



**DRAFT**

**TECHNICAL MEMORANDUM**

**To: NYC Department of City Planning**  
**From: Philip Habib & Associates**  
**Date: November 16, 2018**  
**Project: 960 Franklin Avenue Rezoning**  
**Re: Transportation Planning Factors and Travel Demand Forecast**

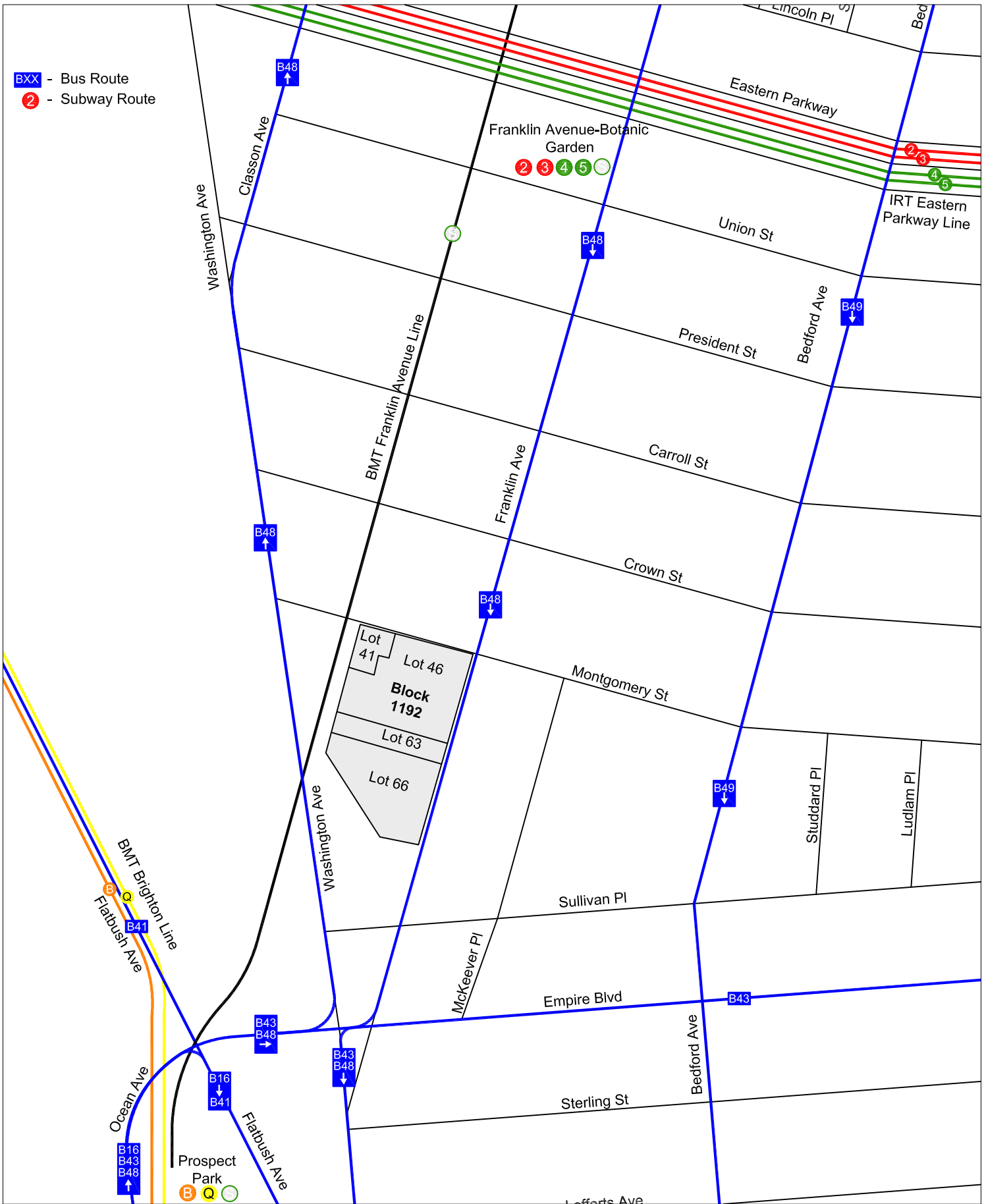
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This memorandum summarizes the transportation planning factors to be used for an environmental assessment analysis of traffic, parking, transit, and pedestrian conditions for the proposed development site, which consists of Lots 41, 46, 63, and 66 on Block 1192 in the Crown Heights neighborhood of Brooklyn (see **Figure 1**).

**THE PROPOSED ACTIONS**

The proposed redevelopment would be facilitated by a rezoning involving zoning map and text amendments. The Proposed Actions would facilitate the development of the 120,209 sf (approximately 2.76-acre) Development Site with an approximately 1,386,070 gsf (1,166,027 zsf) mixed-use development (the “Proposed Project”). The Proposed Project would comprise 1,263,025 gsf of residential uses, introducing a total of 1,578 rental dwelling units, of which 50 percent or 789 dwelling units would be affordable units and 50 percent or 789 dwelling units would be market-rate units. In addition to the residential component, approximately 21,183gsf of local retail space and approximately 9,678 gsf of community facility space would be provided. Approximately 75,414 gsf (approximately 180 parking spaces) would be allocated for parking on the ground- and cellar-levels of the Proposed Project.

