ACME FISH EXPANSION
Chapter 10: Transportation

A. INTRODUCTION

This chapter describes the transportation characteristics and potential impacts associated with the Proposed Actions, which involve a zoning map ~~and text~~ amendment~~s,~~ and Large-Scale General Development special permit~~s~~ for a Development Site encompassing the entirety of Brooklyn Block 2615 in the Greenpoint-Williamsburg Industrial Business Zone (IBZ) in Brooklyn Community District (CD) 1. As shown in Figure 1-1a in Chapter 1, "Project Description," the Development Site, which contains approximately 116,756 square feet (sf) of lot area, is bounded by Meserole Avenue on the north, Wythe Avenue on the south, Banker Street on the east and Gem Street and North 15th Street on the west. The existing Acme Smoked Fish Company ("Acme") facility currently occupies lots 1, 21, 25 and 50, and is comprised of four interconnected one- to two-story buildings with a total of approximately 72,885 sf of built floor area. The Development Site also includes Lot 6, which contains ABC Stone, a stone supplier occupying a 2-story building (approximately 21,500 sf); a single-story vacant building with approximately 3,800 sf on Lot 19; and open storage for Corzo Contracting Company, a utility construction company that occupies the southern portion of the block (Lot 125).

The intent of the Proposed Actions is to provide Acme with a new facility that would allow the company to consolidate their processing operations at their existing location in Greenpoint, Brooklyn. Warehousing and distribution functions would be relocated to a facility in New Jersey. The Proposed Actions seek to enable the cost of a new state-of-the-art factory for Acme to be offset by allowing a mix of compl~~i~~ementary uses. Amending the zoning to preserve manufacturing while allowing greater commercial density above would achieve this objective.

In order to assess the potential effects of the Proposed Actions, 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 is analyzed for an analysis year of 2025~~4~~. As per the RWCDS, the No-Action scenario assumes that the existing M3-1 zoning would remain and the Proposed Development would not be constructed. It is anticipated that, without a new state-of-the-art purpose-built facility for its operations, Acme Smoked Fish would strongly consider relocating outside of New York State. As such, for analysis purposes it is assumed that in the absence of the Proposed Actions Acme Smoked Fish would vacate its buildings on the site (Lots 1, 21, 25, and 50). Lot 6, which is currently occupied by ABC Stone, is also expected to be vacated in the No-Action, as the business is currently in the process of moving out. Based on existing and anticipated real estate market trends, existing structures and site conditions, and uses allowed by existing zoning, it is expected that those vacated buildings would be re-occupied. As such, the No-Action scenario assumes that Acme's and ABC Stone's vacated buildings would be re-occupied by a mix of eating/drinking/entertainment establishments, creative office and warehouse uses. The vacant building on Lot 19, which is the smallest lot on the block, is assumed to be re-occupied by restaurant use in the No-Action. Finally, the No-Action scenario assumes that Lot 125, which currently accommodates parking and open storage, would be redeveloped with a new three-story commercial building with distillery, creative office, dance studio and restaurant uses. (For travel demand forecasting purposes, the dance studio use is conservatively included in the creative office category.)

Overall, as shown in Table 10-1, the No-Action condition for the Development Site is assumed to consist of a total of 148,085 gsf (excluding parking), comprised of approximately 35,225 gsf of restaurant/entertainment uses, 66,750 gsf of creative office space, 28,610 gsf of warehousing spaces, and 17,500 gsf of light industrial (distillery) space, as well as an estimated 107 accessory parking spaces.

Under the With-Action scenario, the Proposed Development would be comprised of a total of 639,900 gsf of new development (excluding parking), including a total of approximately 33,800 gsf of retail space, approximately 496,800 gsf of office space and approximately 109,300 gsf of light industrial/manufacturing space (a new processing facility for Acme). As shown in Table 10-1, compared to the No-Action condition, the Proposed Actions would result in a net incremental increase of 33,800 gsf of local retail space, 430,050 gsf of office space and 91,800 gsf of light industrial/manufacturing space. There would also be a net incremental decrease of 35,225 gsf of restaurant/entertainment uses and 28,610 gsf of warehousing space. On-site accessory parking on the Development Site would increase by approximately 43 spaces to a total of approximately 150.

This chapter describes in detail the existing transportation conditions in proximity to the proposed rezoning area. Future conditions in the year 20254 without the Proposed Actions (the No-Action condition) are then determined, including additional transportation-system demand and any changes expected by the year 20254. The increase in travel demand resulting from the Proposed Actions is then projected and added to the No-Action condition to develop the 20254 future with the Proposed Actions (the With-Action condition). Significant adverse impacts from action-generated trips are then identified and described in detail. Chapter 17, "Mitigation" discusses practicable measures to address these impacts.

TABLE 10-1
20254 RWCDS No-Action and With-Action Land Uses

Land Use	No-Action Condition	With-Action Condition	Net Increment
Commercial			
Local Retail	0 gsf	33,800 gsf	+ 33,800 gsf
Office	66,750 gsf	496,800 gsf	+ 430,050 gsf
Restaurant/Entertainment	35,225 gsf	0 gsf	- 35,225 gsf
Total Commercial	***101,975 gsf***	***530,600 gsf***	***+ 428,625 gsf***
Light Industrial/Manufacturing/Warehousing			
Light Industrial/Manufacturing (Acme)	0 gsf	109,300 gsf	+ 109,300 gsf
Light Industrial/Manufacturing (Distillery)	17,500 gsf	0 gsf	- 17,500 gsf
Warehousing	28,610 gsf	0 gsf	- 28,610 gsf
Total Light Industrial/Manufacturing/Warehousing	***46,110 gsf***	***109,300 gsf***	***+ 63,190 gsf***
Total Floor Area	***148,085 gsf***	***639,900 gsf***	***+ 491,815 gsf***
Parking			
Accessory Parking Spaces	107	150	+ 43

B. PRINCIPAL CONCLUSIONS

A detailed transportation analysis was conducted and determined that the Proposed Actions would result in significant adverse traffic impacts at several intersections near the Development Site, as summarized below. The Proposed Actions would not result in any significant adverse impacts on transit services or pedestrian conditions, nor would they adversely impact vehicular and pedestrian safety or parking conditions.

Traffic

Traffic conditions were evaluated for the weekday 7:30-8:30 AM and 5-6 PM peak hours at 13 intersections (three signalized and ten unsignalized) in the traffic study area where additional traffic resulting from the Proposed Actions would exceed the 50-trips/hour *City Environmental Quality Review* (CEQR) *Technical Manual* analysis threshold. As summarized in Table 10-2 and Table 10-3, the traffic impact analysis indicates the potential for significant adverse impacts at eight intersections (three signalized and five unsignalized) during one or both analyzed peak hours. Significant adverse impacts were identified to seven lane groups at six intersections during the AM peak hour and eight lane groups at seven intersections during the PM peak hour. Chapter 17~~6~~, "Mitigation," discusses potential measures to mitigate these significant adverse traffic impacts.

TABLE 10-2
Number of Impacted Intersections and Lane Groups by Peak Hour

	Peak Hour	
	Weekday AM	**Weekday PM**
Impacted Lane Groups	7	8
Impacted Intersections	6	7

TABLE 10-3
Summary of Significantly Impacted Intersections

Intersection		Peak Hour	
Location	**Control**	**Weekday AM**	**Weekday PM**
Calyer Street (EB/WB) & Franklin Street (NB/SB)	Signalized	X	X
Calyer Street (EB/WB) & Lorimer Street (SB)	Stop-Controlled	X	X
Calyer Street (EB) & Manhattan Avenue (NB/SB)	Signalized	---	X
Quay Street (EB) & Franklin Street (NB/SB)	Signalized	X	X
Meserole Avenue (WB) & Franklin Street (NB)/(SB)	Stop-Controlled	X	X
Meserole Avenue (WB) & Gem Street (NB)	Stop-Controlled	---	X
Norman Avenue (WB) & Banker Street (NB)	Stop-Controlled	X	---
Norman Avenue (WB) & Dobbin Street (NB)	Stop-Controlled	X	X
	Total	6	7

Transit

Subway

SUBWAY STATIONS

The Proposed Actions would generate a net increment of approximately 418 and 438 new subway trips during the weekday AM and PM commuter peak hours. The analysis of subway station conditions focuses on New York City Transit's Nassau Avenue (G) station as incremental demand from the Proposed Actions would exceed the 200-trips/hour *CEQR Technical Manual* analysis threshold at this station in both peak hours. In the future with the Proposed Actions, those stairs and fare arrays that would be used by project-generated demand are expected to operate at an acceptable level of service (LOS) A or B in both the AM and PM peak hours and would therefore not be significantly adversely impacted by the Proposed Actions based on *CEQR Technical Manual* criteria.

SUBWAY LINE HAUL

The proposed rezoning area is served by two New York City Transit (NYCT) subway routes—G trains operating on the Crosstown Line and L trains operating on the Canarsie Line. Incremental demand generated by the Proposed Actions on the Crosstown Line is expected to exceed the 200 trips/hour *CEQR Technical Manual* threshold for a detailed subway analysis in both the AM and PM commuter peak hours. Therefore, the potential for significant adverse line haul impacts to G train service is assessed in this EIS. As there would be fewer than 200 incremental trips per hour in the AM and PM on the Canarsie Line, the Proposed Actions are not expected to result in significant adverse line haul impacts to L train service.

The peak direction of travel on the Crosstown Line is typically northbound in the AM and southbound in the PM. Line Haul conditions on the G train are assessed at two maximum load points in the peak direction in each peak period—one in relative proximity to the Development Site location in Greenpoint, and a second further south at which a greater share of the Proposed Action's incremental demand is expected to present on the trains.

In the future with the Proposed Actions, peak direction G trains are expected to be operating below capacity in both the AM and PM peak hours at all analyzed maximum load points with the exception of northbound trains leaving Greenpoint Avenue in the AM peak hour. These trains would be operating at capacity with a volume-to-capacity (v/c) ratio of 1.01 (the same as in the future without the Proposed Actions); however, incremental demand due to the Proposed Actions would only amount to an average of 0.08 additional passengers per car. As no peak direction G trains operating at or over capacity would experience an average increase of five or more additional passengers per car at any maximum load point in either the AM or PM peak hours as a result of the Proposed Actions, G train service would not be considered significantly adversely impacted under *CEQR Technical Manual* impact criteria.

Bus

The Proposed Actions are expected to generate only 49 incremental trips by bus in the weekday AM peak hour and two incremental trips by bus in the PM peak hour. A total of three NYC Transit bus routes operate within ¼-mile of the Development Site (the B32, B43 and B62), and the number of incremental trips in one direction on any one of these routes would not exceed the 50-trip *CEQR Technical Manual* analysis threshold. Therefore, the Proposed Actions are not expected to result in significant adverse impacts to local bus service.

Pedestrians

The Proposed Actions would generate approximately 216 incremental walk-only trips in the weekday AM peak hour, 1,495 in the midday peak hour and 371 in the PM peak hour. Persons walking to and from subway station entrances and bus and ferry stops would add approximately 496 and 473 incremental pedestrian trips to sidewalks and crosswalks in the vicinity of the Development Site during the weekday AM and PM peak hours, respectively, and there would be a net decrease of 37 such trips in the weekday midday. Pedestrian conditions during the weekday 8-9 AM, 1-2 PM and 5:30-6:30 PM peak hours were evaluated at a total of 19 pedestrian elements (13 sidewalks, two crosswalks and four corner areas) where new trips generated by the Proposed Actions are expected to exceed the 200-trip/hour *CEQR Technical Manual* analysis threshold. These elements are primarily located in the immediate proximity of the Development Site and along the Norman Avenue/Wythe Avenue corridor which connects the Development Site to nearby subway stations and bus routes. In the Future with the Proposed Actions, all analyzed pedestrian elements would continue to operate at an acceptable LOS C or better in all three analyzed peak hours, and there would be no significant adverse pedestrian impacts based on *CEQR Technical Manual* impact criteria.

Vehicular and Pedestrian Safety

The *Vision Zero Brooklyn Pedestrian Safety Action Plan*, released on February 19, 2015, identified no Priority Corridors, Priority Intersections or Priority Areas within the traffic or pedestrian study areas, and no analyzed intersections are located within a designated Senior Pedestrian Focus Area.

Crash data for intersections in the traffic and pedestrian study areas intersections were obtained from the New York City Department of Transportation for the three-year reporting period between January 1, 2015, and December 31, 2017 (the most recent period for which data were available for all locations). The data quantify the total number of crashes as well as the total number of crashes involving injuries to pedestrians or bicyclists. During the three-year reporting period, a total of 62 crashes and 21 pedestrian/bicyclist-related injury crashes occurred at analyzed study area intersections. None of these crashes involved fatalities.

According to the 202014 *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. Based on these criteria, no analyzed intersections are classified as high crash locations.

Parking

The parking analysis documents changes in parking supply and utilization within a study area extending ¼-mile from the Development Site. Within this study area there are a total of two off-street public parking garages. Under the Proposed Actions, no existing on-street or off-street public parking would be displaced, and it is anticipated that a total of 150 accessory parking spaces would be provided on the Development Site, sufficient to accommodate approximately 63 percent of the 234 spaces of peak With-Action parking demand. This includes existing demand from Acme workers who must currently park on-street or in nearby off-street public parking facilities. Based on anticipated changes in parking demand during the 2019 to 20254 period, it is estimated that in the future with the Proposed Actions there would be a deficit of approximately 694 spaces of on-street and off-street public parking capacity within ¼-mile of the Development Site in the weekday midday period. While some drivers destined for the vicinity of the

Development Site would potentially have to travel a greater distance (e.g., between ¼ and ½-mile) to find available parking in the midday, this shortfall would not be considered a significant adverse impact based on *CEQR Technical Manual* criteria due to the magnitude of available alternative modes of transportation. Therefore, the Proposed Actions are not expected to result in significant adverse parking impacts during the weekday midday peak period for commercial and retail parking demand.

C. PRELIMINARY ANALYSIS METHODOLOGY

The *City Environmental Quality Review* (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 action. According to the *CEQR Technical Manual*, if the proposed action is 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 action would generate 50 or more peak hour vehicle trips at an intersection, 200 or more peak hour subway trips at a station, 50 or more peak hour 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, vehicular and pedestrian safety, and parking.

D. 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 by the Proposed Actions during the weekday AM, midday, and PM, and Saturday peak hours for the RWCDS. 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 by the RWCDS. A detailed travel demand forecast is then provided for the RWCDS.

Background

As shown in Table 10-1, compared to the No-Action condition, the Proposed Actions would result in a net incremental increase of 33,800~~6,850~~ gsf of local retail space, 430,050~~13,650~~ gsf of office space and 91,800~~88,100~~ gsf of light industrial/manufacturing space. There would also be a net incremental decrease of 35,225 gsf of restaurant/entertainment uses and 28,610 gsf of warehousing space. While there is currently no dedicated on-site accessory parking on the Development Site, approximately 150 off-street accessory parking spaces would be provided on-site under the Proposed Actions.

Transportation Planning Factors

The trip generation rates, temporal and directional distributions, modal splits, vehicle occupancies and truck trip factors used to forecast travel demand for local retail, office and general light industrial/manufacturing land uses are summarized in Table 10-4. They were based on factors cited in the 202014 *City Environmental Quality Review* (*CEQR) Technical Manual*, American Association of State Highway Transportation Officials (AASHTO) Census Transportation Planning Products (CTPP) reverse journey-to-work five-year data, data from *ITE Trip Generation* Manual, 10th Edition (Land Use Code 150 - Warehousing), data from a 2019 mode choice survey of office workers in Williamsburg conducted by PHA, New York City Department of Transportation (DOT) survey data, and factors developed for recent environmental reviews. Factors are shown for the weekday AM and PM peak hours (typical peak periods for commuter travel demand) and the weekday midday and Saturday peak hours (typical peak periods for retail demand). To reflect the mixed-use nature of the projected development, it was assumed for the purposes of the travel demand forecast that 25 percent of all local retail trips on weekdays would be linked to the proposed office and light industrial uses on the site, consistent with *CEQR Technical Manual* guidance. A five percent linked-trip factor was assumed for the Saturday peak hour reflecting the fact that there would be substantially less office and light industrial travel demand on weekends.

As discussed in the *Transportation Planning Factors/Travel Demand Forecast (TPF/TDF) Technical Memorandum* provided in Appendix D, based on the 2019 mode choice survey data and anticipated demand at the Bedford Avenue (L) subway station and nearby ferry stops, it is estimated that 2.4 percent of office commuter trips would use both the subway and a taxi/rideshare service and that 0.9 percent would use a combination of the ferry and taxi/rideshare modes. Overall, it is estimated that a total of approximately 9.2 percent of trips generated by the Proposed Actions' office component in the weekday AM and PM and Saturday peak hours would therefore arrive or depart the Development Site via taxi/rideshare services.

Under the Proposed Actions' RWCDS, the existing Acme processing facility would be replaced by a new flexible, purpose-build facility that would allow for consolidation of processing operations at the Development Site. Warehousing and distribution functions would be relocated to a facility in New Jersey. Based on the existing workforce and projected employment under the Proposed Actions, it is anticipated that production staff at Acme would remain relatively constant at approximately 80 workers, while administrative/sales staff would total approximately 60 workers. Data on the travel demand characteristics (e.g., temporal distribution, mode choice, etc.) of the existing Acme workforce were used to forecast the travel demand that would be generated by administrative/sales staff in the typical weekday AM and PM commuter peak hours and weekday midday (lunchtime) period. Production staff are expected to generate little if any travel demand during these periods as they would typically arrive in the early morning period (i.e., prior to 6:00 AM) and depart in mid-afternoon (i.e., after 2:30 PM). In addition, as operations at the proposed Acme facility would primarily occur on weekdays, it would also generate little, if any travel demand on Saturdays. The numbers of truck trips that would be generated by the proposed Acme facility were estimated based on data provided by Acme.

TABLE 10-4
Transportation Planning Factors

Land Use:	Local Retail		Office		Light Industrial/ Manufacturing		Restaurant		Warehousing	
Trip Generation										
	(1)		(1)		(2)		(3)		(4)	
Weekday	205		18.0		14.7		179.0		1.9	
Saturday	240		3.9		2.2		139.0		0.2	
	per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf	
Temporal Distribution										
	(1)		(1)		(2)		(3)		(4)	
AM	3.0%		12.0%		13.2%		1.0%		6.0%	
MD	19.0%		15.0%		11.0%		13.7%		8.0%	
PM	10.0%		14.0%		14.2%		7.7%		5.0%	
Saturday	10.0%		17.0%		10.7%		11.6%		11.0%	
Modal Splits										
	(5)		(6,3)		(3,7)		(3)		(3,7)	
	All Periods		AM/PM/SAT	MD	AM/PM/SAT	MD	All Periods		AM/PM/SAT	MD
Auto	11.0%		12.1%	2.0%	40.7%	2.0%	20.0%		40.7%	2.0%
Taxi/Rideshare	0.0%		5.9%	1.0%	0.1%	1.0%	10.0%		0.1%	1.0%
Subway	3.0%		45.7%	7.0%	35.8%	7.0%	15.0%		35.8%	7.0%
Bus	2.0%		6.2%	7.0%	5.4%	7.0%	15.0%		5.4%	7.0%
Ferry	0.0%		2.7%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%
Bike	0.0%		15.3%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%
Walk Only/Other	84.0%		12.1%	83.0%	18.0%	83.0%	40.0%		18.0%	83.0%
	100.0%		100%	100%	100%	100%	100%		100%	100%
In/Out Splits	(8)		(8)		(2)		(3)		(4)	
	In	Out	In	Out	In	Out	In	Out	In	Out
AM	50%	50%	94.0%	6.0%	88.0%	12.0%	94.0%	6.0%	65.0%	35.0%
MD	47%	53%	39.0%	61.0%	50.0%	50.0%	65.0%	35.0%	50.0%	50.0%
PM	44%	56%	5.0%	95.0%	12.0%	88.0%	65.0%	35.0%	24.0%	76.0%
Saturday	55%	45%	60.0%	40.0%	47.0%	53.0%	63.0%	37.0%	64.0%	36.0%
Vehicle Occupancy										
	(2)		(6)		(7)		(3)		(7)	
Auto	2.00		1.15		1.11		2.20		1.11	
Taxi	2.00		1.85		1.11		2.30		1.11	
Truck Trip Generation:	(1)		(1)		(2)		(2)		(4)	
Weekday	0.35		0.32		0.67		3.60		0.35	
Saturday	0.04		0.01		0.67		3.60		0.03	
	per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf		per 1,000 sf	
Truck Temporal Distribution:	(1)		(1)		(2)		(3)		(9)	
AM	8.0%		10.0%		14.0%		6.0%		14.0%	
MD	11.0%		11.0%		9.0%		6.0%		9.0%	
PM	2.0%		2.0%		1.0%		1.0%		1.0%	
Saturday	11.0%		11.0%		0.0%		0.0%		9.0%	
Truck In/Out Splits:										
	In	Out	In	Out	In	Out	In	Out	In	Out
All Periods	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes:
(1) Based on data from the 2020 *CEQR Technical Manual.*
(2) Based on data from the *East New York Rezoning Proposal FEIS*, 2016.
(3) Based on data from the *12 Franklin Street EAS, 2017.*
(4) Based on data from *ITE Trip Generation Manual, 10th Edition,* Land Use Code 150 (Warehousing).
(5) Based on DOT Brooklyn transit zone survey data provided by DCP.
(6) Based on 2019 PHA mode choice survey data for an office use in Williamsburg, Brooklyn.
(7) Based on 2012-2016 ACS Reverse Journey-to-Work census data for Kings County census tracts 557, 561, 565, 569, 571, 573 and 575.
(8) Based on data cited in the *25 Kent Avenue EAS*, 2016.
(9) Based on data from the *Jerome Avenue Rezoning FEIS,* 2018.

