Chapter 16: Traffic and Parking

A. INTRODUCTION

This chapter provides a discussion of the potential impacts of new vehicle trips associated with the proposed project on the local street network and at key intersections in the study area, as well as the effect on parking conditions in the area. The chapter describes existing (2008) and projected (2014) traffic and parking conditions in the future without the proposed project (the "No Action" condition) and the future with the proposed project.

Temporary impacts that could occur during construction resulting from the proposed project are presented in Chapter 20, "Construction Impacts." The project's potential impacts to transit and pedestrian facilities are described in Chapter 17, "Transit and Pedestrians."

PRINCIPAL CONCLUSIONS

The proposed action includes two development scenarios—the Single-Tenant Office Scenario and the Multi-Tenant Office Scenario. Both options include office and retail components, resulting in an increase in the number of vehicle trips into and out of the development site study area. The traffic study area, identified in **Figure 16-1**, extends south from the development site to West 30th Street and north to West 35th Street. In the east-west direction, the study area extends from Eighth Avenue to Madison Avenue. In addition, key intersections along 34th Street—including Ninth Avenue, Park Avenue, Lexington Avenue, Third Avenue, Second Avenue, First Avenue, and the FDR Drive—were analyzed. A total of 43 signalized intersections were selected for detailed traffic impact analysis. These intersections were analyzed for weekday AM, weekday Midday, weekday PM, and Saturday Midday peak hour conditions.

Existing conditions traffic analysis indicated that although most intersections in the traffic study area operate at overall acceptable levels during the four analysis peak hours, individual approach movements at numerous intersections operate at mid-Level of Service (LOS) D or worse. Overall, of the 135 approach movements analyzed, 27 approach movements at 20 intersections operate at mid-LOS D or worse in the AM peak hour; 18 approach movements at 16 intersections operate at mid-LOS D or worse in the Midday peak hour; 23 approach movements at 19 intersections operate at mid-LOS D or worse in the PM peak hour; and 18 approach movements at 17 intersections operate at mid-LOS D or worse in the Saturday Midday peak hour. Minimal on-street parking is available in the primary study area, with most on-street parking restricted for commercial vehicles. A survey of off-street parking facilities within ¼ mile of the project site indicated approximately 1,100 spaces available during the weekday Midday, a utilization rate of 76 percent of all spaces. Approximately 2,200 spaces were available during the weekday overnight, a utilization of 44 percent of the available off-street parking supply.

As detailed in Chapter 2, "Procedural and Analytical Framework," significant levels of development were assumed within and in the area surrounding the traffic study area for analysis

of the No Action condition. Under the No Action condition, an additional 8 approach movements during the weekday AM peak hour, 3 approach movements during the weekday Midday peak hour, 6 approach movements during the PM peak hour, and 3 approach movements during the Saturday Midday peak hour operate at mid-LOS D or worse compared to existing conditions. Off-street parking demand continues to be below the parking supply in the study area.

For the future with the proposed project condition, the worst-case development scenario at the development site was analyzed for each traffic and parking analysis time period. Under the future with the proposed project condition, an additional 1 approach movement during the weekday AM peak hour, 1 approach movement during the weekday Midday peak hour, 4 approach movements during the PM peak hour, and 4 approach movements during the Saturday Midday peak hour operate at mid-LOS D or worse compared to the No Action condition. Off-street parking demand continues to be below the parking supply in the study area.

Under the future with the proposed project condition, significant adverse traffic impacts were identified for 15 approach movements at 13 intersections during the weekday AM peak hour, 11 approach movements at 11 intersections during the weekday Midday peak hour, 20 approach movements at 16 intersections during the weekday PM peak hour, and 13 approach movements at 13 intersections during the Saturday Midday peak hour. Off-street parking capacity in the study area is sufficient to accommodate the future with the proposed project parking demand.

B. METHODOLOGY

OVERVIEW

Planning a transportation impact study begins with understanding the travel characteristics associated with various components of the proposed project and the roadway network and regional transportation systems surrounding the project area (see **Figure 16-1** for the traffic study area). Depending on the size and anticipated trip generation of the proposed project, various transportation elements may need to be evaluated quantitatively. The determination of analysis needs for projects in New York City is based on guidance outlined in the *City Environmental Quality Review (CEQR) Technical Manual*. Impacts on vehicular flow, parking supply and demand, and vehicle-pedestrian safety are evaluated as part of the "Traffic and Parking" section of an Environmental Impact Statement (EIS), while those on transit services and pedestrian flow are examined in the "Transit and Pedestrians" section.

Once the analysis needs are determined, a study area is developed for each of the specific transportation elements. At the same time, the appropriate analysis time periods would be determined. Typically, the weekday AM, Midday, and PM peak hours are selected as representative peak periods for traffic analysis. To provide the basic parameters for analysis, baseline traffic, parking, transit, and pedestrian data, along with physical and operational characteristics, are collected for use in developing baseline conditions, often referred to as "existing conditions." Once the basic analysis parameters have been established, operating levels for each of the transportation analysis areas would be determined.

The No Action condition builds on the existing conditions analysis by incorporating background growth, other nearby projects expected to be completed, and any anticipated changes in the transportation network. Again, operating levels would be computed. The analysis results would become the future baseline onto which projected increments associated with the proposed project

would be layered to formulate the "future with the proposed project conditions." If the future with the proposed project analyses conclude that the proposed project would result in significant transportation-related adverse impacts, as defined by the *CEQR Technical Manual*, mitigation measures would be explored to alleviate these impacts.

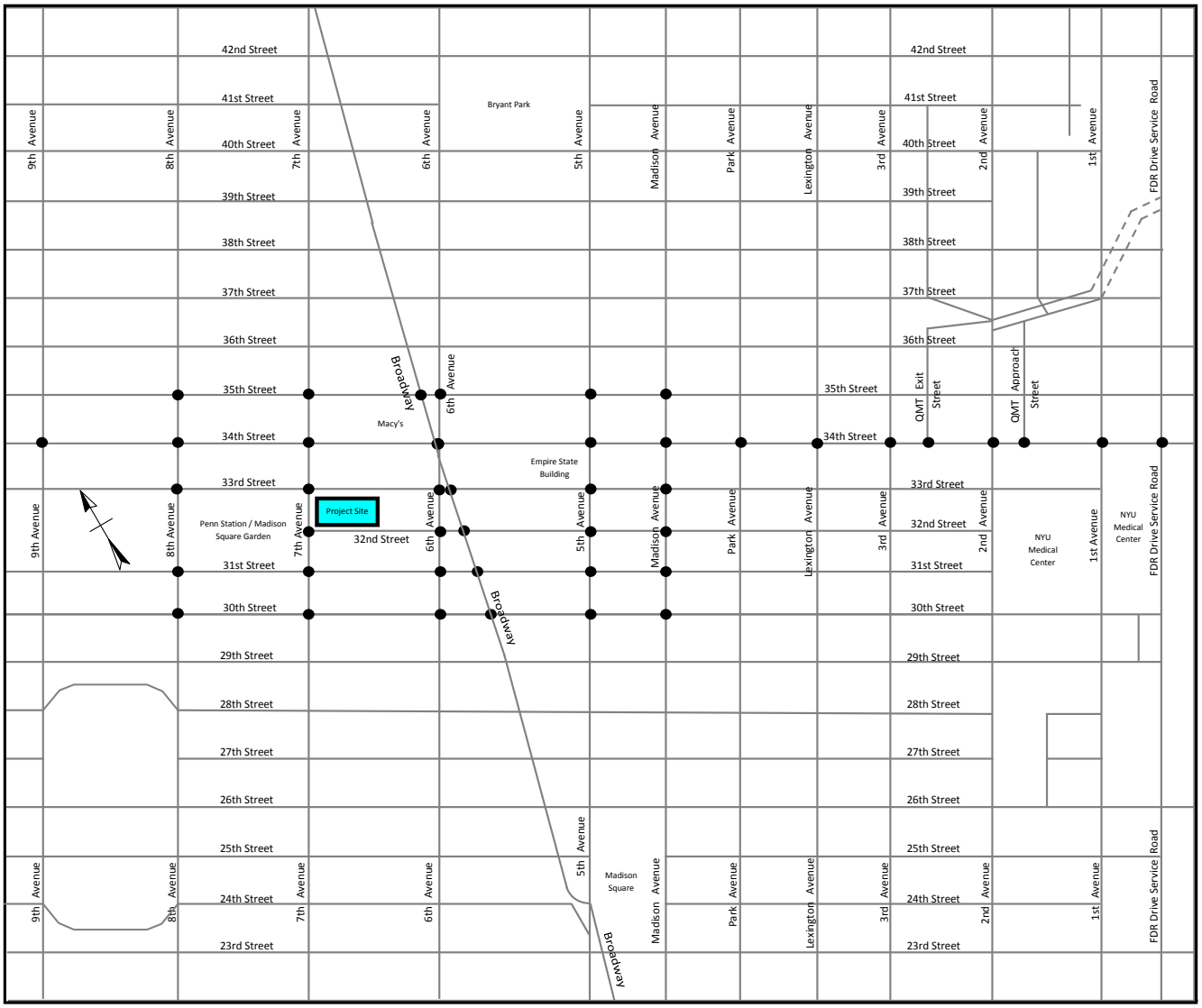
STUDY AREA

CEQR Technical Manual guidelines suggest that intersections through which 50 or more project-generated vehicles may be expected to travel during peak periods should be analyzed as the basis for determining project impacts. To identify the scale of the traffic study area and proposed traffic analysis locations, project-generated weekday vehicle trips were assigned to the Manhattan roadway network and the projected number of project-generated vehicle trips that would travel through each intersection was summarized for reasonable worst-case conditions. Specific traffic study locations were then selected through coordination with the New York City Department of City Planning (DCP) and the New York City Department of Transportation (NYCDOT).

The traffic study area, identified in **Figure 16-1**, extends south from the development site to West 30th Street and north to West 35th Street. In the east-west direction, the study area extends from Eighth Avenue to Madison Avenue. In addition, key intersections along 34th Street—including Ninth Avenue, Park Avenue, Lexington Avenue, Third Avenue, Second Avenue, First Avenue, and the FDR Drive—were analyzed. The total study area includes 43 signalized intersections for analysis.

PEAK HOURS FOR ANALYSIS

Hour-by-hour estimates of the vehicular trips likely to be generated by the proposed project indicate that trip generation would be greatest in the traditional weekday AM, Midday, and PM peak traffic hours: 8 to 9 AM, 12 to 1 PM, and 5 to 6 PM. These hours, therefore, were selected for analysis of weekday traffic conditions. Weekend vehicular activity expected to be generated by the proposed project, while less peaked and lower in total volume than weekday trip generation, could result in traffic impacts as well. For this reason, the Saturday Midday 1 to 2 PM period was also selected for analysis.



Project Site
Analysis Intersections

15 PENN PLAZA

Traffic Study Area
Figure 16-1

OPERATIONAL ANALYSIS METHODOLOGY

SIGNALIZED INTERSECTION CAPACITY ANALYSIS

The operation of signalized intersections in the study area was analyzed in accordance with CEQR guidelines by applying the methodologies presented in the 2000 *Highway Capacity Manual* (HCM). This procedure evaluates signalized intersections for average delay per vehicle and LOS.

LOS for the signalized intersections is based on the average stopped delay per vehicle for the various lane group movements within the intersection. This delay is the basis for an LOS determination for individual lane groups (grouping of movements in one or more travel lanes), the approaches, and the overall intersection. The levels of service are defined in **Table 16-1**.

Table 16-1
LOS Criteria for Signalized Intersections

Level of service	Average Delay
A	≤ 10.0 seconds
B	> 10.0 and ≤ 20.0 seconds
C	> 20.0 and ≤ 35.0 seconds
D	> 35.0 and ≤ 55.0 seconds
E	> 55.0 and ≤ 80.0 seconds
F	> 80.0 seconds

Source: Transportation Research Board, *Highway Capacity Manual,* 2000.

Although the HCM methodology calculates a volume-to-capacity (v/c) ratio, there is no strict relationship between v/c ratios and LOS as defined in the HCM. A high v/c ratio indicates substantial traffic passing through an intersection, but a high v/c ratio combined with low average delay actually represents the most efficient condition in terms of traffic engineering standards, where an approach or the whole intersection processes traffic close to its theoretical maximum with minimal delay. However, very high v/c ratios, especially those approaching or greater than 1.0, are often correlated with a deteriorated LOS. Other important variables affecting delay include cycle length, progression, and green time. LOS A and B indicate good operating conditions with minimal delay. At LOS C, the number of vehicles stopping is higher, but congestion is still fairly light. LOS D describes a condition where congestion levels are more noticeable and individual cycle failures (a condition where motorists may have to wait for more than one green phase to clear the intersection) can occur. The mid-point of this service level (45 seconds of delay) is considered the threshold of acceptable operating conditions. Conditions at LOS E and F reflect poor service levels, and cycle failures are frequent. The HCM methodology provides for a summary of the total intersection operating conditions by identifying the two critical movements (the worst-case from each roadway) and calculating a summary of critical v/c ratio, delay, and LOS.

SIGNIFICANT IMPACT CRITERIA

According to the criteria presented in the *CEQR Technical Manual*, impacts are considered significant and require examination of mitigation if they result in an increase of 5 or more seconds of delay in a lane group over No Action levels beyond mid-LOS D. For No Action LOS E, a 4-second increase in delay is considered significant. For No Action LOS F, a 3-second increase in delay is considered significant. However, if the No Action LOS F condition already

corresponds with a delay in excess of 120 seconds, an increase of 1.0 or more seconds of delay is considered significant. In addition, impacts are considered significant if levels of service deteriorate from acceptable A, B, or C in the No Action condition to marginally unacceptable LOS D (a delay in excess of 45 seconds, the midpoint of LOS D), or unacceptable LOS E or F in the future with the proposed project condition. The above sliding scale is applicable only if the proposed project is expected to generate five or more vehicle trips through the analysis intersection during the peak hour being examined.

TRANPORTATION PLANNING FACTORS

The approach used to determine trip generation is similar to that followed in most transportation impact studies under *CEQR Technical Manual* guidelines. That is, relevant sources were utilized to prepare specific estimates of the number of people that would be entering and exiting the various development program elements (office, retail, hotel, residential, etc.). These estimates focus on peak periods when the maximum levels of activity would occur, thereby creating the greatest potential for impacts. The total number of daily person-trips (the number of entering and exiting people) is then converted into peak hour trips by applying the percent of the daily total occurring in individual hours of the day; this percentage of trips over time is called the temporal distribution. For the proposed project, examining the weekday morning, Midday, and late afternoon peak hours conservatively encompasses those time periods when future activities attributed to the proposed actions would be the greatest.

The estimates of people arriving and leaving during a peak hour are then distributed to the various means of available transportation. This distribution is referred to as the modal split. For most land uses in the West Midtown area of Manhattan, public transportation (specifically the Metropolitan Transportation Authority-Long Island Rail Road (LIRR), New Jersey Transit, Amtrak, subway, bus, and Port Authority Trans Hudson [PATH]) is the predominant mode for trips to and from the area. However, during the Midday, the vast majority of trips are made on foot, many of which are associated with local lunch hour trips. For trips made by automobiles or taxis, person-trip estimates are translated into vehicle trips by applying average vehicle occupancy rates in order to determine vehicle trips generated by each land use type.

The trip estimates are adjusted for "linkages," which is the assumption of interconnected uses. For example, there is an assumption that employees in the office space, guests in the hotel, and riders from the LIRR, New Jersey Transit, Amtrak, PATH, and the subway will, in part, be the source of shoppers for the retail space. This condition of linkage between uses is accounted for by reducing the number of trips to a given program element. The purpose of this adjustment, which varies depending upon the character of the use, is to avoid double-counting people who visit more than one component on the project site.

A variety of sources were consulted in developing the transportation planning travel characteristics used in this DEIS. These sources include standard references such as the *CEQR Technical Manual*; Boris Pushkarev and Jeffrey Zupan's *Urban Space for Pedestrians*; the Institute of Transportation Engineers' *Trip Generation, Seventh Edition*; and a number of relevant studies, particularly the *No. 7 Subway Extension—Hudson Yards Rezoning and Development Program Final Generic Environmental Impact Statement, November 2004 (Hudson Yards FGEIS*).

As detailed below, the trip generation estimates show the future demand with and without the proposed project for various components of the project site. Traffic volume projections follow

standard procedures for a development project in New York City, in accordance with *CEQR Technical Manual* guidelines.

Table 16-2 compares the project components for the Single-Tenant Office Scenario and the Multi-Tenant Office Scenario. The retail component for the Single-Tenant Office Scenario is projected to be local retail (attracting trips from the nearby neighborhoods), while the retail component for the Multi-Tenant Office Scenario is projected to be destination retail (attracting trips from a wider geographic area).

Table 16-2
Proposed Building Program –
Single-Tenant Office and Multi-Tenant Office Scenarios

Project Components	Single-Tenant Office Scenario		Multi-Tenant Office Scenario	
	zsf	gsf	zsf	gsf
Commercial Office	1,396,481	1,534,594	1,723,371	1,893,814
Trading Floor Component	310,180	340,857	0	0
Retail	11,126	18,266	296,392	361,711[1]
Dedicated Mechanical Floors	0	418,395	0	307,180
Lobby Area, Amenity Space, and Back of House	334,880	509,071	32,904	97,131
Total	2,052,667	2,821,183	2,052,667	2,659,836

Notes: *Proposed Program could include up to 100 accessory parking spaces.
zsf = zoning square feet; gsf = gross square feet.
1. In the Multi-Tenant Office Scenario, up to 194,442 zsf (or 211,941 gsf) of this retail space could be utilized for trading uses.
Source: Pelli Clarke Pelli Architects.

Transportation planning travel characteristics were developed for specific land uses, as discussed in Appendix C, and summarized in **Table 16-3**. Travel characteristics were developed for the following land use categories:

- Office
- Trading Floor
- Local Retail
- Destination Retail

Table 16-3
Transportation Planning Assumptions

Land Use	**Office**		**Trading Floor**		**Local Retail**		**Destination Retail**	
Trip Generation	per 1000 SF		per day		per 1000 SF		per 1000 SF	
	(6)	(8)	(2, 4)	(2, 4)	(10, 11)	(11, 12)	(6, 11)	(11, 13)
	Weekday	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**
Daily Person Trips	18.0	3.87	7125	0	205	240	159	185
Net Daily Person Trips	18.0	3.87	7125	0	154	180	119	139
Temporal Distribution	(1, 14)		(5, 16)		(6, 7)		(6, 13)	
AM (8-9)	11.8%		37.8%		3.1%		0.0%	
MD (12-1)	15.0%		0.0%		19.0%		9.5%	
PM 5-6)	13.7%		35.0%		9.6%		9.8%	
SAT (1-2 PM)	14.7%		0.0%		9.5%		9.9%	
In / Out Directional Split	(1, 14)		(5)		(6)		(6, 13)	
	In	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
AM (8-9)	96%	4%	100%	0%	50%	50%	0%	0%
MD (12-1)	48%	52%	0%	0%	50%	50%	55%	45%
PM 5-6)	5%	95%	0%	100%	50%	50%	47%	53%
SAT (1-2 PM)	57%	43%	0%	0%	50%	50%	52%	48%
Modal Split								
	(9)	(6)	(9)	(6)	(6)		(3, 6)	
Mode	**AM / PM**	**MD / SAT**	**AM / PM**	**MD / SAT**	**ALL**		**PM**	**MD / SAT**
Auto	10.2%	1.5%	10.2%	1.5%	2.0%		9.0%	9.0%
Taxi	1.0%	3.0%	1.0%	3.0%	3.0%		4.0%	4.0%
Bus	12.9%	5.0%	12.9%	5.0%	6.0%		8.0%	8.0%
Subway	47.3%	6.0%	47.3%	6.0%	6.0%		26.5%	20.0%
Railroad	25.1%	1.5%	25.1%	1.5%	0.0%		2.0%	0.0%
Walk	3.2%	83.0%	3.2%	83.0%	83.0%		50.5%	59.0%
Other	0.1%	0.0%	0.1%	0.0%	0.0%		0.0%	0.0%
Work at Home	0.2%	0.0%	0.2%	0.0%	0.0%		0.0%	0.0%
	100.00%	100.0%	100.00%	100.0%	100.00%		100.00%	100.0%
Vehicle Occupancy	(6)		(6)		(6)		(6)	
Auto	1.65		1.65		1.65		2.00	
Taxi	1.40		1.40		1.40		2.00	
Truck Trip Generation								
	(6)	(7)	(6)	(7)	(6)	(7)	(6)	(15)
	Weekday	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**	**Weekday**	**Saturday**
Daily Vehicle Trips	0.16	0.01	0.16	0.01	0.35	0.02	0.35	0.02
Temporal Distribution	(7)		(7)		(6, 7)		(6, 15)	
AM (8-9)	7.0%		7.0%		7.7%		7.7%	
MD (12-1)	7.0%		7.0%		11.0%		11.0%	
PM 5-6)	3.0%		3.0%		1.0%		1.0%	
SAT (1-2 PM)	11.0%		11.0%		11.0%		11.0%	
In / Out	In	Out	In	Out	In	Out	In	Out
	50%	50%	50%	50%	50%	50%	50%	50%

Sources:
(1) Pushkarev & Zupan, "Urban Space for Pedestrians," 1975.
(2) New York Stock Exchange New Facility EIS, 1999.
(3) Farley/Moynihan West FEIS, 2006, Table 13-1
(4) Assumes 750 traders per floor and five floors with 95% daily attendance and two trips per person per day
(5) Assumes neglible trips during the midday peak hour
(6) No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FGEIS, 2004.
(7) Atlantic Yards and Arena Redevelopment FEIS, 2006
(8) ITE Trip Generation, 7th Edition, Land Use Code 710: General Office Building Ratio of Weekday to Saturday Trip Generation Rates
(9) Hudson Yards FGEIS, Appendix S-1 Updated by NYCDCP, NYCDOT and NYCT Working Group
(10) City Environmental Quality Review (CEQR) Technical Manual, Appendix 3, 2001
(11) Assumes 25% linked trips for retail uses as per No. 7 Subway Extension - Hudson Yards Rezoning and Development Program FGEIS, 2004.
(12) ITE Trip Generation, 7th Edition, Land Use Code 851: Convenience Retail Ratio of Weekday to Saturday Trip Generation Rates
(13) ITE Trip Generation, 7th Edition, Land Use Code 820: Shopping Center Ratio of Weekday to Saturday Trip Generation Rates
Directional distribution based upon Saturday peak hour of the generator
(14) ITE Trip Generation, 7th Edition, Land Use Code 710: General Office Building Ratio of Saturday Peak Hour Trip Generation Rate to Saturday Daily Rate.
Directional distribution based upon Saturday peak hour of the generator
(15) Assumes same Saturday truck trip generation rate as local retail.
(16) Based on April 1997 survey of NYSE traders and staff

VEHICLE TRIP GENERATION

The number of peak hour vehicle trips that would be generated by the Single-Tenant Office Scenario and the Multi-Tenant Office Scenario are summarized in **Tables 16-4** and **16-5**, respectively. The Single-Tenant Office Scenario generates the most vehicle trips during the AM peak hour, while the Multi-Tenant Office Scenario generates the most vehicle trips during the Midday, PM, and Saturday peak hours. The traffic analyses, therefore, assume the Single-Tenant Office Scenario as the reasonable worst-case development scenario for the AM peak hour, and the Multi-Tenant Office Scenario as the reasonable worst case development scenario for the Midday, PM, and Saturday peak hours.

Table 16-4
Incremental Vehicle Trips Generated – Single-Tenant Office Scenario

LAND USE		AM Peak Hour					MD Peak Hour				
		Auto	Truck	Taxi	Balanced Taxi	Total	Auto	Truck	Taxi	Balanced Taxi	Total
Office	In	27	1	3	-	31	3	1	6	-	10
	Out	1	1	0	-	2	3	1	6	-	10
	Total	28	2	3	-	33	6	2	12	-	20
Trading Floor	In	166	2	19	-	187	0	2	0	-	2
	Out	0	2	0	-	2	0	2	0	-	2
	Total	166	4	19	-	189	0	4	0	-	4
Local Retail	In	-1	0	-1	-	-2	-4	0	-7	-	-11
	Out	-1	0	-1	-	-2	-4	0	-7	-	-11
	Total	-2	0	-2	-	-4	-8	0	-14	-	-22
Destination Retail	In				-	0				-	0
	Out				-	0				-	0
	Total				-	0				-	0
Total Trips	In	**192**	**3**	**21**	**21**	**216**	-1	3	-1	0	2
	Out	**0**	**3**	**-1**	**21**	**24**	-1	3	-1	0	2
	Total	**192**	**6**	**20**	**42**	**240**	-2	6	-2	0	4

LAND USE		PM Peak Hour					SAT Peak Hour				
		Auto	Truck	Taxi	Balanced Taxi	Total	Auto	Truck	Taxi	Balanced Taxi	Total
Office	In	2	1	0	-	3	4	0	1	-	5
	Out	31	1	4	-	36	4	0	1	-	5
	Total	33	2	4	-	39	8	0	2	-	10
Trading Floor	In	0	2	0	-	2	0	0	0	-	0
	Out	154	2	18	-	174	0	0	0	-	0
	Total	154	4	18	-	176	0	0	0	-	0
Local Retail	In	-2	0	-4	-	-6	-2	0	-4	-	-6
	Out	-2	0	-4	-	-6	-2	0	-4	-	-6
	Total	-4	0	-8	-	-12	-4	0	-8	-	-12
Destination Retail	In				-	0				-	0
	Out				-	0				-	0
	Total				-	0				-	0
Total Trips	In	0	3	-4	18	21	2	0	-3	0	2
	Out	183	3	18	18	204	2	0	-3	0	2
	Total	183	6	14	36	225	4	0	-6	0	4

Table 16-5
Incremental Vehicle Trips Generated – Multi-Tenant Office Scenario

LAND USE		AM Peak Hour					MD Peak Hour				
		Auto	Truck	Taxi	Balanced Taxi	Total	Auto	Truck	Taxi	Balanced Taxi	Total
Office	In	72	3	8	-	83	7	3	16	-	26
	Out	3	3	1	-	7	7	3	17	-	27
	Total	75	6	9	-	90	14	6	33	-	53
Trading Floor	In	0	0	0	-	0	0	0	0	-	0
	Out	0	0	0	-	0	0	0	0	-	0
	Total	0	0	0	-	0	0	0	0	-	0
Local Retail	In	-1	-1	-2	-	-4	-7	-1	-13	-	-21
	Out	-1	-1	-2	-	-4	-7	-1	-13	-	-21
	Total	-2	-2	-4	-	-8	-14	-2	-26	-	-42
Destination Retail	In	0	5	0	-	5	100	7	45	-	152
	Out	0	5	0	-	5	84	7	37	-	128
	Total	0	10	0	-	10	184	14	82	-	280
Total Trips	**In**	71	7	6	6	84	**100**	**9**	**48**	**67**	**176**
	Out	2	7	-1	6	15	**84**	**9**	**41**	**67**	**160**
	Total	73	14	5	12	99	**184**	**18**	**89**	**134**	**336**

LAND USE		PM Peak Hour					SAT Peak Hour				
		Auto	Truck	Taxi	Balanced Taxi	Total	Auto	Truck	Taxi	Balanced Taxi	Total
Office	In	4	2	1	-	7	11	1	1	-	13
	Out	83	2	10	-	95	9	1	1	-	11
	Total	87	4	11	-	102	20	2	2	-	24
Trading Floor	In	0	0	0	-	0	0	0	0	-	0
	Out	0	0	0	-	0	0	0	0	-	0
	Total	0	0	0	-	0	0	0	0	-	0
Local Retail	In	-4	0	-6	-	-10	-4	0	-7	-	-11
	Out	-4	0	-6	-	-10	-4	0	-7	-	-11
	Total	-8	0	-12	-	-20	-8	0	-14	-	-22
Destination Retail	In	89	1	39	-	129	122	1	54	-	177
	Out	101	1	45	-	147	102	1	45	-	148
	Total	190	2	84	-	276	224	2	99	-	325
Total Trips	**In**	**89**	**3**	**34**	**62**	**154**	**129**	**2**	**48**	**65**	**196**
	Out	**180**	**3**	**49**	**62**	**245**	**107**	**2**	**39**	**65**	**174**
	Total	**269**	**6**	**83**	**124**	**399**	**236**	**4**	**87**	**130**	**370**

EXISTING CONDITIONS

The proposed project's traffic study area extends south from the development site to West 30th Street and north to West 35th Street. In the east-west direction, the study area extends from Eighth Avenue to Madison Avenue. In addition, key intersections along 34th Street—including Ninth Avenue, Park Avenue, Lexington Avenue, Third Avenue, Second Avenue, First Avenue, and the FDR Drive—were analyzed. The total study area includes 43 signalized intersections for analysis. Several intersections overlap the traffic study area for the *Western Rail Yard Final Environmental Impact Statement*.

The base year traffic conditions described in this section represent 2008 traffic volumes. An extensive data collection program, including automatic traffic recorder (ATR) counts, manual turning movement and vehicle classification counts, travel time and delay surveys, and an inventory of roadway geometry and intersection signal timing, was undertaken in October 2008.

ROADWAY CHARACTERISTICS

In the grid street network, avenues extend in a north-south direction and the cross-streets extend east-west. The north-south avenues are generally high-capacity arterials that serve substantial volumes of through and local traffic and are benefited by traffic signal timing patterns that allow traffic to proceed with good progression when traffic conditions are uncongested. Avenues are typically 60 to 70 feet wide curb-to-curb, with sidewalks ranging from 15 to 20 feet in width.

Streets generally run east-west (crosstown), most carrying one-way traffic, with curb-to-curb widths varying from 30 to 34 feet and sidewalks ranging from 11 to 15 feet in width. Even-numbered streets generally serve eastbound traffic, while odd-numbered streets serve westbound traffic. The only exception within the study area is West 34th Street, which carries two-way traffic and has a curb-to-curb width of about 54 feet and a sidewalk width of 20 to 24 feet. Additionally, West 34th Street has an exclusive bus lane in operation, which is discussed in further detail below.

Exceptions to the general grid are Broadway and West 32nd Street. Broadway is a southbound street that is located diagonal to the grid system. Broadway intersects Sixth Avenue south of West 34th Street, and it intersects Fifth Avenue north of West 23rd Street. West 32nd Street extends east-west, but is interrupted by the "superblocks" located between each avenue from Seventh to Tenth Avenues from West 31st Street to West 33rd Street. These superblocks support Madison Square Garden and the Farley Complex, among other uses.

All 43 analysis intersections are controlled by pre-timed traffic signals and operate with a 90-second cycle length. Broadway crosses West 34th Street and Sixth Avenue at a complex six-legged intersection with four moving approaches, which requires multiple traffic signal timing-plans to keep traffic flowing throughout the day.

SPECIAL STUDY AREA STREET OPERATIONS

Along several corridors in the study area, street space is reserved for the exclusive use of certain vehicles, non-motorized transportation, or pedestrians. NYCDOT has developed programs to enhance mobility by transit and bicycle citywide, and has implemented several significant projects in the study area. Exclusive bus lanes have recently been installed on West 34th Street. The curb lane in each direction is designated as a bus-only lane from Eleventh Avenue to First Avenue, with varying cross sections and hours of operation by project segment. From Ninth Avenue to Third Avenue, a total of three lanes westbound and two lanes eastbound are provided

with the curb lane restricted to buses only on weekdays from 7 AM to 7 PM. Except by buses, left turns are generally prohibited from Ninth Avenue to Third Avenue during weekdays. Also, the curb lanes on 42nd Street are reserved for buses only from Dyer Avenue to Park Avenue during weekday AM and PM peak periods.

