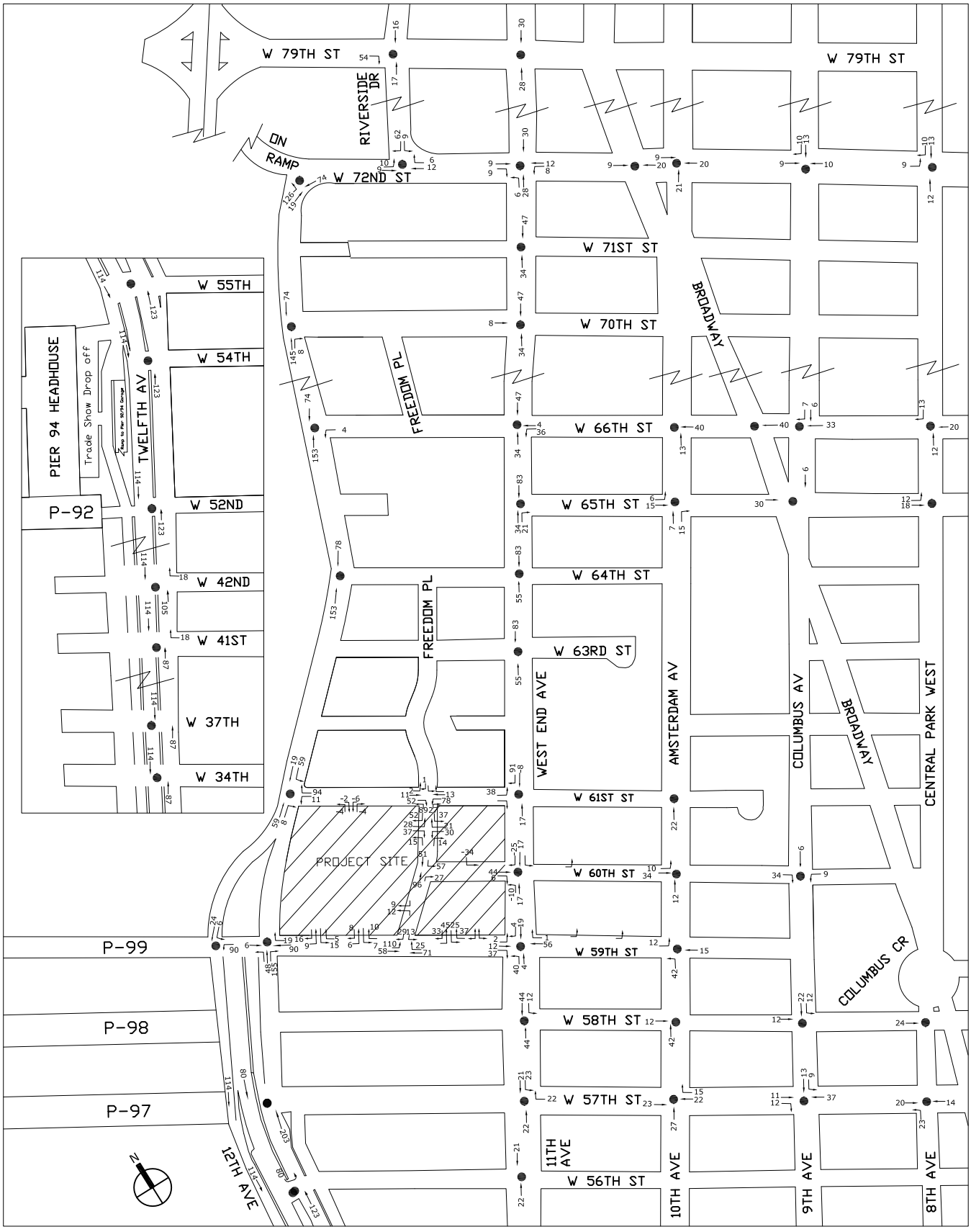
Figure 16-15



Increment Volumes - Weekday PM Peak Hour

RIVERSIDE CENTER
This figure has been revised for the FSEIS

Figure 16-16

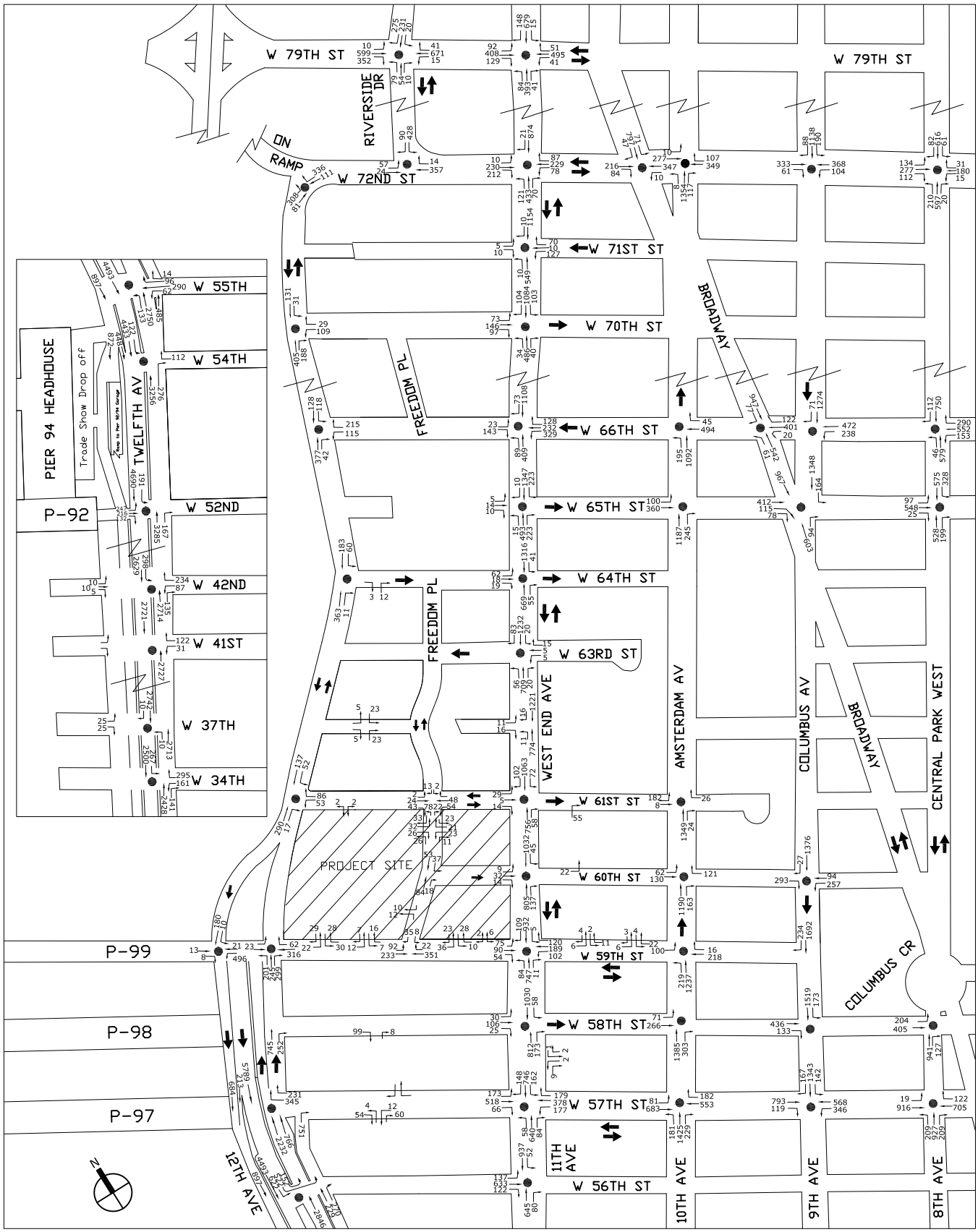


Increment Volumes - Sat MD Peak Hour

RIVERSIDE CENTER

Figure 16-17

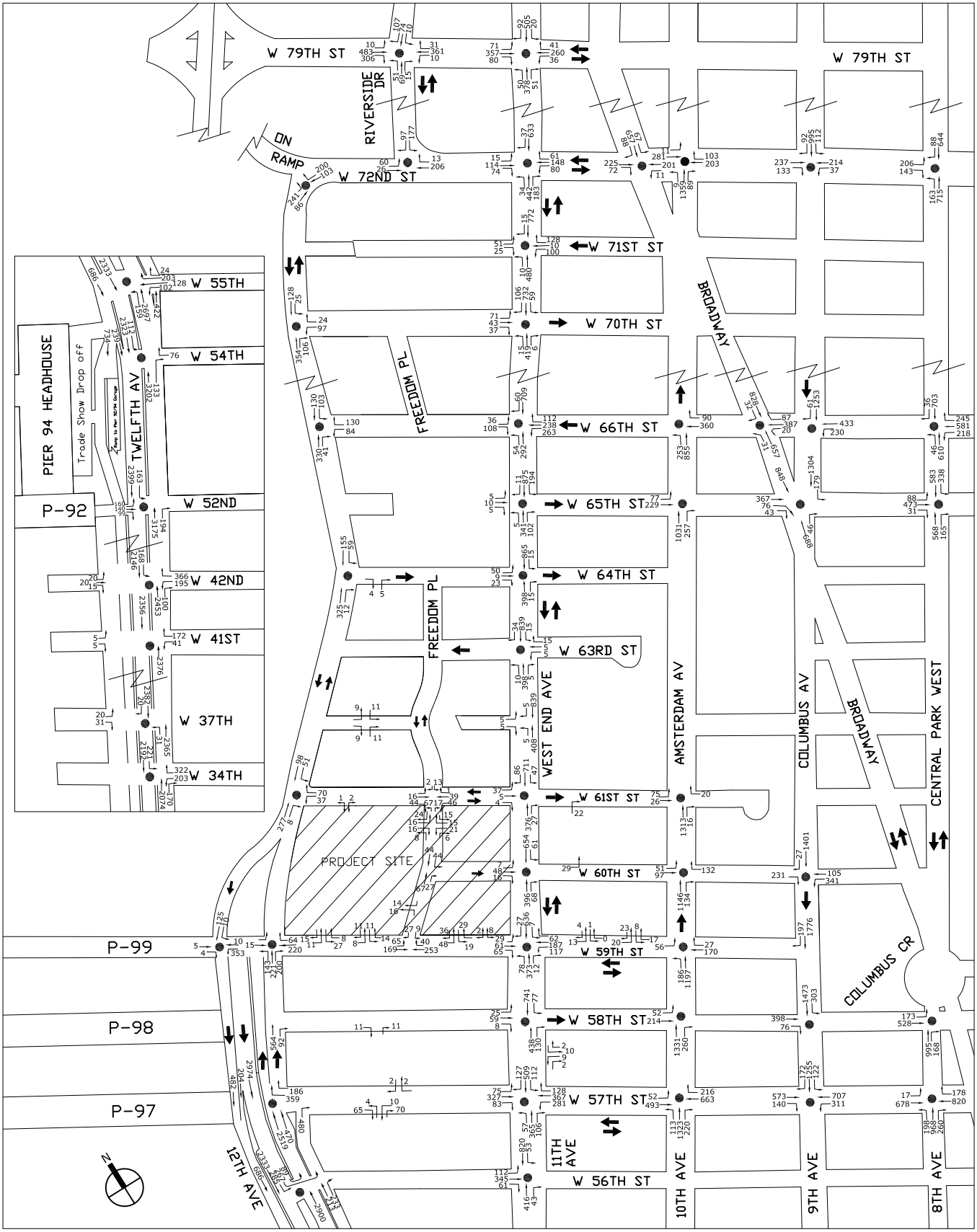
This figure has been revised for the FSEIS