Travel Demand Forecast

The net incremental change in person and vehicle trips expected to result from the Proposed Actions by the 20254 analysis year was derived based on the net change in land uses shown in Table 10-1, the transportation planning factors shown in Table 10-4, and the data on travel demand characteristics and projected future workforce provided by Acme and described above. Tables 10-5 and 10-6 show estimates of the net incremental change in peak hour person trips and vehicle trips (versus the No-Action condition) that would occur in 20254 with implementation of the Proposed Actions. These data are further summarized in Table 10-7. As shown in Table 10-5, under the RWCDS, the Proposed Actions would generate a net increase of approximately 1,046 person trips (in + out combined) in the weekday AM peak hour, 1,347 in the weekday midday, 1,139 in the weekday PM and 483 in the Saturday peak hour. As shown in Table 10-7, peak hour vehicle trips (including auto, taxi and truck trips) would increase by a net total of approximately 215 and 180 (in + out combined) in the weekday AM and PM peak hours, respectively, and decrease by a net total of 47 and 5 trips in the weekday midday and Saturday peak hours, respectively. These vehicle-trip totals assume that a portion of subway and ferry commuters would arrive and depart the site via taxi/rideshare services. Peak hour subway trips would increase by a net total of approximately 418, 438 and 64 trips during the weekday AM and PM, and Saturday peak hours, respectively, and decrease by a net total of 13 trips in the weekday midday. Bus trips would increase by approximately 51 in the weekday AM peak hour and 5 in the weekday PM peak hour, and decrease by 24 and 53 trips in the weekday midday and Saturday peak hours, respectively.

There would also be 27, 30 and eight new ferry trips in the weekday AM and PM, and Saturday peak hours, respectively, and trips by bike would increase by 148, 171 and 45 during these same periods. Lastly, trips made entirely on foot (walk-only trips) would increase by 216, 1,495, 371 and 457, during the weekday AM, midday and PM, and Saturday peak hours, respectively.

TRAFFIC

Based on *CEQR Technical Manual* guidelines, a quantified traffic analysis is typically required if a proposed action would result in 50 or more vehicle trip ends in a peak hour at one or more intersections. As shown in Table 10-7, under the RWCDS, the net number of incremental vehicle trips—215, -47, 180 and -5 in the weekday AM, midday and PM, and Saturday peak hours, respectively—would exceed the 50-trip threshold in the AM and PM, and a Level 2 screening analysis is therefore warranted for these periods to determine which intersections would require quantified analysis. Further analysis of the weekday midday and Saturday peak hours is not warranted.

TRANSIT

According to the general thresholds used by the Metropolitan Transportation Authority and specified in the *CEQR Technical Manual*, detailed transit analyses are generally not required if a proposed action is projected to result in fewer than 200 peak hour rail or bus transit riders. If a proposed action would result in 50 or more bus passengers being assigned to a single bus line (in one direction), or if it would result in an increase of 200 or more passengers at a single subway station or on a single subway line, a detailed bus and/or subway analysis would be warranted. Transit analyses typically focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway and bus systems is usually highest.

TABLE 10-5
RWCDS Travel Demand Forecast – Incremental Person Trips

Land Use:		Local Retail [a,b]	Office	Light Industrial	Restaurant	Warehousing	Acme [d,e]	Total
Size/Units:		33,800 gsf	430,050 gsf	-17,500 gsf [c]	-35,225 gsf	-28,610 gsf	109,300 gsf	
Peak Hour Trips:								
	AM	156	929	-34	-63	-3	61	1,046
	MD	987	1,161	-28	-864	-4	95	1,347
	PM	520	1,084	-37	-486	-3	61	1,139
	Saturday	771	285	-4	-568	-1	0	483

Period	Mode	Local Retail In	Local Retail Out	Office In	Office Out	Light Industrial In	Light Industrial Out	Restaurant In	Restaurant Out	Warehousing In	Warehousing Out	Acme In	Acme Out	Total In	Total Out
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
	Auto	9	9	105	7	-12	-2	-12	-1	-1	0	31	0	120	13
	Taxi	0	0	52	3	0	0	-6	0	0	0	4	0	50	3
	Subway	2	2	398	25	-11	-1	-9	-1	-1	0	14	0	393	25
AM	Bus	2	2	54	3	-2	0	-9	-1	0	0	2	0	47	4
	Ferry	0	0	24	2	0	0	0	0	0	0	1	0	25	2
	Bike	0	0	134	9	0	0	0	0	0	0	5	0	139	9
	Walk/Other	65	65	106	7	-5	-1	-23	-1	-1	0	4	0	146	70
	Total	**78**	**78**	**873**	**56**	**-30**	**-4**	**-59**	**-4**	**-3**	**0**	**61**	**0**	**920**	**126**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
	Auto	51	58	9	14	0	0	-112	-60	0	0	1	1	-51	13
	Taxi	0	0	5	7	0	0	-56	-30	0	0	1	0	-50	-23
	Subway	14	16	32	50	-1	-1	-84	-45	0	0	3	3	-36	23
MD	Bus	9	10	32	50	-1	-1	-84	-45	0	0	3	3	-41	17
	Ferry	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Bike	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Walk/Other	390	439	375	587	-12	-12	-226	-122	-2	-2	40	40	565	930
	Total	**464**	**523**	**453**	**708**	**-14**	**-14**	**-562**	**-302**	**-2**	**-2**	**48**	**47**	**387**	**960**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
	Auto	24	32	7	124	-2	-13	-63	-34	0	-1	0	31	-34	139
	Taxi	0	0	3	61	0	0	-32	-17	0	0	0	4	-29	48
	Subway	7	9	25	470	-2	-11	-47	-26	0	-1	0	14	-17	455
PM	Bus	5	6	3	64	0	-2	-47	-26	0	0	0	2	-39	44
	Ferry	0	0	1	28	0	0	0	0	0	0	0	1	1	29
	Bike	0	0	8	158	0	0	0	0	0	0	0	5	8	163
	Walk/Other	192	245	7	125	-1	-6	-126	-68	0	-1	0	4	72	299
	Total	**228**	**292**	**54**	**1,030**	**-5**	**-32**	**-315**	**-171**	**0**	**-3**	**0**	**61**	**-38**	**1,177**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
	Auto	47	38	21	14	-2	-2	-72	-42	0	0	0	0	-6	8
	Taxi	0	0	10	7	0	0	-36	-21	0	0	0	0	-26	-14
	Subway	13	10	78	51	-1	-1	-54	-32	0	0	0	0	36	28
Saturday	Bus	8	7	11	7	0	0	-54	-32	0	0	0	0	-35	-18
	Ferry	0	0	5	3	0	0	0	0	0	0	0	0	5	3
	Bike	0	0	26	17	1	1	0	0	0	0	0	0	27	18
	Walk/Other	357	291	21	14	0	0	-142	-83	-1	0	0	0	235	222
	Total	**425**	**346**	**172**	**113**	**-2**	**-2**	**-358**	**-210**	**-1**	**0**	**0**	**0**	**236**	**247**

Notes:

[a] 25% linked-trip credit applied to weekday local retail trips.

[b] 5% linked-trip credit applied to Saturday local retail trips.

[c] Demand from No-Action light industrial/manufacturing (distillery) uses.

[d] Based on data provided by Acme, there would be a total of approximately 60 administrative staff who would generate travel demand during the typical weekday AM, midday and PM peak hours. Demand from an additional 80 production staff would typically occur outside of these peak periods.

[e] Assumes a 58% auto/taxi mode share for administrative staff based on data provided by Acme. Auto/taxi split, transit/walk split and vehicle occupancies based on factors for office workers. Conservatively assumes all administrative staff would arrive/depart in the AM/PM peak hours, and that 80% would depart and return to the proposed facility in the midday peak hour.

TABLE 10-6
RWCDS Travel Demand Forecast – Incremental Vehicle Trips

Land Use:		Local Retail [a,b]		Office		Light Industrial		Restaurant		Warehousing		Acme [d,e]			
Size/Units:		33,800 gsf		430,050 gsf		-17,500 gsf [c]		-35,225 gsf		-28,610 gsf		109,300 gsf		Total	
Vehicle Trips :															
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
AM	Auto	5	5	91	6	-11	-2	-5	0	-1	0	27	0	106	9
	Taxi [f]	0	0	47	47	0	0	-3	-3	0	0	2	2	46	46
	Truck	0	0	7	7	-1	-1	-4	-4	-1	-1	3	3	4	4
	Total	**5**	**5**	**145**	**60**	**-12**	**-3**	**-12**	**-7**	**-2**	**-1**	**32**	**5**	**156**	**59**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
MD	Auto	26	29	8	12	0	0	-51	-27	0	0	1	1	-16	15
	Taxi [f]	0	0	7	7	0	0	-37	-37	0	0	0	0	-30	-30
	Truck	1	1	8	8	-1	-1	-4	-4	0	0	3	3	7	7
	Total	**27**	**30**	**23**	**27**	**-1**	**-1**	**-92**	**-68**	**0**	**0**	**4**	**4**	**-39**	**-8**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
PM	Auto	12	16	6	108	-2	-12	-29	-15	0	-1	0	27	-13	123
	Taxi [f]	0	0	54	54	0	0	-21	-21	0	0	2	2	35	35
	Truck	0	0	1	1	0	0	-1	-1	0	0	0	0	0	0
	Total	**12**	**16**	**61**	**163**	**-2**	**-12**	**-51**	**-37**	**0**	**-1**	**2**	**29**	**22**	**158**
		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
Saturday	Auto	24	19	18	12	-2	-2	-33	-19	0	0	0	0	7	10
	Taxi [f]	0	0	14	14	0	0	-25	-25	0	0	0	0	-11	-11
	Truck	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	**24**	**19**	**32**	**26**	**-2**	**-2**	**-58**	**-44**	**0**	**0**	**0**	**0**	**-4**	**-1**

Notes:

[a] 25% linked-trip credit applied to weekday local retail trips.

[b] 5% linked-trip credit applied to Saturday local retail trips.

[c] Demand from No-Action light industrial/manufacturing (distillery) uses.

[d] Based on data provided by Acme, there would be a total of approximately 60 administrative staff who would generate travel demand during the typical weekday AM, midday and PM peak hours. Demand from an additional 80 production staff would typically occur outside of these peak periods.

[e] Assumes a 58% auto/taxi mode share for administrative staff based on data provided by Acme. Auto/taxi split, transit/walk split and vehicle occupancies based on factors for office workers. Conservatively assumes all administrative staff would arrive/depart in the AM/PM peak hours, and that 80% would depart and return to the proposed facility in the midday peak hour.

[f] Office taxi trips include an additional 34, 38 and 10 trips (inbound + outbound, combined) in the AM, PM and Saturday peak hours, respectively, to account for transit riders using taxi/rideshare services to access the Bedford Avenue subway station or the ferry.

TABLE 10-7
Travel Demand Forecast Summary

Peak	Vehicle Trips[1]			Person Trips																	
				Subway			Bus			Ferry			Bike			Walk			Pedestrian Trips[2]		
Hour	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
AM	156	59	215	393	25	418	47	4	51	25	2	27	139	9	148	146	70	216	581	99	680
MD	-39	-8	-47	-36	23	-13	-41	17	-24	0	0	0	0	0	0	565	930	1,495	488	970	1,458
PM	22	158	180	-17	455	438	-39	44	5	1	29	30	8	163	171	72	299	371	15	794	809
Saturday	-4	-1	-5	36	28	64	-35	-18	-53	5	3	8	27	18	45	235	222	457	235	235	470

Notes:

[1] Includes 34, 38 and 10 taxi/rideshare vehicle trips to/from the Bedford Avenue (L) subway station and nearby ferry stops in the AM, PM and Saturday peak hours.

[2] Includes walk-only trips and pedestrians en route to/from nearby subway stations and bus and ferry stops. Excludes transit/ferry trips using taxi/rideshare services to access the site.

As shown in Table 10-7, the Proposed Actions are expected to generate approximately 418 and 438 new subway trips in the weekday AM and PM peak hours. As these numbers of trips would exceed the 200-trip *CEQR Technical Manual* analysis threshold, a Level 2 screening analysis is warranted to determine which subway stations and routes would require quantified analysis. As also shown in Table 10-7 the Proposed Actions are expected to generate only 51 new trips by bus in the weekday AM peak hour and five new trips by bus in the PM. Given that a total of four NYC Transit bus routes operate within ¼-mile of the Development Site (the B32, B43, B48 and B62), the number of incremental trips in one direction on any one of these routes would not exceed the 50-trip *CEQR Technical Manual* analysis threshold. Therefore, a detailed analysis of bus conditions under the Proposed Actions is not warranted and not included in this EIS.

PEDESTRIANS

According to *CEQR Technical Manual* guidelines, a quantified analysis of pedestrian conditions is typically required if a proposed action would result in 200 or more peak hour pedestrian trips at any pedestrian element (sidewalk, corner area or crosswalk). As shown in Table 10-7, the Proposed Actions' RWCDS would generate an incremental demand of approximately 680, 1,458, 809 and 470 total pedestrian trips (including walk-only trips and pedestrians en route to and from nearby subway stations, and bus and ferry stops) in the weekday AM, midday and PM, and Saturday peak hours, respectively. As the numbers of trips in all of these periods would exceed the 200-trip threshold, a Level 2 screening analysis is warranted to determine which if any pedestrian elements would require quantified analysis.

E. 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.

Vehicular Traffic

Based upon the projected development associated with the Proposed Actions, there would be 215 additional vehicle trips during the weekday AM peak hour and 180 during the PM 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 first assigned to the proposed rezoning area street network to identify the intersections that would potentially exceed the 50-trip threshold during one or more periods. The assignments of auto and taxi trips to the street network in proximity to the Development Site were based on the anticipated origins and destinations of vehicle trips associated with the different land uses projected under the RWCDS (i.e., office/light industrial/warehouse and local retail/restaurant). The origins/destinations of office/light industrial/warehouse uses were based on 2012-2016 American Community Survey (ACS) five-year reverse journey-to-work data. Origins/destinations for local retail/restaurant uses that generate mostly local trips were based on population density in proximity to the Development Site and surrounding neighborhoods within a 0.5-mile radius. (Additional data on the distributions of auto and taxi trips by land use are presented in the TPF/TDF *Technical Memorandum* included in Appendix D.) Based on the O-D data, auto and taxi trips were first assigned to various portals on the periphery of Greenpoint/Williamsburg, and from there via the most direct route to the Development Site. Some taxi trips were also assigned to routes connecting the Development Site to nearby transit facilities (i.e., the Bedford Avenue (L) subway station and the North Williamsburg and Greenpoint ferry stops) to reflect the use of taxi/ridesharing services by some transit riders. As the Proposed Actions' RWCDS includes on-site accessory parking, auto trips were assigned directly to the proposed parking garage entrance on Gem Street. (Although some drivers will likely park on-street in the area, assigning all trips to the Development Site can be considered a conservative approach with respect to the traffic impact analysis as it concentrates project traffic at intersections in proximity to the site rather than dispersing it to outlying streets.) Taxis were generally assigned to the building frontages on Gem Street and Banker Street. Trucks were assigned to DOT-designated truck routes—i.e., McGuinness Boulevard and Kent Avenue/Franklin Street (both Local Truck Routes)—and then to the most direct paths to and from the Development Site's loading docks on Meserole Avenue and Banker Street.

The assignment of net incremental peak hour vehicle trips at intersections in proximity to the Development Site are shown in Figure 10-1. As shown in Figure 10-1, a total of 13 intersections (three signalized and 10 unsignalized) were selected for detailed analysis as they would exceed the 50-trip threshold in one or more peak hours.

Transit

Subway Stations

As shown in Table 10-8, the Proposed Actions are expected to generate a net total of approximately 418 and 438 incremental subway trips in the weekday AM and PM peak hours, respectively. These trips are expected to be concentrated at two subway stations located in proximity of the Development Site—the Nassau Avenue station served by G trains operating on the Crosstown Line between western Brooklyn and Long Island City, Queens, and the Bedford Avenue station served by L trains operating on the Canarsie Line between Canarsie, Brooklyn and the 14th Street corridor in Manhattan (see Figure 10-2).

TABLE 10-8
RWCDS Net Incremental Peak Hour Subway Trips by Station

Subway Station	AM Peak Hour Trips			PM Peak Hour Trips		
	Into Project Area	Out of Project Area	Total	Into Project Area	Out of Project Area	Total
RWCDS Summary						
Project-Generated Trips:	920	126	1,046	-38	1,177	1,139
Project-Generated Subway Trips:	393	25	418	-17	455	438
Subway Station Summary						
Bedford Avenue (L)	161	10	171	-5	188	183
Nassau Avenue (G)	232	15	247	-12	267	255
Total	**393**	**25**	**418**	**-17**	**455**	**438**

New subway trips generated by the Proposed Actions' office component were assigned to the Nassau Avenue (G) and Bedford Avenue (L) subway stations based on trip origin data from the 2019 office worker

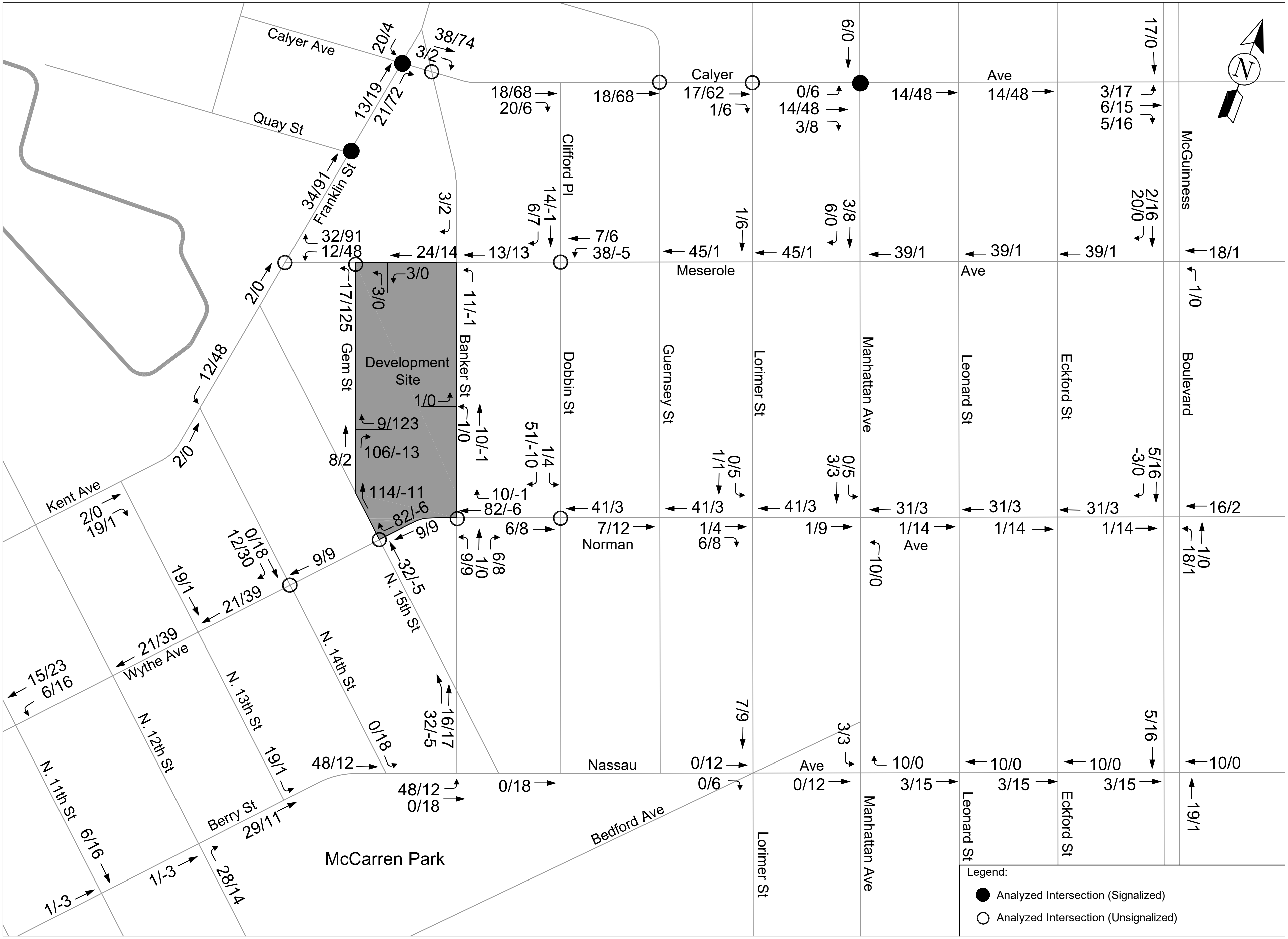
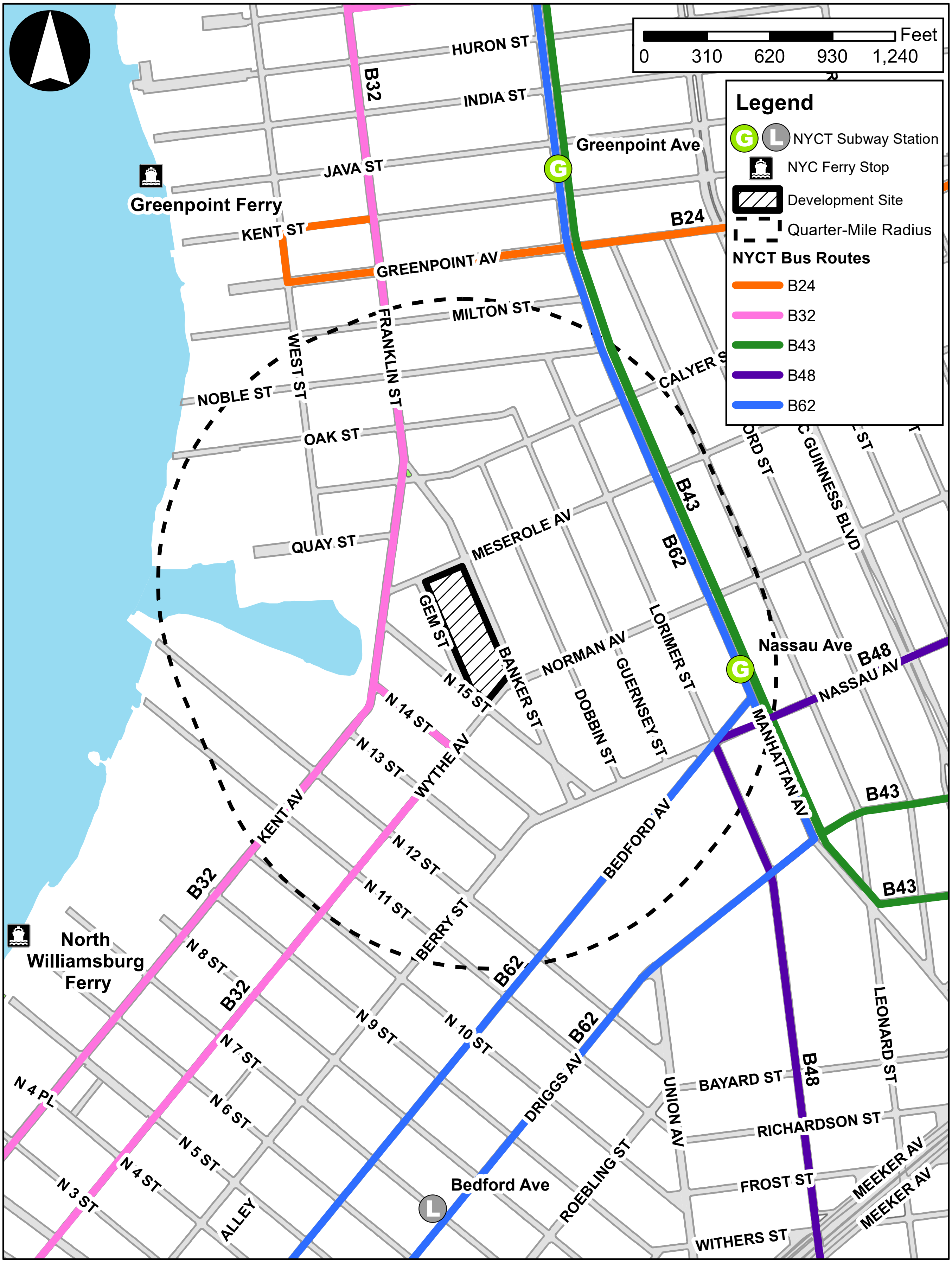