The intent of the Proposed Actions is primarily to provide a substantial number of affordable housing units, which are in high demand city-wide. The Proposed Actions would rezone the Project Area from a R6A zoning district, which allows a 3.0 FAR for residential uses to an R9D zoning district, which allows for a 10.0 FAR to residential uses; however the Applicant will enter into a Restrictive declaration which would restrict the project to 9.7 FAR. The proposed development seeks to maximize the on-site development to utilize the full 9.7 FAR requested in order to provide a high-density residential development with a mix of affordable and market-rate units.



960 Franklin Avenue Rezoning

Figure 1

Site Location & Transit Access

## THE REASONABLE WORST CASE DEVELOPMENT SCENARIO (RWCDs)

### The Future without the Proposed Actions (No-Action)

Under future conditions without the Proposed Actions, it is anticipated that the entire site would be redeveloped with residential uses pursuant to existing R6A zoning. A seven story building with a maximum building height of 70 feet is permitted. A total of approximately 518 market-rate residential units would be constructed totaling approximately 414,606 gsf. A total of approximately 259 parking spaces would be provided, which is the equivalent of 50 percent of the number of market-rate dwelling units in the Proposed Project under No-Action conditions. No commercial uses would be permitted as there is no commercial overlay mapped on these sites and no zoning changes are anticipated on the Proposed Development Site under future conditions without the Proposed Actions. No community facility uses are assumed under future No-Action conditions.

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

In the 2024 future with the Proposed Actions, the 120,209 sf Development Site would accommodate up to approximately 1,386,070 gsf (approximately 1,166,027 zsf) of mixed-use development. The Applicant is proposing approximately 1,263,039 gsf of residential uses, introducing a total of approximately 1,578 dwelling units, of which 50 percent or 789 dwelling units would be affordable units and 50 percent or 789 dwelling units would be market-rate units. In addition to the residential component, approximately 21,183 gsf of local retail space and approximately 9,678 gsf of community facility space would be provided. Approximately 75,414 gsf (approximately 180 parking spaces) would be allocated for parking on the ground- and cellar-levels of the Proposed Project. In order to assess the potential effects of the Proposed Actions, a RWCDs that compares the “future with the Proposed Actions” (With-Action) with the “future without the Proposed Actions” (No-Action) for the projected build year of 2024.

### Net Project Increment

**Table 1** below provides a comparison of the No-Action and With-Action scenarios identified for analysis purposes of the Proposed Project. As shown, the incremental (net) change that would result from the Proposed Development is the addition of 1,060 dwelling units (848,418 gsf), 21,183 gsf of local retail uses, 9,678 gsf of community facility uses, and a net decrease of approximately 79 accessory parking spaces. Based on 2010 census data, Brooklyn Community District 9 has an average of 2.62 persons per household.

**Table 1**  
**Comparison of No-Action and With-Action Development Scenarios**

Use	No-Action Scenario	With-Action Scenario	Increment
Residential			
Market-Rate Dwelling Units	518	789	+271
Affordable Dwelling Units	0	789	+789
<b>TOTAL</b>	<b>518</b>	<b>1,578</b>	<b>+1,060</b>
Local Retail	--	21,183 gsf	+21,183 gsf
Community Facility	--	9,678 gsf	+9,678 gsf
Parking	259 spaces	180 spaces	-79 spaces

## **Residential**

The forecast of travel demand for residential use used a weekday trip generation rate of 8.075 person trips per DU, a Saturday trip generation rate of 9.6 person trips per DU, and temporal distributions of 10.0 percent, 5.0 percent, 11.0 percent, and 8.0 percent for the weekday AM, midday, PM, and Saturday midday peak hours, respectively, as per the 2014 *CEQR Technical Manual*. The residential modal split assumed 13.0 percent, 0.4 percent, 72.2 percent, 4.8 percent, and 9.1 percent mode shares for private auto, taxi, subway, bus and walk-only modes, respectively, as per the 2012 to 2016 *American Community Survey (ACS) Means of Transportation to Work Table* for Brooklyn census tracts 213, 215, 217, 219, 325, and 327. The vehicle occupancy of 1.09 persons per vehicle in the weekday AM and PM peak hours was also assumed based on the ACS data. Directional splits (in/out) were based on the *Empire Boulevard Rezoning EAS*, October 2013.

## **Local Retail**

The forecast of travel demand for the local retail use used a weekday trip generation rate of 205 person trips per 1,000 sf, a Saturday trip generation rate of 240 person trips per 1,000 sf, and temporal distributions of 3.0 percent, 19.0 percent, 10.0 percent, and 10.0 percent for the weekday AM, midday, PM, and Saturday midday peak hours, respectively, as per the 2014 *CEQR Technical Manual*. The local retail modal split assumed 11.0 percent, 0.0 percent, 3.0 percent, 2.0 percent, and 8.0 percent mode shares for private auto, taxi, subway, bus, and walk-only modes, respectively, based data provided by NYCDP/NYCDOT. The vehicle occupancy of 2.00 persons per vehicle was assumed based on the *Crown West Heights Rezoning EAS*. Directional splits (in/out) were assumed based on the *Atlantic Yards FSEIS*, 2014.

Additionally, it was assumed that 25.0 percent of local retail trips were linked trips and not new to the study area.