Bicycle lanes have been installed on several corridors in the study area. Northbound Class 2 Bicycle Lanes (on-street striped route) are in place on Eighth Avenue extending from south of the study area to West 39th Street and on Sixth Avenue south of West 42nd Street.

Broadway Boulevard extends on Broadway from West 42nd Street to West 35th Street and includes a pedestrian plaza area installed in the roadbed along the east side of Broadway with planters and furniture, plus a Class 1 Bicycle Path. Two southbound lanes plus turn lanes are available for traffic within this segment of Broadway.

TRUCK ROUTES

The City of New York has regulations that restrict trucks to local and through truck routes plus other area-wide restrictions in effect in parts of West Midtown. The City defines a truck as "a vehicle which is designed for transportation of property, which has either of the following characteristics: two axles and six tires; or three or more axles."

Through trucks are defined as having "neither an origin nor a destination within the Borough of Manhattan." In the study area, through trucks are restricted to the following routes:

- West 34th Street east of Dyer Avenue (excluding the period from 11 AM to 6 PM);

Local truck routes are designated routes for trucks that are "intended for the purpose of delivery, loading, or providing service within the Borough of Manhattan." Generally, trucks must travel on local truck routes up to the nearest intersection to their destination. Designated local truck routes in the study area are as follows:

- Sixth Avenue;
- Seventh Avenue south of West 31st Street;
- Eighth Avenue;
- Ninth Avenue;
- Broadway south of West 31st Street;
- West 30th Street from Broadway to Eleventh Avenue;
- 31st Street from Third Avenue to Tenth Avenue; and
- 34th Street east of Dyer Avenue (11 AM to 6 PM).

Restrictions of all entering trucks or trucks having an overall length of 33 feet or more are also in effect weekdays during specified hours in designated sub-areas within the traffic study area.

STUDY AREA ROADWAYS AND PEAK HOUR TRAFFIC VOLUMES

EIGHTH AVENUE

Eighth Avenue is a northbound arterial roadway with four to six lanes of moving traffic, depending on parking regulations. Between West 31st and West 33rd Streets, Eighth Avenue runs along the east side of the Farley building and along the west side of the current Madison Square Garden and Pennsylvania (Penn) Station. A taxi stand is located on the east side of

Eighth Avenue just south of West 33rd Street, at Penn Station. Within the study area, there are five analysis locations on Eighth Avenue. On weekdays within the traffic study area, Eighth Avenue generally carries 1,400 to 1,500 vehicles per house (vph) during the AM peak hour, 1,400 to 1,600 vph during the Midday peak hour, 1,400 to 1,700 vph during the PM peak hour, and 1,300 to 1,500 vph during the Saturday Midday peak hour.

SEVENTH AVENUE

Seventh Avenue is a southbound arterial roadway with four lanes of moving traffic. Within the study area, there are six analysis locations on Seventh Avenue. Within the traffic study area, Seventh Avenue is the location of the main entrance to 15 Penn Plaza. At Seventh Avenue, West 32nd Street continues eastbound, and many buses make left turns from Seventh Avenue onto West 32nd Street, since this block of West 32nd Street serves as a final stop and layover location for some Metropolitan Transportation Authority-New York City Transit (NYCT) bus routes. On weekdays within the traffic study area, Seventh Avenue generally carries 1,500 to 1,700 vph during the AM peak hour, 1,200 to 1,600 vph during the Midday peak hour, 1,300 to 1,700 vph during the PM peak hour, and 1,200 to 1,400 vph during the Saturday Midday peak hour.

SIXTH AVENUE

Sixth Avenue is a northbound arterial roadway and generally operates with four lanes of moving traffic, with parking on the west side of the street between West 31st and West 32nd Streets, as well as a bike lane. Within the study area, there are six analysis locations on Sixth Avenue, which includes the Herald Square area and the convergence of Sixth Avenue and Broadway south of West 34th Street. North of West 32nd Street, the bike lane continues, but the parking lane becomes a no standing zone. On weekdays within the traffic study area, Sixth Avenue generally carries 1,600 to 1,800 vph during the AM peak hour, 1,400 to 1,600 vph during the Midday peak hour, 1,400 to 1,600 vph during the weekday PM peak hour, and 1,600 to 1,800 vph during the Saturday Midday peak hour.

BROADWAY

Broadway is a southbound arterial roadway with generally two to three moving lanes and parking activities on curb lanes. Within the study area, there are six analysis locations on Broadway. On weekdays, Broadway carries between 500 and 600 vph during the AM peak hour, 500 to 700 vph during the Midday peak hour, 500 to 700 vph during the weekday PM peak hour, and 400 to 500 vph during the Saturday Midday peak hour.

FIFTH AVENUE

Fifth Avenue is a southbound arterial roadway with generally three moving lanes and parking activities on-curb. There is an exclusive bus lane on the west side of the street between 42nd Street and 34th Street. Within the study area, there are six analysis locations on Fifth Avenue. On weekdays within the traffic study area, Fifth Avenue generally carries 1,300 to 1,500 vph during the AM peak hour, 1,200 to 1,400 vph during the Midday peak hour, 1,200 to 1,300 vph during the PM peak hour, and 1,500 to 1,600 vph during the Saturday Midday peak hour.

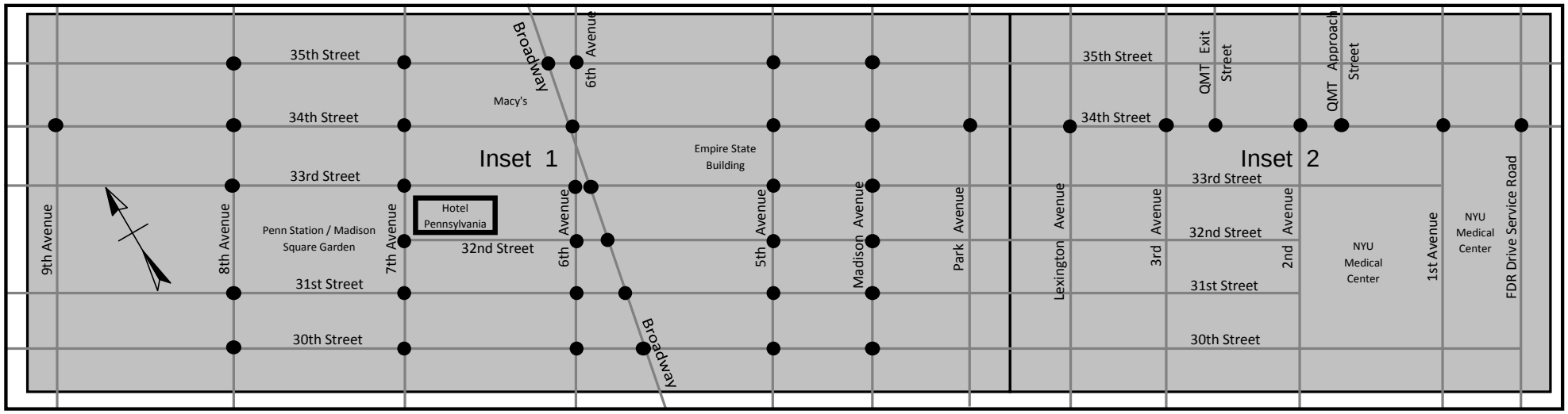
OTHER CROSSTOWN STREETS

Aside from West 34th Street, the other crosstown streets in the traffic study area are West 30th, West 31st, West 33rd, and West 35th Streets between Madison and Eighth Avenues, and West

32nd Street between Madison and Seventh Avenues. All even-numbered streets operate eastbound, and odd-numbered streets operate westbound. Each crosstown street has generally one to three lanes of moving traffic, often with curbside parking, and is continuous. West 33rd Street, although continuous within the traffic study area from Sixth to Tenth Avenues, is interrupted at Broadway just east of Sixth Avenue. West 32nd Street is interrupted by the superblocks between Tenth and Seventh Avenues.

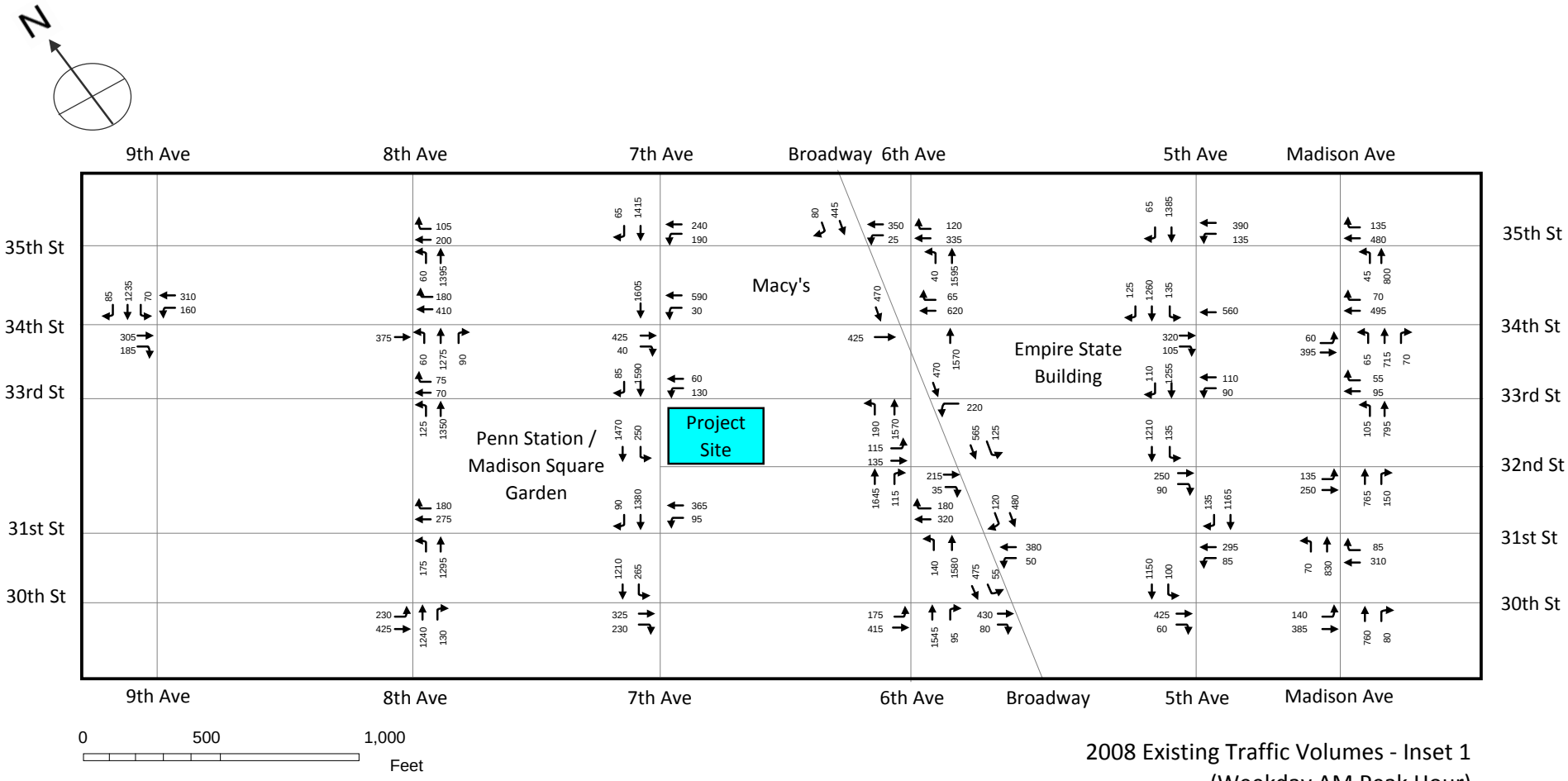
Volumes on these streets vary substantially on a street-by-street and block-by-block basis. Eastbound streets carry between 100 and 800 vph within the traffic study area during each peak hour. Westbound streets generally carry 200 to 900 vph within the traffic study area during the weekday AM peak hour, 200 to 900 vph during the weekday Midday peak hour, and 200 to 1,100 vph during the weekday PM peak.

Figures 16-2 through 16-10 provide 2008 base traffic volumes for the weekday AM (8 to 9 AM), Midday (12 to 1 PM), PM (5 to 6 PM) and Saturday Midday (1 to 2 PM) peak hours, respectively.



15 PENN PLAZA

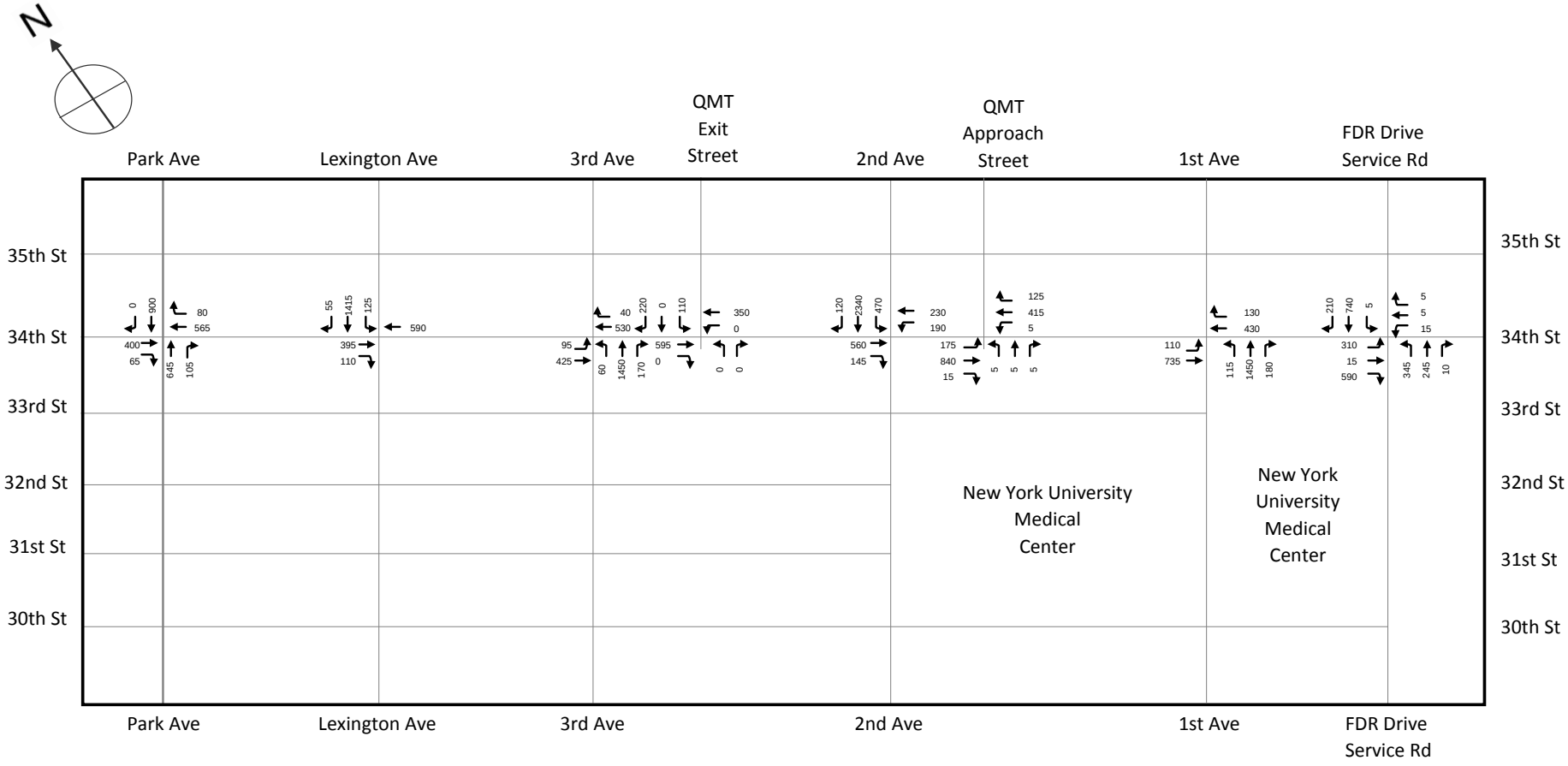
Existing Traffic Volumes: Key Map
Figure 16-2