Figure 10-1
Project Increment Peak Hour Traffic Volumes and Analyzed Intersections

Figure 10-2
Transit Services



mode choice survey conducted by PHA. Trips from other uses were assigned based on 2012-2016 ACS five-year reverse journey-to-work data. As shown in Table 10-8, based on these assignments, it is estimated that new subway demand from the Proposed Actions would likely exceed the 200-trip *CEQR Technical Manual* analysis threshold in the AM and PM periods at the Nassau Avenue (G) station, and this station was therefore selected for detailed analysis. Key circulation elements (e.g., stairs and fare arrays) expected to be used by concentrations of new demand from the Proposed Actions are analyzed.

SUBWAY LINE HAUL

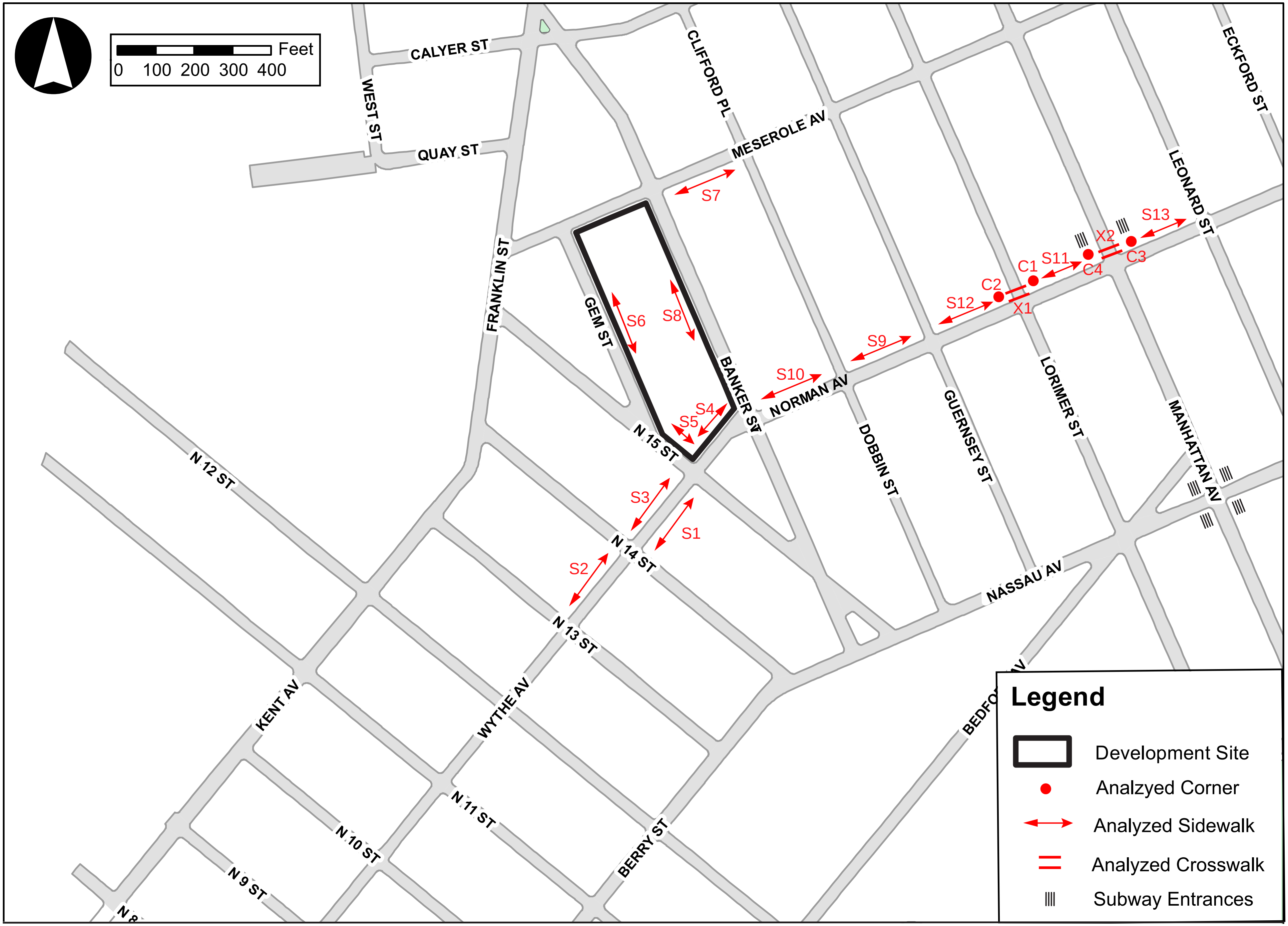
As discussed above, the Development Site is served by G trains operating on the Crosstown Line and L trains operating on the Canarsie Line. As it is possible that the Proposed Actions' RWCDS would generate more than 200 new peak hour subway trips in one direction on G trains, line haul conditions on these trains are analyzed. The analysis uses existing subway service and ridership data provided by NYCT to assess existing, future No-Action, and future With-Action conditions at the maximum load points during the weekday AM and PM peak hours.

Pedestrians

Under *CEQR Technical Manual* criteria, detailed pedestrian analyses are generally warranted if a proposed action is projected to result in 200 or more peak hour pedestrians at any sidewalk, corner area or crosswalk. As shown in Table 10-7, the Proposed Actions' RWCDS is expected to generate approximately 216 incremental walk-only trips in the weekday AM peak hour, 1,495 in the midday peak hour, 371 in the PM peak hour, and 457 in the Saturday peak hour. Persons walking to and from subway station entrances and bus and ferry stops would add approximately 464, 438 and 13 incremental pedestrian trips to sidewalks and crosswalks in the vicinity of the Development Site during the weekday AM and PM, and Saturday peak hours, respectively, and there would be a net decrease of 37 such trips in the weekday midday. (Transit riders using taxi/ridesharing services to/from the site are not included in these totals.) In the weekday AM and PM peak hours, incremental pedestrian trips would be most concentrated on sidewalks and crosswalks adjacent to the Development Site as well as along corridors connecting the site to the Nassau Avenue (G) and Bedford Avenue (L) subway stations. In the weekday midday and Saturday periods, pedestrian trips would tend to be more dispersed, as people travel throughout the area for lunch, shopping and/or errands.

Given the numbers of incremental pedestrian trips that would be generated, a detailed analysis of pedestrian conditions under the Proposed Actions is warranted. As project increment pedestrian trips during the Saturday peak hour would be substantially less than in the weekday AM, midday and PM peak hours, and as pedestrian flow patterns during the Saturday peak hour are expected to be similar to those in the weekday midday, significant adverse pedestrian impacts on Saturday over and above those identified for the weekday peak hours are considered unlikely. The analysis of pedestrian conditions will therefore focus on the weekday AM, midday and PM periods, and a Saturday peak hour will not be analyzed. Based on pedestrian count data collected in proximity to the Development Site, the weekday 8-9 AM, 1-2 PM and 5:30-6:30 PM peak hours have been selected for analysis.

Based on a preliminary assignment of incremental peak hour pedestrian trips, a total of 19 pedestrian elements (13 sidewalks, two crosswalks and four corner areas) are expected to experience an increase of 200 or more trips in one or more peak hours and have therefore been selected for analysis. As shown in Figure 10-3, these elements are primarily located in the immediate proximity of the Development Site and along the Norman Avenue/Wythe Avenue corridor which connects the Development Site to nearby subway stations and bus routes.



Acme Fish Expansion

Figure 10-3
Analyzed Pedestrian Elements

Parking

Parking demand from retail, office and light industrial/manufacturing/warehouse uses typically peaks in the midday period and declines during the afternoon and evening, while parking demand from restaurant uses typically peaks in the evening. As the proposed 150 spaces of on-site accessory parking are not expected to be sufficient to accommodate all of the projected demand under the Proposed Actions' RWCDS, a detailed analysis of parking conditions within ¼-mile of the Development Site is included in this EIS. Existing on-street and off-street parking inventories are provided to document the existing supply and demand during the weekday midday period (when the combined parking demand from the proposed retail, office and light industrial/manufacturing/warehousing uses would be greatest). Changes in the parking supply and utilization under both No-Action and With-Action conditions are also forecasted.

F. TRANSPORTATION ANALYSES METHODOLOGIES

Traffic

Analysis Methodology

The traffic analysis examines conditions in the weekday AM and PM peak hours when the increased travel demand attributable to the Proposed Actions is expected to be the greatest. The 7:30-8:30 AM and 5-6 PM peak hours were selected for analysis based on existing traffic volumes in the study area as reflected in automatic traffic recorder (ATR) count data.

The capacity analyses at intersections were 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).

For unsignalized intersections, the HCM methodology generally assumes that traffic on major streets is not affected by traffic flows on minor streets. Left turns from a major street are assumed to be affected by the opposing, or oncoming, traffic flow on that major street. Traffic on minor streets is affected by all conflicting movements. Similar to signalized intersections, the HCM methodology expresses the quality of traffic flow at unsignalized intersections in terms of LOS based on the amount of delay that a driver experiences. Level of service definitions used to characterize traffic flows at unsignalized intersections differ somewhat from those used for signalized intersections, primarily because drivers anticipate different levels of performance from the two different kinds of intersections. For unsignalized intersections, LOS ranges from A, representing minimal delay (ten seconds or less per vehicle, as it is for signalized intersections), to F, which represents long delays (greater than 50 seconds per vehicle, compared to greater than 80 seconds per vehicle for signalized intersections).

Table 10-9 shows the LOS/delay relationship for signalized and unsignalized 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. For unsignalized intersections, a movement with LOS E or F is also identified as congested.

TABLE 10-9
Intersection Level of Service Criteria

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

Source: *2000 Highway Capacity Manual*

Significant Impact Criteria

The identification of 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 and 30.0 seconds/vehicle for unsignalized intersections), the impact is not considered 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 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 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 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 significant impact.

The same criteria apply to signalized and unsignalized intersections. However, for traffic on a minor street at an unsignalized intersection to result in a significant impact, 90 passenger car equivalents (PCEs) must be projected in the future With-Action condition in any peak hour.

Transit

Analysis Methodology

SUBWAY STATIONS

To determine existing conditions at analyzed subway station elements, subway ridership data were collected at the Nassau Avenue (G) subway station in May 2018. The methodology for assessing subway station pedestrian circulation elements (stairs, escalators, and passageways) and fare control elements (low turnstiles, high entry/exit turnstiles [HEETs], and high exit turnstiles [HXTs]) compares existing and projected pedestrian volumes with the element's design capacity to yield a v/c ratio. All analyses reflect pedestrian flow volumes over a 15-minute interval during each peak hour. Based on existing pedestrian volumes at the Nassau Avenue (G) station, the peak hours selected for the analysis of subway station conditions are 8:00-9:00 AM and 5:00-6:00 PM. (As noted previously, transit analyses typically focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway and bus systems is usually highest.)

Under *CEQR Technical Manual* guidance, the capacity of a stairway or passageway is determined based on four factors: the NYCT guideline capacity, the effective width, and surging and counter-flow factors, if applicable. NYCT guideline capacity is ten passengers per foot-width per minute (pfm) for stairs and 15 pfm for passageways. The effective width of a stair or passageway is the actual width adjusted to reflect pedestrian avoidance of sidewalls and for center handrails, if present. A surging factor is applied to existing pedestrian volumes to reflect conditions where pedestrian flows tend to be concentrated (or surged) during shorter periods within the 15-minute analysis interval. This factor, which is based on the size of the station and the proximity of the pedestrian element to the station platforms, can reduce the calculated capacity by up to 25 percent. Lastly, a friction (or counter-flow) factor reducing calculated capacity by ten percent is applied where opposing pedestrian flows use the same stair or passageway. (No friction factor is applied if the flow is all or predominantly in one direction.)

By contrast with stairways and passageways, under *CEQR Technical Manual* guidance the capacity of an escalator or turnstile is determined based on only two factors: the NYCT guideline capacity for a 15-minute interval and a surging factor of up to 25 percent. Table 10-10 shows the *CEQR Technical Manual* LOS criteria for all subway station elements. As shown in Table 10-10, six levels of service are defined with letters A through F. LOS A is representative of free flow conditions without pedestrian conflicts, and LOS F depicts severe congestion and queuing.

TABLE 10-10
Level of Service Criteria for Subway Station Elements

LOS	Description	V/C Ratio
A	Free Flow	0.00 to 0.45
B	Fluid Flow	0.45 to 0.70
C	Fluid, somewhat restricted	0.70 to 1.00
D	Crowded, walking speed restricted	1.00 to 1.33
E	Congested, some shuffling and queuing	1.33 to 1.67
F	Severely congested, queued	> 1.67

Source: 2020~~14~~ *CEQR Technical Manual*

SUBWAY LINE HAUL

Line haul capacity is based on the guideline capacity per subway car multiplied by the number of subway cars crossing the maximum load point in the peak hour. (Maximum guideline capacities established by NYCT for each car class are 110 passengers/car for a 51-foot subway car, 145 passengers/car for a 60-foot car, and 175 passengers/car for a 75-foot car.) The v/c ratio is determined by dividing the number of peak hour passengers traveling through the maximum load point by the line haul capacity. (Maximum load point subway service and ridership data were provided by NYCT.) The subway line haul analysis focuses on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway system is usually highest.

Significant Impact Criteria

SUBWAY STATIONS

The *CEQR Technical Manual* identifies a significant impact for stairways and passageways in terms of the minimum width increment threshold (WIT) based on the minimum amount of additional capacity that would be required to restore conditions to either their No-Action v/c ratio or to a v/c ratio of 1.00 (LOS C/D), whichever is greater. Stairways that are substantially degraded in LOS or that experience the formation of extensive queues are classified as significantly impacted. Significant adverse stairway or passageway impacts are typically considered to have occurred once the thresholds shown in Table 10-11 are reached or exceeded.

TABLE 10-11
Significant Impact Thresholds for Stairways and Passageways

With-Action V/C Ratio	WIT for Significant Impact (inches)	
	Stairway	Passageway
1.00-1.09	8	13
1.10-1.19	7	11.5
1.20-1.29	6	10
1.30-1.39	5	8.5
1.40-1.49	4	6
1.50-1.59	3	4.5
≥1.6	2	3

Source: 202014 *CEQR Technical Manual*

For turnstiles, escalators, and high-wheel exit gates, the *CEQR Technical Manual* defines a significant impact as an increase from a No-Action v/c ratio of below 1.00 to a v/c ratio of 1.00 or greater. Where a facility is already at a v/c ratio of 1.00 or greater, a 0.01 change in v/c ratio is also considered significant.

SUBWAY LINE HAUL

For subway line haul conditions*, CEQR Technical Manual* criteria specify that any increases in load levels that remain within practical capacity limits are generally not considered significant. However, significant adverse subway line haul impacts can occur if a proposed action is expected to generate an incremental increase averaging five or more riders per subway car on lines projected to carry loads exceeding guideline capacity. This is based on the general assumption that when subways are at or above practical capacity, the addition of even five or more riders per car is perceptible.

Pedestrians

Analysis Methodology

Data on peak period pedestrian flow volumes were collected along analyzed sidewalks, corner areas, and crosswalks in the vicinity of the Development Site in May 2018. Peak hours were determined by comparing rolling hourly averages, and the highest 15-minute volumes within the selected peak hours were used for analysis. Based on existing peak pedestrian volumes along major corridors in the study area, the peak hours selected for analysis include the weekday 8-9 AM, 1-2 PM, and 5:30-6:30 PM periods. As project increment pedestrian trips during the Saturday peak hour would be substantially less than in the weekday AM, midday and PM peak hours, and as pedestrian flow patterns during the Saturday peak hour are expected to be similar to those in the weekday midday, significant adverse pedestrian impacts on Saturday over and above those identified for the weekday peak hours are considered unlikely. The Saturday peak hour is therefore not analyzed for pedestrians.

Peak 15-minute pedestrian flow conditions during the weekday AM, midday, and PM peak hours 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 street crosswalks and corners 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 significant capacity limitations and inconvenience. Table 10-12 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.

Significant Impact Criteria

SIDEWALKS

The *CEQR Technical Manual* impact criteria for a non-central business district (non-CBD) location are used to identify significant adverse impacts due to the Proposed Actions. These criteria define a significant adverse sidewalk impact to have occurred under platoon conditions if the average pedestrian space under the No-Action condition is greater than 44.3 square feet/pedestrian (sf/ped), and the average pedestrian space under the With-Action condition is 40.0 sf/ped or less (LOS D or worse). If the average pedestrian space under the With-Action condition is greater than 40.0 sf/ped (LOS C or better), the impact should not be considered significant. If the No-Action pedestrian space is between 6.4 and 44.3 sf/ped, a reduction in pedestrian space under the With-Action condition should be considered significant based on Table 10-13, which shows a sliding-scale that identifies what decrease in pedestrian space is considered a 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 10-13, the impact is not considered 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 significant.

TABLE 10-12
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: 2020~~14~~ *CEQR Technical Manual*

CORNER AREAS AND CROSSWALKS

For non-CBD areas, *CEQR Technical Manual* criteria define a significant adverse corner area or crosswalk impact to have occurred if the average pedestrian space under the No-Action condition is greater than 26.6 sf/ped and, under the With-Action condition, the average pedestrian space decreases to 24 sf/ped or less (LOS D or worse). If the pedestrian space under the With-Action condition is greater than 24 sf/ped (LOS C or better), the impact should not be considered significant. If the average pedestrian space under the No-Action condition is between 5.1 and 26.6 sf/ped, a decrease in pedestrian space under the With-Action condition should be considered significant based on Table 10-14 which shows a sliding-scale that identifies what decrease in pedestrian space is considered a 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 10-14, the impact is not considered 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 significant.

TABLE 10-13
Significant Impact Criteria for Sidewalks with Platooned Flow in a Non-CBD Location

No-Action Condition Pedestrian Flow (sf/ped)	With-Action Condition Pedestrian Flow Increment to be Considered a Significant Impact (sf/ped)
>44.3	With-Action Condition < 40.0
43.5 to 44.3	Reduction ≥ 4.3
42.5 to 43.4	Reduction ≥ 4.2
41.6 to 42.4	Reduction ≥ 4.1
40.6 to 41.5	Reduction ≥ 4.0
39.7 to 40.5	Reduction ≥ 3.9
38.7 to 39.6	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
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: 202014 *CEQR Technical Manual*

TABLE 10-14
Significant Impact Criteria for Corners and Crosswalks in a Non-CBD Location

No-Action Condition Pedestrian Space (sf/ped)	With-Action Condition Pedestrian Space Reduction to be Considered a Significant Impact (sf/ped)
> 26.6	With-Action Condition < 24.0
25.8 to 26.6	Reduction ≥ 2.6
24.9 to 25.7	Reduction ≥ 2.5
24.0 to 24.8	Reduction ≥ 2.4
23.1 to 23.9	Reduction ≥ 2.3
22.2 to 23.0	Reduction ≥ 2.2
21.3 to 22.1	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
15.0 to 15.8	Reduction ≥ 1.4
14.1 to 14.9	Reduction ≥ 1.3
13.2 to 14.0	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
6.0 to 6.8	Reduction ≥ 0.4
5.1 to 5.9	Reduction ≥ 0.3
< 5.1	Reduction ≥ 0.2

Source: 202014 *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 NYCDOT.

