A. INTRODUCTION

This section describes the transportation characteristics and potential impacts associated with the replacement of the existing Brooklyn Detention Complex with a new detention facility as part of the proposed project. As shown in **Figure 3.9-1**, the Brooklyn project site is located at 275 Atlantic Avenue (Block 175, Lot 1) in the Downtown Brooklyn neighborhood of Brooklyn Community District 2. The site occupies the entire block bounded by Atlantic Avenue, Smith Street, State Street, and Boerum Place.

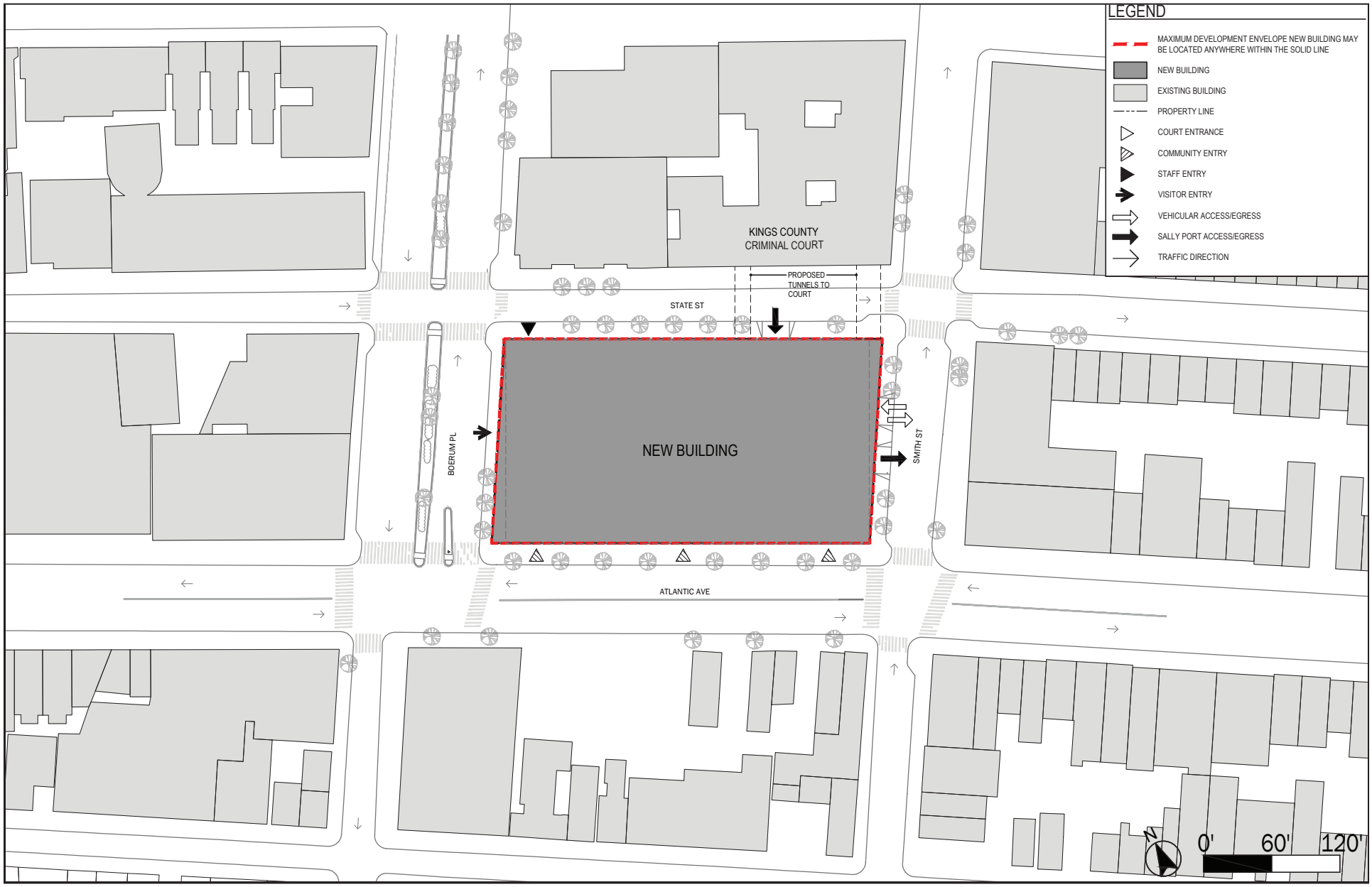
The existing 161,765 gsf Brooklyn Detention Complex was opened in 1957 and has 815 beds for detained people undergoing the intake process or awaiting trial in Brooklyn or Staten Island courts. A tunnel beneath State Street connects the site to the Brooklyn Central Courts Building at 120 Schermerhorn Street. The proposed project would replace this facility with a new detention facility containing approximately 1,190,000 gsf of above-grade floor area, including approximately 1,437 beds for people in detention (approximately 900,000 gsf of housing space); 260,000 gsf of support space; 30,000 gsf of community and/or retail space; and 292 accessory parking spaces. The community and/or retail space would be located along Boerum Place, Atlantic Avenue, and Smith Street. As shown in **Figure 3.9-2**, the entrance/exit for accessory staff parking would be located along Smith Street and loading functions would be located along State Street. The facility would also have a sally port with an entrance on Smith Street and an exit on State Street. Staff and visitor pedestrian entrances would be located on Smith Street and Boerum Place, respectively.

Based on the current conceptual designs and programming objectives for the proposed project, actions necessary to develop the proposed facility at the Brooklyn Site include site selection for public facilities, waivers of height and setback requirements, waiver of floor area requirements, and a special permit for accessory parking. The project would also include the demapping of above- and below-grade volumes of State Street between Boerum Place and Smith Street to facilitate the construction of pedestrian bridges and/or tunnels connecting the proposed detention facility to existing court facilities to the north and allow the potential placement of accessory space below the street.

In order to assess the potential effects of the proposed project on transportation systems and services in proximity to the Brooklyn Site, a reasonable worst case development scenario (RWCDS) for both "future without the Proposed Actions" (No Action) and "future with the Proposed Actions" (With Action) conditions are analyzed for an analysis year of 2027, the year by which the proposed project is expected to be complete. Under the No Action condition, it is assumed that Rikers Island would continue operating as the city's main detention center, and that the existing 815-bed Brooklyn Detention Complex would remain in operation.

This section of Chapter 3 describes in detail the existing transportation conditions in proximity to the Brooklyn Site. Future conditions in the year 2027 without the proposed project (the No Action condition) are then determined, including additional transportation-system demand and any changes expected by the year 2027. The increase in travel demand resulting from the proposed

3.19.19



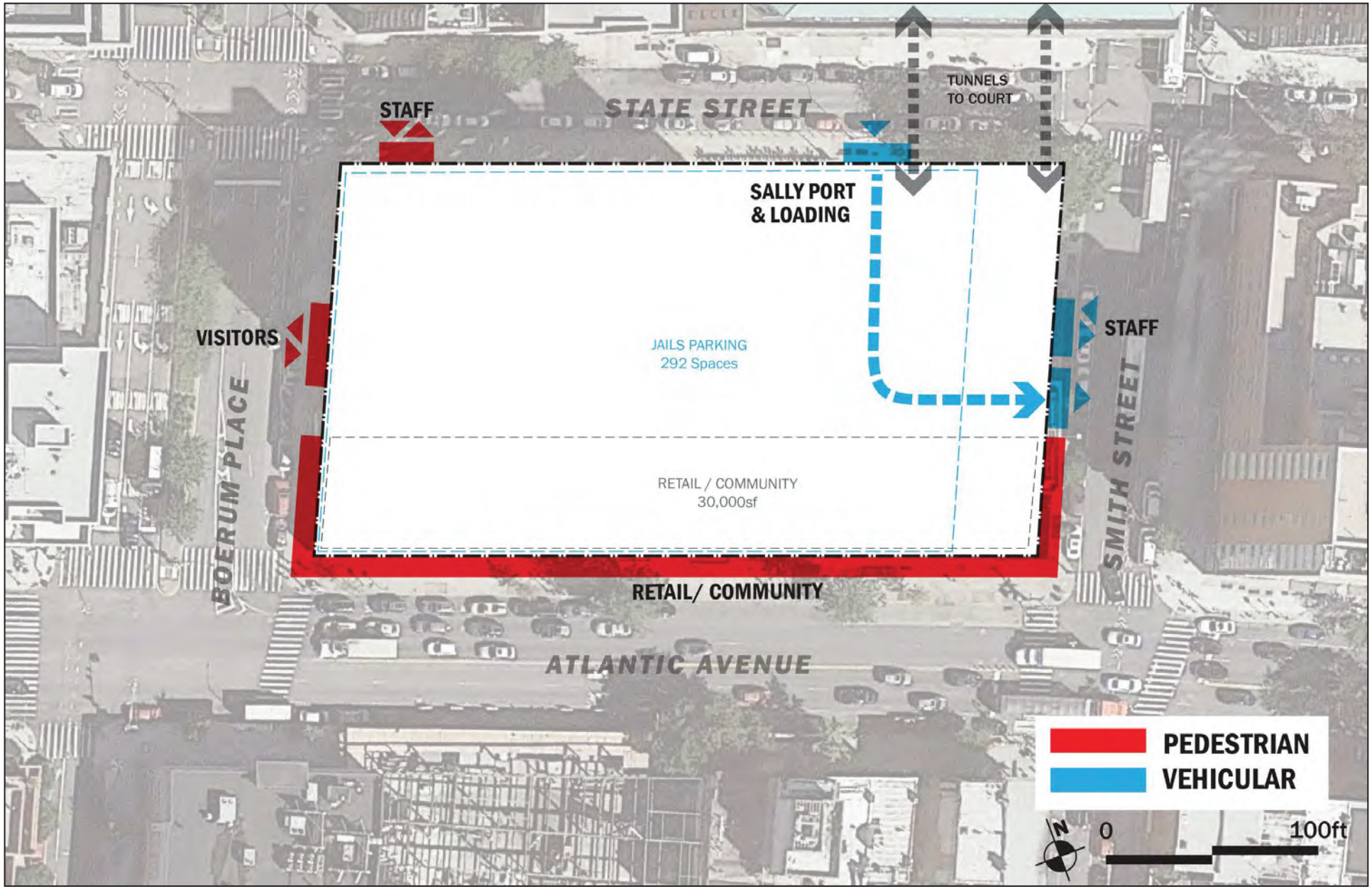
Source: Perkins Eastman

Brooklyn Site - 275 Atlantic Avenue
Project Location

BOROUGH-BASED NYC JAIL SYSTEM

Figure 3.9-1

3.19.19



Source: Perkins Eastman

Brooklyn Site - 275 Atlantic Avenue
Access/Circulation Plan

Figure 3.9-2

project is then projected and added to the No Action condition to develop the 2027 future with the proposed project (the With Action condition). The potential for significant adverse impacts from project-generated trips are then identified and described in detail.

PRINCIPAL CONCLUSIONS

TRAFFIC

Traffic conditions were evaluated for the weekday 6:30-7:30 AM and 2:45-3:45 PM (midday) peak hours, and the Saturday 2:45-3:45 PM peak hour which are the periods when incremental traffic associated with the proposed project is expected to be highest as they coincide with the peak hour within the uniformed DOC staff shift periods. The traffic study area includes a total of 12 intersections (all signalized) in proximity to the Brooklyn Site where incremental vehicle trips generated by the proposed project are expected to exceed the 50 trips/hour *CEQR Technical Manual* analysis threshold. As summarized in **Tables 3.9-1 and 3.9-2**, the results of the traffic impact analysis indicate the potential for significant adverse impacts at ten analyzed intersections during one or more analyzed peak hours. A potential for significant adverse impacts was identified for seven analyzed lane groups at six analyzed intersections during the weekday AM peak hour, 18 analyzed lane groups at ten analyzed intersections during the weekday midday peak hour, and 10 analyzed lane groups at seven analyzed intersections during the Saturday peak hour. Section 3.15, "Mitigation," discusses potential measures under consideration, such as signal timing changes, to mitigate these identified potential significant adverse traffic impacts.

Table 3.9-1
Number of Potentially Impacted Intersections and Lane Groups by Peak Hour

	Peak Hour		
	Weekday AM	Weekday Midday	Saturday
Lane Groups	7	18	10
Intersections	6	10	7

Table 3.9-2
Summary of Potentially Significantly Impacted Intersections

Intersection	Control	Peak Hour		
		Weekday AM	Weekday Midday	Saturday
Columbia Street & Atlantic Avenue	Signal		X	X
Brooklyn-Queens Expressway (BQE) Exist and Entrance Ramps & Atlantic Avenue	Signal		X	X
Clinton Street & Atlantic Avenue	Signal	X	X	X
Court Street & Atlantic Avenue	Signal	X	X	
Boerum Place & Atlantic Avenue	Signal	X	X	X
Smith Street & Atlantic Avenue	Signal	X	X	X
State Street & Boerum Place	Signal		X	
State Street & Smith Street	Signal		X	
Boerum Place & Schermerhorn Street	Signal	X	X	X
Smith Street & Schermerhorn Street	Signal	X	X	X

TRANSIT

Transit analyses typically focus on the weekday AM and PM commuter peak periods as it is during these periods that overall demand on the subway and bus systems is usually highest. The proposed project is expected to generate its peak travel demand during the weekday AM, weekday midday and Saturday midday periods when uniformed DOC staff are changing shifts. Peak transit demand from the proposed project would therefore only coincide with peak transit system demand during the weekday AM period. There would be fewer transit trips associated with the proposed project during the weekday PM commuter peak period as this period would not coincide with a uniformed DOC staff shift change period.

Subway

Eight MTA New York City Transit (NYCT) subway stations are located in within ¼ mile of the Brooklyn Site. These include the Bergen Street station served by F and G trains operating on the Culver Line; the three stations that comprise the Borough Hall/Court Street station complex which is served by R trains operating on the Fourth Avenue Line and the Nos. 2, 3, 4 and 5 trains operating on the Eastern Parkway Line; the Hoyt Street-Fulton Mall station served by Nos. 2 and 3 trains operating on the Eastern Parkway Line; The Hoyt-Schermerhorn Street station served by A and C trains operating on the Eighth Avenue Line and G trains operating on the Culver Line; and the two stations that comprise the Jay Street-MetroTech station which is served by A and C trains operating on the Eighth Avenue Line, F trains operating on the Culver Line and R trains operating on the Fourth Avenue Line.

During the weekday AM and PM commuter peak hours, the proposed project would generate a total of approximately 92 and 50 incremental subway trips, respectively, at the eight stations in proximity to the project site— less than the *CEQR Technical Manual* analysis threshold of 200 total incremental trips/hour. Therefore, a potential for significant adverse impacts to subway station and line haul conditions is not anticipated as a result of the proposed project, and a detailed subway analysis is not warranted.

Bus

A total of 12 NYCT local bus routes and one MTA Bus limited-stop route operate within ¼-mile of the Brooklyn Site. These include the B25, B26, B38, B41, B45, B52, B57, B61, B62, B63, B65 and B67 routes operated by NYCT and the B103 limited-stop service operated by MTA Bus. Both local and limited-stop service are provided on the B38 and B41 routes.

During the weekday AM and PM commuter peak hours, the proposed project would generate a total of approximately 23 and 20 new transit bus trips, respectively, on bus routes operating within ¼-mile of the project site. Given these numbers of peak hour trips, no single route would experience an incremental increase of 50 or more trips/hour in one direction. Therefore, under *CEQR Technical Manual* guidance, the potential for significant adverse impacts is considered unlikely, and a detailed bus analysis is not warranted.

PEDESTRIANS

The proposed project would generate a net increment of approximately 18, 757, 392 and 403 walk-only trips at the Brooklyn Site in the weekday AM, midday and PM peak hours, and the Saturday peak hour, respectively. Persons walking en route to and from subway station entrances and bus stops would bring the total number of project-generated pedestrian trips on area sidewalks and crosswalks to 133, 935, 462 and 547 during these same periods, respectively. The total number of pedestrian trips in the weekday midday, weekday PM and Saturday periods would therefore

exceed the *CEQR Technical Manual* analysis threshold of 200 incremental trips/hour. These trips would be most concentrated on sidewalks and crosswalks in the immediate vicinity of the site. A total of seven pedestrian elements—three sidewalks and four corner areas—are expected to experience an incremental increase of 200 or more trips in the weekday midday and were selected for detailed analysis. In the other peak hours, no pedestrian element is expected to experience an incremental increase of 200 or more trips. Therefore, the detailed analysis of pedestrian elements focuses on the weekday midday period only. Based on *CEQR Technical Manual* criteria, none of these analyzed pedestrian elements would potentially be significantly adversely impacted by the proposed project.

VEHICULAR AND PEDESTRIAN SAFETY

The *Vision Zero Brooklyn Pedestrian Safety Action Plan* was released on February 19, 2015. In the vicinity of the Brooklyn Site, Atlantic Avenue, Fulton Street and Court Street were identified as Priority Corridors and the intersection of Atlantic Avenue with Court Street was identified as a Priority Intersection. The site is also located in a Priority Area but not within a DOT-designated Senior Pedestrian Focus Area (SPFA).

Crash data for intersections within ¼-mile of the Brooklyn site were obtained from the New York City Department of Transportation (DOT) for the three-year reporting period between January 1, 2014, and December 31, 2016 (the most recent period for which data were available for all locations). During this period, a total of 431 reportable and non-reportable crashes, 164 pedestrian/bicyclist-related injury crashes and two fatalities occurred at study area intersections. A review of the crash data identified five intersections as high crash locations (defined as those with 48 or more total reportable and non-reportable crashes or five or more pedestrian/bicyclist injury crashes occurring in any consecutive 12 months of the most recent three-year period for which data are available). NYCDOT has proposed or recently implemented improvements at four of these five high crash locations. Additional measures that could be employed to increase pedestrian/bicyclist safety could include installation of additional high visibility crosswalks where not already present, and improved street lighting.

PARKING

The parking analyses document changes in the parking supply and utilization within a ¼-mile radius of the Brooklyn Site under both No-Action and With-Action conditions. There are currently a total of 19 public parking lots and garages within the parking study area with a combined capacity of 3,308 spaces during the weekday midday period and 3,140 spaces during the early AM period (as three facilities are closed overnight). Under the proposed project, 292 on-site accessory parking spaces would be provided for DOC and Correctional Health Services (CHS) staff. There would be a surplus of available accessory parking after accounting for all incremental DOC and CHS parking demand. As these spaces would only be used by authorized staff, parking demand associated with non-staff trips (site visitors and local retail patrons) would need to be accommodated off-site, either on-street or off-street. Surplus on-site accessory parking would accommodate much of the demand associated with existing staff at the Brooklyn Detention Complex. An increase in available public parking capacity resulting from the relocation of much of this existing staff parking demand from on-street or off-street public spaces to the proposed on-site parking area would fully accommodate the incremental project generated demand that would not be accommodated on the project site. As the project would likely result in a net increase in future public parking availability, there would not be a potential for a significant adverse parking shortfall based on *CEQR Technical Manual* criteria.