2008 Existing Traffic Volumes - Inset 1
(Weekday AM Peak Hour)

15 PENN PLAZA

Figure 16-3

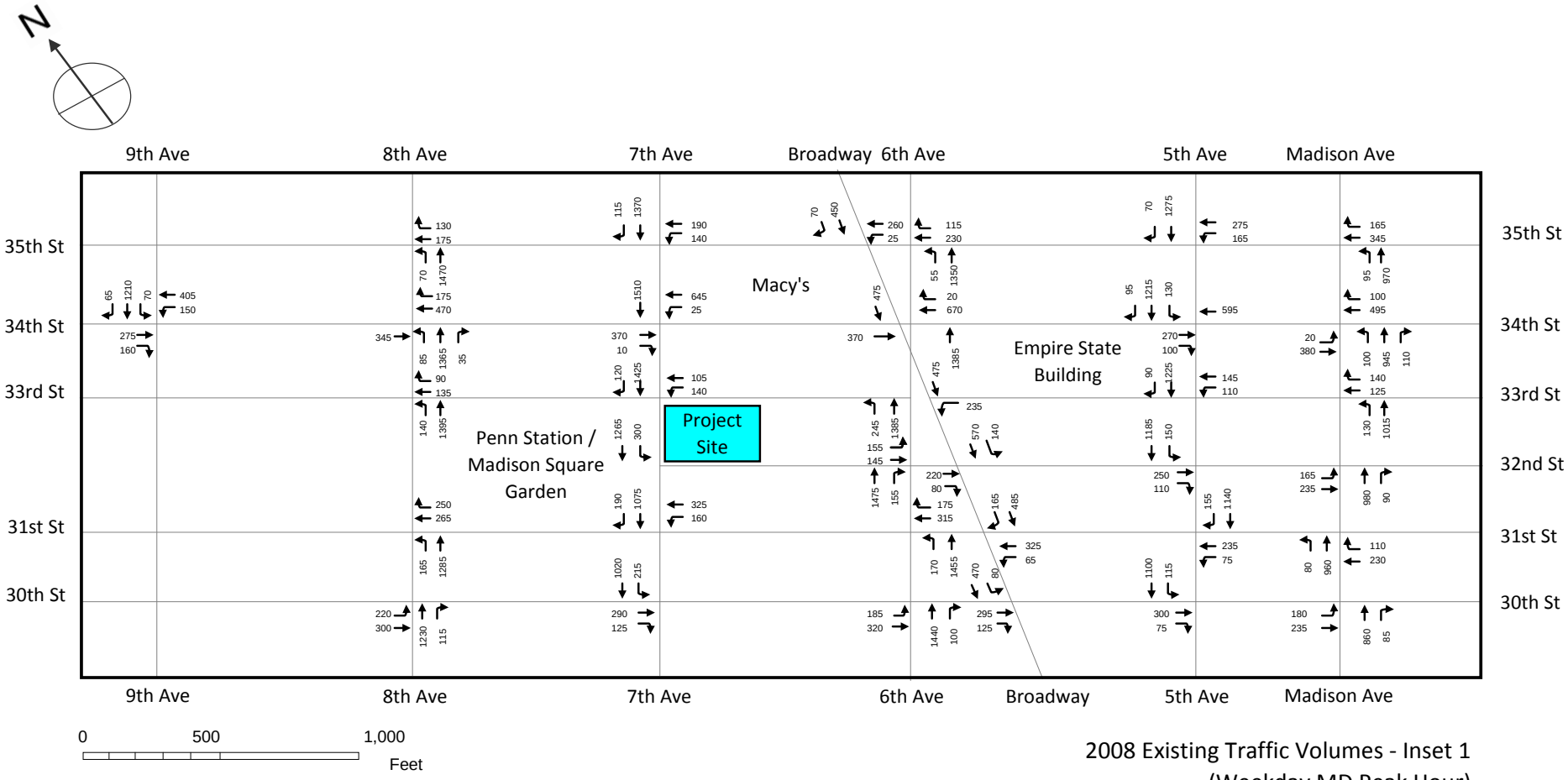


0 750 1,500
Feet

2008 Existing Traffic Volumes - Inset 2
(Weekday AM Peak Hour)

15 PENN PLAZA

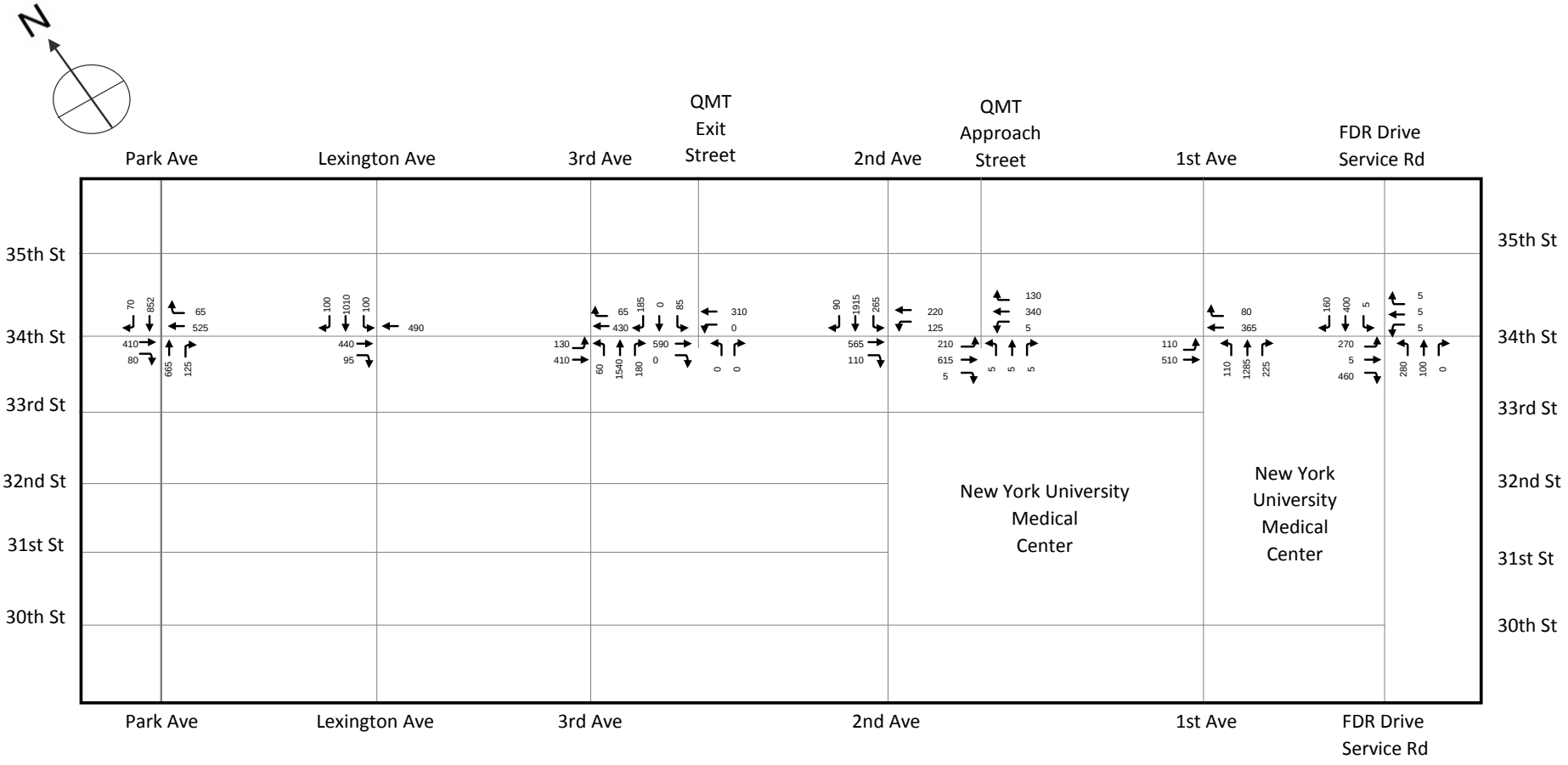
Figure 16-4



2008 Existing Traffic Volumes - Inset 1
(Weekday MD Peak Hour)

15 PENN PLAZA

Figure 16-5

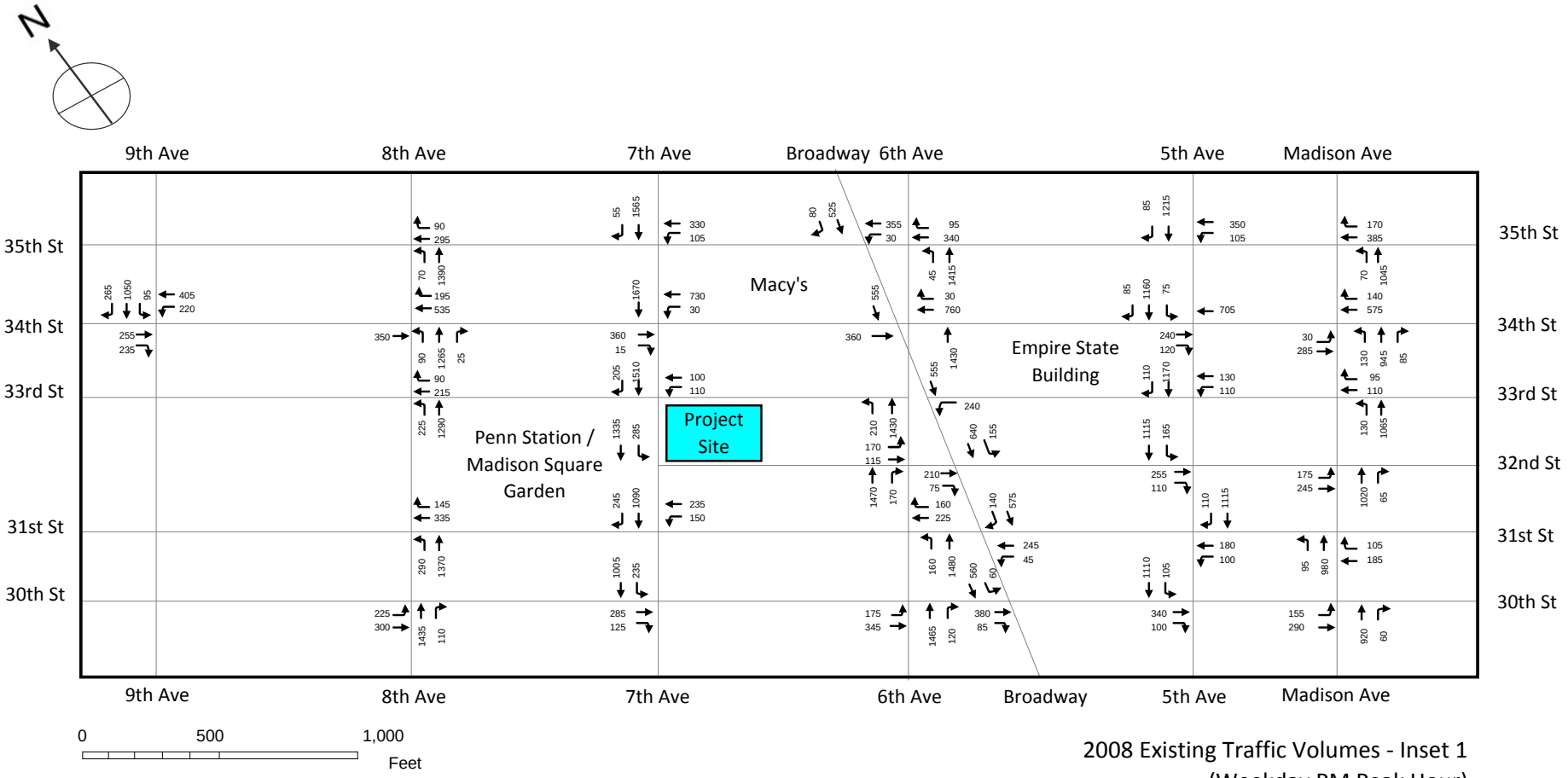


0 750 1,500
Feet

2008 Existing Traffic Volumes - Inset 2
(Weekday MD Peak Hour)

15 PENN PLAZA

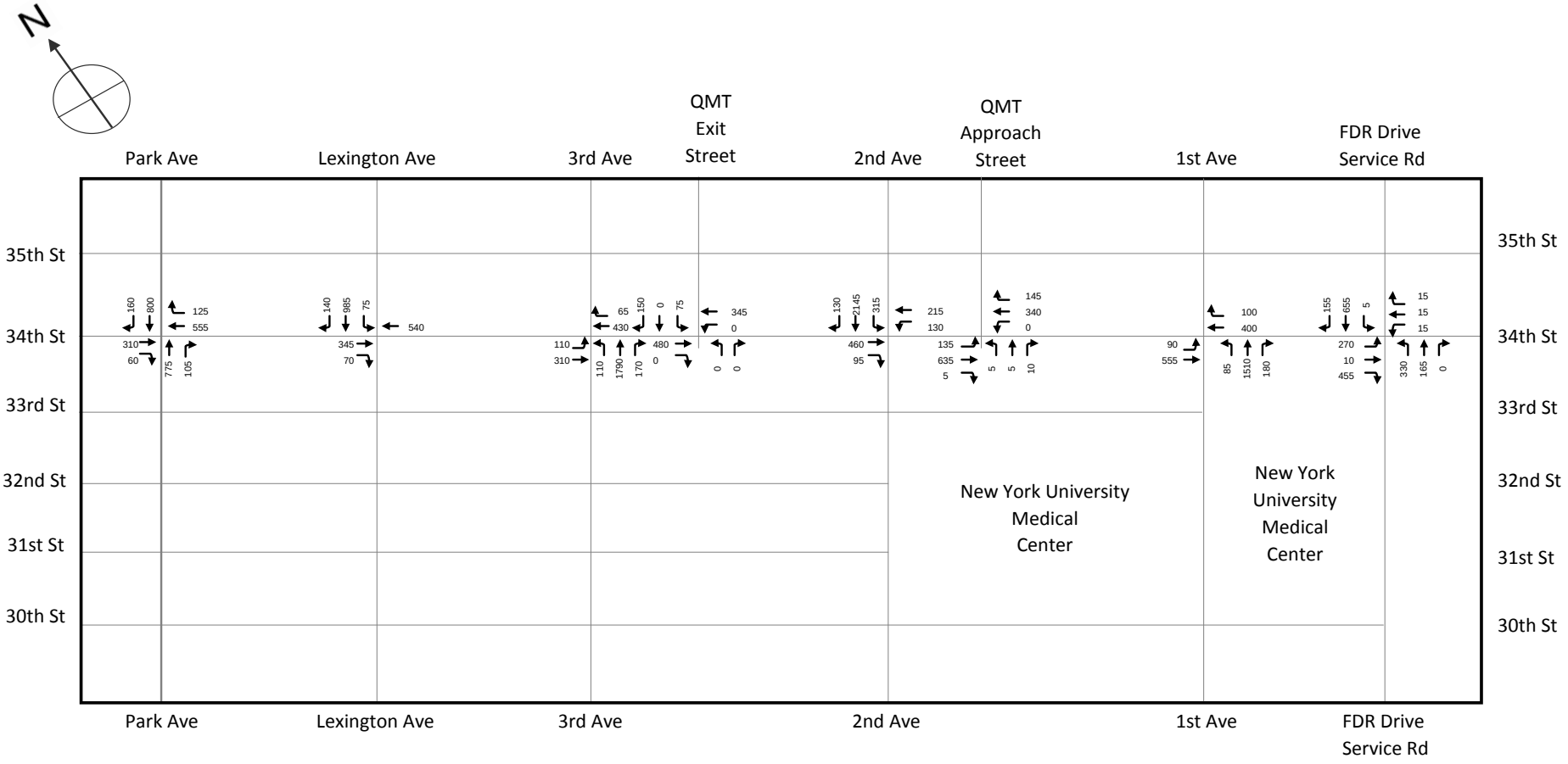
Figure 16-6



2008 Existing Traffic Volumes - Inset 1
(Weekday PM Peak Hour)

15 PENN PLAZA

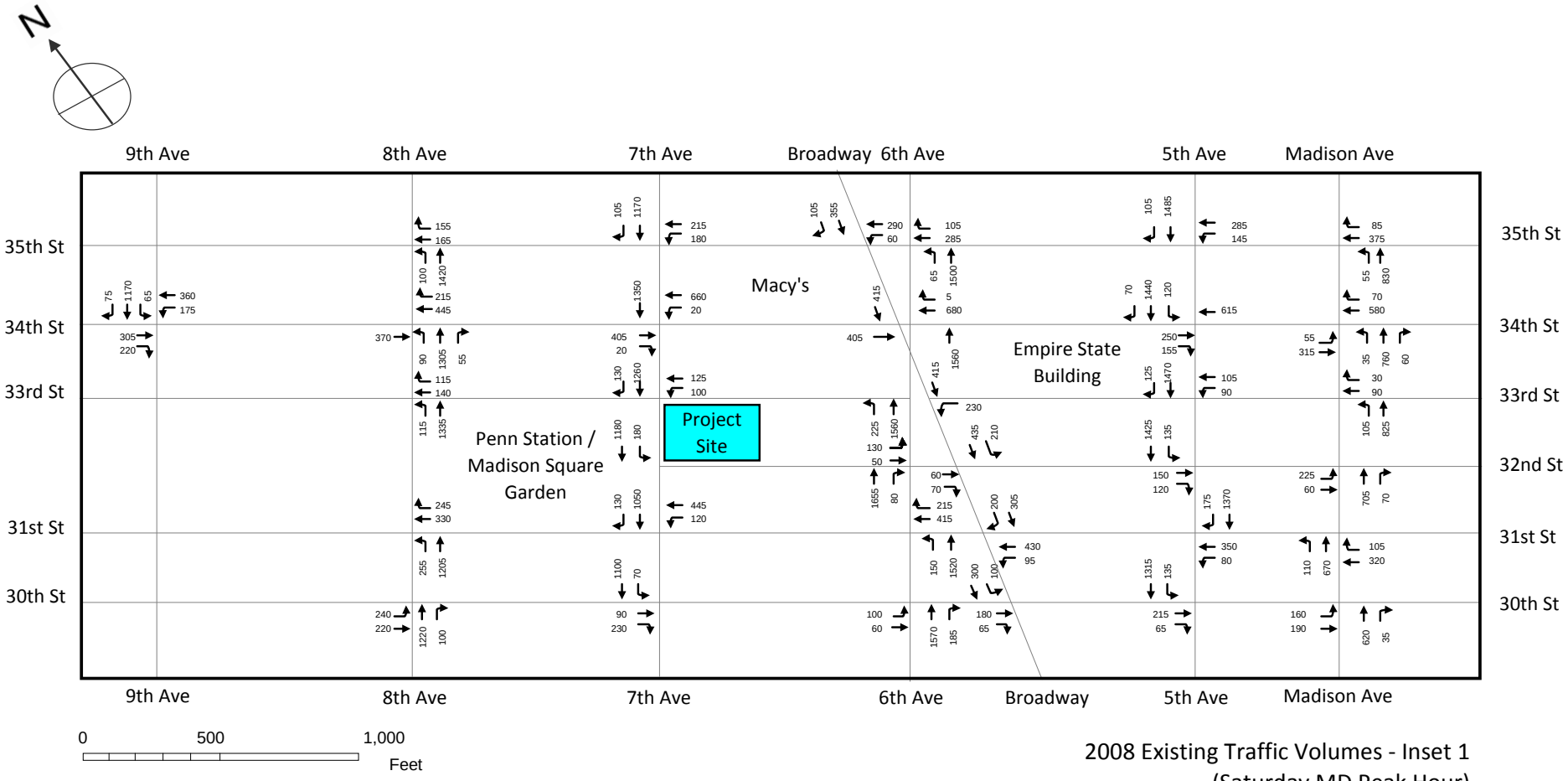
Figure 16-7



2008 Existing Traffic Volumes - Inset 2
(Weekday PM Peak Hour)

15 PENN PLAZA

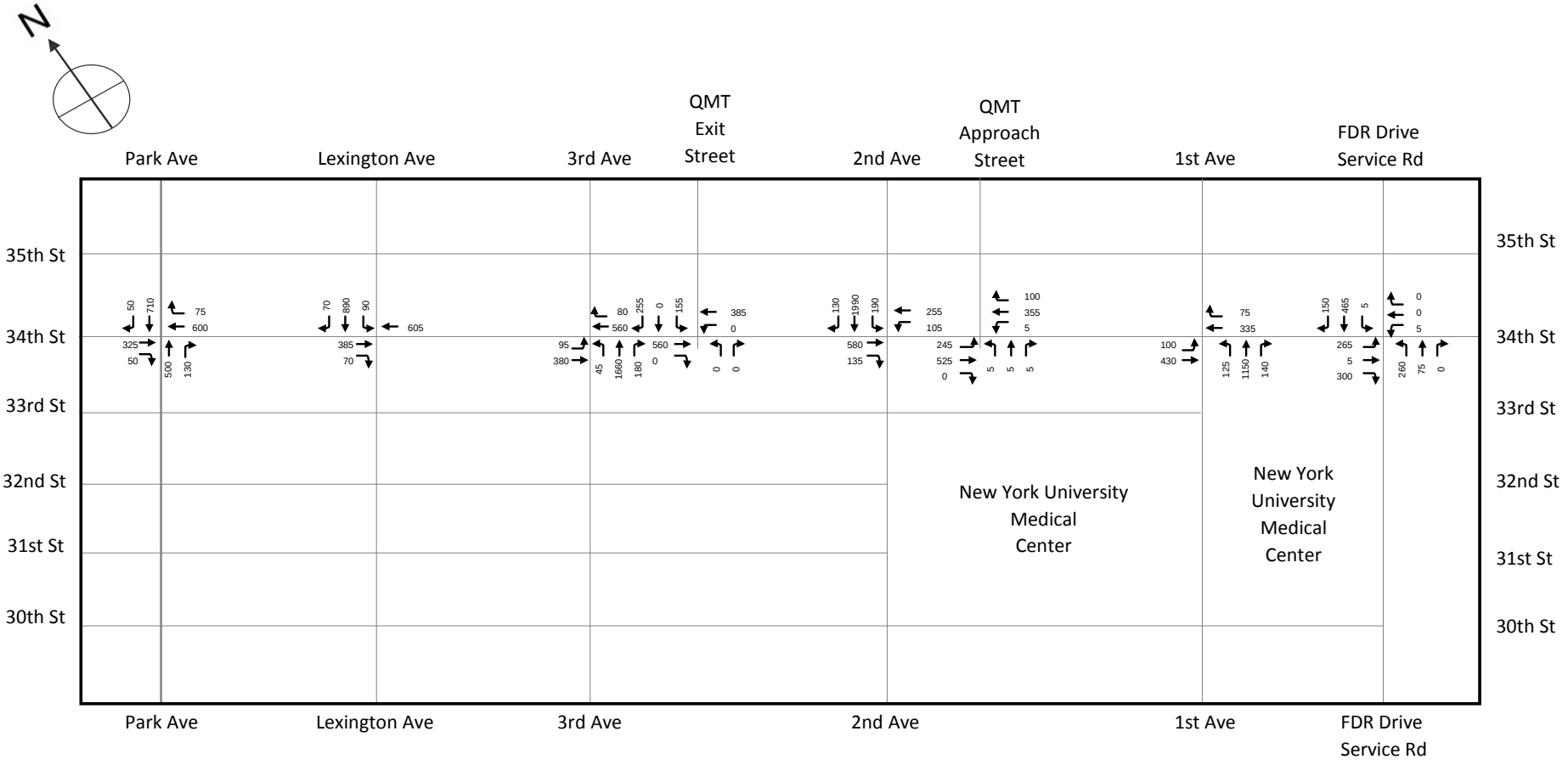
Figure 16-8



2008 Existing Traffic Volumes - Inset 1
(Saturday MD Peak Hour)

15 PENN PLAZA

Figure 16-9



2008 Existing Traffic Volumes - Inset 2
(Saturday MD Peak Hour)

15 PENN PLAZA

Figure 16-10

LEVEL OF SERVICE ANALYSIS

An intersection capacity and level of service analysis was conducted for the 43 study area intersections. The following summarizes the analysis results by travel corridor and details the locations with substandard operating levels (marginally unacceptable mid-LOS D or more than 45 seconds of average delay) by analysis time period.

SUMMARY OF ANALYSIS RESULTS

Although most intersections in the traffic study area operate at overall acceptable levels during the four analysis peak hours, individual approach movements at numerous intersections operate at mid-LOS D or worse. Overall, of the 135 approach movements analyzed, 27 approach movements operate at mid-LOS D or worse in the AM peak hour; 18 approach movements operate at mid-LOS D or worse in the Midday peak hour, 23 approach movements operate at mid-LOS D or worse in the PM peak hour; and 18 approach movements operate at mid-LOS D or worse in the Saturday Midday peak hour. These findings are presented in **Table 16-6**. Intersection approaches or individual approach movements operating at capacity or within LOS E or F are discussed below.

Table 16-6
Existing Conditions
Number of Intersection Approach Movements at Mid-LOS D, LOS E, or LOS F

Level of Service	Analysis Hour			
	AM	Weekday Midday	PM	Saturday Midday
Mid-LOS D	7	4	6	5
LOS E	6	4	4	7
LOS F	14	10	13	6

LOCATIONS WITH SUBSTANDARD OPERATING LEVELS OF SERVICE

Locations having at least one lane group operating at mid-LOS D—45.0 seconds per vehicle (spv) of delay or higher—are described below.

Weekday AM Peak Hour

Of the 43 intersections studied, 20 intersections have at least one lane group operating at mid-LOS D or worse during the weekday AM peak hour.

- The West 35th Street westbound approach to Fifth Avenue operates at mid-LOS D.
- The left turn lane on the West 35th Street westbound approach to Fifth Avenue operates at LOS E.
- The West 33rd Street westbound approach to Fifth Avenue operates at mid-LOS D.
- The West 30th Street eastbound approach to Fifth Avenue operates at LOS F.
- The West 34th Street eastbound approach to Sixth Avenue/Broadway operates at LOS F.
- The West 34th Street westbound approach to Sixth Avenue/Broadway operates at LOS F.
- The West 35th Street westbound approach to Broadway operates at mid-LOS D.
- The left turn lane on the West 33rd Street westbound approach to Broadway operates at LOS F.
- The West 35th Street westbound approach to Seventh Avenue operates at LOS F.

- The West 33rd Street westbound approach to Seventh Avenue operates at LOS E.
- The West 35th Street westbound approach to Eighth Avenue operates at mid-LOS D.
- The right turn lane on the West 34th Street eastbound approach to Ninth Avenue operates at LOS E.
- The East 30th Street eastbound approach to Madison Avenue operates at mid-LOS D.
- The left turn lane on the East 34th Street eastbound approach to Madison Avenue operates at mid-LOS D.
- The East 35th Street westbound approach to Madison Avenue operates at LOS F.
- The right turn lane on the East 35th Street westbound approach to Madison Avenue operates at LOS E.
- The East 34th Street westbound approach to Park Avenue operates at LOS F.
- The East 34th Street westbound approach to Lexington Avenue operates at LOS F.
- The Lexington Avenue southbound approach to East 34th Street operates at LOS F.
- The left turn lane on the I-495 southbound approach to East 34th Street operates at LOS E.
- The right turn lane on the East 34th Street approach to Second Avenue operates at LOS F.
- The East 34th Street westbound approach to the I-495 ramp operates at mid-LOS D.
- The right turn lane on the East 34th Street westbound approach to the I-495 ramp operates at LOS F.
- The East 34th Street eastbound approach to First Avenue operates at LOS F.
- The left turn lane on the East 34th Street approach to the FDR Drive operates at LOS F.
- The East 34th Street approach to the FDR Drive operates at LOS E.
- The left turn lane on the FDR Drive northbound approach to East 34th Street operates at LOS F.

Weekday Midday Peak Hour

Of the 43 intersections studied, 16 intersections have at least one lane group operating at mid-LOS D or worse during the weekday Midday peak hour.

- The left turn lane on the West 35th Street westbound approach to Fifth Avenue operates at LOS F.
- The West 33rd Street westbound approach to Fifth Avenue operates at LOS F.
- The West 30th Street eastbound approach to Fifth Avenue operates at LOS E.
- The West 30th Street eastbound approach to Sixth Avenue operates at LOS F.
- The West 34th Street eastbound approach to Sixth Avenue/Broadway operates at LOS F.
- The West 34th Street westbound approach to Sixth Avenue/Broadway operates at mid-LOS D.
- The left turn lane on the West 33rd Street westbound approach to Broadway operates at LOS F.
- The West 33rd Street westbound approach to Seventh Avenue operates at LOS F.
- The West 31st Street westbound approach to Seventh Avenue operates at mid-LOS D.
- The West 30th Street eastbound approach to Eighth Avenue operates at LOS F.

- The right turn lane on the West 34th Street eastbound approach to Ninth Avenue operates at mid-LOS D.
- The right turn lane on the East 35th Street westbound approach to Madison Avenue operates at LOS E.
- The East 34th Street westbound approach to Park Avenue operates at LOS F.
- The left turn lane on the I-495 southbound approach to East 34th Street operates at LOS E.
- The right turn lane on the East 34th Street approach to Second Avenue operates at LOS E.
- The right turn lane on the East 34th Street westbound approach to the I-495 ramp operates at LOS F.
- The left turn lane on the East 34th Street approach to the FDR Drive operates at LOS F.
- The East 34th Street approach to the FDR Drive operates at mid-LOS D.

Weekday PM Peak Hour

Of the 43 intersections studied, 19 intersections have at least one lane group operating at mid-LOS D or worse during the weekday PM peak hour.

- The left turn lane on the West 35th Street westbound approach to Fifth Avenue operates at mid-LOS D.
- The West 33rd Street westbound approach to Fifth Avenue operates at LOS E.
- The West 30th Street eastbound approach to Fifth Avenue operates at LOS F.
- The West 30th Street eastbound approach to Sixth Avenue operates at LOS F.
- The West 34th Street eastbound approach to Sixth Avenue/Broadway operates at mid-LOS D.
- The West 34th Street westbound approach to Sixth Avenue/Broadway operates at LOS F.
- The West 35th Street westbound approach to Broadway operates at LOS E.
- The left turn lane on the West 33rd Street westbound approach to Broadway operates at LOS F.
- The West 33rd Street westbound approach to Seventh Avenue operates at LOS E.
- The West 30th Street eastbound approach to Eighth Avenue operates at LOS F.
- The West 35th Street westbound approach to Eighth Avenue operates at LOS F.
- The right turn lane on the West 34th Street eastbound approach to Ninth Avenue operates at LOS F.
- The right turn lane on the East 35th Street westbound approach to Madison Avenue operates at LOS F.
- The East 34th Street westbound approach to Madison Avenue operates at LOS F.
- The East 34th Street westbound approach to Park Avenue operates at LOS F.
- The East 34th Street westbound approach to Lexington Avenue operates at LOS F.
- The right turn lane on the Lexington Avenue southbound approach to East 34th operates at LOS E.
- The left turn lane on the I-495 southbound approach to East 34th Street operates at mid-LOS D.
- The right turn lane on the East 34th Street approach to Second Avenue operates at mid-LOS D.
- The right turn lane on the East 34th Street westbound approach to the I-495 ramp operates at LOS F.

- The left turn lane on the East 34th Street approach to the FDR Drive operates at LOS F.
- The East 34th Street approach to the FDR Drive operates at mid-LOS D.
- The left turn lane on the FDR Drive northbound approach to East 34th Street operates at mid-LOS D.

Saturday Midday Peak Hour

Of the 43 intersections studied, 17 intersections have at least one lane group operating at mid-LOS D or worse during the Saturday Midday peak hour.

- The left turn lane on the West 35th Street westbound approach to Fifth Avenue operates at LOS E.
- The West 33rd Street westbound approach to Fifth Avenue operates at mid-LOS D.
- The West 34th Street eastbound approach to Sixth Avenue/Broadway operates at LOS F.
- The West 31st Street westbound approach to Broadway operates at LOS F.
- The West 34th Street eastbound approach to Seventh Avenue operates at LOS E.
- The West 33rd Street westbound approach to Seventh Avenue operates at mid-LOS D.
- The West 31st Street westbound approach to Seventh Avenue operates at LOS E.
- The West 31st Street westbound approach to Eighth Avenue operates at LOS F.
- The West 35th Street westbound approach to Eighth Avenue operates at LOS E
- The left turn lane on the East 34th Street eastbound approach to Madison Avenue operates at LOS E.
- The East 34th Street westbound approach to Madison Avenue operates at mid-LOS D.
- The East 34th Street westbound approach to Park Avenue operates at LOS F.
- The East 34th Street westbound approach to Lexington Avenue operates at LOS F.
- The East 34th Street eastbound approach to Third Avenue operates at mid-LOS D.
- The left turn lane on the I-495 southbound approach to East 34th Street operates at LOS F.
- The right turn lane on the East 34th Street approach to Second Avenue operates at mid-LOS D.
- The right turn lane on the East 34th Street westbound approach to the I-495 ramp operates at LOS E.
- The left turn lane on the East 34th Street approach to the FDR Drive operates at LOS E.

Detailed analysis results, including the v/c ratio, delay, and LOS for intersections with one or more approach or lane group operating at mid-LOS D or worse for the weekday AM, Midday, PM, and Saturday Midday peak periods are provided in **Table 16-7**.

Table 16-7
Existing Conditions
Intersection Approach Movements Operating at Mid-LOS D, LOS E, or LOS F

Intersection	Approach	Weekday AM				Weekday MD				Weekday PM				Saturday MD			
		Movt.	V/C Ratio	Delay (spv)	LOS	Movt.	V/C Ratio	Delay (spv)	LOS	Movt.	V/C Ratio	Delay (spv)	LOS	Movt.	V/C Ratio	Delay (spv)	LOS
Ninth Ave & 34th St	EB	R	0.87	63.0	E	R	0.75	47.1	mid-D	R	1.05	286.6	F				
Eighth Ave & 30th St	EB					LT	0.57	99.9	F	LT	0.60	113.8	F	LT			
Eighth Ave & 31st St	WB	TR				TR				TR				TR	0.61	102.6	F
Eighth Ave & 35th St	WB	TR	0.88	53.3	mid-D	TR				TR	1.04	232.6	F	TR	0.98	72.9	E
Seventh Ave & 31st St	WB	LT				LT	0.93	49.4	mid-D	LT				LT	0.97	56.0	E
Seventh Ave & 33rd St	WB	LT	0.92	75.8	E	LT	1.05	282.5	F	LT	0.92	73.0	E	LT	0.81	52.6	mid-D
Seventh Ave & 34th St	EB	T				T				T				T	0.43	73.6	E
Seventh Ave & 35th St	WB	LT	0.60	137.2	F	LT				LT				LT			
Broadway & 31st St	WB	LT				LT				LT				LT	1.05	254.9	F
Broadway & 33rd St	WB	L	1.00	87.8	F	L	0.99	81.2	F	L	1.03	196.6	F	L			
Broadway & 35th St	WB	T	0.89	51.8	mid-D	T				T	0.91	55.3	E	T			
Sixth Ave & 30th St	EB	LT				LT	0.78	100.5	F	LT	0.78	97.8	F	LT			
Sixth Ave / Bdwy & 34th St	EB	T	1.05	268.5	F	T	1.04	234.5	F	T	0.85	47.4	mid-D	T	1.03	354.3	F
	WB	TR	1.01	104.2	F	TR	0.91	46.1	mid-D	TR	1.05	256.7	F	TR			
Fifth Ave & 30th St	EB	TR	1.05	263.8	F	TR	0.96	65.1	E	TR	1.05	268.0	F	TR			
Fifth Ave & 33rd St	WB	LT	0.79	50.3	mid-D	LT	1.00	85.8	F	LT	0.90	64.6	E	LT	0.75	45.7	mid-D
Fifth Ave & 35th St	WB	L	0.81	68.1	E	L	0.96	95.2	F	L	0.58	47.1	mid-D	L	0.81	66.7	E
		T	0.90	48.4	mid-D	T				T				T			
Madison Ave & 30th St	EB	T	0.89	50.0	mid-D	T				T				T			
Madison Ave & 34th St	EB	L	0.64	49.6	mid-D	L				L				L	0.73	67.2	E
	WB	T				T				T	1.03	175.6	F	T	0.95	50.9	mid-D
Madison Ave & 35th St	WB	T	1.05	209.5	F	T				T				T			
		R	0.86	76.8	E	R	0.77	55.9	E	R	1.05	312.3	F	R			
Park Ave & 34th St	WB	T	1.05	202.5	F	T	1.05	212.3	F	T	1.05	203.9	F	T	1.05	192.8	F
Lexington Ave & 34th St	WB	T	1.05	189.7	F	T				T	1.03	191.6	F	T	1.05	183.0	F
	SB	LT	1.01	83.5	F	LT				LT				LT			
		R				R				R	0.92	69.8	E	R			
Third Ave & 34th St	WB	TR				TR				TR				TR	0.92	49.0	mid-D
Ramp from I-495 & 34th St	SB	L	0.82	75.9	E	L	0.63	55.3	E	L	0.56	50.6	mid-D	L	1.05	311.0	F
Second Ave & 34th St	EB	R	1.05	292.9	F	R	0.78	62.1	E	R	0.67	50.4	mid-D	R	0.76	53.9	mid-D
Ramp to I-495 & 34th St	WB	LT	0.86	52.7	mid-D	LT				LT				LT			
		R	0.95	100.0	F	R	0.99	109.0	F	R	1.05	296.9	F	R	0.70	57.9	E
First Ave & 34th St	EB	LT	1.05	244.5	F	LT				LT				LT			
FDR Drive & 34th St	EB	L	1.05	292.6	F	L	0.98	89.1	F	L	1.00	94.3	F	L	0.87	66.0	E
		LTR	0.92	69.5	E	LTR	0.74	47.7	mid-D	LTR	0.75	49.2	mid-D	LTR			
	NB	L	1.05	174.6	F	L				L	0.94	47.4	mid-D	L			

PARKING

Field inventories were conducted to evaluate existing parking conditions. On-street parking regulations and off-street public parking facilities were identified within the parking study area defined below. The future parking demand associated with the future with the proposed project is expected to be concentrated in the vicinity of the development site, and it is expected that this demand would be primarily accommodated by off-street facilities. Therefore, the on-street parking assessment involved only an inventory of the parking study area's on-street parking regulations. Detailed surveys of supply and utilization for the study area's off-street parking facilities were conducted and are summarized below.

OFF-STREET PARKING

An inventory of public parking lots and garages within a ¼-mile radius of the 15 Penn Plaza site was prepared based on field surveys conducted in January 2009. Parking occupancy surveys were conducted for all off-street parking facilities to confirm the available inventory. **Figure 16-11** illustrates the boundaries of the parking study area and the locations of the off-street parking facilities.

The parking study area roughly extends from West 37th to West 27th Streets and from Ninth Avenue to Fifth Avenue. The January 2009 survey identified 47 off-street parking facilities. The total capacity of the facilities surveyed is slightly less than 6,500 spaces during the day and over 4,550 spaces overnight. As shown in **Table 16-8**, the 47 surveyed facilities have an occupancy rate of about 87 percent during the weekday Midday period and 44 percent during the weekday overnight, with approximately 870 available spaces during the weekday Midday hour.

ON-STREET PARKING

On-street parking regulations were also inventoried within the same parking study area on weekdays and on Saturday, with parking regulations recorded on a block-by-block basis. Most of the area is characterized by a blend of very stringent parking regulations that restrict parking all day during the week and on Saturdays. Those areas where parking is not restricted during the entire day often have peak hour parking restrictions. **Figure 16-12** and **Table 16-9** detail the on-street parking restrictions on a block-by-block basis.

STUDY AREA ACCIDENT PATTERNS

Accident data for intersections within the study area were obtained from NYCDOT. This information provides available accident data from 2006 to 2008 and is presented in **Table 16-10**. The table provides, by intersection, the total number of accidents, the total number of reportable accidents (involving fatality, injury, or more than $1,000 in property damage), and the number of fatalities and injuries during the study period, as well as a yearly breakdown of pedestrian- and bicycle-related injuries or fatalities at each intersection.



15 PENN PLAZA

Off-Street Parking Facilities
Figure 16-11

Table 16-8
Existing Off-Street Parking Utilization

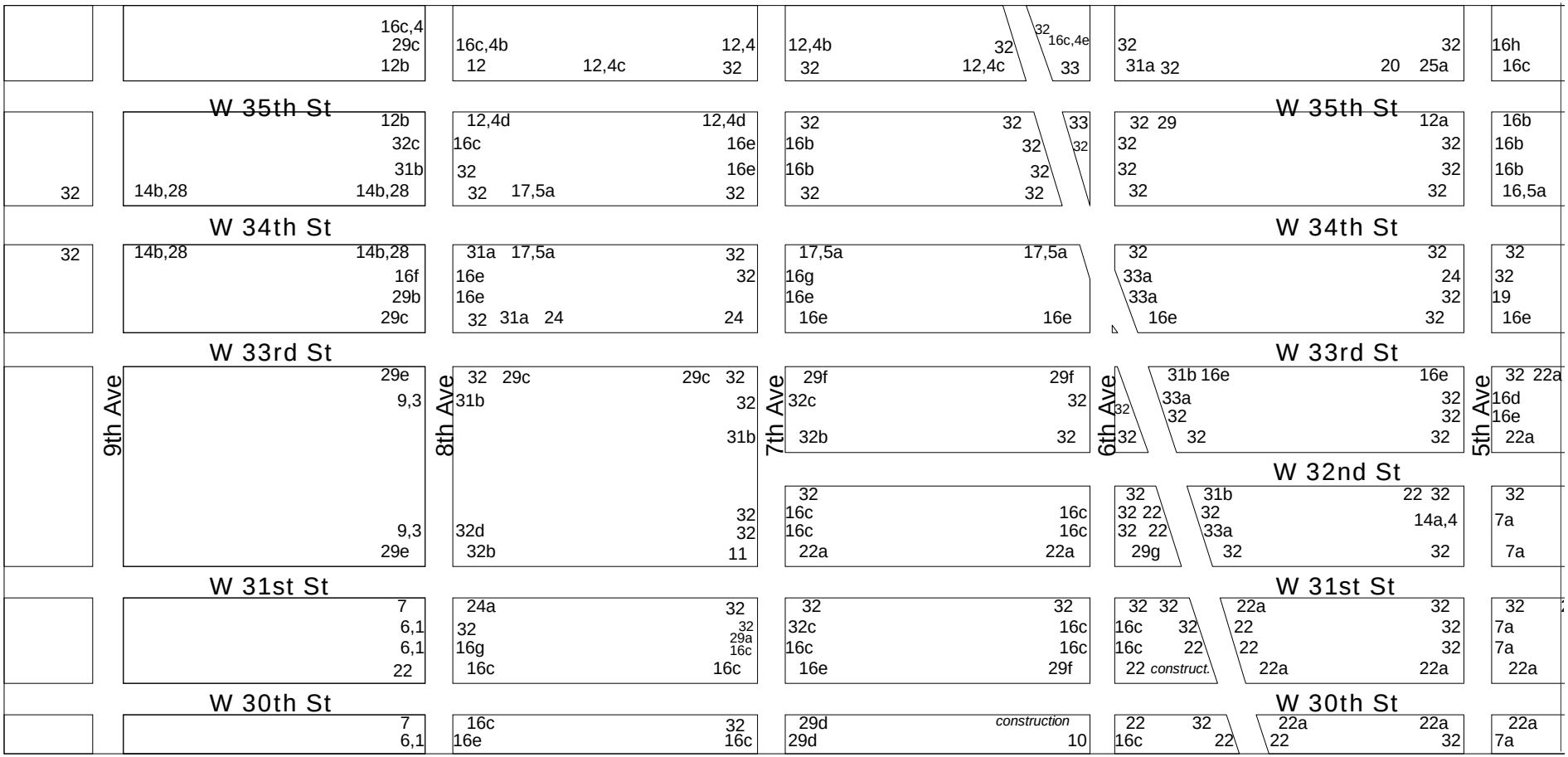
Map #	Name	Address	License Number	Licensed Capacity	Weekday Midday			Weekday Overnight		
					Utilization Rate	Demand	Available Capacity	Utilization Rate	Demand	Available Capacity
1	New Garden Garage LLC / Meyers[1]	218-230 West 31st Street / 227 West 30th Street	1180977	600	90%	540	60	39%	231	369
2	Pater Realty Co. LLC	42-64 West 30th Street	1192326	100	30%	30	70	Closed	Closed	Closed
3	Central Parking Systems of New York, Inc	9 West 31st Street	1226482	101	60%	61	40	50%	51	50
4	Central Parking System of NY, Inc.	1251 Broadway	0962013	80	90%	72	8	Closed	Closed	Closed
5	Flash 31 Mgmt LLC	124-126 West 31st Street	1262200	34	71%	24	10	59%	20	14
6	West 31st Street Garage Corp / Imperial Parking System	371 Seventh Avenue / 148 West 31st Street	1099887	112	34%	38	74	32%	36	76
7	Central Parking System of New York, Inc.	300-306 West 31st Street / 308-310 West 31st Street	1231084 / 1231053	63	87%	55	8	Closed	Closed	Closed
8	Central Parking System of New York, Inc.	1 Penn Plaza	0961998	665	80%	532	133	45%	299	366
9	Central Parking Systems	1250 Broadway	0908174	150	90%	135	15	39%	59	91
10	38 West 33rd Street Corp.	38-46 West 33rd Street	0768357	224	90%	202	22	Closed	Closed	Closed
11	9 West 35th Street LLC/ D/B/A Meyers Parking	9-19 West 35th Street / 12-14 West 36th Street	1180979	225	60%	135	90	20%	45	180
12	Fashion 35 Parking LLC	1328 Broadway	1275065	149	87%	129	20	36%	53	96
13	Impark 33 LLC	325 5th Avenue	1244704	174	57%	100	74	29%	51	123
14	33 Street Operating LLC	35 West 33rd Street	1241305	34	100%	34	0	Closed	Closed	Closed
15	Garden Lots, LLC	125 West 31st Street	1266254	120	75%	90	30	19%	23	97
16	Edison NY Parking, LLC	245 West 28th Street	0926756	131	90%	118	13	45%	71	60
17	West 28th Garage Parking, LLC	241-243 West 28th Street	1233094	240	64%	154	86	50%	120	120
18	Troy Parking Corp	217-219 West 28th Street	1186129	25	124%	31	-6	Closed	Closed	Closed
19	Smart Park / Desoto Parking, LLC	211 West 29th Street	1201084	50	76%	38	12	Closed	Closed	Closed
20	Park 29, LLC	217-221 West 29th Street	1025798 / 1025799	48	140%	67	-19	Closed	Closed	Closed
21	Quick Park / Garden Garage, LLC	253-255 West 29th Street	1140970	25	100%	25	0	Closed	Closed	Closed
22	Secure Parking LLC	363 West 30th Street	1099298	18	80%	14	4	Closed	Closed	Closed
23	30 West LLC	320 West 30th Street	1155070	82	100%	82	0	46%	38	44
24	Post Office Garage LLC / D/B/A Meyers Parking	340 West 31st Street	1181008	255	90%	230	26	40%	102	153
25	Central Parking System of New York, Inc.	305-319 West 33rd Street	1094411	250	50%	125	125	60%	150	100
26	Lincoln Garage LLC / D/B/A Meyers Parking	323-31 West 34th Street	1182737	500	75%	375	125	50%	250	250
27	34th and Ninth Parking LLC	436-438 Ninth Avenue / 351-353 West 34th Street	1166499	140	70%	98	42	Closed	Closed	Closed
28	Wizard Car Park, LLC	320 West 36th Street	1091809	150	50%	75	75	50%	75	75
29	NY 786 Parking	339 West 36th Street	1131404	25	76%	19	6	20%	5	20
30	S and R Parking Corp	318 West 37th Street	0900877	77	95%	73	4	Closed	Closed	Closed
31	Quik Park Queensboro LLC	326 West 37th Street	1263691 / 1263695	130	80%	104	26	Closed	Closed	Closed
32	Quik Park/Garden Garage LLC	384-386 Eighth Avenue	1140965	35	74%	26	9	Closed	Closed	Closed
33	Atrium Parking LLC	161-163 West 36th Street	0469518	149	100%	149	0	Closed	Closed	Closed
34	Pace Parking LLC	990-996 Sixth Avenue	1179983	120	90%	108	12	40%	48	72
35	52 West 36th Street Parking LLC	58-70 West 37th Street / 59-61 West 36th Street	0429528	150	100%	150	0	Closed	Closed	Closed