Parking

Analysis Methodology

The 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 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.

A parking demand forecast for the Proposed Actions' RWCDS is provided to document the projected demand at the proposed 150-spaces of on-site accessory parking and the demand that would need to be accommodated on-street or at nearby off-street public parking facilities. As the Proposed Actions are predominantly commercial in nature (and therefore generate substantially less parking demand on weekends than on weekdays), and as demand from retail, office and light industrial/manufacturing uses typically peaks in the midday period and declines during the afternoon and evening, the parking analysis focuses on the weekday midday period.

Significant Shortfall Criteria

Should a proposed action generate the need for more parking than it provides, a shortfall of spaces may be considered 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 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 2020~~14~~ *CEQR Technical Manual*. As the proposed rezoning area is located within Zone 2 as shown in Map 16-2, the inability of the Proposed Actions or the surrounding area to accommodate future parking demands would be considered a parking shortfall, but would generally not be considered significant due to the magnitude of available alternative modes of transportation.

G. TRAFFIC

Existing Conditions

Study Area Street Network

As shown in Figure 10-4, the street network in proximity to the Development Site is comprised of an irregular grid pattern of collector and one-way local streets. Many of the intersections along local streets are stop-controlled, with traffic signals more common along collector streets and arterial roadways.

The Development Site itself is bordered by Banker Street on the east, North 15th and Gem streets on the west, Meserole Avenue on the north and Wythe Avenue on the south. **Banker Street** is a one-way northbound local street that typically operates with one moving lane plus parking along both curbs. A striped bicycle lane is located outboard of the parking lane along the west curb. **North 15th Street** and **Gem Street** are also one-way northbound local streets, and they typically operate with one to two moving lanes plus parking along both curbs. Both **Meserole Avenue** and **Wythe Avenue** are one-way westbound local streets that typically operate with one moving lane plus parking along both curbs. East of Banker Street, Wythe Avenue becomes **Norman Avenue**, which operates two-way with one moving lane plus curbside parking in each direction. Another local street that is expected to be used by project-generated traffic is **Calyer Street** which runs parallel and to the north of Meserole Avenue. Calyer Street operates one-way eastbound, typically with one moving lane plus parking along both curbs.

To the west of the Development Site is **Franklin Street**, a two-way, north-south collector street that operates with one moving lane plus a striped curbside bicycle lane in the northbound direction, and one moving lane, a striped bicycle lane and a curbside parking lane in the southbound direction. South of North 14th Street, Franklin Street becomes **Kent Avenue** which operates one-way northbound with one moving lane plus a two-way striped bicycle path along the west curb. NYC Transit B32 buses operate along Franklin Street (in both directions), and along Kent Avenue (northbound only). Another collector street of note is **Manhattan Avenue** located to the east of the Development Site. Manhattan Avenue is a commercial corridor that operates two-way in a north-south orientation with one moving lane plus curbside parking in each direction. NYC Transit B43 and B62 buses operate along the street.

The primary arterial roadway in proximity to the Development Site is **McGuinness Boulevard** located approximately 0.4 mile to the east. McGuinness Boulevard is a two-way north-south roadway that operates with two moving lanes plus curbside parking in each direction. A raised median separates northbound and southbound traffic, and left-turn bays are provided at many intersections. McGuinness Boulevard is a New York City Department of Transportation (DOT)-designated Local Truck Route and provides a connection to the Brooklyn-Queens Expressway (I-278) to the south of the Development Site.

BUS ROUTES

As shown in Figure 10-2, NYCT bus routes primarily operate along portions of the following study area corridors:

- Bedford Avenue (B62)
- Kent Avenue/Franklin Street (B32)
- Lorimer Street (B48)
- Manhattan Avenue (B43, B62)

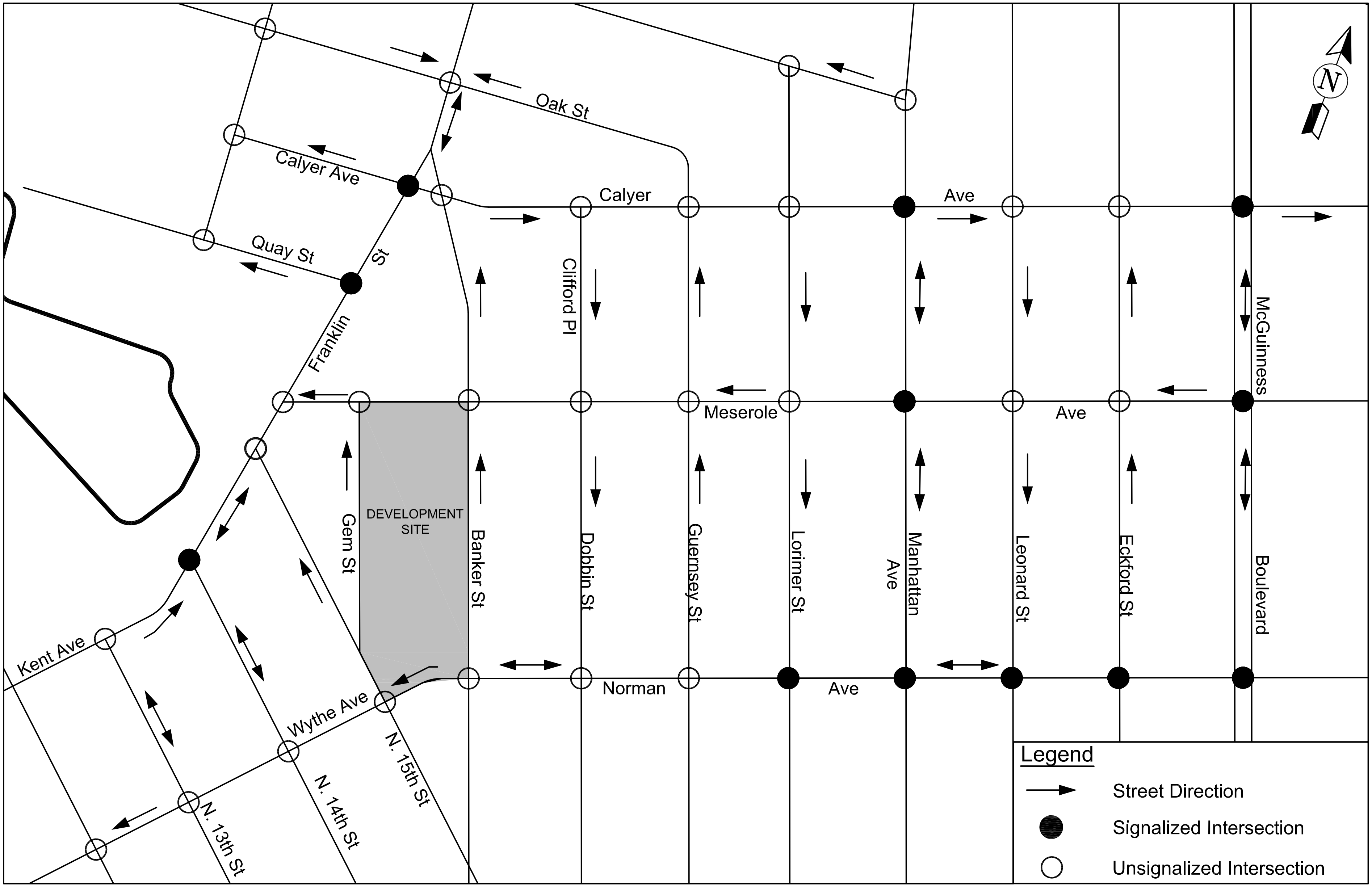


Figure 10-4
Study Area Street Network

- Nassau Avenue (B48)
- North 14th Street (B32)
- Wythe Avenue (B32)

TRUCK ROUTES

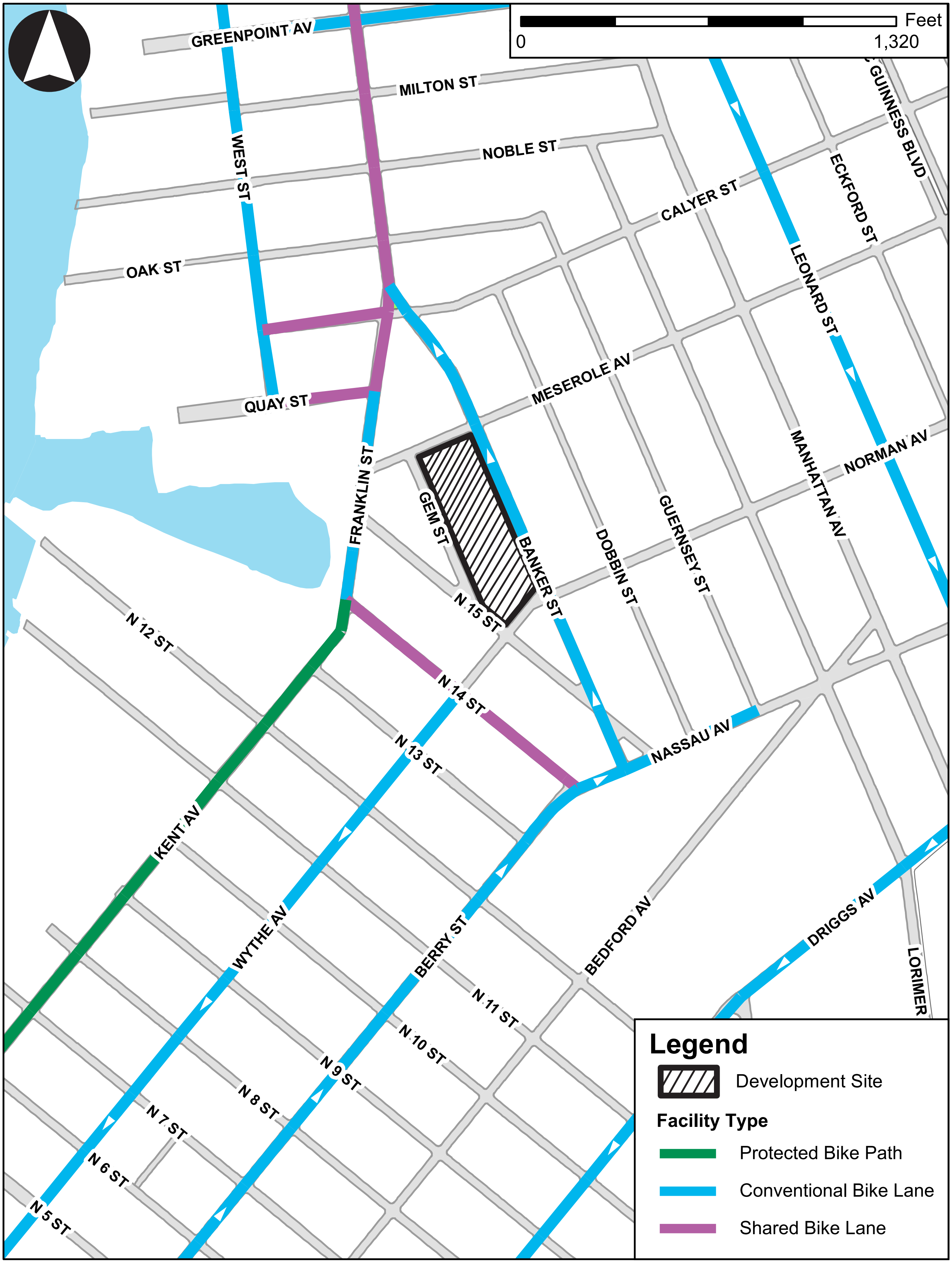
The City has established local and through truck routes to manage the flow of trucks and improve the quality of neighborhoods. The City defines a truck as "a vehicle which is designed for transportation of property, which has either of the following characteristics: two axles and six tires or three or more axles." Trucks must generally travel on local truck routes to reach the intersection nearest their destinations. In the vicinity of the Development Site, local truck routes have been designated along Kent Avenue/Franklin Street, Greenpoint Avenue, McGuinness Boulevard, North 10th Street and North 11th Street. Through trucks are defined as having neither an origin nor a destination within the Borough of Manhattan. The nearest designated through truck route in proximity to the Development Site is the Brooklyn-Queens Expressway (I-278).

BICYCLE LANES

As shown in Figure 10-5, bicycle facilities have been installed along the following roadways in the vicinity of the Development Site:

- Banker Street (a bicycle lane from Berry Street to Franklin Street)
- Berry Street (a bicycle lane south of Guernsey Street)
- Calyer Street (a shared lane between West Street and Franklin Street)
- Driggs Avenue (a bicycle lane south of Leonard Street)
- Franklin Street (bicycle lanes from North 14th Street to Quay Street and shared lanes north of Quay Street)
- Greenpoint Avenue (bicycle lanes from West Street to Manhattan Avenue, shared lanes from Manhattan Avenue to Provost Street, and bicycle lanes east of Provost Street)
- Kent Avenue (a protected bicycle path south of North 14th Street)
- Leonard Street (a bicycle lane south of Greenpoint Avenue)
- Manhattan Avenue (bicycle lanes north of Greenpoint Avenue)
- North 14th Street (a shared lane between Kent Avenue and Berry Street)
- Quay Street (a shared lane between West and Franklin streets)
- West Street (bicycle lanes between Quay and Eagle streets)
- Wythe Avenue (a bicycle lane south of North 14th Street)

Area Bicycle Routes



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 May 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 May 2018. Signal timing plans for signalized intersections within the study area were obtained from NYCDOT. Figure 10-6 shows existing traffic volumes during weekday AM and PM peak hours.

Intersection Capacity Analysis

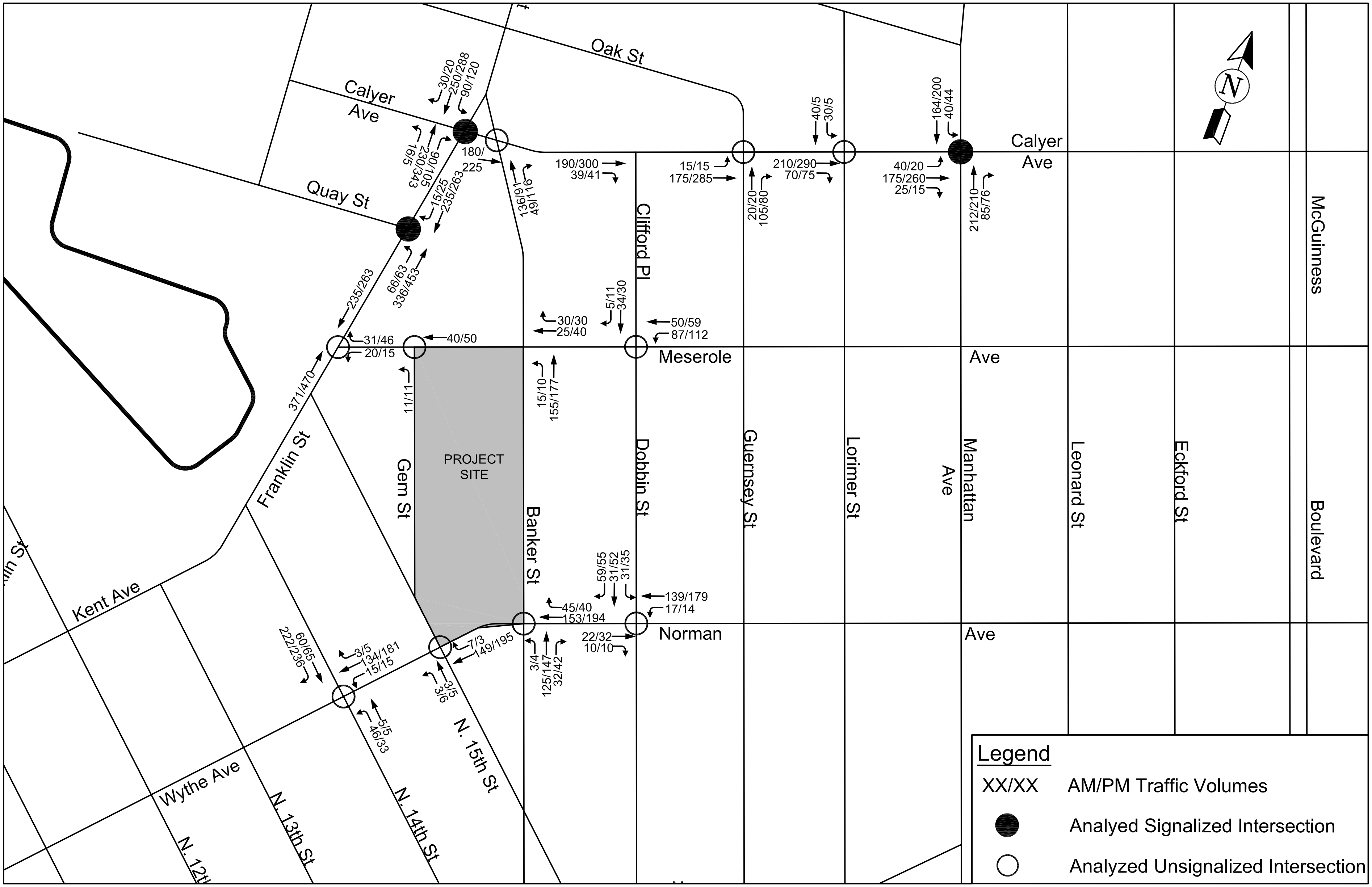
Existing v/c ratios, delays, and LOS for individual lane groups at analyzed intersections are shown in Table 10-15. A lane group is considered congested in Table 10-15 if it operates at LOS E or F and/or with a v/c ratio of 0.90 or above. A v/c ratio of 1.00 or above reflects capacity conditions. As shown in Table 10-15, only one analyzed intersection—Calyer Street at Lorimer Street—currently experiences congestion. During the AM peak hour, the eastbound Calyer Street approach to Lorimer Street operates at LOS E. No other intersections currently experience congestion in either analyzed peak hour.

The Future Without the Proposed Actions (No-Action Condition)

Future No-Action Traffic Growth

Between 2018 and 2025~~4~~, it is expected that transportation demands in the vicinity of the Development Site will increase due to long-term background growth, new uses on the Development Site, and other planned developments unrelated to the Proposed Actions. As shown in Table 10-1, for analysis purposes it is assumed that under the No-Action RWCDS Acme would vacate its buildings on the Development Site and that the site would be occupied by a total of 148,085 gsf (excluding parking), comprised of approximately 35,225 gsf of restaurant/entertainment uses, 66,750 gsf of creative office space, 28,610 gsf of warehousing spaces, and 17,500 gsf of light industrial (distillery) space, as well as an estimated 107 accessory parking spaces.

In order to forecast future traffic conditions without the Proposed Actions (the No-Action condition), the developments within ¼-mile of the Development Site listed in Table 2-3 in Chapter 2, "Land Use, Zoning and Public Policy," were considered, along with more distant developments that would potentially generate trips through the traffic study area. The future No-Action traffic volumes also reflect annual background growth rates of 0.5 percent per year for the 2018 through 2023 period and 0.25 percent per year for 2023 to 2025~~4~~. These background growth rates, recommended in the ~~2014~~ *CEQR Technical Manual* for projects in Brooklyn (outside of the Downtown area), are applied to account for smaller projects and as-of-right developments not reflected in Table 2-3, and general increases in travel demand not attributable to specific development projects. Where new developments were found to generate relatively little new traffic through analyzed intersections, demand from these sites was also assumed to be reflected as part of general background growth. Figure 10-7 shows total No-Action traffic volumes during weekday AM and PM peak hours.