B. PRELIMINARY ANALYSIS METHODOLOGY

The CEQR *Technical Manual* describes a two-level screening procedure for the preparation of a "preliminary analysis" to determine if quantified operational analyses of transportation conditions are warranted. As discussed in the following sections, the preliminary analysis begins with a trip generation (Level 1) analysis to estimate the numbers of person and vehicle trips attributable to the proposed actions for each site. According to the *CEQR Technical Manual*, if the proposed actions are expected to result in fewer than 50 peak hour vehicle trips and fewer than 200 peak hour transit or pedestrian trips, further quantified analyses are not warranted. When these thresholds are exceeded, detailed trip assignments (a Level 2 analysis) are to be performed to estimate the incremental trips that would be incurred at specific transportation elements and to identify potential locations for further analyses. If the trip assignments show that the proposed actions would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips (inbound and outbound) at a station, 50 or more peak hour transit bus trips in one direction along a bus route, or 200 or more peak hour pedestrian trips traversing a sidewalk, corner area or crosswalk, then further quantified operational analyses may be warranted to assess the potential for significant adverse impacts on traffic, transit, pedestrians, parking, and vehicular and pedestrian safety.

C. LEVEL 1 SCREENING ASSESSMENT

A Level 1 trip generation screening assessment was conducted to estimate the numbers of person and vehicle trips by mode expected to be generated at the Brooklyn Site during the weekday AM, midday and PM peak hours; and the Saturday peak hour with implementation of the proposed project. These estimates were then compared to the *CEQR Technical Manual* analysis thresholds to determine if a Level 2 screening and/or quantified operational analyses may be warranted. The travel demand assumptions used for the assessment are described in the following sections along with a summary of the travel demand that would be generated at the Brooklyn Site by the proposed project. A detailed travel demand forecast is then provided for the Brooklyn Site.

It should be noted that the development program for the proposed detention facility on the Brooklyn Site was revised shortly before publication of this EIS as the transportation analyses was nearing completion. Although, the travel demand forecast included in the transportation analyses presented below were not updated to reflect the proposed program (which is described above), the provided assessments are conservative as they are based on a larger development program. Overall, the travel demand forecast presented below is based on a development plan that, compared to the proposed program described above, assumed an additional 210,000 gsf of above-grade floor area (100,000 gsf of housing space and 110,000 gsf of support space) and 73 beds for people in detention.

BACKGROUND

The Brooklyn Site at 275 Atlantic Avenue encompasses the existing 161,765 gsf Brooklyn Detention Complex that was opened in 1957 and has 815 beds for detained people undergoing the intake process or awaiting trial in Brooklyn or Staten Island courts. A tunnel beneath State Street connects the site to the Brooklyn Central Courts Building at 120 Schermerhorn Street. The proposed project would replace this facility with a new detention facility containing approximately 1,190,000 gsf of above-grade floor area, including approximately 1,437 beds for people in detention (approximately 900,000 gsf of housing space); 260,000 gsf of support space; and 292 accessory parking spaces. The project would also include 30,000 gsf of community and/or retail space. As Atlantic Avenue is a major retail corridor, the transportation analysis assumes this

30,000 gsf area is entirely local retail space instead of community space. This local retail space would be located along Boerum Place, Atlantic Avenue, and Smith Street. As shown in **Figure 3.9-2**, the entrance/exit for accessory staff parking would be located along Smith Street and loading functions would be located along State Street. The facility would also have a sally port with an entrance on Smith Street and an exit on State Street. Staff and visitor pedestrian entrances would be located on State Street and Boerum Place, respectively.

As mentioned above, the travel demand forecast included in the provided transportation analyses was based on a development program that is larger than the proposed project. For analysis purposes, the following larger program described below and summarized in **Table 3.9-3** serves as the basis of the travel demand forecast and subsequent transportation analyses. **Table 3.9-3** summarizes the number of beds, the anticipated staffing levels, the number of visitors, and the amount of local retail space assumed in the transportation analyses' travel demand forecast. As shown in **Table 3.9-3**, in the future without the proposed project (the No Action condition), the existing Brooklyn Detention Complex would remain open with 815 beds, an average weekday uniformed staff count of 228 (189 on Saturday), 15 non-uniformed staff and 52 clinical/medical staff. By contrast, in the future with the proposed project (the With Action condition), the existing Brooklyn Detention Complex would be replaced with a new facility with a total of 1,510 beds, an average of 642 uniformed staff on weekdays (544 on Saturday), 144 non-uniformed staff, 90 clinical/medical staff and 30,000 gsf of local retail space. Therefore, for travel demand forecasting purposes, the proposed project would result in a net incremental increase of 695 beds, 414 uniformed staff on weekdays (355 on Saturday), 129 non-uniformed staff and 38 clinical/medical staff at the Brooklyn Site. There would also be a net increase of 30,000 gsf of local retail space.

Table 3.9-3
Brooklyn Site No Action and With Action
Bed Count, Staff Populations and Local Retail Space

	No Action[1]	With Action	Net Increment
Beds	815	1,510	+695
Uniformed Staff (Weekday)	228	642	+414
Uniformed Staff (Saturday)	189	544	+355
Non-Uniformed Staff	15	144	+129
Clinical/Medical Staff	52	90	+38
Local Retail (gsf)	0	30,000	+30,000

Sources: DOC and CHS projections.
Notes: [1]No Action scenario reflects the existing Brooklyn Detention Complex remaining open.

While most DOC staffers would be uniformed officers, some non-uniformed DOC employees – e.g., administrative personnel, kitchen aides, maintenance crews, etc., and medical/infirmary personnel staffed by CHS – would also travel to and from the Brooklyn Site on a typical day. Additional travel demand would also be generated by DOC buses transporting people who are detained, third-party programming aides, lawyers and visitors, and patrons and staff at the proposed local retail uses. As detention centers operate 24-hours a day, uniformed officers, the predominant staffing group, are generally divided into three shifts which start at 7 AM, 3 PM and 11 PM. The non-uniformed staff would operate on a separate schedule, with the majority expected to work shifts during daytime hours. Medical staff are also generally divided into three shifts but, with start times one hour later than those of uniformed staff (e.g. first shift starts at 8 AM instead of 7 AM, etc.) It is anticipated that travel demand associated with the proposed project would be

highest during the shift overlap periods for uniformed officers as they would comprise the majority of staff on the site. Consequently, the transportation analyses focus on three daytime peak periods—an early weekday AM peak hour (6:30 AM to 7:30 AM) to reflect the peak hour during the shift change period that would occur around the start of the 7 AM morning shift, and the weekday midday (2:45 PM to 3:45 PM) and Saturday (2:45 PM to 3:45 PM) peak hours to reflect the peak hour during the shift change period that would occur around the start of the 3 PM to 11 PM work shift. The 11 PM shift change is not included for analysis as overall demand on the area's transportation systems is substantially lower during this late night period than during the daytime hours.

TRANSPORTATION PLANNING FACTORS

The transportation planning factors used to forecast project-generated travel demand at the Brooklyn Site are summarized in **Table 3.9-4**. Factors are shown for the weekday AM, midday and PM peak hours; and the Saturday peak hour. The trip generation rates, temporal distributions and directional splits for detention center staff and visitors were based on data provided by DOC and CHS and data from counts conducted at existing detention facilities in Manhattan and Brooklyn. Modal splits and vehicle occupancies were based on data from surveys conducted at existing detention facilities in Manhattan and Brooklyn, from 2010 Census reverse-journey-to-work data, and from data cited in the 2014 *Atlantic Yards Arena and Redevelopment FSEIS.* The factors for the local retail land use were based on those cited in the *CEQR Technical Manual*, the 2014 *Atlantic Yards Arena and Redevelopment FSEIS*, the 2003 *No. 7 Extension Hudson Yards Rezoning and Development Program FEIS, and* on data provided by NYCDOT. Additional details on the transportation planning factors used for the travel demand forecast are presented in the *Transportation Planning Factors and Travel Demand Forecast Technical Memorandum* provided in **Appendix F**.

Table 3.9-4
Transportation Planning Factors

Land Use:	Uniformed Staff		Non-Uniformed Staff		Clinic Staff		Authorized Visitors		Other Visitors		Brooklyn Local Retail	
Trip Generation:	(1)		(1)		(1)		(1)		(5)		(7)	
Weekday	2.0		2.0		2.0		0.89		0.30		205.0	
Saturday	2.0		2.0		2.0		0.19		0.30		240.0	
	trips/employee		trips/employee		trips/employee		trips/bed		trips/bed		per 1,000 sf	
Temporal Distribution:	(1)		(1)		(1)		(1)		(5)		(7,8)	
AM	29.1%		36.6%		3.3%		5.2%		0.5%		0.0%	
Midday	29.8%		39.0%		10.3%		4.4%		9.6%		19.0%	
PM	0.0%		0.0%		0.0%		8.2%		9.0%		10.0%	
Saturday	29.0%		39.0%		10.3%		4.3%		11.7%		10.0%	
	(2)		(3)		(3)		(3)		(2)		(9)	
Modal Splits:	All Periods		All Periods		All Periods		All Periods		All Periods		All Periods	
Auto	77.4%		31.0%		31.0%		31.0%		10.0%		11.0%	
Taxi	5.3%		0.3%		0.3%		0.3%		2.5%		0.0%	
Subway	13.4%		43.6%		43.6%		43.6%		72.8%		3.0%	
Bus	1.3%		15.9%		15.9%		15.9%		8.6%		2.0%	
Walk/Ferry/Other	2.6%		9.2%		9.2%		9.2%		6.1%		84.0%	
	100.0%		100.0%		100.0%		100.0%		100.0%		100.0%	
	(1)		(1)		(1)		(1)		(5)		(10)	
In/Out Splits:	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	65.0%	35.0%	100.0%	0.0%	100.0%	0.0%	60.8%	39.2%	100.0%	0.0%	50.0%	50.0%
Midday	37.0%	63.0%	0.0%	100.0%	100.0%	0.0%	73.1%	26.9%	47.6%	52.4%	50.0%	50.0%
PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	31.8%	68.3%	55.3%	44.7%	50.0%	50.0%
Saturday	43.0%	57.0%	0.0%	100.0%	100.0%	0.0%	71.4%	28.6%	26.9%	73.1%	55.0%	45.0%
Vehicle Occupancy:	(2)		(3,4)		(3,4)		(3,4)		(6)		(10)	
Auto	1.15		1.22		1.22		1.22		1.50		2.00	
Taxi	1.00		1.42		1.42		1.42		1.00		2.00	
Truck/bus Trip Generation:	(1)										(7)	
Weekday	0.06										0.35	
Saturday	0.06										0.04	
	per bed										per 1,000 sf	
	(1)										(7)	
AM	2.9%										8.0%	
Midday	5.9%										11.0%	
PM	9.8%										2.0%	
Saturday	5.9%										11.0%	
	In	Out									In	Out
All	55.0%	45.0%									50.0%	50.0%

Notes :

(1) Trip generation rate, temporal distribution, and in/out splits assumes DOC & CHS staff do not typically leave facility during their 8-hour work shifts. DOC & CHS temporal distribution and in/out splits are derived from DOC & CHS staff schedule and information for existing Manhattan and Brooklyn jails. Authorized Visitor rates are derived from day-time count data collected at the Manhattan and Brooklyn jails in July 2018. Rates were determined by discounting expected trips made by DOC & CHS staff from the count data. Authorized Visitor Saturday trip generation rate based on similar ratio between weekday and saturday rates for office use provided in Table 16-2 of the 2014 City Environmental Quality (CEQR) Technical Manual (3.9 trips/18 trips = 0.22 ratio).
(2) Based on survey data collected at Brooklyn House of Detention, May and June 2018.
(3) Based on 2010 census reverse journey to work data for Kings County Census Tract 9, 37, 41, 43, 45, 69 and 71.
(4) Taxi occupancy rate based on Atlantic Yards Arena and Redevelopment FSEIS, 2014.
(5) Based on Manhattan and Brooklyn House of Detention average hourly weekday and weekend visitation data for 2017 provided by DOC.
(6) Based on survey data collected at Manhattan and Brooklyn Houses of Detention, May and June 2018.
(7) Based on 2014 City Environmental Quality Review (CEQR) Technical Manual.
(8) Based on Number 7 Extension Hudson Yards Rezoning and Development Program Appendix S.1, 2003.
(9) Based on DOT survey of local retail in Downtown Brooklyn.
(10) Based on Atlantic Yards Arena and Redevelopment FSEIS, 2014.

TRAVEL DEMAND FORECAST

The net incremental change in person and vehicle trips expected to be generated by the proposed project at the Brooklyn Site in the 2027 analysis year was derived based on the net change in the number of beds and staff populations shown in **Table 3.9-3**, the net 30,000 gsf increase in local retail uses on the project site, and the transportation planning factors shown in **Table 3.9-4**. **Table 3.9-5** shows an estimate of the net incremental change in peak hour person trips (by all modes) and vehicle trips by population component and land use (versus the No Action condition) that would occur at the Brooklyn Site in 2027 with implementation of the proposed project. A summary of these data is presented in **Table 3.9-6**. As shown in **Tables 3.9-5 and 3.9-6**, the proposed project would generate a net increase of approximately 371 person trips in the weekday AM peak hour, 1,279 in the weekday midday, 530 in the weekday PM, and 805 in the Saturday peak hour. Peak hour vehicle trips (including auto, truck, DOC shuttle bus and taxi trips balanced to reflect that some taxis arrive or depart empty) would increase by a net total of approximately 217, 278, 45 and 217 (in and out combined) in the weekday AM, midday and PM, and Saturday peak hours, respectively. Peak hour subway trips would increase by a net total of 92, 133, 50 and 110 during these periods, respectively, while transit bus trips would increase by approximately 23, 45, 20 and 34, respectively. Lastly, trips made entirely on foot (walk-only trips) would increase by 18, 757, 392 and 403 during the weekday AM, midday and PM, and Saturday peak hours, respectively. The walk-only trips in the weekday midday, weekday PM and Saturday peak hours would be predominantly generated by the proposed local retail uses.

The following evaluates the traffic, transit, and pedestrian trips that would be generated by the proposed project in each peak hour with respect to the *CEQR Technical Manual* Level 1 screening analysis thresholds.

TRAFFIC

As shown in **Table 3.9-6**, the number of incremental peak-hour vehicle trips generated by the proposed project—217, 278, 45 and 217 in the weekday AM, midday and PM peak hours, and the Saturday peak hour, respectively—would exceed the 50-trip *CEQR Technical Manual* analysis threshold in all but the weekday PM period. A Level 2 screening assessment is therefore warranted for the weekday AM and midday periods along with the Saturday period to determine which, if any, intersections require quantified analysis.

TRANSIT

Transit analyses typically focus on the weekday AM and PM commuter peak periods as it is during these periods that overall demand on the subway and bus systems is usually highest. As noted previously, the proposed project is expected to generate its peak travel demand during the weekday AM and midday, and Saturday periods (i.e., when uniformed DOC staff are changing shifts). Peak transit demand from the proposed project would therefore only coincide with peak transit system demand during the weekday AM period. As it would not coincide with a uniformed DOC staff shift change, there would be fewer incremental transit trips at the Brooklyn Site in the weekday PM commuter peak period.

Table 3.9-5
Travel Demand Forecast

Land Use:		Uniformed Staff		Non-uniformed Staff		Clinic Staff		Authorized Visitors		Other Visitors		Brooklyn Local Retail		Total	
Size/Units:	Weekday	414		129		38		695 beds				30,000 gsf			
	Saturday	355		129		38									
Peak Hour Trips:															
	AM	241		94		3		32		1		0		371	
	Midday	247		101		8		27		20		876		1,279	
	PM	0		0		0		51		19		460		530	
	Saturday	206		101		8		6		24		460		805	
Person Trips:															
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	**Auto**	121	65	29	0	1	0	6	4	0	0	0	0	157	69
	Taxi	8	4	0	0	0	0	0	0	0	0	0	0	8	4
	Subway	22	12	41	0	2	0	8	6	1	0	0	0	74	18
	Bus	2	1	15	0	0	0	3	2	0	0	0	0	20	3
	Walk/Ferry/Other	4	2	9	0	0	0	2	1	0	0	0	0	15	3
	Total	157	84	94	0	3	0	19	13	1	0	0	0	274	97
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Midday	**Auto**	71	120	0	31	3	0	6	2	1	1	48	48	129	202
	Taxi	5	8	0	0	0	0	0	0	0	0	0	0	5	8
	Subway	12	22	0	44	3	0	9	3	6	8	13	13	43	90
	Bus	1	2	0	17	1	0	3	1	1	1	9	9	15	30
	Walk/Ferry/Other	2	4	0	9	1	0	2	1	1	1	368	368	374	383
	Total	91	156	0	101	8	0	20	7	9	11	438	438	566	713
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PM	**Auto**	0	0	0	0	0	0	5	11	1	1	25	25	31	37
	Taxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Subway	0	0	0	0	0	0	7	15	8	6	7	7	22	28
	Bus	0	0	0	0	0	0	3	6	0	1	5	5	8	12
	Walk/Ferry/Other	0	0	0	0	0	0	1	3	1	1	193	193	195	197
	Total	0	0	0	0	0	0	16	35	10	9	230	230	256	274
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Saturday	**Auto**	69	90	0	31	2	0	1	1	1	2	27	23	100	147
	Taxi	5	6	0	0	0	0	0	0	0	0	0	0	5	6
	Subway	12	16	0	44	4	0	2	1	5	12	8	6	31	79
	Bus	1	2	0	17	1	0	1	0	1	2	5	4	9	25
	Walk/Ferry/Other	2	3	0	9	1	0	0	0	0	1	213	174	216	187
	Total	89	117	0	101	8	0	4	2	7	17	253	207	361	444
Vehicle Trips :															
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	**Auto**	105	57	24	0	1	0	5	3	0	0	0	0	135	60
	Taxi	8	4	0	0	0	0	0	0	0	0	0	0	8	4
	Taxi Balanced	10	10	0	0	0	0	0	0	0	0	0	0	10	10
	Truck/Bus	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	Total	116	68	24	0	1	0	5	3	0	0	0	0	146	71
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Midday	**Auto**	62	104	0	25	2	0	5	2	1	1	24	24	94	156
	Taxi	5	8	0	0	0	0	0	0	0	0	0	0	5	8
	Taxi Balanced	12	12	0	0	0	0	0	0	0	0	0	0	12	12
	Truck/Bus	1	1	0	0	0	0	0	0	0	0	1	1	2	2
	Total	75	117	0	25	2	0	5	2	1	1	25	25	108	170
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PM	**Auto**	0	0	0	0	0	0	4	9	1	1	13	13	18	23
	Taxi	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Taxi Balanced	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Truck/Bus	2	2	0	0	0	0	0	0	0	0	0	0	2	2
	Total	2	2	0	0	0	0	4	9	1	1	13	13	20	25
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Saturday	**Auto**	60	78	0	25	2	0	1	1	1	1	14	12	78	117
	Taxi	5	6	0	0	0	0	0	0	0	0	0	0	5	6
	Taxi Balanced	10	10	0	0	0	0	0	0	0	0	0	0	10	10
	Truck/Bus	1	1	0	0	0	0	0	0	0	0	0	0	1	1
	Total	71	89	0	25	2	0	1	1	1	1	14	12	89	128

Note:
25% linked trip credit taken for local retail use

Table 3.9-6
Summary of Net Incremental Peak Hour Trips

Mode	Trip Type	Weekday AM	Weekday Midday	Weekday PM	Saturday
Vehicle (Auto/Taxi/DOC Bus/Truck)	Vehicle Trips	217	278	45	217
Subway	Person Trips	92	133	50	110
Transit Bus	Person Trips	23	45	20	34
Walk-only	Person Trips	18	757	392	403
All Pedestrians[1]	Person Trips	133	935	462	547

Notes: [1] Includes walk-only trips and pedestrians en route to and from subway stations and bus stops.

