APPENDIX C
TDF Memo

AKRF, Inc.
Environmental, Planning, and Engineering Consultants
440 Park Avenue South
7th Floor
New York, NY 10016
tel: 212 696-0670
fax: 212 213-3191
www.akrf.com

Revised Draft Travel Demand Factors (TDF) Memorandum

To:	Project File
From:	AKRF
Date:	April 1, 2021
Re:	307 Kent Avenue—Travel Demand Analysis
cc:	Project Team

A. INTRODUCTION

This memorandum details the trip generation assumptions and travel demand estimates for the proposed 307 Kent Avenue development that would require a zoning map amendment (the "Proposed Action")—located in the Williamsburg neighborhood of Brooklyn. The development would include the proposed project on Block 2415, Lot 1 and the potential development on Lot 6, collectively known as the Projected Development Sites. Lots 10 and portions of Lots 16 and 38 would also be rezoned under the Proposed Actions, but no development is anticipated as a result.[1] Collectively Lots 1, 6, 10, and portions of Lots 16 and 38 are known as the Rezoning Area. The Rezoning Area is generally bounded by Wythe Avenue to the east, South 2nd Street to the north, Kent Avenue to the west, and South 3rd Street to the south.

Under the No Action scenario, the 11,344 (i.e., approximately 11,500) gross square feet (gsf) of existing warehouse space on Lot 6 would remain unchanged. Lot 1 is currently occupied by Villain, which is a warehouse/production event space and this use is assumed to continue under the No Action scenario[2]. Based on a review of Villain's current event schedule, the majority of trips created by Villain relate to its events, all of which would take place during the evening hours and do not occur on a daily basis. For the most conservative assumption possible, it is assumed that no trips are generated during the daytime related to the

[1] As noted in the Reasonable Worst Case Development Scenario (RWCDS) Memo, the rezoning area also includes Block 2415, Lot 10 and portions of Lots 16 and 38. However, the development of Lot 10 is under BSA jurisdiction per a 2003 Board of Standards and Appeals resolution (BSA Cal. No 102-03-BZ) which grants a variance to facilitate the development on the zoning lot of a residential and commercial project. Accordingly, Lot 10 is not considered a soft site for purposes of the RWCDS analysis. Lots 16 and 38 are largely located in the adjacent MX zoning district, and the small portions of Lots 16 and 38 can accordingly be treated as if wholly located within the MX district, and are not considered soft sites for the purposes of the RWCDS analysis.

[2] The Certificate of Occupancy for Villain, the warehouse/production event space on the Project Site, currently lists it as a UG 16 Warehouse use; however, there is currently a pending application (see BIS Permit #321188969) to change this use to a UG 13 Banquet Hall use.

warehouse use. Therefore, associated peak hour and trip-making would not overlap with the typical weekday analysis peak hours (AM, midday, and PM) and trip-making for the Proposed Action. As a result, no trip credits were taken against the Villain use in developing the Proposed Action's incremental trip-making. Under the With Action scenario, the Rezoning Area would be developed with approximately 17,000 gsf of local retail, 39,500 gsf of medical office, and 125,000 gsf of office/light manufacturing.

Table 1 provides a comparison of the development programs between the No Action and With Action scenarios.

Table 1
Comparison of No Action and With Action Scenarios for Trip-Making

Components	Existing/No Action	With Action	Increment
Local Retail (GSF)	0	17,000	17,000
Medical Office (GSF)	0	39,500	39,500
Office/Light Manufacturing (GSF)	0	125,000	125,000
Warehouse (GSF)*	11,344	0	-11,344
Hotel (Rooms)	0	0	0

Source: S9 Architecture / G4 Capital Partners, 2018
Notes: * Lot size of Lot 6 = 11,344 sf

B. TRANSPORTATION PLANNING ASSUMPTIONS

Trip generation factors for the Proposed Action are based on information from the 2014 *City Environmental Quality Review (CEQR) Technical Manual*, the 2016 *25 Kent Avenue EAS*, the 2016 *East New York Rezoning Proposal FEIS*, *ITE Trip Generation Manual*, U.S. Census Data, and the New York City Department of Transportation (DOT)'s medical office and local retail trip generation surveys—as summarized in **Table 2**.

LOCAL RETAIL

The daily person trip rate and temporal distribution for the local neighborhood retail component are from the *CEQR Technical Manual*. In line with accepted City practice, a 25-percent linked trip credit has been applied to the local retail trip generation estimates. The directional distribution and vehicle occupancies are from the 2016 *25 Kent Avenue EAS*. The modal splits are from DOT's local retail trip generation survey. The daily delivery trip rate and temporal and directional distributions are from the *CEQR Technical Manual*.

MEDICAL OFFICE

The daily person trip rate and temporal distribution for the medical office component are from DOT's medical office trip generation survey. The directional distribution is from the 2016 *25 Kent Avenue EAS*. The modal splits were obtained from the 2006–2010 U.S. Census Bureau American Community Survey (ACS) Reverse Journey-to-Work (RJTW) estimates for Kings County Census tracts 519, 523, 549, 551, 553, and 555. The vehicle occupancies are from the 2016 *25 Kent Avenue EAS* and the 2006–2010 U.S. Census ACS RJTW estimates. The daily delivery trip rate and temporal and directional distributions are from the 2016 *25 Kent Avenue EAS*.