Build Volumes - Weekday AM Peak Hour

RIVERSIDE CENTER
This figure has been revised for the FSEIS

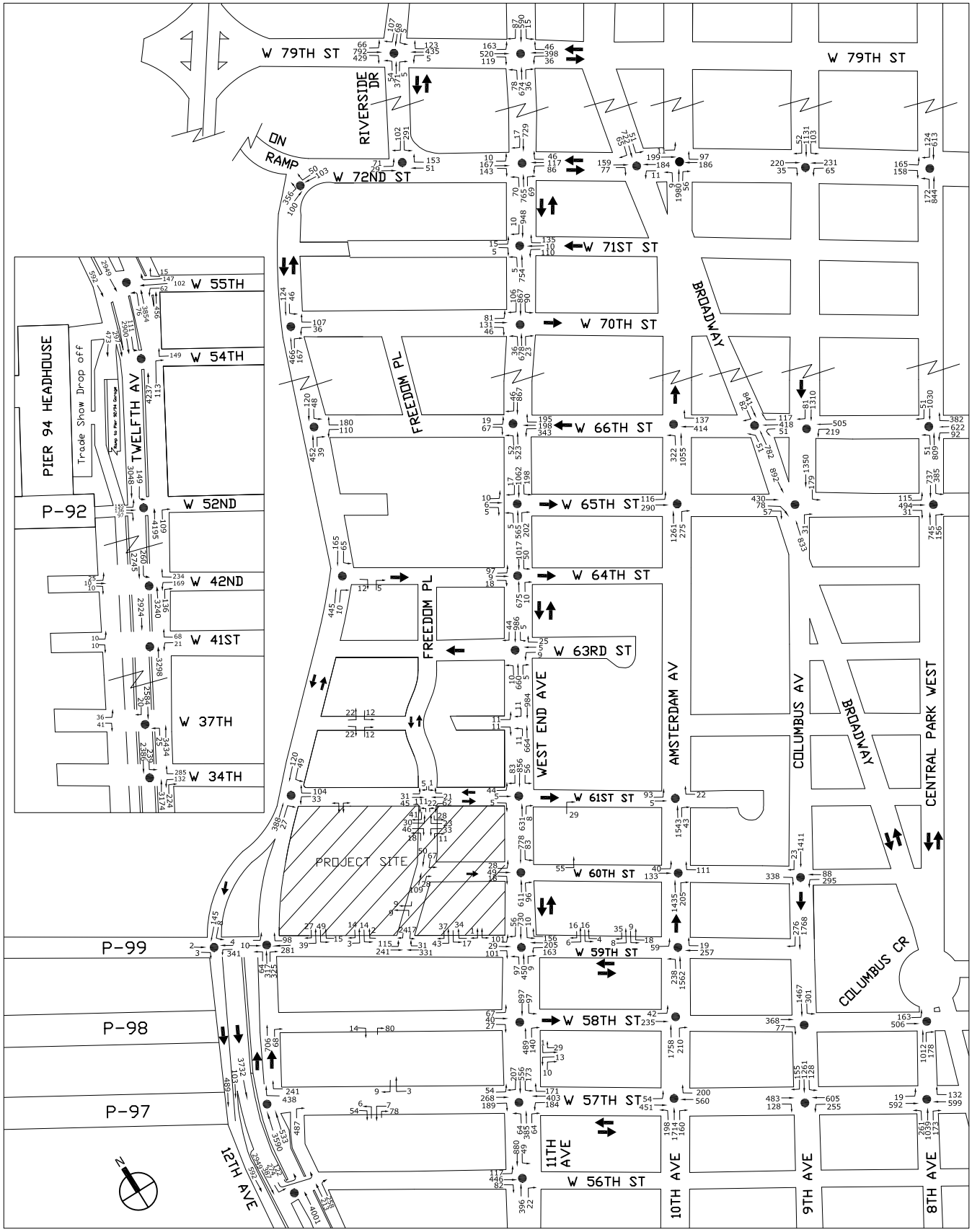
Figure 16-18



Build Volumes - Weekday MD Peak Hour

RIVERSIDE CENTER
This figure has been revised for the FSEIS

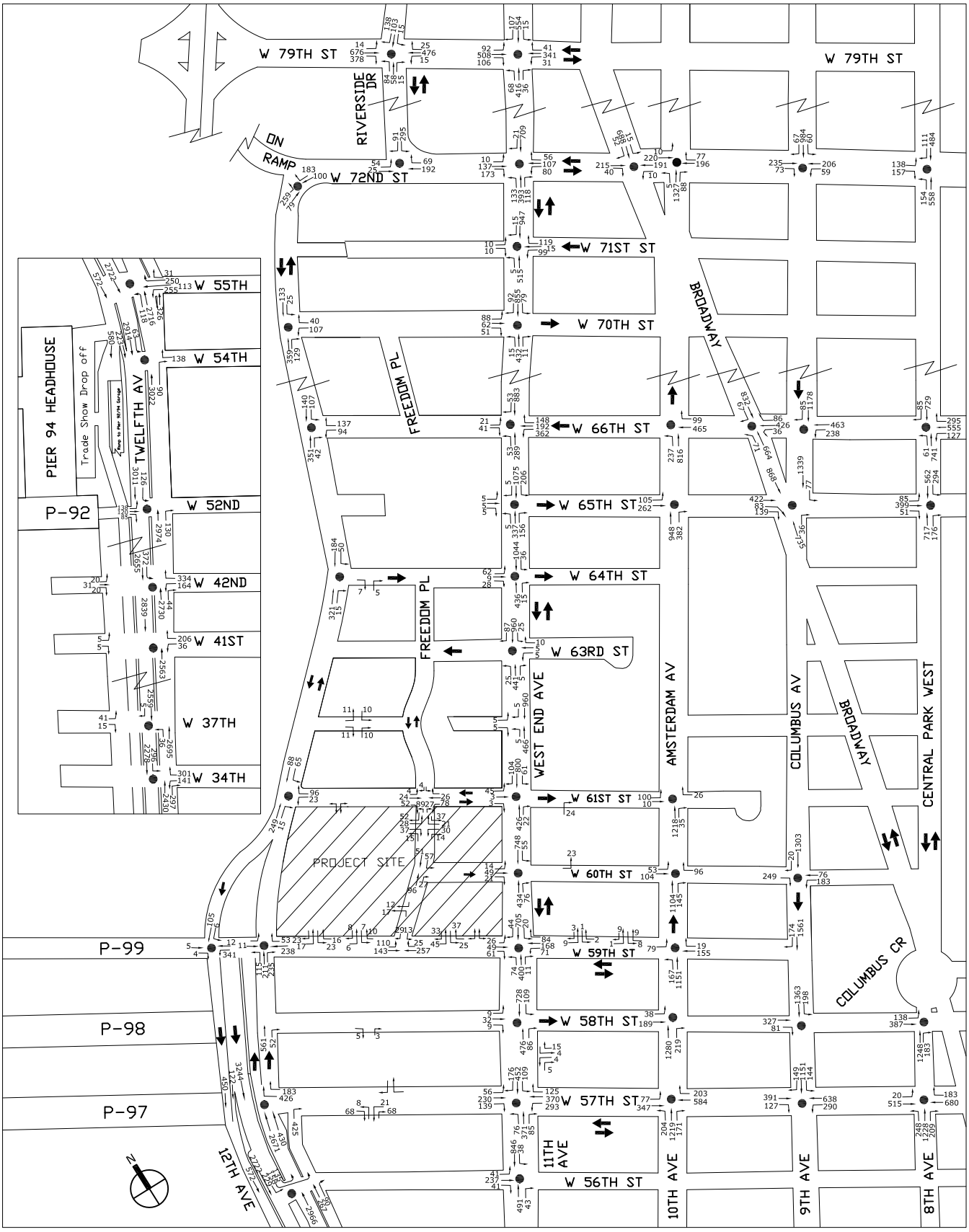
Figure 16-19



Build Volumes - Weekday PM Peak Hour

RIVERSIDE CENTER
This figure has been revised for the FSEIS

Figure 16-20



Build Volumes - Sat MD Peak Hour

RIVERSIDE CENTER
This figure has been revised for the FSEIS

Figure 16-21

	LANE GROUP	NO BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS
Riverside Dr.																									
Riverside Dr. (N-S) @ W. 79th St. (E-W)	EB-LTR	0.46	14.3	B	0.48	14.6	B	0.40	13.5	B	0.42	13.8	B	0.69	18.0	B	0.72	18.7	B	0.50	14.7	B	0.53	15.2	B
	WB-LTR	0.34	12.9	B	0.34	12.9	B	0.20	11.7	B	0.20	11.7	B	0.28	12.3	B	0.28	12.3	B	0.24	12.0	B	0.25	12.0	B
	NB-LTR	0.46	26.5	C	0.49	27.1	C	0.27	21.3	C	0.29	21.7	C	0.75	31.3	C	0.77	32.6	C	0.37	23.3	C	0.40	24.0	C
	SB-LTR	0.99	62.7	E	1.02	67.9	E *	0.36	22.6	C	0.38	22.9	C	0.34	22.3	C	0.36	22.6	C	0.48	24.7	C	0.50	25.2	C
Riverside Dr. (SB) @ W. 72nd St. (WB)	EB-L	0.33	30.7	C	0.36	32.0	C	0.18	21.1	C	0.21	21.7	C	0.20	21.5	C	0.24	22.1	C	0.21	22.2	C	0.26	23.2	C
	EB-T	0.05	24.1	C	0.07	24.3	C	0.04	19.1	B	0.06	19.4	B	0.05	19.2	B	0.07	19.4	B	0.04	19.1	B	0.06	19.3	B
	WB-T	0.55	30.8	C	0.57	31.2	C	0.24	21.0	C	0.24	21.1	C	0.05	19.1	B	0.05	19.2	B	0.20	20.6	C	0.22	20.7	C
	WB-R	0.01	1.5	A	0.02	1.5	A	0.01	1.5	A	0.02	1.5	A	0.19	2.2	A	0.20	2.2	A	0.12	2.0	A	0.14	2.1	A
	SB-LR	0.83	28.0	C	0.94	41.3	D	0.45	22.1	C	0.58	25.3	C	0.74	29.2	C	0.89	42.6	D	0.72	30.3	C	0.92	50.8	D *
Riverside Blvd.																									
Riverside Blvd. (N-S) @ W. 72nd St On Ramp (WB) UNSIGNALIZED 2-WAY STOP	NB-L	0.22	9.1	A	0.32	10.0	A	0.12	8.1	A	0.20	8.6	A	0.18	7.9	A	0.28	8.6	A	0.10	8.0	A	0.22	8.7	A
Riverside Blvd. (N-S) @ W. 70th St (WB) UNSIGNALIZED All-WAY STOP	WB-LR	NA	9.9	A	NA	10.6	B	NA	9.3	A	NA	10.0	B	NA	9.6	A	NA	10.5	B	NA	9.4	A	NA	10.5	B
	NB-TR	NA	14.6	B	NA	22.6	C	NA	11.0	B	NA	15.5	C	NA	16.1	C	NA	35.6	E *	NA	10.9	B	NA	17.2	C
	SB-LT	NA	9.2	A	NA	10.2	B	NA	8.8	A	NA	9.7	A	NA	9.4	A	NA	10.6	B	NA	8.8	A	NA	10.2	B
Riverside Blvd. (N-S) @ W. 66th St. (WB) UNSIGNALIZED All-WAY STOP	WB-LR	NA	14.2	B	NA	17.0	C	NA	10.3	B	NA	11.5	B	NA	11.8	B	NA	14.5	B	NA	10.5	B	NA	12.4	B
	NB-TR	NA	14.1	B	NA	22.7	C	NA	10.7	B	NA	14.9	B	NA	13.8	B	NA	27.5	D	NA	10.6	B	NA	16.7	C
	SB-LT	NA	12.0	B	NA	14.7	B	NA	10.2	B	NA	11.9	B	NA	9.9	A	NA	11.7	B	NA	10.2	B	NA	12.7	B
Riverside Blvd. (N-S) @ W. 64th St. (WB) UNSIGNALIZED 2-WAY STOP	SB-LT	0.06	8.2	A	0.06	8.6	A	0.05	8.0	A	0.06	8.3	A	0.07	8.5	A	0.08	9.1	A	0.04	7.9	A	0.05	8.4	A
Riverside Blvd. (N-S) @ W. 61st St. (WB) UNSIGNALIZED All-WAY STOP	WB-LR	NA	8.5	A	NA	9.5	A	NA	7.2	A	NA	8.8	A	NA	8.4	A	NA	9.6	A	NA	7.9	A	NA	8.7	A
	NB-TR	NA	9.6	A	NA	11.3	B	NA	8.7	A	NA	10.4	B	NA	10.7	B	NA	14.2	B	NA	8.5	A	NA	10.1	B
	SB-LT	NA	8.5	A	NA	9.8	A	NA	7.8	A	NA	9.1	A	NA	8.3	A	NA	9.8	A	NA	7.7	A	NA	9.1	A
12th Avenue																									
12th Ave. (NB) @ W. 59th St. (WB) UNSIGNALIZED 2-WAY STOP	EB-LT	0.00	8.5	A	0.00	8.9	A	0.00	8.2	A	0.00	8.5	A	0.00	8.5	A	0.00	8.9	A	0.00	8.5	A	0.00	8.6	A
	WB-TR																								
	NB-LTR	1.23	144.7	F	1.65	320.7	F *	0.78	29.2	D	1.14	109.3	F *	1.05	79.5	F	1.51	262.0	F *	1.05	79.5	F	1.11	96.8	F *
12th Ave. (SB) @ W. 59th St. (WB) UNSIGNALIZED 2-WAY STOP	WB-LT	0.37	9.6	A	0.44	10.2	B	0.25	8.8	A	0.31	9.2	A	0.22	8.7	A	0.30	9.1	A	0.22	8.7	A	0.30	9.1	A
	SB-L	0.00	26.8	D	0.07	29.5	D	0.00	16.3	C	0.05	21.7	C	0.00	15.1	C	0.03	20.2	C	0.00	15.1	C	0.03	20.4	C
	SB-R	0.18	9.2	A	0.19	9.3	A	0.12	8.9	A	0.13	8.9	A	0.13	8.9	A	0.15	9.0	A	0.09	8.7	A	0.11	8.8	A
12th Ave. (N-S) @ W. 57th St. (E-W)	NB-T Main Line	0.73	28.2	C	0.73	28.2	C	0.79	17.4	B	0.79	17.4	B	0.94	13.3	B	0.94	13.3	B	0.74	16.1	B	0.74	16.1	B
	NB-T Service	0.74	32.0	C	0.91	46.6	D *	0.36	11.0	B	0.54	13.8	B	0.34	4.1	A	0.51	5.6	A	0.23	9.5	A	0.44	12.0	B
	WB-R	0.38	32.6	C	0.38	32.6	C	0.58	40.0	D	0.58	40.0	D	0.77	58.1	E	0.77	58.1	E	0.64	41.5	D	0.64	41.5	D
	NB-R Service unsignalized	0.92	35.9	E	0.92	35.9	E	0.71	21.9	C	0.71	21.9	C	0.72	22.4	C	0.72	22.4	C	0.73	22.7	C	0.73	22.7	C
12th Ave. (N-S) @ W. 56th St. (EB)	NB-T	1.08	82.2	F	1.11	96.4	F *	0.75	12.6	B	0.77	13.2	B	1.04	35.8	D	1.07	49.3	D *	0.70	11.7	B	0.73	12.3	B
	SB-L	0.95	48.8	D	1.00	58.5	E *	1.10	115.6	F	1.21	159.8	F *	1.02	96.1	F	1.12	128.7	F *	0.73	51.5	D	0.86	60.0	E *
	NB-TR Service	0.65	33.9	C	0.65	33.9	C	0.27	7.0	A	0.27	7.0	A	0.29	3.7	A	0.29	3.7	A	0.20	6.5	A	0.20	6.5	A
12th Ave. (N-S) @ W. 55th St. (WB)	WB-L	0.78	73.2	E	0.78	73.2	E	0.46	42.7	D	0.46	42.7	D	0.42	55.7	E	0.42	55.7	E	0.66	48.7	D	0.66	48.7	D
	WB-LR	0.71	74.0	E	0.71	74.0	E	0.62	50.5	D	0.62	50.5	D	0.75	85.0	F	0.75	85.0	F	0.81	63.5	E	0.81	63.5	E
	WB-R	0.36	60.0	E	0.36	60.0	E	0.58	50.7	D	0.58	50.7	D	0.49	63.7	E	0.49	63.7	E	0.79	66.8	E	0.79	66.8	E
	NB-L	1.09	169.9	F	1.09	169.9	F	0.99	118.4	F	0.99	118.4	F	0.77	101.7	F	0.77	101.7	F	1.00	126.8	F	1.00	126.8	F
	NB-T	0.78	13.4	B	0.80	14.2	B	0.75	15.3	B	0.78	16.0	B	0.92	7.9	A	0.95	9.9	A	0.68	13.7	B	0.71	14.4	B
	SB-T	1.09	55.6	E	1.09	55.6	E	0.83	27.5	C	0.83	27.5	C	0.91	30.2	C	0.91	30.2	C	0.94	34.8	C	0.94	34.8	C
	NB-T Service	0.50	9.5	A	0.50	9.5	A	0.41	10.8	B	0.41	10.8	B	0.39	8.8	A	0.39	8.8	A	0.35	10.0	B	0.35	10.0	B
	SB-T Service	0.49	15.0	B	0.55	16.0	B	0.38	18.1	B	0.43	18.9	B	0.26	14.1	B	0.32	14.8	B	0.33	17.4	B	0.41	18.6	B