Subway

The proposed project would generate a total of approximately 92 and 50 incremental subway trips (inbound and outbound combined) during the weekday AM and PM commuter peak hours, less than the *CEQR Technical Manual* analysis threshold of 200 total incremental trips/hour at any one subway station or on any one subway route. Therefore, a potential for significant adverse impacts to subway station and line haul conditions is not anticipated as a result of the proposed project, and a detailed subway analysis is not warranted.

Bus

A total of 12 NYCT local bus routes and one MTA Bus limited-stop route operate within ¼-mile of the Brooklyn Site. These include the B25, B26, B38, B41, B45, B52, B57, B61, B62, B63, B65 and B67 routes operated by NYCT and the B103 limited-stop service operated by MTA Bus. Both local and limited-stop service are provided on the B38 and B41 routes.

The proposed project would generate approximately 23 and 20 incremental transit bus trips at the Brooklyn Site during the weekday AM and PM commuter peak hours. Given these numbers of peak hour trips, no single route would experience an incremental increase of 50 or more trips/hour in one direction. Therefore, based on *CEQR Technical Manual* guidance, a detailed bus analysis is not warranted.

PEDESTRIANS

The Proposed Actions would generate a net increment of approximately 18, 757, 392 and 403 walk-only trips in the weekday AM, midday and PM peak hours, and the Saturday peak hour, respectively. Persons walking en route to and from subway station entrances and bus stops would bring the total number of incremental project-generated pedestrian trips on area sidewalks and crosswalks to 133, 935, 462 and 547 during these same periods, respectively. The total number of pedestrian trips in the weekday midday and PM, and Saturday periods would therefore exceed the *CEQR Technical Manual* analysis threshold of 200 incremental trips/hour. A Level 2 screening assessment is therefore warranted to determine which, if any pedestrian elements (sidewalks, corner areas and crosswalks), require quantified analysis.

D. LEVEL 2 SCREENING ASSESSMENT

A Level 2 screening assessment involves the assignment of project-generated trips to the study area street network, pedestrian elements, and transit facilities, and the identification of specific

locations where the incremental increase in demand may potentially exceed *CEQR Technical Manual* analysis thresholds and therefore require a quantitative analysis.

TRAFFIC

Based upon the proposed project's travel demand forecast, there would be 217 additional vehicle trips during the weekday AM peak hour, 278 during the weekday midday peak hour and 217 during the Saturday peak hour. These traffic volumes would exceed the *CEQR Technical Manual* threshold of 50 vehicles during the peak hours for Level 1 screening and, therefore, a Level 2 screening was performed to help identify intersections for detailed analysis.

The *CEQR Technical Manual* Level 2 screening threshold for detailed analysis is also 50 vehicles, but this threshold applies to individual intersections during the peak hours (rather than total trips generated). Peak hour project increment traffic volumes were therefore assigned to the street network in proximity to the Brooklyn Site (shown in **Figure 3.9-3**) to identify the intersections that would potentially exceed the 50-trip threshold during one or more periods. For this assignment, which is shown in **Figure 3.9-4**, it was assumed that the staff parking entrance/exit would be located along the east frontage of the site on Smith Street, that the loading entrance would be located along the north frontage of the site on State Street, and that the sally port would have an entrance on Smith Street and an exit on State Street. Based on this assignment, a total of 12 intersections (all signalized) are expected to experience 50 or more incremental vehicle trips in one or more peak hours and have therefore been selected for analysis. These intersections, shown in **Figure 3.9-4**, include the following:

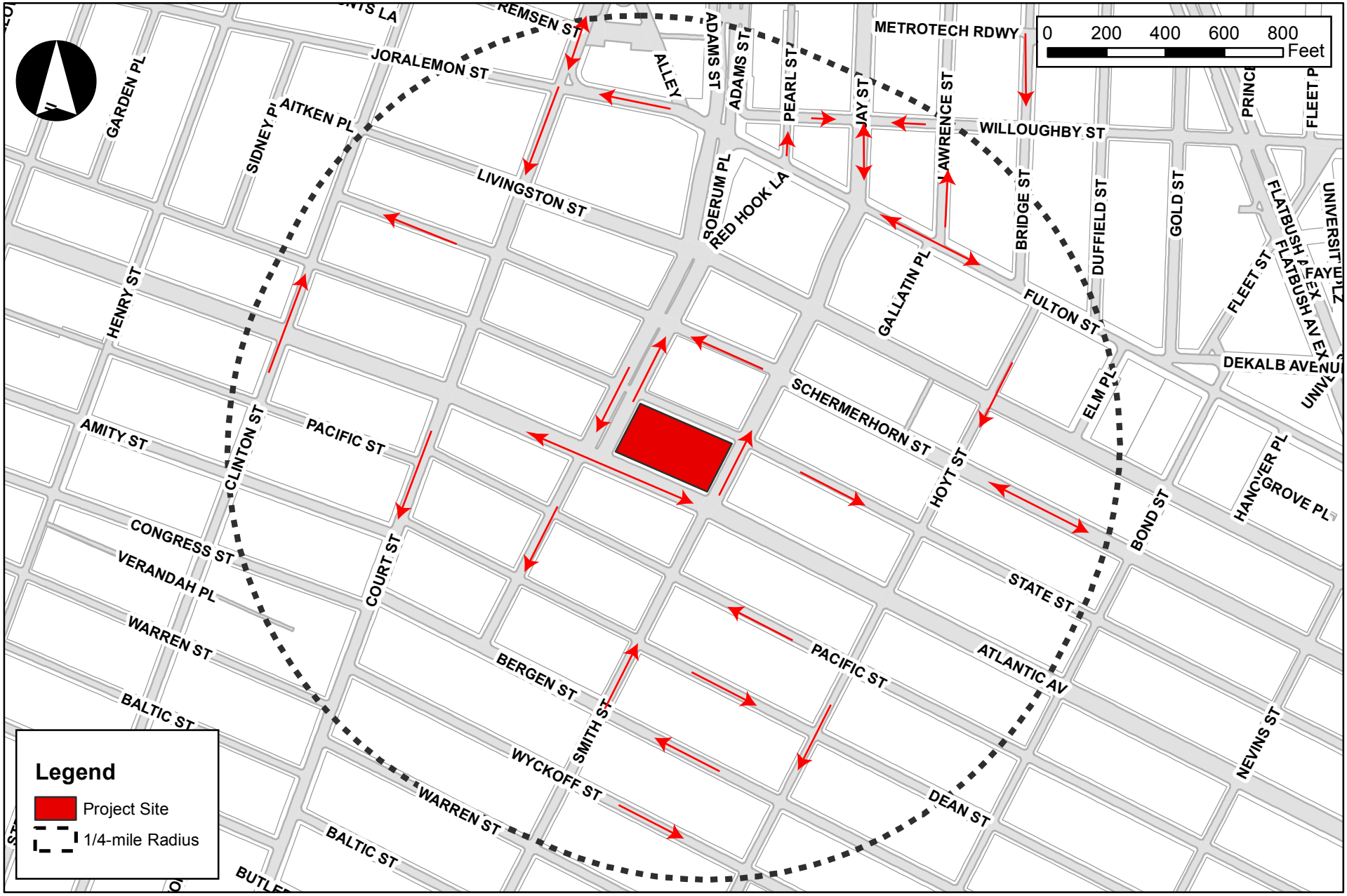
1. Atlantic Avenue and Smith Street
2. Atlantic Avenue and Boerum Place
3. Atlantic Avenue and Court Street
4. Atlantic Avenue and Clinton Street
5. Atlantic Avenue and Henry Street
6. Atlantic Avenue and Hicks Street
7. Atlantic Avenue and the BQE Exit and Entrance Ramps
8. Atlantic Avenue and Columbia Street
9. State Street and Smith Street
10. State Street and Boerum Place
11. Schermerhorn Street and Smith Street
12. Schermerhorn Street and Boerum Place

PEDESTRIANS

As discussed above, the proposed project would generate a total incremental pedestrian demand of approximately 935, 462 and 547 trips during the weekday midday and PM peak hours, and the Saturday peak hour, respectively. These pedestrian trips are expected to utilize the proposed project's DOC staff entrance on State Street, the DOC visitor entrance on Boerum Place, and retail entrances along Atlantic Avenue, Boerum Place and Smith Street and would be en route to and from area subway stations, bus stops, and other local destinations. Based on likely travel patterns, it is anticipated that incremental pedestrian demand would exceed the *CEQR Technical Manual* 200-trip analysis threshold in the weekday midday peak hours at the following three sidewalks and four corner areas:

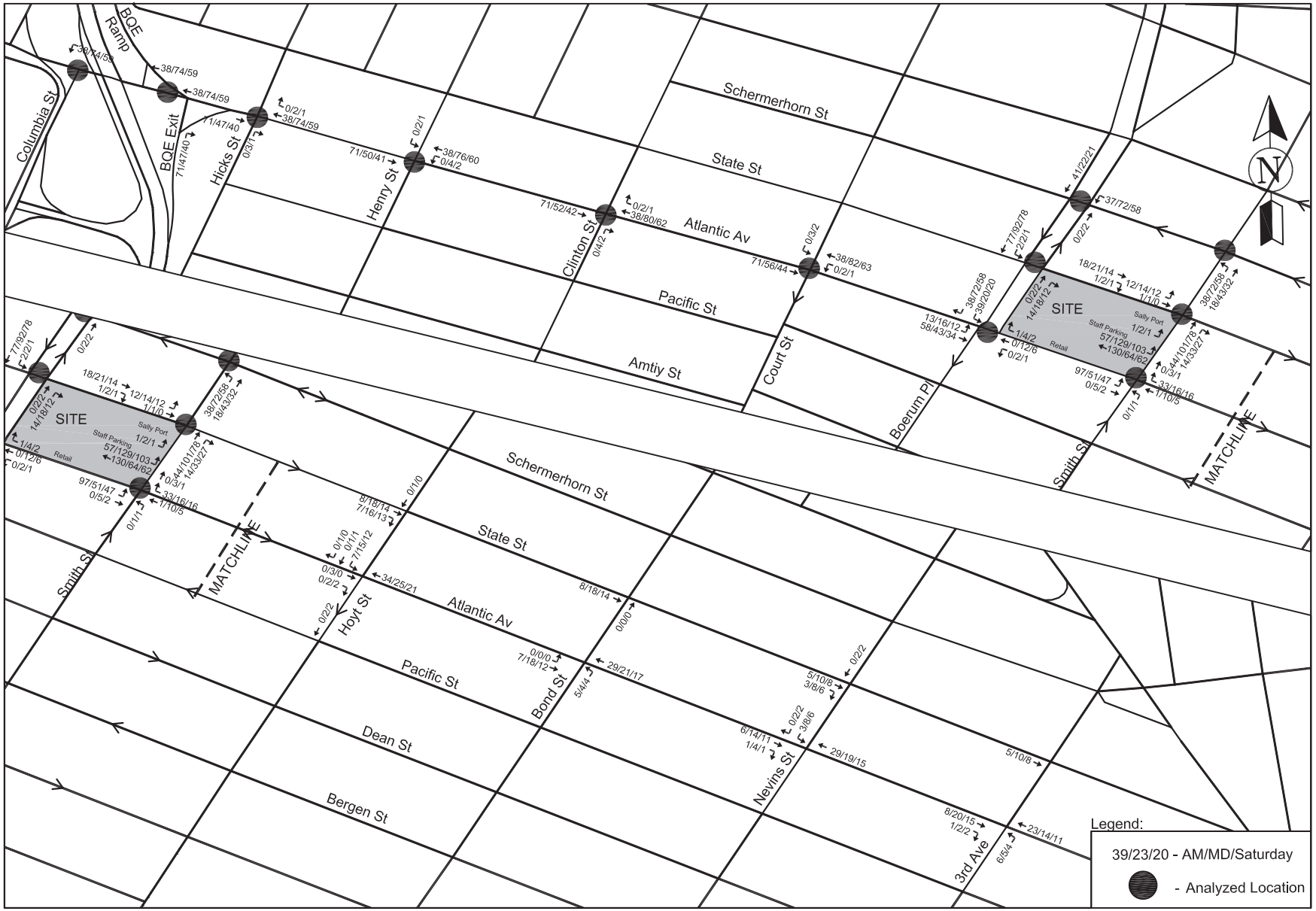
- East sidewalk on Boerum Place between State Street and Atlantic Avenue
- West sidewalk on Smith Street between State Street and Atlantic Avenue

3.18.19



Brooklyn Site - 275 Atlantic Avenue
Street Network

Figure 3.9-3



Brooklyn Site - 275 Atlantic Avenue
Peak Hour Project Increment Traffic Volumes and Analyzed Intersections

Figure 3.9-4

- North sidewalk on Atlantic Avenue between Boerum Place and Smith Street
- Northeast corner of Atlantic Avenue and Boerum Place
- Northwest corner of Atlantic Avenue and Smith Street
- Southwest corner of State Street and Smith Street
- Southeast corner of Boerum Place and State Street

These pedestrian elements, shown in **Figure 3.9-5**, have therefore been selected for detailed analysis focusing on the weekday midday period. As project-generated pedestrian demand is not expected to total 200 or more trips at any sidewalk, corner area or crosswalk in either the weekday AM, weekday PM peak hour or Saturday peak hour, these periods are not included for detailed analysis.

PARKING

It is anticipated that the on-site accessory parking would not be sufficient to accommodate the overall incremental demand that would be generated by the proposed project. (This would include demand from DOC staff, authorized services workers, jail visitors and community facility visitors and staff.) As such, detailed existing on-street and off-street parking inventories for the weekday early morning and midday periods and a Saturday midday period are provided in this EIS to document the existing supply and demand during each period. The parking analyses document changes in the parking supply and utilization within a ¼-mile radius of the Brooklyn Site under both No Action and With Action conditions.

E. TRANSPORTATION ANALYSES METHODOLOGIES

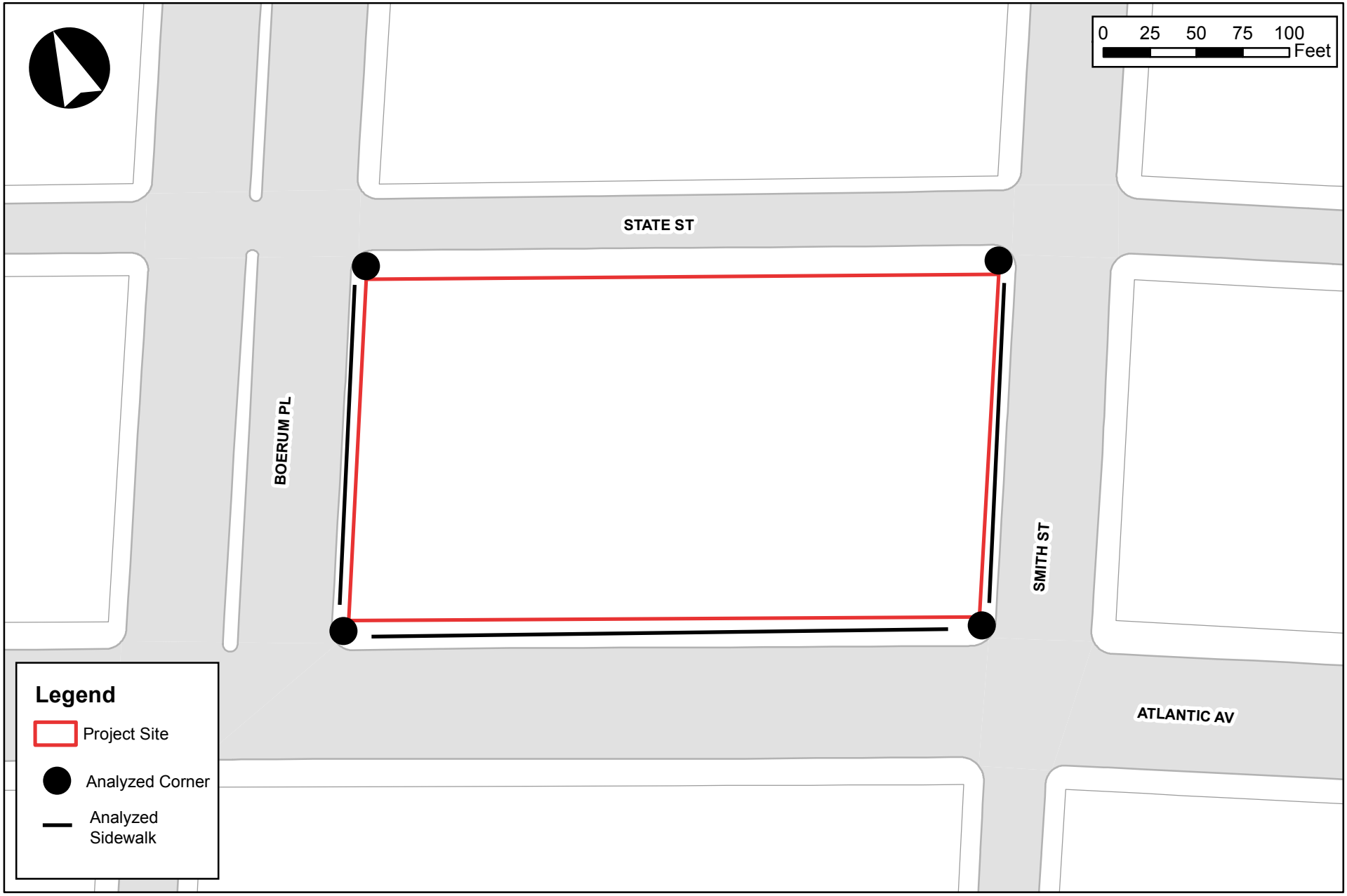
TRAFFIC

ANALYSIS METHODOLOGY

Traffic conditions at study area intersections were evaluated for the weekday 6:30-7:30 AM and 2:45-3:45 PM (midday) peak hours, and the Saturday 2:45-3:45 PM peak hour which are the periods when incremental traffic associated with the proposed project is expected to be highest as these periods coincide with the peak hour within the uniformed DOC staff shift change periods. The capacity analyses at analyzed intersections are based on the methodology presented in the Highway Capacity Manual (HCM) and utilize HCS+ Version 5.5 software. Traffic data required for these analyses include the hourly volumes on each approach, turning movements, the percentage of trucks and buses, and pedestrian volumes at crosswalks. Field inventories are also necessary to document the physical layout and street widths, lane markings, curbside parking regulations, and other relevant characteristics needed for the analysis.