## **Community Facility**

For analysis purposes, it is assumed that the proposed community facility space will be occupied by a medical office facility. The forecast of travel demand for the medical office use used a weekday trip generation rate of 103.4 person trips per 1,000 sf, a Saturday trip generation rate of 62.1 person trips per 1,000 sf, and temporal distributions of 10.0 percent, 13.0 percent, 9.0 percent, and 16.0 percent were assumed for the weekday AM, midday, PM, and Saturday midday peak hours, respectively, based on data provided by NYCDP/NYCDOT. The medical office modal split assumed 24.0 percent, 6.0 percent, 59.0 percent, 9.0 percent, and 2.0 percent mode shares for private auto, taxi, subway, bus, and walk-only modes, respectively with vehicle occupancy of 1.5 persons per vehicle. The modal split percentages and vehicle occupancy rates were also based on data provided by NYCDP/NYCDOT.

## TRIP GENERATION

The net incremental change in person and vehicle trips expected to result from the Proposed Actions by the 2024 analysis year was derived based on the proposed RWCDs land uses described above and the transportation planning factors shown in **Table 2**. **Table 3** shows an estimate of the net incremental change in peak hour person trips and vehicle trips (versus the No-Action condition) that would occur in 2024 with implementation of the Proposed Actions. As shown in **Table 3**, under the RWCDs, the Proposed Actions would generate a net increase of approximately 1,054 person trips (in + out combined) in the weekday AM peak hour, 1,178 in the weekday midday, 1,358 in the weekday PM peak hour, and 1,355 in the Saturday peak hour. Peak hour vehicle trips (including auto, bus, truck, and taxi trips) would increase by a net total of approximately 146, 122, 158, and 162 (in + out combined) in the weekday AM, midday, and PM, and Saturday peak hours, respectively.

Peak hour subway trips would increase by a net total of 683, 405, 748, and 696 during these periods, respectively, while bus trips would increase by approximately 52, 44, 59 and 61, respectively. Trips made entirely on foot (walk-only trips) would increase by 164, 565, 362, and 397 during the weekday AM, midday, and PM, and Saturday peak hours, respectively.

## ANALYSIS PERIODS

Based on *CEQR Technical Manual* guidelines, a quantified traffic analysis is typically required if a proposed action would result in more than 50 vehicle trip ends in a peak hour. As shown in **Table 3**, the Proposed Actions are expected to result in more than 50 total vehicle trips during the weekday AM and PM peak hours (which are typical peak periods for commuter travel demand) and the weekday midday and Saturday peak hours (which are typical peak periods for retail demand). All of these periods are therefore included in the quantified analysis of traffic conditions.

Transit (subway, bus and commuter rail) analyses typically examine conditions during the weekday AM and PM commuter peak periods, as it is during these times that overall transit demand (and the potential for significant adverse impacts) is generally greatest.

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. As shown in **Table 2**, the net increase in pedestrian trips resulting from the Proposed Actions would exceed the 200-trip *CEQR Technical Manual* analysis threshold during the weekday AM and PM commuter peak hours and the weekday midday and Saturday peak hours for retail demand.

Similarly to the analysis of traffic conditions, the analysis of pedestrian conditions will be conducted for the weekday AM, MD, PM, and Saturday midday/afternoon peak periods. The exact peak hours will be determined based on existing pedestrian volumes in the study area.

**Table 2: Transportation Planning Factors**

<b>Land Use:</b>	<b><u>Residential</u></b>		<b><u>Local Retail</u></b>		<b><u>Medical Office</u></b>	
<b>Trip Generation:</b>	(1)		(1)		(6)	
Weekday	8.075		205		103.4	
Saturday	9.6		240		62.1	
	per DU		per 1,000 sf		per 1,000 sf	
<b>Temporal Distribution:</b>	(1)		(1)		(6)	
AM	10.0%		3.0%		10.0%	
MD	5.0%		19.0%		13.0%	
PM	11.0%		10.0%		9.0%	
SAT	8.0%		10.0%		16.0%	
<b>Modal Splits*:</b>	(2)		(6)		(6)	
Auto	13.0%		11.0%		24.0%	
Taxi	0.4%		0.0%		6.0%	
Subway	72.7%		3.0%		59.0%	
Bus	4.8%		2.0%		9.0%	
Walk/Bike/Other	9.1%		84.0%		2.0%	
	100.0%		100.0%		100.0%	
<b>In/Out Splits:</b>	(3)		(5)		(6)	
	In	Out	In	Out	In	Out
AM	20.0%	80.0%	50.0%	50.0%	89.0%	11.0%
MD	51.0%	49.0%	50.0%	50.0%	51.0%	49.0%
PM	65.0%	35.0%	50.0%	50.0%	48.0%	52.0%
SAT	50.0%	50.0%	55.0%	45.0%	51.0%	49.0%
<b>Vehicle Occupancy*:</b>	(2)		(4)		(6)	
Auto	1.09		2.00		1.50	
Taxi	1.4		2.00		1.50	
<b>Truck Trip Generation</b>	(1)		(1)		(1)	
Weekday	0.06		0.35		0.32	
Saturday	0.02		0.04		0.01	
	per DU		per 1,000 sf		per 1,000 sf	
<b>Truck Temporal Distribution</b>	(1)		(1)		(1)	
AM	12.0%		8.0%		10.0%	
MD	9.0%		11.0%		11.0%	
PM	2.0%		2.0%		2.0%	
SAT	9.0%		11.0%		11.0%	
	In	Out	In	Out	In	Out
AM/MD/PM/Sat	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
<b>Notes :</b>	<p>(1) 2014 City Environmental Quality Review (CEQR) Technical Manual.</p> <p>(2) Based on American Community Survey 2012-2016 , Means of Transportation to Work Table for Brooklyn Tracts 213, 215, 217, 219, 325, and 327.</p> <p>(3) Empire Boulevard Rezoning EAS, December 2013.</p> <p>(4) Crown Heights West Rezoning EAS .</p> <p>(5) Atlantic Yards FSEIS, 2014.</p> <p>(6) Based on data provided by NYCDOT/NYCDOT.</p>					