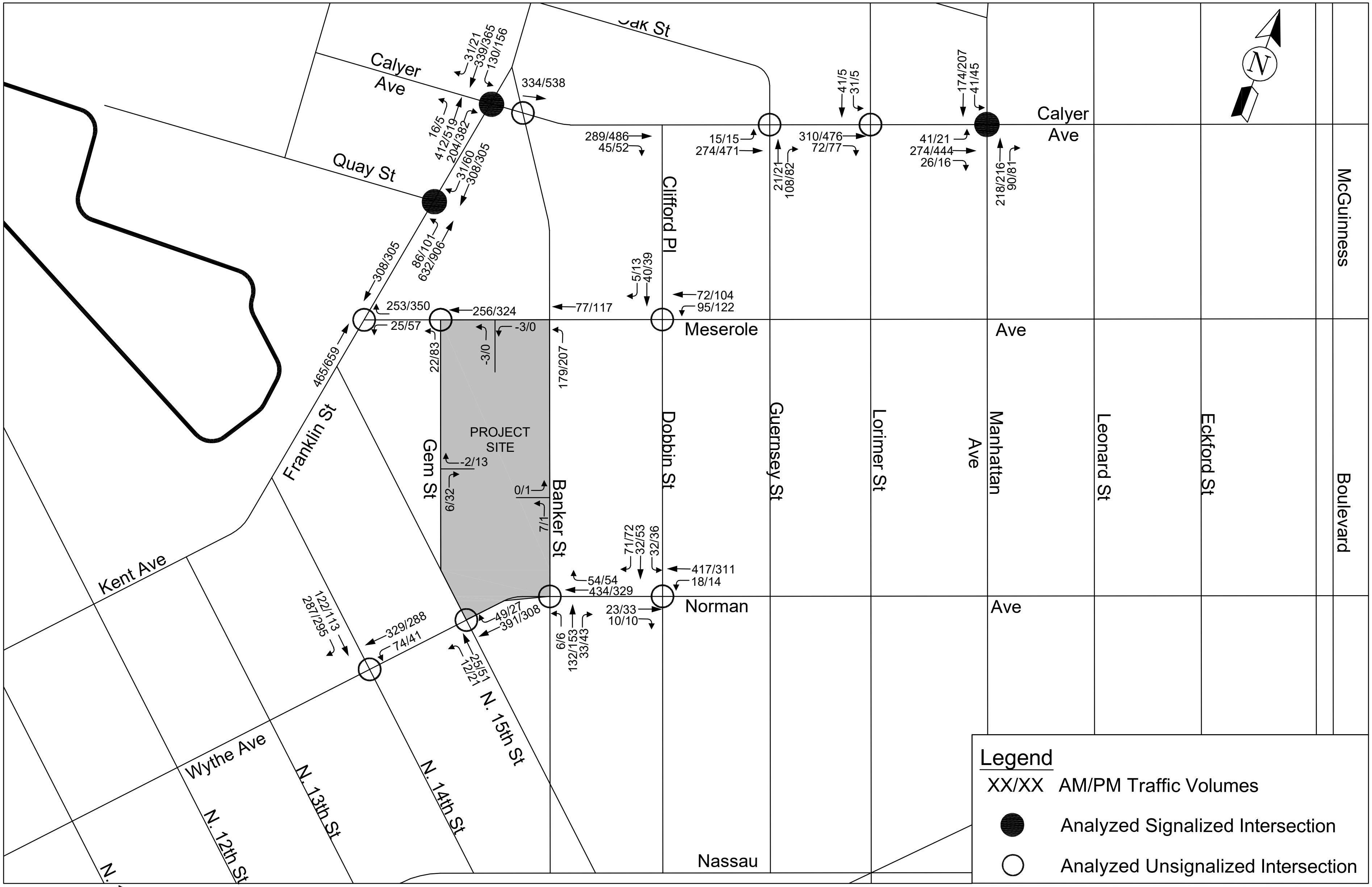
Acme Fish Expansion

Figure 10 - 6
Existing Weekday AM and PM Peak Hour Traffic Volumes

TABLE 10-15
Existing Conditions Intersection Level of Service Analysis

Intersection	Lane Group	AM Peak Hour				PM Peak Hour		
		V/C Ratio	Delay (sec.)	LOS		V/C Ratio	Delay (sec.)	LOS
Calyer Street (EB/WB) @ Franklin Street (NB/SB)	NB-LTR	0.59	13.7	B		0.69	15.9	B
	SB-LTR	0.66	16.3	B		0.84	26.4	C
Calyer Street (EB) @ Banker Street (NB) (Unsignalized)	EB-TL	0.00	7.3	A		0.00	7.4	A
	NB-TR	0.34	13.0	B		0.36	13.5	B
Calyer Street (EB) @ Guemsey Street (NB) (Unsignalized)	EB-LT	0.01	7.6	A		0.01	7.5	A
	NB-TR	0.26	13.3	B		0.23	14.5	B
Calyer Street (EB) @ Lorimer Street (SB) (Unsignalized)	EB-TR	0.85	47.1	E	*	0.68	21.6	C
	SB-LT	0.02	7.3	A		0.00	7.2	A
Calyer Street (EB) @ Manhattan Avenue (NB/SB)	EB-LTR	0.50	33.2	C		0.57	35.1	D
	NB-TR	0.51	19.1	B		0.41	16.8	B
	SB-LT	0.46	18.5	B		0.41	17.2	B
Quay Street (EB) @ Franklin Street (NB/SB)	NB-LT	0.65	15.5	B		0.73	17.5	B
	SB-TR	0.38	10.4	B		0.43	10.8	B
Meserole Avenue (WB) @ Franklin Street (NB/SB) (Unsignalized)	WB-LR	0.12	12.6	B		0.16	14.3	B
Meserole Avenue (WB) @ Gem Street (NB) (Unsignalized)	NB-L	0.01	8.8	A		0.02	9.2	A
Meserole Avenue (WB) @ Dobbin Street (SB) (Unsignalized)	WB-LT	0.07	7.7	A		0.09	7.7	A
	SB-TR	0.10	13.5	B		0.11	13.5	B
North 14th Street (EB/WB) @ Wythe Avenue (SB) (Unsignalized, All-Way Stop)	EB-TR		10.0	B			10.3	B
	WB-LT		8.6	A			8.9	A
	SB-LTR		9.8	A			10.2	B
North 15th Street (WB) @ Wythe Avenue (SB) (Unsignalized)	WB-LT	0.01	10.3	B		0.02	11.7	B
Norman Avenue (WB) @ Banker Street (NB) (Unsignalized, All-Way Stop)	WB-TR		9.2	A			9.8	A
	NB-LTR		8.8	A			9.3	A
Norman Avenue (WB) @ Dobbin Street (NB) (Unsignalized)	WB-LT	0.01	7.6	A		0.01	7.7	A
	SB-LTR	0.23	12.1	B		0.29	13.5	B

Notes:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DfL-Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume to capacity ratio
LOS - level of service
* - Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.9)



Acme Fish Expansion

This figure has been updated for the FEIS.

Figure 10-7
No-Action Weekday AM and PM Peak Hour Traffic Volumes

No-Action Street Network Changes

In the future without the Proposed Actions, DOT expects to implement a number of pedestrian and bicycle improvements in proximity to the traffic study area that would affect traffic flow. These are expected to include:

- The closure to traffic of the segment of Banker Street between Calyer and Franklin streets and its inclusion as part of a pedestrian plaza (Calyer Triangle). Banker Street would be converted from one-way northbound to one-way southbound operation between Calyer and Meserole streets as part of this improvement.
- The conversion of North 14th Street from two-way to one-way eastbound operation between Franklin Street and Nassau Avenue to accommodate the installation of a new bicycle lane
- New or improved bicycle lanes along Franklin, Quay and West streets.

It should be noted that there have also been recent street network changes/closures related DOT initiatives in response to the COVID-19 pandemic, including the Open Streets Program, the Open Restaurants Program, Open Streets Outdoor Learning, transit initiatives, and new bicycle lanes. However, as these changes are generally a response to an emergency order, and no approvals that would be needed to make the closures permanent have been granted, they are not reflected in the analyses of No-Action or With-Action conditions.

Intersection Capacity Analysis

The weekday AM and PM peak hour v/c ratios, delays and LOS for lane groups at analyzed intersections under No-Action conditions are shown in Table 10-16. As shown in Table 10-16, a total of eight intersections (three signalized and five stop-controlled) are expected to have at least one congested lane group in one or more peak hours in the No-Action condition, compared to one stop-controlled intersection under existing conditions. These intersections include:

- Calyer Street and Franklin Street (signalized) where both approaches are expected to deteriorate from LOS B or C to LOS F in both the AM and PM peak hours;
- Eastbound Calyer Street at Lorimer Street (unsignalized) which is expected to deteriorate from LOS E to LOS F in the AM peak hour and from LOS C to LOS F in the PM;
- Eastbound Calyer Street at Manhattan Avenue (signalized) which is expected to deteriorate from LOS D to LOS E in the PM (and from LOS C to LOS D in the AM);
- Northbound Franklin Avenue at Quay Street (signalized) which is expected to deteriorate from LOS B to LOS E in the AM peak hour, and from LOS B to LOS F in the PM;
- Westbound Meserole Avenue at Franklin Street (unsignalized) which is expected to deteriorate from LOS B to LOS F in the PM peak hour;
- Westbound Meserole Avenue at Gem Street (unsignalized) which is expected to deteriorate from LOS A to LOS E in the PM peak hour;
- Westbound North 15th Street at Wythe Avenue (unsignalized) which is expected to deteriorate from LOS B to LOS F in the PM peak hour; and

- Southbound Dobbin Street at Norman Avenue (unsignalized) which is expected to deteriorate from LOS B to LOS E in the AM peak hour and LOS B to LOS F in the PM.

As shown in Table 10-16, three intersections are expected to have one or more lane groups operating at or over capacity (v/c $\geq$ 1.0) in the weekday AM peak hour and five in the PM. No intersection has a lane group operating at or over capacity under existing conditions.

The Future with the Proposed Actions (With-Action Condition)

Future With-Action Traffic Growth

As shown in Table 10-7, based on projected development associated with the Proposed Actions, there would be a net total of approximately 215 and 180 additional vehicle trips (auto, taxi and truck) during the weekday AM and PM peak hours, respectively. The assignments of auto and taxi trips to the street network in proximity to the Development Site were based on the anticipated origins and destinations of vehicle trips associated with the different land uses projected under the RWCDS—i.e., office/light industrial and local retail. (Additional data on the distribution of auto and taxi trips are provided in *The Acme Fish Expansion Transportation Planning Factors and Travel Demand Forecast Technical Memorandum* included in Appendix D.) Based on the origin/destination data, auto and taxi trips were first assigned to various portals on the periphery of Greenpoint/Williamsburg and from there via the most direct route to the Development Site. As the Proposed Actions' RWCDS includes on-site accessory parking, auto trips were assigned directly to the proposed parking garage entrance on Gem Street. (Although some drivers may park on-street or in other nearby off-street public parking garages in the area, assigning all trips to the Development Site can be considered a conservative approach with respect to the traffic impact analysis as it concentrates project traffic at analyzed intersections in proximity to the site rather than dispersing it to outlying streets.)

Taxis were generally assigned to the building frontages on Gem Street and Banker Street. Trucks were assigned to DOT-designated truck routes—i.e., McGuinness Boulevard and Kent Avenue/Franklin Street (both Local Truck Routes)—and then to the most direct paths to and from the Development Site's loading docks on Meserole Avenue (for Acme Smoked Fish) and Banker Street (for office and retail uses).

Figure 10-1 shows the assignment of incremental vehicle trips (auto, taxi and truck) generated during the weekday AM and PM peak hours under the Proposed Actions. Figure 10-8 shows the total weekday AM and PM traffic volumes in the 20254 future with the Proposed Actions. The volumes shown are the combination of the net incremental traffic generated by the Proposed Actions and the No-Action volumes.

Intersection Capacity Analysis

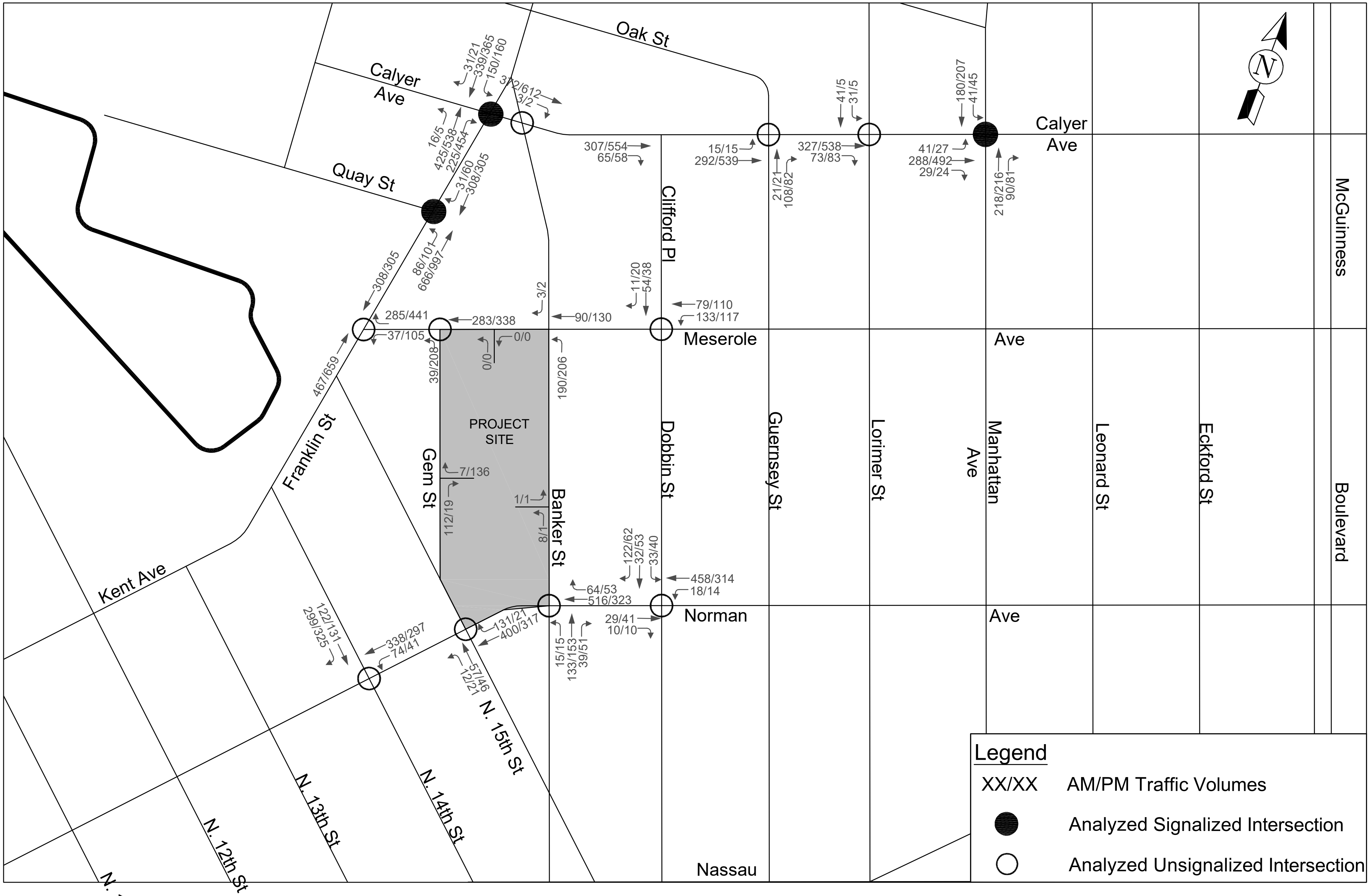
The weekday AM and PM peak hour v/c ratios, delays and LOS for lane groups at analyzed intersections under With-Action conditions are shown in Table 10-17, respectively. Lane groups with significant adverse impacts are identified based on the *CEQR Technical Manual* impact criteria described in Section F, "Transportation Analyses Methodologies." As shown in Table 10-17, a total of nine analyzed intersections (three signalized and six stop-controlled) would have at least one congested lane group in one or both peak hours in the With-Action condition, compared to eight (three signalized and five stop-controlled) in the No-Action condition. Significant adverse impacts were identified to six intersections during the AM peak hour and seven intersections in the PM peak hour. These intersections would include:

TABLE 10-16
No-Action Intersection Level of Service Analysis

Intersection	Lane Group	AM Peak Hour								PM Peak Hour						
		Existing				No-Action				Existing			No-Action			
		V/C Ratio	Delay (sec.)	LOS		V/C Ratio	Delay (sec.)	LOS		V/C Ratio	Delay (sec.)	LOS	V/C Ratio	Delay (sec.)	LOS	
Calyer Street (EB/WB) @ Franklin Street (NB/SB)	NB-LTR	0.59	13.7	B		1.12	85.6	F	*	0.69	15.9	B	1.52	254.9	F	*
	SB-LTR	0.66	16.3	B		1.14	102.0	F	*	0.84	26.4	C	1.80	383.8	F	*
Calyer Street (EB) @ Banker Street (NB) (Unsignalized)	EB-TL	0.00	7.3	A		-	-	-		0.00	7.4	A	-	-	-	
	NB-TR	0.34	13.0	B		-	-	-		0.36	13.5	B	-	-	-	
Calyer Street (EB) @ Guemsey Street (NB) (Unsignalized)	EB-LT	0.01	7.6	A		0.01	7.7	A		0.01	7.5	A	0.01	7.6	A	
	NB-TR	0.26	13.3	B		0.33	16.3	C		0.23	14.5	B	0.37	22.9	C	
Calyer Street (EB) @ Lorimer Street (SB) (Unsignalized)	EB-TR	0.85	47.1	E	*	1.19	141.1	F	*	0.68	21.6	C	1.05	76.0	F	*
	SB-LT	0.02	7.3	A		0.02	7.3	A		0.00	7.2	A	0.00	7.2	A	
Calyer Street (EB) @ Manhattan Avenue (NB/SB)	EB-LTR	0.50	33.2	C		0.70	40.1	D		0.57	35.1	D	0.92	58.8	E	*
	NB-TR	0.51	19.1	B		0.53	19.6	B		0.41	16.8	B	0.44	17.3	B	
	SB-LT	0.46	18.5	B		0.49	19.2	B		0.41	17.2	B	0.43	17.5	B	
Quay Street (EB) @ Franklin Street (NB/SB)	NB-LT	0.65	15.5	B		1.10	78.5	E	*	0.73	17.5	B	1.49	244.2	F	*
	SB-TR	0.38	10.4	B		0.56	13.2	B		0.43	10.8	B	0.60	13.7	B	
Meserole Avenue (WB) @ Franklin Street (NB/SB) (Unsignalized)	WB-LR	0.12	12.6	B		0.66	24.0	C		0.16	14.3	B	1.49	264.4	F	*
Meserole Avenue (WB) @ Gem Street (NB) (Unsignalized)	NB-L	0.01	8.8	A		0.06	13.8	B		0.02	9.2	A	0.48	36.8	E	*
Meserole Avenue (WB) @ Dobbin Street (SB) (Unsignalized)	WB-LT	0.07	7.7	A		0.10	8.5	A		0.09	7.7	A	0.14	9.0	A	
	SB-TR	0.10	13.5	B		0.17	18.6	C		0.11	13.5	B	0.26	24.5	C	
North 14th Street (EB/WB) @ Wythe Avenue (SB) (Unsignalized, All-Way Stop)	EB-TR		10.0	B			18.9	C			10.3	B		15.4	C	
	WB-LT		8.6	A			-	-			8.9	A		-	-	
	SB-LTR		9.8	A			23.4	C			10.2	B		14.7	B	
North 15th Street (WB) @ Wythe Avenue (SB) (Unsignalized)	WB-LT	0.01	10.3	B		0.16	19.9	C		0.02	11.7	B	0.61	63.2	F	*
Norman Avenue (WB) @ Banker Street (NB) (Unsignalized, All-Way Stop)	WB-TR		9.2	A			20.9	C			9.8	A		14.0	B	
	NB-LTR		8.8	A			10.7	B			9.3	A		10.5	B	
Norman Avenue (WB) @ Dobbin Street (NB) (Unsignalized)	WB-LT	0.01	7.6	A		0.02	8.5	A		0.01	7.7	A	0.02	9.6	A	
	SB-LTR	0.23	12.1	B		0.69	48.5	E	*	0.29	13.5	B	1.38	268.2	F	*

This table has been updated for the FEIS.

Notes:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DfL-Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume to capacity ratio
LOS - level of service
* - Denotes a congested movement (LOS E or F, or V/C ratio greater than or equal to 0.9)



Acme Fish Expansion

This figure has been updated for the FEIS.

Figure 10-8

With-Action Weekday AM and PM Peak Hour Traffic Volumes

TABLE 10-17
With-Action Intersection Level of Service Analysis

Intersection	Lane Group	AM Peak Hour							PM Peak Hour						
		No-Action			With-Action				No-Action			With-Action			
		V/C Ratio	Delay (sec.)	LOS	V/C Ratio	Delay (sec.)	LOS		V/C Ratio	Delay (sec.)	LOS	V/C Ratio	Delay (sec.)	LOS	
Calyer Street (EB/WB) @	NB-LTR	1.12	85.6	F	1.18	110.7	F	**	1.52	254.9	F	1.70	335.2	F	**
Franklin Street (NB/SB)	SB-LTR	1.14	102.0	F	1.32	172.9	F	**	1.80	383.8	F	2.02	484.4	F	**
Calyer Street (EB) @	EB-LT	-	-	-	-	-	-		-	-	-	-	-	-	
Banker Street (NB)	NB-TR	-	-	-	-	-	-		-	-	-	-	-	-	
(Unsignalized Two-Way Stop)															
Calyer Street (EB) @	EB-LT	0.01	7.7	A	0.01	7.7	A		0.01	7.6	A	0.01	7.7	A	
Guemsey Street (NB)	NB-TR	0.33	16.3	C	0.35	17.3	C		0.37	22.9	C	0.44	28.4	D	
(Unsignalized Two-Way Stop)															
Calyer Street (EB) @	EB-TR	1.19	141.1	F	1.26	165.1	F	**	1.05	76.0	F	1.19	123.3	F	**
Lorimer Street (SB)	SB-LT	0.02	7.3	A	0.02	7.3	A		0.00	7.2	A	0.00	7.2	A	
(Unsignalized Two-Way Stop)															
Calyer Street (EB) @	EB-LTR	0.70	40.1	D	0.74	42.1	D		0.92	58.8	E	1.05	89.3	F	**
Manhattan Avenue (NB/SB)	NB-TR	0.53	19.6	B	0.53	19.7	B		0.44	17.3	B	0.44	17.4	B	
	SB-LT	0.49	19.2	B	0.50	19.5	B		0.43	17.5	B	0.43	17.5	B	
Quay Street (EB) @	NB-LT	1.10	78.5	E	1.14	95.1	F	**	1.49	244.2	F	1.62	297.9	F	**
Franklin Street (NB/SB)	SB-TR	0.56	13.2	B	0.56	13.3	B		0.60	13.7	B	0.60	13.8	B	
Meserole Avenue (WB) @	WB-LR	0.66	24.0	C	0.81	36.7	E	**	1.49	264.4	F	2.21	580.4	F	**
Franklin Street (NB/SB)															
(Unsignalized Two-Way Stop)															
Meserole Avenue (WB) @	NB-L	0.06	13.8	B	0.14	17.2	C		0.48	36.8	E	1.68	384.8	F	**
Gem Street (NB)															
(Unsignalized Two-Way Stop)															
Meserole Avenue (WB) @	WB-LT	0.10	8.5	A	0.15	9.0	A		0.14	9.0	A	0.15	9.6	A	
Dobbin Street (SB)	SB-TR	0.17	18.6	C	0.33	27.2	D		0.26	24.5	C	0.32	28.7	D	
(Unsignalized Two-Way Stop)															
North 14th Street (EB/WB) @	EB-TR		18.9	C		20.2	C			15.4	C		18.8	C	
Wythe Avenue (SB)	WB-LT		-	-		-	-			-	-		-	-	
(Unsignalized All-Way Stop)	SB-LTR		23.4	C		25.3	D			14.7	B		16.1	C	
North 15th Street (WB) @	WB-LT	0.16	19.9	C	0.52	48.9	E		0.61	63.2	F	0.96	177.6	F	
Wythe Avenue (SB)															
(Unsignalized Two-Way Stop)															
Norman Avenue (WB) @	WB-TR		20.9	C		39.1	E	**		14.0	B		14.0	B	
Banker Street (NB)	NB-LTR		10.7	B		11.8	B			10.5	B		10.8	B	
(Unsignalized All-Way Stop)															
Norman Avenue (WB) @	WB-LT	0.02	8.5	A	0.02	8.7	A		0.02	9.6	A	0.02	10.0	B	
Dobbin Street (NB)	SB-LTR	0.69	48.5	E	2.66	600+	F	**	1.38	268.2	F	6.20	600+	F	**
(Unsignalized Two-Way Stop)															

This table has been updated for the FEIS.