The HCM methodology produces a volume-to-capacity (v/c) ratio for each signalized intersection approach. The v/c ratio represents the ratio of traffic volume on an approach to the approach's carrying capacity. A v/c ratio of less than 0.90 is generally considered indicative of non-congested conditions in dense urban areas; when higher than this value, the ratio reflects increasing congestion. At a v/c ratio between 0.95 and 1.0, near-capacity conditions are reached and delays can become substantial. Ratios of greater than 1.0 indicate saturated conditions with queuing. The HCM methodology also expresses the quality of traffic flow in terms of level of service (LOS), which is based on the amount of delay that a driver typically experiences at an intersection. Levels of service range from A, representing minimal delay (ten seconds or less per vehicle), to F, which represents long delays (greater than 80 seconds per vehicle).

3.18.19



Brooklyn Site - 275 Atlantic Avenue
Analyzed Pedestrian Elements

Figure 3.9-5

Table 3.9-7 shows the LOS/delay relationship for signalized intersections using the HCM methodology. Levels of service A, B, and C generally represent highly favorable to fair levels of traffic flow. At LOS D, the influence of congestion becomes noticeable. LOS E reflects heavy delay, and LOS F is considered to be unacceptable to most drivers. In these traffic impact analyses, a signalized lane grouping operating at LOS E or F or a v/c ratio of 0.90 or more is identified as congested.

Table 3.9-7
Signalized Intersection
Level of Service Criteria

LOS	Average Delay per Vehicle (seconds)
A	Less than 10.1
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	Greater than 80.0

Source: *2000 Highway Capacity Manual*.

POTENTIAL SIGNIFICANT IMPACT CRITERIA

The identification of the potential for significant adverse traffic impacts at analyzed intersections is based on criteria presented in the *CEQR Technical Manual*. If a lane group in the With Action condition would be LOS A, B, or C, or marginally acceptable LOS D (i.e., delay less than or equal to 45.0 seconds/vehicle for signalized intersections), the impact is not considered potentially significant. If the lane-group LOS would deteriorate from LOS A, B, or C in the No Action condition to worse than mid-LOS D or to LOS E or F in the With Action condition, a potentially significant traffic impact is identified. For a lane group that would operate at LOS D in the No Action condition, an increase in delay of 5.0 or more seconds in the With Action condition is considered a potential significant impact if the With Action delay would exceed mid-LOS D. For a lane group that would operate at LOS E in the No Action condition, a projected With Action increase in delay of 4.0 or more seconds is considered a potential significant impact. For a lane group that would operate at LOS F in the No Action condition, a projected With Action increase in delay of 3.0 or more seconds is considered a potential significant impact.

PEDESTRIANS

ANALYSIS METHODOLOGY

Peak 15-minute pedestrian flow conditions during the weekday midday peak hour are analyzed using the *Highway Capacity Manual 2010* methodology and procedures outlined in the *CEQR Technical Manual*. Using this methodology, the congestion level of pedestrian facilities is determined by considering pedestrian volume, measuring the sidewalk or crosswalk width, determining the available pedestrian capacity, and developing a ratio of volume flows to capacity conditions. The resulting ratio is then compared with LOS standards for pedestrian flow, which define a qualitative relationship at a certain pedestrian traffic concentration level. The evaluation of crosswalks and corner areas is more complicated as these spaces cannot be treated as corridors due to the time incurred waiting for traffic lights. To effectively evaluate these facilities a “time-

space" analysis methodology is employed, which takes into consideration the traffic light cycle at intersections.

LOS standards are based on the average area available per pedestrian during the analysis period, typically expressed as a 15-minute peak period. LOS grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting potentially significant capacity limitations and inconvenience. **Table 3.9-8** defines the LOS criteria for pedestrian crosswalk/corner area and sidewalk conditions, as based on the *Highway Capacity Manual* methodology.

The analysis of sidewalk conditions includes a "platoon" factor in the calculation of pedestrian flow to more accurately estimate the dynamics of walking. "Platooning" is the tendency of pedestrians to move in bunched groups or "platoons" once they cross a street where cross traffic required them to wait. Platooning generally results in an LOS one level poorer than that determined for average flow rates.

POTENTIAL SIGNIFICANT IMPACT CRITERIA

Sidewalks

The *CEQR Technical Manual* impact criteria for a central business district (CBD) location are used to identify the potential for significant adverse impacts due to the Proposed Actions. These criteria define a potential significant adverse sidewalk impact to have occurred under platoon conditions if the average pedestrian space under the No Action condition is greater than 39.2 square feet/pedestrian (sf/ped), and the average pedestrian space under the With Action condition is 31.5 sf/ped or less (mid-LOS D or worse). If the average pedestrian space under the With Action condition is greater than 31.5 sf/ped (mid-LOS D or better), the potential impact should not be considered significant. If the No Action pedestrian space is between 6.4 and 39.2 sf/ped, a reduction in pedestrian space under the With Action condition should be considered potentially significant based on **Table 3.9-9**, which shows a sliding-scale that identifies what decrease in pedestrian space is considered a potentially significant impact for a given pedestrian space value in the No Action condition. If the reduction in pedestrian space is less than the value in **Table 3.9-9**, the impact is not considered to be potentially significant. If the average pedestrian space under the No Action condition is less than 6.4 sf/ped, then a reduction in pedestrian space greater than or equal to 0.3 sf/ped, under the With Action condition, should be considered potentially significant.

Corner Areas and Crosswalks

For CBD areas, *CEQR Technical Manual* impact criteria define a potential significant adverse corner area or crosswalk impact to have occurred if the average pedestrian space under the No Action condition is greater than 21.5 sf/ped and, under the With-Action condition, the average pedestrian space decreases to 19.5 sf/ped or less (mid-LOS D or worse). If the pedestrian space under the With Action condition is greater than 19.5 sf/ped (mid-LOS C or better), the impact should not be considered potentially significant. If the average pedestrian space under the No Action condition is between 5.1 and 21.5 sf/ped, a decrease in pedestrian space under the With Action condition should be considered potentially significant based on **Table 3.9-10** which shows a sliding-scale that identifies what decrease in pedestrian space is considered a potentially

Table 3.9-8
Pedestrian Crosswalk/Corner Area and Sidewalk Levels of Service Descriptions

LOS	Crosswalk/Corner	Crosswalk/Corner Area Criteria (sf/ped)	Non-Platoon Sidewalk Criteria (sf/ped)	Platoon Sidewalk Criteria (sf/ped)
A	(Unrestricted)	> 60	> 60	> 530
B	(Slightly Restricted)	> 40 to 60	> 40 to 60	> 90 to 530
C	(Restricted but fluid)	> 24 to 40	> 24 to 40	> 40 to 90
D	(Restricted, necessary to continuously alter walking stride and direction)	> 15 to 24	> 15 to 24	> 23 to 40
E	(Severely restricted)	> 8 to 15	> 8 to 15	> 11 to 23
F	(Forward progress only by shuffling; no reverse movement possible)	≤ 8	≤ 8	≤ 11

Notes:
Based on average conditions for 15 minutes
sf/ped – square feet of area per pedestrian
Source: *2014 CEQR Technical Manual*

Table 3.9-9
Potential Significant Impact Criteria for Sidewalks with Platooned Flow in a CBD Location

No Action Condition Pedestrian Flow (sf/ped)	With-Action Condition Pedestrian Flow Increment to be Considered a Significant Impact (sf/ped)
> 39.2	With Action Condition < 31.5
38.7 to 39.2	Reduction ≥ 3.8
37.8 to 38.6	Reduction ≥ 3.7
36.8 to 37.7	Reduction ≥ 3.6
35.9 to 36.7	Reduction ≥ 3.5
34.9 to 35.8	Reduction ≥ 3.4
34.0 to 34.8	Reduction ≥ 3.3
33.0 to 33.9	Reduction ≥ 3.2
32.1 to 32.9	Reduction ≥ 3.1
31.1 to 32.0	Reduction ≥ 3.0
30.2 to 31.0	Reduction ≥ 2.9
29.2 to 30.1	Reduction ≥ 2.8
28.3 to 29.1	Reduction ≥ 2.7
27.3 to 28.2	Reduction ≥ 2.6
26.4 to 27.2	Reduction ≥ 2.5
25.4 to 26.3	Reduction ≥ 2.4
24.5 to 25.3	Reduction ≥ 2.3
23.5 to 24.4	Reduction ≥ 2.2
22.6 to 23.4	Reduction ≥ 2.1
21.6 to 22.5	Reduction ≥ 2.0
20.7 to 21.5	Reduction ≥ 1.9
19.7 to 20.6	Reduction ≥ 1.8
18.8 to 19.6	Reduction ≥ 1.7
17.8 to 18.7	Reduction ≥ 1.6

Table 3.9-9
Potential Significant Impact Criteria for Sidewalks with Platooned Flow in a CBD Location

No Action Condition Pedestrian Flow (sf/ped)			With-Action Condition Pedestrian Flow Increment to be Considered a Significant Impact (sf/ped)
16.9	to	17.7	Reduction ≥ 1.5
15.9	to	16.8	Reduction ≥ 1.4
15.0	to	15.8	Reduction ≥ 1.3
14.0	to	14.9	Reduction ≥ 1.2
13.1	to	13.9	Reduction ≥ 1.1
12.1	to	13.0	Reduction ≥ 1.0
11.2	to	12.0	Reduction ≥ 0.9
10.2	to	11.1	Reduction ≥ 0.8
9.3	to	10.1	Reduction ≥ 0.7
8.3	to	9.2	Reduction ≥ 0.6
7.4	to	8.2	Reduction ≥ 0.5
6.4	to	7.3	Reduction ≥ 0.4
<6.4			Reduction ≥ 0.3

Source: 2014 *CEQR Technical Manual*

significant impact for a given amount of pedestrian space in the No Action condition. If the decrease in pedestrian space is less than the value in **Table 3.9-10**, the impact is not considered potentially significant. If the average pedestrian space under the No Action condition is less than 5.1 sf/ped, then a decrease in pedestrian space greater than or equal to 0.2 sf/ped should be considered potentially significant.

Table 3.9-10
Potential Significant Impact Criteria for Corners and Crosswalks in a CBD Location

No-Action Condition Pedestrian Space (sf/ped)			With-Action Condition Pedestrian Space Reduction to be Considered a Significant Impact (sf/ped)
> 21.5			With Action Condition < 19.5
21.3	to	21.5	Reduction ≥ 2.1
20.4	to	21.2	Reduction ≥ 2.0
19.5	to	20.3	Reduction ≥ 1.9
18.6	to	19.4	Reduction ≥ 1.8
17.7	to	18.5	Reduction ≥ 1.7
16.8	to	17.6	Reduction ≥ 1.6
15.9	to	16.7	Reduction ≥ 1.5
15	to	15.8	Reduction ≥ 1.4
14.1	to	14.9	Reduction ≥ 1.3
13.2	to	14	Reduction ≥ 1.2
12.3	to	13.1	Reduction ≥ 1.1
11.4	to	12.2	Reduction ≥ 1.0
10.5	to	11.3	Reduction ≥ 0.9
9.6	to	10.4	Reduction ≥ 0.8
8.7	to	9.5	Reduction ≥ 0.7
7.8	to	8.6	Reduction ≥ 0.6
6.9	to	7.7	Reduction ≥ 0.5
6	to	6.8	Reduction ≥ 0.4
5.1	to	5.9	Reduction ≥ 0.3
< 5.1			Reduction ≥ 0.2

Source: 2014 *CEQR Technical Manual*

VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

Under *CEQR Technical Manual* guidance, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high crash locations. These are defined as locations with 48 or more total reportable and non-reportable crashes or where five or more pedestrian/bicyclist injury crashes have occurred in any consecutive 12 months of the most recent three-year period for which data are available. For these locations, crash trends would be identified to determine whether projected vehicular and pedestrian traffic would further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips. The determination of potential significant safety impacts depends on the type of area where the project site is located, traffic and pedestrian volumes, crash types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety should be identified and coordinated with DOT.

PARKING

ANALYSIS METHODOLOGY

A parking analysis initially documents the ability of the proposed project's on-site accessory parking to accommodate projected demand. If the proposed capacity would be insufficient to accommodate projected demand, then a detailed analysis of on-street and off-street public parking

is prepared. A detailed parking analysis identifies the supply of on-street and off-street public parking near a proposed project and determines the extent to which the supply is utilized in existing conditions and in the future without and with a proposed action. The analysis considers anticipated changes in the study area's parking supply and demand, and compares project-generated parking demand with future parking availability to determine if the potential for a parking shortfall is likely to result. The displacement of existing parking capacity attributable to the proposed action or project is also considered.

Typically, the analysis encompasses the parking facilities—public parking lots and garages and on-street curbside spaces—that vehicular traffic destined to the project site or area would likely utilize. According to the *CEQR Technical Manual*, a ¼-mile radius around a project site is generally assumed as the distance that someone driving to the site would be willing to walk. The parking analysis therefore documents changes in the parking supply and utilization within a ¼-mile radius of the Brooklyn Site under both No Action and With Action conditions.

POTENTIALLY SIGNIFICANT SHORTFALL CRITERIA

Should a proposed action generate the need for more parking than it provides, a shortfall of spaces may be considered potentially significant. The availability of off-street and on-street parking spaces within a convenient walking distance (about a ¼-mile), as well as the availability of alternative modes of transportation, are considered in making this determination.

Under *CEQR Technical Manual* guidance, different criteria for determining potential significance are applied based on whether or not a proposed project is located in residential or commercial areas designated as Parking Zones 1 and 2 as shown in Map 16-2, "CEQR Parking Zones, May 2010," in the 2014 *CEQR Technical Manual*. As the Brooklyn Site is located within Zone 1 as shown in Map 16-2, the inability of the proposed project or the surrounding area to accommodate future parking demands would be considered a parking shortfall, but would generally not be considered potentially significant due to the magnitude of available alternative modes of transportation.

F. TRAFFIC

EXISTING CONDITIONS

STUDY AREA STREET NETWORK

As shown in **Figure 3.9-3**, the Brooklyn Site at 275 Atlantic Avenue is served by a grid pattern of streets and arterials that provide local access and also see substantial volumes of through traffic en route to and from expressways and river crossings. The principal arterial serving the project site is **Atlantic Avenue**, which borders the site on the south and runs from the Brooklyn Heights waterfront and a connection to the Brooklyn-Queens Expressway (I-278) on the west, eastward through Brooklyn to the Van Wyck Expressway (I-678) in the Jamaica neighborhood of Queens. In the vicinity of the site it typically operates with two moving lanes in each direction plus parking along one or both curbs, and is traversed by NYCT B61, B63 and B65 buses. Atlantic Avenue is a designated through truck route.

Another two-way arterial serving the Brooklyn Site is **Boerum Place** which borders the site on the west. From Atlantic Avenue it runs northward to Fulton Street where it becomes Adams Street and continues to the Brooklyn Bridge to Manhattan and a connection to the Brooklyn-Queens Expressway. Adjacent to the project site, the Boerum Place roadway is approximately 110 feet in width and operates with three to four moving lanes, a bicycle lane and curbside parking in each

direction. A 13-foot-wide planted median separates the northbound and southbound lanes. To the south of Atlantic Avenue Boerum Place narrows to approximately 26 feet in width and operates one-way southbound with one moving lane, a bicycle lane and parking along both curbs. NYCT B61 and B65 buses traverse Boerum Place north of Atlantic Avenue.

Bordering the site on the east is **Smith Street**, a northbound collector street that in the vicinity of the site typically operates with two moving lanes, a bicycle lane and parking along both curbs. To the north of the site, Smith Street converts to two-way operation (at Schermerhorn Street), becomes Jay Street (at Fulton Street), and continues to the waterfront in the Dumbo neighborhood with connections to the Brooklyn and Manhattan bridges (via Tillary Street) and the Brooklyn-Queens Expressway. Smith and Jay streets are a designated local truck route north of Atlantic Avenue, and are traversed by NYCT B57, B61 and B65 buses in the vicinity of the site.

Bordering the Brooklyn Site on the north is **State Street**, an eastbound local street that parallels Atlantic Avenue from Columbia Street at the Brooklyn Heights waterfront on the west to Flatbush Avenue on the east. In the vicinity of the site it typically operates with one moving lane plus parking along both curbs. One block to the north is **Schermerhorn Street**, an east-west collector street. To the west of Smith Street, Schermerhorn Street operates one-way westbound typically with one moving lane, a bicycle lane and parking along both curbs. To the east of Smith Street, Schermerhorn Street widens and operates two-way with a single moving lane, a bicycle lane and curbside parking in each direction. It is also a designated local truck route east of Smith Street, and NYCT B62 buses traverse the block between Smith Street and Boerum Place.

Another street of note in the traffic study area is **Court Street**, a southbound collector street that parallels Boerum Place on the west and typically operates with two moving lanes plus curbside parking in the vicinity of the site. It is a designated local truck route north of Atlantic Avenue, and is traversed by NYCT B57 buses in the vicinity of the site. To the west of Court Street are **Clinton Street**, **Henry Street** and **Hicks Street**, all of which are local streets that operate either northbound or southbound typically with one moving lane plus parking along both curbs.