**Table 3: Travel Demand Forecast (Net Incremental Trips)**

Land Use:		Residential		Local Retail		Medical Office		Total	
Area/Units:		1060	DU	21,183	gsf	9,678	gsf		
<b>Peak Hour Trips:*</b>									
	AM	856		98		100		1,054	
	MD	428		620		130		1,178	
	PM	942		326		90		1,358	
	Saturday	814		381		160		1,355	
<b>Person Trips:</b>									
		In	Out	In	Out	In	Out	In	Out
AM	Auto	22	89	5	5	21	3	48	97
	Dropoff/Taxi	1	3	0	0	5	1	6	4
	Subway	124	498	1	1	53	6	178	505
	Public Bus	8	33	1	1	8	1	17	35
	Walk/Bike/Other	16	62	42	42	2	0	60	104
	<b>Total</b>	171	685	49	49	89	11	309	745
		In	Out	In	Out	In	Out	In	Out
MD	Auto	28	27	34	34	16	15	78	76
	Dropoff/Taxi	1	1	0	0	4	4	5	5
	Subway	159	151	9	9	39	38	207	198
	Public Bus	10	10	6	6	6	6	22	22
	Walk/Bike/Other	21	20	261	261	1	1	283	282
	<b>Total</b>	219	209	310	310	66	64	595	583
		In	Out	In	Out	In	Out	In	Out
PM	Auto	80	43	18	18	10	11	108	72
	Dropoff/Taxi	2	1	0	0	3	3	5	4
	Subway	445	240	5	5	25	28	475	273
	Public Bus	29	16	3	3	4	4	36	23
	Walk/Bike/Other	56	30	137	137	1	1	194	168
	<b>Total</b>	612	330	163	163	43	47	818	540
		In	Out	In	Out	In	Out	In	Out
Saturday	Auto	53	53	23	19	20	19	96	91
	Dropoff/Taxi	2	2	0	0	5	5	7	7
	Subway	296	296	6	5	47	46	349	347
	Public Bus	20	20	4	3	7	7	31	30
	Walk/Bike/Other	36	36	177	144	2	2	215	182
	<b>Total</b>	407	407	210	171	81	79	698	657
<b>Vehicle Trips :</b>									
		In	Out	In	Out	In	Out	In	Out
AM	Auto	20	82	3	3	14	2	37	87
	Dropoff/Taxi	1	2	0	0	3	1	4	3
	Dropoff/Taxi Balanced	3	3	0	0	4	4	7	7
	Truck	4	4	0	0	0	0	4	4
	<b>Total</b>	27	89	3	3	18	6	48	98
			In	Out	In	Out	In	Out	In
MD	Auto	26	25	17	17	11	10	54	52
	Dropoff/Taxi	1	1	0	0	3	3	4	4
	Dropoff/Taxi Balanced	2	2	0	0	6	6	8	8
	Truck	0	0	0	0	0	0	0	0
	<b>Total</b>	28	27	17	17	17	16	62	60
			In	Out	In	Out	In	Out	In
PM	Auto	73	39	9	9	7	7	89	55
	Dropoff/Taxi	1	1	0	0	2	2	3	3
	Dropoff/Taxi Balanced	2	2	0	0	4	4	6	6
	Truck	1	1	0	0	0	0	1	1
	<b>Total</b>	76	42	9	9	11	11	96	62
			In	Out	In	Out	In	Out	In
Saturday	Auto	49	49	12	10	13	13	74	72
	Dropoff/Taxi	1	1	0	0	3	3	4	4
	Dropoff/Taxi Balanced	2	2	0	0	6	6	8	8
	Truck	0	0	0	0	0	0	0	0
	<b>Total</b>	51	51	12	10	19	19	82	80

Note: \*25 percent linked trips assumed for local retail.

## TRAFFIC STUDY AREA

### Rezoning Area Street Network

Block 1192 is bounded by Washington Avenue on the west, Empire Boulevard on the south, Franklin Avenue on the east, and Montgomery Street on the north. The BMT Franklin Avenue Line of the New York City Subway (NYCT) runs north-south in an open cut that bisects Block 1192. The proposed development site is located east of this cut.

In addition to the proposed development site, which is currently primarily occupied by a spice warehouse and distribution facility, the rezoning area would include a portion of Lots 77 and 85, both of which contain residential buildings. The development site is approximately 2.75 acres in size. The development site includes approximately 550 feet of frontage along Franklin Avenue and approximately 230 feet of frontage along Montgomery Street. Adjacent land uses include residential, mixed-use or light industrial/warehouse uses, and there are various schools nearby, including P.S. 241, Clara Barton High School, and Medgar Evers College.

Franklin Avenue is a minor one-way southbound arterial through Crown Heights which runs along the east side of the rezoning area, and Washington Avenue is a minor two-way arterial west of the rezoning area. The nearest designated local truck routes to the rezoning area are Rogers Avenue (northbound) and Nostrand Avenue (southbound) east of the rezoning area and Empire Boulevard (east-west) south of the rezoning area. Eastern Parkway is a major arterial north of the rezoning area but is not a designated local truck route. All other streets in the area are local streets.