OFFICE/LIGHT MANUFACTURING

The daily person trip rate and temporal and directional distributions for the office/light manufacturing component are based on the office use from the *CEQR Technical Manual* and the 2016 *25 Kent Avenue EAS*. The modal splits and vehicle occupancies are from the 2016 *25 Kent Avenue EAS* and the 2006–2010 U.S. Census ACS RJTW estimates. The daily delivery trip rate and temporal and directional distributions are from the 2016 *25 Kent Avenue EAS*.

Table 2
Travel Demand Assumptions

Use	Local Retail			Medical Office			Office/ Light Manufacturing			Warehouse		
Total Daily Person Trip	(1) Weekday 205.00 Trips / KSF			(3) Weekday 103.40 Trips / KSF			(1)(2) Weekday 18.00 Trips / KSF			(7) Weekday 1.90 Trips / KSF		
Trip Linkage	25%			0%			0%			0%		
Net Daily Person Trip	Weekday 153.75 Trips / KSF			Weekday 103.40 Trips / KSF			Weekday 18.00 Trips / KSF			Weekday 1.90 Trips / KSF		
	AM	**MD**	**PM**	**AM**	**MD**	**PM**	**AM**	**MD**	**PM**	**AM**	**MD**	**PM**
Temporal	(1)			(3)			(1)(2)			(8)		
	3.0%	19.0%	10.0%	10.0%	13.0%	9.0%	12.0%	15.0%	14.0%	6.0%	8.6%	6.6%
Direction	(2)			(2)			(1)(2)			(5)(7)		
In	50%	47%	44%	89%	51%	48%	94%	39%	5%	65%	50%	24%
Out	50%	53%	56%	11%	49%	52%	6%	61%	95%	35%	50%	76%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Modal Split	(6)			(4)			(2)(4)			(4)		
	AM	**MD**	**PM**	**AM**	**MD**	**PM**	**AM**	**MD**	**PM**	**AM**	**MD**	**PM**
Auto	11.0%	11.0%	11.0%	35.0%	35.0%	35.0%	35.0%	2.0%	35.0%	35.0%	35.0%	35.0%
Taxi	0.0%	0.0%	0.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Subway	3.0%	3.0%	3.0%	33.0%	33.0%	33.0%	33.0%	7.0%	33.0%	33.0%	33.0%	33.0%
Bus	2.0%	2.0%	2.0%	11.0%	11.0%	11.0%	11.0%	7.0%	11.0%	11.0%	11.0%	11.0%
Walk	84.0%	84.0%	84.0%	20.0%	20.0%	20.0%	20.0%	83.0%	20.0%	20.0%	20.0%	20.0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Vehicle Occupancy	(2) Weekday			(2)(4) Weekday			(2)(4) Weekday			(4)(5) Weekday		
Auto	2.20			1.20			1.20			1.20		
Taxi	2.20			1.20			1.20			1.30		
Daily Delivery Trip Generation Rate	(1) Weekday 0.35 Delivery Trips / KSF			(2) Weekday 0.29 Delivery Trips / KSF			(2) Weekday 0.35 Delivery Trips / KSF			(7) Weekday 0.35 Delivery Trips / KSF		
	AM	**MD**	**PM**	**AM**	**MD**	**PM**	**AM**	**MD**	**PM**	**AM**	**MD**	**PM**
Delivery Temporal	(1)			(2)			(2)			(8)		
	8.0%	11.0%	2.0%	3.0%	11.0%	1.0%	10.0%	11.0%	2.0%	6.0%	8.6%	6.6%
Delivery Direction	(1)			(2)			(2)			(5)		
In	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Out	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Sources:
(1) 2014 *CEQR Technical Manual*
(2) *25 Kent Avenue EAS* (2016)
(3) Based on DOT's Medical Office Trip Generation Survey
(4) U.S. Census American Community Survey (ACS) 2006–2010 Reverse Journey-to-Work Data for Census tracts 519, 523, 549, 551, 553, and 555
(5) *East New York Rezoning Proposal FEIS* (2016)
(6) Based on DOT's local retail trip generation surveys in Brooklyn
(7) *ITE Trip Generation Manual, 10th Edition*: Warehouse (150) land use. Assumes trucks account for 20 percent of weekday traffic (*ITE Trip Generation Manual, 9th Edition*). Convert to daily person trip rate by taking remaining 80 percent of vehicle trip generation per 1,000 sf and multiplying by vehicle occupancy of 1.3 and dividing by 0.95. Weekday daily person trip rate = (1.74 x 0.80 x 1.3)/0.95 = 1.90 daily person trips per 1,000 sf.
(8) *ITE Trip Generation Manual, 10th Edition*: Warehouse (150) land use. Peak hours are weekday AM (8–9 AM), midday (12–1 PM), and PM (5–6 PM).

WAREHOUSE

The daily person trip rate and temporal distribution for the warehouse use are based on the *ITE Trip Generation Manual*. The modal splits are from the 2006-2010 U.S. Census ACS RJTW estimates. The vehicle occupancies are from the 2006–2010 U.S. Census ACS RJTW estimates for autos and from the 2016 *East New York Rezoning Proposal FEIS* for taxis. The daily delivery trip rate and temporal distribution are based on the *ITE Trip Generation Manual*. The delivery directional distribution is from the 2016 *East New York Rezoning and Proposal FEIS.*

C. CEQR TRANSPORTATION ANALYSIS SCREENING

The *CEQR Technical Manual* identifies procedures for evaluating a proposed project's potential impacts on traffic, transit, pedestrian, and parking conditions. This methodology begins with the preparation of a trip generation analysis to determine the volume of person and vehicle trips associated with the proposed project. The results are then compared with the *CEQR Technical Manual*-specified thresholds (Level 1

screening analysis) to determine whether a Level 2 screening analysis is warranted. If the proposed project would result in 50 or more peak hour vehicle trips, 200 or more peak hour transit trips (200 or more peak hour transit riders at any given subway station or 50 or more peak hour bus trips on a particularly route in one direction), and/or 200 or more peak hour pedestrian trips, a Level 2 screening analysis is undertaken.