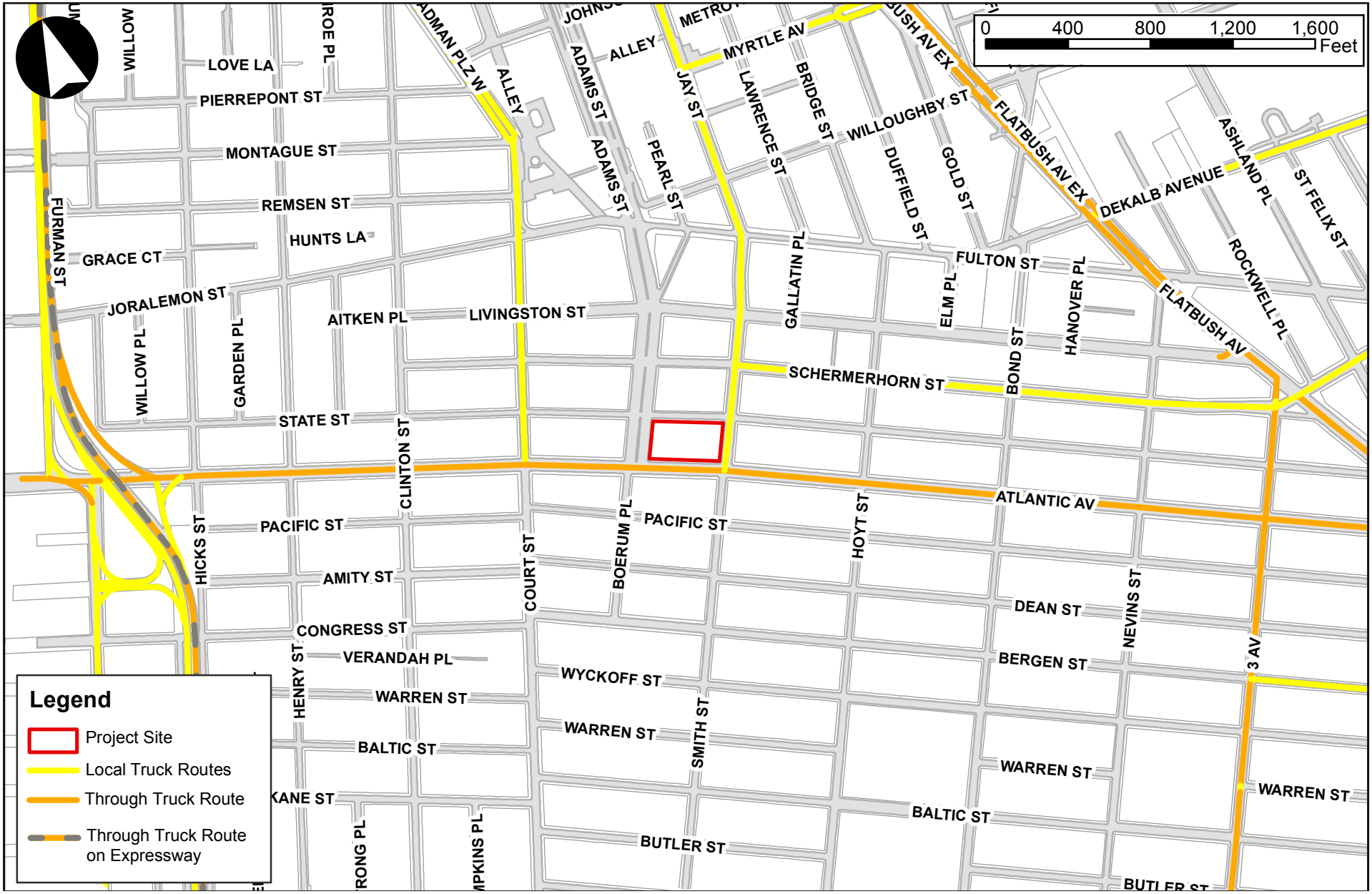
Bus Routes

NYCT and MTA Bus routes primarily operate along portions of the following study area corridors:

- Atlantic Avenue (NYCT B61, B63 and B65)
- Boerum Place (NYCT B61 and B65)
- Court Street (NYCT B57)
- Schermerhorn Street (NYCT B62)
- Smith Street (NYCT B57, B61 and B65)

Truck Routes

The City has established local and through truck routes to manage the flow of trucks and improve the quality of neighborhoods. 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.” Trucks must generally travel on local truck routes to reach the intersection nearest their destinations. Through trucks are defined as having neither an origin nor a destination within the Borough of Brooklyn. As shown in **Figure 3.9-6**, in proximity to the Brooklyn Site Atlantic Avenue is a designated through truck route and both Court Street and Smith Street are designated local truck routes north of Atlantic Avenue. Schermerhorn Street is also a designated local truck route east of Smith Street.



Brooklyn Site - 275 Atlantic Avenue
Designated Truck Routes
Figure 3.9-6

Bicycle Lanes

As shown in **Figure 3.9-7**, bicycle routes in proximity to the Brooklyn Site include bicycle lanes along Boerum Place, Clinton Street, Henry Street, Schermerhorn Street and Smith Street. Pacific Street, which is one block to the south of, and parallels, Atlantic Avenue, hosts a shared bicycle lane between Smith and Henry Streets.

TRAFFIC CONDITIONS

To establish the Existing conditions traffic network, an extensive traffic data collection program—including ATR counts, turning movement counts, vehicle classification counts, and travel time and delay surveys—was undertaken in June 2018. Physical inventory data needed for operational analysis—e.g., the number of traffic lanes, lane widths, pavement markings, turn prohibitions, bus stops, and typical parking regulations—were also collected in June 2018. Signal timing plans for signalized intersections within the study area were obtained from DOT. **Figure 3.9-8** shows existing traffic volumes during weekday AM, weekday midday and Saturday peak hours. To present a conservative traffic assessment, the existing traffic volumes utilized in the analysis and shown in **Figure 3.9-8**, were based on data for the weekday 7:00-8:00 AM and 3:00-4:00 PM periods and the 3:00-4:00 PM period on a Saturday. According to the June 2018 ATR data, the weekday 7:00-8:00 AM and 3:00-4:00 PM periods exhibited approximately 3.0 and 1.9 percent higher volumes than the 6:30-7:30 AM and 2:45-3:45 PM peak hours, respectively. For Saturday, the 3:00-4:00 PM period also exhibited approximately 0.3 percent higher traffic volume than the 2:45-3:45 PM period.

INTERSECTION CAPACITY ANALYSIS

The v/c ratios, delays, and LOS for those individual analyzed lane groups experiencing congestion in one or more peak hours under existing conditions are shown in **Table 3.9-11**. A lane group is considered congested and is included in **Table 3.9-11** if it operates at LOS E or F and/or with a v/c ratio of 0.90 or above. A v/c ratio of 1.00 or above reflects capacity conditions. As shown in **Table 3.9-11**, all but two analyzed intersections (State Street and Smith Street; and Atlantic Avenue and the BQE Exit and Entrance Ramps) currently have at least one congested lane group in one or more peak hours. There are currently two analyzed intersections with one or more lane groups operating at capacity (v/c ratio $\geq$ 1.0) in the weekday AM peak hour, five such intersections in the weekday midday peak hour and four such intersections in the Saturday peak hour. Overall, the data in **Table 3.9-11** indicate that traffic congestion at analyzed intersections in proximity to the Brooklyn Site is most evident in the weekday midday and Saturday peak hours. V/c ratios, delays, and LOS for all analyzed lane groups at all analyzed intersections in all peak periods under existing conditions are provided in **Appendix F**.

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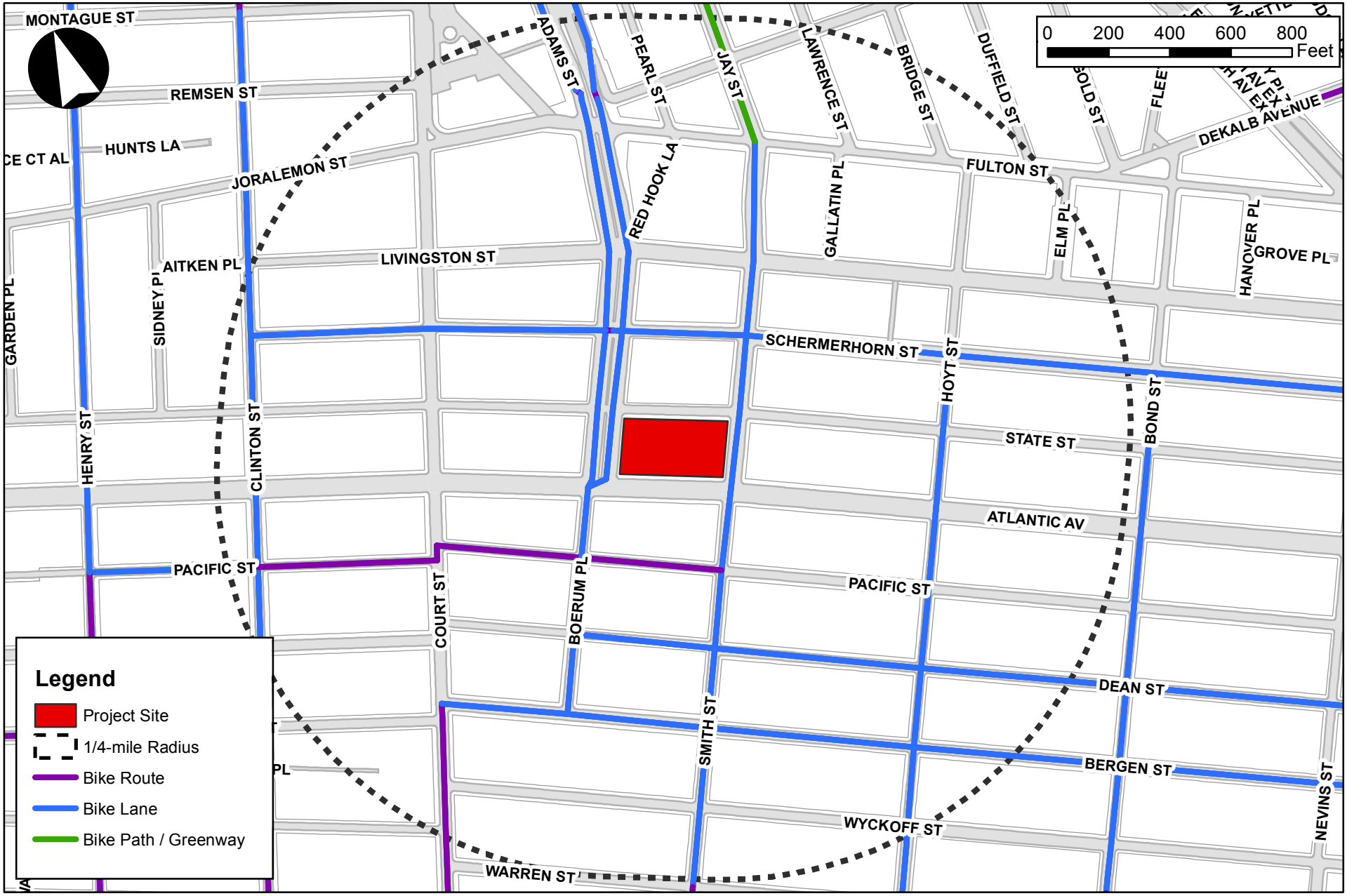


Brooklyn Site - 275 Atlantic Avenue
Bicycle Routes

BOROUGH-BASED NYC JAIL SYSTEM

Figure 3.9-7

3.18.19

Brooklyn Site - 275 Atlantic Avenue
Existing Peak Hour Traffic Volumes

Figure 3.9-8

Table 3.9-11
Existing Peak Hour Traffic Conditions

Intersection	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS
Weekday AM					
Boerum Place & Atlantic Avenue	EB	TR	0.83	57.6	E
	WB	R	1.07	64.5	E
Smith Street & Atlantic Avenue	WB	TR	1.07	75.6	E
	NB	TR	1.07	109.9	F
Smith Street & Schermerhorn Street	NB	TR	0.99	71.2	E
Weekday Midday					
Columbia Street & Atlantic Avenue	WB	L	0.98	81.3	F
Hicks Street & Atlantic Avenue	NB	LT	1.00	75.9	E
Henry Street & Atlantic Avenue	SB	LTR	0.95	67.4	E
Court Street & Atlantic Avenue	WB	T	1.06	156.2	F
Boerum Place & Atlantic Avenue	EB	TR	1.07	220.7	F
	WB	LT	0.92	68.5	E
	SB	R	1.05	115.0	F
Smith Street & Atlantic Avenue	NB	L	1.06	126.4	F
	NB	TR	0.87	71.7	E
State Street & Boerum Place	EB	LTR	0.87	61.5	E
Boerum Place & Schermerhorn Street	WB	LTR	0.96	82.7	F
Smith Street & Schermerhorn Street	WB	TR	1.07	148.1	F
	SB	L	0.93	87.9	F
	SB	R	0.65	55.3	E
Saturday					
Columbia Street & Atlantic Avenue	WB	L	1.07	120.0	F
Clinton Street & Atlantic Avenue	NB	LTR	1.07	105.7	F
Court Street & Atlantic Avenue	SB	LTR	0.87	58.5	E
Boerum Place & Atlantic Avenue	EB	TR	1.06	199.7	F
	SB	R	0.78	57.5	E
Smith Street & Atlantic Avenue	NB	TR	1.05	108.6	F
Smith Street & Schermerhorn Street	WB	TR	0.93	62.8	E

Notes: - Approach: EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound.
- Lane Group: L-Left, T-Through, R-Right, DefL-Defacto left.

THE FUTURE WITHOUT THE PROPOSED PROJECT (NO ACTION CONDITION)

Under the No Action condition, it is assumed that Rikers Island would continue operating as the city's main detention center, and that the existing Brooklyn Detention Complex would remain operational.

NO ACTION CHANGES TO THE STUDY AREA STREET NETWORK

The No Action traffic analysis reflects anticipated signal timing, striping and street geometry changes planned by DOT at the intersection of Atlantic Avenue and Boerum Place.

NO ACTION TRAFFIC GROWTH

Between 2018 and 2027, it is expected that transportation demands in the vicinity of the Brooklyn Site will increase due to long-term background growth as well as development that could occur pursuant to existing zoning. The No Action traffic volumes reflect annual background growth rates of 0.25 percent per year for the 2018 through 2023 period and 0.125 percent for the 2023 through 2027 period. These background growth rates, recommended in the *CEQR Technical Manual* for

projects in Downtown Brooklyn, are applied to account for smaller projects and general increases in travel demand not attributable to specific development projects. In addition, discrete demand from major development projects in the vicinity of the Brooklyn Site is also reflected in the No-Action traffic network. **Figure 3.9-9** shows the total No Action traffic volumes during the weekday AM and midday, and Saturday peak hours.

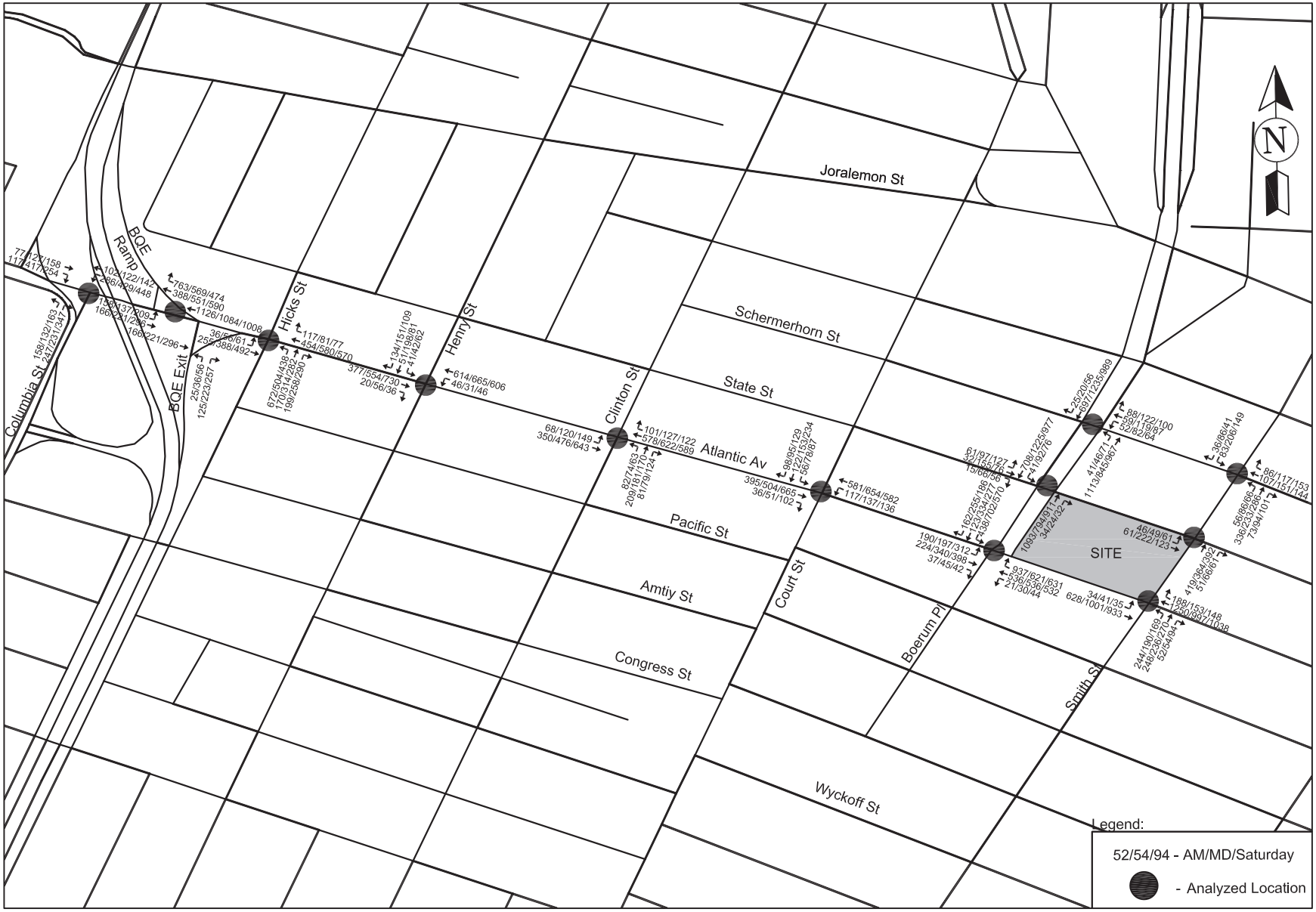
INTERSECTION CAPACITY ANALYSIS

The v/c ratios, delays and LOS for those individual lane groups experiencing congestion in one or more peak hours under No Action conditions are shown in **Table 3.9-12**. As shown in **Table 3.9-12**, 11 analyzed intersections are expected to have at least one congested lane group in one or more peak hours in the No Action condition. There would be three analyzed intersections with one or more lane groups operating at capacity (v/c ratio $\geq$ 1.0) in the weekday AM peak hour, ten in the weekday midday and five in the Saturday peak hour. This compares to 10 analyzed intersections experiencing congestion in one or more peak hours under existing conditions, with two analyzed intersections with one or more lane groups operating at capacity in the weekday AM peak hour, five in the weekday midday and four in the Saturday peak hour. Overall, the data in **Table 3.9-12** indicate that existing traffic congestion at analyzed intersections is expected to worsen in the future without the proposed project. V/c ratios, delays, and LOS for all analyzed lane groups at all analyzed intersections in all peak periods under No Action conditions are provided in **Appendix F**.