	LANE GROUP	NO BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS		BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS		NO BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS		BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS		NO BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS		BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS		NO BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS		BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	
12th Ave. (N-S) @	WB-R	0.53	62.3	E		0.53	62.3	E		0.28	39.5	D		0.28	39.5	D		0.69	71.7	E		0.69	71.7	E		0.51	45.6	D		0.51	45.6	D	
W. 54th St. (EB)	NB-TR	0.97	27.1	C		0.99	31.9	C		0.95	25.3	C		0.98	29.5	C		1.06	40.1	D		1.08	52.9	D	*	0.80	16.1	B		0.83	17.1	B	
	SB-L	0.56	61.5	E		0.56	61.5	E		0.40	41.4	D		0.40	41.4	D		0.45	58.3	E		0.45	58.3	E		0.23	37.9	D		0.23	37.9	D	
	SB-T	1.07	48.1	D		1.07	48.1	D		0.64	12.5	B		0.64	12.5	B		0.74	12.8	B		0.74	12.8	B		0.78	15.5	B		0.78	15.5	B	
	SB-T Service	0.32	2.3	A		0.41	2.7	A		0.14	7.6	A		0.23	8.4	A		0.16	6.3	A		0.25	7.0	A		0.12	7.4	A		0.24	8.4	A	
12th Ave. (N-S) @	EB-LTR	1.05	109.4	F		1.05	109.4	F		0.65	45.8	D		0.65	45.8	D		0.86	77.0	E		0.86	77.0	E		0.53	43.0	D		0.53	43.0	D	
W. 52nd St. (EB)	NB-TR	1.03	54.5	D		1.06	63.8	E	*	1.13	89.2	F		1.16	103.0	F	*	1.15	85.1	F		1.18	99.4	F	*	0.97	37.7	D		1.01	46.8	D	*
	SB-L	0.87	96.8	F		0.87	96.8	F		0.84	86.4	F		0.84	86.4	F		0.80	91.6	F		0.80	91.6	F		0.75	77.9	E		0.75	77.9	E	
	SB-T	1.03	27.4	C		1.05	36.6	D		0.64	12.4	B		0.66	12.9	B		0.73	11.8	B		0.76	12.5	B		0.77	14.6	B		0.80	15.5	B	
12th Ave. (N-S) @	EB-LTR	0.04	46.2	D		0.04	46.2	D		0.07	32.4	C		0.07	32.4	C		0.08	46.7	D		0.08	46.7	D		0.09	32.6	C		0.09	32.6	C	
W. 42 nd St. (E-W)	WB-L	0.35	53.2	D		0.35	53.2	D		0.61	45.9	D		0.61	45.9	D		0.67	65.9	E		0.67	65.9	E		0.51	42.0	D		0.51	42.0	D	
	WB-R	0.54	33.2	C		0.56	34.1	C		0.64	25.3	C		0.67	26.3	C		0.68	52.1	D		0.74	55.9	E		0.61	24.2	C		0.64	25.5	C	
	NB-T	0.99	54.7	D		1.02	62.4	E	*	1.08	82.4	F		1.12	97.1	F	*	0.94	25.2	C		0.97	28.9	C		1.15	153.5	F		1.20	173.4	F	*
	NB-R	0.29	26.7	C		0.29	26.7	C		0.31	28.5	C		0.31	28.5	C		0.23	10.7	B		0.23	10.7	B		0.13	25.2	C		0.13	25.2	C	
	SB-L	0.47	53.9	D		0.47	53.9	D		0.26	40.0	D		0.26	40.0	D		0.87	91.6	F		0.87	91.6	F		0.55	45.0	D		0.55	45.0	D	
	SB-T	0.74	4.4	A		0.76	4.8	A		0.75	17.0	B		0.78	18.0	B		0.77	15.7	B		0.80	16.7	B		0.82	19.1	B		0.85	20.6	C	
12th Ave. (N-S) @	EB-LR	0.00	38.2	D		0.00	38.2	D		0.02	24.9	C		0.02	24.9	C		0.06	47.3	D		0.06	47.3	D		0.02	24.9	C		0.02	24.9	C	
W. 41 st St. (E-W)	WB-L	0.07	50.6	D		0.07	50.6	D		0.08	37.7	D		0.08	37.7	D		0.06	59.7	E		0.06	59.7	E		0.06	37.5	D		0.06	37.5	D	
	WB-R	0.31	54.7	D		0.34	55.3	E		0.37	42.5	D		0.41	43.1	D		0.19	61.8	E		0.25	62.9	E		0.37	42.0	D		0.40	42.6	D	
	NB-T	1.16	150.7	F		1.19	163.9	F	*	1.05	68.8	E		1.08	80.3	F	*	0.99	25.4	C		1.02	31.7	C		1.03	60.2	E		1.06	72.6	E	*
	SB-T	1.06	84.1	F		1.10	99.4	F	*	0.92	31.9	C		0.96	36.4	D		0.91	22.6	C		0.94	26.2	C		1.04	81.2	F		1.09	97.4	F	*
12th Ave. (N-S) @	EB-LR	0.12	52.5	D		0.12	52.5	D		0.14	43.1	D		0.14	43.1	D		0.25	60.6	E		0.25	60.6	E		0.16	43.3	D		0.16	43.3	D	
W. 37 th St. (EB)	EB-R	0.13	53.1	D		0.13	53.1	D		0.14	43.7	D		0.14	43.7	D		0.25	62.0	E		0.25	62.0	E		0.10	42.7	D		0.10	42.7	D	
	NB-L	0.10	63.7	E		0.10	63.7	E		0.20	50.4	D		0.20	50.4	D		0.29	72.4	E		0.29	72.4	E		0.26	51.6	D		0.26	51.6	D	
	NB-T	0.95	37.8	D		0.98	42.1	D		0.78	19.8	B		0.80	20.6	C		0.87	6.1	A		0.89	6.8	A		0.83	21.7	C		0.86	22.9	C	
	SB-TR	1.05	105.8	F		1.09	119.8	F	*	0.98	39.5	D		1.02	49.0	D	*	0.86	22.3	C		0.89	24.7	C		1.06	110.4	F		1.11	129.8	F	*
12th Ave. (N-S) @	WB-L	0.54	63.0	E		0.54	63.0	E		0.48	44.0	D		0.48	44.0	D		0.51	60.9	E		0.51	60.9	E		0.41	42.0	D		0.41	42.0	D	
W. 34 th St. (WB)	WB-LR	0.53	62.8	E		0.53	62.8	E		0.48	43.9	D		0.48	43.9	D		0.47	59.6	E		0.47	59.6	E		0.39	41.5	D		0.39	41.5	D	
	WB-R	0.53	39.4	D		0.53	39.4	D		0.48	29.3	C		0.48	29.3	C		0.46	45.1	D		0.46	45.1	D		0.38	27.0	C		0.38	27.0	C	
	NB-T	0.89	35.8	D		0.92	37.9	D		0.79	27.3	C		0.82	28.2	C		0.95	21.8	C		0.97	25.2	C		0.86	29.7	C		0.89	31.4	C	
	NB-R	0.27	20.2	C		0.27	20.2	C		0.34	19.6	B		0.34	19.6	B		0.32	8.7	A		0.32	8.7	A		0.50	22.8	C		0.50	22.8	C	
	SB-L	0.54	61.0	E		0.54	61.0	E		0.62	56.6	E		0.62	56.6	E		1.11	303.6	F		1.11	303.6	F		0.76	62.9	E		0.76	62.9	E	
	SB-T	0.77	4.4	A		0.81	4.9	A		0.68	13.4	B		0.71	14.1	B		0.68	11.7	B		0.71	12.4	B		0.74	14.6	B		0.78	15.6	B	
West End Ave/11th Avenue																																	
West End Ave. (N-S) @	EB-LTR	1.09	96.4	F		1.10	97.0	F		0.76	35.8	D		0.76	35.8	D		1.09	87.2	F		1.09	87.2	F		1.09	92.8	F		1.09	92.8	F	
W. 79th St. (E-W)	WB-LTR	0.82	39.0	D		0.82	39.0	D		0.49	28.2	C		0.49	28.2	C		0.62	28.2	C		0.62	28.2	C		0.60	30.5	C		0.60	30.5	C	
	NB-LTR	0.63	22.3	C		0.66	23.0	C		0.46	18.2	B		0.48	18.6	B		0.95	41.9	D		0.99	50.6	D	*	0.54	19.6	B		0.57	20.3	C	
	SB-LTR	0.71	19.8	B		0.73	20.3	C		0.53	19.2	B		0.55	19.6	B		0.66	24.4	C		0.68	25.0	C		0.57	19.8	B		0.59	20.3	C	
West End Ave. (N-S) @	EB-LT	0.53	30.0	C		0.54	30.3	C		0.28	29.9	C		0.31	30.2	C		0.46	32.8	C		0.48	33.3	C		0.53	34.2	C		0.56	35.0	C	
W. 72nd St. (E-W)	EB-R	0.51	34.3	C		0.53	34.9	C		0.44	40.4	D		0.48	42.7	D		0.43	37.0	D		0.45	37.7	D		0.57	42.8	D		0.60	44.4	D	
	WB-LTR	0.85	47.3	D		0.92	56.8	E	*	0.99	79.2	E		1.04	93.2	F	*	0.68	42.1	D		0.73	45.0	D		0.62	39.2	D		0.68	42.0	D	
	NB-L	0.50	30.6	C		0.51	32.0	C																		0.46	31.6	C		0.49	33.5	C	
	NB-TR	0.44	16.7	B		0.46	16.9	B																		0.42	16.3	B		0.44	16.6	B	
	NB-LTR									0.44	16.5	B		0.47	16.9	B		0.41	3.6	A		0.43	3.7	A									
	SB-TR	0.64	25.8	C		0.66	26.1	C		0.79	35.6	D		0.82	37.2	D		0.76	37.0	D		0.79	38.0	D		0.84	38.2	D		0.88	40.9	D	
West End Ave. (N-S) @	EB-LR	0.04	16.7	B		0.04	16.7	B		0.26	20.2	C		0.26	20.2	C		0.06	17.0	B		0.06	17.0	B		0.06	17.0	B		0.06	17.0	B	
W. 71st St. (E-W)	WB-LTR	0.53	25.8	C		0.53	25.8	C		0.67	31.4	C		0.67	31.4	C		0.37	20.9	C		0.37	20.9	C		0.62	28.8	C		0.62	28.8	C	
	NB-LT	0.50	16.4	B		0.52	16.8	B		0.39	14.8	B		0.41	15.1	B		0.42	11.6	B		0.44	11.8	B		0.41	15.1	B		0.44	15.5	B	
	SB-TR	0.56	13.1	B		0.58	13.3	B		0.58	17.6	B		0.61	18.2	B		0.66	19.2	B		0.69	19.9	B		0.71	20.7	C		0.75	21.8	C	
West End Ave. (N-S) @	EB-LTR	0.76	37.2	D		0.77	38.0	D		0.40	25.0	C		0.43	25.5	C		0.62	30.4	C		0.64	31.1	C		0.47	26.1	C		0.49	26.6	C	
W. 70th St. (EB)	NB-LTR	0.60	19.7	B		0.62	20.3	C		0.38	15.9	B		0.40	16.2	B		0.49	14.0	B		0.52	14.3	B		0.40	16.2	B		0.43	16.7	B	
	SB-LTR	0.87	23.5	C		0.89	25.6	C		0.82	27.2	C		0.86	29.6	C		1.07	70.8	E		1.11	86.0	F	*	1.00	49.5	D		1.04	63.0	E	*
West End Ave. (N-S) @	EB-LR	0.51	27.9	C		0.52	28.3	C		0.50	28.4	C		0.51	28.8	C		0.27	22.6	C		0.27	22.6	C		0.20	21.4	C		0.20	21.5	C	
W. 66 th St. (E-W)	WB-L	0.55	29.6	C		0.59	31.0	C		0.48	27.7	C		0.54	29.6	C		0.49	28.1	C		0.54	29.6	C		0.59	30.7	C		0.65	33.3	C	
	WB-T	0.73	35.4	D		0.76	36.9	D		0.66	31.8	C		0.68	32.9	C		0.74	35.9	D		0.78	38.4	D		0.72	34.6	C		0.77	37.4	D	
	WB-R	0.36	24.8	C		0.36	24.8	C		0.31	23.7	C		0.31	23.7	C		0.54	29.4	C		0.54	29.4	C		0.41	25.6	C		0.41	25.6	C	
	NB-L	0.83	68.5	E		0.88	81.1	F	*	0.30	20.1	C		0.32	21.1	C		0.41	20.2	C		0.44	22.2	C		0.43	26.9	C		0.47	30.5	C	
	NB-T	0.35	17.3	B		0.37	17.5	B		0.23	15.9	B		0.25	16.2	B		0.29	11.8	B		0.31	11.9	B		0.23	15.9	B		0.26	16.2	B	
	SB-TR	0.65	18.3	B		0.67	18.7	B		0.64	22.1	C		0.67	22.9	C		0.74	22.8	C		0.77	24.0	C		0.78	26.4	C		0.82	28.3	C	