For the Level 2 screening analysis, project generated trips would be assigned to specific intersections, transit routes, and pedestrian elements. If the results of this analysis show that the proposed project would generate 50 or more peak hour vehicle trips through an intersection, 50 or more peak hour bus riders on a bus route in a single direction, 200 or more peak hour subway passengers at any given station, or 200 or more peak hour pedestrian trips per pedestrian element, further quantified analyses may be warranted to evaluate the potential for significant adverse traffic, transit, pedestrian, and parking impacts.

TRIP GENERATION SUMMARY

As summarized in **Table 3**, under the No Action scenario, the Rezoning Area would generate a total of 1, 2, and 1 person trips during the weekday AM, midday, and PM peak hours, respectively. Approximately 1, 2, and 1 vehicle trips would be generated during the same respective peak hours.

Table 3
Trip Generation: No Action Scenario

Program	Peak Hour	In/Out	Person Trip						Vehicle Trip			
			Auto	Taxi	Subway	Bus	Walk	Total	Auto	Taxi	Delivery	Total
Warehouse 11,344 GSF	AM	In	1	0	0	0	0	1	1	0	0	1
		Out	0	0	0	0	0	0	0	0	0	0
		Total	1	0	0	0	0	1	1	0	0	1
	Midday	In	1	0	0	0	0	1	1	0	0	1
		Out	1	0	0	0	0	1	1	0	0	1
		Total	2	0	0	0	0	2	2	0	0	2
	PM	In	0	0	0	0	0	0	0	0	0	0
		Out	1	0	0	0	0	1	1	0	0	1
		Total	1	0	0	0	0	1	1	0	0	1

As summarized in **Table 4**, under the With Action scenario, the Rezoning Area would generate a total of 758, 1,365, and 944 person trips during the weekday AM, midday, and PM peak hours, respectively. Approximately 218, 210, and 228 vehicle trips would be generated during the same time periods.

Table 4
Trip Generation: With Action Scenario

Program	Peak Hour	In/Out	Person Trip						Vehicle Trip			
			Auto	Taxi	Subway	Bus	Walk	Total	Auto	Taxi	Delivery	Total
Local Retail 17,000 GSF	AM	In	4	0	1	1	33	39	2	0	0	2
		Out	4	0	1	1	33	39	2	0	0	2
		Total	8	0	2	2	66	78	4	0	0	4
	Midday	In	26	0	7	5	196	234	12	0	0	12
		Out	29	0	8	5	221	263	13	0	0	13
		Total	55	0	15	10	417	497	25	0	0	25
	PM	In	13	0	3	2	97	115	6	0	0	6
		Out	16	0	4	3	123	146	7	0	0	7
		Total	29	0	7	5	220	261	13	0	0	13
Medical Office 39,500 GSF	AM	In	127	4	120	40	73	364	106	3	0	109
		Out	16	0	15	5	9	45	13	3	0	16
		Total	143	4	135	45	82	409	119	6	0	125
	Midday	In	95	3	89	30	54	271	79	6	1	86
		Out	91	3	86	29	52	261	76	6	1	83
		Total	186	6	175	59	106	532	155	12	2	169
	PM	In	62	2	58	19	35	176	52	4	0	56
		Out	67	2	63	21	38	191	56	4	0	60
		Total	129	4	121	40	73	367	108	8	0	116
Office/ Light Manufacturing 125,000 GSF	AM	In	89	3	84	28	51	255	74	3	2	79
		Out	6	0	5	2	3	16	5	3	2	10
		Total	95	3	89	30	54	271	79	6	4	89
	Midday	In	3	1	9	9	109	131	3	3	2	8
		Out	4	2	14	14	171	205	3	3	2	8
		Total	7	3	23	23	280	336	6	6	4	16
	PM	In	6	0	5	2	3	16	5	3	0	8
		Out	105	3	99	33	60	300	88	3	0	91
		Total	111	3	104	35	63	316	93	6	0	99
With Action Total	AM	In	220	7	205	69	157	658	182	6	2	190
		Out	26	0	21	8	45	100	20	6	2	28
		Total	246	7	226	77	202	758	202	12	4	218
	Midday	In	124	4	105	44	359	636	94	9	3	106
		Out	124	5	108	48	444	729	92	9	3	104
		Total	248	9	213	92	803	1,365	186	18	6	210
	PM	In	81	2	66	23	135	307	63	7	0	70
		Out	188	5	166	57	221	637	151	7	0	158
		Total	269	7	232	80	356	944	214	14	0	228

The net incremental trips generated by the No Action and With Action scenario are shown in **Table 5**.