THE FUTURE WITH THE PROPOSED PROJECT (WITH ACTION CONDITION)

WITH ACTION TRAFFIC GROWTH

As shown in **Table 3.9-5**, under the proposed project there would be a total of approximately 217, 278 and 217 additional vehicle (auto, truck, DOC shuttle bus and taxi trips balanced to reflect that taxis arrive or depart empty) trips during the weekday AM and midday, and Saturday peak hours, respectively. Auto and taxi trips were assigned to the various bridges, expressways and arterials providing access to Downtown Brooklyn based on the anticipated origins and destinations of vehicle trips associated with the different populations projected for the site (i.e., DOC staff and visitors, and retail staff and patrons). DOC staff autos were assigned via the most direct routes to the on-site accessory parking entrance/exit on State Street while taxis were assigned to the pedestrian entrances on State Street (DOC staff) and Boerum Place (DOC visitors). Although auto demand not associated with DOC staff is expected to park on-street or at off-street public parking facilities in the area, these auto trips were also assigned directly to/from the Brooklyn Site frontages. This can be considered a conservative approach with respect to the traffic impact analysis as it concentrates project-generated traffic at analyzed intersections in proximity to the site rather than dispersing it to outlying public parking facilities. DOC buses were assigned to the proposed project's sally port entrance on Smith Street and exit on State Street, and any truck trips were assigned to designated truck routes and then to the most direct path to and from the proposed project's loading dock entrance on State Street.



Brooklyn Site - 275 Atlantic Avenue
No-Action Peak Hour Traffic Volumes
Figure 3.9-9

Table 3.9-12
No Action Peak Hour Traffic Conditions

Intersection	Existing Approach	Existing Lane Group	Existing V/C Ratio	Existing Delay (sec/veh)	Existing LOS	No Action Approach	No Action Lane Group	No Action V/C Ratio	No Action Delay (sec/veh)	No Action LOS
Weekday AM										
Henry Street & Atlantic Avenue	SB	LTR	0.56	36.6	D	SB	LTR	0.87	61.8	E
Clinton Street & Atlantic Avenue	NB	LTR	0.86	49.3	D	NB	LTR	0.90	54.9	D
Court Street & Atlantic Avenue	WB	T	0.70	26.0	C	WB	T	0.99	57.8	E
Boerum Place & Atlantic Avenue	EB	TR	0.83	57.6	E	EB	TR	0.97	81.0	F
	WB	R	1.07	64.5	E	WB	R	1.09	72.7	E
Smith Street & Atlantic Avenue	EB	LT	0.78	26.0	C	EB	LT	0.92	39.4	D
	WB	TR	1.07	75.6	E	WB	TR	1.19	123.4	F
	NB	TR	1.07	109.9	F	NB	TR	1.22	165.3	F
Smith Street & Schermerhorn Street	NB	TR	0.99	71.2	E	NB	TR	1.15	123.6	F
Weekday Midday										
Columbia Street & Atlantic Avenue	WB	L	0.98	81.3	F	WB	L	1.39	232.1	F
Hicks Street & Atlantic Avenue	NB	LT	1.00	75.9	E	NB	LT	1.18	136.2	F
Henry Street & Atlantic Avenue	SB	LTR	0.95	67.4	E	SB	LTR	1.20	149.5	F
Clinton Street & Atlantic Avenue	EB	LT	0.67	32.1	C	EB	LT	1.17	128.3	F
Court Street & Atlantic Avenue	EB	TR	0.77	50.8	D	EB	TR	1.04	92.2	F
	WB	T	1.06	156.2	F	WB	T	1.42	297.3	F
Boerum Place & Atlantic Avenue	EB	TR	1.07	220.7	F	EB	TR	1.49	385.8	F
	WB	LT	0.92	68.5	E	WB	LT	1.55	305.2	F
	SB	T	0.82	53.4	D	SB	T	0.85	55.7	E
	SB	R	1.05	115.0	F	SB	R		(a)	
Smith Street & Atlantic Avenue	EB	LT	0.73	21.7	C	EB	LT	0.96	43.2	D
	WB	TR	0.79	26.4	C	WB	TR	0.91	35.0	D
	NB	L	1.06	126.4	F	NB	L	1.16	162.1	F
	NB	TR	0.87	71.7	E	NB	TR	1.24	181.4	F
State Street & Boerum Place	EB	LTR	0.87	61.5	E	EB	LTR	1.06	104.5	F
Boerum Place & Schermerhorn Street	WB	LTR	0.96	82.7	F	WB	LTR	1.35	218.9	F
Smith Street & Schermerhorn Street	WB	TR	1.07	148.1	F	WB	TR	1.53	330.7	F
	NB	TR	0.79	51.8	D	NB	TR	1.42	243.8	F
	SB	L	0.93	87.9	F	SB	L	1.32	215.9	F
	SB	R	0.65	55.3	E	SB	R	0.65	55.8	E
Saturday										
Columbia Street & Atlantic Avenue	WB	L	1.07	120.0	F	WB	L	1.26	195.6	F
BQE NB Off-Ramp & Atlantic Avenue	EB	L	0.71	48.6	D	EB	L	0.79	57.8	E
Hicks Street & Atlantic Avenue	NB	LT	0.89	53.9	D	NB	LT	0.97	68.3	E
Henry Street & Atlantic Avenue	SB	LTR	0.69	41.7	D	SB	LTR	0.84	55.1	E
Clinton Street & Atlantic Avenue	EB	LT	0.82	31.2	C	EB	LT	1.02	62.0	E
	NB	LTR	1.07	105.7	F	NB	LTR	1.13	125.3	F
Court Street & Atlantic Avenue	SB	LTR	0.87	58.5	E	SB	LTR	0.94	69.4	F
Boerum Place & Atlantic Avenue	EB	L	0.79	33.8	C	EB	L	0.92	51.2	D
	EB	TR	1.06	199.7	F	EB	TR	1.25	270.5	F
	WB	LT	0.84	50.9	D	WB	LT	1.09	106.3	F
	SB	R	0.78	57.5	E	SB	R		(a)	
Smith Street & Atlantic Avenue	EB	LT	0.83	38.8	D	EB	LT	1.01	56.0	E
	WB	TR	0.84	36.9	D	WB	TR	0.91	35.3	D
	NB	L	0.74	59.6	E	NB	L	0.79	57.8	E
	NB	TR	1.05	108.6	F	NB	TR	1.27	183.1	F
State Street & Boerum Place	EB	LTR	0.73	48.4	D	EB	LTR	0.83	57.8	E
Boerum Place & Schermerhorn Street	WB	LTR	0.72	49.8	D	WB	LTR	0.98	86.9	F
Smith Street & Schermerhorn Street	WB	TR	0.93	62.8	E	WB	TR	1.27	173.5	F
	NB	TR	0.79	40.6	D	NB	TR	1.08	97.5	F
	SB	L	0.64	50.4	D	SB	L	0.87	72.8	E

Notes: - Approach: EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound.
- Lane Group: L-Left, T-Through, R-Right, DefL-Defacto left.
- (a) Lane group would no longer be congested under No Action conditions as a result of planned signal improvements.

Figure 3.9-4 shows the assignment of incremental vehicle trips generated during the weekday AM and midday, and Saturday peak hours with implementation of the proposed project. **Figure 3.9-10** shows the total traffic volumes in each peak hour in the 2027 With Action. The volumes shown in **Figure 3.9-10** are the combination of the net incremental traffic generated by the proposed project and the No Action volumes.

INTERSECTION CAPACITY ANALYSIS

The v/c ratios, delays and LOS for those individual analyzed lane groups experiencing congestion in one or more peak hours under With Action conditions are shown in **Table 3.9-13**. Analyzed lane groups with potentially significant adverse impacts are highlighted. As shown in **Table 3.9-13**, all 12 analyzed intersections would continue to have at least one congested lane group in one or more peak hours in the With Action condition. The potential for significant adverse impacts was identified at seven lane groups at six analyzed intersections during the weekday AM peak hour, 18 lane groups at ten analyzed intersections in the weekday midday peak hour, and 10 lane groups at seven analyzed intersections during the Saturday peak hour. V/c ratios, delays, and LOS for all lane groups at all analyzed intersections in all peak periods under With Action conditions are provided in **Appendix F**. Potential measures to mitigate the potential significant adverse traffic impacts identified in **Table 3.9-13** are discussed in Section 3.15, "Mitigation."

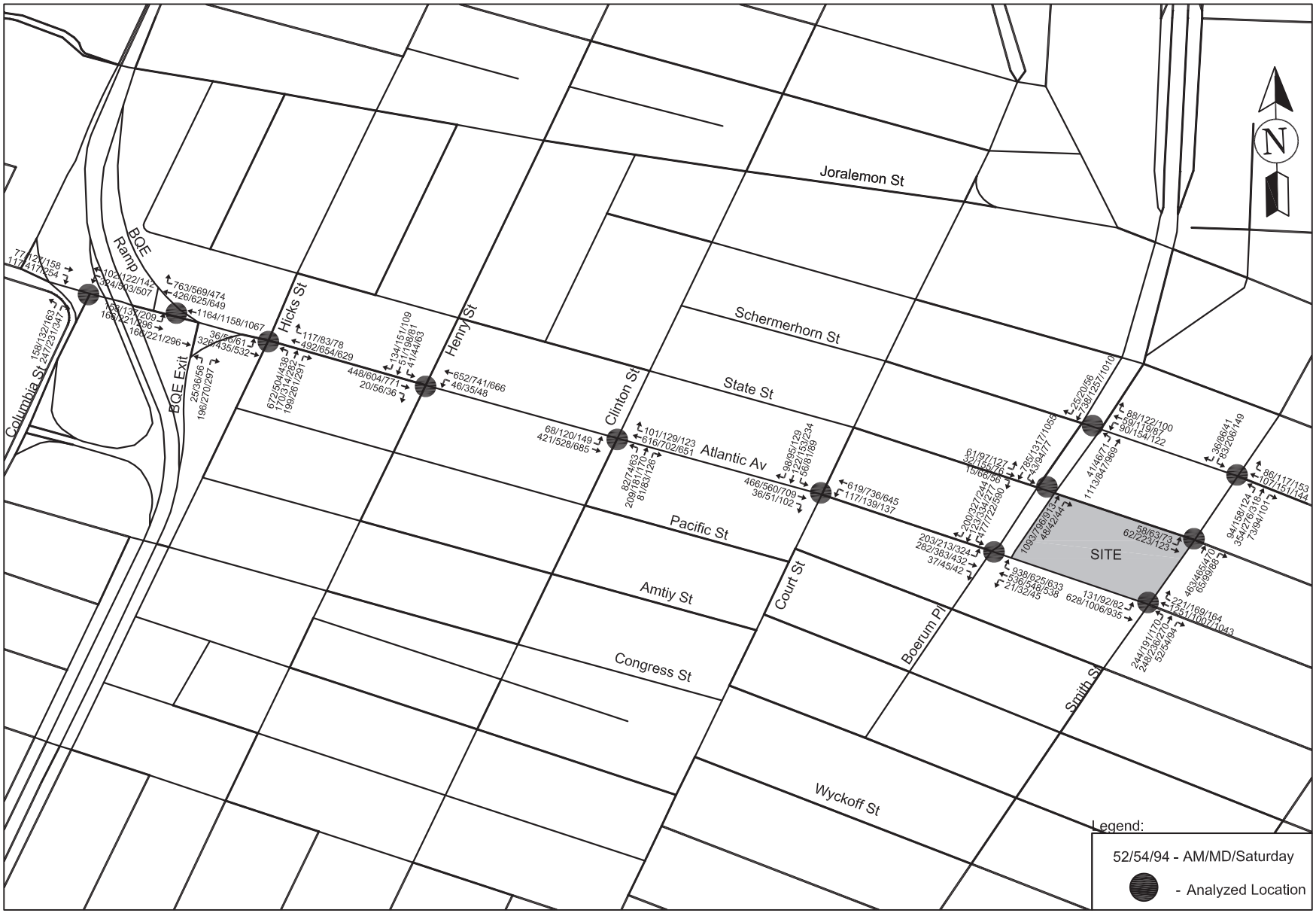
G. PEDESTRIANS

EXISTING CONDITIONS

As discussed previously in Section D, "Level 2 Screening Assessment," the analysis of pedestrian conditions focuses on a total of seven pedestrian elements where new trips generated by the proposed project are expected to exceed the 200 trips/hour *CEQR Technical Manual* analysis threshold. As shown in **Figure 3.9-5**, these elements—three sidewalks and four corner areas—are located adjacent to the site along Atlantic Avenue, Boerum Place and Smith Street.

SIDEWALKS

Analyzed sidewalks in the vicinity of the Brooklyn Site are generally characterized by low to moderate pedestrian flows in the weekday midday period. In the analyzed weekday midday peak hour, the greatest demand is found along the north sidewalk on Atlantic Avenue. Of the three analyzed sidewalks, the north sidewalk on Atlantic Avenue is the widest at approximately 18.9 feet in width, followed by the west sidewalk on Smith Street at 15 feet and the east sidewalk on Boerum Place at 11.5 feet. Features typically present along these sidewalks that can reduce the effective width available for pedestrian flow include street furniture such as fire hydrants, curbside signage, and traffic signal and lamp posts.



Brooklyn Site - 275 Atlantic Avenue
With-Action Peak Hour Traffic Volumes

Figure 3.9-10

Table 3.9-13
With Action Peak Hour Traffic Conditions

	No Action					With Action				
Intersection	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS	Approach	Lane Group	V/C Ratio	Delay (sec/veh)	LOS
Weekday AM										
Henry Street & Atlantic Avenue	SB	LTR	0.87	61.8	E	SB	LTR	0.87	61.8	E
Clinton Street & Atlantic Avenue	EB	LT	0.78	34.2	C	EB	LT	0.91	47.4	D
	NB	LTR	0.90	54.9	D	NB	LTR	0.90	54.9	D
Court Street & Atlantic Avenue	WB	T	0.99	57.8	E	WB	T	1.05	75.4	E
Boerum Place & Atlantic Avenue	EB	TR	0.97	81.0	F	EB	TR	1.17	145.6	F
	WB	R	1.09	72.7	E	WB	R	1.09	74.1	E
Smith Street & Atlantic Avenue	EB	DefL		(a)		EB	DefL	2.73	854.7	F
	EB	T		(a)		EB	T	1.09	86.8	F
	EB	LT	0.92	39.4	D	EB	LT	(a)	238.2	F
	WB	TR	1.19	123.4	F	WB	TR	1.23	140.5	F
	NB	TR	1.22	165.3	F	NB	TR	1.23	167.0	F
Boerum Place & Schermerhorn Street	WB	LTR	0.74	51.3	D	WB	LTR	0.88	66.0	E
Smith Street & Schermerhorn Street	NB	TR	1.15	123.6	F	NB	TR	1.20	142.5	F
Weekday Midday										
Columbia Street & Atlantic Avenue	WB	L	1.39	232.1	F	WB	L	1.74	386.4	F
BQE NB Off-Ramp & Atlantic Avenue	EB	L	0.48	40.0	D	EB	L	0.55	47.5	D
Hicks Street & Atlantic Avenue	NB	LT	1.18	136.2	F	NB	LT	1.18	136.2	F
Henry Street & Atlantic Avenue	SB	LTR	1.20	149.5	F	SB	LTR	1.21	151.5	F
Clinton Street & Atlantic Avenue	EB	LT	1.17	128.3	F	EB	LT	1.32	187.6	F
	WB	TR	0.84	39.5	D	WB	TR	0.93	48.5	D
Court Street & Atlantic Avenue	EB	TR	1.04	92.2	F	EB	TR	1.14	126.4	F
	WB	L	0.60	44.5	D	WB	L	0.66	50.5	D
	WB	T	1.42	297.3	F	WB	T	1.59	374.0	F
Boerum Place & Atlantic Avenue	EB	L	0.79	40.5	D	EB	L	0.87	50.5	D
	EB	TR	1.49	385.8	F	EB	TR	1.64	451.0	F
	WB	LT	1.55	305.2	F	WB	LT	1.80	415.3	F
	SB	T	0.85	55.7	E	SB	T	0.85	55.7	E
	SB	R	0.72	33.3	C	SB	R	0.97	68.6	E
Smith Street & Atlantic Avenue	EB	LT	0.96	43.2	D	EB	LT	1.39	206.3	F
	WB	TR	0.91	35.0	D	WB	TR	0.95	40.3	D
	NB	L	1.16	162.1	F	NB	L	1.21	182.3	F
	NB	TR	1.24	181.4	F	NB	TR	1.25	183.3	F
State Street & Boerum Place	EB	LTR	1.06	104.5	F	EB	LTR	1.09	115.6	F
State Street & Smith Street	NB	TR	0.87	44.5	D	NB	TR	1.15	118.3	F
Boerum Place & Schermerhorn Street	WB	LTR	1.35	218.9	F	WB	LTR	1.68	363.3	F
Smith Street & Schermerhorn Street	WB	TR	1.53	330.7	F	WB	TR	1.53	330.7	F
	NB	L	0.41	30.5	C	NB	L	0.77	48.9	D
	NB	TR	1.42	243.8	F	NB	TR	1.58	310.2	F
	SB	L	1.32	215.9	F	SB	L	1.32	215.9	F
	SB	R	0.65	55.8	E	SB	R	0.65	55..8	E
Saturday										
Columbia Street & Atlantic Avenue	WB	L	1.26	195.6	F	WB	L	1.47	285.0	F
BQE NB Off-Ramp & Atlantic Avenue	EB	L	0.79	57.8	E	EB	L	0.86	70.3	E
Hicks Street & Atlantic Avenue	NB	LT	0.97	68.3	E	NB	LT	0.97	68.3	F
Henry Street & Atlantic Avenue	SB	LTR	0.84	55.1	E	SB	LTR	0.84	55.4	E
Clinton Street & Atlantic Avenue	EB	LT	1.02	62.0	E	EB	LT	1.09	86.9	F
	NB	LTR	1.13	125.3	F	NB	LTR	1.14	129.3	F
Court Street & Atlantic Avenue	WB	T	0.81	28.6	C	WB	T	0.90	37.3	D
	SB	LTR	0.94	69.4	E	SB	LTR	0.95	70.1	E
Boerum Place & Atlantic Avenue	EB	L	0.92	51.2	D	EB	L	0.96	61.0	E
	EB	TR	1.25	270.5	F	EB	TR	1.32	298.4	F
	WB	LT	1.09	106.3	F	WB	LT	1.17	136.0	F
Smith Street & Atlantic Avenue	EB	LT	1.01	56.0	E	EB	LT	1.44	232.0	F
	WB	TR	0.91	35.3	D	WB	TR	0.94	39.4	D
	NB	L	0.79	57.8	E	NB	L	0.80	59.8	E
	NB	TR	1.27	183.1	F	NB	TR	1.27	184.6	F
State Street & Boerum Place	EB	LTR	0.83	57.8	E	EB	LTR	0.86	61.4	E
Boerum Place & Schermerhorn Street	WB	LTR	0.98	86.9	F	WB	LTR	1.24	172.6	F
Smith Street & Schermerhorn Street	WB	TR	1.27	173.5	F	WB	TR	1.27	173.5	F
	NB	TR	1.08	97.5	F	NB	TR	1.16	124.2	F
	SB	L	0.87	72.8	E	SB	L	0.87	72.8	E

Notes: - Approach: EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound.
- Lane Group: L-Left, T-Through, R-Right, DefL-Defacto left.
- (a) Under With Action conditions, EB approach would consist of a defacto left (DefL) and a through (T) lane group. Results for the combined left-through (LT) lane group are shown in order to compare back to the No Action condition.
- Shading denotes a significant adverse impact based on CEQR Technical Manual criteria.