	LANE GROUP	NO BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS
West End Ave. (N-S) @ W. 65 th St. (WB)	EB-LTR	0.08	23.1	C	0.08	23.1	C	0.05	22.8	C	0.05	22.8	C	0.05	22.7	C	0.05	22.7	C	0.03	22.6	C	0.03	22.6	C
	NB-L	0.13	16.8	B	0.14	17.2	B	0.02	14.3	B	0.03	14.3	B	0.04	12.3	B	0.04	12.4	B	0.03	14.4	B	0.03	14.4	B
	NB-TR	0.67	23.2	C	0.71	24.1	C	0.39	17.9	B	0.44	18.5	B	0.50	16.1	B	0.54	16.6	B	0.43	18.3	B	0.48	19.2	B
	SB-L	0.73	23.8	C	0.75	26.1	C	0.48	12.9	B	0.50	13.4	B	0.72	23.2	C	0.75	26.0	C	0.53	13.8	B	0.55	14.8	B
	SB-TR	0.54	7.0	A	0.57	7.2	A	0.54	12.0	B	0.59	12.7	B	0.71	15.2	B	0.75	16.6	B	0.65	13.7	B	0.70	14.9	B
West End Ave. (N-S) @ W. 64 th St. (EB)	EB-LTR	0.33	24.0	C	0.33	24.0	C	0.27	22.7	C	0.27	22.7	C	0.44	26.7	C	0.44	26.6	C	0.32	23.6	C	0.32	23.6	C
	NB-TR	0.52	14.4	B	0.55	14.8	B	0.28	11.5	B	0.32	11.9	B	0.34	8.3	A	0.37	8.5	A	0.29	11.6	B	0.33	12.0	B
	SB-L	0.16	11.6	B	0.17	11.8	B	0.04	9.7	A	0.04	9.7	A	0.20	12.1	B	0.21	12.5	B	0.10	10.3	B	0.10	10.5	B
	SB-T	0.57	10.5	B	0.60	10.8	B	0.54	14.6	B	0.59	15.4	B	0.73	18.7	B	0.78	20.6	C	0.64	16.4	B	0.70	17.6	B
West End Ave. (N-S) @ W. 63 rd St. (E-W)	WB-LTR	0.06	20.0	C	0.06	20.0	C	0.06	19.9	B	0.06	19.9	B	0.09	20.3	C	0.09	20.3	C	0.04	19.8	B	0.04	19.8	B
	NB-L	0.51	27.2	C	0.57	33.9	C	0.06	10.2	B	0.06	10.3	B	0.07	7.5	A	0.08	7.8	A	0.17	12.7	B	0.21	13.9	B
	NB-TR	0.54	14.8	B	0.57	15.2	B	0.29	11.6	B	0.24	11.2	B	0.30	8.1	A	0.33	8.3	A	0.30	11.6	B	0.34	12.1	B
	SB-L	0.09	7.5	A	0.09	7.6	A	0.04	9.8	A	0.04	9.7	A	0.02	9.6	A	0.02	9.6	A	0.07	10.0	B	0.08	10.1	B
	SB-TR							0.63	16.4	B	0.69	17.7	B	0.76	19.9	B	0.82	22.1	C	0.73	18.8	B	0.79	21.0	C
	SB-T	0.85	17.9	B	0.89	20.6	C																		
	SB-R	0.13	10.4	B	0.13	10.4	B																		
West End Ave. (N-S) @ W. 61 st St.	EB-LTR	0.06	20.0	C	0.14	21.0	C	0.04	19.7	B	0.10	20.4	C	0.04	19.8	B	0.12	20.6	C	0.03	19.6	B	0.10	20.4	C
	NB-T	0.58	15.2	B	0.58	15.3	B	0.27	11.4	B	0.28	11.5	B							0.31	11.8	B	0.33	11.9	B
	NB-R	0.12	10.4	B	0.12	10.4	B	0.06	9.9	A	0.06	9.9	A							0.04	9.7	A	0.04	9.7	A
	NB-TR													0.31	8.1	A	0.32	8.2	A						
	SB-L	0.39	17.3	B	0.39	17.5	B	0.14	11.0	B	0.15	11.0	B	0.21	12.2	B	0.21	12.2	B	0.18	11.5	B	0.19	11.6	B
	SB-TR	0.86	19.1	B	0.95	28.6	C	0.58	15.4	B	0.67	17.5	B	0.69	17.8	B	0.78	20.9	C	0.62	16.0	B	0.69	17.7	B
West End Ave. (N-S) @ W. 60 th St. (EB)	EB-LTR	0.06	19.4	B	0.15	20.5	C	0.07	19.5	B	0.16	20.7	C	0.11	20.0	C	0.24	21.8	C	0.10	19.9	B	0.26	22.1	C
	NB-L	0.13	11.9	B				0.14	11.4	B				0.10	7.8	A				0.06	10.2	B			
	NB-TR	0.84	23.5	C	0.87	25.9	C	0.40	12.9	B	0.41	13.1	B	0.38	8.7	A	0.39	8.8	A	0.46	13.6	B	0.47	13.8	B
	SB-L	0.36	15.1	B	0.38	16.4	B	0.22	12.4	B	0.26	13.2	B	0.41	17.4	B	0.42	17.9	B	0.24	12.9	B	0.25	13.2	B
	SB-TR	0.81	16.6	B				0.52	14.4	B				0.61	15.9	B				0.58	15.3	B			
	SB-T				0.79	16.0	B				0.51	14.3	B				0.61	16.0	B				0.56	14.9	B
West End Ave. (N-S) @ W. 59 th St. (E-W)	EB-LT				0.96	82.2	F				0.29	26.8	C				0.58	36.0	D				0.26	26.6	C
	EB-R				0.21	26.3	C				0.23	26.6	C				0.38	29.4	C				0.20	26.1	C
	EB-LTR	0.97	82.6	F		68.4	E	0.34	27.8	C		26.7	C	0.82	52.6	D		33.1	C	0.28	26.8	C		26.4	C
	WB-LTR	1.12	114.4	F	1.81	411.1	F *	0.81	44.8	D	0.97	68.5	E *	1.36	212.5	F	1.95	471.5	F *	0.83	48.2	D	1.10	107.4	F *
	NB-L	0.29	11.9	B	0.55	21.5	C	0.15	8.6	A	0.33	11.8	B	0.28	7.3	A	0.45	11.2	B	0.16	9.0	A	0.38	13.3	B
	NB-TR	0.56	11.8	B	0.56	11.8	B	0.27	8.6	A	0.27	8.6	A	0.20	4.4	A	0.20	4.4	A	0.30	8.8	A	0.30	8.8	A
	SB-L	0.02	4.0	A	0.02	4.0	A	0.02	6.9	A	0.02	6.9	A	0.03	7.0	A	0.03	7.0	A	0.05	7.3	A	0.05	7.3	A
	SB-TR	0.74	9.9	A	0.77	10.8	B	0.42	10.0	B	0.44	10.2	B	0.52	11.3	B	0.54	11.5	B	0.49	10.7	B	0.50	11.0	B
11th Ave. (N-S) @ W. 58 th St. (EB)	EB-LTR	0.46	30.1	C	0.46	30.1	C	0.24	26.0	C	0.24	26.0	C	0.39	28.7	C	0.39	28.7	C	0.14	24.6	C	0.14	24.6	C
	NB-TR	0.74	15.7	B	0.77	16.6	B	0.40	9.8	A	0.43	10.1	B	0.28	4.8	A	0.29	4.9	A	0.40	9.7	A	0.43	10.1	B
	SB-L	0.29	8.7	A	0.39	11.6	B	0.19	8.9	A	0.23	9.5	A	0.26	10.0	B	0.31	10.8	B	0.29	10.4	B	0.35	11.5	B
	SB-TR	0.68	8.7	A	0.70	9.0	A	0.45	10.3	B	0.47	10.6	B	0.56	11.7	B	0.58	12.1	B	0.44	10.1	B	0.47	10.5	B
11th Ave. (N-S) @ W. 57 th St. (E-W)	EB-L	0.71	32.7	C	0.73	34.3	C	0.28	17.3	B	0.28	17.6	B	0.23	17.7	B	0.24	17.9	B	0.21	16.9	B	0.21	17.0	B
	EB-TR	0.67	31.0	C	0.67	31.0	C	0.58	29.9	C	0.58	29.9	C	0.65	31.9	C	0.65	31.9	C	0.49	28.1	C	0.49	28.1	C
	WB-L	0.76	37.5	D	0.76	37.5	D	0.95	67.7	E	0.95	67.7	E	0.67	33.9	C	0.67	33.9	C	0.98	76.2	E	0.98	76.2	E
	WB-TR	0.72	33.7	C	0.75	35.1	D	0.61	30.4	C	0.65	31.4	C	0.67	31.7	C	0.70	32.7	C	0.60	30.2	C	0.64	31.1	C
	NB-L	0.40	24.5	C	0.41	25.1	C	0.28	19.7	B	0.29	20.0	C	0.37	19.9	B	0.39	20.6	C	0.36	20.9	C	0.37	21.4	C
	NB-TR	0.63	21.8	C	0.64	22.2	C	0.43	18.9	B	0.44	19.2	B	0.39	15.1	B	0.40	15.3	B	0.40	17.9	B	0.42	18.2	B
	SB-L	0.81	48.3	D	0.94	72.6	E *	0.35	20.7	C	0.45	23.5	C	0.52	24.5	C	0.61	28.3	C	0.31	19.0	B	0.41	21.4	C
	SB-TR	0.75	21.8	C	0.76	22.2	C	0.55	20.9	C	0.57	21.1	C	0.66	22.4	C	0.67	22.8	C	0.58	20.9	C	0.60	21.3	C
11th Ave. (N-S) @ W. 56 th St. (EB)	EB-LTR	0.91	42.0	D	0.91	42.0	D	0.88	43.6	D	0.88	43.6	D	1.06	79.7	E	1.06	79.7	E	0.62	30.0	C	0.62	30.0	C
	NB-TR	0.51	14.2	B	0.52	14.4	B	0.33	13.1	B	0.35	13.2	B	0.30	9.4	A	0.31	9.5	A	0.37	12.5	B	0.39	12.6	B
	SB-L	0.21	9.2	A	0.22	9.3	A	0.17	12.4	B	0.17	12.4	B	0.14	12.0	B	0.15	12.0	B	0.12	10.8	B	0.13	10.9	B
	SB-T	0.43	9.0	A	0.43	9.1	A	0.39	13.4	B	0.40	13.5	B	0.42	13.7	B	0.42	13.8	B	0.38	12.3	B	0.39	12.4	B

	LANE GROUP	NO BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS
Amsterdam Ave/10th Avenue																									
Amsterdam Ave. (NB) @	EB-T	0.34	23.0	C	0.35	23.1	C	0.35	23.1	C	0.36	23.2	C	0.24	21.8	C	0.25	21.9	C	0.31	22.6	C	0.33	22.8	C
W. 72 nd St. (E-W)	WB-TR	0.37	23.0	C	0.38	23.1	C	0.32	22.5	C	0.33	22.6	C	0.25	21.7	C	0.26	21.8	C	0.22	21.3	C	0.23	21.5	C
	NB-L	0.03	9.7	A	0.03	9.7	A	0.03	9.7	A	0.03	9.7	A	0.04	9.8	A	0.04	9.8	A	0.02	9.6	A	0.02	9.6	A
	NB-TR	0.59	10.5	B	0.60	10.6	B	0.58	10.4	B	0.59	10.5	B	0.81	14.2	B	0.82	14.4	B	0.57	10.2	B	0.58	10.3	B
Amsterdam Ave. (NB) @	WB-TR	0.53	23.2	C	0.56	23.7	C	0.44	21.8	C	0.48	22.3	C	0.56	23.9	C	0.59	24.6	C	0.58	24.1	C	0.62	25.0	C
W. 66 th St. (WB)	NB-LT	0.54	12.6	B	0.54	12.6	B	0.49	12.2	B	0.49	12.1	B	0.57	13.0	B	0.58	13.0	B	0.43	11.4	B	0.43	11.5	B
Amsterdam Ave. (NB) @	EB-LT	0.52	24.4	C	0.53	24.7	C	0.33	21.5	C	0.35	21.8	C	0.45	23.1	C	0.47	23.5	C	0.33	21.2	C	0.35	21.5	C
W. 65 th St. (EB)	NB-TR	0.48	10.6	B	0.49	10.6	B	0.56	11.6	B	0.57	11.7	B	0.50	10.7	B	0.50	10.7	B	0.52	11.0	B	0.53	11.1	B
Amsterdam Ave. (NB) @	EB-LT	0.40	25.3	C	0.40	25.3	C	0.20	22.2	C	0.20	22.2	C	0.24	23.0	C	0.24	23.0	C	0.28	23.4	C	0.28	23.5	C
W. 61 st St. (E-W)	WB-R	0.09	21.1	C	0.09	21.1	C	0.07	20.9	C	0.07	20.9	C	0.08	21.1	C	0.08	21.1	C	0.09	21.1	C	0.09	21.1	C
	NB-TR	0.43	8.2	A	0.44	8.3	A	0.55	9.4	A	0.56	9.5	A	0.51	8.8	A	0.52	8.9	A	0.45	8.5	A	0.46	8.5	A
Amsterdam Ave. (NB) @	EB-LT	0.45	26.0	C	0.52	27.6	C	0.25	21.9	C	0.34	23.1	C	0.30	23.0	C	0.39	24.5	C	0.32	23.4	C	0.44	25.5	C
W. 60 th St. (EB)	WB-R	0.41	26.4	C	0.41	26.4	C	0.44	26.4	C	0.44	26.4	C	0.29	23.2	C	0.29	23.2	C	0.25	22.6	C	0.25	22.6	C
	NB-TR	0.45	9.0	A	0.45	9.0	A	0.45	9.6	A	0.45	9.6	A	0.56	9.9	A	0.56	10.0	A	0.48	9.4	A	0.49	9.4	A
Amsterdam Ave. (NB) @	EB-L	0.61	38.4	D	0.71	46.9	D *	0.25	23.8	C	0.33	25.8	C	0.35	27.5	C	0.45	31.2	C	0.35	26.3	C	0.43	29.0	C
W. 59 th St. (E-W)	WB-T	0.39	24.2	C	0.41	24.5	C	0.28	22.6	C	0.31	22.9	C	0.42	24.8	C	0.45	25.2	C	0.28	22.5	C	0.31	22.9	C
	WB-R	0.05	19.9	B	0.05	19.9	B	0.08	20.3	C	0.08	20.3	C	0.05	20.0	B	0.05	20.0	B	0.06	20.1	C	0.06	20.1	C
	NB-LT	0.46	9.1	A	0.48	9.2	A	0.43	8.9	A	0.44	9.0	A	0.47	9.1	A	0.48	9.2	A	0.49	9.4	A	0.50	9.5	A
10th Ave. (NB) @	EB-LT	0.47	25.5	C	0.48	25.8	C	0.32	23.4	C	0.33	23.5	C	0.34	23.6	C	0.35	23.8	C	0.29	23.0	C	0.31	23.2	C
W. 58 th St. (EB)	NB-TR	0.52	9.0	A	0.53	9.1	A	0.63	10.4	B	0.65	10.6	B	0.64	10.1	B	0.65	10.3	B	0.51	9.0	A	0.53	9.1	A
10th Ave. (NB) @	EB-LT	0.95	46.0	D	0.98	53.6	D *	0.74	30.1	C	0.78	32.3	C	0.61	25.4	C	0.65	26.4	C	0.61	25.9	C	0.65	27.2	C
W. 57 th St. (E-W)	WB-TR	0.65	23.6	C	0.68	24.2	C	0.84	33.0	C	0.87	35.3	D	0.71	27.2	C	0.74	28.3	C	0.74	28.1	C	0.78	29.6	C
	NB-LTR	0.73	17.7	B	0.74	17.9	B																		
	NB-LT							0.60	13.4	B	0.61	13.5	B	0.59	13.0	B	0.59	13.1	B	0.57	12.9	B	0.58	13.1	B
	NB-R							0.45	17.3	B	0.45	17.3	B	0.31	14.8	B	0.31	14.8	B	0.33	15.1	B	0.33	15.1	B
Broadway																									
Broadway (SB) @	EB-TR	0.43	24.5	C	0.44	24.6	C	0.41	24.1	C	0.42	24.2	C	0.33	23.1	C	0.34	23.2	C	0.38	23.6	C	0.40	23.8	C
W. 72 nd St. (E-W)	WB-T	0.30	22.2	C	0.32	22.4	C	0.22	21.3	C	0.23	21.5	C	0.17	20.8	C	0.18	20.9	C	0.16	20.7	C	0.17	20.9	C
	SB-LTR	0.51	9.9	A	0.51	9.9	A	0.47	9.6	A	0.47	9.6	A	0.47	9.5	A	0.47	9.5	A	0.42	9.1	A	0.42	9.1	A
Broadway (N-S) @	WB-LTR	0.46	24.2	C	0.48	24.5	C	0.40	23.3	C	0.42	23.7	C	0.50	24.8	C	0.53	25.2	C	0.42	23.5	C	0.45	23.9	C
W. 66 th St. (WB)	NB-LT	0.40	12.7	B	0.40	12.7	B	0.41	12.7	B	0.41	12.7	B	0.49	9.8	A	0.49	9.8	A	0.43	13.0	B	0.43	13.0	B
	SB-TR	0.48	15.6	B	0.48	15.6	B	0.39	17.2	B	0.39	17.2	B	0.42	17.6	B	0.42	17.6	B	0.38	17.2	B	0.38	17.2	B
Broadway (NB-SB1) / Columbus Ave.(SB2)	EB-TR	0.56	32.3	C	0.59	32.8	C	0.46	30.3	C	0.50	30.9	C	0.56	32.1	C	0.59	32.9	C	0.71	36.3	D	0.75	37.9	D
@ W. 65 th St. (EB)	EB-R	0.91	74.2	E	0.91	74.2	E	0.56	38.9	D	0.56	38.9	D	0.66	45.3	D	0.66	45.3	D	0.67	44.2	D	0.67	44.2	D
	NB-TR	0.73	33.4	C	0.73	33.4	C	0.74	33.8	C	0.74	33.8	C	0.86	38.5	D	0.86	38.5	D	0.69	31.8	C	0.69	31.8	C
	SB1-T	0.66	30.2	C	0.66	30.2	C	0.60	29.3	C	0.60	29.3	C	0.57	28.6	C	0.57	28.6	C	0.55	28.4	C	0.55	28.4	C
	SB2-L	0.29	29.4	C	0.29	29.4	C	0.30	29.6	C	0.30	29.6	C	0.28	29.0	C	0.28	29.0	C	0.28	29.4	C	0.28	29.4	C
	SB2-LT	1.06	75.2	E	1.06	76.0	E	1.05	71.0	E	1.05	72.1	E	1.06	74.8	E	1.06	75.9	E	0.90	41.3	D	0.90	41.7	D