Table 5
Trip Generation Summary: Net Incremental Trips

Peak Hour	In/Out	Person Trip						Vehicle Trip			
		Auto	Taxi	Subway	Bus	Walk	Total	Auto	Taxi	Delivery	Total
AM	In	219	7	205	69	157	657	181	6	2	189
	Out	26	0	21	8	45	100	20	6	2	28
	Total	245	7	226	77	202	757	201	12	4	217
Midday	In	123	4	105	44	359	635	93	9	3	105
	Out	123	5	108	48	444	728	91	9	3	103
	Total	246	9	213	92	803	1,363	184	18	6	208
PM	In	81	2	66	23	135	307	63	7	0	70
	Out	187	5	166	57	221	636	150	7	0	157
	Total	268	7	232	80	356	943	213	14	0	227

LEVEL 1 SCREENING

TRAFFIC

As shown in **Table 5**, the incremental trips generated by the Proposed Action would be 217, 208, and 227 vehicle trips during the weekday AM, midday, and PM peak hours, respectively. Since the incremental vehicle trips would be greater than 50 vehicles during the weekday AM, midday, and PM peak hours, a

Level 2 screening assessment (presented in the section below) has been conducted to determine if a quantified traffic analysis is warranted.

TRANSIT

Public transit options to and from the study area are shown in **Figure 1**. The Rezoning Area is served by the New York City Transit (NYCT) Bedford Avenue (L train) and Marcy Avenue (J, M, and Z trains) Subway Stations, as well as the B32 and B62 bus routes.

As detailed in **Table 5**, the incremental transit trips generated by the Proposed Action would be 226, 213, and 232 person trips by subway, and 77, 92, and 80 person trips by bus during the weekday AM, midday, and PM peak hours, respectively. The subway trips would be dispersed onto the area's subway stations/lines such that trip-making for any single subway station/line would not exceed the *CEQR Technical Manual* analysis threshold of 200 or more peak hour subway trips. Therefore, a detailed analysis of subway facilities is not warranted and the Proposed Action is not expected to result in any significant adverse subway impacts. Bus trips would be dispersed among the local bus routes serving the study area, however, considering the distance from the study area subway stations to the Rezoning Area, it is expected that a significant number of subway riders would subsequently transfer to buses to reach the project site, and therefore a Level 2 screening assessment is warranted to determine if there is a need for additional quantified bus analyses.

PEDESTRIANS

All incremental person trips generated by the Proposed Action would traverse the pedestrian elements (i.e., sidewalks, corners, and crosswalks) surrounding the Rezoning Area. As shown in **Table 5**, the net incremental pedestrian trips would be greater than 200 during the weekday AM, midday, and PM peak hours. A Level 2 screening assessment (presented in the section below) has been conducted to determine if there is a need for additional quantified pedestrian analyses.