Table 16-8 (cont'd.)
Existing Off-Street Parking Utilization

Map #	Name	Address	License Number	Licensed Capacity	Weekday Midday			Weekday Overnight		
					Utilization Rate	Demand	Available Capacity	Utilization Rate	Demand	Available Capacity
36	Garment 36 Parking LLC	52 West 36th Street	1233097	149	100%	149	0	Closed	Closed	Closed
37	Edison NY Parking, LLC	451 Ninth Avenue / 409 West 35th Street	0976955 / 0976953	154	80%	123	31	73%	113	41
38	Edison 9th Avenue Parking Corp	401-409 Ninth Avenue / 412-422 West 34th Street	0696486 / 0428456	207	90%	186	21	60%	124	83
39	Madison Square Parking Corp	359-363 Ninth Avenue	993927	51	100%	51	0	88%	45	6
40	Kinney Parking System, Inc./ D/B/A Central Parking System	33 West 28th Street	1137167	224	60%	134	90	Closed	Closed	Closed
41	Central Parking System of NY, Inc.	800 Sixth Avenue	1204131	56	80%	45	11	29%	16	40
42	Central Parking System Inc.[2]	835-851 Sixth Avenue	0963076	0	-	448	-	Closed	Closed	Closed
43	Kinney Parking System, Inc.[2]	106 West 31st Street	0427104	0	-	15	-	Closed	Closed	Closed
44	Kinney Parking System, Inc.[2]	109 West 31st Street	0427104	0	-	26	-	Closed	Closed	Closed
45	Central Parking System	7-11 W. 28th Street / 6-10 W. 29th Street	1076965	112	95%	106	6	Closed	Closed	Closed
46	Fero Parking Corp.	140 West 28th Street	0367501	60	100%	60	0	Closed	Closed	Closed
47	Central Parking System Inc.	32-34 West 29th Street	1058904	35	91%	32	3	Closed	Closed	Closed
			Totals	**6,479**	**87%**	**5,613**	**867**	**44%**	**2,025**	**2,526**

[1] Several floors of this garage serve event parking at Madison Square Garden only. Therefore, available capacity was reduced from 1,500 to 600 spaces

[2] Currently under construction (demand dispersed throughout parking study area)



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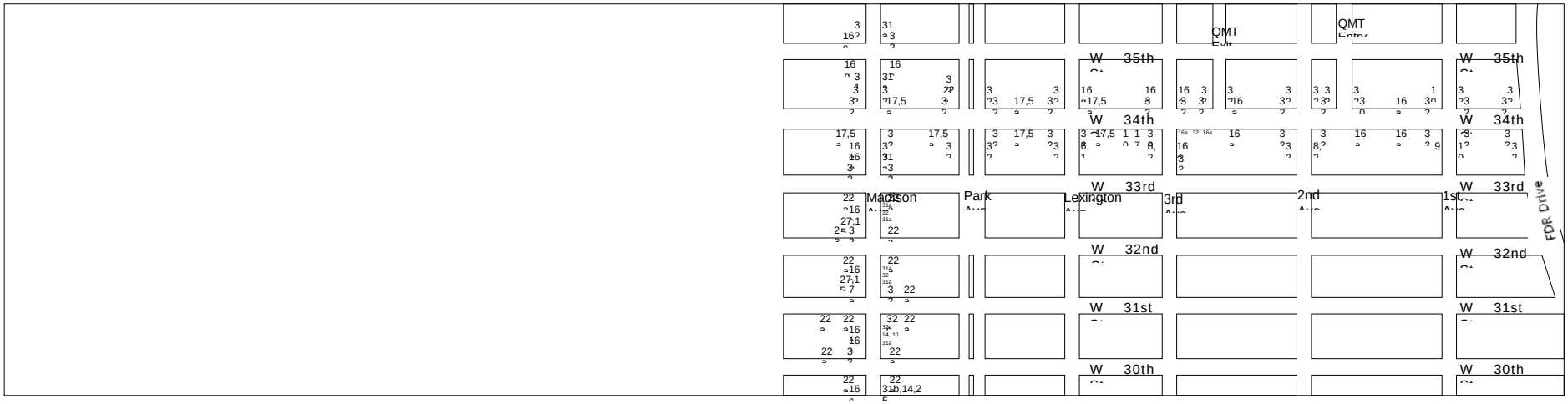
On-Street Parking Regulations
Figure 16-12



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On-Street Parking Regulations
Figure 16-12 (cont'd)

Table 16-9
On-Street Parking Regulations

Map No.	Parking Regulation
1	1 Hr Metered Parking from 8am - 7pm except Sun
2	1 Hr Metered Parking from 8:30am - 10pm except Sun
3	1 Hr Metered Parking from 9am - 7pm except Sun
4	Metered Parking from 10am - 4pm Mon-Fri
4	No Parking from 2am - 6am Mon, Wed, Fri
4a	No Parking from 2am - 6am Mon, Wed, Sat
4b	No Parking from 2am - 6am Tue, Thu, Sat
4c	No Parking from 2am - 6am Sat
4d	No Parking from 2am - 6am Sun
4e	No Parking from 2am - 6am
5	No Parking from 7am - Midnight including Sun
5a	No Parking from 7pm - Midnight including Sun
6	No Parking from 7:30am - 8am except Sun
7	No Parking from 8am - 6pm except Sun
7a	No Parking from 8am - 6pm Mon - Fri
8	No Parking from 8am - 8:30am except Sun
9	No Parking from 8:30am - 9am except Sun
10	No Parking from Anytime
11	No Parking (construction regulation)
12	No Standing 6am - 7pm Mon - Fri except Commercial Vehicles, Metered Parking 3 Hr Limit
12a	No Standing 6am - 7pm Mon - Fri except Commercial Vehicles, Metered Parking 4 Hr Limit
12b	No Standing 6am - 7pm Mon - Fri except trucks loading and unloading
13	No Standing 7am - 1pm Mon - Fri
14	4pm - 7pm except Sun ,
14a	4pm - 7pm Mon - Fri ,
14b	4pm - 7pm Mon - Sat ,
15	No Standing 7am - 3:30pm except Sun except Commercial Vehicles, Metered Parking 3 Hr Limit
16	No Standing 7am - 7pm including Sun
16a	No Standing 7am - 7pm Mon - Fri
16b	No Standing 7am - 7pm Mon - Sat
16c	No Standing 7am - 7pm except Sun except Commercial Vehicles, Metered Parking 3 Hr Limit
16d	No Standing 7am - 7pm Mon - Fri except Authorized Vehicles, Dept of Mental Health
16e	No Standing 7am - 7pm Mon - Fri except Commercial Vehicles, Metered Parking 3 Hr Limit
16f	No Standing 7am - 7pm Mon - Fri except trucks loading and unloading,
16g	No Standing 7am - 7pm Mon - Sat except Commercial Vehicles, Metered Parking 3 Hr Limit
16h	No Standing 7am - 7pm except Sun
17	1pm - 7pm Mon - Fri
18	No Standing 7am - 8pm Mon - Fri except Commercial Vehicles, Metered Parking 3 Hr Limit
19	No Standing 7am - Midnight Mon - Sat except Commercial Vehicles, Metered Parking 3 Hr Limit
20	4pm - 6pm Mon - Fri ,
21	No Standing 8am - 10pm Mon - Sat except Commercial Vehicles, Metered Parking 3 Hr Limit
22	No Standing 8am - 6pm except Sun except Commercial Vehicles, Metered Parking 3 Hr Limit
22a	No Standing 8am - 6pm Mon - Fri except Commercial Vehicles, Metered Parking 3 Hr Limit
23	No Standing 8am - 7pm Mon - Fri except Commercial Vehicles, Metered Parking 3 Hr Limit
24	No Standing 8am - Midnight Mon - Sat except Commercial Vehicles, Metered Parking 3 Hr Limit
24a	No Standing 8am - Midnight Mon - Sat except trucks loading and unloading
25	No Standing 10am - 4pm except Sun except Commercial Vehicles, Metered Parking 3Hr Limit
25a	No Standing 10am - 4pm Mon - Fri except Commercial Vehicles, Metered Parking 3Hr Limit
26	No Standing 1pm - 7pm Mon - Fri except Commercial Vehicles, Metered Parking 3 Hr Limit
27	No Standing 3:30pm - 7pm Mon - Fri, Bus Layover Area
28	10am - 4pm Mon - Sat except Commercial Vehicles, Metered Parking 3 Hr Limit
29	No Standing except Authorized Vehicles
29a	No Standing except Authorized Vehicles, Consuls and Diplomats
29b	No Standing except Authorized Vehicles, FISA Vehicles only
29c	No Standing except Authorized Vehicles, NY Press License Plates
29d	No Standing except Authorized Vehicles, NYPD
29e	No Standing except Authorized Vehicles, US Mail
29f	No Standing except Commercial Vehicles, Metered Parking 3 Hr Limit
29g	No Standing including Sun except Commercial Vehicles, Metered Parking 3 Hr Limit
30	No Standing except pick-ups & drop-offs
31	No Standing
31a	No Standing, Bus Stop
31b	No Standing, Taxi Stand
32	No Standing Anytime
32a	No Standing Anytime except Authorized Vehicles, Police Dept. Vehicles
32b	No Standing Anytime, Bus Layover Area
32c	No Standing Anytime, Hotel Loading Zone
32d	No Standing Anytime, Taxi Stand
33	No Stopping
33a	No Stopping Anytime

Table 16-10
2006 to 2008 Accident History

Intersection		2006, 2007, 2008			Injuries or Fatalities by Year								
		Overall Accidents[1]			Pedestrian			Bicycle			Combined[2]		
Main Street	Cross Street	Reportable Accidents	Fatalities	Injuries	2006	2007	2008	2006	2007	2008	2006	2007	2008
Ninth Ave	W 34th St.	25	0	32	5	2	2	1	1	2	6	3	4
Eighth Ave	W 30th St.	14	0	15	2	8	3	1	0	0	3	8	3
Eighth Ave	W 31st St.	11	0	15	0	2	5	0	2	1	0	4	6
Eighth Ave	Post Office X-ing	2	0	2	0	0	0	0	0	0	0	0	0
Eighth Ave	W 33rd St.	17	0	19	4	1	3	2	2	1	6	3	4
Eighth Ave	W 34th St.	52	0	60	13	7	10	5	1	2	18	8	12
Eighth Ave	W 35th St.	6	0	6	0	3	1	1	1	0	1	4	1
Seventh Ave	W 30th St.	12	0	15	0	2	3	0	1	0	0	3	3
Seventh Ave	W 31st St.	16	0	16	2	1	2	1	2	2	3	3	4
Seventh Ave	W 32nd St.	12	0	15	2	6	4	0	0	0	2	6	4
Seventh Ave	W 33rd St.	18	0	20	3	7	3	1	0	0	4	7	3
Seventh Ave	W 34th St.	40	0	54	6	7	9	2	0	0	8	7	9
Seventh Ave	W 35th St.	18	0	23	5	8	3	0	0	0	5	8	3
Sixth Ave	W 30th St.	13	0	9	2	1	1	1	1	1	3	2	2
Sixth Ave	W 31st St.	8	0	9	0	1	0	0	1	0	0	2	0
Sixth Ave	W 32nd St.	21	0	20	2	1	1	0	1	2	2	2	3
Sixth Ave	W 33rd St.	8	0	7	1	1	1	0	0	0	1	1	1
Sixth Ave	W 34th St.	25	0	27	2	2	1	1	2	0	3	4	1
Sixth Ave	W 35th St.	9	0	9	0	0	2	2	1	1	2	1	3
Broadway	W 35th St.	5	0	1	0	0	0	0	0	0	0	0	0
Broadway	W 33rd St.	7	0	8	0	3	1	0	1	1	0	4	2
Broadway	W 32nd St.	8	0	4	1	0	1	0	0	0	1	0	1
Broadway	W 31st St.	10	0	7	0	2	0	1	0	0	1	2	0
Broadway	W 30th St.	6	0	6	1	2	2	0	0	0	1	2	2
Fifth Ave	E 35th St.	16	0	13	1	2	0	2	0	0	3	2	0
Fifth Ave	E 33rd St.	12	0	8	2	2	1	0	1	0	2	3	1
Fifth Ave	E 32nd St.	17	0	15	0	1	1	1	0	1	1	1	2
Fifth Ave	E 31st St.	7	0	5	1	2	0	0	0	0	1	2	0
Fifth Ave	E 30th St.	8	0	6	0	2	0	0	0	0	0	2	0
Madison Ave	E 30th St.	8	0	8	1	0	2	1	0	1	2	0	3
Madison Ave	E 31st St.	5	0	4	0	1	1	0	0	0	0	1	1
Madison Ave	E 32nd St.	5	0	2	0	0	1	0	0	0	0	0	1
Madison Ave	E 33rd St.	3	0	3	0	0	1	0	0	1	0	0	2
Madison Ave	E 35th St.	3	0	4	0	0	2	0	0	0	0	0	2
E 34th St.	FDR Dr. SR	6	0	7	0	0	0	0	0	0	0	0	0
E 34th St.	FDR Dr. SR	17	1	14	0	0	0	0	0	0	0	0	0
E 34th St.	First Ave	32	0	24	4	0	2	0	1	0	4	1	2
E 34th St.	I-495 Entrance	4	0	3	2	0	0	0	0	0	2	0	0
E 34th St.	Second Ave	32	0	20	3	3	3	1	1	0	4	4	3
E 34th St.	I-495 Exit	8	0	5	0	0	0	0	0	0	0	0	0
E 34th St.	Third Ave	43	0	34	6	2	5	0	0	0	6	2	5
E 34th St.	Lexington Ave	29	0	25	3	2	5	0	1	5	3	3	10
E 34th St.	Park Ave NB	12	0	10	2	1	0	0	0	0	2	1	0
E 34th St.	Park Ave SB	18	0	26	0	0	2	0	1	0	0	1	2
E 34th St.	Madison Ave	19	0	22	0	2	0	2	0	0	2	2	0
E 34th St.	Fifth Ave	20	0	25	3	0	2	0	0	1	3	0	3

Notes:

1 Overall accidents includes accidents involving one or more motor vehicles or a motor vehicle with a pedestrian or bicycle.

2 A combined total of five or more pedestrian and/or bicycle related accidents in any one year is the CEQR criteria for identifying a high accident location.

Source: NYCDOT

C. NO ACTION

ROADWAY MODIFICATIONS

Several modifications to the study area roadway network are expected to be in place by 2014. These modifications are expected to be implemented as part of the Hudson Yards area development and other development in the study area and in accordance with NYCDOT initiatives.

SAFE STREETS FOR SENIORS

NYCDOT has implemented a citywide program of improving pedestrian safety conditions for senior citizens. One traffic signal timing factor considered at intersections is the pedestrian walk time assumed for crossing. Within designated areas, NYCDOT has proposed reducing the assumed pedestrian crossing walk rate from four to three feet per second to provide additional pedestrian crossing time. The Midtown West/Chelsea Senior Safety Area overlaps a large portion of the traffic study area. Traffic signal timings within this Senior Safety Area were checked for conformance with this revised pedestrian walk rate parameter and modified as necessary in both the future with the proposed project and the No Action conditions to satisfy reduced walking rate traffic signal timing requirements.

GREEN LIGHT FOR MIDTOWN / BROADWAY CLOSURE

At the time of completion of the DEIS, NYCDOT's Green Light for Midtown pilot project was in effect. The pilot project includes the complete closure of Broadway to through traffic at Times Square and Herald Square, as well as other geometric changes on Broadway between Columbus Circle and West 26th Street. A determination whether these changes will be made permanent has not been made and will occur at a later date by NYCDOT. However, the Green Light for Midtown project, if implemented, could have the potential to change traffic circulation patterns at some of the study area intersections analyzed in the DEIS for 15 Penn. The changed traffic circulation could result in a slight increase in the number of intersections that are significantly impacted. In the event that, during the period between Draft and Final EIS, it is determined that a future decision to make the Green Light project permanent is reasonably foreseeable, additional traffic counts will be conducted in the study area, including along 5th Avenue, and other additional analyses will be included as appropriate in the Final EIS to take the potential for a changed condition of Broadway into account.

FIRST AVENUE / SECOND AVENUE SELECT BUS SERVICE (SBS) CORRIDORS

At the time of completion of the DEIS, NYCDOT was planning to implement Select Bus Service (SBS) Corridors along First and Second Avenue connecting South Ferry in Lower Manhattan to 125th Street. This program is designed to enhance transit service while increasing bicycle access and improving pedestrian safety. The potential design alternatives each include a dedicated bus lane with a shared / protected bike lane. If the First Avenue / Second Avenue SBS Corridor is implemented, the program could have the potential to change traffic circulation patterns at some of the study area intersections analyzed in the DEIS for 15 Penn. In the event that, during the period between Draft and Final EIS, it is determined that a future decision to implement the First Avenue / Second Avenue SBS Corridors is reasonably foreseeable,

additional analyses will be included as appropriate in the Final EIS to take the potential for changed conditions into account.

OTHER ROADWAY MODIFICATIONS

NYCDOT is planning to implement pedestrian safety improvements on Seventh Avenue from West 31st to West 34th Streets, consisting of corner bulb-outs to increase pedestrian circulation space on street corners and curbline relocations to widen sidewalks.

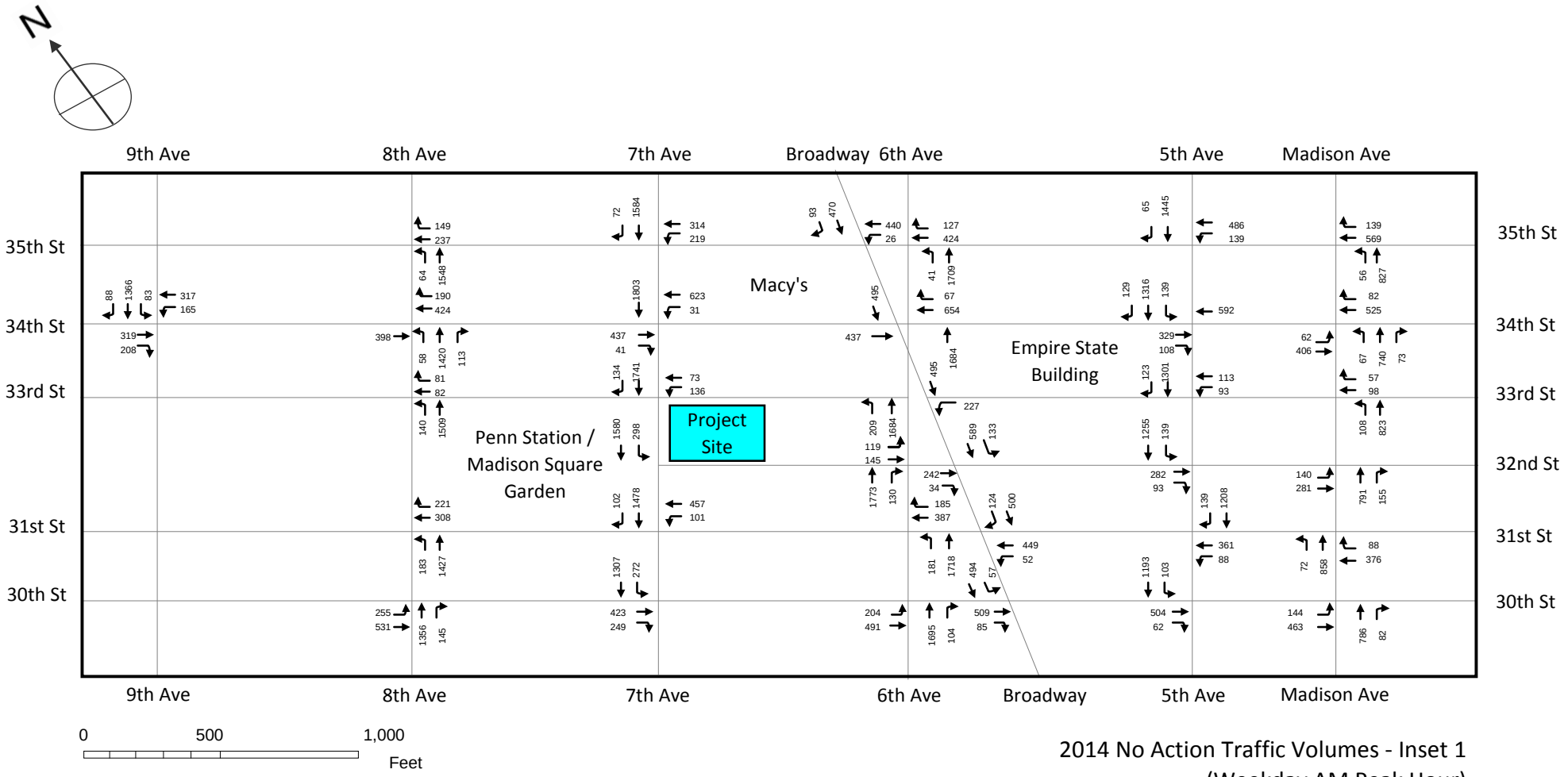
Consistent with the NYCDOT safety improvement plan, as part of the Proposed Project, the southeast corner of Seventh Avenue at 33rd Street and the northeast corner of Seventh Avenue at 32nd Street will be bulbed out, increasing pedestrian refuge area at these street corners.

PEAK HOUR TRAFFIC VOLUMES

Traffic volumes on the study area roadway network in the No Action condition were derived through a combination of background traffic growth and traffic projected to be generated by specific developments anticipated to be completed by 2014. A description of No Action (or "No Build") development projects whose projected trips were included in the traffic volume networks in the No Action analysis is provided in Chapter 2, "Procedural and Analytical Framework."

For the 2014 analysis traffic forecasts, a cumulative background growth rate of approximately 3.0 percent was applied to 2008 conditions to represent background growth occurring over the 2008 to 2014 period.

Figures 16-13 through 16-20 provide the No Action traffic volumes for the typical weekday AM (8 to 9 AM), Midday (12 to 1 PM), PM (5 to 6 PM) and typical Saturday Midday (1 to 2 PM) peak hours, respectively, in the study area.



2014 No Action Traffic Volumes - Inset 1
(Weekday AM Peak Hour)

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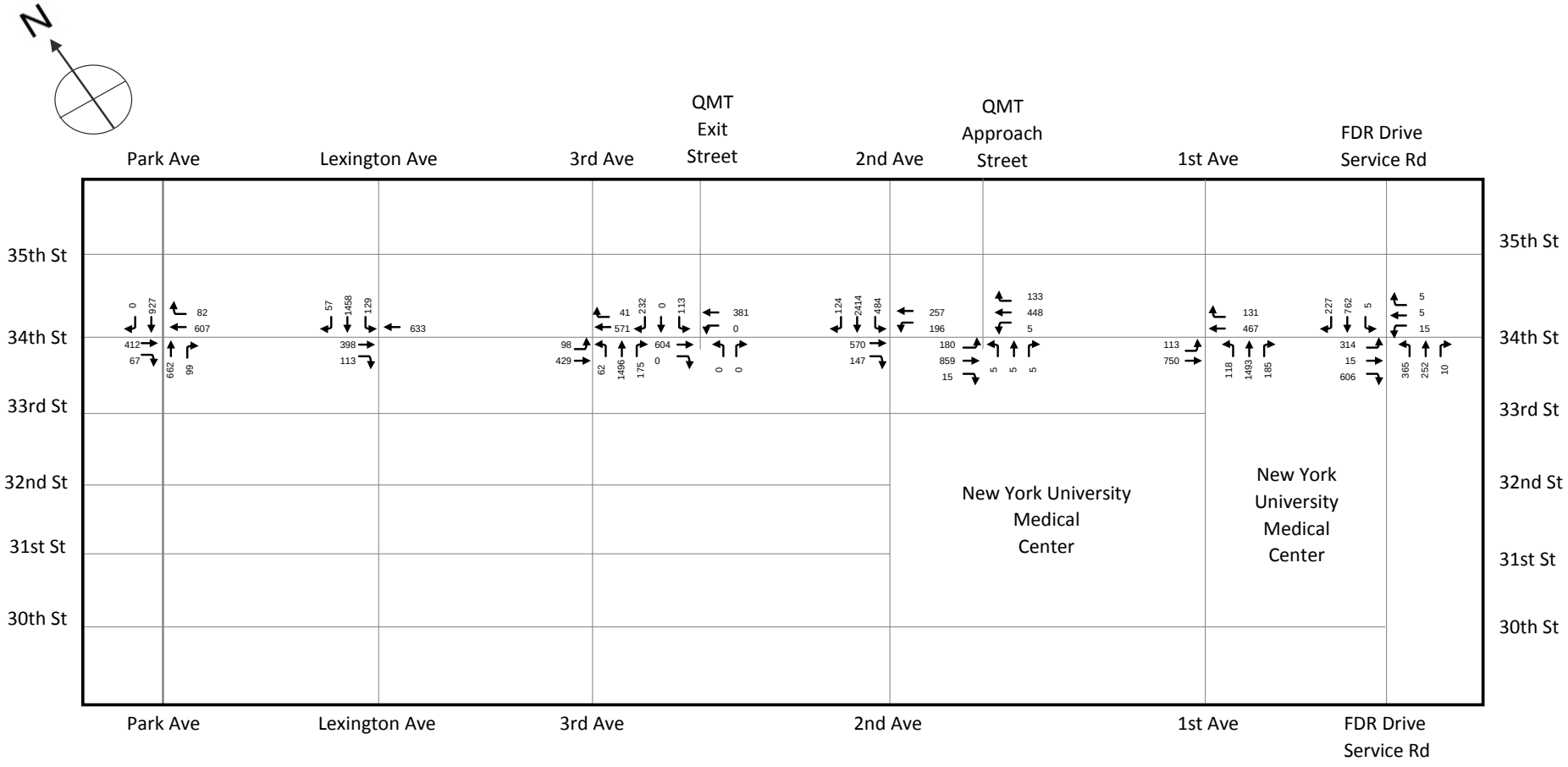
Figure 16-13