Notes:
EB-Eastbound, WB-Westbound, NB-Northbound, SB-Southbound
L-Left, T-Through, R-Right, DfL-Analysis considers a defacto left-turn lane on this approach
V/C ratio - volume to capacity ratio
LOS - level of service
** - Denotes a significant adverse impact based on *CEQR Technical Manual* criteria.

- Calyer Street at Franklin Avenue (signalized) where the northbound and southbound Franklin Street approaches would be significantly impacted in the AM and PM peak hours, with LOS F conditions on both approaches in both periods (unchanged from the No-Action);
- Calyer Street at Lorimer Street (unsignalized) where the eastbound Calyer Street approach would be significantly impacted in the AM and PM peak hours, with LOS F conditions in both periods (unchanged from the No-Action);
- Calyer Street at Manhattan Avenue (signalized) where the eastbound approach would be significantly impacted in the PM peak hour with LOS F conditions (versus LOS E in the No-Action);
- Quay Street at Franklin Street (signalized) where the northbound approach would be significantly impacted in the AM and PM peak hours with LOS F conditions in both periods (versus LOS E and LOS F, respectively, in the No-Action).
- Meserole Avenue at Franklin Street (unsignalized) where the westbound approach would be significantly impacted in both periods, with LOS E conditions in the AM peak hour and LOS F in the PM (versus LOS C and LOS F, respectively, in the No-Action);
- Meserole Avenue at Gem Street (unsignalized) where the northbound approach would be significantly impacted in the PM peak hour with LOS F conditions (versus LOS E in the No-Action);
- Norman Avenue at Banker Street (unsignalized) where the westbound approach would be significantly impacted in the AM peak hour with LOS E conditions (versus LOS C in the No-Action); and
- Norman Avenue at Dobbin Street (unsignalized) where the southbound approach would be significantly impacted in the AM and PM peak hours, with LOS F conditions in both periods (versus LOS E and LOS F, respectively, in the No-Action).

While the westbound North 15th Street approach at Wythe Avenue would deteriorate from LOS C to LOS E in the AM peak hour, and remain at LOS F in the PM, this approach would not be considered significantly impacted in either period based on the *CEQR Technical Manual* impact criteria described in Section F, "Transportation Analyses Methodologies." In addition, approaches at three intersections would deteriorate from LOS C to LOS D in one or more peak hours, but would also not be considered significantly impacted based on *CEQR Technical Manual* impact criteria. These would include northbound Guernsey Street at Calyer Street in the PM, southbound Dobbin Street at Meserole Avenue in the AM and PM, and southbound Wythe Avenue at North 14th Street in the AM.

Potential measures to mitigate the significant adverse traffic impacts identified in Table 10-17 are discussed in Chapter 17, "Mitigation."

H. TRANSIT

Existing Conditions

Subway Stations

As discussed above in Section E, "Level 2 Screening Assessment," and shown in Table 10-8, the Proposed Actions are expected to exceed the 200-trip *CEQR Technical Manual* threshold for a subway station analysis in both the weekday AM and PM peak hours at the Nassau Avenue station served by G trains operating on the Crosstown Line between Church Avenue in Brooklyn and Long Island City, Queens (see Figure 10-2). The Nassau Avenue station is located beneath Manhattan Avenue between Nassau and Norman avenues. The station consists of a mezzanine level below which are two side platforms. As shown in Figure 10-9, four street stairs—one at each corner of the Manhattan Avenue/Nassau Avenue intersection—provide access to the mezzanine level at the south end of the station. The two stairs on the east side of Manhattan Avenue (S3/M3 and S4/M4) provide access to a 24-hour fare booth (N408A) and a fare array with four low turnstiles. A short stairway (P2) connects this fare control area to the Queens-bound platform. The two stairs on the west side of Manhattan Avenue (S1/M1 and S2/M2) provide access to a separate fare array (N408) which also consists of four low turnstiles.[1] A short stair (P1) provides access to the Church Avenue-bound platform from this fare array. A raised crossover connects the east and west sides of the mezzanine via stairs M6 and M5, respectively. A fence divides the crossover and each stair so that they can be used by customers both inside and outside the fare control zone.

At the north end of the station, each platform has an unstaffed platform-level fare array accessed from a single entrance at the Manhattan Avenue/Norman Avenue intersection. Stairs S5/P3 at the northwest corner of the intersection provide access to the Church Avenue-bound platform via fare array N406, and stairs S6/P4 at the northeast corner provide access to the Queens-bound platform via fare array N407. Each of these two fare arrays consists of three low turnstiles. There is no crossover between the two platforms at the north end of the station.

Based on the location of this station relative to the Development Site, it is anticipated that new project-generated subway trips would utilize stairs S5/P3 and S6/P4 along with adjacent fare arrays N406 and N407 at the north end of the station at Norman Avenue. As shown in Tables 10-18 and 10-19, stairs S5/P3 and S6/P4 and adjacent fare arrays N406 and N407 all currently operate at an uncongested LOS A in both the AM and PM peak hours.

TABLE 10-18
Existing Conditions Subway Station Stair Analysis

Peak Hour	Stair	Total Width (ft.)	Effective Width (ft.)	Peak Hour Volumes		Surging Factor		Friction Factor	V/C Ratio	LOS
				Into Subway	Out of Subway	Into Subway	Out of Subway			
AM	S5/P3 (Brooklyn bound)	5.00	4.00	305	88	1.00	0.75	0.9	0.25	A
	S6/P4 (Queens bound)	5.00	4.00	228	244	1.00	0.75	0.9	0.32	A
PM	S5/P3 (Brooklyn bound)	5.00	4.00	231	139	1.00	0.75	0.9	0.24	A
	S6/P4 (Queens bound)	5.00	4.00	134	206	1.00	0.75	0.9	0.24	A

Notes:
Methodology based on *CEQR Technical Manual* guidance.

[1] In 2018 this fare array consisted of two HEETs and two HXTs. These were replaced by four low turnstiles in 2019.

Nassau Avenue (G) Subway Station

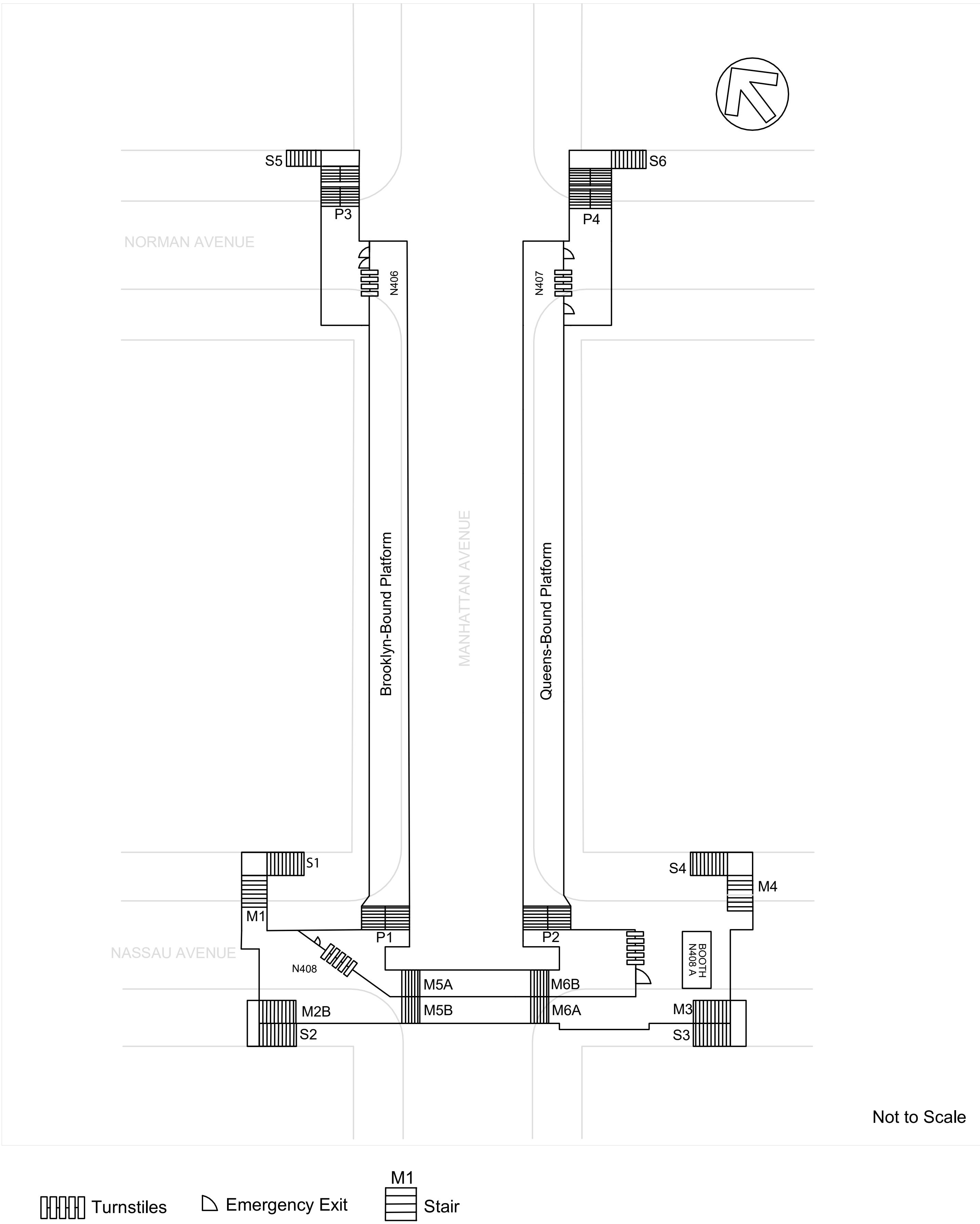


TABLE 10-19
Existing Conditions Subway Station Fare Array Analysis

Peak Hour	Fare Array	Control Elements	Peak Hour Volumes		Surging Factor		Friction Factor	V/C Ratio	LOS
		Turnstiles	System Entries	System Exits	System Entries	System Exits			
AM	N406 (Brooklyn bound)	3	305	88	1.0	0.75	0.9	0.11	A
	N407 (Queens bound)	3	228	244	1.0	0.75	0.9	0.12	A
PM	N406 (Brooklyn bound)	3	231	139	1.0	0.75	0.9	0.10	A
	N407 (Queens bound)	3	134	206	1.0	0.75	0.9	0.09	A

Notes:
Methodology based on *CEQR Technical Manual* guidelines.

Subway Line Haul

Line haul is the volume of transit riders passing a defined point on a given transit route. For subway routes in New York City to and from Brooklyn, line haul is typically measured either at East River bridge and tunnel crossings or at the actual maximum load point on each subway route (the point where the trains carry the greatest number of passengers during the peak hour). As discussed above, the Development Site is served by two NYCT subway routes—G trains operating on the Crosstown Line and L trains operating on the Canarsie Line. As the Proposed Actions are expected to generate fewer than 200 peak hour L-train trips, significant adverse line haul impacts to L-train service are not anticipated. The analysis therefore focuses on the Proposed Actions' potential for impacts to G train service. The peak direction of travel on the Crosstown Line is typically northbound in the AM and southbound in the PM. Line Haul conditions on the G train are assessed at two maximum load points in the peak direction in each peak period—one in relative proximity to the Development Site location in Greenpoint, and a second further south at which a greater share of the Proposed Action's incremental demand is expected to present on the trains. Maximum load point data from 2016-2017 were provided by NYCT, and were grown by 0.5 percent per year to account for any increases in demand during the 2017-2019 period.

Table 10-20 shows existing line haul conditions on the G train in the peak direction at the maximum load points during the AM and PM peak hours. As shown in Table 10-20, G trains are currently operating with available peak direction capacity at all analyzed maximum load points in both the AM and PM peak hours. The highest ridership occurs in the peak northbound direction in the AM peak hour leaving Greenpoint Avenue where trains are currently operating at a volume-to-capacity (v/c) ratio of approximately 0.94.

TABLE 10-20
Existing Conditions Subway Line Haul Analysis

Peak Period	Route	Direction	Maximum Load Point (leaving station)	Average Trains Per Hour (1)	Cars Per Train	Average Cars Per Hour	Average Passengers Per Hour (2)	Average Passengers Per Car	Guideline Passengers Per Car (3)	V/C Ratio (4)
AM	G	NB	Bergen St	8.6	4	34	2,380	69	145	0.48
AM	G	NB	Greenpoint Avenue	9.1	4	36	4,959	136	145	0.94
PM	G	SB	21st Street	8.2	4	33	3,880	118	145	0.82
PM	G	SB	Clinton-Washington Avs	8.0	4	32	2,970	93	145	0.64

Notes:
(1) Trains per hour based on 2018 scheduled trains per hour.
(2) Based on 2016-2017 ridership data from NYCT. Passenger volumes grown by 0.5%/year to account for growth in demand during the 2017-2019 period.
(3) Guideline capacities are based on NYCT rush hour loading guidelines, which vary by car type, line, and location based on frequency and type of service.
(4) Volume to guideline capacity ratio.

This table has been updated for the FEIS.

The Future Without the Proposed Actions (No-Action Condition)

Between 2019 and 2025~~4~~, it is expected that subway demand in the vicinity of the Development Site will increase due to long-term background growth as well as planned development. In order to forecast future subway conditions without the Proposed Actions (the No-Action condition), the developments within ¼-mile of the Development Site listed in Table 2-3 in Chapter 2, “Land Use, Zoning and Public Policy,” were considered, along with more distant developments that would potentially generate trips at analyzed subway stations. The Future No-Action subway volumes also reflect annual background growth rates of 0.5 percent per year for the first five years and 0.25 percent per year for every year thereafter. These background growth rates, recommended in the ~~2014~~ *CEQR Technical Manual* for projects in Brooklyn outside of the Downtown area, are applied to account for smaller projects and as-of-right developments not reflected in Table 2-3 and general increases in travel demand not attributable to specific development projects.

Subway Stations

Under No-Action conditions, demand at the Nassau Avenue (G) subway station is expected to increase as a result of new development and background growth. As shown in Tables 10-21 and 10-22, it is expected that in the future No-Action condition, all analyzed street stairs and fare arrays will continue to operate at an uncongested LOS A in both the AM and PM peak hours.

Subway Line Haul

Table 10-23 shows anticipated 2025~~4~~ No-Action line haul conditions in the peak direction at the maximum load points on the Crosstown (G) Line. The data in Table 10-23 reflect both background growth for the 2019 through 2025~~4~~ period and the addition of demand from new development in proximity to the Development Site. As shown in Table 10-23, in the AM peak hour, northbound G trains are expected to operate essentially at capacity with a v/c ratio of 1.01 leaving Greenpoint Avenue. Northbound G trains would continue to operate with available capacity leaving Bergen Street in the AM peak hour, as would southbound G trains leaving 21st Street and Clinton-Washington Avenues in the PM peak hour.

TABLE 10-21
No-Action Stair Analysis at Analyzed Subway Stations

Peak Hour	Stair	Total Width (ft.)	Effective Width (ft.)	Peak Hour Volumes		Surging Factor		Friction Factor	V/C Ratio	LOS
				Into Subway	Out of Subway	Into Subway	Out of Subway			
AM	S5/P3 (Brooklyn bound)	5.00	4.00	364	122	1.00	0.75	0.9	0.30	A
	S6/P4 (Queens bound)	5.00	4.00	237	370	1.00	0.75	0.9	0.42	A
PM	S5/P3 (Brooklyn bound)	5.00	4.00	400	157	1.00	0.75	0.9	0.35	A
	S6/P4 (Queens bound)	5.00	4.00	178	280	1.00	0.75	0.9	0.32	A

Notes:
Methodology based on *CEQR Technical Manual* guidance.

This table has been updated for the FEIS.

TABLE 10-22
No-Action Fare Array Analysis at Analyzed Subway Stations

Peak Hour	Fare Array	Control Elements	Peak Hour Volumes		Surging Factor		Friction Factor	V/C Ratio	LOS
		Turnstiles	System Entries	System Exits	System Entries	System Exits			
AM	N406 (Brooklyn bound)	3	364	122	1.0	0.75	0.9	0.13	A
	N407 (Queens bound)	3	237	370	1.0	0.75	0.9	0.15	A
PM	N406 (Brooklyn bound)	3	400	157	1.0	0.75	0.9	0.15	A
	N407 (Queens bound)	3	178	280	1.0	0.75	0.9	0.12	A

Notes:
Methodology based on *CEQR Technical Manual* guidance.

This table has been updated for the FEIS.

TABLE 10-23
No-Action Subway Line Haul Analysis

Peak Period	Route	Direction	Maximum Load Point (leaving station)	Average Trains Per Hour (1)	Average Cars Per Hour	Average Passengers Per Hour (2)	Average Passengers Per Car	Guideline Passengers Per Car (3)	V/C Ratio (4)
AM	G	NB	Bergen St	8.6	34	2,813	82	145	0.56
AM	G	NB	Greenpoint Avenue	9.1	36	5,328	146	145	1.01
PM	G	SB	21st Street	8.2	33	4,199	128	145	0.88
PM	G	SB	Clinton-Washington Avs	8	32	3,451	108	145	0.74

Notes:
(1) Trains per hour based on 2018 scheduled trains per hour.
(2) No Action passenger volumes reflect demand from No Action development plus background growth rates of 0.5%/year for the 2019-2024 period and 0.25%/year for the 2024-2025 period.
(3) Guideline capacities are based on NYCT rush hour loading guidelines, which vary by car type, line, and location based on frequency and type of service.
(4) Volume to guideline capacity ratio.

This table has been updated for the FEIS.

The Future with the Proposed Actions (With-Action Condition)

Subway Service

SUBWAY STATIONS

As shown in Table 10-8, the Proposed Actions are expected to generate a net total of 418 and 438 new subway trips in the weekday AM and PM peak hours, respectively. Based on existing travel patterns and the proximity of subway stations to the Development Site, it is estimated that the Nassau Avenue (G) station on the Crosstown Line would experience approximately 247 new trips (in and out combined) in the AM peak hour and 255 in the PM peak hour. Tables 10-24 and 10-25 show conditions at analyzed stairs and fare arrays at this subway station in the future with the Proposed Actions. As shown in Table 10-24, under With-Action conditions, stair S5/P3 would operate at LOS A and B in the AM and PM peak hours, respectively, and stair S6/P43 would operate at LOS B and A during these same periods, respectively. This compares to LOS A conditions on both of these stairs in the AM and PM in the No-Action condition. As shown in Table 10-25, both analyzed fare arrays would continue to operate at LOS A in both periods.

As all analyzed stairs and fare arrays at the Nassau Avenue (G) station would operate at an uncongested LOS A or B in both the AM and PM peak hours, the Proposed Actions would not result in significant adverse subway station impacts based on *CEQR Technical Manual* impact criteria.

SUBWAY LINE HAUL

Table 10-26 shows line haul conditions on G trains in the future with the Proposed Actions. As shown in Table 10-26, peak direction G trains are expected to be operating below capacity in both the AM and PM peak hours at all analyzed maximum load points with the exception of northbound trains leaving Greenpoint Avenue in the AM peak hour. These trains would be operating at capacity with a v/c ratio of 1.01 (unchanged from the No-Action condition); however, incremental demand due to the Proposed Actions would only amount to an average of 0.08 additional passengers per car. As no peak direction G trains operating at or over capacity would experience an average increase of five or more additional passengers per car at their maximum load point in either the AM or PM peak hours, G train service would not be considered significantly adversely impacted by the Proposed Actions under the *CEQR Technical Manual* impact criteria outlined above in Section F, "Transportation Analyses Methodologies."

TABLE 10-24
With-Action Stair Analysis at Analyzed Subway Stations

Peak Hour	Stair	Total Width (ft.)	Effective Width (ft.)	Project Increment		Peak Hour Volumes		Surging Factor		Friction Factor	V/C Ratio	LOS
				Into Subway	Out of Subway	Into Subway	Out of Subway	Into Subway	Out of Subway			
AM	S5/P3 (Brooklyn bound)	5.00	4.00	12	51	376	173	1.00	0.75	0.9	0.35	A
	S6/P4 (Queens bound)	5.00	4.00	3	181	240	551	1.00	0.75	0.9	0.56	B
PM	S5/P3 (Brooklyn bound)	5.00	4.00	209	-5	609	152	1.00	0.75	0.9	0.47	B
	S6/P4 (Queens bound)	5.00	4.00	58	-7	236	273	1.00	0.75	0.9	0.35	A

Notes:
Methodology based on *CEQR Technical Manual* guidance.