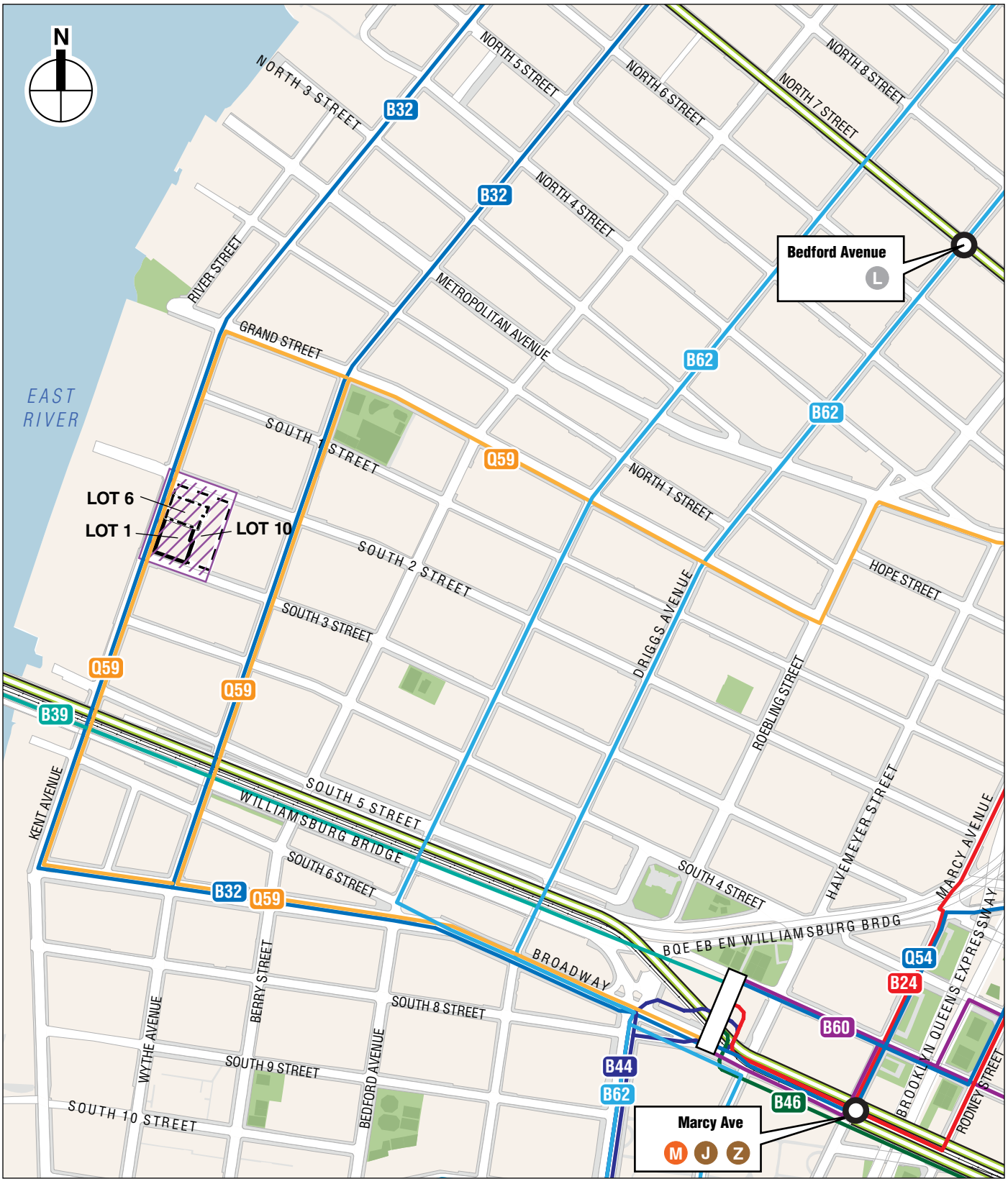
LEVEL 2 SCREENING

As part of the Level 2 screening assessment, project generated trips are assigned to specific intersections and pedestrian elements near the Rezoning Area. As previously stated, further quantified analyses to assess the potential impacts of the Proposed Action on the transportation system would be warranted if the trip assignments were to identify key intersections incurring 50 or more peak hour vehicle trips or pedestrian elements incurring 200 or more peak hour pedestrian trips.

SITE ACCESS AND EGRESS

Entrances to all the uses are assumed to be along the east side of Kent Avenue between South 2nd and South 3rd Streets. No accessory parking would be made available for the No Action or With Action scenarios. A parking utilization survey has been conducted to determine the existing on- and off-street parking resources in an approximately ¼-mile radius of the Rezoning Area. The results of the parking utilization survey showed on-street parking at near full utilization during the weekday midday peak period. Therefore, project generated vehicle trips are assigned to nearby off-street parking facilities, summarized in **Table 6** and shown in **Figure 2**, where available capacity was identified and motorists would walk to/from the Rezoning Area.

12.12.17



Project Site (Lot 1)

Proposed Rezoning Area

Projected Development Site (Lot 6)

Lot 10 (Formerly Lots 10, 13, 110)

Subway Station

Subway Line

Bus Route

307 KENT AVENUE

Transit Study Area

Figure 1



307 KENT AVENUE

Off-Street Parking Facilities
Figure 2

Table 6
Existing Off-Street Parking—Approximately ¼-Mile
Weekday Utilization

Map #	Name/Address	License Number	Licensed Capacity	Utilization Rate				Utilized Spaces				Available Spaces			
				AM	MD	PM	ON	AM	MD	PM	ON	AM	MD	PM	ON
1	Sherman Parking Mgmt. / 26 S. 6th Street	2001021	144	40%	70%	50%	30%	58	101	72	43	86	43	72	101
2	4 Square Mgmt. / 76 S. 6th Street	2010314	60	60%	80%	60%	60%	36	48	36	36	24	12	24	24
3	G&M Park Inc. / 110 Broadway	1389587	32	75%	75%	75%	75%	24	24	24	24	8	8	8	8
4	Quik Park 184 Mgmt. / 184 Kent Avenue	1368505	200	50%	75%	75%	50%	100	150	150	100	100	50	50	100
5	LAZ Parking NY/NJ / 175 Kent Avenue	2006294	140	45%	60%	60%	20%	63	84	84	28	77	56	56	112
6	QP Berry Street LLC / 197 Berry Street	1409794	142	50%	50%	70%	30%	71	71	99	43	71	71	43	99
Approximate ¼-Mile Area Totals			**718**	**49%**	**67%**	**65%**	**38%**	**352**	**478**	**465**	**274**	**366**	**240**	**253**	**444**

Notes:
MD = Midday; ON = Overnight; N/A = Not Available
Source: Survey conducted by AKRF Inc. October, 2017

TRAFFIC

Vehicle trips are assigned to area intersections based on the most likely travel routes to and from the Rezoning Area, prevailing travel patterns, commuter origin-destination (O-D) summaries from the census data, the configuration of the roadway network, the anticipated locations of site access and egress, locations nearby off-street parking resources, and nearby land use and population characteristics. Auto trips are assigned to off-street parking facilities identified in the approximately ¼-mile radius of the Rezoning Area. Taxi trips are distributed to the Rezoning Area's various frontages. Delivery trips are assigned to the Rezoning Area via New York City Department of Transportation (DOT)-designated truck routes. Traffic assignments for autos, taxis, and deliveries for the various development uses are discussed below.

Local Retail Use

The With Action local retail auto trips are generally assigned from local origins within the neighborhood and adjacent residential areas. Approximately 34 percent of vehicle trips would originate from the north of the Rezoning Area, 33 percent from the south of the Rezoning Area, and 33 percent from east of the Rezoning Area. The auto trips are assigned to the available off-street parking facilities identified in the approximately ¼-mile radius of the Rezoning Area. Taxi trips generated by the local retail use are assigned to the South 3rd Street, South 2nd Street, and Kent Avenue frontages.

Medical Office Use

Similar to the With Action local retail auto trips, the With Action medical office auto trips are assigned from local origins within the neighborhood and adjacent residential areas and then to the available off-street parking facilities identified in the approximately ¼-mile radius of the Rezoning Area. The medical office auto trip assignments are further refined by assuming that 50 percent of the inbound auto trips would first travel to the Rezoning Area and then to the available off-street parking facilities while the remaining 50 percent of the inbound medical office auto trips were assigned directly to the available off-street parking facilities. All outbound medical office auto trips are assigned departing from the available off-street parking facilities. Taxi trips generated by the medical office use are assigned to the South 3rd Street, South 2nd Street, and Kent Avenue frontages.