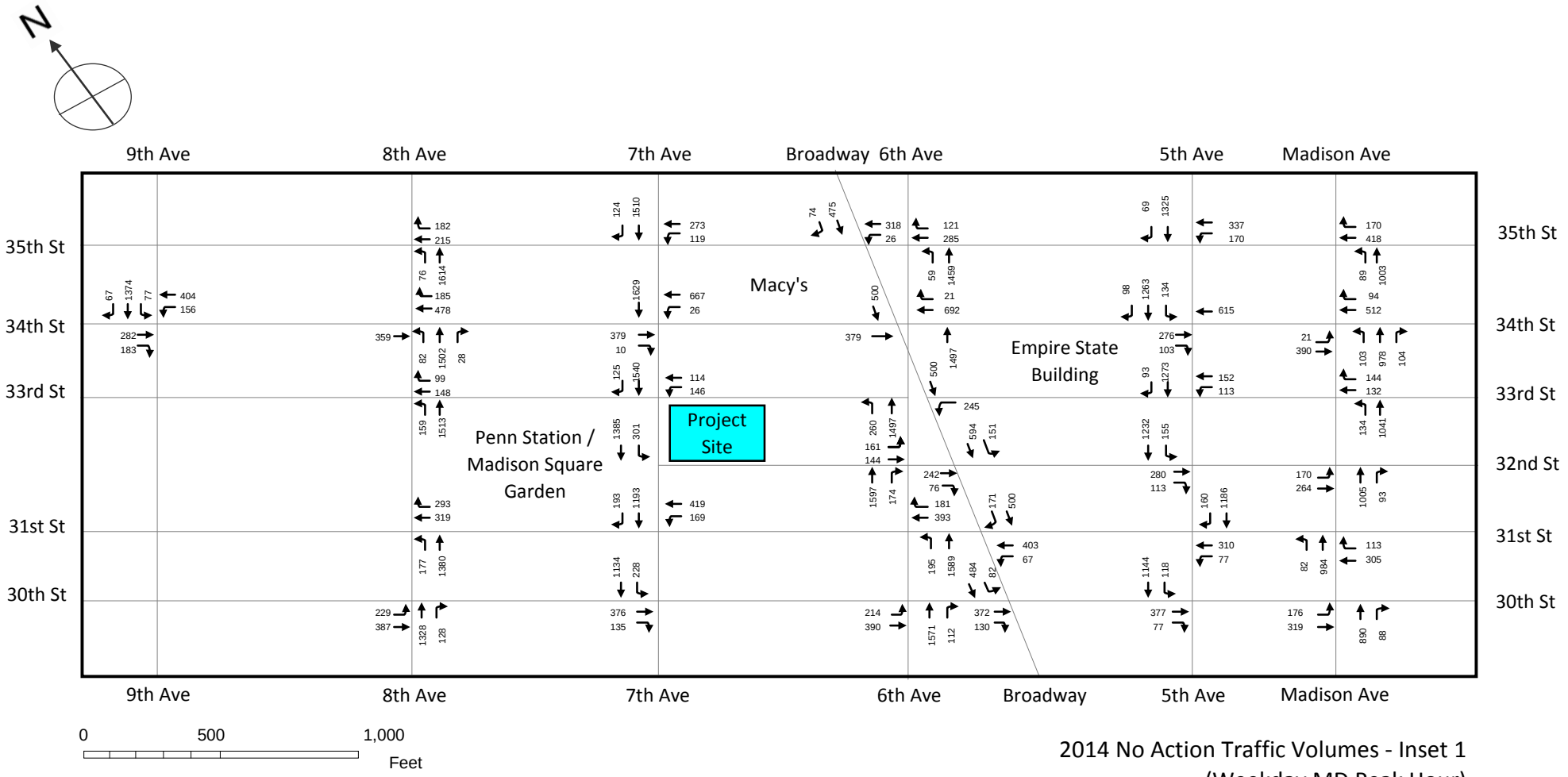


0 750 1,500
Feet

2014 No Action Traffic Volumes - Inset 2
(Weekday AM Peak Hour)

15 PENN PLAZA

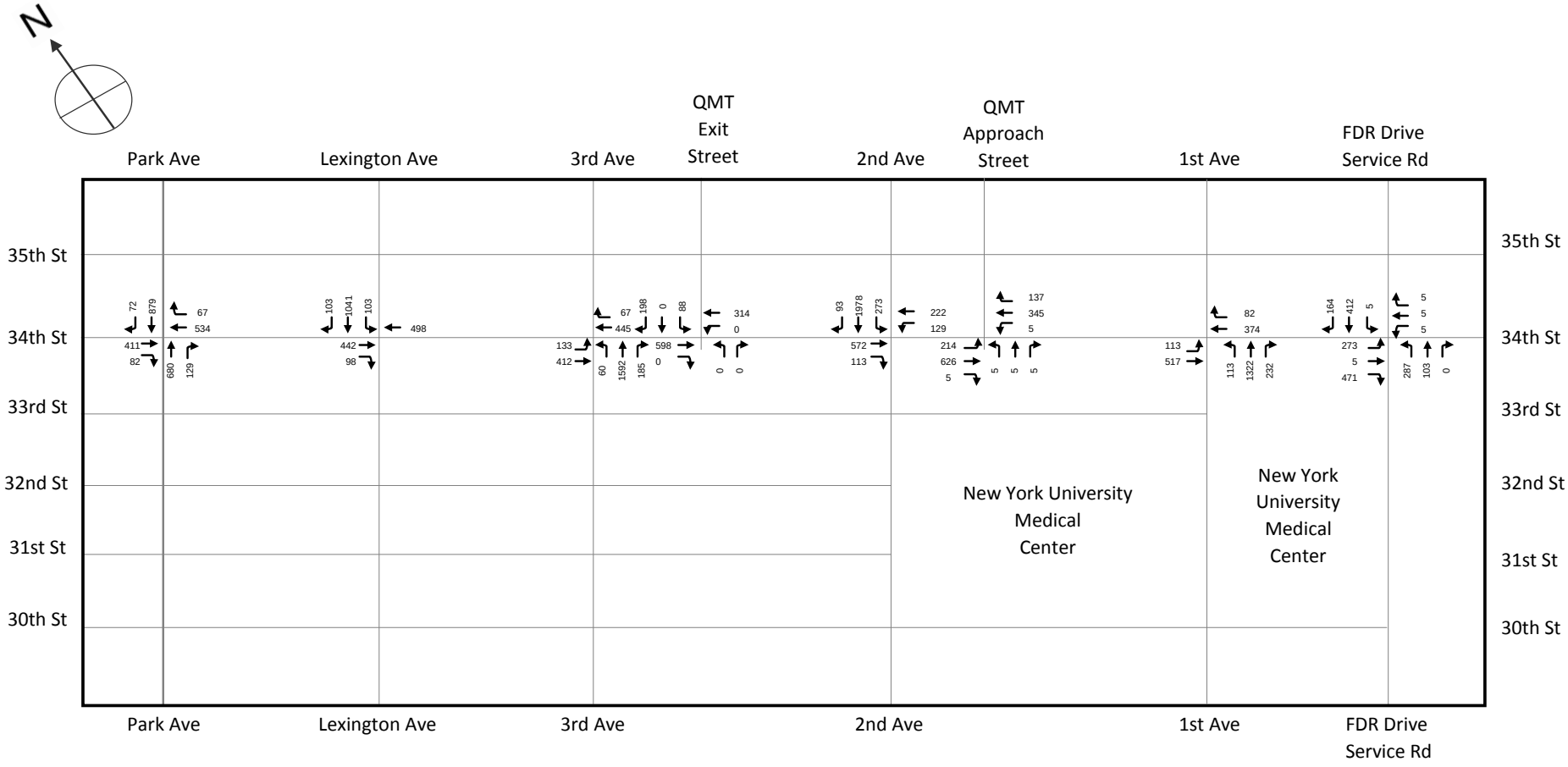
Figure 16-14



2014 No Action Traffic Volumes - Inset 1
(Weekday MD Peak Hour)

15 PENN PLAZA

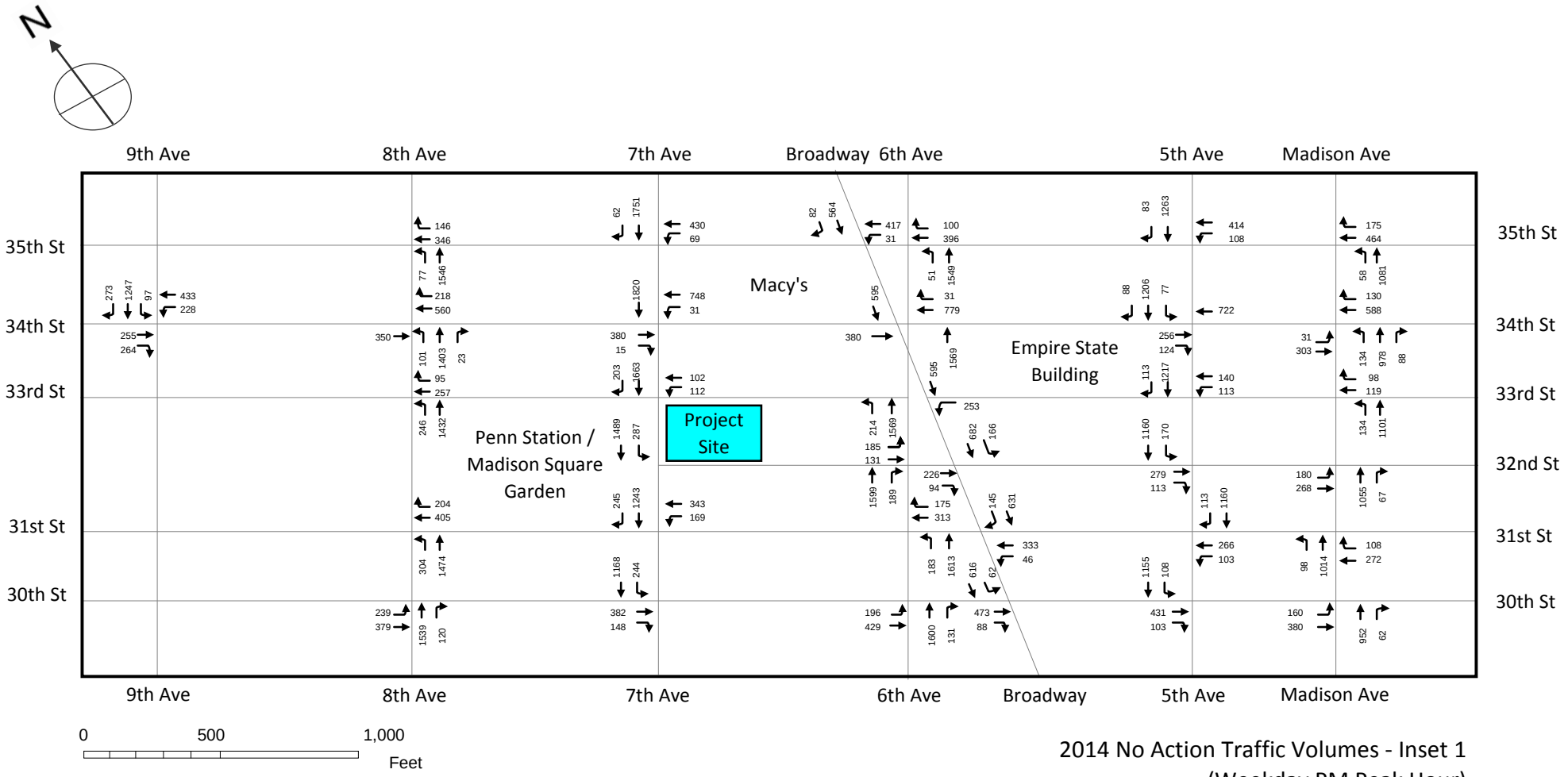
Figure 16-15



2014 No Action Traffic Volumes - Inset 2
(Weekday MD Peak Hour)

15 PENN PLAZA

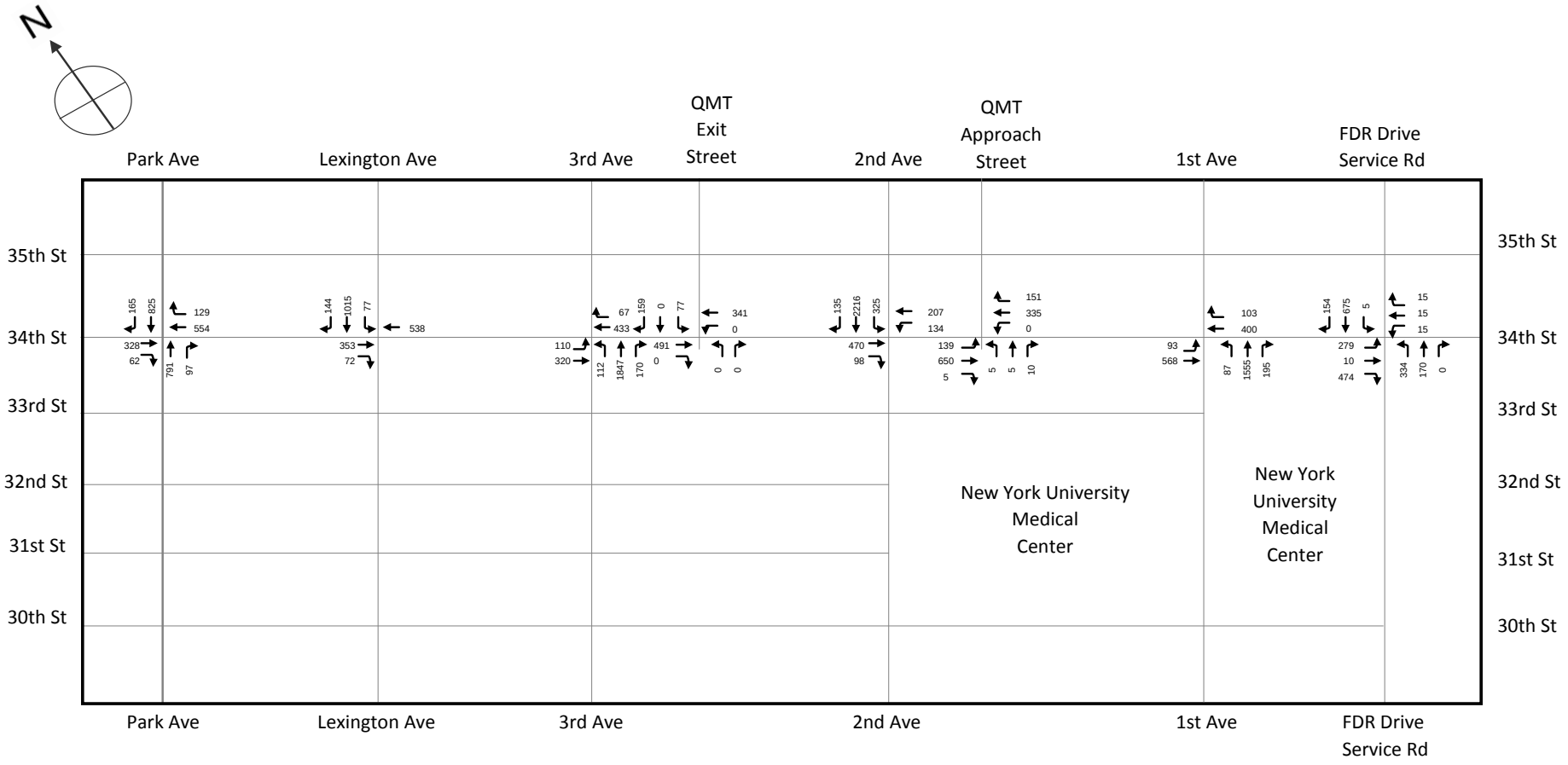
Figure 16-16



2014 No Action Traffic Volumes - Inset 1
(Weekday PM Peak Hour)

15 PENN PLAZA

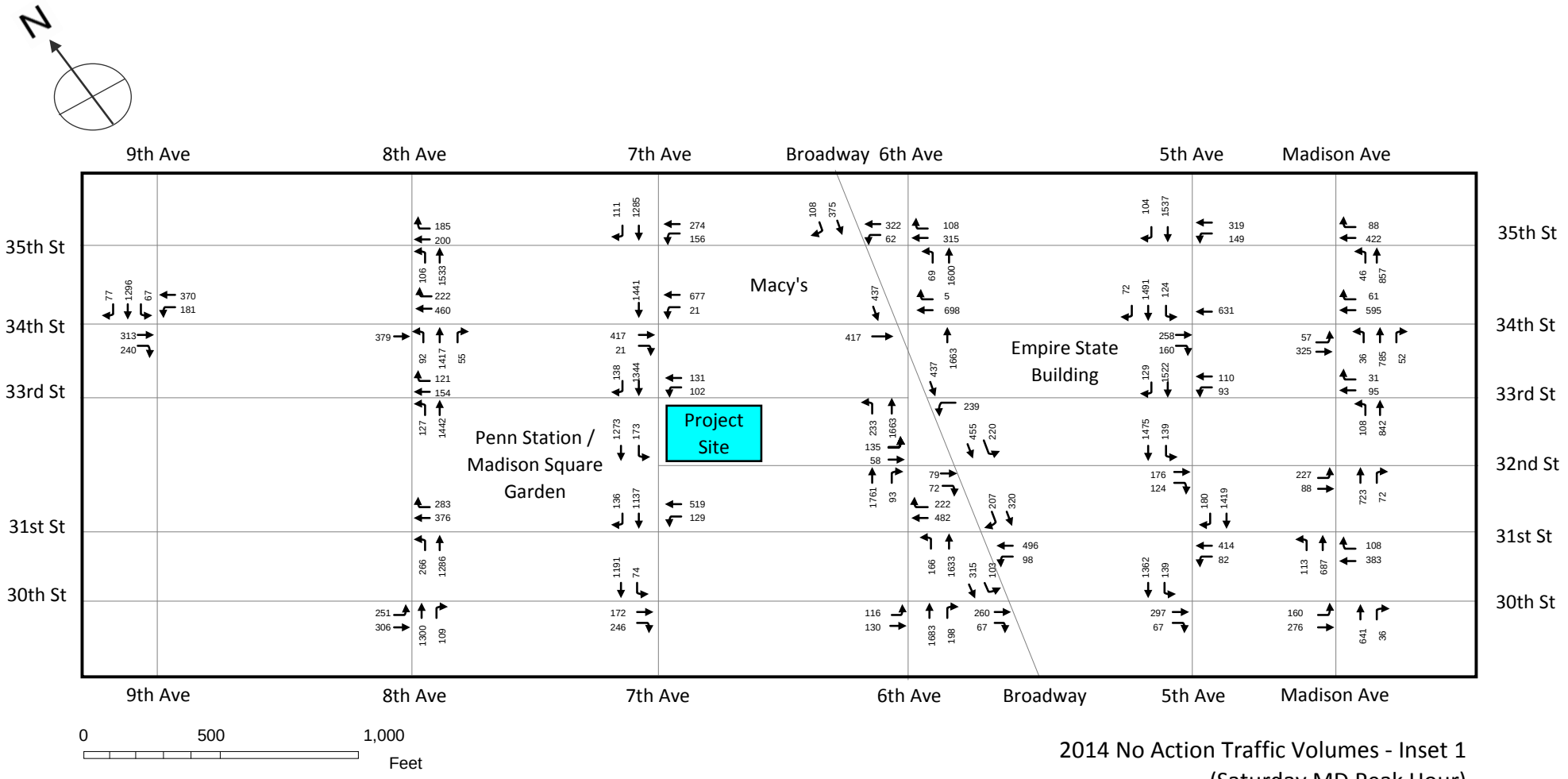
Figure 16-17



2014 No Action Traffic Volumes - Inset 2
(Weekday PM Peak Hour)

15 PENN PLAZA

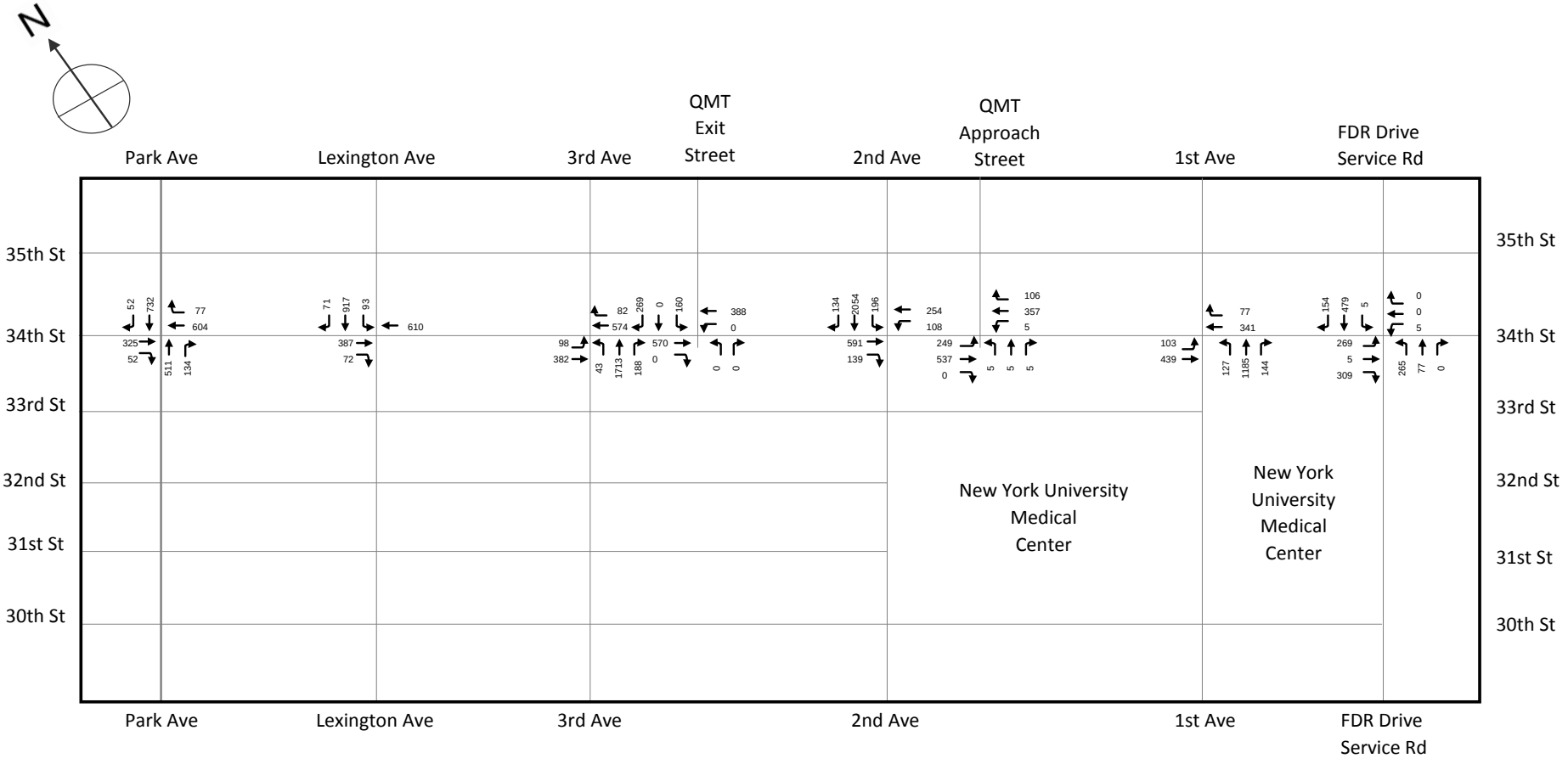
Figure 16-18



2014 No Action Traffic Volumes - Inset 1
(Saturday MD Peak Hour)

15 PENN PLAZA

Figure 16-19



2014 No Action Traffic Volumes - Inset 2
(Saturday MD Peak Hour)

15 PENN PLAZA

Figure 16-20

LEVEL OF SERVICE ANALYSIS

An intersection capacity and level of service analysis was conducted for the 43 study area intersections. The following summarizes the analysis results by travel corridor and details the locations with substandard operating levels (marginally unacceptable mid-LOS D or more than 45 seconds of average delay) by analysis time period.

SUMMARY OF ANALYSIS RESULTS

Although most intersections in the traffic study area operate at overall acceptable levels during the four analysis peak hours, individual approach movements at numerous intersections operate at mid-LOS D or worse. Overall, of the 135 approach movements analyzed, 35 approach movements operate at mid-LOS D or worse in the AM peak hour, 21 approach movements operate at mid-LOS D or worse in the Midday peak hour, 29 approach movements operate at mid-LOS D or worse in the PM peak hour, and 21 approach movements operate at mid-LOS D or worse in the Saturday Midday peak hour. These findings are presented in **Table 16-11**.

Table 16-11
No Action
Number of Intersection Approach Movements at Mid-LOS D, LOS E, or LOS F

	Analysis Hour			
Level of Service	**AM**	**Weekday Midday**	**PM**	**Saturday Midday**
Mid-LOS D	6	3	7	4
LOS E	5	6	5	9
LOS F	24	12	17	8

Detailed analysis results, including the v/c ratio, delay, and LOS for intersections with one or more approach or lane group operating at mid-LOS D or worse, are provided in **Table 16-12** for the weekday AM, Midday, PM, and Saturday Midday peak periods.

Table 16-12
No Action
Intersection Approach Movements Operating at Mid-LOS D, LOS E, or LOS F

Intersection	Approach	Weekday AM				Weekday MD				Weekday PM				Saturday MD			
		Movt.	V/C Ratio	Delay (spv)	LOS	Movt.	V/C Ratio	Delay (spv)	LOS	Movt.	V/C Ratio	Delay (spv)	LOS	Movt.	V/C Ratio	Delay (spv)	LOS
Ninth Avenue & 34th St	EB	R	0.99	88.1	F	R	0.87	62.3	E	R	1.19	367.5	F				
	SB	LTR				LTR				LTR	1.01	89.0	F	LTR			
Eighth Ave & 30th St	EB	LT				LT	0.67	122.0	F	LT	0.70	143.6	F	LT			
Eighth Ave & 31st St	WB	TR				TR				TR				TR	0.70	129.6	F
Eighth Ave & 35th St	WB	TR	1.16	476.0	F	TR	0.97	60.9	E	TR	1.39	550.9	F	TR	1.18	490.0	F
Seventh Ave & 30th St	EB	T	0.89	45.2	mid-D	T				T				T			
Seventh Ave & 31st St	WB	LT	1.01	104.2	F	LT	1.12	330.5	F	LT	0.97	55.9	E	LT	1.12	304.9	F
Seventh Ave & 33rd St	WB	LT	0.94	77.0	E	LT	1.06	316.2	F	LT	0.90	67.7	E	LT	0.80	50.2	mid-D
Seventh Ave & 34th St	EB	T				T				T				T	0.45	75.1	E
Seventh Ave & 35th St	WB	LT	0.79	219.2	F	LT				LT	1.09	339.0	F	LT			
Broadway & 30th St	EB	TR	0.94	47.3	mid-D	TR				TR				TR			
Broadway & 31st St	WB	LT	1.01	102.3	F	LT	0.99	62.6	E	LT				LT	1.18	321.4	F
Broadway & 33rd St	WB	L	1.05	274.0	F	L	1.04	240.7	F	L	1.09	433.0	F	L			
Broadway & 35th St	WB	T	1.12	145.8	F	T				T	1.07	129.2	F	T			
Sixth Ave & 30th St	EB	LT	1.05	248.1	F	LT	0.93	177.6	F	LT	0.93	177.4	F	LT			
Sixth Ave / Bdwy & 34th St	EB	T	1.08	380.2	F	T	1.07	348.8	F	T	0.89	53.2	mid-D	T	1.06	363.7	F
	WB	TR	1.07	337.0	F	TR	0.94	50.5	mid-D	TR	1.07	337.6	F	TR			
	SB	T				T				T	0.85	45.1	mid-D	T			
Fifth Ave & 30th St	EB	TR	1.22	332.3	F	TR	1.15	337.4	F	TR	1.26	363.8	F	TR	0.93	59.1	E
Fifth Ave & 31st St	WB	T	0.86	46.1	mid-D	T				T				T	0.95	60.9	E
Fifth Ave & 33rd St	WB	LT	0.81	52.7	mid-D	LT	1.03	202.3	F	LT	0.95	72.9	E	LT	0.78	48.3	mid-D
Fifth Ave & 35th St	WB	L	0.83	71.2	E	L	0.99	102.0	F	L	1.28	388.1	F	L	0.83	69.5	E
		T	1.12	253.9	F	T				T	0.91	49.6	mid-D	T			
Madison Ave & 30th St	EB	T	1.07	250.0	F	T				T	0.86	46.2	mid-D	T			
Madison Ave & 34th St	EB	L	0.76	69.5	E	L				L				L	0.75	71.2	E
	WB	T	0.94	51.2	mid-D	T	0.92	47.3	mid-D	T	1.05	182.6	F	T	0.97	55.5	E
Madison Ave & 35th St	WB	T	1.25	281.7	F	T				T	1.00	68.2	E	T			
		R	0.88	81.0	F	R	0.80	58.2	E	R	1.08	427.2	F	R	0.52	45.3	mid-D
Park Ave & 34th St	WB	T	1.13	229.4	F	T	1.07	217.8	F	T	1.05	203.4	F	T	1.06	194.9	F
Lexington Ave & 34th St	WB	T	1.13	216.1	F	T				T	1.03	184.0	F	T	1.05	185.5	F
	SB	LT	1.04	124.0	F	LT				LT				LT			
		R				R				R	0.96	77.1	E	R			
Third Ave & 34th St	WB	TR	0.88	45.2	mid-D	TR				TR				TR	0.94	52.7	mid-D
Ramp from I-495 & 34th St	SB	L	0.85	81.6	F	L	0.66	58.6	E	L	0.58	52.2	mid-D	L	1.09	371.2	F
Second Ave & 34th St	EB	R	1.06	346.3	F	R	0.80	64.8	E	R	0.69	52.2	mid-D	R	0.78	57.5	E
Ramp to I-495 & 34th St	WB	LT	0.93	61.9	E	LT				LT				LT			
		R	1.01	143.1	F	R	1.04	281.7	F	R	1.10	511.9	F	R	0.76	64.3	E
First Ave & 34th St	EB	LT	1.10	261.8	F	LT				LT				LT			
FDR Drive & 34th St	EB	L	1.07	347.9	F	L	1.00	94.0	F	L	1.04	243.2	F	L	0.89	69.7	E
		LTR	0.94	73.8	E	LTR	0.75	48.9	mid-D	LTR	0.78	51.9	mid-D	LTR			
	NB	L	1.15	212.1	F	L				L	0.97	55.7	E	L			

PARKING

Future off-street parking demand was calculated by adding existing parking demand, increased due to background growth, and parking demand from No Action development projects within the study area. Hourly parking accumulation profiles were calculated for each No Action project within the study area or that may impact off-street facilities in the study area. The background demand for parking in the study area is projected to grow at a rate equivalent to background vehicular traffic. Overall, background parking demand is projected to increase by 3.0 percent between 2008 and 2014.

As noted in the discussion of existing conditions above, most of the parking study area's curbside regulations restrict weekday daytime usage to commercial loading/unloading activities and authorized vehicles, or prohibit parking overall. This condition is not expected to change in the future, and no on-street parking availability was assumed in the future.

Due to background growth in parking demand and parking demand generated by developments assumed to be completed by 2014 in the No Action condition, off-street parking is anticipated to be more highly utilized. As shown in **Tables 16-13 and 16-14**, anticipated 2014 off-street parking facilities have an occupancy rate of 93 percent during the weekday Midday period and 52 percent during the weekday overnight, with approximately 475 available spaces during the weekday Midday hour and 2,510 available spaces during the weekday overnight.

Table 16-13
No Action Off-Street Parking Utilization: Weekday Midday

Site	Total Capacity	Demand	Utilization Rate	Available Spaces
Existing	6,479	5,709	89%	706
No Build Site #1	201	201	-	
No Build Site #2	-	139	-	
No Build Site #3	529	106	-	
No Build Site #4	-	68	-	
No Build Site #5	-	4	-	
No Build Site #6	-	15	-	
No Build Site #7	-	34	-	
No Build Site #8	-169	237	-	
No Build Site #9	-	22	-	
No Build Site #13	-	24	-	
15 Penn As of Right	-	7	-	
Total	7,040	6,566	93%	474

Table 16-14
No Action Off-Street Parking Utilization: Weekday Overnight

Site	Total Capacity	Demand	Utilization Rate	Available Spaces
Existing	4,551	2,076	46%	2,475
No Build Site #1	201	123	-	
No Build Site #2	-	139	-	
No Build Site #3	529	140	-	
No Build Site #4	-	86	-	
No Build Site #5	-	4	-	
No Build Site #6	-	18	-	
No Build Site #7	-	34	-	
No Build Site #8	-21	321	-	
No Build Site #9	-	36	-	
No Build Site #13	-	30	-	
15 Penn As of Right	-	-255	-	
Total	5,260	2,752	52%	2,508

D. FUTURE WITH THE PROPOSED PROJECT

This section presents the projected traffic and parking conditions in the future with the proposed project.

As discussed earlier in this chapter, the Single-Tenant Office Scenario would generate a higher number of trips during the AM peak hour, with the Multi-Tenant Office Scenario generating a higher number of trips during the weekday Midday, weekday PM, and Saturday Midday peak hours. Therefore, the traffic analyses reasonable worst-case development scenario assumes the Single-Tenant Office Scenario for the AM peak hour analysis and the Multi-Tenant Office

Scenario for the weekday Midday, weekday PM, and Saturday Midday peak hour analyses. As the comparative levels of parking demand generated by the development scenarios would exhibit greater fluctuation depending on the analysis period, the parking analyses examine the future with the proposed project conditions for both scenarios.

As part of both development scenarios, it is anticipated that a 100-space accessory parking garage will be constructed on the development site. This parking facility would serve only the office uses for the development site.

PEAK HOUR TRAFFIC VOLUMES

Traffic volumes on the study area roadway network in the future with the proposed project were derived through the addition of incremental vehicle trips generated by the proposed project and the No Action traffic volumes.

Figures 16-21 through 16-28 provide the incremental traffic volumes for the future with the proposed project condition for the typical weekday AM (8 to 9 AM), weekday Midday (12 to 1 PM), weekday PM (5 to 6 PM), and typical Saturday Midday (1 to 2 PM) peak hours, respectively, in the study area. As noted above, the reasonable worst case scenario for the AM peak hour is the Single-Tenant Office Scenario and the reasonable worst case scenario for the weekday Midday, weekday PM, and Saturday Midday peak hours is the Multi-Tenant Office Scenario.

Figures 16-29 through 16-36 provide the future with the proposed project traffic volumes for the typical weekday AM (8 to 9 AM), Midday (12 to 1 PM), PM (5 to 6 PM) and typical Saturday Midday (1 to 2 PM) peak hours, respectively, in the study area. These volumes were derived by adding the No Action condition traffic volumes and the incremental traffic volumes for the future with the proposed project condition.