### Traffic Assignment and Analysis Locations

As project-generated traffic volumes would exceed 50 trips in each peak hour (the *CEQR Technical Manual* Level 1 screening threshold for a detailed analysis), a preliminary assignment of net increment traffic volumes was prepared for each period to help identify individual intersections for analysis (a Level 2 screening assessment). The origins/destinations used for the assignments of residential trips, which comprise approximately 85 to 95 percent of all vehicle trips in each of the four analysis peak hours, are based on 2006-2010 ACS journey-to-work data. Based on these data, projected vehicle trips to/and from the proposed development site were assigned to portals on the periphery of the area surrounding the proposed development site. As shown below in **Table 4**, trips into and out of the study area would be fairly evenly distributed to ten portals. A high concentration of project generated vehicle trips is expected to occur along Washington Avenue between Empire Boulevard and the project site as trips from both the Washington Avenue and the Union Street portal funnel into this corridor.

From the various portals, trips were assigned to the most direct route to the projected development site. Although some project-generated auto demand is expected to park at off-street public parking facilities and utilize on-street parking in the area, auto trips were assigned directly to their respective projected development sites. This 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 project site area rather than dispersing it to outlying public parking facilities and on-street parking spaces.

Truck trips were assigned to designated local truck routes and then to the most direct paths to and from each projected development site.



**Table 4: Traffic Portal Assignments**

Classon/Franklin Avenues (North)	9.6%
Bedford Avenue (North)	8.1%
Eastern Parkway (East)	8.2%
Empire Boulevard (East)	8.8%
Flatbush Avenue (North)	7.8%
Flatbush Avenue (South)	9.8%
Ocean Avenue (South)	15.4%
Rogers/Nostrand Avenues (South)	4.1%
Union Street (West)	12.4%
Washington Avenue (North)	15.8%

As discussed above, projected development associated with the Proposed Actions would result in a net increase of approximately 146 vehicle trips during the weekday AM peak hour, 122 during the midday peak hour, 158 during the PM peak hour and 162 during the Saturday peak hour.

**Figures 2** through **5** show the assignment of incremental peak hour vehicle trips from the Proposed Actions' RWCDs at analyzed intersections within the traffic study area. As shown in **Figure 6**, a total of eight intersections (five signalized and three unsignalized) were selected as traffic analysis locations.

## TRANSIT

According to the general thresholds used by the Metropolitan Transportation Authority (MTA) 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 or subway analysis would be warranted.

### Subway Analysis

#### Subway Stations

As shown in **Figure 1**, the nearest subway stations to the rezoning area are the Franklin Avenue-Botanic Garden station on the IRT Eastern Parkway Line (2, 3, 4, and 5 trains) and the BMT Franklin Avenue Line (Franklin Avenue Shuttle) on Eastern Parkway between Classon and Franklin Avenues north of the rezoning area, and Prospect Park on the BMT Brighton Line (B and Q trains) and the BMT Franklin Avenue Line (Franklin Avenue Shuttle) at the intersection of Flatbush Avenue, Empire Boulevard, and Ocean Avenue southwest of the rezoning area.

As shown above in **Table 3**, the approximate net hourly subway trips generated by the proposed project would be 683 and 748 (in and out combined) trips in the weekday AM and PM commuter peak hours, respectively. Based on ridership data and distance from the proposed development sites, approximately 60 percent of subway trips were assigned to the Franklin Avenue-Botanic Garden station on the IRT Eastern Parkway Line (2, 3, 4, and 5 trains) and the BMT Franklin Avenue Line (Franklin Avenue Shuttle)