Office/Light Manufacturing and Warehouse Uses

Auto trips generated by the office/light manufacturing (With Action) and warehouse (No Action) uses are assigned to the surrounding roadway network based on the 2006–2010 U.S. Census ACS RJTW origin-destination (O-D) estimates. The office/light manufacturing and warehouse trips would originate for Brooklyn (55 percent), Queens (22 percent), Manhattan (1 percent), Staten Island (5 percent), Long Island (9 percent), Upstate New York (4 percent), New Jersey (3 percent), and Pennsylvania (1 percent). Auto vehicle trips for the office/light manufacturing and warehouse uses were assigned to off-street parking facilities identified in the approximately ¼-mile radius of the Rezoning Area. Overall, vehicle trips generated by the office/light manufacturing and warehouse uses are distributed to the study area roadway

network in the following manner: approximately 43 percent of inbound trips are assigned to Metropolitan Avenue westbound, 41 percent to Kent Avenue northbound, 11 percent to Broadway westbound, and 5 percent to various northbound and southbound avenues. Taxi trips generated by the office/light manufacturing and warehouse uses are assigned to the South 3rd Street, South 2nd Street, and Kent Avenue frontages.

Deliveries

Truck delivery trips for all land uses are assigned to DOT-designated truck routes and are assumed to stay on them as long as possible until reaching the area surrounding the Rezoning Area. These are then generally distributed to Broadway (45 percent), Kent Avenue (27 percent), and South 4th Street (28 percent) until they reached the various curbsides along the Rezoning Area.

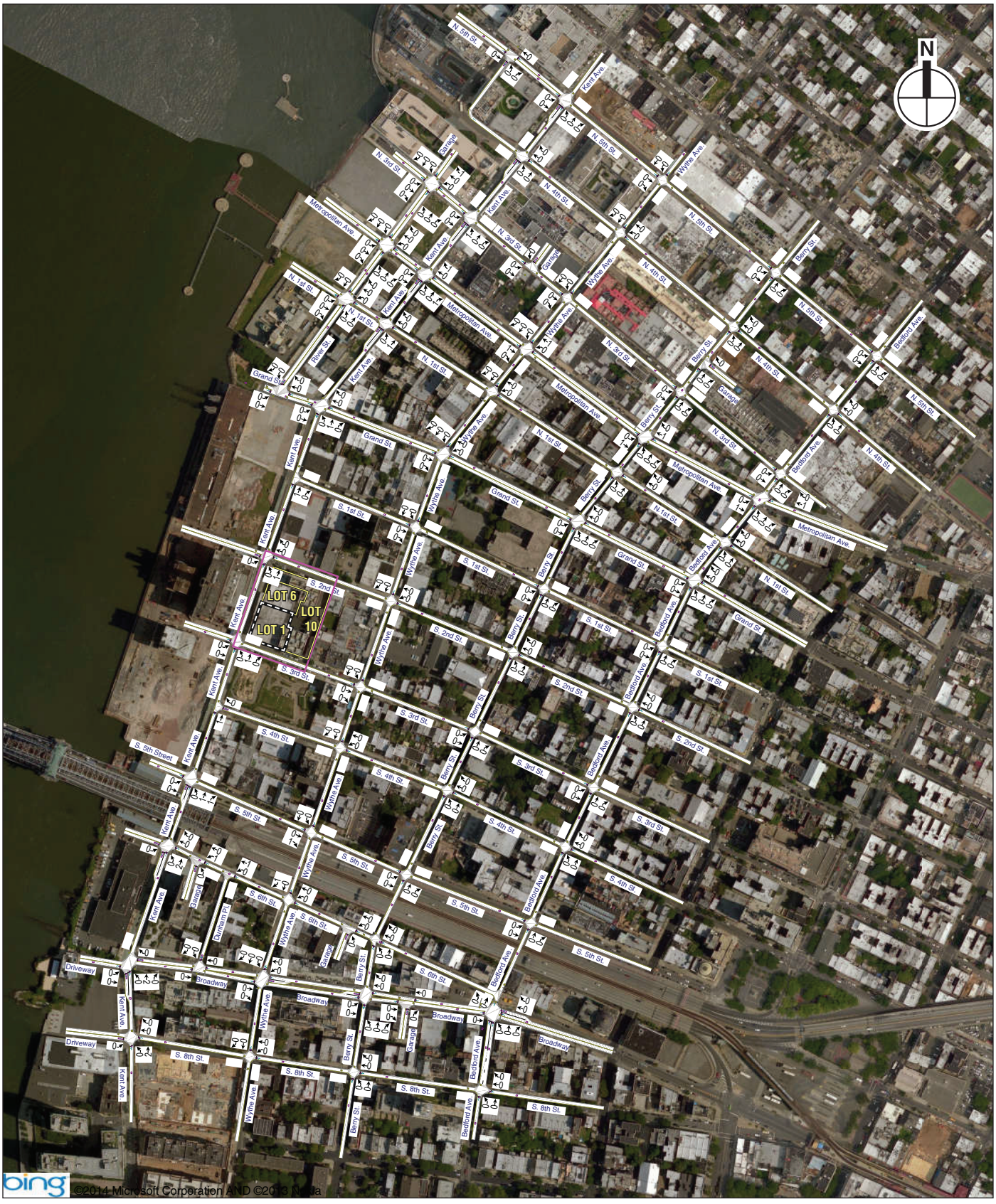
Summary

Figures 3 through 5 show the No Action project generated vehicle trips for the weekday AM, midday, and PM peak hours. **Figures 6 through 8** show the With Action project generated vehicle trips for the weekday AM, midday, and PM peak hours. **Figures 9 through 11** show the With Action incremental vehicle trips for the weekday AM, midday, and PM peak hours. Based on the volume of incremental trips projected and the turning movements anticipated to occur at study area intersections, 13 intersections would be recommended for detailed traffic analysis, as summarized in **Table 7** and **Figure 12**.