LEVEL OF SERVICE ANALYSIS

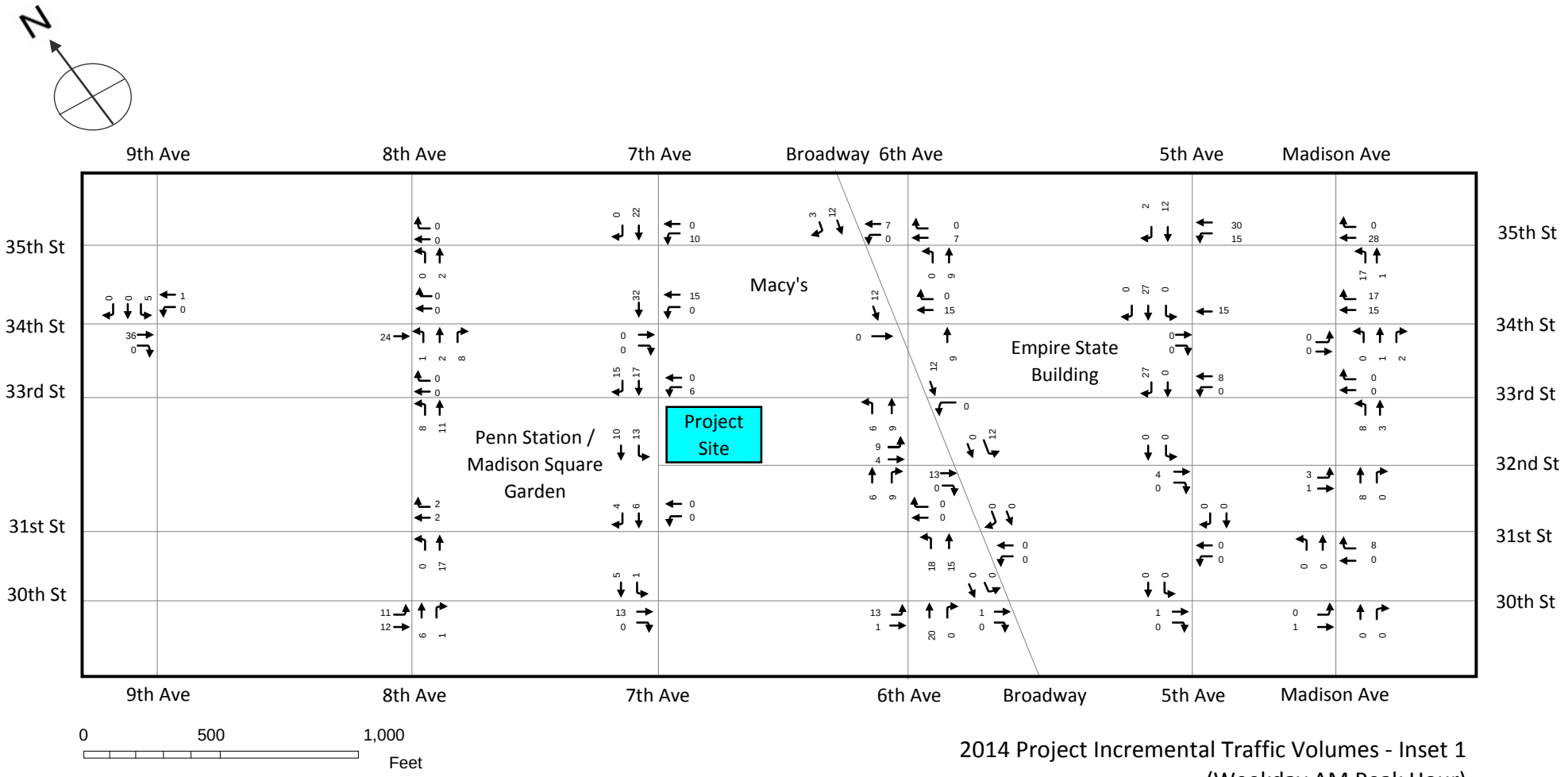
An intersection capacity and level of service analysis was conducted for the 43 study area intersections. The following summarizes the analysis results by travel corridor and details the locations with substandard operating levels (marginally unacceptable mid-LOS D or more than 45 seconds of average delay) by analysis time period.

SUMMARY OF ANALYSIS RESULTS

Although most intersections in the traffic study area operate at overall acceptable levels during the four analysis peak hours, individual approach movements at numerous intersections operate at mid-LOS D or worse. Overall, of the 135 approach movements analyzed, 36 approach movements operate at mid-LOS D or worse in the AM peak hour; 22 approach movements operate at mid-LOS D or worse in the Midday peak hour, 34 approach movements operate at mid-LOS D or worse in the PM peak hour; and 25 approach movements operate at mid-LOS D or worse in the Saturday Midday peak hour. These findings are presented in **Table 16-15**.

Table 16-15
Future with the Proposed Project
Number of Intersection Approach Movements at Mid-LOS D, LOS E, or LOS F

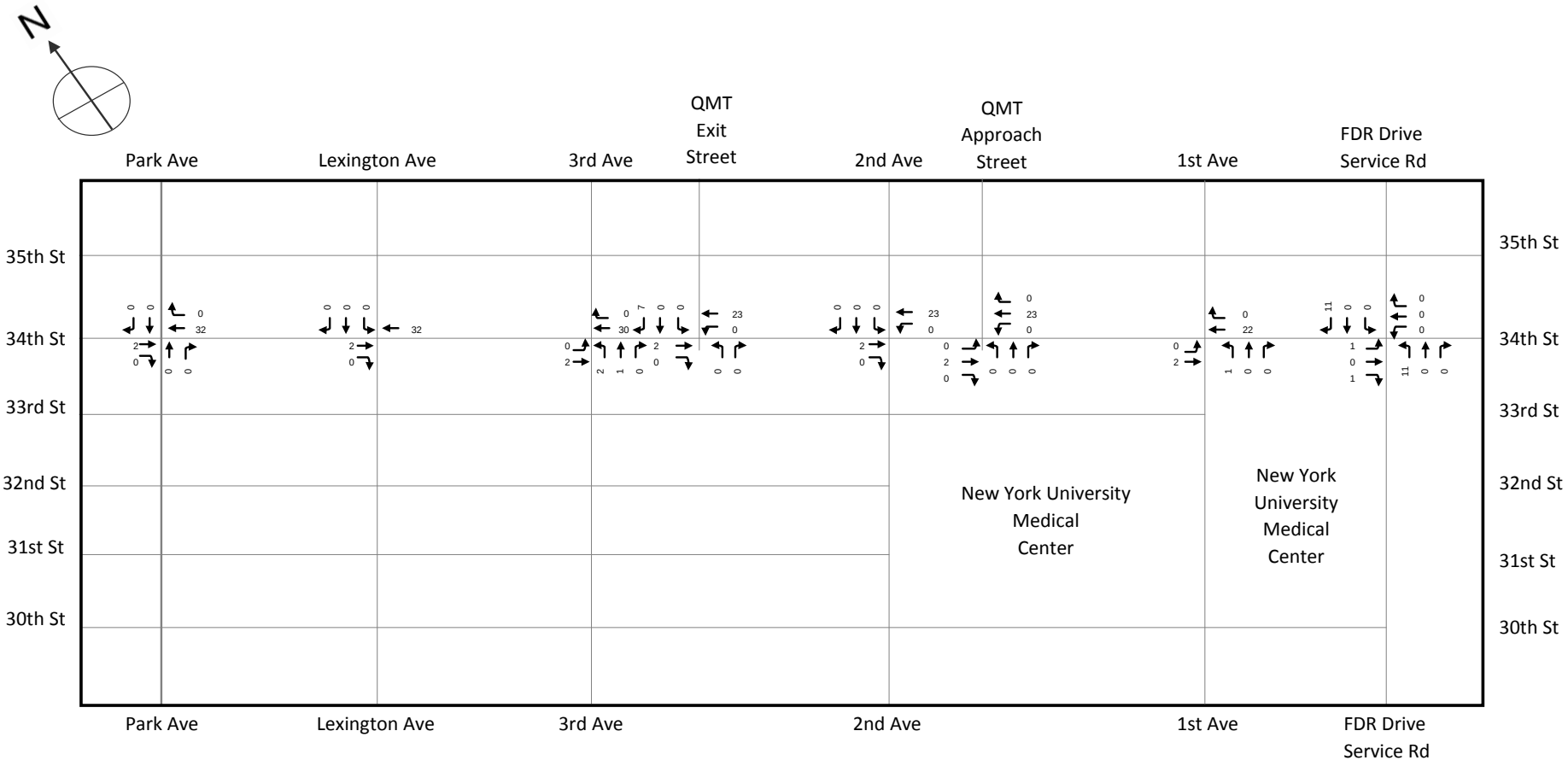
	Analysis Hour			
Level of Service	AM	Weekday Midday	PM	Saturday Midday
Mid-LOS D	5	4	6	7
LOS E	5	6	8	10
LOS F	26	12	20	8