960 Franklin Avenue Rezoning

Figure 2

Preliminary AM Traffic Assignments



960 Franklin Avenue Rezoning

Figure 3

Preliminary MD Traffic Assignments



960 Franklin Avenue Rezoning

Figure 4

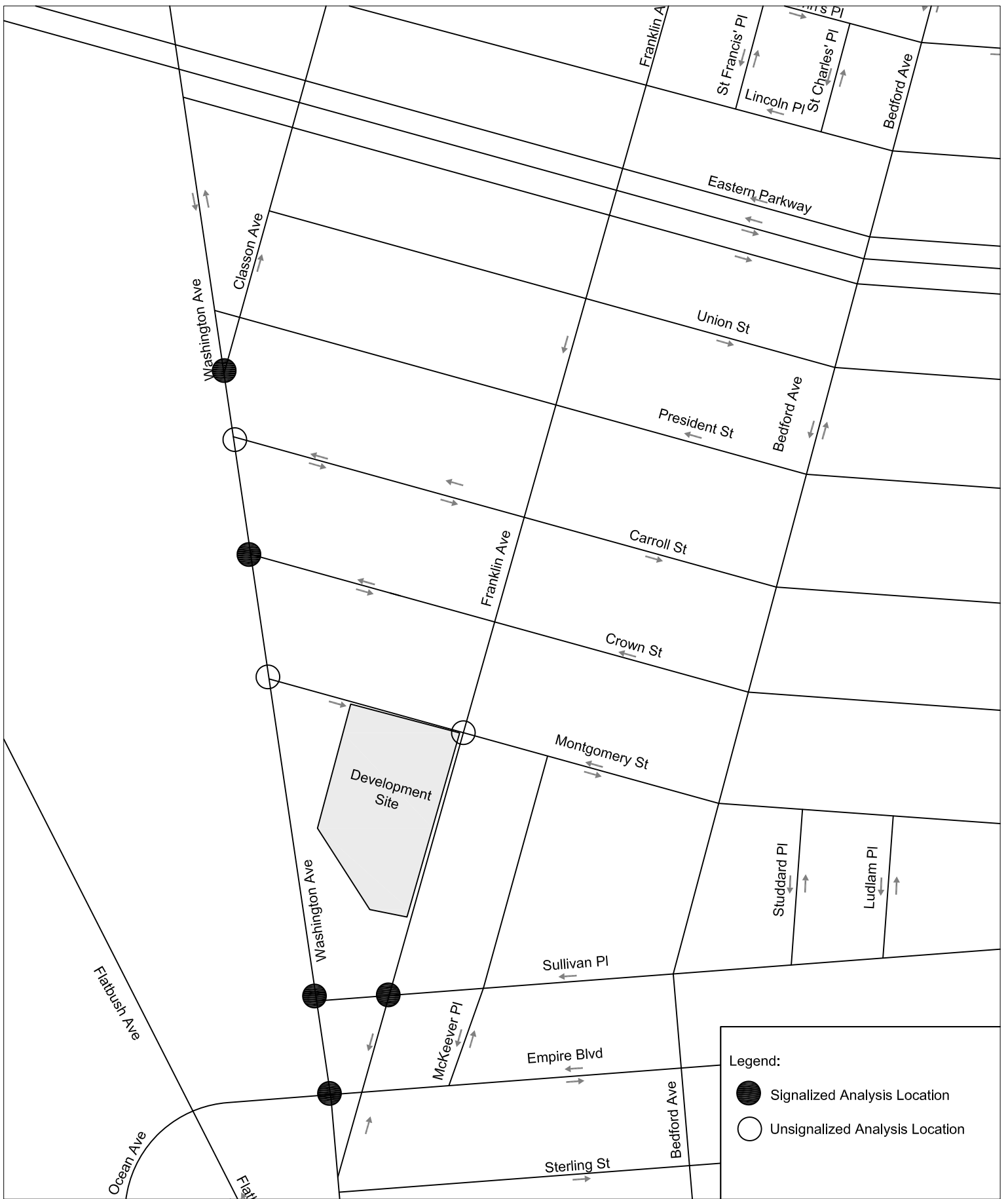
Preliminary PM Traffic Assignments



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Figure 5

Preliminary SAT Traffic Assignments



960 Franklin Avenue Rezoning

Figure 6

Traffic Analysis Locations

with the remaining approximately 40 percent assigned to the Prospect Park station on the BMT Brighton Line (B and Q trains) and the BMT Franklin Avenue Line (Franklin Avenue Shuttle). As shown in **Table 5**, both the Franklin Avenue-Botanic Garden station with an expected increase of 410 AM and 449 PM peak hour trips and the Prospect Park station with an expected increase of 273 AM and 299 PM peak hour Trips would exceed the *CEQR Technical Manual* analysis threshold of 200 new trips in any one peak hour. A detailed analysis of key circulation elements (e.g., street stairs and fare arrays) is therefore warranted for both the Franklin Avenue-Botanic Garden and the Prospect Park subway stations.

**Table 5: Project Increment Peak Hour Subway Assignments by Station**

Subway Station	AM Peak Hour Trips			PM Peak Hour Trips		
	Into Project	Out Of Project	Total	Into Project	Out Of Project	Total
<b>Project Summary</b>						
Peak Hour Project Increment Trips	314	740	1,054	786	572	1,358
Peak Hour Project Increment Subway Trips	178	505	683	475	273	748
<b>Subway Station Summary</b>						
Franklin Avenue (2/3/4/5)-Botanic Garden (S)	107	303	410	285	164	449
Prospect Park (B/Q/S)	71	202	273	190	109	299

Subway Line Haul

As noted above, the proposed project would generate approximately 178 incoming and 505 outgoing new subway trips in the weekday AM peak hour and 475 incoming and 273 outgoing new subway trips in the weekday PM peak hour. As discussed above, the rezoning area is served by a total of seven NYCT subway routes—the No. 2, 3, 4, 5, as well as the B, Q, and the Franklin Avenue Shuttle (S). As the project generated subway trips would be distributed among these seven lines, the Proposed Actions are expected to generate less than 200 new peak hour subway trips per line in one direction. An analysis of subway line haul conditions is therefore not warranted per *CEQR Technical Manual* analysis criteria.

**Bus Analysis**

Bus Routes

As shown in **Figure 1**, the proposed rezoning area is served by a total of five local bus routes operated by NYCT including the B43 and B48 which provide service between Greenpoint and Prospect-Lefferts Gardens; the B49 which runs along Bedford and Rogers Avenues en route between Manhattan Beach and Bedford-Stuyvesant; the B16 which provides service between Bay Ridge and Lefferts Garden; and the B41, which runs along Flatbush Avenue en route between Kings Plaza and Downtown Brooklyn. It should be noted that the B16, B43 and B48 all terminate at Lincoln Road and Flatbush Avenue, approximately 0.3 miles south of the project site. The northern terminus of the B49 is located at Franklin Avenue & Lefferts Place, approximately one mile north of the project site. These factors and the distance of individual bus stops from the project site were taken into consideration for the assignment of project generated bus trips.

Bus Assignment and Analyzed Routes

As shown in **Table 3**, projected development sites are expected to generate a net total of approximately 52 and 59 incremental trips by local bus during the weekday AM and PM peak hours, respectively.