Table 7
Traffic Level 2 Screening Analysis Results

Intersection	Incremental Vehicle Trips (Weekday)			Recommended Analysis Location
	AM	MD	PM	
Kent Avenue & N. 5th Street	2	12	9	
Kent Avenue & N. 4th Street	2	12	9	
Kent Avenue & N. 3rd Street	46	34	33	
Kent Avenue & Metropolitan Avenue	**67**	45	37	✓
Kent Avenue & N. 1st Street	27	24	15	
Kent Avenue & Grand Street	27	24	15	
Kent Avenue & S. 1st Street	29	28	18	
Kent Avenue & S. 2nd Street	29	28	18	
Kent Avenue & S. 3rd Street	32	28	18	
Kent Avenue & S. 4th Street	32	28	18	
Kent Avenue & S. 5th Street	**57**	**57**	**69**	✓
Kent Avenue & S. 6th Street	**57**	**57**	**69**	✓
Kent Avenue & Broadway	**52**	21	15	✓
Kent Avenue & S. 8th Street	48	17	13	
Dunham Place & S. 6th Street **	**75**	41	29	
Dunham Place & Broadway	20	8	5	
Wythe Avenue & N. 5th Street	12	11	7	
Wythe Avenue & N. 4th Street	13	17	10	
Wythe Avenue & N. 3rd Street	15	30	38	
Wythe Avenue & Metropolitan Avenue	**77**	**61**	**62**	✓
Wythe Avenue & N. 1st Street	26	22	15	
Wythe Avenue & Grand Street	26	22	15	
Wythe Avenue & S. 1st Street	28	26	18	
Wythe Avenue & N. 2nd Street	28	24	17	
Wythe Avenue & S. 3rd Street	31	24	17	
Wythe Avenue & S. 4th Street	40	34	21	
Wythe Avenue & S. 5th Street	**65**	**63**	**72**	✓
Wythe Avenue & S. 6th Street	**99**	**86**	**101**	✓
Wythe Avenue & Broadway	44	**53**	**77**	✓
Wythe Avenue & S. 8th Street	4	14	21	
Berry Street & N. 5th Street	3	16	25	

5.14.19



Project Site (Lot 1)

Proposed Rezoning Area

Projected Development Site (Lot 6)

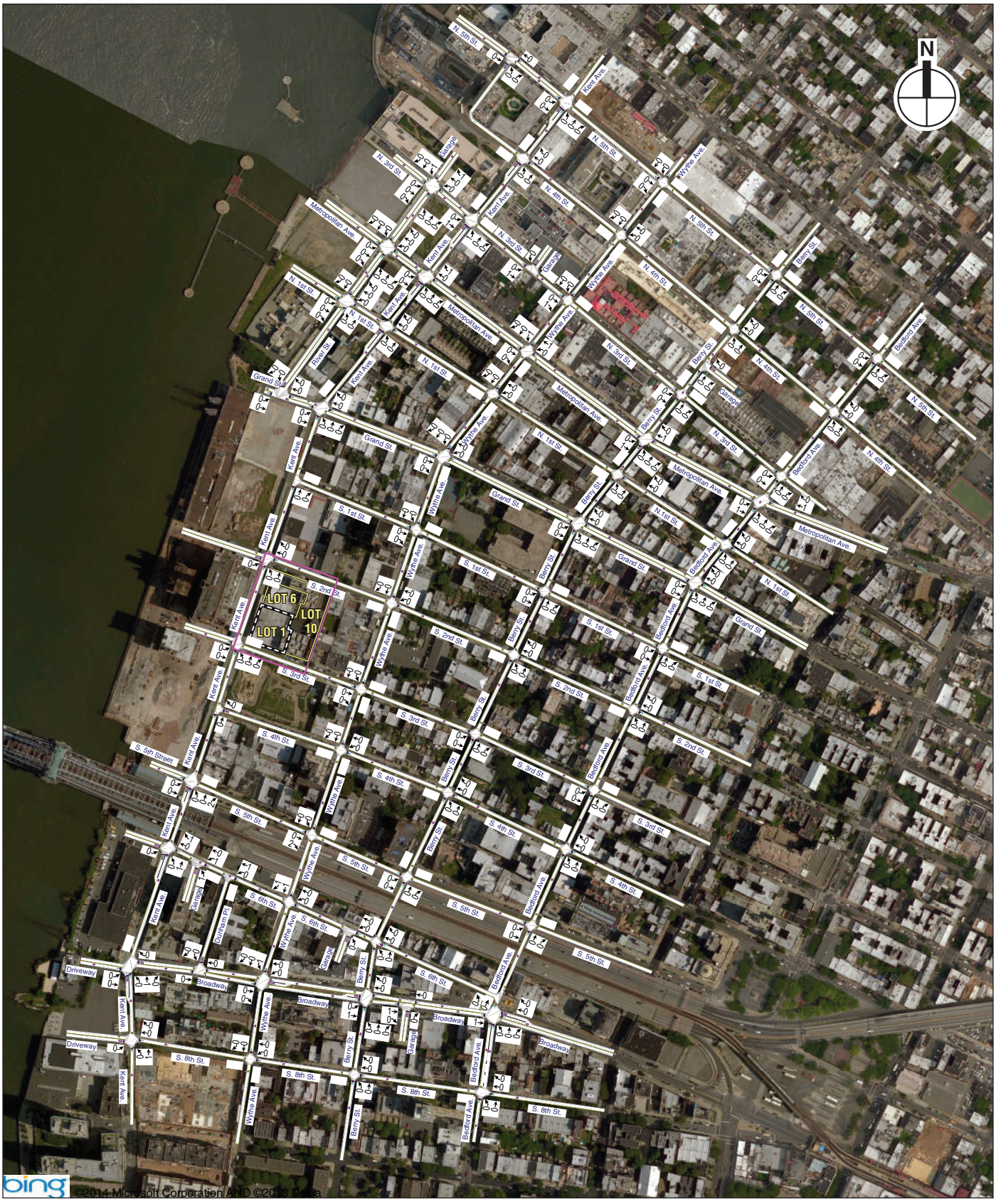
Lot 10 (Formerly Lots 10, 13, 110)