2014 Project Incremental Traffic Volumes - Inset 1
(Weekday AM Peak Hour)

15 PENN PLAZA

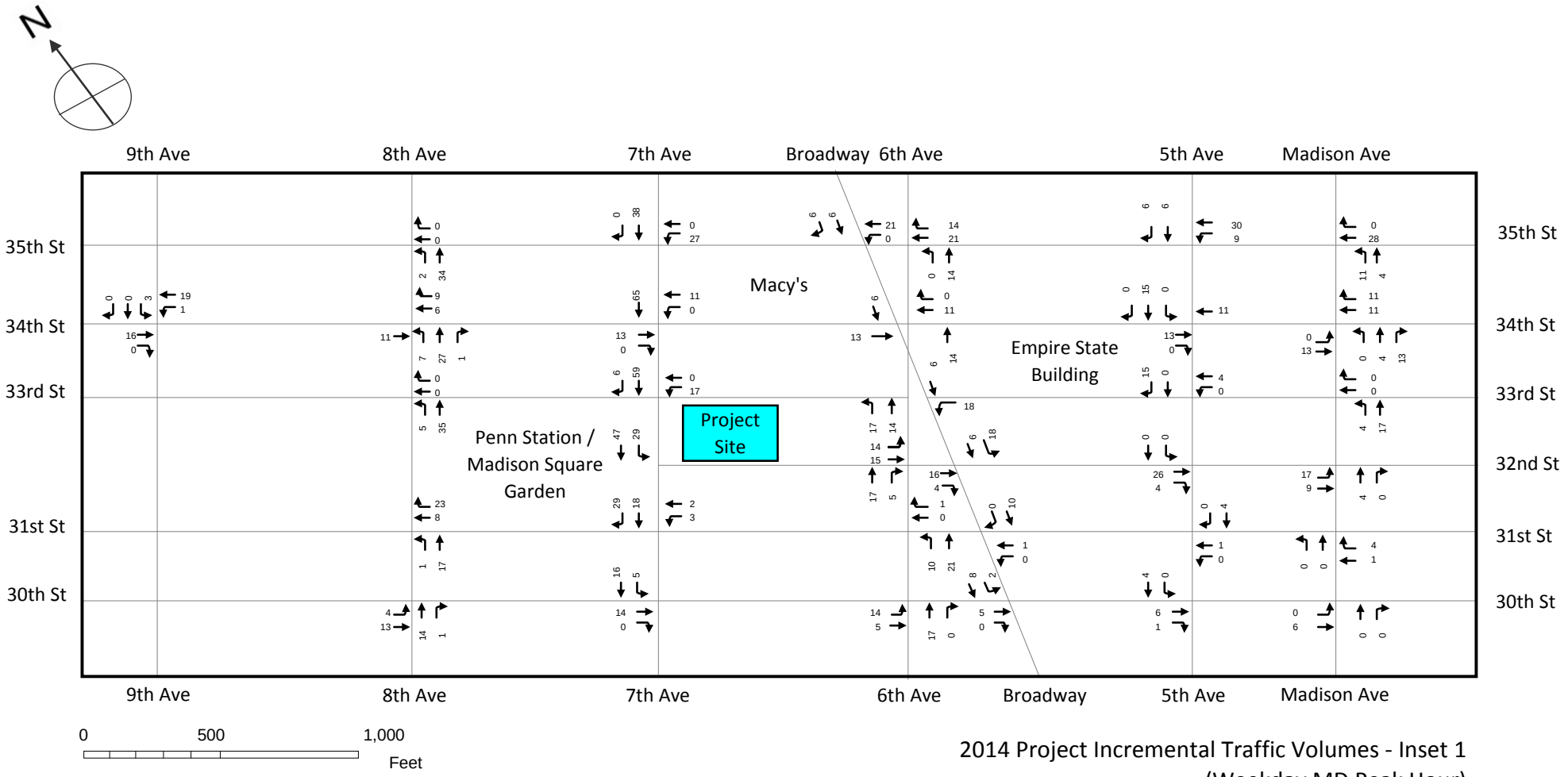
Figure 16-21



2014 Project Incremental Traffic Volumes - Inset 2
(Weekday AM Peak Hour)

15 PENN PLAZA

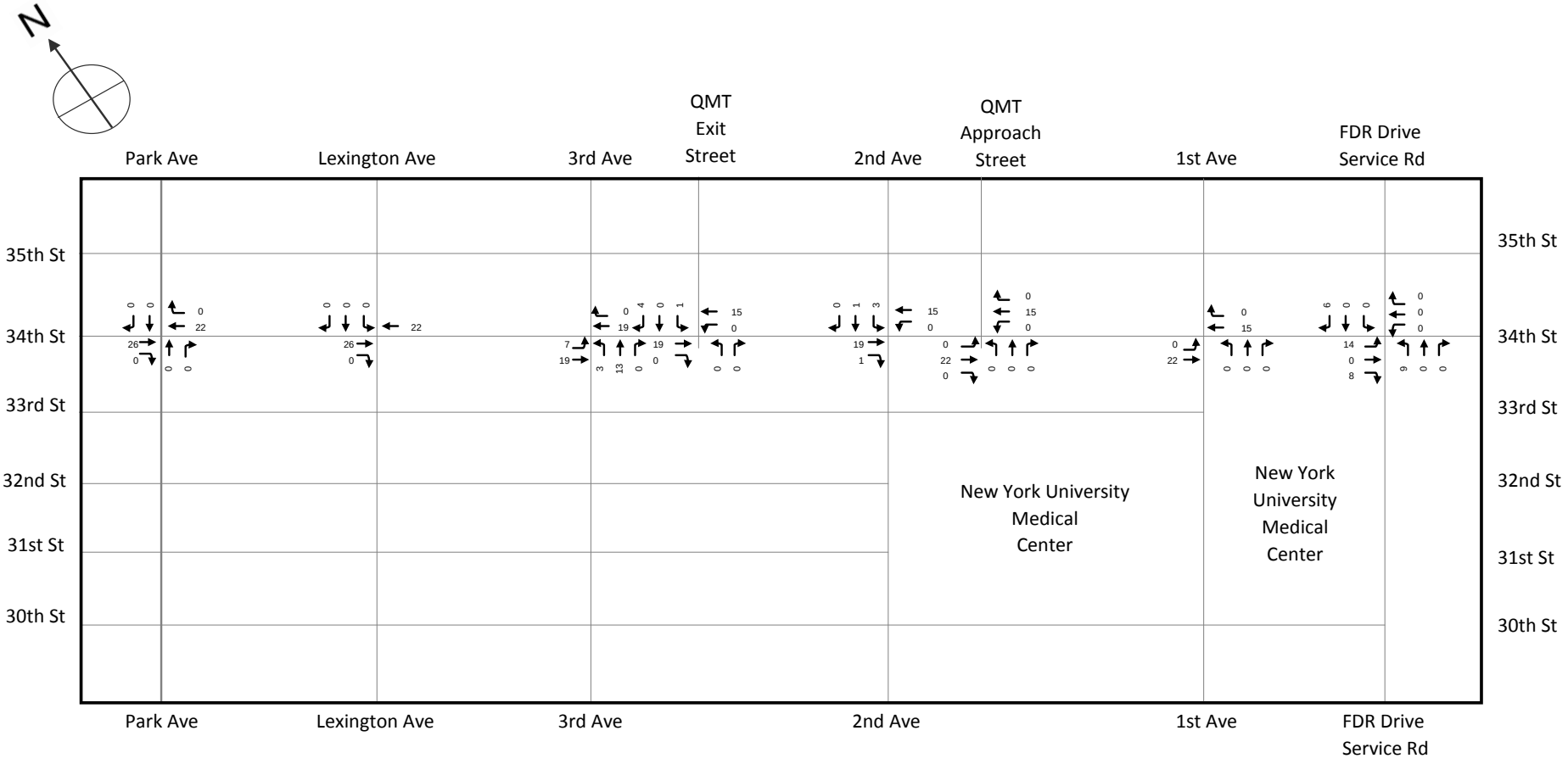
Figure 16-22



2014 Project Incremental Traffic Volumes - Inset 1
(Weekday MD Peak Hour)

15 PENN PLAZA

Figure 16-23

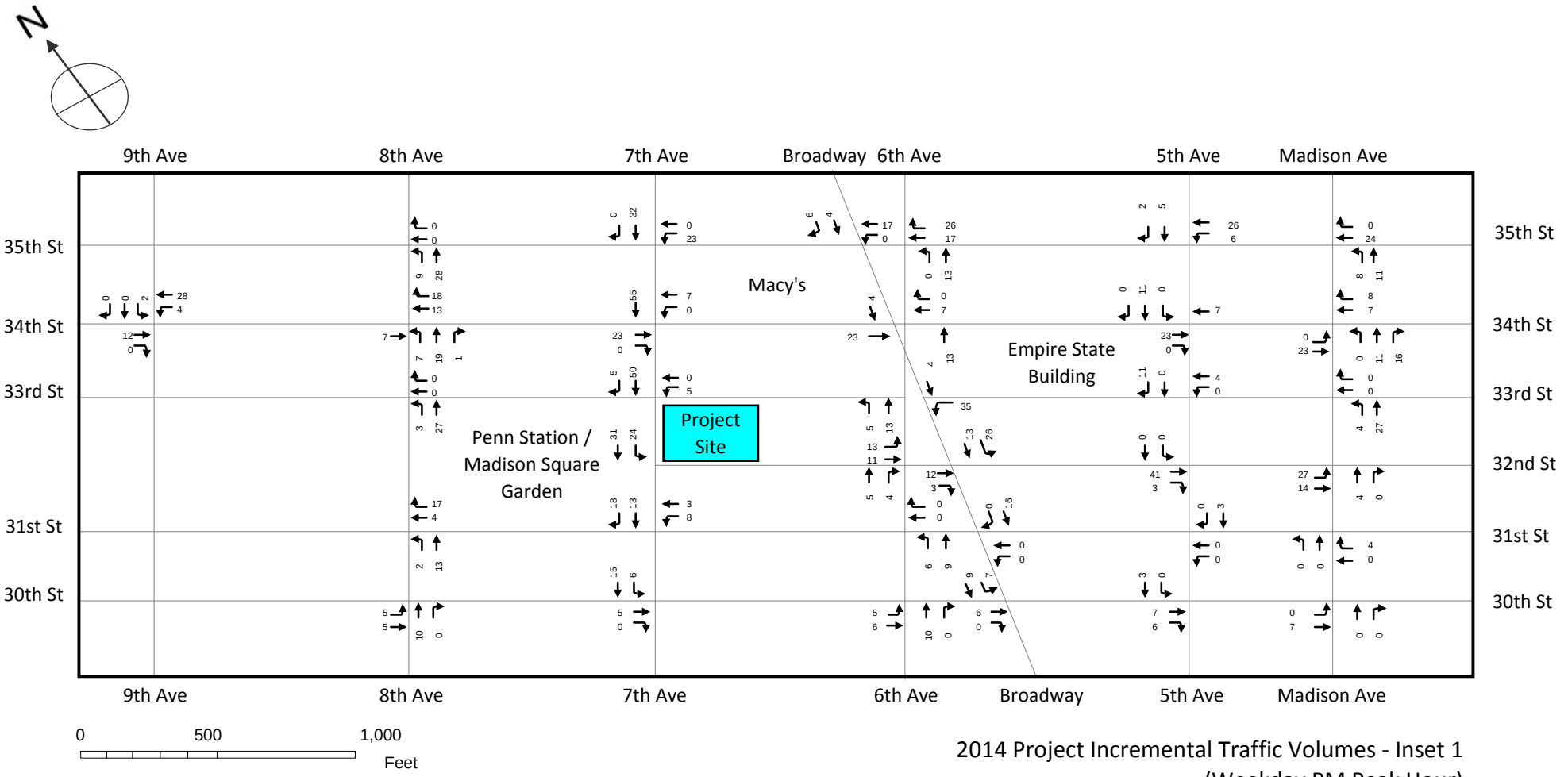


0 750 1,500
Feet

2014 Project Incremental Traffic Volumes - Inset 2
(Weekday MD Peak Hour)

15 PENN PLAZA

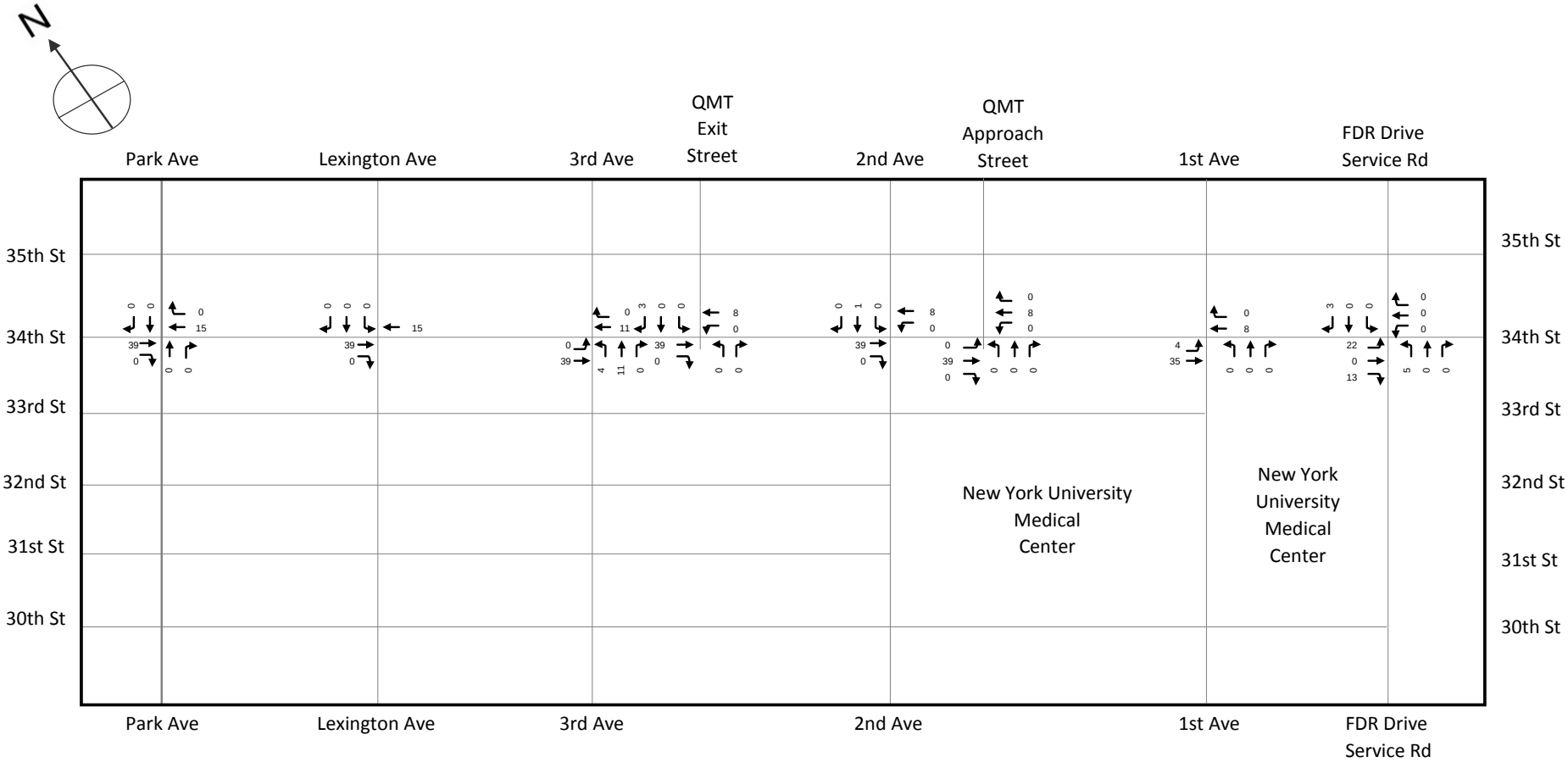
Figure 16-24



2014 Project Incremental Traffic Volumes - Inset 1
(Weekday PM Peak Hour)

15 PENN PLAZA

Figure 16-25

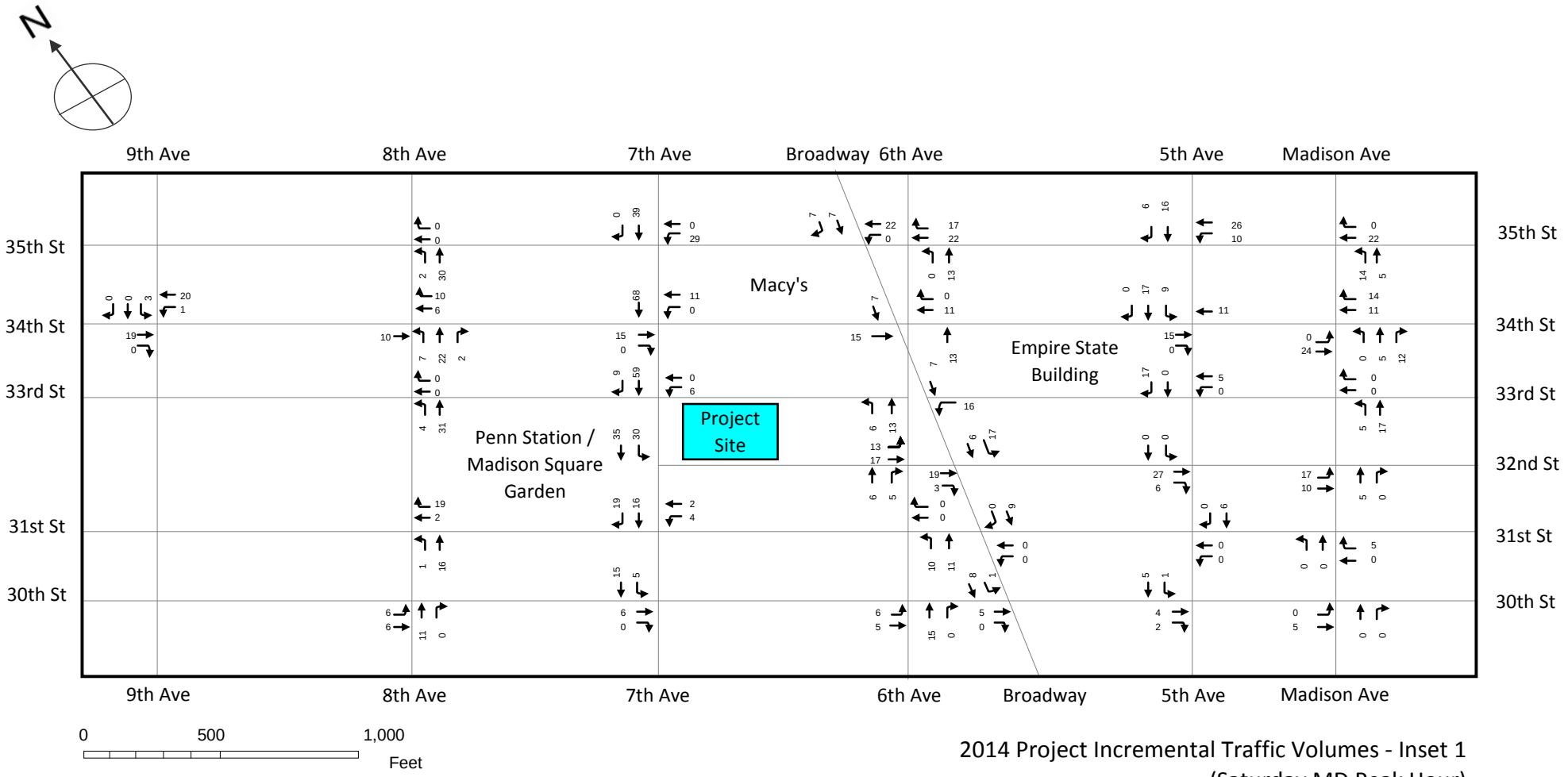


0 750 1,500
Feet

2014 Project Incremental Traffic Volumes - Inset 2
(Weekday PM Peak Hour)

15 PENN PLAZA

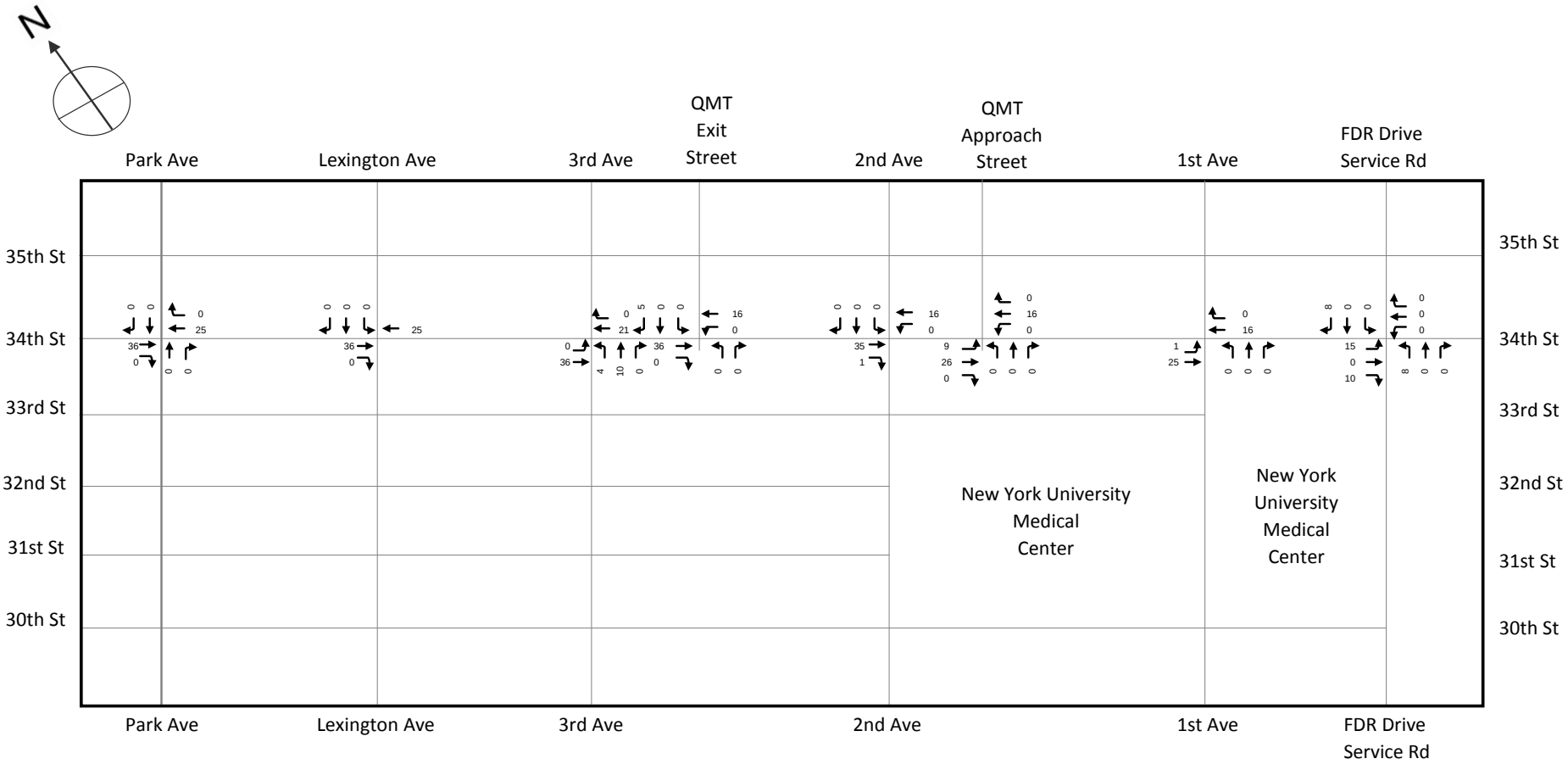
Figure 16-26



2014 Project Incremental Traffic Volumes - Inset 1
(Saturday MD Peak Hour)

15 PENN PLAZA

Figure 16-27

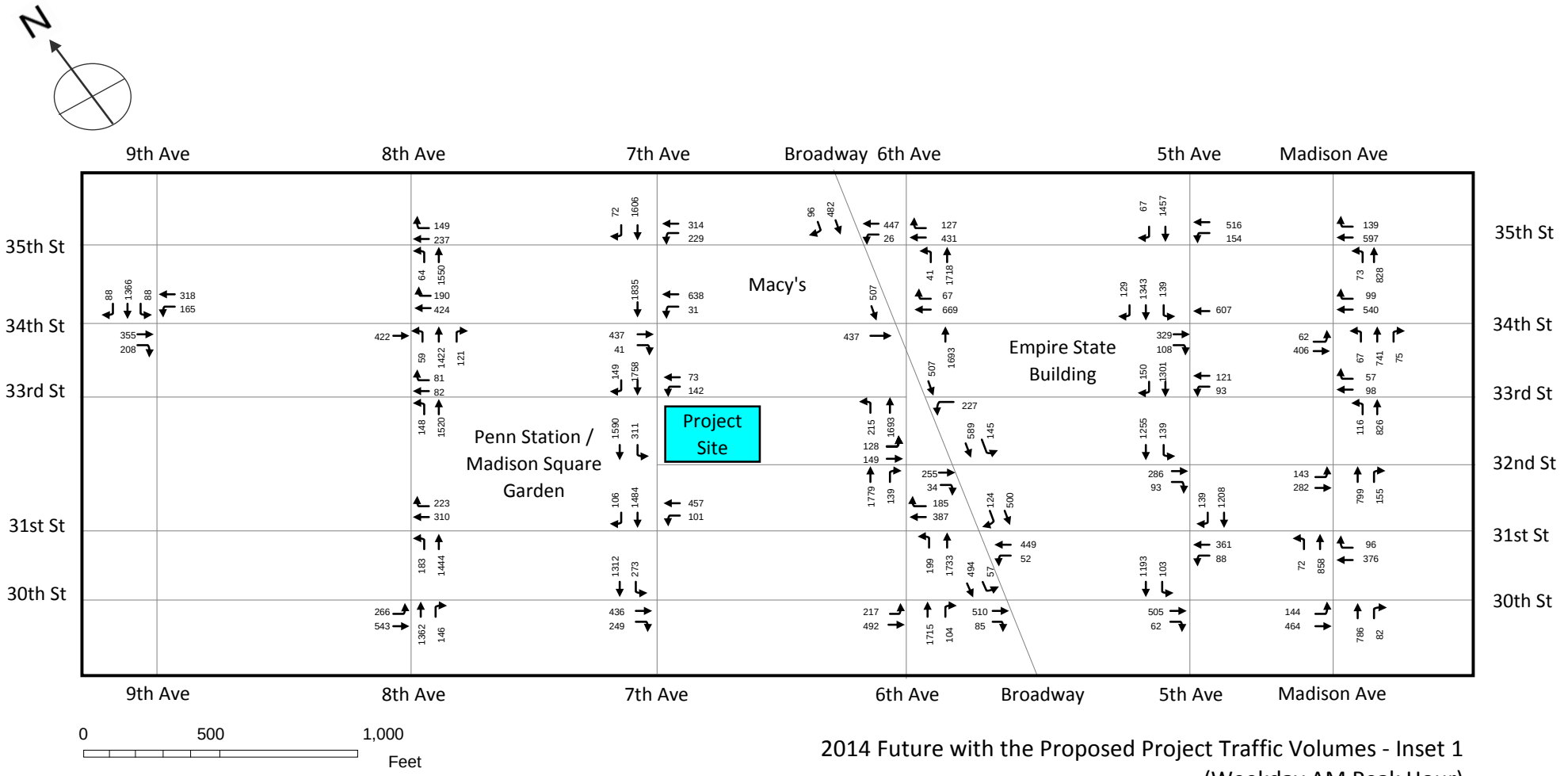


0 750 1,500
Feet

2014 Project Incremental Traffic Volumes - Inset 2
(Saturday MD Peak Hour)

15 PENN PLAZA

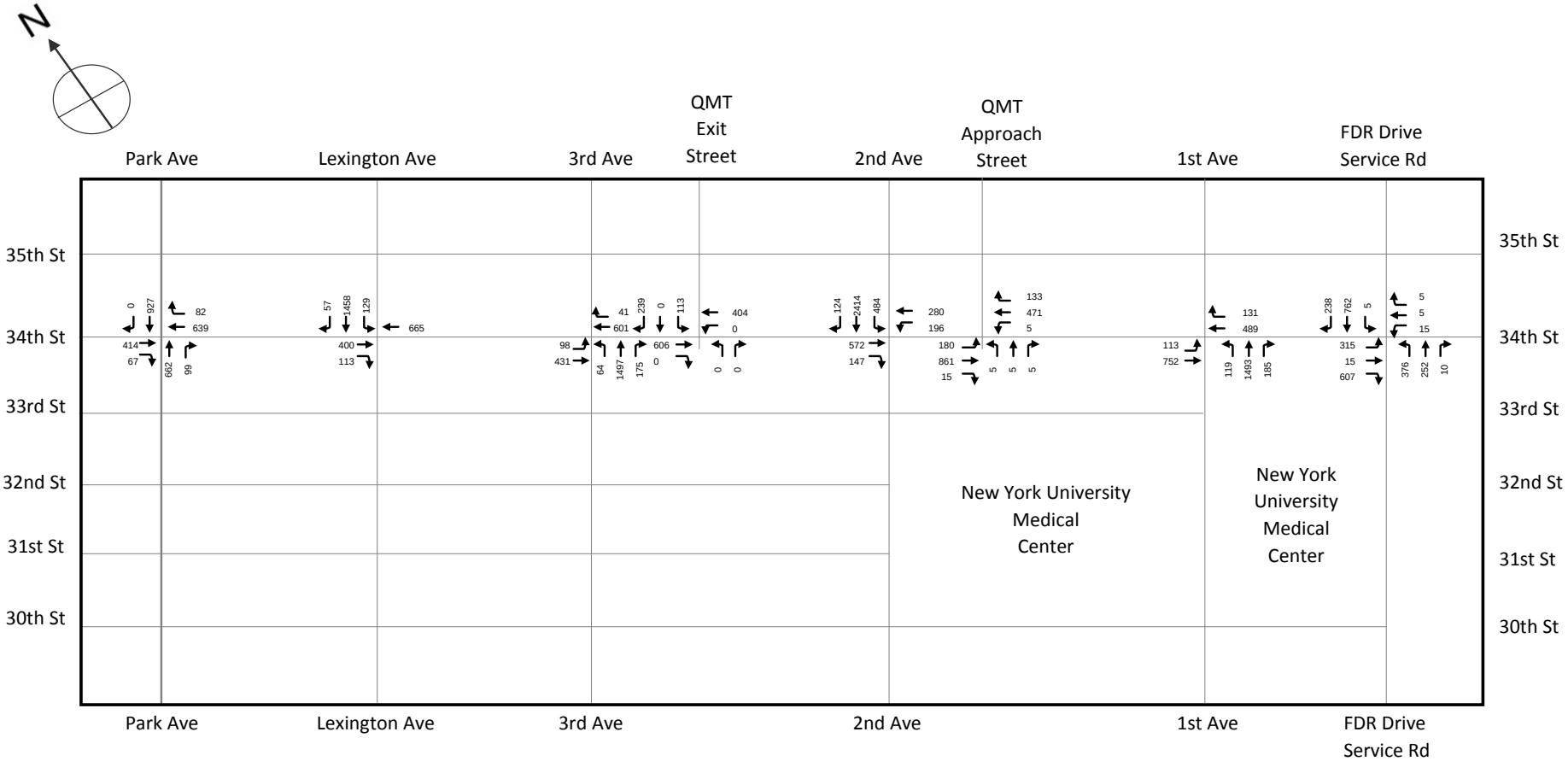
Figure 16-28



2014 Future with the Proposed Project Traffic Volumes - Inset 1
(Weekday AM Peak Hour)

15 PENN PLAZA

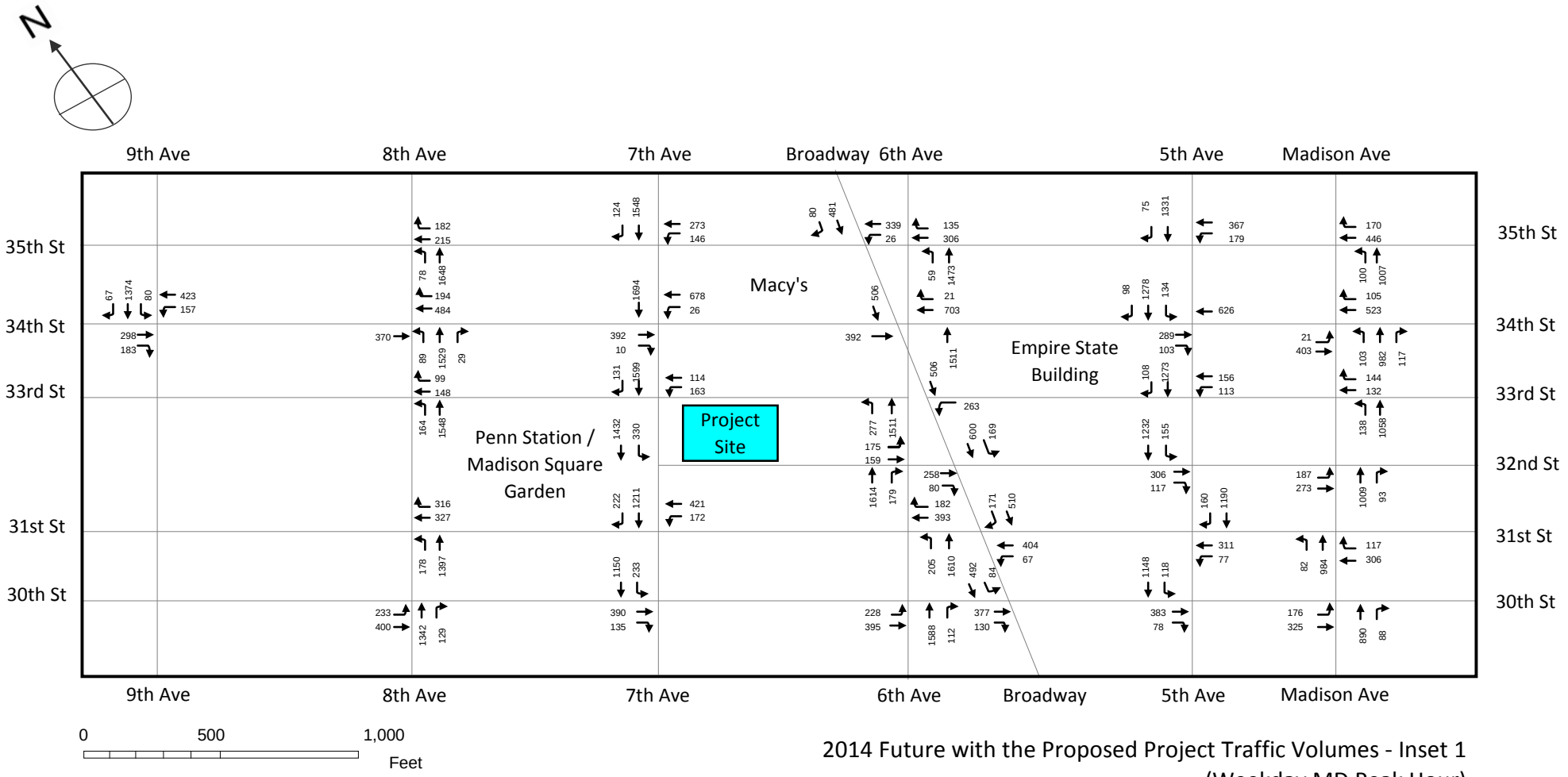
Figure 16-29



2014 Future with the Proposed Project Traffic Volumes - Inset 2
(Weekday AM Peak Hour)

15 PENN PLAZA

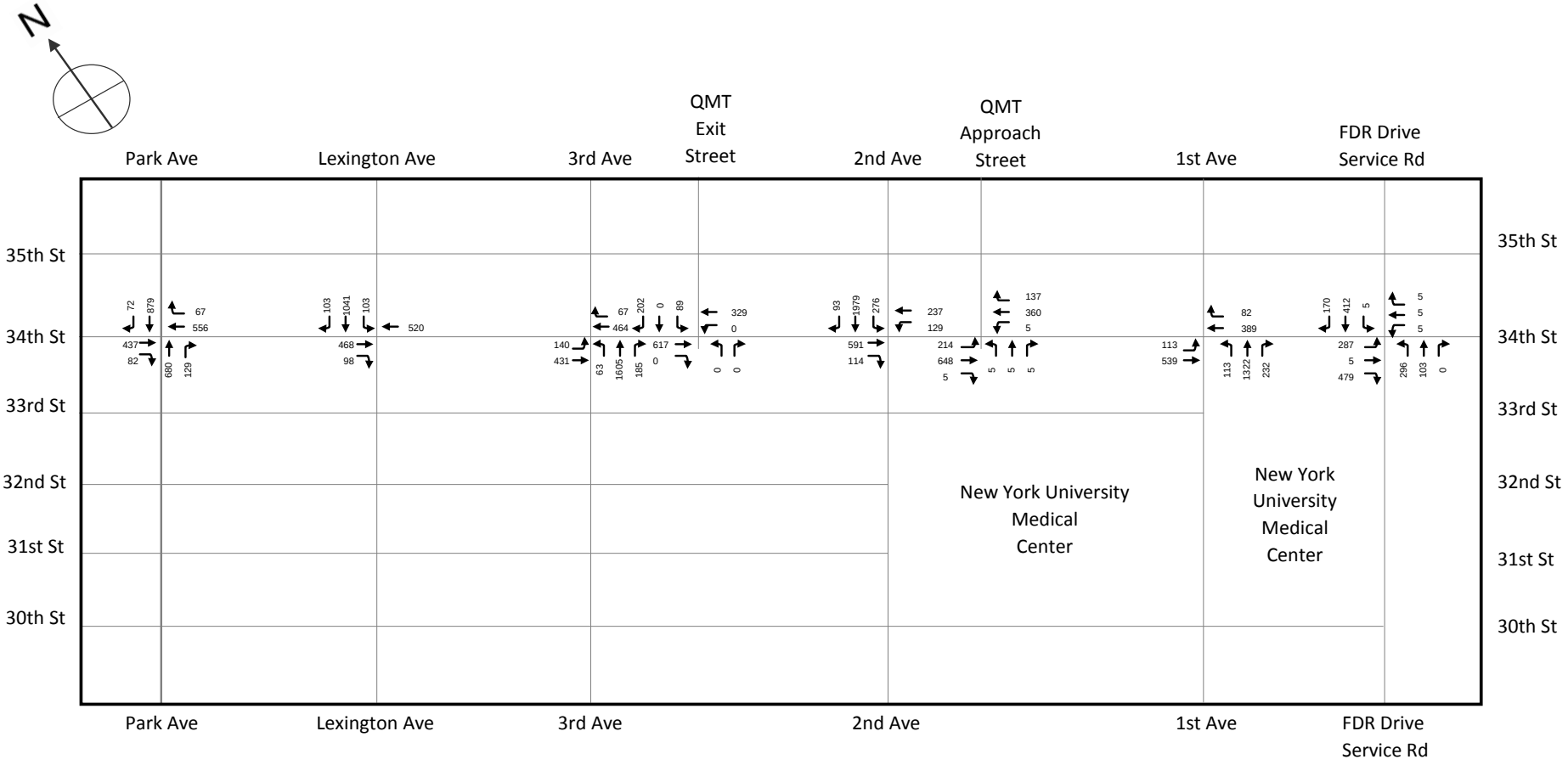
Figure 16-30



2014 Future with the Proposed Project Traffic Volumes - Inset 1
(Weekday MD Peak Hour)

15 PENN PLAZA

Figure 16-31

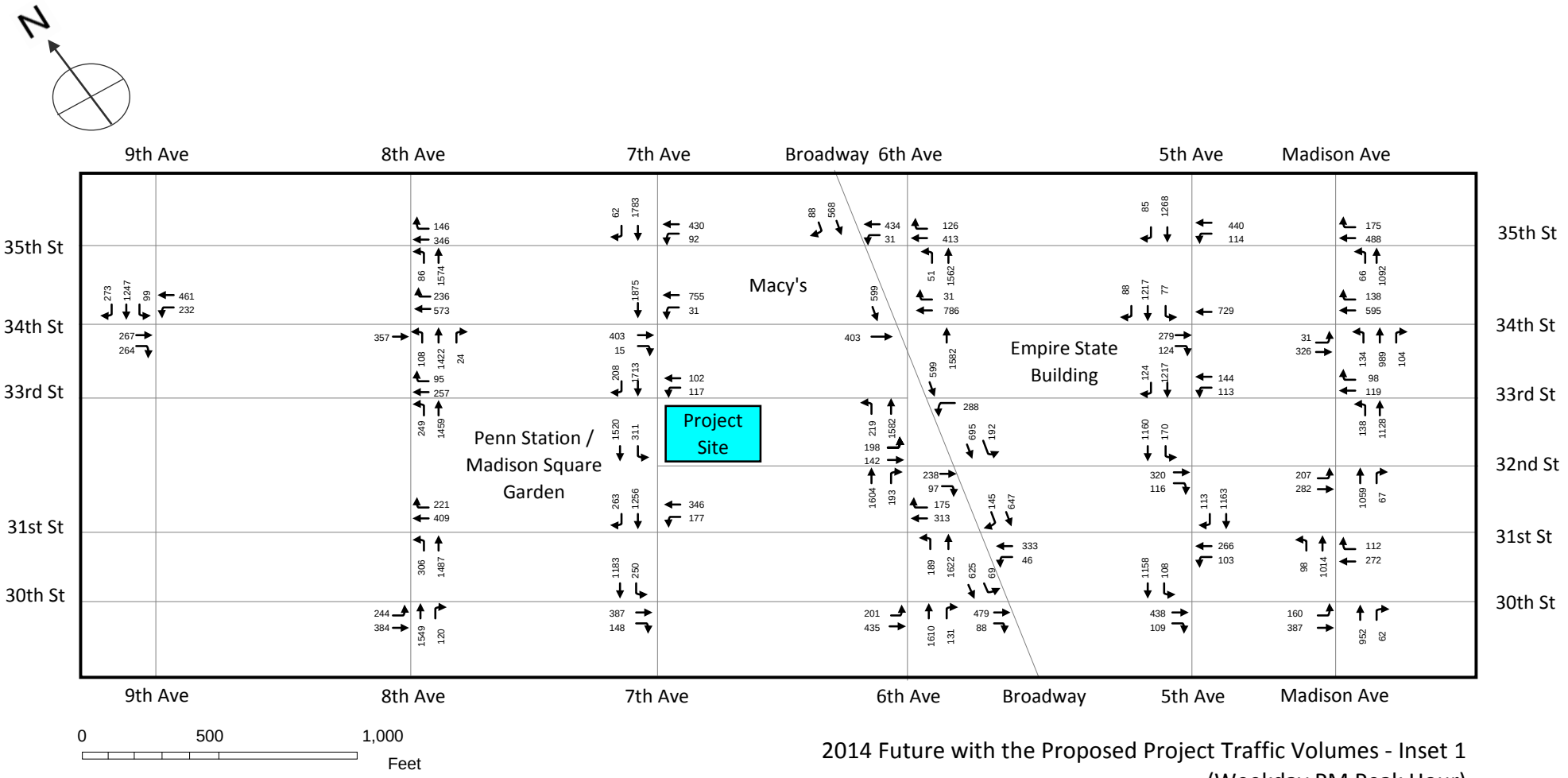


0 750 1,500
Feet

2014 Future with the Proposed Project Traffic Volumes - Inset 2
(Weekday MD Peak Hour)

15 PENN PLAZA

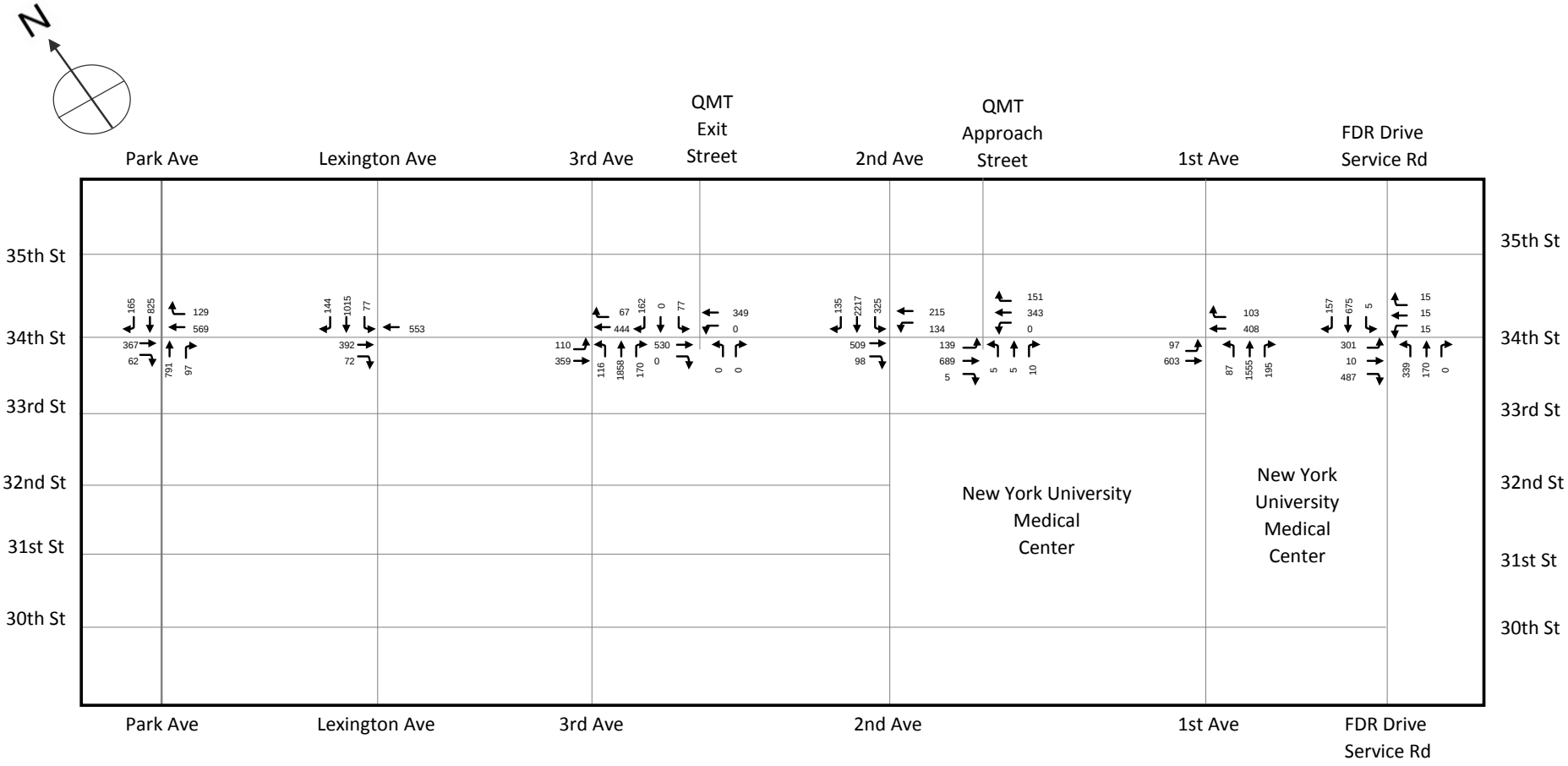
Figure 16-32



2014 Future with the Proposed Project Traffic Volumes - Inset 1
(Weekday PM Peak Hour)

15 PENN PLAZA

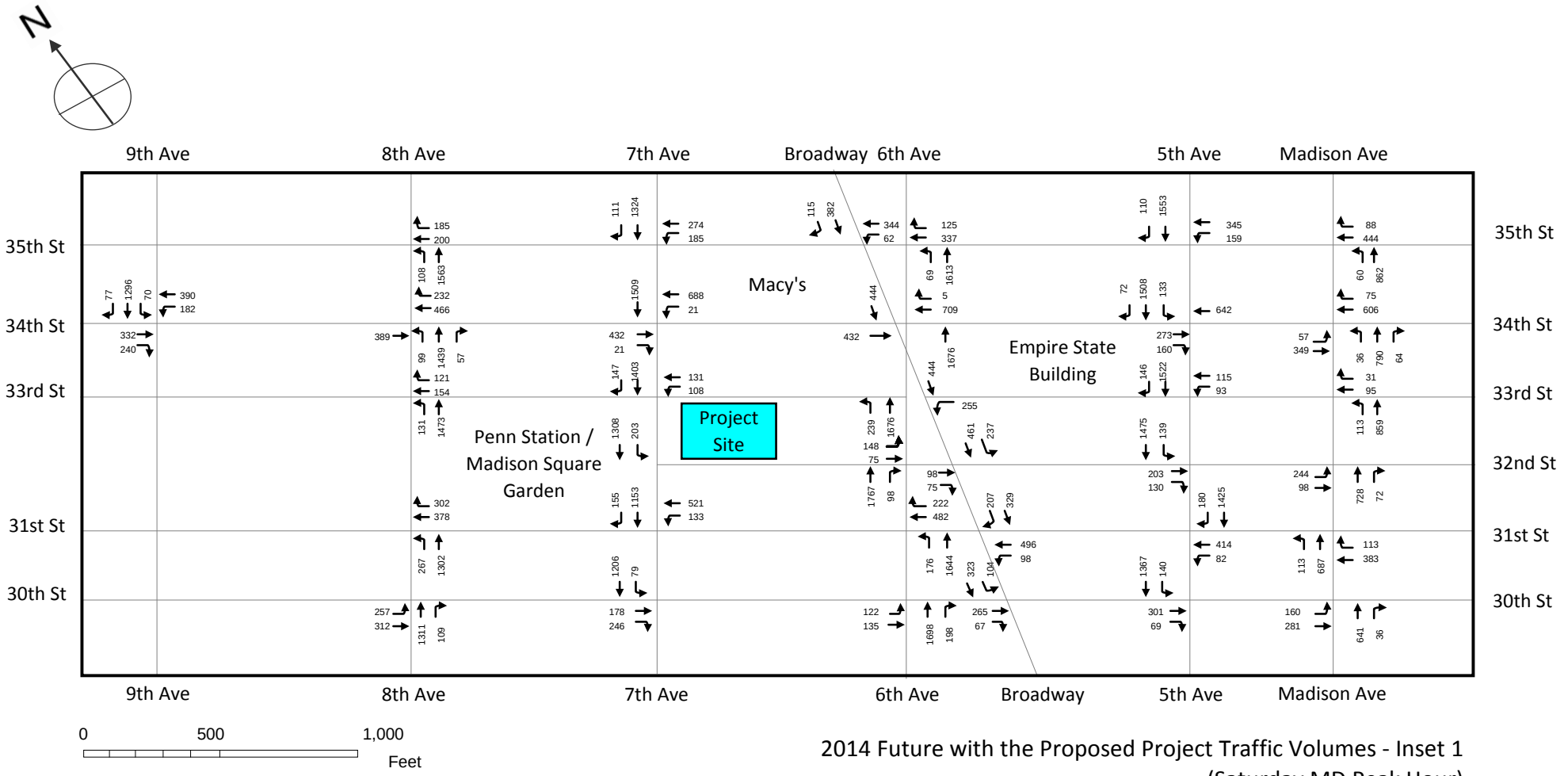
Figure 16-33



2014 Future with the Proposed Project Traffic Volumes - Inset 2
(Weekday PM Peak Hour)

15 PENN PLAZA

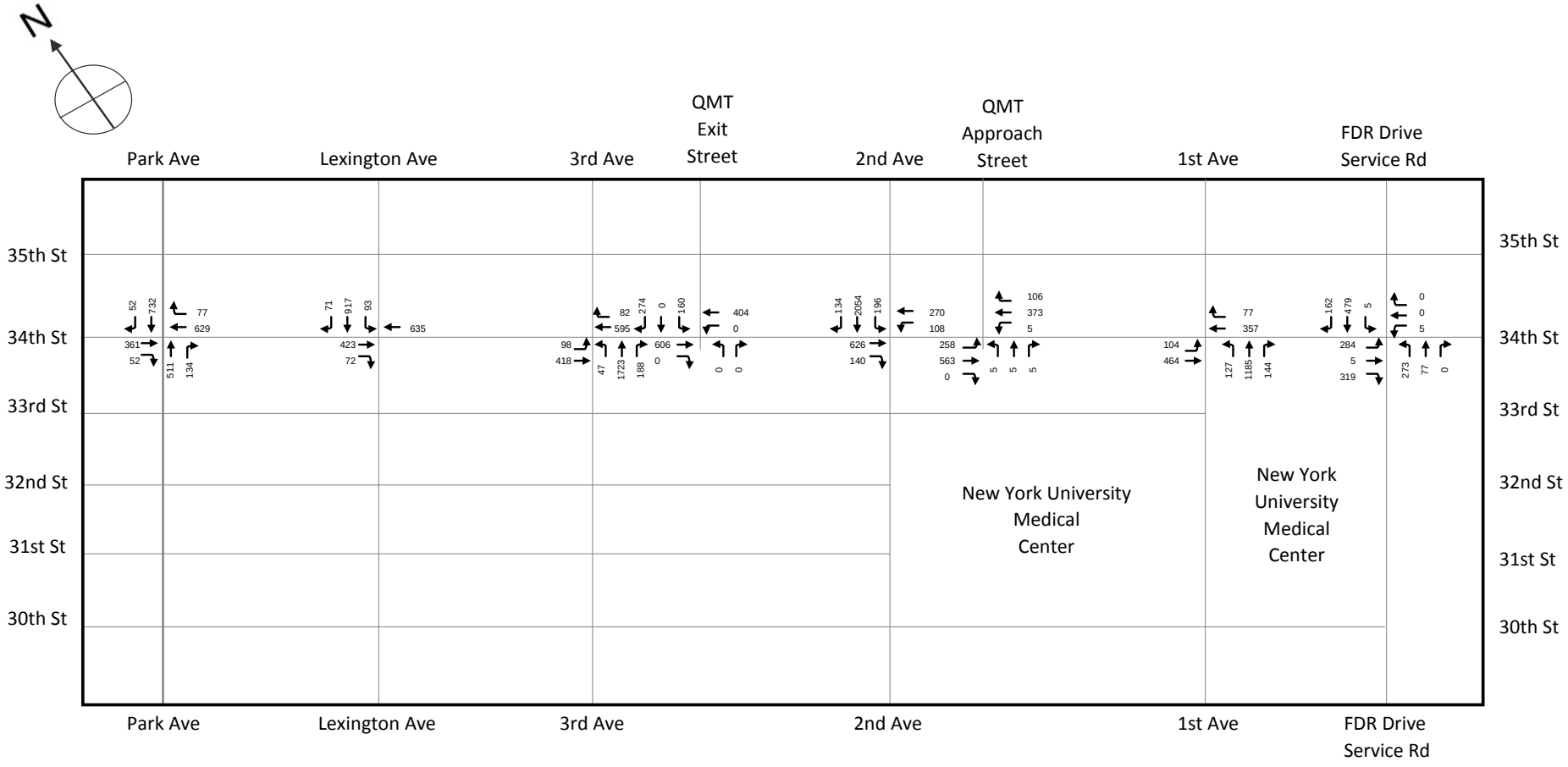
Figure 16-34



2014 Future with the Proposed Project Traffic Volumes - Inset 1
(Saturday MD Peak Hour)

15 PENN PLAZA

Figure 16-35



2014 Future with the Proposed Project Traffic Volumes - Inset 2
(Saturday MD Peak Hour)

15 PENN PLAZA

Figure 16-36

SIGNIFICANT ADVERSE TRAFFIC IMPACTS

Based on the thresholds established for signalized intersections in the *CEQR Technical Manual*, a significant adverse traffic impact would occur if a No Action LOS A, B, or C deteriorates to unacceptable mid-LOS D, or a LOS E or F, in the future with the proposed project.