	LANE GROUP	NO BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS		BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS		NO BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS		BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS		NO BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS		BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS		NO BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS		BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	
Columbus Ave/9th Avenue																																	
Columbus Ave. (SB) @	EB-T	0.33	20.1	C		0.33	20.1	C		0.23	18.9	B		0.24	19.0	B		0.19	18.6	B		0.20	18.6	B		0.23	19.0	B		0.24	19.1	B	
W. 72 nd St. (E-W)	EB-R	0.18	19.1	B		0.18	19.1	B		0.45	25.1	C		0.45	25.1	C		0.11	18.2	B		0.11	18.2	B		0.28	21.4	C		0.28	21.4	C	
	WB-LT	0.68	27.9	C		0.69	28.3	C		0.30	20.0	B		0.31	20.1	C		0.40	21.5	C		0.41	21.6	C		0.40	21.4	C		0.41	21.6	C	
	SB-LTR	0.61	13.5	B		0.62	13.7	B		0.71	15.8	B		0.73	16.1	B		0.75	16.7	B		0.77	17.1	B		0.65	18.4	B		0.66	18.7	B	
Columbus Ave. (SB) @	WB-LT	0.55	12.8	B		0.56	13.1	B		0.49	12.0	B		0.51	12.2	B		0.55	12.8	B		0.57	13.1	B		0.50	12.1	B		0.52	12.4	B	
W. 66 th St. (WB)	SB-TR	0.89	37.4	D		0.89	37.9	D		1.18	121.5	F		1.19	127.1	F	*	1.21	134.5	F		1.23	140.3	F	*	1.04	68.9	E		1.06	73.7	E	*
Columbus Ave. (SB) @	EB-R	1.14	128.6	F		1.23	164.0	F	*	0.85	55.7	E		0.98	79.6	E	*	1.28	181.5	F		1.42	239.2	F	*	0.88	54.8	D		1.02	84.7	F	*
W. 60 th St. (E-W)	WB-L	0.53	28.2	C		0.55	28.5	C		0.72	34.7	C		0.73	35.5	D		0.61	30.5	C		0.63	31.1	C		0.29	23.2	C		0.31	23.4	C	
	WB-LT	0.23	22.8	C		0.23	22.8	C		0.26	23.2	C		0.26	23.2	C		0.21	22.6	C		0.21	22.6	C		0.19	22.3	C		0.19	22.3	C	
	SB-TR	0.66	18.2	B		0.67	18.2	B		0.68	21.6	C		0.68	21.6	C		0.69	18.6	B		0.69	18.7	B		0.61	20.3	C		0.62	20.3	C	
9th Ave. (SB) @	EB-TR	0.84	38.6	D		0.85	39.6	D		0.64	30.0	C		0.65	30.3	C		0.61	29.3	C		0.63	29.7	C		0.55	27.8	C		0.56	28.1	C	
W. 58 th St. (EB)	SB-L	0.36	12.5	B		0.37	12.6	B		0.62	18.7	B		0.65	19.5	B		0.59	17.2	B		0.61	17.8	B		0.28	11.0	B		0.30	11.2	B	
	SB-T	0.59	9.1	A		0.59	9.2	A		0.57	8.9	A		0.57	9.0	A		0.53	8.5	A		0.54	8.6	A		0.48	8.1	A		0.49	8.2	A	
9th Ave. (SB) @	EB-TR	1.27	164.7	F		1.29	176.4	F	*	1.24	157.3	F		1.29	176.9	F	*	1.22	150.3	F		1.28	172.9	F	*	0.86	47.7	D		0.90	52.2	D	
W. 57 th St. (E-W)	WB-DefL	1.03	74.9	E		1.03	81.3	F	*	0.93	58.2	E		0.93	57.6	E		0.86	48.7	D		0.86	47.7	D		0.80	33.2	C		0.81	35.0	C	
	WB-T	0.87	36.3	D		0.92	42.2	D		1.16	112.8	F		1.21	134.3	F	*	1.01	62.6	E		1.06	78.6	E	*	1.00	59.8	E		1.06	77.2	E	*
	SB-L	0.48	28.3	C		0.50	29.0	C		0.43	27.3	C		0.46	28.1	C		0.42	26.7	C		0.45	27.5	C		0.29	23.0	C		0.31	23.3	C	
	SB-TR																	0.70	27.3	C		0.70	27.4	C									
	SB-T	0.77	27.7	C		0.78	27.9	C		0.77	28.3	C		0.78	28.5	C										0.65	25.3	C		0.66	25.5	C	
	SB-R	0.66	36.5	D		0.66	36.5	D		0.76	45.9	D		0.65	35.5	D										0.36	24.3	C		0.36	24.3	C	
Central Park W.																																	
Central Park W. (N-S) @	EB-LT	0.55	25.4	C		0.56	25.7	C																									
W. 72 nd St. (E-W)	EB-L									0.22	20.2	C		0.23	20.2	C		0.15	19.4	B		0.16	19.5	B		0.16	21.5	C		0.17	21.7	C	
	EB-R	0.37	24.0	C		0.37	24.0	C		0.47	26.5	C		0.47	26.5	C		0.45	25.5	C		0.45	25.5	C		0.68	39.5	D		0.68	39.5	D	
	WB-LTR	0.25	20.4	C		0.25	20.4	C																									
	NB-LTR	1.07	75.1	E		1.07	77.5	E																									
	NB-TR																																
	NB-LT									1.08	79.8	E		1.10	84.6	F	*	1.00	51.5	D		1.01	54.2	D		0.92	37.4	D		0.94	41.7	D	
	SB-LTR	0.92	34.8	C		0.94	37.9	D																									
	SB-TR									0.65	18.5	B		0.67	18.9	B		0.67	19.0	B		0.69	19.5	B		0.49	16.8	B		0.51	17.1	B	
Central Park W. (N-S) @	WB-L	0.44	29.2	C		0.44	29.2	C		0.59	33.2	C		0.59	33.2	C		0.23	25.0	C		0.23	25.0	C		0.36	27.4	C		0.36	27.4	C	
W. 66 th St. (WB)	WB-T	1.16	124.2	F		1.19	136.7	F	*	1.12	107.7	F		1.15	118.4	F	*	1.15	119.8	F		1.18	131.8	F	*	1.12	108.1	F		1.18	131.7	F	*
	WB-R	0.85	51.4	D		0.85	51.4	D		0.70	38.3	D		0.70	38.3	D		1.02	82.1	F		1.02	82.1	F		0.94	66.3	E		0.94	66.3	E	
	NB-LT	0.64	15.2	B		0.65	15.4	B		0.57	13.6	B		0.59	13.8	B		0.93	26.2	C		0.95	28.7	C		0.73	12.2	B		0.74	12.6	B	
	SB-TR	0.83	25.3	C		0.83	25.8	C		0.65	22.2	C		0.66	22.6	C		1.03	57.8	E		1.04	63.3	E	*	0.70	20.5	C		0.72	21.0	C	
Central Park W. (N-S) @	EB-L	0.27	26.6	C		0.29	26.9	C		0.25	26.4	C		0.29	27.1	C		0.42	30.8	C		0.46	32.2	C		0.24	26.2	C		0.28	26.9	C	
W. 65 th St. (EB)	EB-TR	0.77	36.5	D		0.78	37.2	D		0.65	32.1	C		0.67	32.7	C		0.68	33.1	C		0.70	33.8	C		0.59	30.8	C		0.62	31.3	C	
	NB-TR	0.88	38.6	D		0.88	38.6	D		0.92	44.2	D		0.92	44.2	D		1.01	57.6	E		1.01	57.6	E		1.03	67.1	E		1.03	67.1	E	
	SB-DefL	0.78	38.2	D		0.78	38.2	D		0.78	38.5	D		0.78	38.5	D		1.00	74.7	E		1.00	74.7	E		0.70	35.3	D		0.70	35.3	D	
	SB-T	0.66	10.3	B		0.66	10.3	B		0.64	15.1	B		0.64	15.1	B		0.87	25.7	C		0.87	25.7	C		0.60	13.9	B		0.60	13.9	B	
8th Avenue																																	
8th Ave. (NB) @	EB-L	0.57	27.6	C		0.57	27.6	C		0.37	21.6	C		0.37	21.6	C		0.34	21.1	C		0.34	21.1	C		0.28	20.1	C		0.28	20.1	C	
W. 58 th St. (EB)	EB-T	0.40	21.0	C		0.42	21.3	C		0.53	23.2	C		0.56	23.6	C		0.50	22.5	C		0.52	22.9	C		0.36	20.5	C		0.39	20.8	C	
	NB-TR	0.51	12.3	B		0.51	12.3	B		0.55	12.8	B		0.55	12.8	B		0.53	12.5	B		0.53	12.5	B		0.61	13.4	B		0.61	13.4	B	
8th Ave. (NB) @	EB-LT	0.97	48.7	D		0.98	52.3	D		0.78	30.7	C		0.80	31.7	C		0.72	28.3	C		0.75	29.2	C		0.59	24.5	C		0.61	25.1	C	
W. 57 th St. (E-W)	WB-TR	0.71	27.2	C		0.72	27.6	C		0.77	29.4	C		0.79	30.0	C		0.57	23.8	C		0.58	24.0	C		0.62	24.7	C		0.63	25.0	C	
	WB-R	0.32	21.3	C		0.32	21.3	C		0.44	23.8	C		0.44	23.8	C		0.33	21.5	C		0.33	21.5	C		0.44	23.6	C		0.44	23.6	C	
	NB-L	0.31	14.4	B		0.33	14.8	B		0.31	14.5	B		0.34	15.0	B		0.37	15.2	B		0.40	15.7	B		0.34	14.7	B		0.37	15.2	B	
	NB-TR	0.53	12.6	B		0.53	12.6	B		0.62	13.8	B		0.62	13.8	B		0.53	12.6	B		0.53	12.6	B		0.62	13.7	B		0.62	13.7	B	
Freedom Place																																	
W.59th St. (E-W) @	EB-LT					0.09	8.5	A						0.06	8.1	A						0.11	8.5	A						0.10	8.2	A	
Freedom Pl. (N-S)	SB-LR					0.09	12.4	B						0.07	11.3	B						0.11	14.8	B						0.08	12.0	B	
UNSIGNALIZED 2-WAY STOP																																	
W.61st St. (E-W) @	EB-LTR					0.00	7.8	A						0.00	7.3	A						0.00	7.7	A						0.00	7.7	A	
Freedom Pl. (N-S)	WB-LTR					0.05	8.0	A						0.03	7.5	A						0.05	8.0	A						0.07	8.1	A	
UNSIGNALIZED 2-WAY STOP	NB-LTR					0.27	17.2	C						0.12	10.2	B						0.36	18.8	C						0.33	18.6	C	
	SB-LTR					0.03	11.2	B						0.02	9.9	A						0.01	11.1	B						0.01	10.4	B	

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

Table 16-15
Summary of Significantly Impacted Intersections

SIGNIFICANTLY IMPACTED INTERSECTION	PEAK PERIOD: IMPACTED MOVEMENT			
	WKDY AM	WKDY MD	WKDY PM	SAT MD
12th Avenue (NB) at West 59th Street	NB-LTR	NB-LTR	NB-LTR	NB-LTR
12th Avenue at West 57th Street	NB-T(Service)	--	--	--
12th Avenue at West 56th Street	NB-T, SB-L	SB-L	NB-T, SB-L	SB-L
12th Avenue at West 54th Street	--	--	NB-TR	--
12th Avenue at West 52nd Street	NB-TR,	NB-TR	NB-TR	NB-TR
12th Avenue at West 42nd Street	NB-T	NB-T		NB-T
12th Avenue at West 41st Street	NB-T, SB-T	NB-T	--	NB-T, SB-T
12th Avenue at West 37th Street	SB-TR	SB-TR	--	SB-TR
Riverside Dr. at West 79th Street	SB-LTR	--	--	--
Riverside Dr. at West 72nd Street		--		SB-LR
Riverside Blvd. at West 70th Street	--	--	NB-TR	--
West End Avenue at West 79th Street	--	--	NB-LTR	--
West End Avenue at West 72nd Street	WB-LTR	WB-LTR	--	--
West End Avenue at West 70th Street	--	--	SB-LTR	SB-LTR
West End Avenue at West 66th Street	NB-L	--	--	--
West End Avenue at West 59th Street	WB-LTR	WB-LTR	WB-LTR	WB-LTR
11th Avenue at West 57th Street	SB-L	--	--	--
Amsterdam Avenue at West 59th Street	EB-L	--	--	--
Columbus Ave at West 66th Street	--	SB-TR	SB-TR	SB-TR
Columbus Ave at West 60th Street	EB-R	EB-R	EB-R	EB-R
10th Avenue at West 57th Street	EB-LT			
Central Park West at West 72nd Street		NB-LT	--	
Central Park West at West 66th Street	WB-T	WB-T	WB-T, SB-TR	WB-T
9th Avenue at West 57th Street	EB-TR, -WB-DefL	EB-TR, WB-T	EB-TR, WB-T	WB-T
Note: This table has been revised for the FSEIS.				

The northbound through movement along the service road at West 57th Street would experience a significant impact in the weekday AM peak hour. At this time, it would deteriorate from 28.2 (LOS C) to 46.6 (LOS D).

West 56th Street would experience significant impacts at the northbound movement during the weekday AM and PM and at the southbound movement in all peak hours. The weekday AM period would deteriorate from 42.9 seconds (LOS D) to 50.0 seconds (LOS E) in the southbound direction, and would deteriorate from 96.1 seconds (LOS F) to 111.2 seconds (LOS F) in the northbound direction. The southbound movement in the weekday midday period would deteriorate from 115.6 seconds (LOS F) to 159.8 seconds (LOS F). The weekday PM period would deteriorate from 96.1 seconds (LOS F) to 128.7 seconds (LOS F) in the southbound direction, and would deteriorate from 35.8 seconds (LOS E) to 49.3 seconds (LOS E) in the northbound direction. The southbound movement in the Saturday midday period would deteriorate from 51.5 seconds (LOS D) to 60.0 seconds (LOS E).

West 54th Street would only experience significant impacts during the PM peak period at the northbound movement, and it would deteriorate from 40.1 seconds (LOS D) to 52.9 seconds (LOS D).