Table 3.9-14 shows the existing peak hour pedestrian volumes, average pedestrian space (in sf/ped), and platoon-adjusted LOS at analyzed sidewalks. As shown in **Table 3.9-14**, all three analyzed sidewalks currently operate at an uncongested LOS B in the analyzed weekday midday peak hour.

Table 3.9-14
Existing Sidewalk Conditions

No.	Location		Effective Width (ft.)	Peak Hour Volumes	Average Pedestrian Space (ft^2/ped)	Platoon-Adjusted Level of Service
S1	Boerum Pl between State Street & Atlantic Avenue	East	2.0	210	108.1	B
S2	Atlantic Avenue between Boerum Place & Smith Street	North	9.0	379	361.0	B
S3	Smith Street between State Street & Atlantic Avenue	West	7.5	361	243.3	B

CORNER AREAS

Table 3.9-15 shows the peak hour volumes, average pedestrian space (in sf/ped) and levels of service at analyzed corner areas. As shown in **Table 3.9-15**, all four analyzed corner areas currently operate at an uncongested LOS A in the analyzed weekday midday peak hour.

Table 3.9-15
Existing Corner Conditions

	Corner		Average Pedestrian Space (ft^2/ped)	Level of Service
Atlantic Avenue & Boerum Place	C1	NE	339.4	A
Atlantic Avenue & Smith Street	C2	NW	242.6	A
State Street & Smith Street	C3	SW	555.1	A
State Street & Boerum Place	C4	SE	592.1	A

Note: NE - northeast; NW - northwest; SW - southwest; SE - southeast

THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO ACTION CONDITION)

Under the No Action condition, it is assumed that Rikers Island would continue operating as the city's main detention center, and that the existing Brooklyn Detention Complex would remain operational.

NO ACTION PEDESTRIAN GROWTH

Between 2018 and 2027, it is expected that transportation demands in the vicinity of the Brooklyn Site will increase due to long-term background growth as well as development that could occur pursuant to existing zoning. The No Action pedestrian volumes reflect annual background growth rates of 0.25 percent per year for the 2018 through 2023 period and 0.125 percent for the 2023 through 2027 period. These background growth rates, recommended in the *CEQR Technical Manual* for projects in Downtown Brooklyn, are applied to account for smaller projects and

general increases in travel demand not attributable to specific development projects. In addition, discrete demand from major development projects in the vicinity of the Brooklyn Site is also reflected in the No Action pedestrian network.

SIDEWALKS

Table 3.9-16 shows the No Action peak hour pedestrian volumes, average pedestrian space, and platoon-adjusted LOS at analyzed sidewalks. As shown in **Table 3.9-16**, all three analyzed sidewalks are expected to operate at an uncongested LOS C or betterin the analyzed weekday midday peak hour in the future without the proposed project.

Table 3.9-16
No Action Sidewalk Conditions

No.	Location		Effective Width (ft.)	Peak Hour Volumes	Average Pedestrian Space (ft^2/ped)	Platoon-Adjusted Level of Service
S1	Boerum Pl between State Street & Atlantic Avenue	East	2.0	280	80.8	C
S2	Atlantic Avenue between Boerum Place & Smith Street	North	9.0	435	314.4	B
S3	Smith Street between State Street & Atlantic Avenue	West	7.5	505	173.8	B

CORNER AREAS

Table 3.9-17 shows the peak hour volumes, average pedestrian space, and LOS at analyzed corner areas in the No Action condition. As shown in **Table 3.9-17**, all four analyzed corner areas are expected to continue to operate at an uncongested LOS A in the analyzed weekday midday peak hour in the future without the proposed project.

Table 3.9-17
No Action Corner Conditions

	Corner		Average Pedestrian Space (ft^2/ped)	Level of Service
Atlantic Avenue & Boerum Place	C1	NE	193.7	A
Atlantic Avenue & Smith Street	C2	NW	174.8	A
State Street & Smith Street	C3	SW	374.5	A
State Street & Boerum Place	C4	SE	350.2	A

Note: NE - northeast; NW - northwest; SW - southwest; SE - southeast

THE FUTURE WITH THE PROPOSED ACTIONS (WITH ACTION CONDITION)

The proposed project would generate new pedestrian demand on the analyzed sidewalks and corner areas by 2027. This new demand would include trips made solely by walking, as well as pedestrian trips en route to and from subway station entrances and bus stops. Pedestrian trips generated by the proposed project are expected to be most concentrated in proximity to the site and along corridors connecting the site to area transit services.

As shown in **Table 3.9-6**, the proposed project would generate a net increment of approximately 757 walk-only pedestrian trips at the Brooklyn Site in the weekday midday peak hour. Persons walking en route to and from subway station entrances and bus stops would bring the total number of project-generated pedestrian trips on area sidewalks and crosswalks to 935. These pedestrian volumes were added to the projected No Action volumes to generate the With Action pedestrian volumes for analysis.

Anticipated conditions at analyzed sidewalks and corner areas in the future with the proposed project are shown in **Table 3.9-18 and Table 3.9-19**. As discussed below, no analyzed sidewalk or corner area would be potentially impacted in the analyzed weekday midday peak hour by new demand from the proposed project.

Table 3.9-18
With Action Sidewalk Conditions

No.	Location		Effective Width (ft.)	Peak Hour Volumes	Average Pedestrian Space (ft^2/ped)	Platoon-Adjusted Level of Service
S1	Boerum Pl between State Street & Atlantic Avenue	East	2.0	507	43.8	C
S2	Atlantic Avenue between Boerum Place & Smith Street	North	9.0	638	214.3	B
S3	Smith Street between State Street & Atlantic Avenue	West	7.5	730	120.0	B

Table 3.9-19
With Action Corner Conditions

	Corner		Average Pedestrian Space (ft^2/ped)	Level of Service
Atlantic Avenue & Boerum Place	C1	NE	112.6	A
Atlantic Avenue & Smith Street	C2	NW	127.0	A
State Street & Smith Street	C3	SW	248.8	A
State Street & Boerum Place	C4	SE	216.1	A
Note: NE - northeast; NW - northwest; SW - southwest; SE - southeast				

SIDEWALKS

Table 3.9-18 shows the total With Action pedestrian volumes, average pedestrian space, and platoon-adjusted LOS at analyzed sidewalks. As shown in **Table 3.9-18**, all three analyzed sidewalks are expected to operate at an acceptable LOS C or better in the analyzed weekday midday peak hour, and they would therefore not be potentially significantly adversely impacted based on the *CEQR Technical Manual* impact criteria shown in **Table 3.9-9** in Section E.

CORNER AREAS

Table 3.9-19 shows the average pedestrian space and LOS at analyzed corner areas in the With Action condition. As shown in **Table 3.9-19**, all four analyzed corner areas are expected to

continue to operate at an uncongested LOS A in the analyzed weekday midday peak hour in the future with the proposed project, and they would therefore not be potentially significantly adversely impacted based on the *CEQR Technical Manual* impact criteria shown in **Table 3.9-10** in Section E.

H. VEHICULAR AND PEDESTRIAN SAFETY

RECENT NYCDOT INITIATIVES

VISION ZERO BROOKLYN PEDESTRIAN SAFETY ACTION PLAN

The City's Vision Zero initiative seeks to eliminate all deaths from traffic crashes regardless of whether on foot, bicycle, or inside a motor vehicle. In an effort to drive these fatalities down, DOT and the New York City Police Department (NYPD) developed a set of five plans, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough's specific challenges to pedestrian safety. These plans pinpoint the conditions and characteristics of pedestrian fatalities and severe injuries; they also identify priority corridors, intersections, and areas that disproportionately account for pedestrian fatalities and severe injuries, prioritizing them for safety interventions. The plans outline a series of recommended actions comprised of engineering, enforcement, and education measures that intend to alter the physical and behavioral conditions on City streets that lead to pedestrian fatality and injury.

The *Vision Zero Brooklyn Pedestrian Safety Action Plan* was released on February 19, 2015. In the vicinity of the Brooklyn Site, Atlantic Avenue, Fulton Street and Court Street were identified as a Priority Corridor and the intersection of Atlantic Avenue with Court Street was identified as a Priority Intersection. The site is also located in a Priority Area but not within a DOT-designated Senior Pedestrian Focus Area (SPFA).

Actions recommended in the *Vision Zero Brooklyn Pedestrian Safety Action Plan* to enhance pedestrian safety in Brooklyn are summarized below.

Engineering and Planning

- Implement at least 50 Vision Zero safety engineering improvements at Priority Corridors, Intersections, and Areas citywide, informed by community input
- Expand exclusive pedestrian crossing time, install expanded speed limit signage, and modify signal timing to reduce off-speak speeding on Priority Corridors and Intersections where feasible
- Expand community outreach and engagement with regard to Priority Corridors, Intersections, and Areas
- Install additional lighting under elevated trains and around other key transit stops
- Install 60 new speed bumps in Brooklyn annually
- Develop additional Neighborhood Slow Zones in Priority Areas
- Coordinate with MTA to ensure bus operations contribute to a safe pedestrian environment
- Expand a bicycle network in Brooklyn that improves safety for all road users
- Proactively design for pedestrian safety in high-growth areas in Brooklyn

Enforcement

- Deploy speed camera at Priority Corridors, Intersections, and Areas
- Focus enforcement and deploy dedicated resources to Brooklyn NYPD precincts that overlap substantially with Priority Areas
- Prioritize targeted enforcement at all Priority Corridors, Intersections, and Areas annually

Education and Awareness

- Target child and senior safety education at Priority Corridors and Priority Areas
- Launch multilingual public information campaigns in Priority Areas
- Target intensive street-level outreach at Priority Corridors, Intersections, and Areas

STUDY AREA HIGH CRASH LOCATIONS

Crash data for intersections within ¼-mile of the Brooklyn Site were obtained from DOT for the three-year period between January 1, 2014 and December 31, 2016 (the most recent three-year period for which data are available). The data quantify the total number of reportable (involving a fatality, injury, or more than $1,000 in property damage) and non-reportable crashes as well as the total number of crashes involving injuries to pedestrians or bicyclists. During the three-year reporting period, a total of 431 reportable and non-reportable crashes, 164 pedestrian/bicyclist-related injury crashes, and two fatalities occurred at study area intersections. **Table 3.9-20** provides details of crash characteristics by intersection during the 2014 to 2016 period, as well as a breakdown of pedestrian and bicycle crashes by year and location.

Table 3.9-20
Summary of Motor Vehicle Crash Data 2014-2016

Intersection		Pedestrian Injury Crashes			Bicycle Injury Crashes			Total Pedestrian/ Bicyclist Injury Crashes			Total Crashes (Reportable + Non-Reportable)		
North-South Roadway	**East-West Roadway**	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**
Dead End	Verandah Place	0	0	0	0	0	0	0	0	0	0	0	0
Clinton Street	Amity Street	0	0	0	0	0	0	0	0	0	0	0	0
	Pacific Street	0	0	0	0	0	0	0	0	0	0	1	0
	Atlantic Avenue	1	3	0	0	0	0	1	3	0	5	6	5
	State Street	1	0	0	0	0	1	1	0	1	1	0	1
	Schermerhorn Street	0	0	0	0	0	0	0	0	0	0	0	0
	Livingston Street	2	1	0	0	0	0	2	1	0	4	1	0
Court Street	Warren Street	0	0	1	0	0	0	0	0	1	0	2	1
	Wycoff Street	1	0	1	0	0	0	1	0	1	1	1	2
	Congress Street	0	0	0	0	0	0	0	0	0	0	0	0
	Bergen Street	0	0	0	0	0	0	0	0	0	0	0	0
	Amity Street	0	2	0	1	0	0	1	2	0	1	2	0
	Dean Street	0	0	2	0	0	0	0	0	2	1	1	2
	Pacific Street	0	0	0	0	1	1	0	1	1	1	1	1
	Atlantic Avenue	3	2	3	0	0	0	3	2	3	7	6	5
	State Street	0	0	0	0	0	0	0	0	0	1	1	1
	Schermerhorn Street	0	1	0	0	0	0	0	1	0	2	3	1
	Livingston Street	0	1	3	1	0	0	1	1	3	3	3	7
	Joralemon Street	0	0	2	0	1	0	0	1	2	2	1	4
	Remsen Street	0	0	1	0	0	0	0	0	1	2	1	4
Boerum Place	Bergen Street	0	0	0	0	0	0	0	0	0	0	0	0
	Dean Street	0	0	0	0	0	0	0	0	0	1	0	0
	Pacific Street	0	0	0	0	0	0	0	0	0	0	0	0
	Atlantic Avenue	1	0	1	2	0	0	3	0	1	14	7	8
	State Street	0	0	0	0	1	0	0	1	0	3	5	0
	Schermerhorn Street	0	1	0	0	0	1	0	1	1	2	7	3
	Livingston Street	2	1	1	0	0	1	2	1	2	8	5	3
	Fulton Street	3	4	3	0	0	3	3	4	**6**	6	10	6
Pearl Street	Fulton Street	1	0	0	0	0	0	1	0	0	1	0	0
	Willoughby Street	1	0	0	0	0	0	1	0	0	1	0	1
Smith Street	Warren Street	2	0	1	0	1	1	2	1	2	4	1	4
	Wycoff Street	1	0	0	0	0	1	1	0	1	3	1	1
	Bergen Street	1	0	0	0	0	0	1	0	0	3	2	1
	Dean Street	1	0	0	0	0	1	1	0	1	3	0	1
	Pacific Street	0	0	0	1	0	0	1	0	0	1	4	5
	Atlantic Avenue	4	1	3	1	1	0	**5**	2	3	14	4	9
	State Street	0	0	0	0	0	0	0	0	0	2	2	1
	Schermerhorn Street	2	0	2	0	0	0	2	0	2	3	2	3
	Livingston Street	4	3	1	1	3	2	**5**	**6**	3	18	18	12
	Fulton Street	4	1	2	0	1	0	4	2	2	5	3	4
Jay Street	Willoughby Street	4	3	3	0	0	2	4	3	**5**	5	9	5
Galatin Place	Livingston Street	1	0	0	0	0	0	1	0	0	3	0	1
	Fulton Street	0	0	1	0	1	0	0	1	1	0	1	1
Lawerence Street	Willoughby Street	0	2	0	1	0	0	1	2	0	2	2	0
Hoyt Street	Wycoff Street	1	1	0	0	0	0	1	1	0	2	2	1
	Bergen Street	1	0	0	0	0	0	1	0	0	1	0	2
	Dean Street	0	2	0	0	0	1	0	2	1	2	2	2
	Pacific Street	0	1	1	0	0	0	0	1	1	1	2	2
	Atlantic Avenue	3	1	2	0	1	0	3	2	2	8	4	5
	State Street	0	1	1	0	0	0	0	1	1	3	2	2
	Schermerhorn Street	2	0	0	0	2	1	2	2	1	3	2	3
	Livingston Street	3	3	0	2	0	0	**5**	3	0	5	6	3
	Fulton Street	1	0	0	0	0	0	1	0	0	1	1	0
Bridge Street	Fulton Street	0	0	2	1	0	0	1	0	2	1	0	2
Elm Place	Livingston Street	0	0	1	0	0	0	0	0	1	4	2	5
Duffield Street	Fulton Street	0	0	0	0	0	0	0	0	0	0	0	1

Shading denotes a high crash location based on *CEQR Technical Manual* guidance.
Source: NYSDMV/DOT

According to the 2014 *CEQR Technical Manual*, a high crash location is one where there were 48 or more reportable and non-reportable crashes or five or more pedestrian/bicyclist-related crashes in any consecutive 12 months within the most recent three-year period for which data are available. As shown in **Table 3.9-20**, no intersections experienced 48 or more reportable and non-reportable crashes within a consecutive 12-month period during the 2014 to 2016 period; however, five

analyzed intersections experienced five or more pedestrian/bicyclist-related crashes within a consecutive 12-month period. These intersections, identified as high crash locations in **Table 3.9-20**, are the following:

- Smith Street at Atlantic Avenue
- Smith Street at Livingston Street
- Boerum Place at Fulton Street
- Jay Street at Willoughby Street
- Hoyt Street at Livingston Street

The five high crash intersections are discussed below.

SMITH STREET AT ATLANTIC AVENUE

The intersection of Smith Street and Atlantic Avenue, the southeast corner of the project site, is considered a high accident location as five pedestrian/bicycle injury crashes were reported in 2014. The intersection experienced four, one, and three reported pedestrian injury crashes in 2014, 2015, and 2016, respectively. One bicycle injury crash was reported in 2014 and 2015.

SMITH STREET AT LIVINGSTON STREET

The intersection of Smith Street and Livingston Street, located two blocks north of the project site, experienced five and six total pedestrian/bicycle injury crashes in 2014 and 2015, respectively. In 2014, four pedestrian and one bicycle injury crashes were reported at this location. In 2015, three pedestrian and three bicycle injury crashes were reported. In 2016, three total pedestrian/bicycle injury crashes were reported – one pedestrian and two bicycle.

BOERUM PLACE AT FULTON STREET

The intersection of Boerum Place and Fulton Street, located three blocks north of the project site, experienced six total reported pedestrian/bicycle injury crashes in 2016. Three pedestrian and three bicycle injury crashes were reported that year. Three and four pedestrian injury crashes were reported in 2014 and 2015, respectively. No injury crashes involving cyclists were reported in 2014 or 2015.

JAY STREET AT WILLOUGHBY STREET

The intersection of Jay Street and Willoughby Street, located four blocks north of the project site, experienced five total pedestrian/bicycle injury crashes in 2016 – three pedestrian and two bicycle. Four and three pedestrian injury crashes were reported in 2014 and 2015, respectively. No injury crashes involving cyclists were reported in 2014 or 2015.

HOYT STREET AT LIVINGSTON STREET

The intersection of Hoyt Street and Livingston Street, located east of the project site, experienced five total reported pedestrian/bicycle injury crashes in 2014. Three pedestrian and two bicycle injury crashes were reported in 2014. In 2015, three pedestrian injury crashes were reported; no bicycle injury crashes were reported. No pedestrian or bicycle injury crashes were reported in 2016.