The *CEQR Technical Manual* further states that, for a No Action condition mid-LOS D, an increase of five or more seconds of delay in a lane group in the future with the proposed project should be considered significant. For No Action LOS E, an increase in delay of four seconds should be considered significant. For No Action LOS F, a three second increase in delay should be considered significant. However, if a No Action LOS F condition already has delays in excess of 120 seconds, an increase of one second in delay should be considered significant, unless the proposed action would generate fewer than five vehicles through that lane group in the peak hour.

Table 16-16 summarizes the number of intersection approach movements with significant adverse impacts for the future with the proposed project condition. In the future with the proposed project condition, of the 135 approach movements analyzed, 15 approach movements with significant adverse impacts at 13 intersections were identified during the AM peak hour; 11 approach movements with significant adverse impacts at 11 intersections were identified during the weekday Midday peak hour; 20 approach movements with significant adverse impacts at 16 intersections were identified during the PM peak hour; and 12 approach movements with significant adverse impacts at 12 intersections were identified during the Saturday Midday peak hour.

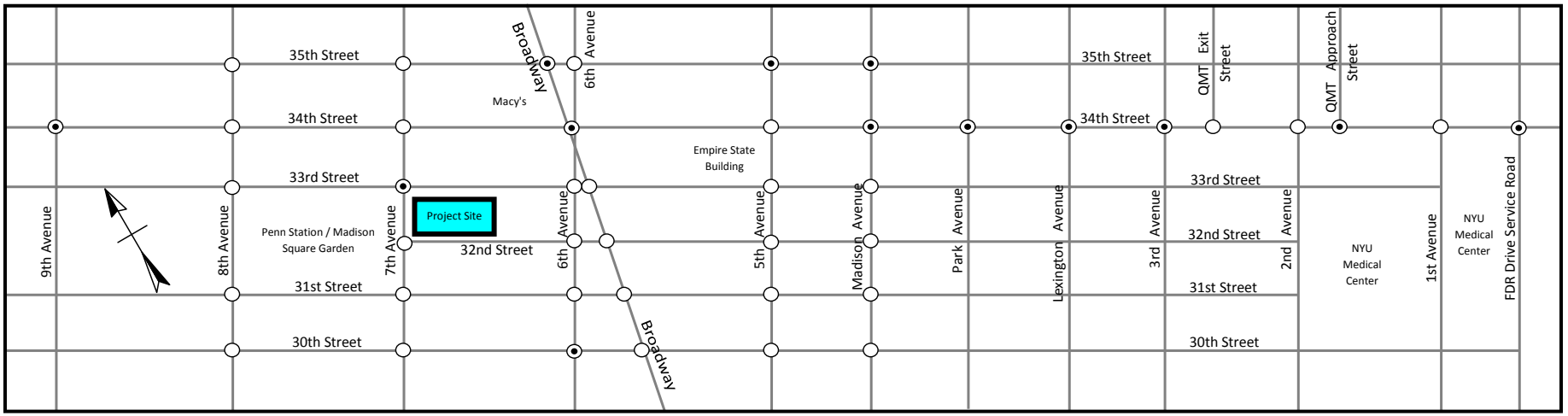
Table 16-16
Future with the Proposed Project
Number of Significantly Impacted Approach Movements

	Analysis Hour			
Analysis Year	**AM**	**Weekday Midday**	**PM**	**Saturday Midday**
2014	15	11	20	12

Appropriate measures to mitigate these significant impacts are identified along with the evaluation of their effectiveness in Chapter 22, "Mitigation."

Intersections where significant traffic impacts are projected to occur are presented in **Figures 16-37 through 16-40** for future with the proposed project weekday AM, weekday Midday, weekday PM, and Saturday Midday conditions, respectively.

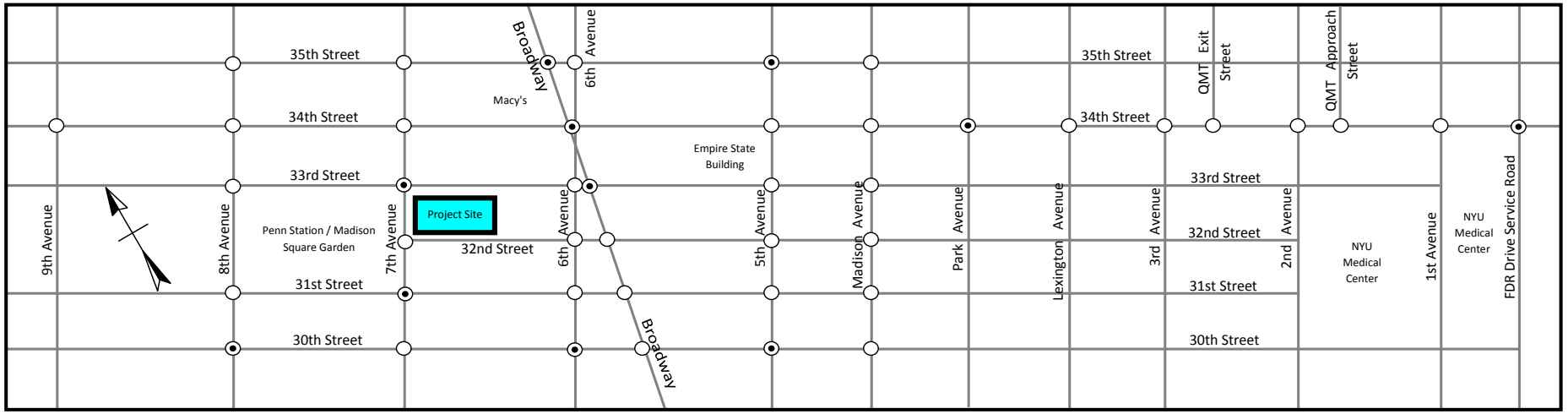
Shaded intersection approaches/movements in **Tables 16-17 through 16-20** indicate where significant impacts are projected to occur under CEQR criteria. Also indicated is the incremental average delay in seconds per vehicle for each intersection approach/movement relative to the No Action condition.



Project Site
No Significant Impact
Significant Impact

15 PENN PLAZA

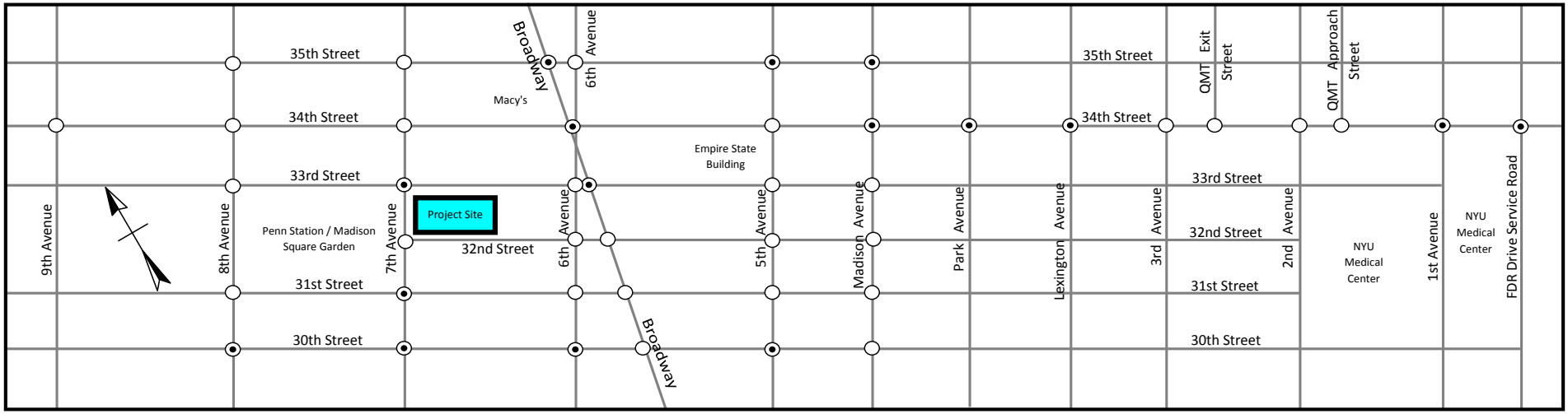
Future with the Proposed Project:
Intersections with Significant Adverse Impacts
Weekday AM Peak Hour
Figure 16-37



Project Site
No Significant Impact
Significant Impact

15 PENN PLAZA

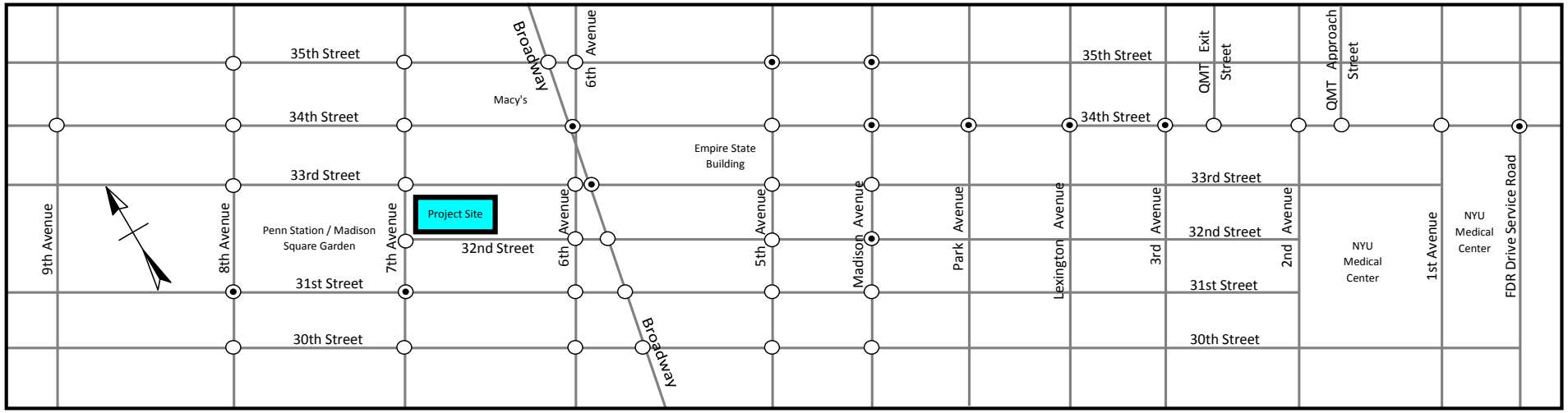
Future with the Proposed Project:
Intersections with Significant Adverse Impacts
Weekday Midday Peak Hour
Figure 16-38



Project Site
No Significant Impact
Significant Impact

15 PENN PLAZA

Future with the Proposed Project:
Intersections with Significant Adverse Impacts
Weekday PM Peak Hour
Figure 16-39



Project Site
No Significant Impact
Significant Impact

15 PENN PLAZA

Future with the Proposed Project:
Intersections with Significant Adverse Impacts
Saturday Midday Peak Hour
Figure 16-40

Table 16-17
Future with the Proposed Project: Weekday AM Peak Hour
Intersection Approach Movements at Mid-LOS D, LOS E, or LOS F

Intersection	Weekday AM										
	2014 Future Without the Proposed Project					2014 Future With the Proposed Project					
	Approach	Movement	V/C Ratio	Delay Sec/Veh	LOS	Approach	Movement	V/C Ratio	Delay Sec/Veh	LOS	Delay Increment Sec/Veh
Ninth Ave & 34th St	EB	T	0.80	42.2	D	EB	T	0.89	52.4	mid-D	10.2
		R	0.99	88.1	F		R	0.99	88.1	F	0.0
Eighth Ave & 35th St	WB	TR	1.16	476.0	F	WB	TR	1.16	476.0	F	0.0
Seventh Ave & 30th St	EB	T	0.89	45.2	mid-D	EB	T	0.91	49.2	mid-D	4.0
Seventh Ave & 31st St	WB	LT	1.01	104.2	F	WB	LT	1.01	104.2	F	0.0
Seventh Ave & 33rd St	WB	LT	0.94	77.0	E	WB	LT	0.97	83.7	F	6.7
Seventh Ave & 35th St	WB	LT	0.79	219.2	F	WB	LT	0.79	219.2	F	0.0
Broadway & 30th St	EB	TR	0.94	47.3	mid-D	EB	TR	0.94	47.6	mid-D	0.3
Broadway & 31st St	WB	LT	1.01	102.3	F	WB	LT	1.01	102.3	F	0.0
Broadway & 33rd St	WB	L	1.05	274.0	F	WB	L	1.05	274.0	F	0.0
Broadway & 35th St	WB	T	1.12	145.8	F	WB	T	1.14	152.8	F	7.0
Sixth Ave & 30th St	EB	LT	1.05	248.1	F	EB	LT	1.08	256.3	F	8.2
Sixth Ave / Bdwy & 34th St	EB	T	1.08	380.2	F	EB	T	1.08	380.2	F	0.0
	WB	TR	1.07	337.0	F	WB	TR	1.09	413.4	F	76.4
Fifth Ave & 30th St	EB	TR	1.22	332.3	F	EB	TR	1.23	333.1	F	0.8
Fifth Ave & 31st St	WB	T	0.86	46.1	mid-D	WB	T	0.86	46.1	mid-D	0.0
Fifth Ave & 33rd St	WB	LT	0.81	52.7	mid-D	WB	LT	0.84	55.4	E	2.7
Fifth Ave & 35th St	WB	L	0.83	71.2	E	WB	L	0.92	87.1	F	15.9
		T	1.12	253.9	F		T	1.18	279.2	F	25.3
Madison Ave & 30th St	EB	T	1.07	250.0	F	EB	T	1.07	250.7	F	0.7
Madison Ave & 34th St	EB	L	0.76	69.5	E	EB	L	0.80	80.0	E	10.5
	WB	T	0.94	51.2	mid-D	WB	T	0.96	56.2	E	5.0
Madison Ave & 35th St	WB	T	1.25	281.7	F	WB	T	1.31	306.7	F	25.0
		R	0.88	81.0	F		R	0.88	81.0	F	0.0
Park Ave & 34th St	WB	T	1.13	229.4	F	WB	T	1.19	252.8	F	23.4
Lexington Ave & 34th St	WB	T	1.13	216.1	F	WB	T	1.19	238.5	F	22.4
	SB	LT	1.04	124.0	F	SB	LT	1.04	124.0	F	0.0
Third Ave & 34th St	WB	TR	0.88	45.2	mid-D	WB	TR	0.93	50.5	mid-D	5.3
Ramp from I-495 & 34th St	SB	L	0.85	81.6	F	SB	L	0.85	81.6	F	0.0
Second Ave & 34th St	EB	R	1.06	346.3	F	EB	R	1.06	346.3	F	0.0
Ramp to I-495 & 34th St	WB	LT	0.93	61.9	E	WB	LT	0.98	71.1	E	9.2
		R	1.01	143.1	F		R	1.01	143.1	F	0.0
First Ave & 34th St	EB	LT	1.10	261.8	F	EB	LT	1.11	268.1	F	6.3
FDR Drive & 34th St	EB	L	1.07	347.9	F	EB	L	1.08	349.2	F	1.3
		LTR	0.94	73.8	E		LTR	0.94	74.6	E	0.8
	NB	L	1.15	212.1	F	NB	L	1.19	230.9	F	18.8

Shading denotes approach movement subject to significant adverse impact.
No shading denotes movement with 45.0 or more seconds of delay, but not subject to significant adverse impact.

Table 16-18
Future with the Proposed Project: Weekday Midday Peak Hour
Intersection Approach Movements at Mid-LOS D, LOS E, or LOS F

Intersection	Weekday MD										
	2014 Future Without the Proposed Action					2014 Future With the Proposed Action					
	Approach	Movement	V/C Ratio	Delay Sec/Veh	LOS	Approach	Movement	V/C Ratio	Delay Sec/Veh	LOS	Delay Increment Sec/Veh
Ninth Ave & 34th St	EB	R	0.87	62.3	E	EB	R	0.87	62.3	E	0.0
Eighth Ave & 30th St	EB	LT	0.67	122.0	F	EB	LT	0.69	127.7	F	5.7
Eighth Ave & 35th St	WB	TR	0.97	60.9	E	WB	TR	0.97	60.9	E	0.0
Seventh Ave & 31st St	WB	LT	1.12	330.5	F	WB	LT	1.13	333.8	F	3.3
Seventh Ave & 33rd St	WB	LT	1.06	316.2	F	WB	LT	1.15	622.0	F	305.8
Broadway & 31st St	WB	LT	0.99	62.6	E	WB	LT	0.99	63.1	E	0.5
Broadway & 33rd St	WB	L	1.04	240.7	F	WB	L	1.12	555.2	F	314.5
Broadway & 35th St	WB	T	0.81	42.6	D	WB	T	0.86	48.3	mid-D	5.7
Sixth Ave & 30th St	EB	LT	0.93	177.6	F	EB	LT	0.96	196.4	F	18.8
Sixth Ave / Bdwy & 34th St	EB	T	1.07	348.8	F	EB	T	1.11	428.8	F	80.0
	WB	TR	0.94	50.5	mid-D	WB	TR	0.95	52.8	mid-D	2.3
Fifth Ave & 30th St	EB	TR	1.15	337.4	F	EB	TR	1.17	343.7	F	6.3
Fifth Ave & 33rd St	WB	LT	1.03	202.3	F	WB	LT	1.05	286.6	F	84.3
Fifth Ave & 35th St	WB	L	0.99	102.0	F	WB	L	1.04	195.0	F	93.0
Madison Ave & 34th St	WB	T	0.92	47.3	mid-D	WB	T	0.94	50.6	mid-D	3.3
Madison Ave & 35th St	WB	R	0.80	58.2	E	WB	R	0.80	58.2	E	0.0
Park Ave & 34th St	WB	T	1.07	217.8	F	WB	T	1.11	232.8	F	15.0
Ramp from I-495 & 34th St	SB	L	0.66	58.6	E	SB	L	0.67	59.2	E	0.6
Second Ave & 34th St	EB	R	0.80	64.8	E	EB	R	0.81	65.8	E	1.0
Ramp to I-495 & 34th St	WB	R	1.04	281.7	F	WB	R	1.04	281.7	F	0.0
FDR Drive & 34th St	EB	L	1.00	94.0	F	EB	L	1.05	292.6	F	198.6
		LTR	0.75	48.9	mid-D		LTR	0.77	51.2	mid-D	2.3

Shading denotes approach movement subject to significant adverse impact.
No shading denotes movement with 45.0 or more seconds of delay, but not subject to significant adverse impact.

Table 16-19
Future with the Proposed Project: Weekday PM Peak Hour
Intersection Approach Movements at Mid-LOS D, LOS E, or LOS F

Intersection	Weekday PM										
	2014 Future Without the Proposed Action					2014 Future With the Proposed Action					
	Approach	Movement	V/C Ratio	Delay Sec/Veh	LOS	Approach	Movement	V/C Ratio	Delay Sec/Veh	LOS	Delay Increment Sec/Veh
Ninth Ave & 34th St	EB	R	1.19	367.5	F	EB	R	1.19	367.5	F	0.0
	WB	DefL	0.81	42.4	D	WB	DefL	0.84	46.3	mid-D	3.9
	SB	LTR	1.01	89.0	F	SB	LTR	1.01	89.5	F	0.5
Eighth Ave & 30th St	EB	LT	0.70	143.6	F	EB	LT	0.71	148.3	F	4.7
Eighth Ave & 35th St	WB	TR	1.39	550.9	F	WB	TR	1.39	550.9	F	0.0
Seventh Ave & 30th St	EB	T	0.79	166.8	F	EB	T	0.79	171.8	F	5.0
		R	0.40	105.6	F		R	0.40	105.6	F	0.0
Seventh Ave & 31st St	WB	LT	0.97	55.9	E	WB	LT	0.99	60.9	E	5.0
Seventh Ave & 33rd St	WB	LT	0.90	67.7	E	WB	LT	0.92	72.9	E	5.2
Seventh Ave & 35th St	WB	LT	1.09	339.0	F	WB	LT	1.09	339.0	F	0.0
Broadway & 33rd St	WB	L	1.09	433.0	F	WB	L	1.24	693.0	F	260.0
Broadway & 35th St	WB	T	1.07	129.2	F	WB	T	1.11	144.0	F	14.8
Sixth Ave & 30th St	EB	LT	0.93	177.4	F	EB	LT	0.95	187.8	F	10.4
Sixth Ave / Bdwy & 34th St	EB	T	0.89	53.2	mid-D	EB	T	0.95	62.3	E	9.1
	WB	TR	1.07	337.6	F	WB	TR	1.08	376.8	F	39.2
	SB	T	0.85	45.1	mid-D	SB	T	0.86	45.6	mid-D	0.5
Fifth Ave & 30th St	EB	TR	1.26	363.8	F	EB	TR	1.29	380.1	F	16.3
Fifth Ave & 33rd St	WB	LT	0.95	72.9	E	WB	LT	0.96	76.0	E	3.1
Fifth Ave & 35th St	WB	L	1.28	388.1	F	WB	L	1.35	413.9	F	25.8
		T	0.91	49.6	mid-D		T	0.96	60.0	E	10.4
Madison Ave & 30th St	EB	T	0.86	46.2	mid-D	EB	T	0.88	48.0	mid-D	1.8
Madison Ave & 34th St	WB	T	1.05	182.6	F	WB	T	1.06	186.3	F	3.7
Madison Ave & 35th St	WB	T	1.00	68.2	E	WB	T	1.05	208.4	F	140.2
		R	1.08	427.2	F		R	1.08	427.2	F	0.0
Park Ave & 34th St	WB	T	1.05	203.4	F	WB	T	1.08	212.6	F	9.2
Lexington Ave & 34th St	WB	T	1.03	184.0	F	WB	T	1.06	199.2	F	15.2
	SB	R	0.96	77.1	E	SB	R	0.96	77.1	E	0.0
Ramp from I-495 & 34th St	SB	L	0.58	52.2	mid-D	SB	L	0.58	52.2	mid-D	0.0
Second Ave & 34th St	EB	R	0.69	52.2	mid-D	EB	R	0.69	52.2	mid-D	0.0
Ramp to I-495 & 34th St	WB	R	1.10	511.9	F	WB	R	1.10	511.9	F	0.0
First Ave & 34th St	EB	LT	0.88	38.5	D	EB	LT	0.93	45.3	mid-D	6.8
FDR Drive & 34th St	EB	L	1.04	243.2	F	EB	L	1.12	387.4	F	144.2
		LTR	0.78	51.9	mid-D		LTR	0.82	56.3	E	4.4
	NB	L	0.97	55.7	E	NB	L	0.99	60.1	E	4.4

Shading denotes approach movement subject to significant adverse impact.
No shading denotes movement with 45.0 or more seconds of delay, but not subject to significant adverse impact.

Table 16-20
Future with the Proposed Project: Saturday Midday Peak Hour
Intersection Approach Movements at Mid-LOS D, LOS E, or LOS F

Intersection	Saturday MD										
	2014 Future Without the Proposed Action					2014 Future With the Proposed Action					
	Approach	Movement	V/C Ratio	Delay Sec/Veh	LOS	Approach	Movement	V/C Ratio	Delay Sec/Veh	LOS	Delay Increment Sec/Veh
Eighth Ave & 31st St	WB	TR	0.70	129.6	F	WB	TR	0.73	141.3	F	11.7
Eighth Ave & 35th St	WB	TR	1.18	490.0	F	WB	TR	1.18	490.0	F	0.0
Seventh Ave & 31st St	WB	LT	1.12	304.9	F	WB	LT	1.13	308.5	F	3.6
Seventh Ave & 33rd St	WB	LT	0.80	50.2	mid-D	WB	LT	0.82	53.2	mid-D	3.0
Seventh Ave & 34th St	EB	T	0.45	75.1	E	EB	T	0.46	76.5	E	1.4
Broadway & 31st St	WB	LT	1.18	321.4	F	WB	LT	1.18	321.4	F	0.0
Broadway & 33rd St	WB	L	0.81	43.9	D	WB	L	0.86	50.0	mid-D	6.1
Sixth Ave / Bdwy & 34th St	EB	T	1.06	363.7	F	EB	T	1.10	393.8	F	30.1
Fifth Ave & 30th St	EB	TR	0.93	59.1	E	EB	TR	0.95	62.0	E	2.9
Fifth Ave & 31st St	WB	T	0.95	60.9	E	WB	T	0.95	60.9	E	0.0
Fifth Ave & 33rd St	WB	LT	0.78	48.3	mid-D	WB	LT	0.78	49.0	mid-D	0.7
Fifth Ave & 35th St	WB	L	0.83	69.5	E	WB	L	0.88	77.9	E	8.4
Madison Ave & 32nd St	EB	L	0.77	42.0	D	EB	L	0.83	47.8	mid-D	5.8
Madison Ave & 34th St	EB	L	0.75	71.2	E	EB	L	0.75	71.2	E	0.0
	WB	T	0.97	55.5	E	WB	T	0.99	59.8	E	4.3
Madison Ave & 35th St	WB	T	0.86	42.2	D	WB	T	0.91	47.9	mid-D	5.7
		R	0.52	45.3	mid-D		R	0.52	45.3	mid-D	0.0
Park Ave & 34th St	WB	T	1.06	194.9	F	WB	T	1.10	209.4	F	14.5
Lexington Ave & 34th St	WB	T	1.05	185.5	F	WB	T	1.10	199.7	F	14.2
Third Ave & 34th St	WB	TR	0.94	52.7	mid-D	WB	TR	0.97	57.7	E	5.0
Ramp from I-495 & 34th St	SB	L	1.09	371.2	F	SB	L	1.09	371.2	F	0.0
Second Ave & 34th St	EB	R	0.78	57.5	E	EB	R	0.79	58.2	E	0.7
Ramp to I-495 & 34th St	WB	LT	0.73	43.3	D	WB	LT	0.77	45.0	mid-D	1.7
		R	0.76	64.3	E		R	0.76	64.3	E	0.0
FDR Drive & 34th St	EB	L	0.89	69.7	E	EB	L	0.94	79.2	E	9.5

Shading denotes approach movement subject to significant adverse impact.
No shading denotes movement with 45.0 or more seconds of delay, but not subject to significant adverse impact.

PARKING

In order to determine which scenario has a greater impact on off-street parking demand during the weekday Midday and weekday overnight analysis periods, both the Single-Tenant Office Scenario and Multi-Tenant Office Scenario were analyzed. Hourly parking demand was calculated for each scenario. As described for the No Action condition, no on-street parking supply was assumed to be available to absorb future parking demand. As stated above, a total of up to 100 accessory parking spaces would be provided on the development site as a result of the proposed project.

As previously stated, most of the parking study area's curbside regulations restrict weekday daytime usage to commercial loading/unloading activities and authorized vehicles, or prohibit parking overall. This condition is not expected to change in the future, and no on-street parking availability was assumed in the future, as was assumed for existing conditions.

Table 16-21 provides the 2014 off-street parking utilization projections for both development scenarios. As shown, the maximum weekday Midday parking demand would occur for the Single-Tenant Office Scenario. For this scenario, anticipated 2014 off-street parking facilities have an occupancy rate of 100 percent during the weekday Midday period and 52 percent during the weekday overnight, with 4 available spaces during the weekday Midday hour, and 2,510 available spaces during the weekday overnight. For the Multi-Tenant Office Scenario, anticipated 2014 off-street parking facilities have an occupancy rate of 99 percent during the weekday Midday period and 52 percent during the weekday overnight, with approximately 40 available spaces during the weekday Midday hour, and 2,510 available spaces during the weekday overnight.

Table 16-21
Future with the Proposed Project: Off-Street Parking Utilization

Analysis Period	Total Capacity	Parking Demand			Utilization Rate	Available Spaces
		No Action	Build Increment	Total Demand		
Single-Tenant Office Scenario						
Weekday Midday	7,040	6,566	470	7,036	100%	4
Weekday Overnight	5,260	2,752	0	2,752	52%	2,508
Multi-Tenant Office Scenario						
Weekday Midday	7,040	6,566	435	7,001	99%	39
Weekday Overnight	5,260	2,752	0	2,752	52%	2,508

The 100 space accessory parking lot located on the development site would not be sufficient to accommodate all of the parking demand for either build scenario. As the table above shows, however, there is sufficient off-street parking available in the study area to accommodate the additional parking demand.

Though a parking shortfall does not occur, according to the *CEQR Technical Manual*, for proposed actions within the Manhattan Business District (defined as the area south of 61st Street), the inability of the proposed action or the surrounding area to accommodate projected future parking demands is not deemed to be a significant adverse impact. The unsatisfied demand for parking spaces during the Midday peak utilization period would result in vehicles parking outside of the parking study area and motorists walking greater distances to their

destinations. As parking shortfalls do not constitute significant adverse impacts for CEQR purposes, mitigation is not required.

TRAFFIC SAFETY

As indicated in **Table 16-10**, several intersections in the study area exceed the CEQR criteria of five or more pedestrian-related accidents during any one year over the three-year accident history period. The following intersections experienced five or more combined pedestrian and bicycle related accidents over the three-year accident history period:

- Ninth Avenue – The intersection of Ninth Avenue and West 34th Street.
- Eighth Avenue – The intersections of Eighth Avenue and West 30th Street, West 31st Street, West 33rd Street, and West 34th Street.
- Seventh Avenue – The intersections of Seventh Avenue and West 32nd Street, West 33rd Street, West 34th Street, and West 35th Street.
- Third Avenue – The intersection of Third Avenue and East 34th Street.
- Lexington Avenue – The intersection of Lexington Avenue and East 34th Street.

Significant changes have occurred in the study area, primarily in 2008, which would have the effect of changing pedestrian and bicycle accident patterns in the study area in the future in comparison to the accident history over the 2006 to 2008 period. These changes include the installation of a Class 1 Bicycle Path (separated on-street path) on Ninth Avenue from south of the study area to West 31st Street and a Class 2 Bicycle Lane (on-street striped route) on Eighth Avenue. Also, with the implementation of the exclusive bus lanes on West 34th Street, certain turning movements were prohibited, such as the eastbound West 34th Street left turn at Eighth Avenue, which should reduce the number of vehicle/pedestrian conflicts at this high accident location and along the 34th Street corridor overall. In addition, NYCDOT has initiated specific pedestrian safety programs in the study area, such as implementation of lead pedestrian intervals and the Safe Streets for Seniors program, which provides increased pedestrian clearance time at intersections where concentrations of senior citizens have been identified. Overall, the above measures should provide significant benefits to study area pedestrian and bicycle safety.

As discussed in Chapter 22, "Mitigation," proposed pedestrian mitigation measures would include 5 new bulb outs at 4 intersections and crosswalk widening for 2 crosswalks in the pedestrian study area. The proposed bulb outs and crosswalk widening would be at intersections along West 32nd, West 33rd and West 34th Streets at Broadway and Sixth Avenue.

The measures that have been implemented by NYCDOT, in combination with the Proposed Actions' mitigation measures mentioned above, are anticipated to provide benefits to study area pedestrian and bicycle safety. Therefore, the Proposed Action would not reasonably be expected to significantly increase the number of accidents in the study area. ✷