West 52nd Street would experience significant impacts at the northbound movement during all peak periods, while the southbound through movement would only be impacted in the AM peak hour. The northbound movement in the weekday AM peak hour would deteriorate from 54.5 seconds (LOS D) to 63.8 seconds (LOS E), in the weekday midday period would deteriorate from 89.2 seconds (LOS F) to 103.0 seconds (LOS F), in the weekday PM period would

deteriorate from 85.1 seconds (LOS F) to 99.4 seconds (LOS F), and in the Saturday midday period would deteriorate from 37.7 (LOS D) to 46.8 seconds (LOS E).

The northbound through movement at West 42nd Street would experience significant impacts in the weekday AM, midday, and Saturday midday peak periods. During the weekday AM, it would deteriorate from 54.7 seconds (LOS D) to 62.4 seconds (LOS E). During the weekday midday, it would deteriorate from 82.4 seconds (LOS F) to 97.1 seconds (LOS F), and during the Saturday midday peak period it would deteriorate from 153.5 seconds (LOS F) to 173.4 seconds (LOS F).

West 41st Street would experience significant impacts in the weekday AM, midday, and Saturday midday peak periods. The northbound movement during AM peak would deteriorate from 150.7 seconds (LOS F) to 163.9 seconds (LOS F), while the southbound movement would deteriorate from 84.1 seconds (LOS F) to 99.4 seconds (LOS F). The northbound movement in the weekday midday period would deteriorate from 68.8 seconds (LOS F) to 80.3 seconds (LOS F). The northbound movement during the Saturday midday period would deteriorate from 60.2 seconds (LOS E) to 72.6 seconds (LOS E), while the southbound movement would deteriorate from 81.2 (LOS F) to 97.4 seconds (LOS F).

The southbound movement at West 37th Street would experience significant impacts in the weekday AM, midday and Saturday midday peak periods. During the weekday AM, it would deteriorate from 105.8 seconds (LOS F) to 119.8 seconds (LOS F). During the weekday midday, it would deteriorate from 39.5 seconds (LOS D) to 49.0 seconds (LOS E), and during the Saturday midday peak period it would deteriorate from 110.4 seconds (LOS F) to 129.8 seconds (LOS F).

RIVERSIDE DRIVE/BOULEVARD

There are three significantly impacted intersections along Riverside Drive/Boulevard.

At West 79th Street during the weekday AM peak period, southbound movement would deteriorate from 62.7 seconds (LOS E) to 67.9 seconds (LOS E).

At West 72nd Street during the Saturday midday peak period, the southbound movement would deteriorate from 30.3 seconds (LOS C) to 50.8 seconds (LOS D).

At West 70th Street during the weekday PM peak period, northbound movement would deteriorate from 16.1 seconds (LOS C) to 35.6 seconds (LOS E).

WEST END AVENUE/ELEVENTH AVENUE

There are six intersections in this corridor, which would experience significantly impacted movements.

The northbound movement at West 79th Street would experience significant impacts in the weekday PM peak hour, and would deteriorate from 41.9 seconds (LOS D) to 50.6 seconds (LOS D) of delay.

West 72nd Street would experience significant impacts in the weekday AM and midday peak periods. During the weekday AM peak period, the westbound movement would deteriorate from 47.3 seconds (LOS D) to 56.8 seconds (LOS E). During the weekday midday peak period, the westbound movement would deteriorate from 79.2 seconds (LOS F) to 93.2 seconds (LOS F).

The southbound movement at West 70th Street would experience significant impacts in the weekday PM and Saturday midday peak hours. During the weekday PM peak period it would deteriorate from 70.8 seconds (LOS F) to 86.0 seconds (LOS F). During the Saturday midday peak period it would deteriorate from 49.5 seconds (LOS D) to 630 seconds (LOS E).

The northbound left turn at West 66th Street would experience significant impacts in the weekday AM peak hour. It would deteriorate from 68.5 seconds (LOS E) to 81.1 seconds (LOS F).

West 59th Street would experience significant impacts in the weekday AM, midday, PM and Saturday midday peak periods. During the weekday AM, the westbound movement would deteriorate from 114.4 seconds (LOS F) to 411.1 seconds (LOS F). During the weekday midday peak period, the westbound movement would deteriorate from 44.8 seconds (LOS D) to 68.5 seconds (LOS E). During the weekday PM, the westbound movement would deteriorate from 212.5 seconds (LOS F) to 468.4 seconds (LOS F). During the Saturday midday peak period, the westbound movement would deteriorate from 48.2 seconds (LOS D) to 107.4 seconds (LOS F).

West 57th Street would experience significant impacts in the weekday AM peak period. During the weekday AM, the southbound left turn would deteriorate from 48.3 seconds (LOS D) to 72.6 seconds (LOS E).

AMSTERDAM AVENUE/TENTH AVENUE CORRIDOR

There would be two significantly impacted intersections along the Amsterdam/Tenth Avenue corridor, one at West 59th Street and one at West 57th Street, during the weekday AM peak period. At West 59th Street the eastbound left turn movement would deteriorate from 38.4 seconds (LOS D) to 46.9 seconds (LOS D) and at West 57th Street the eastbound approach would deteriorate from 46.0 seconds (LOS D) to 53.6 seconds (LOS D).

COLUMBUS AVENUE/NINTH AVENUE CORRIDOR

There are three intersections in this corridor, which would experience significantly impacted movements.

The eastbound right turn movement at West 60th Street would experience significant impacts in the weekday AM, midday, PM and Saturday midday peak periods. The weekday AM peak period would deteriorate from 128.6 seconds (LOS F) to 164.0 seconds (LOS F), the weekday midday peak period would deteriorate from 55.7 seconds (LOS E) to 79.6 seconds (LOS E), the weekday PM peak period would deteriorate from 181.5 seconds (LOS F) to 239.2 seconds (LOS F), and the Saturday midday peak period would deteriorate from 54.8 seconds (LOS E) to 84.7 seconds (LOS F).

West 57th Street would experience significant impacts in all four peak periods. The eastbound movement in the weekday AM peak period would deteriorate from 164.7 seconds (LOS F) to 176.4 seconds (LOS F), and the westbound movement would deteriorate from 74.9 seconds (LOS E) to 81.3 seconds (LOS F). The eastbound through-right movement during the weekday midday peak period would deteriorate from 157.3 seconds (LOS F) to 176.9 seconds (LOS F), and the westbound through movement would deteriorate from 112.8 seconds (LOS F) to 134.3 seconds (LOS F). During the weekday PM peak period the eastbound though-right movement would deteriorate from 150.3 seconds (LOS F) to 172.9 seconds (LOS F), while the westbound through movement would deteriorate from 62.6 seconds (LOS E) to 78.6 seconds (LOS E). During the Saturday midday peak period the westbound through movement would deteriorate from 59.8 seconds (LOS E) to 77.2 seconds (LOS E).

The southbound through-right turn movement at West 66th Street would experience significant impacts in the weekday midday, PM and Saturday midday peak hours. The weekday midday peak period would deteriorate from 121.5 seconds (LOS F) to 127.1 seconds (LOS F), the weekday PM would deteriorate from 134.5 seconds (LOS F) to 140.3 seconds (LOS F), and the Saturday midday would deteriorate from 98.9 seconds (LOS E) to 73.7 seconds (LOS E).

CENTRAL PARK WEST

There are two intersections along Central Park West which would experience significantly impacted movements.

The intersection at West 72nd Street would be significantly impacted during the midday peak period. In the weekday midday peak period the northbound left-through movement would deteriorate from 79.8 seconds (LOS E) to 84.6 seconds (LOS F).

The intersection at West 66th Street would be significantly impacted during the weekday AM, midday, PM and Saturday midday peak periods. During the weekday AM peak period the westbound through movement would deteriorate from 124.2 seconds (LOS F) to 136.7 seconds (LOS F). During the weekday midday peak period the westbound through movement would deteriorate from 107.7 seconds (LOS F) to 118.4 seconds (LOS F). During the weekday PM peak period the westbound through movement would deteriorate from 119.8 seconds (LOS F) to 131.8 seconds (LOS F) and the southbound through-right movement would deteriorate from 57.8 seconds (LOS E) to 63.3 seconds (LOS E). During the Saturday midday peak period the westbound through movement would deteriorate from 108.1 seconds (LOS F) to 131.7 seconds (LOS F).

EIGHTH AVENUE

No intersections along on the Eighth Avenue corridor have significantly impacted movements.

Mitigation measures to address these impacts are presented in Chapter 22, "Mitigation."

TRAFFIC SAFETY

The annual number of pedestrians and bicyclists injured or killed in motor vehicle accidents from 2006 through 2008 at study area intersections is shown in **Table 16-16**. 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. 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 16-16**, 8 intersections experienced one or more years with 5 or more pedestrians or bicyclists killed or injured during the 2006 to 2008 study period.

These high accident location intersections are:

- Eighth Avenue at West 57th Street—there were 4 bicyclists and 9 pedestrians injured or killed in 2006; 2 bicyclists and 8 pedestrians injured or killed in 2007; and 5 pedestrians injured or killed in 2008.
- Ninth Avenue at West 57th Street—there were 2 bicyclists and 4 pedestrians injured or killed in 2006; and 7 pedestrians injured or killed in 2007.
- Tenth Avenue at West 57th Street—there were 2 bicyclists and 3 pedestrians injured or killed in 2006; and 6 pedestrians injured or killed in 2007.

Table 16-16

Annual Pedestrian and Bicyclist Injuries/Fatalities at Study Area Intersections, 2006-2008

Intersection		Bicyclists Killed / Injured			Pedestrians Killed / Injured			Total Peds/Bicyclists Killed/Injured		
		2006	2007	2008	2006	2007	2008	2006	2007	2008
West 57 Street	8 Avenue	4	2	0	9	8	5	**13**	**10**	**5**
	9 Avenue	2	0	2	4	7	2	**6**	**7**	4
	10 Avenue	2	0	1	3	6	3	**5**	**6**	4
	11 Avenue	2	1	0	0	0	1	2	1	1
	12 Avenue	0	1	1	2	1	1	2	2	2
West 58 Street	7 Avenue	0	0	0	1	1	0	1	1	0
	9 Avenue	0	0	1	5	3	4	**5**	3	**5**
	10 Avenue	0	0	0	0	1	1	0	1	1
	11 Avenue	0	0	0	1	0	0	1	0	0
West 59 Street	Amsterdam Avenue	0	0	0	0	1	0	0	1	0
	West End Avenue	0	0	0	2	0	1	2	0	1
	12 Avenue	1	0	0	0	0	0	1	0	0
West 60 Street	Columbus Avenue	0	0	0	2	2	2	2	2	2
	Amsterdam Avenue	0	0	0	1	0	1	1	0	1
	West End Avenue	0	0	0	1	0	1	1	0	1
West 61 Street	Amsterdam Avenue	0	0	0	0	0	2	0	0	2
	West End Avenue	0	1	0	0	0	0	0	1	0
West 63 Street	West End Avenue	0	1	0	1	0	0	1	1	0
West 64 Street	West End Avenue	0	0	0	2	1	0	2	1	0
West 65 Street	Central Park West	0	1	1	0	3	0	0	4	1
	Columbus Avenue	0	0	0	1	1	2	1	1	2
	Broadway	2	0	0	2	0	0	4	0	0
	Amsterdam Avenue	1	0	0	2	0	2	3	0	2
	West End Avenue	0	0	1	1	0	0	1	0	1
West 66 Street	Central Park West	1	0	0	2	0	3	3	0	3
	Columbus Avenue	1	0	2	4	4	4	**5**	4	**6**
	Broadway	1	3	1	4	1	1	**5**	4	2
	Amsterdam Avenue	0	0	1	7	5	1	**7**	**5**	2
	West End Avenue	0	0	0	1	1	1	1	1	1
	Riverside Drive	0	0	0	0	0	0	0	0	0
West 70 Street	West End Avenue	1	0	1	1	0	2	2	0	3
	Riverside Drive	0	0	0	1	0	0	1	0	0
West 71 Street	West End Avenue	0	1	0	1	1	2	1	2	2
West 72 Street	West End Avenue	1	2	3	0	1	2	1	3	**5**
	Riverside Drive	0	0	0	0	0	0	0	0	0
West 79 Street	West End Avenue	0	0	1	2	1	1	2	1	2
	Riverside Drive	0	0	3	0	0	1	0	0	4

Notes

Source: NYCDOT data.

- Ninth Avenue at West 58th Street—there were 5 pedestrians injured or killed in 2006; and 1 bicyclist and 4 pedestrians injured or killed in 2008.
- Columbus Avenue at West 66th Street—1 bicyclist and 4 pedestrians were injured or killed in 2006; and 2 bicyclist and 4 pedestrians were injured or killed in 2008.
- Broadway at West 66th Street—1 bicyclist and 4 pedestrians were injured or killed in 2006.
- Amsterdam Avenue at West 66th Street—there were 7 pedestrians were injured or killed in 2006; and 5 pedestrians were injured or killed in 2007.
- West End Avenue at West 72nd Street—there were 3 bicyclists and 2 pedestrians injured or killed in 2008.

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. As noted in the traffic assignment patterns, the majority of vehicular travel would be focused on Twelfth Avenue/Route 9A (north and south of West 57th Street, West 59th Street and on Riverside Boulevard). Therefore, only a minor number of project related vehicles would be traveling through these high accident locations, which are concentrated along the West 57th Street corridor and on the north-south corridors of Columbus Avenue, Amsterdam Avenue and Broadway. NYCDOT has already begun to address these high accident locations by implementing the Safe Streets for Seniors campaign to increase safety within the study area. These safety improvements include increasing the pedestrian crossing time of the wide avenues to allow for adequate green time for slow walkers, installing high visibility crosswalks and advanced stop bars at 18 locations, and installing two pedestrian refuge islands at the intersections of West 61st and West End Avenue (south crosswalk) and at West 66th Street and West End Avenue (north crosswalk), as well as the investigation of including leading pedestrian intervals at 15 locations. NYCDOT is also planning to implement a bicycle protection system along both Eighth and Ninth Avenues. These safety improvement measures along with other proposed items from No Build projects in the area, such as 770 Eleventh Avenue, have all been included in the No Build condition analysis. However, the Proposed Project would include a new elementary and intermediate school on the project site with an entrance along West 61st Street. With a maximum capacity of just over 1,300 elementary and intermediate school children, it would be expected that a substantial number of students at the school would be from the adjacent neighborhood. At most, approximately 90 percent of children would be expected to arrive on foot and concentrate at the West End Avenue/West 61st Street intersection. While this intersection is presently not a high-accident location (limited pedestrian activity), the potential for vehicle pedestrian conflict would be expected to increase substantially with the Proposed Project.

To address the increased presence of children, the West End Avenue/West 61st Street intersection would include:

- School crossing signs and pavement markings along both directions of West End Avenue;
- Installation of school crosswalks on three of the four approaches; and
- Installation of street lights on the southwest corner to maximize after dark visibility.

PARKING

PARKING SUPPLY CHANGES

The Proposed Project would provide 1,800 parking spaces to accommodate accessory and public demand. As noted previously, the 2,387 existing public parking spaces on the project site would be displaced, as described in more detail below.