This table has been updated for the FEIS.

TABLE 10-25
With-Action Fare Array Analysis at Analyzed Subway Stations

Peak Hour	Fare Array	Control Elements	Project Increment		Peak Hour Volumes		Surging Factor		Friction Factor	V/C Ratio	LOS
		Turnstiles	System Entries	System Exits	System Entries	System Exits	System Entries	System Exits			
AM	N406 (Brooklyn bound)	3	12	51	376	173	1.0	0.75	0.9	0.15	A
	N407 (Queens bound)	3	3	181	240	551	1.0	0.75	0.9	0.20	A
PM	N406 (Brooklyn bound)	3	209	-5	609	152	1.0	0.75	0.9	0.20	A
	N407 (Queens bound)	3	58	-7	236	273	1.0	0.75	0.9	0.13	A

Notes:
Methodology based on *CEQR Technical Manual* guidance.

This table has been updated for the FEIS.

TABLE 10-26
With-Action Subway Line Haul Analysis

Peak Period	Route	Direction	Maximum Load Point (leaving station)	Average Trains Per Hour (1)	Average Cars Per Hour	Project Increment	Average Passengers Per Hour	Average Passengers Per Car	Guideline Passengers Per Car (2)	V/C Ratio (3)	Average Additional Passengers per Car
AM	G	NB	Bergen St	8.6	34	181	2,994	87	145	0.60	5.26
AM	G	NB	Greenpoint Avenue	9.1	36	3	5,331	146	145	1.01	0.08
PM	G	SB	21st Street	8.2	33	-5	4,194	128	145	0.88	-0.15
PM	G	SB	Clinton-Washington Avs	8.0	32	209	3,660	114	145	0.79	6.53

Notes:
(1) Trains per hour based on 2018 scheduled trains per hour.
(2) Guideline capacities are based on NYCT rush hour loading guidelines, which vary by car type, line, and location based on frequency and type of service.
(3) Volume to guideline capacity ratio.

This table has been updated for the FEIS.

I. PEDESTRIANS

Existing Conditions

The pedestrian study area is generally characterized by very low to moderate pedestrian flows in the more industrial areas in proximity to the Development Site, with greater demand along the more commercial corridors such as Manhattan Avenue. Higher levels of demand can also be found along corridors providing access to area subway stations and bus routes. As discussed previously in Section E, “Level 2 Screening Assessment,” the analysis of pedestrian conditions focuses on a total of 19 pedestrian elements where new trips generated by projected developments are expected to exceed 200 trips in one or more peak hours. As shown in Figure 10-3, these elements—13 sidewalks, two crosswalks and four corner areas—are primarily located in the immediate proximity of the Development Site and along the Norman Avenue/Wythe Avenue corridor which connect the Development Site to nearby subway stations and bus routes.

Sidewalks

The highest existing pedestrian flows on analyzed sidewalks are generally found along Norman Avenue in the vicinity of Manhattan Avenue and entrances to the Nassau Avenue (G) subway station (up to 550 persons/hour). By contrast, the lowest existing pedestrian volumes are found along Gem Street adjacent to the Development Site (fewer than 20 persons/hour). Analyzed sidewalks typically range from 12.5 feet in width (along Gem Street) to 17 to 18 feet in width (along Norman Avenue). Features typically present along study area 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, as well as larger installations such as subway stairs.

Table 10-27 shows the existing peak hour pedestrian volumes, average pedestrian space (in sf/ped), and platoon-adjusted LOS at analyzed sidewalks. As shown in Table 10-27, all analyzed sidewalks currently operate at an acceptable LOS C or better in all peak hours.

TABLE 10-27
Existing Sidewalk Conditions

No.	Location		Effective Width (ft.)	Peak Hour Volumes			Average Pedestrian Space (ft^2/ped)			Platoon-Adjusted LOS		
				AM	MD	PM	AM	MD	PM	AM	MD	PM
S1	Wythe Ave bet. N. 14th St & N. 15th St	East	8.5	32	66	95	2,608.6	1,611.6	1,162.1	A	A	A
S2	Wythe Ave bet. N. 13th St & N. 14th St	West	8.0	51	46	93	1,441.1	1,983.4	831.1	A	A	A
S3	Wythe Ave bet. N. 14th St & N. 15th St	West	9.5	83	69	95	1,250.9	1,395.7	997.9	A	A	A
S4	Wythe Ave bet. N. 15th St & Banker St	West	9.0	64	43	54	1,692.9	2,983.8	2,085.6	A	A	A
S5	N. 15th St betw. Wythe Ave & Gem St	South	4.8	30	122	38	2,402.2	263.7	1,593.8	A	B	A
S6	Gem St betw. N. 15th St & Meserole Ave	East	7.4	11	19	4	5,868.7	4,880.3	14,671.8	A	A	A
S7	Meserole Ave betw. Banker St & Dobbin St	South	3.6	61	58	71	641.4	674.5	646.9	A	A	A
S8	Banker St betw. Norman Ave & Meserole Ave	West	9.6	43	20	35	2,364.4	6,297.5	2,904.9	A	A	A
S9	Norman Ave betw. Dobbin St & Guernsey St	North	4.5	124	152	170	471.3	393.8	335.3	B	B	B
S10	Norman Ave betw. Banker St & Dobbin St	North	9.8	83	126	114	1,097.8	1,041.8	1,025.0	A	A	A
S11	Norman Ave betw. Lorimer St & Manhattan Ave	North	6.6	467	189	407	176.0	435.5	204.6	B	B	B
S12	Norman Ave betw. Guernsey St & Lorimer St	North	5.8	210	177	267	381.5	354.9	296.6	B	B	B
S13	Norman Ave betw. Manhattan Ave & Leonard St	North	3.8	550	333	500	86.7	134.8	94.3	C	B	B

Crosswalks

Study area intersections are a mix of signalized and stop controlled, and the signalized intersections generally include pedestrian signals. High visibility crosswalk striping is present at several intersections along Norman Avenue. Table 10-28 shows the peak hour volumes, average pedestrian space (in sf/ped), and LOS at analyzed crosswalks. As shown in Table 10-28, both analyzed crosswalks (located along Norman Avenue on Lorimer Street and on Manhattan Avenue) currently operate at an uncongested LOS A or B in all peak hours.

Corner Areas

Table 10-29 shows the peak hour volumes, average pedestrian space (in sf/ped) and levels of service at analyzed corner areas. As shown in Table 10-29, all four of the analyzed corner areas currently operate at an uncongested LOS A in all peak hours.

TABLE 10-28
Existing Crosswalk Conditions

Intersection	Crosswalk		Peak Hour Volumes			Average Pedestrian Space (ft^2/ped)			Level of Service		
			AM	MD	PM	AM	MD	PM	AM	MD	PM
Norman Ave & Lorimer St	X1	North	272	187	242	103.9	138.1	114.9	A	A	A
Norman Ave & Manhattan Ave	X2	North	506	227	388	57.9	114.9	69.7	B	A	A

TABLE 10-29
Existing Corner Conditions

Intersection	Corner		Average Pedestrian Space (ft^2/ped)			Level of Service		
			AM	MD	PM	AM	MD	PM
Norman Ave & Lorimer St	C1	NE	309.5	395.4	342.8	A	A	A
	C2	NW	329.4	432.5	359.4	A	A	A
Norman Ave & Manhattan Ave	C3	NE	146.7	198.9	153.0	A	A	A
	C4	NW	152.5	216.9	124.3	A	A	A

The Future Without the Proposed Actions (No-Action Condition)

Pedestrian volumes along analyzed sidewalks, crosswalks, and corner areas are expected to increase through 20254 as a result of background growth as well as demand from No-Action development projects (see Table 2-3 in Chapter 2, "Land Use, Zoning, and Public Policy"). It should also be noted that in the future without the Proposed Actions, DOT expects to implement a number of pedestrian and bicycle improvements in proximity to the pedestrian study area. These are expected to include:

- The closure to traffic of the segment of Banker Street between Calyer and Franklin streets and its inclusion as part of a pedestrian plaza (Calyer Triangle). Banker Street would be converted from one-way northbound to one-way southbound operation between Calyer and Meserole streets as part of this improvement.

- The conversion of North 14th Street from two-way to one-way eastbound operation between Franklin Street and Nassau Avenue to accommodate the installation of a new bicycle lane

- New or improved bicycle lanes along Franklin, Quay and West streets.

These improvements are not expected to directly affect any analyzed sidewalk, corner area or crosswalk.

Sidewalks

Table 10-30 shows the No-Action peak hour pedestrian volumes, average pedestrian space, and platoon-adjusted LOS at analyzed sidewalks. As shown in Table 10-30, in the future without the Proposed Actions, conditions on three sidewalks would degrade to LOS C from LOS A or B in one or more peak hours. These would include the south sidewalk on North 15th Street between Wythe Avenue and Gem Street and the south sidewalk on Meserole Avenue between Banker and Dobbins streets in the midday peak hour, and the north sidewalk on Norman Avenue between Manhattan Avenue and Leonard Street in the midday and PM peak hours. (This latter sidewalk would also to continue to operate at LOS C in the AM peak hour.) All other analyzed sidewalks are expected to operate at an uncongested LOS A or B in all peak hours in the future without the Proposed Actions.

Crosswalks

Table 10-31 shows the peak hour volumes, average pedestrian space, and LOS at analyzed crosswalks in the No-Action condition. As shown in Table 10-31, in the future without the Proposed Actions, conditions on the north crosswalk on Lorimer Street at Norman Avenue both analyzed crosswalks would degrade from LOS A to LOS C from LOS A in the midday peak hour, and conditions on the north crosswalk on Manhattan Avenue at Norman Avenue would degrade from LOS A to LOS C in the midday and PM peak hours. In other periodsthe AM and PM peak hours, both of these crosswalks are expected to operate at an uncongested LOS A or B.

Corner Areas

Table 10-32 shows the peak hour volumes, average pedestrian space, and LOS at analyzed corner areas in the No-Action condition. As shown in Table 10-32, all analyzed corner areas are expected to continue to operate at an uncongested LOS A in all peak hours in the future without the Proposed Actions.

The Future with the Proposed Actions (With-Action Condition)

The Proposed Actions would generate new pedestrian demand on analyzed sidewalks, crosswalks, and corner areas by 20254. 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 Actions are expected to be most concentrated in proximity to the Development Site, and along corridors connecting the site to area transit services such as Norman Avenue. To better accommodate this demand, it is anticipated that as part of the Proposed Development, a new crosswalk would be striped on the north leg of the intersection Banker Street/Norman Avenue intersection adjacent to the Development Site.

As shown in Table 10-7, the Proposed Actions are expected to generate a net total of approximately 216 walk-only trips in the weekday AM peak hour, 1,495 in the midday and 371 in the PM peak hour. Persons en route to and from subway station entrances and bus stops would add approximately 496 and 473 additional pedestrian trips to proposed rezoning area sidewalks and crosswalks during the AM and PM peak hours, respectively, while there would be a net decrease of 37 such trips in the weekday midday. 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, crosswalks, and corner areas in the future with the Proposed Actions are shown in Tables 10-33 through 10-35. As discussed below, all analyzed pedestrian elements would continue to operate at acceptable levels of service in all analyzed peak hours in the With-Action condition, and no significant adverse impacts are expected to result from the Proposed Actions.

TABLE 10-30
No-Action Sidewalk Conditions

No.	Location		Effective Width (ft.)	Peak Hour Volumes			Average Pedestrian Space (ft²/ped)			Platoon-Adjusted LOS		
				AM	MD	PM	AM	MD	PM	AM	MD	PM
S1	Wythe Ave bet. N. 14th St & N. 15th St	East	8.5	98	365	242	851.7	294.5	456.1	A	B	B
S2	Wythe Ave bet. N. 13th St & N. 14th St	West	8.0	123	365	268	597.5	251.1	288.2	A	B	B
S3	Wythe Ave bet. N. 14th St & N. 15th St	West	9.5	171	439	306	607.1	221.2	309.6	A	B	B
S4	Wythe Ave bet. N. 15th St & Banker St	West	9.0	143	610	353	757.6	210.8	318.9	A	B	B
S5	N. 15th St betw. Wythe Ave & Gem St	South	4.8	108	574	261	667.2	55.7	231.8	A	C	B
S6	Gem St betw. N. 15th St & Meserole Ave	East	7.4	95	462	227	679.5	200.9	258.3	A	B	B
S7	Meserole Ave bet. Banker St & Dobbin St	South	3.6	217	522	348	180.0	74.7	131.6	B	C	B
S8	Banker St bet. Norman Ave & Meserole Ave	West	9.6	200	424	317	508.2	298.3	320.6	B	B	B
S9	Norman Ave bet. Dobbin St & Guernsey St	North	4.5	290	594	469	201.3	101.5	121.1	B	B	B
S10	Norman Ave bet. Banker St & Dobbin St	North	9.8	260	599	428	350.3	221.5	270.4	B	B	B
S11	Norman Ave bet. Lorimer St & Manhattan Ave	North	6.6	620	610	699	132.4	137.1	118.8	B	B	B
S12	Norman Ave bet. Guernsey St & Lorimer St	North	5.8	360	622	569	222.4	102.0	138.9	B	B	B
S13	Norman Ave betw. Manhattan Ave & Leonard St	North	3.8	674	726	753	70.5	62.6	62.1	C	C	C

This table has been updated for the FEIS.

TABLE 10-31
No-Action Crosswalk Conditions

Intersection	Crosswalk		Peak Hour Volumes			Average Pedestrian Space (ft²/ped)			Level of Service		
			AM	MD	PM	AM	MD	PM	AM	MD	PM
Norman Ave & Lorimer St	X1	North	425	633	542	66.6	39.4	50.4	A	C	B
Norman Ave & Manhattan Ave	X2	North	635	638	654	45.8	39.0	39.9	B	C	C

This table has been updated for the FEIS.

TABLE 10-32
No-Action Corner Conditions

Intersection	Corner		Average Pedestrian Space (ft²/ped) AM	MD	PM	Level of Service AM	MD	PM
Norman Ave & Lorimer St	C1	NE	223.4	151.5	183.8	A	A	A
	C2	NW	234.2	156.7	187.3	A	A	A
Norman Ave & Manhattan Ave	C3	NE	124.4	110.0	109.2	A	A	A
	C4	NW	130.1	114.6	90.9	A	A	A

This table has been updated for the FEIS.

TABLE 10-33
With-Action Sidewalk Conditions

No.	Location		Effective Width (ft.)	Project Increment AM	MD	PM	Peak Hour Volumes AM	MD	PM	Average Pedestrian Space (ft²/ped) AM	MD	PM	Platoon-Adjusted LOS AM	MD	PM
S1	Wythe Ave bet. N. 14th St & N. 15th St	East	8.5	81	224	107	179	589	349	466.2	181.5	316.2	B	B	B
S2	Wythe Ave bet. N. 13th St & N. 14th St	West	8.0	68	224	93	191	589	361	384.7	155.1	213.9	B	B	B
S3	Wythe Ave bet. N. 14th St & N. 15th St	West	9.5	89	224	115	260	663	421	399.2	145.8	224.9	B	B	B
S4	Wythe Ave bet. N. 15th St & Banker St	West	9.0	50	166	48	193	776	401	436.5	128.5	218.2	B	B	B
S5	N. 15th St betw. Wythe Ave & Gem St	South	4.8	74	183	72	182	757	333	668.3	71.6	306.8	A	C	B
S6	Gem St betw. N. 15th St & Meserole Ave	East	7.4	121	300	134	216	762	361	224.8	91.2	122.0	B	B	B
S7	Meserole Ave betw. Banker St & Dobbin St	South	3.6	42	218	52	259	740	400	150.7	52.1	114.4	B	C	B
S8	Banker St betw. Norman Ave & Meserole Ave	West	9.6	414	561	514	614	985	831	165.3	127.7	121.9	B	B	B
S9	Norman Ave betw. Dobbin St & Guernsey St	North	4.5	277	67	279	567	661	748	102.6	91.0	75.5	B	B	C
S10	Norman Ave betw. Banker St & Dobbin St	North	9.8	277	67	279	537	666	707	169.4	198.9	163.5	B	B	B
S11	Norman Ave betw. Lorimer St & Manhattan Ave	North	6.6	272	55	268	892	665	967	91.7	125.5	85.6	B	B	C
S12	Norman Ave betw. Guernsey St & Lorimer St	North	5.8	277	67	279	637	689	848	125.4	91.8	92.9	B	B	B
S13	Norman Ave betw. Manhattan Ave & Leonard St	North	3.8	203	71	222	877	797	975	53.8	56.8	47.5	C	C	C

This table has been updated for the FEIS.

TABLE 10-34
With-Action Crosswalk Conditions

Intersection	Crosswalk		Project Increment AM	MD	PM	Peak Hour Volumes AM	MD	PM	Average Pedestrian Space (ft²/ped) AM	MD	PM	Level of Service AM	MD	PM
Norman Ave & Lorimer St	X1	North	275	62	276	700	695	818	40.3	35.7	33.3	B	C	C
Norman Ave & Manhattan Ave	X2	North	218	61	212	853	699	866	33.7	34.8	28.6	C	C	C

This table has been updated for the FEIS.

TABLE 10-35
With-Action Corner Conditions

Intersection	Corner		Average Pedestrian Space (ft²/ped)			Level of Service		
			AM	MD	PM	AM	MD	PM
Norman Ave & Lorimer St	C1	NE	149.1	138.6	132.6	A	A	A
	C2	NW	157.1	141.8	129.6	A	A	A
Norman Ave & Manhattan Ave	C3	NE	98.9	102.6	90.1	A	A	A
	C4	NW	106.7	104.1	71.5	A	A	A

This table has been updated for the FEIS.

Sidewalks

Table 10-33 shows the incremental change in peak hour pedestrian volumes attributable to the Proposed Actions and the total With-Action pedestrian volumes, average pedestrian space, and platoon-adjusted LOS at analyzed sidewalks. As shown in Table 10-33, in the future with the Proposed Actions, conditions on two sidewalks would degrade in the PM peak hour to LOS C from a No-Action LOS B—the north sidewalks on Norman Avenue between Dobbin and Guernsey streets and between Lorimer Street and Manhattan Avenue. Three additional sidewalks would continue to operate at LOS C in one or more peak hours, including the south sidewalk on North 15th Street between Wythe Avenue and Gem Street (midday), the south sidewalk on Meserole Avenue between Banker and Dobbins streets (midday) and the north sidewalk on Norman Avenue between Manhattan Avenue and Leonard Street (all periods). All other analyzed sidewalks would continue to operate at an uncongested LOS A or B in all peak hours. Based on the *CEQR Technical Manual* impact criteria cited in Section F, "Transportation Analyses Methodologies," the Proposed Actions would not result in any significant adverse sidewalk impacts.

Crosswalks

Table 10-34 shows the incremental change in peak hour pedestrian volumes attributable to the Proposed Actions and the total With-Action pedestrian volumes, average pedestrian space, and LOS at the two analyzed crosswalks. As shown in Table 10-34, in the future with the Proposed Actions, conditions at the north crosswalk on Lorimer Street at Norman Avenue would degrade from a No-Action LOS B to LOS C in the PM peak hour, and remain at LOS B and C in the AM and midday, respectively. Conditions at the north crosswalk on Manhattan Avenue at Norman Avenue would degrade from a No-Action LOS B to LOS C in the AM ~~and PM~~ peak hour~~s~~, and remain at LOS C in the midday and PM. Based on the *CEQR Technical Manual* impact criteria cited in Section F, "Transportation Analyses Methodologies," the Proposed Actions would not result in any significant adverse crosswalk impacts.

Corner Areas

Table 10-35 shows the total With-Action pedestrian volumes, average pedestrian space, and LOS at analyzed corner areas. As shown in Table 10-35, in the With-Action condition all analyzed corner areas would continue to operate at an uncongested LOS A in all peak hours. Therefore, the Proposed Actions would not result in any significant adverse corner area impacts based on the *CEQR Technical Manual* impact criteria discussed above in Section F, "Transportation Analyses Methodologies."

J. VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

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, NYCDOT 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. No Priority Corridors, Priority Intersections or Priority Areas were identified in proximity to the Development site. 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 CAMPAIGNS

- 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

North Williamsburg Transportation Study

Among the recommendations included in NYCDOT's *North Williamsburg Transportation Study* (2018) is the elimination of one or more curbside parking spaces on approaches at the signalized intersection of Manhattan Avenue and Calyer Street and the unsignalized intersection of Meserole Avenue and Lorimer Street. These measures (referred to as "daylighting") are proposed to make pedestrians entering the crosswalks more visible to drivers.

Study Area High Crash Locations

Crash data for intersections in the traffic and pedestrian study areas were obtained from NYCDOT for the three-year period between January 1, 2015 and December 31, 2017 (the most recent three-year period for which data are available). The data quantify the total number of crashes as well as the total number of crashes involving injuries to pedestrians or bicyclists. During the three-year reporting period, a total of 62 crashes and 21 pedestrian/bicyclist-related injury crashes occurred at analyzed study area intersections. None of these crashes involved fatalities. Table 10-36 provides a summary of crashes by intersection during the 2015 to 2017 period, as well as a breakdown of pedestrian and bicycle crashes by year and location.

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 10-36, based on these criteria, no analyzed intersections are classified as high crash locations.

Lastly, no intersections within the traffic and pedestrian study areas are located within a designated Senior Pedestrian Focus Area (SPFA), which were identified by NYCDOT based on the density of senior pedestrian (age 65+) crashes resulting in fatalities or severe injuries in a five-year period, as well as variables such as senior trip generators, concentrations of senior centers, and senior housing locations.