According to the general thresholds used by the MTA and specified in the *CEQR Technical Manual*, a detailed analysis of bus conditions is generally not required if a proposed action is projected to result in fewer than 50 peak hour trips being assigned to a single bus route (in one direction), as this level of new demand is considered unlikely to result in significant adverse impacts. As the 52 project generated AM peak hour and 59 PM peak hour bus trips will be distributed to the five local NYCT bus routes serving the project area, none of these bus routes are expected to experience 50 or more new trips in one direction in at least one peak hour and therefore a detailed analysis of bus line haul conditions is not warranted per *CEQR Technical Manual* criteria.

## **PEDESTRIANS**

Under *CEQR Technical Manual* guidelines, detailed pedestrian analyses are generally warranted if a proposed action is projected to result in 200 or more new peak hour pedestrians at any sidewalk, corner area or crosswalk. As shown in **Table 3**, the Proposed Actions are expected to generate approximately 164 walk-only trips in the weekday AM peak hour, 565 in the midday peak hour, 362 in the PM peak hour, and 397 in the Saturday peak hour. Persons en route to and from subway station entrances and bus stops would add approximately 735, 449, 807, and 757 additional pedestrian trips to sidewalks and crosswalks in the vicinity of the rezoning area during these same periods, respectively. New pedestrian trips would therefore total 899, 1,014, 1,169, and 1,154 (bus, subway and “walk only”; in and out combined) in the weekday AM, midday, PM, and Saturday midday peak hours, respectively.

For the preliminary pedestrian trip assignment for the proposed action, the walk-only trips were distributed evenly around the network and the subway and bus trips were assigned to stations and bus routes based on the ridership at each subway station/on each bus route and the distance from the each of the proposed developments to the subway station/nearest bus stop on a route. As shown in **Figure 7**, a total of 34 pedestrian elements, including 15 sidewalks, 13 corner areas, and 6 crosswalks are expected to exceed the *CEQR Technical Manual* analysis threshold of 200 new peak hour pedestrian trips on any single element. The analysis elements are primarily located along the Franklin Avenue and Empire Boulevard corridors connecting the site to area subway station entrances.

It should be noted that several crosswalks and corner areas along Franklin Avenue between Montgomery Street and Eastern Parkway are expected an increase of more than 200 new pedestrian trips but will not be included in the pedestrian analysis as the intersections of Franklin Avenue with Montgomery, Crown, Carrol, and Union Streets are all unsignalized.

## **PARKING**

Parking demand from commercial and retail uses typically peaks in the weekday midday period and declines during the afternoon and evening. By contrast, residential demand typically peaks during the overnight period.

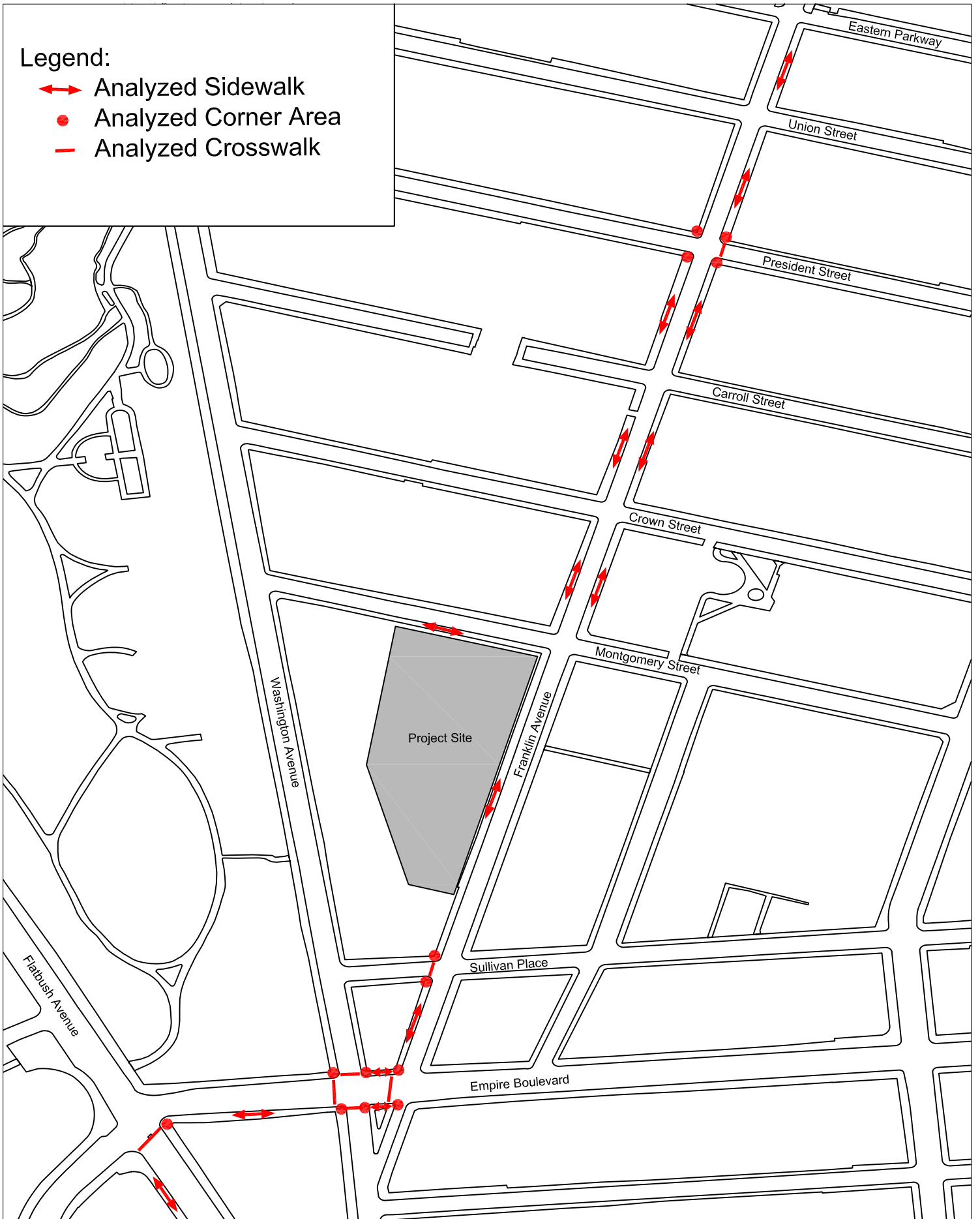
Based on the 2012-2016 ACS Vehicles Available Data for Brooklyn Census Tracts 213, 215, 217, 219, 325, and 327, there is an average of 0.30 vehicles per renter-occupied household. Using this rate for the market-rate units and a rate of 0.17 vehicle per household for the affordable units, the total 1,578 DUs in the With-Action condition would generate a peak overnight parking demand of approximately 371 vehicles, as shown in **Tables 6** and **7**.