Tables 16-17 and 16-18 show the expected accessory and public parking demand and accumulation for a typical weekday and Saturday for each building, respectively. These tables represent the RWCDS 1 which has the highest parking demand of all the scenarios. As shown in **Table 16-17**, the weekday accessory demand on site (i.e., the parking demand from project-related uses) would peak at 1,374 spaces in the late evening. **Table 16-18** also shows that on Saturday, the peak accessory accumulation would be at 1,359 spaces during the overnight period. The total peak demand due to the Proposed Project would result in the utilization of approximately 76.3 percent of the 1,800 on-site parking spaces during the weekday late evening and Saturday overnight periods. Since the parking garages would function as public parking facilities with a total of 1,800 spaces, parking spaces that are not utilized by accessory demand from on-sites uses could be used to accommodate a portion of the displaced parkers who currently park on site or the demand from other parkers in the project study area. **Table 16-17 and 16-18** also shows the estimated portions of weekday and Saturday public demands that would be retained by the project site.

Table 16-19 provides a summary of 2018 Build parking conditions within the overall ¼-mile parking study area. As shown in **Table 16-19**, utilization would increase from 81.2 percent to 102.3 percent from No Build to Build in the weekday midday peak hour, while weekday overnight and Saturday midday would increase from 68.8 percent to 90.9 percent and from 62.3 percent to 80.4 percent, respectively. Within ¼ mile around the project site available off-street parking capacity would be sufficient to accommodate all project-generated, as well as displaced parker parking demand However, within ½ mile of the project site the 2018 parking utilization would be approximately 93.4 percent during the weekday midday. Therefore, no parking shortfall would be anticipated.

Table 16-17

PARKING PEAK SCENARIO / WEEKDAY ON-SITE ACCUMULATION

	Building 1 Capacity=460							Building 2 Capacity=230							Building 3 Capacity=290						
	Accessory parking			Public garage demand				Accessory parking			Public garage demand				Accessory Parking			Public garage demand			
	In	Out	Accumulation	In	Out	Accumulation	Accumulation	In	Out	Accumulation	In	Out	Accumulation	Accumulation	In	Out	Accumulation	In	Out	Accumulation	Accumulation
12-1 AM	1	1	424	1	0	31	455	1	1	230	0	0	0	230	0	0	185	0	0	100	285
1-2	1	1	424	0	0	31	455	1	1	230	0	0	0	230	0	0	185	0	0	100	285
2-3	1	1	424	0	0	31	455	1	1	230	0	0	0	230	0	0	185	0	0	100	285
3-4	1	1	424	1	0	32	456	1	1	230	0	0	0	230	0	0	185	0	0	100	285
4-5	1	1	424	3	0	35	459	1	1	230	0	0	0	230	0	0	185	2	0	102	287
5-6	2	7	419	6	0	41	460	1	4	227	3	0	3	230	1	3	183	5	0	107	290
6-7	6	20	405	9	0	50	455	3	11	219	4	0	7	226	2	9	176	7	0	114	290
7-8	8	21	392	15	11	54	446	11	11	219	4	0	11	230	3	11	168	9	5	118	286
8-9	11	52	351	21	16	59	410	9	28	200	10	0	21	221	5	22	151	12	5	125	276
9-10	17	19	349	11	5	65	414	9	11	198	9	0	30	228	6	8	149	10	5	130	279
10-11	18	23	344	15	12	68	412	11	13	196	3	0	33	229	6	9	146	11	8	133	279
11-12	19	22	341	14	14	68	409	12	13	195	0	0	33	228	6	8	144	8	9	132	276
12-1 PM	23	22	342	17	16	69	411	13	12	196	0	0	33	229	8	8	144	8	6	134	278
1-2	24	24	342	6	5	70	412	14	14	196	0	0	33	229	8	8	144	5	5	134	278
2-3	23	24	341	8	10	68	409	14	14	196	0	0	33	229	9	8	145	7	10	131	276
3-4	31	22	350	10	15	63	413	18	19	195	0	10	23	218	12	8	149	8	13	126	275
4-5	49	31	368	8	10	61	429	28	20	203	0	7	16	219	19	12	156	6	9	123	279
5-6	54	31	391	9	17	53	444	29	20	212	0	6	10	222	20	11	165	8	15	116	281
6-7	38	22	407	6	16	43	450	24	14	222	0	5	5	227	15	8	172	5	14	107	279
7-8	36	22	421	6	13	36	457	17	13	226	0	5	0	226	12	8	176	5	13	99	275
8-9	26	16	431	2	9	29	460	14	10	230	0	0	0	230	12	5	183	5	8	96	279
9-10	7	14	424	3	4	28	452	7	8	229	0	0	0	229	4	4	183	3	2	97	280
10-11	5	6	423	4	2	30	453	3	2	230	0	0	0	230	3	2	184	3	1	99	283
11-12	4	3	424	1	1	30	454	2	2	230	0	0	0	230	2	1	185	2	1	100	285
	406	406		176	176			244	244		33	33			153	153		129	129		

	Building 4 Capacity=370							Building 5 Capacity=450							Total Capacity=1800						
	Accessory parking			Public garage demand				Accessory parking			Public garage demand				Accessory Parking			Public garage demand			
	In	Out	Accumulation	In	Out	Accumulation	Accumulation	In	Out	Accumulation	In	Out	Accumulation	Accumulation	In	Out	Accumulation	In	Out	Accumulation	Accumulation
12-1 AM	0	0	170	1	0	178	348	1	1	349	3	0	95	444	3	3	1358	5	0	404	1762
1-2	0	0	170	0	0	178	348	1	1	349	0	0	95	444	3	3	1358	0	0	404	1762
2-3	0	0	170	0	0	178	348	1	1	349	0	0	95	444	3	3	1358	0	0	404	1762
3-4	0	0	170	2	0	180	350	1	1	349	0	0	95	444	3	3	1358	3	0	407	1765
4-5	0	0	170	3	0	183	353	1	1	349	2	0	97	446	3	3	1358	10	0	417	1775
5-6	1	3	168	8	0	191	359	2	6	345	6	0	103	448	7	23	1342	28	0	445	1787
6-7	2	8	162	9	0	200	362	5	16	334	8	0	111	445	18	64	1296	37	0	482	1778
7-8	14	11	165	9	5	204	369	18	19	333	13	7	117	450	54	73	1277	50	28	504	1781
8-9	19	27	157	10	6	208	365	25	49	309	14	5	126	435	69	178	1168	67	32	539	1707
9-10	17	12	162	5	5	208	370	25	21	313	16	10	132	445	74	71	1171	51	25	565	1736
10-11	13	15	160	10	8	210	370	21	26	308	18	16	134	442	69	86	1154	57	44	578	1732
11-12	14	16	158	8	9	209	367	24	26	306	16	20	130	436	75	85	1144	46	52	572	1716
12-1 PM	19	19	158	7	7	209	367	31	30	307	7	5	132	439	94	91	1147	39	34	577	1724
1-2	16	16	158	5	4	210	368	28	28	307	11	10	133	440	90	90	1147	27	24	580	1727
2-3	15	15	158	6	9	207	365	27	27	307	18	22	129	436	88	88	1147	39	51	568	1715
3-4	16	17	157	19	24	202	359	30	28	309	11	14	126	435	107	94	1160	48	76	540	1700
4-5	23	22	158	16	15	203	361	45	37	317	7	10	123	440	164	122	1202	37	51	526	1728
5-6	22	23	157	20	31	192	349	46	40	323	7	16	114	437	171	125	1248	44	85	485	1733
6-7	14	9	162	14	22	184	346	33	18	338	5	15	104	442	124	71	1301	30	72	443	1744
7-8	13	8	167	12	19	177	344	30	18	350	5	12	97	447	108	69	1340	28	62	409	1749
8-9	9	5	171	9	11	175	346	21	13	358	2	9	90	448	82	49	1373	18	37	390	1763
9-10	2	3	170	10	8	177	347	6	11	353	4	4	90	443	26	40	1359	20	18	392	1751
10-11	2	2	170	5	6	176	346	3	6	350	4	3	91	441	16	18	1357	16	12	396	1753
11-12	1	1	170	3	2	177	347	3	4	349	2	1	92	441	12	11	1358	8	5	400	1758
	232	232		191	191			428	428		179	179			1463	1463		708	708		

This table has been revised for the FSEIS to reflect the reassignment of fifty percent of the vehicular demand generated by the auto-dealership from the parking garage entrances to the auto-service entrance on W. 59th Street.

Table 16-18
PARKING PEAK SCENARIO / SATURDAY ON-SITE ACCUMULATION

	Building 1 Capacity=460							Building 2 Capacity=230							Building 3 Capacity=290						
	Accessory parking			Public garage demand				Accessory parking			Public garage demand				Accessory Parking			Public garage demand			
	In	Out	Accumulation	In	Out	Accumulation	Accumlation	In	Out	Accumulation	In	Out	Accumulation	Accumlation	In	Out	Accumulation	In	Out	Accumulation	Accumlation
12-1 AM	1	1	424	0	0	36	460	1	1	230	0	0	0	230	0	0	185	0	0	105	290
1-2	1	1	424	0	0	36	460	1	1	230	0	0	0	230	0	0	185	0	0	105	290
2-3	1	1	424	0	0	36	460	1	1	230	0	0	0	230	0	0	185	0	0	105	290
3-4	1	1	424	0	0	36	460	1	1	230	0	0	0	230	0	0	185	0	0	105	290
4-5	1	1	424	0	0	36	460	1	1	230	0	0	0	230	0	0	185	0	0	105	290
5-6	2	7	419	1	1	36	455	1	4	227	1	0	1	228	1	3	183	2	2	105	288
6-7	6	19	406	4	1	39	445	3	10	220	3	1	3	223	2	8	177	3	1	107	284
7-8	8	30	384	5	2	42	426	5	16	209	4	2	5	214	3	13	167	5	2	110	277
8-9	10	40	354	6	3	45	399	7	22	194	5	2	8	202	5	16	156	5	4	111	267
9-10	17	27	344	8	9	44	388	10	14	190	5	6	7	197	5	11	150	8	8	111	261
10-11	20	31	333	9	10	43	376	13	17	186	7	8	6	192	6	12	144	9	9	111	255
11-12	24	31	326	8	10	41	367	16	19	183	5	7	4	187	6	10	140	7	9	109	249
12-1 PM	28	49	305	6	14	33	338	17	28	172	7	10	1	173	8	18	130	5	13	101	231
1-2	40	34	311	10	9	34	345	25	21	176	7	5	3	179	13	11	132	11	9	103	235
2-3	43	42	312	6	5	35	347	25	26	175	5	5	3	178	14	13	133	7	6	104	237
3-4	38	26	324	6	9	32	356	24	17	182	4	7	0	182	12	7	138	6	9	101	239
4-5	35	39	320	7	9	30	350	21	25	178	7	7	0	178	12	13	137	5	9	97	234
5-6	55	23	352	6	6	30	382	31	15	194	5	5	0	194	21	6	152	4	4	97	249
6-7	37	17	372	5	4	31	403	21	12	203	4	4	0	203	15	5	162	4	3	98	260
7-8	34	8	398	3	2	32	430	18	6	215	2	2	0	215	13	3	172	4	1	101	273
8-9	26	9	415	3	1	34	449	15	5	225	2	2	0	225	11	3	180	2	1	102	282
9-10	11	4	422	1	0	35	457	7	3	229	1	0	1	230	5	1	184	2	0	104	288
10-11	6	4	424	1	0	36	460	2	2	229	1	1	1	230	2	1	185	1	0	105	290
11-12	3	3	424	0	0	36	460	2	1	230	0	1	0	230	1	1	185	0	0	105	290
	448	448		95	95			268	268		75	75			155	155		90	90		

	Building 4 Capacity=370							Building 5 Capacity=450							Total Capacity=1800						
	Accessory parking			Public garage demand				Accessory parking			Public garage demand				Accessory Parking			Public garage demand			
	In	Out	Accumulation	In	Out	Accumulation	Accumlation	In	Out	Accumulation	In	Out	Accumulation	Accumlation	In	Out	Accumulation	In	Out	Accumulation	Accumlation
12-1 AM	0	0	171	0	0	199	370	1	1	349	0	0	101	450	3	3	1359	0	0	441	1800
1-2	0	0	171	0	0	199	370	1	1	349	0	0	101	450	3	3	1359	0	0	441	1800
2-3	0	0	171	0	0	199	370	1	1	349	0	0	101	450	3	3	1359	0	0	441	1800
3-4	0	0	171	0	0	199	370	1	1	349	0	0	101	450	3	3	1359	0	0	441	1800
4-5	0	0	171	0	0	199	370	1	1	349	0	0	101	450	3	3	1359	0	0	441	1800
5-6	1	3	169	2	1	200	369	2	6	345	2	1	102	447	7	23	1343	8	5	444	1787
6-7	2	7	164	5	2	203	367	6	16	335	3	1	104	439	19	60	1302	18	6	456	1758
7-8	10	14	160	7	3	207	367	14	26	323	5	2	107	430	40	99	1243	26	11	471	1714
8-9	10	19	151	7	4	210	361	17	38	302	4	3	108	410	49	135	1157	27	16	482	1639
9-10	12	13	150	10	10	210	360	22	25	299	7	6	109	408	66	90	1133	38	39	481	1614
10-11	10	16	144	11	13	208	352	21	31	289	9	9	109	398	70	107	1096	45	49	477	1573
11-12	12	16	140	10	12	206	346	26	32	283	7	10	106	389	84	108	1072	37	48	466	1538
12-1 PM	13	23	130	8	17	197	327	29	47	265	4	12	98	363	95	165	1002	30	66	430	1432
1-2	18	17	131	13	12	198	329	43	38	270	10	10	98	368	139	121	1020	51	45	436	1456
2-3	20	19	132	8	7	199	331	42	40	272	6	5	99	371	144	140	1024	32	28	440	1464
3-4	14	10	136	7	12	194	330	36	27	281	6	9	96	377	124	87	1061	29	46	423	1484
4-5	14	18	132	9	12	191	323	33	42	272	6	9	93	365	115	137	1039	34	46	411	1450
5-6	22	13	141	7	7	191	332	47	28	291	5	5	93	384	176	85	1130	27	27	411	1541
6-7	14	4	151	6	4	193	344	31	15	307	5	2	96	403	118	53	1195	24	17	418	1613
7-8	12	2	161	4	3	194	355	29	6	330	3	2	97	427	106	25	1276	16	10	424	1700
8-9	9	2	168	3	2	195	363	19	7	342	3	2	98	440	80	26	1330	13	8	429	1759
9-10	3	1	170	4	1	198	368	8	3	347	1	0	99	446	34	12	1352	9	1	437	1789
10-11	2	1	171	1	1	198	369	5	4	348	2	0	101	449	17	12	1357	6	2	441	1798
11-12	1	1	171	1	0	199	370	3	2	349	0	0	101	450	10	8	1359	1	1	441	1800
	199	199		123	123			438	438		88	88			1508	1508		471	471		

This table has been revised for the FSEIS to reflect the reassignment of fifty percent of the vehicular demand generated by the auto-dealership from the parking garage entrances to the auto-service entrance on W. 59th Street

Table 16-19
2018 Build Off-Street Parking Utilization
(Weekday AM, Midday, Pre-Theater, Overnight and Saturday Midday)

2018 No Build Condition	
No-Build Capacity (spaces)	**6,410**
AM Parking Demand (Spaces)	4,789
AM Utilization	74.7%
Midday Parking Demand (Spaces)	5,202
Midday Utilization	81.2%
Pre-Theater Parking Demand (Spaces)	4,737
Pre-Theater Utilization	73.9%
Overnight Parking Demand	4,411
Overnight Utilization	68.8%
Saturday Midday Parking Demand	3,991
Saturday Midday Utilization	62.3%
2018 Build Condition	
Proposed Project Site Garage	1800
Closed Garages/Lots at Project Site	
No-Build Site - Building L	149
No-Build Site - Building M	152
Existing Parking Lot	1,850
Build Capacity (Spaces within 1/4 Mile)	**6,059**
AM Parking Demand (Spaces Within 1/4 Mile)	5,854
Available Spaces	205
AM Utilization	**96.6%**
Midday Parking Demand (Spaces Within 1/4 Mile)	6,196
Available Spaces	-137
Midday Utilization (Over Capacity with 1/4 Mile)	**102.3%**
Build Capacity (Spaces within 1/2 mile)	**14,010**
Midday Parking Demand (Spaces)	13,091
Available Spaces	919
Midday Utilization (Project Demand can be met within 1/2 Mile)	**93.4%**
Pre-Theater Parking Demand (Spaces Within 1/4 Mile)	5,849
Available Spaces	210
Pre-Theater Utilization	**96.5%**
Overnight Parking Demand (Space Within 1/4 Mile)	5,510
Available Spaces	549
Overnight Utilization	**90.9%**
Saturday Midday Parking Demand (Space Within 1/4 Mile)	4,869
Available Spaces	1,190
Saturday Midday Utilization	**80.4%**

This table has been revised for the FSEIS

G. FUTURE CONDITIONS WITH THE MILLER HIGHWAY RELOCATION

As described in Chapter 1, "Project Description," for certain environmental issues—including traffic and parking—the 1992 FEIS analyzed an additional scenario in which the elevated portion of the Miller Highway (also known as Route 9A) between 59th Street and 72nd Street would be relocated to an inbound, below-grade location by 2002, the anticipated completion year for the Riverside South project.