I. PARKING

EXISTING CONDITIONS

OFF-STREET PARKING

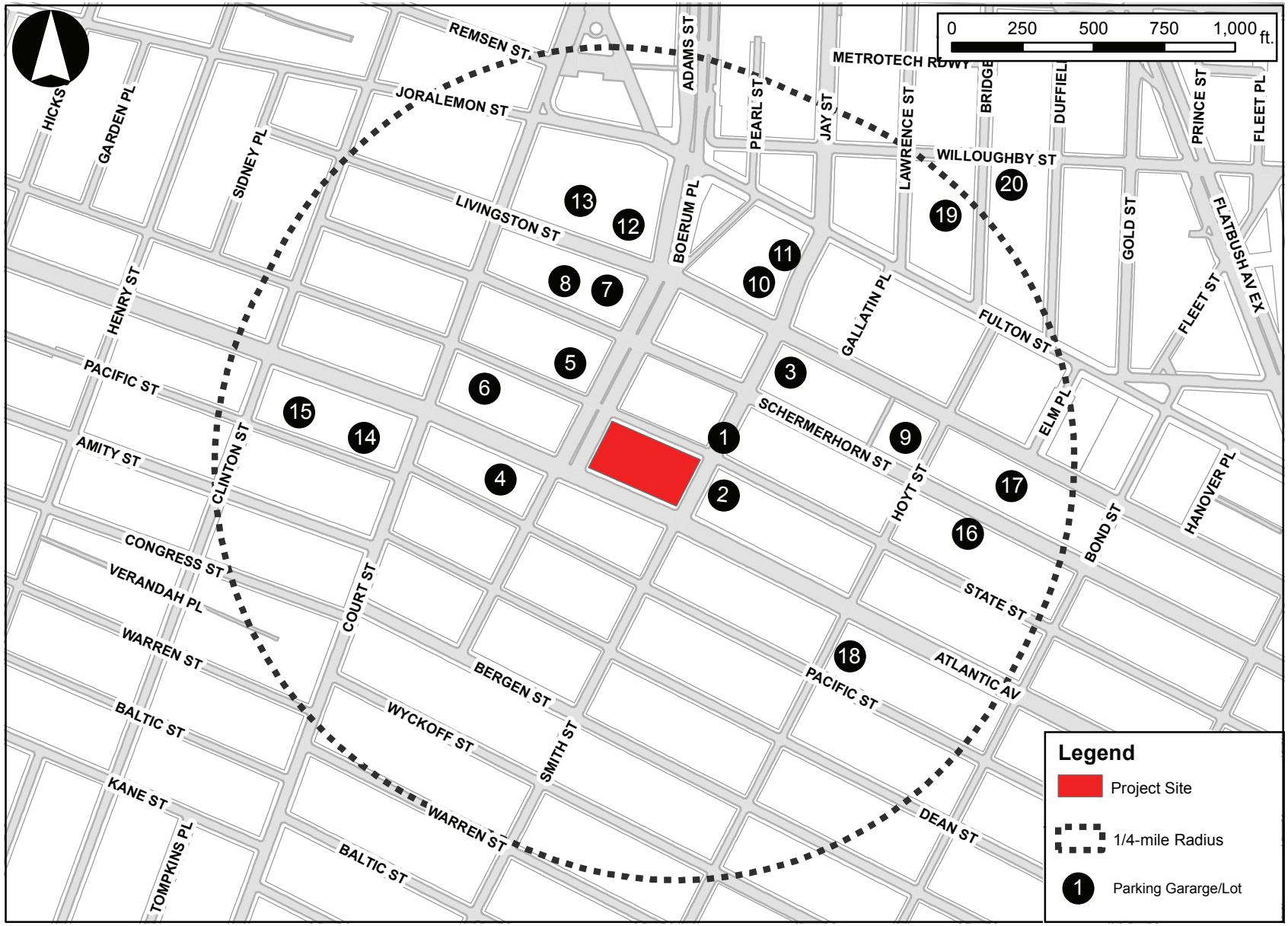
There are currently 19 off-street public parking facilities located within approximately ¼-mile of the Brooklyn Site. **Figure 3.9-11** shows the locations of these parking facilities and **Table 3.9-21** provides a summary of their names, addresses, license numbers, capacities, and estimated utilization during the weekday early morning and midday periods and the Saturday midday period. Based on field observations and interviews with parking attendants conducted in May 2018 and February 2019, the 19 parking facilities have a combined licensed capacity of 3,140 spaces during the weekday early morning period, 3,308 spaces during the weekday midday period, and 3,290 spaces during the Saturday midday period. Three of these facilities (Nos. 3, 10 and 11 in **Table 3.9-21**) are closed during the weekday early morning period and one facility is closed on the weekends (No. 10 in **Table 3.9-21**). Approximately 30 percent and 58 percent of spaces within the parking study area are utilized during the weekday early morning and midday periods, respectively, leaving a residual supply of approximately 2,190 and 1,393 available parking spaces during these same periods, respectively. During the Saturday midday period, approximately 51 percent of spaces are utilized, leaving a residual supply of approximately 1,130 available parking spaces.

ON-STREET PARKING

An inventory of existing parking regulations within a ¼-mile radius of the Brooklyn Site was compiled from field surveys and on-line sources. Curbside parking regulations for all block faces within the study area are shown in **Appendix F**. On-street public parking is generally governed by alternate-side-of-the-street regulations to facilitate street cleaning, with more restrictive regulations in place at locations where additional traffic flow capacity is needed, especially during the weekday AM and PM peak periods. Based on existing curbside parking regulations, and taking into account curb space obstructed by curb cuts, fire hydrants, and other impediments, there are a total of approximately 2,428 legal curbside parking spaces during the weekday early morning period and 2,115 spaces during the weekday midday period within ¼-mile of the site, while during the Saturday midday period there are a total of approximately 2,111 legal curbside parking spaces.

As shown in **Table 3.9-22**, based on data collected during field surveys conducted in within ¼-mile of the site in May 2018 and February 2019, on-street parking within the overall parking study area is approximately 63, 96 and 97 percent utilized during the weekday early morning and midday and Saturday midday periods, respectively. Approximately 896, 84 and 74 on-street parking spaces are currently available within the study area during each of these periods, respectively.

3.18.19



Brooklyn Site - 275 Atlantic Avenue
Off-Street Public Parking Facilities
Figure 3.9-11

Table 3.9-21
Existing Off-Street Public Parking Facilities

Figure No.	Garage	Address	License Number	Capacity	Utilization			Available Capacity		
					Weekday Early AM	Weekday Midday	Saturday Midday	Weekday Early AM	Weekday Midday	Saturday Midday
1	State Street Parking, LLC	71 Smith Street	1157614	750	8%	15%	63%	690	640	277
2	Smith Car Park, LLC	75 Smith Street	1432578	64	47%	100%	67%	34	0	21
3	Edison NY Parking, LLC	160 Livingston Street	926765	100	Closed	100%	71%	Closed	0	29
4	Atlantic Garage Management, LLC	238 Atlantic Avenue	2052721	130	30%	80%	69%	91	26	40
5	MP Together, LLC	205 State Street	1214412	131	45%	85%	68%	72	20	42
6	Park Kwik, LLC[1]	211 Atlantic Avenue	1178703	700	45%	60%	65%	385	280	245
7	Park Kwik, LLC	110 Livingston Street	1244225	225	20%	50%	65%	180	112	79
8	Edison NY Parking, LLC	75 Schermerhorn Street	1441857	150	10%	80%	69%	135	30	46
9	Cielo Garage	189 Schermerhorn Street	2041027	200	30%	100%	63%	140	0	74
10	Livingston Car Park, LLC[2]	141 Livingston Street	2059649	18	Closed	100%	Closed	Closed	0	Closed
11	Livingston Car Park, LLC	22 Smith Street	2059649	50	Closed	100%	66%	Closed	0	17
12	Livingston Car Park, LLC	111 Livingston Street	1100843	150	80%	100%	65%	30	0	52
13	Supreme 85 Parking, LLC	85 Livingston Street	1416193	160	70%	95%	71%	48	8	46
14	P.A.T.	165 Pacific Street	366200	30	50%	50%	68%	15	15	10
15	AP Schermerhorn Management, LLC	200 Schermerhorn Street	1246208	144	10%	20%	67%	130	115	48
16	Quik Park Sch Garage, LLC	236 Livingston Street	1412999	109	18%	37%	65%	89	69	38
17	Sarno, Cahterine, Andrew	99 Hoyt Street	1019603	10	80%	70%	70%	2	3	3
18	388 Bridge Street, LLC	388 Bridge Street	2028510	142	11%	56%	66%	127	62	48
19	Brooklyn Metro Parking, LLC[3]	100 Willoughy Street	2046303	45	50%	70%	66%	22	13	15
Total Weekday Early Morning				3,140	30%			2,190		
Total Weekday Midday				3,308		58%			1,393	
Total Saturday Midday				3,290			51%			1,130

Note:
[1]No response at 211 Atlantic Avenue for AM period (assumed same utilization rate as nearby garage at 205 State St)
[2]No response at 141 Livingston Street for MD period (assumed same utilization rate as nearby garage at 22 Smith St)
[3]No response at 100 Willoughby Street for SAT MD period (assumed same utilization rate as nearby garage at 388 Bridge Street)

Table 3.9-22
Existing On-Street Parking Utilization

	Legal Curbside Spaces	Estimated Utilization	Available Capacity
Weekday Early Morning	2,428	63.1%	896
Weekday Midday	2,115	96.0%	84
Saturday Midday	2,111	96.5%	74

NO ACTION CONDITIONS

Under the No Action condition, it is assumed that Rikers Island would continue operating as the city's main detention center, and that the existing Brooklyn Detention Complex would remain operational.

Between 2018 and 2027, it is expected that parking demands in the vicinity of the Brooklyn Site will increase due to long-term background growth as well as developments expected to occur in the vicinity. The No Action parking demand reflects annual background growth rates of 0.25 percent per year for the 2018 through 2023 period and 0.125 percent per year for the 2023 through 2027 period. These background growth rates, recommended in the *CEQR Technical Manual* for projects in Downtown Brooklyn, are applied to account for smaller projects and general increases in parking demand not attributable to specific development projects. Discrete demand from major development projects within or near the ¼-mile study area is also reflected in the No-Action demand.

OFF-STREET PARKING

No change in off-street public parking capacity is anticipated under the No-Action condition within the ¼-mile study area. Future No Action demand was determined by applying general background growth as well as discrete demand from planned developments near the site that would not provide any accessory parking space. As shown in **Table 3.9-23**, based on the increased demand under the No Action condition, weekday early morning, weekday midday, and Saturday midday off-street public parking utilization within the overall study area is expected to increase to 50 percent, 79 percent and 86 percent of capacity, with no deficit of spaces during any peak hour.

Table 3.9-23
No Action Off-Street Public Parking Capacity, Demand and Utilization

	Weekday Early AM	Weekday Midday	Saturday Midday
Off-Street Capacity			
Existing Supply	3,140	3,308	3,290
2027 No Action Supply	3,140	3,308	3,290
Off-Street Demand			
Existing Demand	950	1,915	2,160
Incremental Background Growth Demand	17	34	29
Estimated Demand from No Action Developments	605	654	636
2027 No Action Off-Street Parking Total Demand	**1,572**	**2,603**	**2,825**
Utilization			
2027 No Action Off-Street Public Parking Utilization	50%	79%	86%
2027 No Action Off-Street Public Parking Surplus/(Deficit)	**1,568**	**705**	**465**

ON-STREET PARKING

As shown in **Table 3.9-24**, no change in on-street parking supply is anticipated between Existing and No Action conditions and on-street parking capacity levels ¼-mile of the site are expected to remain at approximately 2,428, 2,115, and 2,111 spaces during the weekday early morning, weekday midday and Saturday midday periods, respectively. As all future public parking demand generated by No Action developments would likely be accommodated within off-street public parking garages, increases in on-street parking demand would primarily be due to general

background growth. As shown in **Table 3.9-24,** on-street parking within a ¼-mile of the site is expected to be approximately 64 percent utilized in the weekday early morning period, 98 percent utilized in the weekday midday period, and 98 percent utilized in the Saturday midday period. Approximately 869, 48 and 38 on-street parking spaces would be available within the overall ¼-mile study area during the weekday early morning and midday periods, and the Saturday midday periods, respectively.

Table 3.9-24
No Action On-Street Public Parking Capacity, Demand and Utilization

	Weekday Early AM	Weekday Midday	Saturday Midday
On-Street Capacity			
Existing Supply	2,428	2,115	2,111
2027 No Action Supply	2,428	2,115	2,111
On-Street Demand			
Existing Demand	1,532	2,031	2,037
Incremental Background Growth Demand	27	36	36
Estimated Demand from No Action Developments not Accommodated in Public Garages	0	0	0
2027 No Action On-Street Parking Total Demand	**1,559**	**2,067**	**2,073**
Utilization			
2027 No Action On-Street Public Parking Utilization	64%	98%	98%
2027 No Action On-Street Parking Surplus/(Deficit)	**869**	**48**	**38**

WITH ACTION CONDITIONS

Tables 3.9-25 and **3.9-26** presents the hourly net incremental change in parking demand generated by the site under the With-Action condition. As shown in **Tables 3.9-25** and **3.9-26**, incremental parking demand generated by the proposed project would peak just before the start of the uniformed staff shift change periods. In the weekday early morning period, total incremental parking demand would peak at 197 spaces during the 6:00-7:00 AM hour. In the weekday and Saturday midday periods (2:00-3:00 PM), peak parking demand would total 241 and 196 spaces, respectively.

The project would include approximately 292 accessory parking spaces for authorized DOC and CHS staff. These spaces would be located in a below-grade parking garage under the proposed building. All new demand associated with DOC staff (both uniformed and non-uniformed) and CHS staff would be fully accommodated on-site as the combined demands peak at 196, 220 and 187 spaces in the weekday early AM (6:00-7:00 AM), weekday midday (2:00-3:00 PM) and weekday Saturday midday (2:00-3:00 PM) periods, respectively. The remaining demand associated with visitors and local retail patrons would need to be accommodated off-site.

It should be noted that total future site generated demand would be higher as the existing site already generates parking demand from the existing Brooklyn Detention Complex. Approximately, 12 parking spaces are available within the existing Brooklyn Detention Complex site. With the new development, there would be a net increase of 280 (292 new minus 12 existing) accessory spaces. Therefore, after accounting for incremental accessory parking demand (demand

Table 3.9-25
With Action Net Incremental Weekday Hourly Parking Demand

Hour	Uniformed Staff[1]	Non-Uniformed Staff	Medical Staff	Authorized Visitors	Other Visitors[2]	Local Retail	Total
12-1 AM	57	0	3	0	0	0	60
1-2 AM	57	0	3	0	0	0	60
2-3 AM	57	0	3	0	0	0	60
3-4 AM	58	0	3	0	0	0	61
4-5 AM	71	0	3	0	0	0	74
5-6 AM	75	0	3	0	0	0	78
6-7 AM	160	33	3	1	0	0	197
7-8 AM	145	33	5	7	0	0	190
8-9 AM	127	33	3	15	0	0	178
9-10 AM	130	33	3	20	0	0	186
10-11 AM	134	33	3	18	0	0	188
11-12 PM	135	33	3	18	0	0	189
12-1 PM	151	33	3	20	0	0	207
1-2 PM	142	33	3	23	1	0	202
2-3 PM	191	26	3	19	2	0	241
3-4 PM	114	0	6	23	2	0	145
4-5 PM	96	0	4	22	2	0	124
5-6 PM	95	0	4	16	2	0	117
6-7 PM	91	0	4	8	2	0	105
7-8 PM	87	0	4	3	2	0	96
8-9 PM	85	0	4	0	1	0	90
9-10 PM	62	0	4	0	0	0	66
10-11 PM	104	0	4	0	0	0	108
11-12 PM	57	0	6	0	0	0	63

Note:
[1]To be conservative for parking analysis purposes, unlike in the traffic analysis where it is assumed all uniformed staff partaking in a shift change do so in the same hour, uniformed staff hourly parking demand is based on in/out patterns observed at the existing Manhattan and Brooklyn facilities.
[2]Other visitors refers to family/friends visiting persons who are detained.

Table 3.9-26
With Action Net Incremental Saturday Hourly Parking Demand

Hour	Uniformed Staff[1]	Non-Uniformed Staff	Medical Staff	Authorized Visitors	Other Visitors[2]	Local Retail	Total
12-1 AM	56	0	3	0	0	0	59
1-2 AM	56	0	3	0	0	0	59
2-3 AM	56	0	3	0	0	0	59
3-4 AM	57	0	3	0	0	0	60
4-5 AM	67	0	3	0	0	0	70
5-6 AM	70	0	3	0	0	0	73
6-7 AM	133	33	3	1	0	0	170
7-8 AM	113	33	5	2	0	0	153
8-9 AM	97	33	3	4	1	0	138
9-10 AM	101	33	3	5	2	0	144
10-11 AM	105	33	3	5	2	0	148
11-12 PM	106	33	3	5	2	0	149
12-1 PM	117	33	3	4	2	0	159
1-2 PM	112	33	3	5	2	0	155
2-3 PM	158	26	3	4	2	3	196
3-4 PM	102	0	6	5	1	5	119
4-5 PM	87	0	4	5	0	4	100
5-6 PM	87	0	4	4	0	0	95
6-7 PM	82	0	4	2	0	0	88
7-8 PM	78	0	4	1	0	0	83
8-9 PM	76	0	4	0	0	0	80
9-10 PM	60	0	4	0	0	0	64
10-11 PM	101	0	4	0	0	0	105
11-12 PM	56	0	6	0	0	0	62

Note:
[1]To be conservative for parking analysis purposes, unlike in the traffic analysis where it is assumed all uniformed staff partaking in a shift change do so in the same hour, uniformed staff hourly parking demand is based on in/out patterns observed at the existing Manhattan and Brooklyn facilities.
[2]Other visitors refers to family/friends visiting persons who are detained.

from new DOC and CHS staff), there would be a future surplus of on-site accessory spaces of 84, 60 and 93 spaces during the weekday early AM, weekday midday and Saturday midday periods. This on-site surplus would be used to accommodate some of the existing DOC and CHS staff demand, which would effectively free-up some off-street/on-street parking capacity in the With Action condition.

According to estimates of full-build parking demand (not only incremental demand), there would be a total accessory parking space demand of 292, 330, and 277 spaces in the weekday early AM, weekday midday and Saturday midday periods, respectively. As a result, it is estimated that the existing DOC and CHS parking demand totals 96, 110 and 90 spaces in the weekday early AM, weekday midday and Saturday midday periods, respectively. Much of the existing DOC and CHS generated demand could be accommodated on-site and that demand would be removed from the future public parking demand in the study area. Consequently, up to 84, 60 and 93 on-street/off-street public spaces would be made available under the With Action condition compared to the No Action as a result of this demand relocation. However, up to six on-street spaces (three on State Street and three on Smith Street) would be displaced due to the introduction of new curb cut needed to allow entry/exiting to and from the future sally port, loading dock and staff parking entrances. It should be noted that, any authorized vehicle spaces lost as a result of the project will be restored in kind proximate to the original spaces. Therefore, after accounting for freed spaces

due to staff demand relocation and the displaced spaces due to curb cuts, 78, 54 and 87 additional on-street/off-street public spaces would be made available overall under the With Action condition. As there would be available off-street and on-street capacity in the future without the project (the No Action condition), as shown in **Tables 3.9-23** and **3.9-24**, these additional spaces would more than fully accommodate the incremental demand associated with the project that would not be accommodated on-site (new demand from visitors and local retail staff and patrons). Therefore, as the proposed project would result in an overall increase in the future available parking capacity in the study area, the potential for a significant adverse shortfall as a result of the project is unlikely. ✷