As it is anticipated that the proposed development site will provide approximately 180 accessory parking spaces, the project-generated parking demand would exceed the provided accessory parking spaces in



Legend:

- ↔ Analyzed Sidewalk
- Analyzed Corner Area
- Analyzed Crosswalk



the overnight period. However, the on-site accessory parking would be sufficient to accommodate the project-generated parking demand in the midday peak period. As such, detailed existing on-street and off-street parking inventories for the weekday overnight period are provided in the EIS to document the existing supply and demand. The parking analyses document changes in the parking supply and utilization in the rezoning area and within a ¼-mile radius of projected development sites under both No-Action and With-Action conditions.

**Table 6: Projected Weekday Hourly Parking Accumulation**

	Residential 1,578 DU 1,520 Auto Trips		Local Retail 21,183 sf 180 Auto Trips		Medical Office Staff 9,678 sf 162 Auto Trips		Total		
	In	Out	In	Out	In	Out	In	Out	Accumulation
	12-1 AM	8	0	0	0	0	0	8	0
1-2	8	0	0	0	0	0	8	0	387
2-3	0	0	0	0	0	0	0	0	387
3-4	0	0	0	0	0	0	0	0	387
4-5	0	0	0	0	0	0	0	0	387
5-6	8	17	0	0	0	0	8	17	378
6-7	8	51	0	0	0	0	8	51	335
7-8	8	75	2	1	0	0	10	76	269
8-9	30	122	3	3	14	2	47	127	189
9-10	22	36	6	4	9	6	37	46	180
10-11	33	42	6	3	8	8	47	53	174
11-12	33	33	6	5	8	10	47	48	173
12-1 PM	30	33	7	7	4	6	41	46	168
1-2	39	37	17	17	11	10	67	64	171
2-3	38	25	7	7	6	9	51	41	181
3-4	59	17	7	7	6	7	72	31	222
4-5	87	33	7	8	8	10	102	51	273
5-6	109	59	9	9	7	8	125	76	322
6-7	73	33	6	7	0	5	79	45	356
7-8	50	33	4	5	0	0	54	38	372
8-9	50	33	2	5	0	0	52	38	386
9-10	25	25	1	2	0	0	26	27	385
10-11	25	33	0	0	0	0	25	33	377
11-12	17	23	0	0	0	0	17	23	371
<b>Total</b>	<b>760</b>	<b>760</b>	<b>90</b>	<b>90</b>	<b>81</b>	<b>81</b>	<b>931</b>	<b>931</b>	

**Table 7: Projected Saturday Hourly Parking Accumulation**

	Residential 1,578 DU 1,808 Auto Trips		Local Retail 21,183 sf 210 Auto Trips		Medical Office Staff 9,678 sf 98 Auto Trips		Total		
	In	Out	In	Out	In	Out	In	Out	Accumulation
	12-1 AM	10	0	0	1	0	0	10	1
1-2	10	0	0	0	0	0	10	0	390
2-3	0	0	0	0	0	0	0	0	390
3-4	0	0	0	0	0	0	0	0	390
4-5	0	0	0	0	0	0	0	0	390
5-6	10	20	0	0	0	0	10	20	380
6-7	10	60	0	0	0	0	10	60	330
7-8	10	80	1	0	0	0	11	80	261
8-9	30	130	1	1	9	1	40	132	169
9-10	20	60	2	2	5	4	27	66	130
10-11	40	50	7	6	5	5	52	61	121
11-12	40	40	9	9	5	6	54	55	120
12-1 PM	33	35	10	9	2	4	45	48	117
1-2	72	72	12	10	6	6	90	88	119
2-3	41	21	10	11	4	5	55	37	137
3-4	70	20	11	10	4	4	85	34	188
4-5	90	40	11	11	5	6	106	57	237
5-6	130	60	10	9	4	5	144	74	307
6-7	90	40	8	9	0	3	98	52	353
7-8	60	40	5	6	0	0	65	46	372
8-9	60	39	3	4	0	0	63	43	392
9-10	30	30	2	3	0	0	32	33	391
10-11	29	39	2	2	0	0	31	41	381
11-12	19	28	1	2	0	0	20	30	371
<b>Total</b>	<b>904</b>	<b>904</b>	<b>105</b>	<b>105</b>	<b>49</b>	<b>49</b>	<b>1058</b>	<b>1058</b>	