At this time the Miller Highway has not been relocated, and there is no funding allocated toward advancing the project. However, since the highway may, in the future, be relocated, this section considers an additional future condition in which the highway relocation takes place by the Proposed Project's Build year of 2018, in a manner similar to that described in the 1992 FEIS, and as analyzed in greater detail as part of the Preferred Alternative scenario in the *October 2000 Miller Highway Project FEIS.*

The potential relocation of the Miller Highway would be functionally identical (from a traffic viewpoint) to the elevated highway analyzed for the 2018 Build conditions. That is, the relocated highway would also have three lanes in each direction and a northbound entrance ramp at West 72nd Street.

South of West 61st Street, the new alignment of the relocated highway would cause the severing of the West 59th Street underpass that gains access to the southbound service road of Route 9A. With the closure of West 59th Street under the existing Miller Highway most of the vehicles would be rerouted to either West 61st or West 63rd Street. **Figure 16-22** shows the new alignment of the Miller Highway traveling under Riverside Boulevard with West 61st Street gaining access to the southbound Route 9A service road. Vehicles that currently travel west on West 59th Street to access southbound Route 9A would have to make a right on Riverside Boulevard and then make a U-turn at West 61st Street. Vehicles traveling south on West End Avenue that currently make the right turn onto westbound West 59th Street would most likely turn on West 61st Street instead causing vehicle diversion along West End Avenue between West 61st Street and West 59th Street. Vehicles traveling north on West End Avenue that currently make the left turn onto westbound West 59th Street would most likely turn on West 63rd Street as the northbound left turn at West 61st Street is banned. No other diversions are likely as a result from the relocation of the Miller Highway.

Table 16-20 shows the resulting traffic analysis from these diversions and compares the 2018 Build and No Build Conditions. As shown on the table, none of the analyzed intersections would experience new significant impacts compared to the 2018 Build condition without the relocation of the Miller Highway. However, there are two intersections that would be impacted in the Build condition and would still experience significant adverse impacts with the traffic diversions resulting from the relocation of the Miller Highway. These intersections are West 59th Street at both Riverside Boulevard and West End Avenue. The remaining seven intersections that would be affected by diverted vehicles would not be significantly impacted in either the Build condition or with the relocation of the Miller Highway.

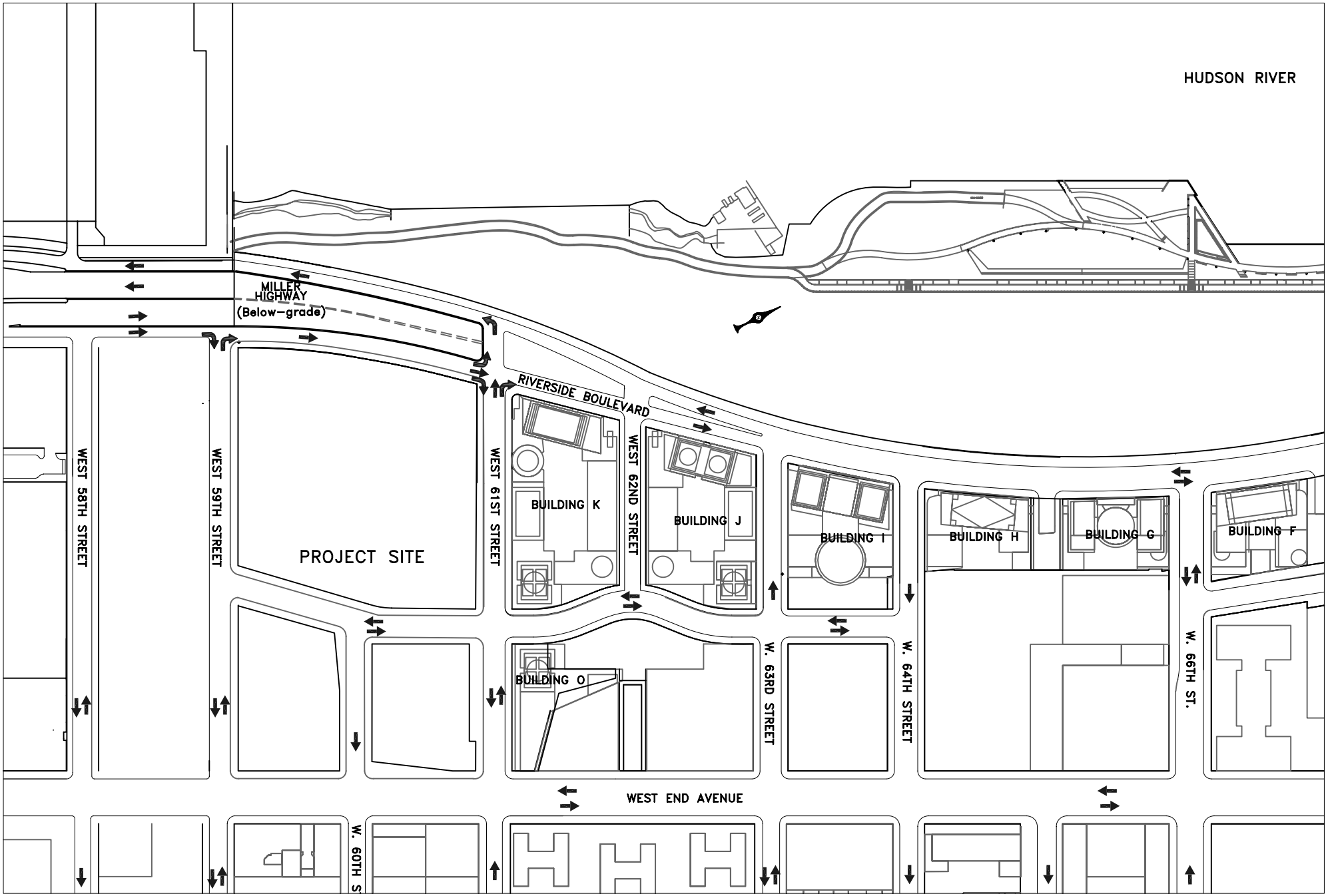


Figure 16-22

Riverside Center SEIS

2018 Roadway Plan with Relocated Miller Highway

Table 16-20

2018 Build Traffic Conditions — **Relocated Highway LOS Table**

	LANE GROUP	NO-BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD AM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO-BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO-BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD PM PEAK HOUR V/C RATIO	Delay (sec.)	LOS	NO-BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS	BUILD SAT MD PEAK HOUR V/C RATIO	Delay (sec.)	LOS
11th Avenue/West End Avenue																									
West End Ave. (N-S) @ W. 61 st St.	EB-LR	0.06	20.0	C	0.14	21.0	C	0.04	19.7	B	0.11	20.5	C	0.04	19.8	B	0.12	20.6	C	0.03	19.6	B	0.10	20.4	C
	NB-T	0.58	15.2	B	0.58	15.3	B	0.27	11.4	B	0.28	11.5	B							0.31	11.8	B	0.33	11.9	B
	NB-R	0.12	10.4	B	0.12	10.4	B	0.06	9.9	A	0.06	9.9	A							0.04	9.7	A	0.04	9.7	A
	NB-TR													0.33	8.3	A	0.34	8.3	A						
	SB-L	0.39	17.3	B	0.39	17.5	B	0.14	11.0	B	0.15	11.0	B	0.22	12.4	B	0.22	12.5	B	0.18	11.5	B	0.19	11.6	B
	SB-TR	0.89	21.5	C	1.00	40.2	D	0.59	15.6	B	0.69	17.9	B	0.71	18.4	B	0.81	22.5	C	0.63	16.2	B	0.69	17.8	B
West End Ave. (N-S) @ W. 60 th St. (EB)	EB-LTR	0.06	19.4	B	0.15	20.5	C	0.07	19.6	B	0.16	20.7	C	0.11	20.0	B	0.24	21.8	C	0.10	19.9	B	0.26	22.1	C
	NB-L	0.11	11.3	B				0.13	11.3	B				0.09	7.7	A				0.06	10.2	B			
	NB-TR	0.84	23.5	C	0.87	25.9	C	0.40	12.9	B	0.41	13.1	B	0.38	8.7	A	0.39	8.8	A	0.46	13.6	B	0.47	13.8	B
	SB-L	0.36	15.1	B	0.38	16.4	B	0.22	12.4	B	0.26	13.2	B	0.41	17.4	B	0.42	17.9	B	0.24	12.9	B	0.25	13.2	B
	SB-T				0.73	13.9	B				0.50	14.1	B				0.57	15.2	B				0.53	14.5	B
	SB-TR	0.74	14.3	B		14.0	B	0.54	14.1	B				0.57	15.2	B				0.55	14.8	B			
West End Ave. (N-S) @ W. 59 th St. (E-W)	EB-LT				0.96	82.2	F				0.29	26.8	C				0.58	36.0	D				0.26	26.7	C
	EB-R				0.21	26.3	C				0.23	26.6	C				0.38	29.4	C				0.20	26.1	C
	EB-LTR	0.97	82.6	F		68.4	E	0.34	27.8	C		26.7	C	0.82	52.6	D		33.1	C	0.28	26.8	C		26.4	C
	WB-LTR	1.12	114.4	F	1.81	411.1	F *	0.81	44.8	D	0.97	68.5	E *	1.36	212.5	F	1.95	471.5	F *	0.83	48.2	D	1.10	108.4	F *
	NB-L	0.25	10.8	B	0.49	17.8	B	0.14	8.5	A	0.32	11.6	B	0.27	6.9	A	0.43	10.3	B	0.16	8.8	A	0.36	12.9	B
	NB-TR	0.56	11.8	B	0.56	11.8	B	0.27	8.6	A	0.27	8.6	A	0.20	4.4	A	0.20	4.4	A	0.30	8.8	A	0.30	8.8	A
	SB-L	0.02	4.0	A	0.02	4.0	A	0.02	6.9	A	0.02	6.9	A	0.03	7.0	A	0.03	7.0	A	0.05	7.3	A	0.05	7.3	A
	SB-TR	0.65	8.2	A	0.66	8.4	A	0.40	9.8	A	0.41	9.9	A	0.47	10.5	B	0.48	10.7	B	0.45	10.2	B	0.46	10.4	B
Riverside Blvd.																									
Riverside Blvd (SB) @ W. 61st St. (WB) UNSIGNALIZED All-WAY STOP	WB-L	NA	17.2	C	NA	28.0	D	NA	10.7	B	NA	13.7	B	NA	10.3	B	NA	13.3	B	NA	10.2	B	NA	13.2	B
	SB-LT	NA	9.9	A	NA	11.5	B	NA	8.6	A	NA	9.8	A	NA	8.7	A	NA	10.0	B	NA	8.4	A	NA	9.8	A
Riverside Blvd (NB) @ W. 61st St. (EW) UNSIGNALIZED All-WAY STOP	EB-LT	NA	8.5	A	NA	9.7	A	NA	8.1	A	NA	9.0	A	NA	8.3	A	NA	9.2	A	NA	8.0	A	NA	9.2	A
	WB-TR	NA	9.9	A	NA	12.6	B	NA	8.5	A	NA	9.7	A	NA	8.9	A	NA	10.9	B	NA	8.4	A	NA	10.0	B
	NB-L	NA	12.2	B	NA	16.8	C	NA	9.8	A	NA	12.1	B	NA	9.2	A	NA	11.6	B	NA	9.4	A	NA	12.0	B
	NB-TR	NA	10.0	A	NA	12.2	B	NA	8.8	A	NA	9.9	A	NA	10.9	B	NA	12.9	B	NA	8.5	A	NA	10.5	B
Riverside Blvd (SB) @ W. 59th St. (EB) UNSIGNALIZED All-WAY STOP	EB-R	0.06	15.6	C	0.09	20.6	C	0.02	12.7	B	0.02	13.9	B	0.01	12.5	B	0.01	13.9	B	0.02	12.1	B	0.03	15.3	B
Riverside Blvd (NB) @ W. 59th St. (WB) UNSIGNALIZED TWO-WAY STOP	NB-TR	1.14	108.0	F	1.46	237.4	F *	0.79	30.8	D	1.11	98.5	F *	1.01	67.5	F	1.41	217.2	F *	0.68	23.0	C	1.07	84.6	F *
Freedom Place																									
W.59th St. (E-W) @ Freedom Pl. (N-S) UNSIGNALIZED 2-WAY STOP	EB-LT				0.09	8.5	A				0.06	8.1	A				0.11	8.5	A				0.10	8.2	A
	SB-LR				0.04	15.1	C				0.03	12.3	B				0.07	17.9	C				0.05	14.0	B
W.61st St. (E-W) @ Freedom Pl. (N-S) UNSIGNALIZED 2-WAY STOP	EB-LTR				0.00	7.8	A				0.00	7.3	A				0.00	7.7	A				0.00	7.7	A
	WB-LTR				0.05	8.0	A				0.03	7.5	A				0.05	8.0	A				0.07	8.1	A
	NB-LTR				0.35	19.3	C				0.15	10.4	B				0.42	20.3	C				0.40	20.6	C
	SB-LTR				0.03	11.2	B				0.02	9.9	A				0.01	11.1	B				0.01	10.4	B

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