TABLE 10-36
Summary of Motor Vehicle Crash Data 2015-2017

Intersection		Pedestrian Injury Crashes			Bicycle Injury Crashes			Total Pedestrian/Bicycle Crashes			Total Crashes Including Motor Vehicle-Only		
		2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Franklin Street	Milton Street	0	0	0	0	0	0	0	0	0	0	0	0
	Noble Street	0	0	0	0	0	0	0	0	0	0	0	0
	Oak Street	0	0	0	0	0	0	0	0	0	0	0	0
	Calyer Street	0	0	0	0	1	0	0	1	0	0	2	0
	Quay Street	0	0	0	0	2	0	0	2	0	0	4	0
	Meserole Avenue	0	0	0	0	0	1	0	0	1	1	0	1
	North 15th Street	0	0	0	0	0	0	0	0	0	0	0	0
	North 14th Street/Kent Avenue	0	0	0	0	0	0	0	0	0	0	1	0
	Banker Street	0	0	0	0	0	0	0	0	0	0	0	0
Calyer Street	Leonard Street	0	0	0	0	0	0	0	0	0	0	0	0
	Manhattan Avenue	1	1	0	0	0	0	1	1	0	1	3	0
	Lorimer Street	0	0	0	0	0	0	0	0	0	0	2	1
	Guernsey Street	0	0	0	0	0	0	0	0	0	0	0	1
	Banker Street	0	0	1	0	0	0	0	0	1	0	0	1
	Clifford Place	0	0	0	0	0	0	0	0	0	1	0	0
Meserole Avenue	Leonard Street	0	0	0	0	0	0	0	0	0	0	0	0
	Manhattan Avenue	0	0	0	0	0	1	0	0	1	2	0	4
	Lorimer Street	0	0	0	0	1	0	0	1	0	0	2	0
	Guernsey Street	0	0	0	0	0	0	0	0	0	0	0	1
	Dobbin Street/Clifford Place	0	0	0	0	0	0	0	0	0	0	0	0
	Banker Street	0	0	0	0	0	0	0	0	0	0	0	0
Gem Street	Meserole Avenue	0	0	0	0	0	0	0	0	0	0	0	0
	North 15th Street	0	0	0	0	0	0	0	0	0	0	0	0
Norman Avenue	Leonard Street	0	0	0	0	0	0	0	0	0	0	1	0
	Manhattan Avenue	1	1	0	1	1	0	2	2	0	3	3	2
	Lorimer Street	0	0	0	1	0	0	1	0	0	1	0	0
	Guernsey Street	1	0	0	0	0	0	1	0	0	2	1	2
	Dobbin Street	0	0	0	0	0	0	0	0	0	0	0	0
	Banker Street/Wythe Avenue	0	0	0	0	0	0	0	0	0	0	0	0
Banker Street	North 15th Street	0	0	0	0	0	0	0	0	0	0	0	0
Nassau Avenue	Manhattan Avenue	0	0	0	0	0	0	0	0	0	0	0	0
	Bedford Avenue/Lorimer Street	0	0	0	0	0	0	0	0	0	0	0	0
	Guernsey Street	0	0	0	0	0	0	0	0	0	0	0	0
	Dobbin Street	0	0	0	0	0	0	0	0	0	0	0	0
	North 15th Street	0	0	2	0	0	0	0	0	2	0	0	2
	Banker Street/Wythe Avenue	0	0	0	0	0	0	0	0	0	0	0	1
Berry Street	North 14th Street/Nassau Avenue	0	1	0	0	0	0	0	1	0	0	1	2
	North 13th Street	0	0	1	0	0	0	0	0	1	0	0	1
	North 12th Street	0	2	0	0	0	0	0	2	0	0	2	1
Wythe Avenue	North 15th Street	0	0	0	0	0	0	0	0	0	0	1	1
	North 14th Street	0	0	0	0	0	0	0	0	0	0	0	0
	North 13th Street	0	0	0	0	0	0	0	0	0	1	3	3
	North 12th Street	0	0	0	0	0	0	0	0	0	0	0	0
Kent Avenue	North 13th Street	0	0	0	0	0	0	0	0	0	0	0	0
	North 12th Street	0	0	0	0	0	0	0	0	0	0	0	0

K. PARKING

Existing Conditions

Off-Street Parking

Off-street public parking facilities were inventoried during November 2019 and a total of two public parking garages were identified within ¼-mile of the Development Site. Figure 10-10 shows the locations of these off-street public parking facilities and Table 10-37 provides a summary of their names, addresses, license numbers, capacities, and estimated weekday midday utilization.

Available on-line data, field observations and interviews with parking attendants were used to determine the utilization levels of each parking facility during the midday (noon to 2:00 p.m.) period on a typical weekday. As shown in Table 10-37, the two parking garages have a combined licensed capacity of 430 spaces. During the midday period, approximately 51 percent of spaces are utilized, leaving a residual supply of approximately 202 available parking spaces.

TABLE 10-37
Existing Off-Street Public Parking Facilities

						Weekday Midday	
Map No.	Name	Address	License No.	Hours of Operation	Licensed Capacity	Estimated Utilization (%)	Available Capacity
1	MP East 87th LLC	55 Wythe Ave	N/A	24 Hrs Daily	228	25%	166
2	Imperial Parking US, LLC	101 Bedford Ave	1474717	24 Hrs Daily	202	80%	36
				Total:	**430**	**51%**	**202**

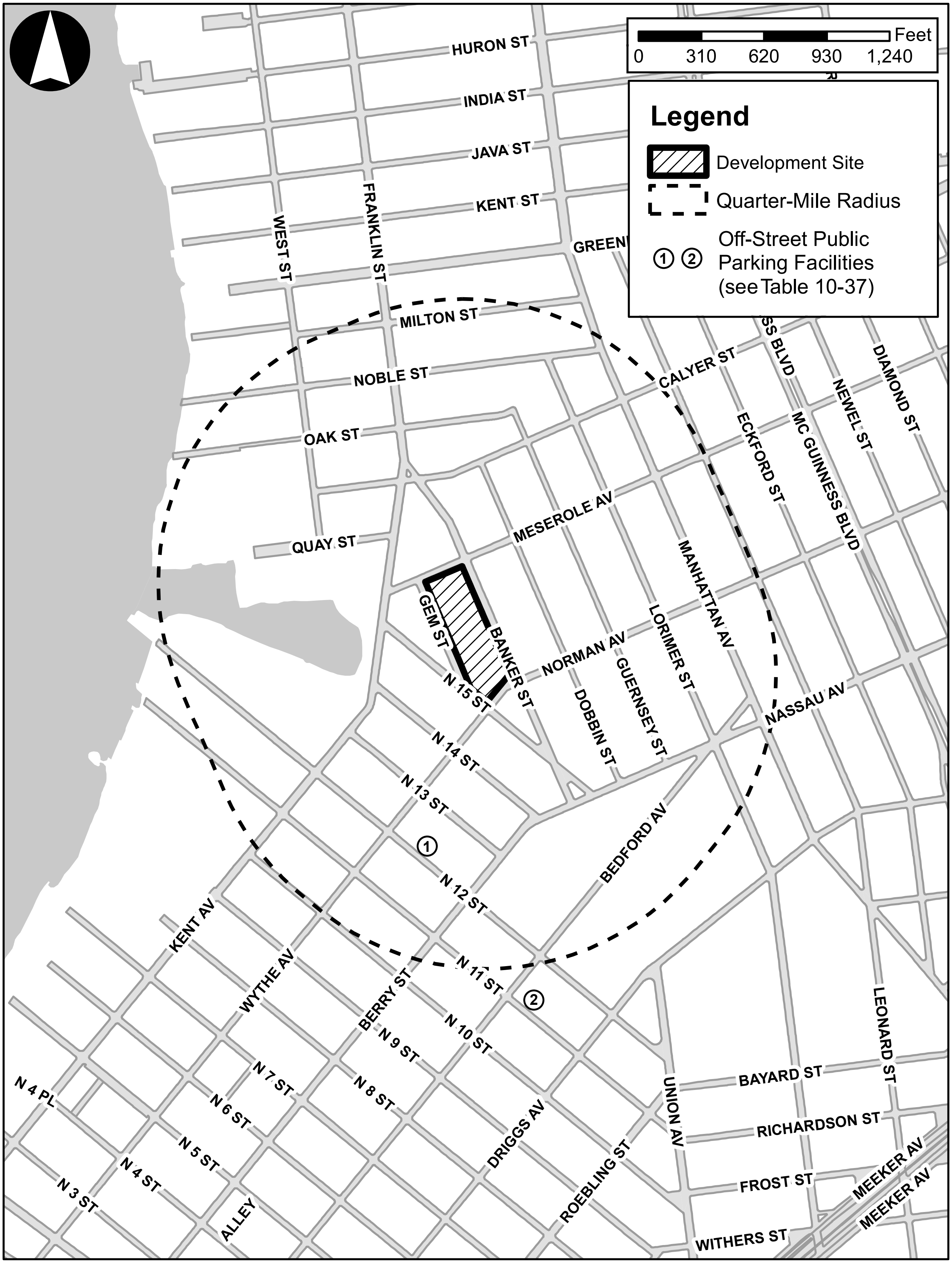
Notes:
Source: May 2018 PHA field surveys and interviews with parking facility operators.
Conservatively assumes full utilization at 98 percent of licensed capacity as per *CEQR Technical Manual* guidance.

On-Street Parking

An inventory of existing parking regulations within ¼-mile of the Development Site was compiled from field surveys and on-line sources. Curbside parking regulations for all block faces within the study area are shown in Figure D-1 and listed in accompanying Table D-1 in Appendix D. On-street public parking is generally governed by truck loading regulations and alternate-side-of-the-street regulations to facilitate street cleaning, as well as more restrictive no standing regulations at locations where additional traffic flow capacity is needed. One-hour or two-hour metered public parking is present along Manhattan Avenue and portions of Berry, Noble and Milton streets. 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 1,791 legal curbside parking spaces in the midday within ¼-mile of the Development Site.

Based on data collected during field surveys conducted in May 2018 and November 2019, on-street parking within the overall parking study area is approximately 95 percent utilized in the weekday midday. Approximately 86 on-street parking spaces are currently available within the study area during this period.

Off-Street Public Parking Facilities



The Future Without the Proposed Actions (No-Action Condition)

Between 2018 and 20254, it is expected that transportation demands in the vicinity of the Development Site will increase due to long-term background growth, new uses on the Development Site, and other planned developments unrelated to the Proposed Actions. As shown in Table 10-1, under the No-Action RWCDS, the Development Site is assumed to be occupied by a total of 148,085 gsf (excluding parking), comprised of approximately 35,225 gsf of restaurant/entertainment uses, 66,750 gsf of creative office space, 28,610 gsf of warehousing spaces, and 17,500 gsf of light industrial (distillery) space, as well as an estimated 107 accessory parking spaces. As these new accessory spaces would not be sufficient to accommodate all of the weekday midday parking demand generated by the new No-Action uses, some of the incremental No-Action demand is expected to utilize off-street public parking facilities or park on-street.

The forecast of future No-Action parking conditions also considers the potential for new demand from the planned developments listed in Table 2-3 in Chapter 2, "Land Use, Zoning, and Public Policy." Auto trip forecasts were used to forecast the parking demands from these developments except where site-specific data were available from secondary sources such as previous environmental studies. In addition, the forecast of future No-Action parking conditions incorporates annual background growth rates of 0.5 percent per year for the 2018 through 2023 period and 0.25 percent per year for the 2023 to 20254 period. These background growth rates, recommended in the *CEQR Technical Manual* for projects in Brooklyn outside of the Downtown area, are applied to account for smaller projects and as-of-right developments not reflected in Table 2-3, and general increases in parking demand not attributable to specific development projects.

Off-Street Parking

As shown in Table 10-38, based on the increased demand under the No-Action RWCDS, midday off-street public parking demand within the overall parking study area is expected to total 112 percent of capacity, with a deficit of 49 spaces during this period.

On-Street Parking

After accounting for background growth and demand from No-Action land uses on the Development Site and in the surrounding area not otherwise accommodated by accessory parking, the demand for on-street parking within the study area is expected to increase to 1,806 spaces in the midday period. Table 14-39 shows that in the future without the Proposed Actions, on-street parking within ¼-mile of the Development Site is expected to be operating at approximately 101 percent of capacity with a deficit of 15ten spaces in the weekday midday versus an existing surplus of 86 spaces.

Overall, in the future without the Proposed Actions, the combined supply of on-street and public off-street parking capacity within ¼-mile of the Development Site would not be sufficient to accommodate demand during the weekday midday. It is estimated that there would be a shortfall of 15ten parking spaces in the study area during this period.

TABLE 10-38
No-Action Off-Street Public Parking Capacity, Demand and Utilization

	Midday
Capacity	
Existing Capacity[1]	421
Capacity Displaced by No-Action Developments[2]	0
Total No-Action Capacity	421
Demand	
Existing Demand	219
Demand From Background Growth[3]	6
Incremental Demand from the No-Action RWCDS[4]	30
Incremental Demand from Off-Site No-Action Developments[5]	215
Total No-Action Demand	470
Utilization	
No-Action Utilization	112%
No-Action Off-Street Parking Surplus/(Deficit)	(49)

Notes:
[1] Analysis conservatively assumes that facilities are fully utilized at 98 percent of licensed capacity.
[2] No existing public parking facilities are expected to be displaced by new development in the No-Action condition.
[3] Reflects annual background growth rates of 0.5 percent/year for the 2018 through 2023 period and 0.25 percent/year for the 2023-2025~~4~~ period.
[4] Demand from No-Action land uses on the Development Site not accommodated by accessory parking.
[5] Demand from developments in proximity to the Development Site unrelated to the Proposed Actions and not accommodated by accessory parking.

TABLE 10-39
No-Action On-Street Parking Capacity, Demand and Utilization

	Midday
Capacity	
Existing Capacity[1]	1,791
Net Change in No-Action Parking Supply[2]	0
Total No-Action Capacity	1,791
Demand	
Existing Demand[1]	1,705
Demand From Background Growth[3]	52~~47~~
Off-Street Public Parking Deficit[4]	49
Total No-Action Demand	1,806~~1~~
Utilization	
No-Action Utilization	101%
No-Action On-Street Parking Surplus/(Deficit)	(15~~0~~)

Notes:
[1] Based on May 2018 and November 2019 field surveys. Excludes authorized vehicle parking.
[2] No changes to on-street parking spaces existing are expected to be implemented in the No-Action condition.
[3] Reflects annual background growth rates of 0.5 percent/year for the 2018 through 2023 period and 0.25 percent/year for the 2023-2025~~4~~ period.
[4] Demand from No-Action land uses on the Development Site and from unrelated developments in the vicinity not otherwise accommodated by accessory parking.

The Future With the Proposed Actions (With-Action Condition)

Under the Proposed Actions, no existing on-street or off-street public parking would be displaced, and it is anticipated that a total of 150 accessory parking spaces would be provided on the Development Site compared to 107 spaces in the No-Action condition. Table 10-40 shows a forecast of the total hourly parking demand that would be generated at the Development Site on a weekday under the Proposed Actions. (As the proposed project is predominantly commercial in nature, there is expected to be substantially less parking demand on weekends than on weekdays.) The parking forecast was derived from the forecast of daily auto trips from the proposed uses on the Development Site as well as from employment and worker shift data provided by Acme. As shown in Table 10-40, weekday parking demand generated by Acme Smoked Fish and the office and retail uses that would be developed under the Proposed Actions would total approximately 234 spaces in the midday period and peak at approximately 241 spaces during the late morning (10-11 AM) period. There would be little if any demand overnight. Compared to the No-Action condition, net incremental midday parking demand from the Proposed Actions would total approximately 54 spaces at off-street public parking facilities and on-street.

Off-Street Parking

A comparison of estimated No-Action and With-Action parking demand and capacity at study area off-street public parking facilities is provided in Table 10-41. As shown in Table 10-41, under the Proposed Actions, off-street public parking in proximity to the Development Site would be operating at approximately 124 percent of capacity in the midday period with a shortfall of approximately 103 spaces.

As discussed in Section F, "Transportation Analysis Methodologies," in this area of Brooklyn the inability of a proposed action or the surrounding area to accommodate future parking demands would be considered a parking shortfall, but would generally not be considered significant under *CEQR Technical Manual* guidance due to the magnitude of available alternative modes of transportation. The shortfall in off-street public parking spaces during the weekday midday period under the Proposed Actions would therefore not be considered a significant adverse parking impact. The ability of the on-street parking supply to accommodate this excess demand is assessed below.

On-Street Parking

As shown in Table 10-42, compared to the No-Action RWCDS, development associated with the Proposed Actions would result in a net increase in study area on-street parking demand of approximately 54 spaces in the weekday midday period. On-street parking demand within ¼-mile of the Development Site would therefore total approximately 1,860~~55~~ spaces in the weekday midday, and utilization would increase from 101 percent of capacity in the No-Action condition to 104 percent with the Proposed Actions. There would be a deficit of approximately 69~~4~~ on-street parking spaces within the study area in the midday period.

In summary, in the future with the Proposed Actions there would be a deficit of approximately 69~~4~~ spaces of on-street and off-street public parking capacity within ¼-mile of the Development Site in the weekday midday period. This deficit would reflect project demand not otherwise accommodated on-site or in off-street public parking facilities. While some drivers destined for the proximity of the Development Site would potentially have to travel a greater distance (e.g., between ¼ and ½ mile) to find available parking, this shortfall would not be considered a significant adverse impact based on *CEQR Technical Manual* criteria due to the magnitude of available alternative modes of transportation. Therefore, the Proposed Actions are not expected to result in significant adverse parking impacts during the weekday midday peak period for commercial and retail parking demand.

TABLE 10-40
Total Weekday Hourly Parking Accumulation Under the Proposed Actions' RWCDS

	Local Retail [1,2]			Office [1]			Acme Smoked Fish Co.[3]					
							Adminstration/Sales[4,5]		Production[6,7]			
	33,800 gsf			496,800 gsf			60 staff		80 staff			
	286 Total auto trips/day [2]			640 Total auto trips/day			56 Total auto trips/day [4,5]		38 Total auto trips/day [6,7]			
	In	Out	Accumulation	In	Out	Accumulation	In	Out	In	Out	Accumulation	Total Accumulation
12-1 AM	0	0	0	0	0	0	0	0	0	0	0	0
1-2	0	0	0	0	0	0	0	0	0	0	0	0
2-3	0	0	0	0	0	0	0	0	0	0	0	0
3-4	0	0	0	0	0	0	0	0	0	0	0	0
4-5	0	0	0	0	0	0	0	0	0	0	0	0
5-6	0	0	0	0	0	0	0	0	18	0	18	18
6-7	0	0	0	0	0	0	0	0	0	0	18	18
7-8	3	1	2	11	1	10	0	0	0	0	18	30
8-9	5	5	2	105	7	108	27	0	0	0	45	155
9-10	9	6	5	90	15	183	0	0	1	1	45	233
10-11	9	5	9	15	11	187	0	0	0	0	45	241
11-12	10	7	12	7	18	176	0	0	0	0	45	233
12-1 PM	11	11	12	8	7	177	1	1	0	0	45	234
1-2	26	29	9	9	14	172	0	0	0	0	45	226
2-3	12	12	9	40	10	202	0	0	0	18	27	238
3-4	12	12	9	12	13	201	0	0	0	0	27	237
4-5	12	13	8	11	75	137	0	0	0	0	27	172
5-6	12	16	4	7	124	20	0	27	0	0	0	24
6-7	11	11	4	4	21	3	0	0	0	0	0	7
7-8	6	7	3	1	4	0	0	0	0	0	0	3
8-9	4	5	2	0	0	0	0	0	0	0	0	2
9-10	1	3	0	0	0	0	0	0	0	0	0	0
10-11	0	0	0	0	0	0	0	0	0	0	0	0
11-12	0	0	0	0	0	0	0	0	0	0	0	0
	143	143		320	320		28	28	19	19		

Notes:

[1] Local retail and office parking demand patterns based on data from the 2016 *East New York Rezoning FEIS* .

[2] 25% linked-trip credit applied to local retail use.

[3] Based on data on future employment and anticipated work shifts provided by Acme Smoked Fish.

[4] Conservatively assumes that 80 percent of administrative/sales staff leave and return during the midday period.

[5] Administrative/sales staff auto mode share in midday based on midday office worker mode split.

[6] Conservatively assumes that 50 percent of production staff leave and return during the mid-morning period.

[7] Production staff auto mode share in mid-morning period based on midday light industrial/manufacturing mode split.

TABLE 10-41
With-Action Off-Street Public Parking Capacity, Demand and Utilization

	Midday
Capacity	
No-Action Capacity	421
Capacity Displaced by With-Action Developments[1]	0
Total With-Action Capacity	421
Demand	
No-Action Demand	470
Incremental Demand from the Proposed Actions[2]	54
Total With-Action Demand	524
Utilization	
With-Action Utilization	124%
With-Action Off-Street Parking Surplus/(Deficit)	(103)

Notes:
[1] No changes to off-street public parking capacity are expected to result from the Proposed Actions.
[2] Demand from With-Action land uses on the Development Site not accommodated by accessory parking.

TABLE 10-42
With-Action On-Street Public Parking Capacity, Demand and Utilization

	Midday
Capacity	
Total With-Action Capacity[1]	1,791
Demand	
No-Action Demand	1,806~~1~~
Incremental Demand from the Proposed Actions[2]	54
Total With-Action Demand	1,860~~55~~
Utilization	
With-Action Utilization	104%
With-Action On-Street Parking Surplus/(Deficit)	(69~~4~~)

Notes:
[1] No changes to on-street parking capacity are expected to result from the Proposed Actions.
[2] Demand from With-Action land uses on the Development Site not otherwise accommodated by on-site accessory parking or in off-street public parking facilities.