No Action Project Generated Vehicle Trips
Weekday AM Peak Hour

307 KENT AVENUE

Figure 3

5.14.19



Project Site (Lot 1)

Proposed Rezoning Area

Projected Development Site (Lot 6)

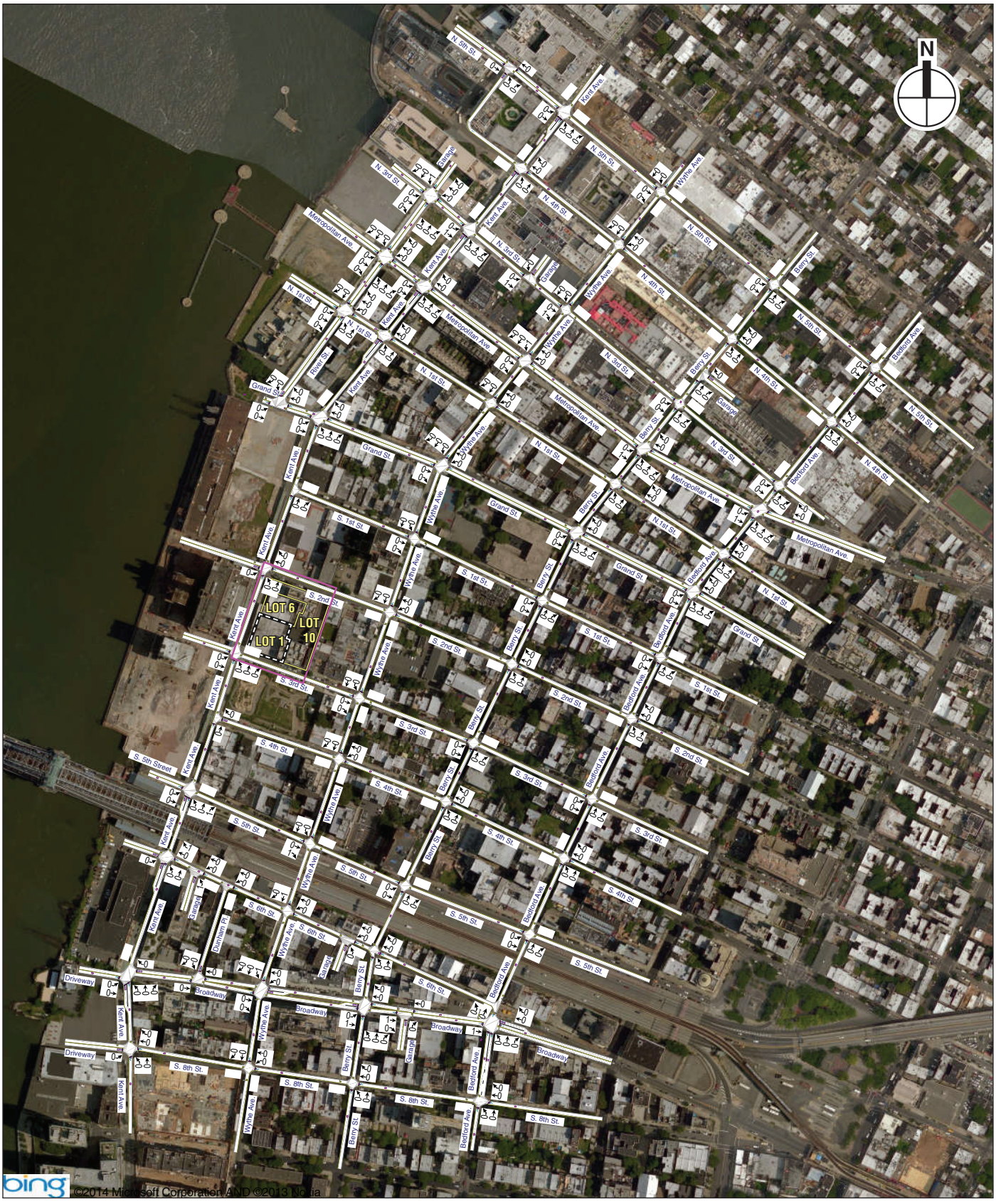
Lot 10 (Formerly Lots 10, 13, 110)

No Action Project Generated Vehicle Trips
Weekday Midday Peak Hour

307 KENT AVENUE

Figure 4

5.14.19



Project Site (Lot 1)

Proposed Rezoning Area

Projected Development Site (Lot 6)

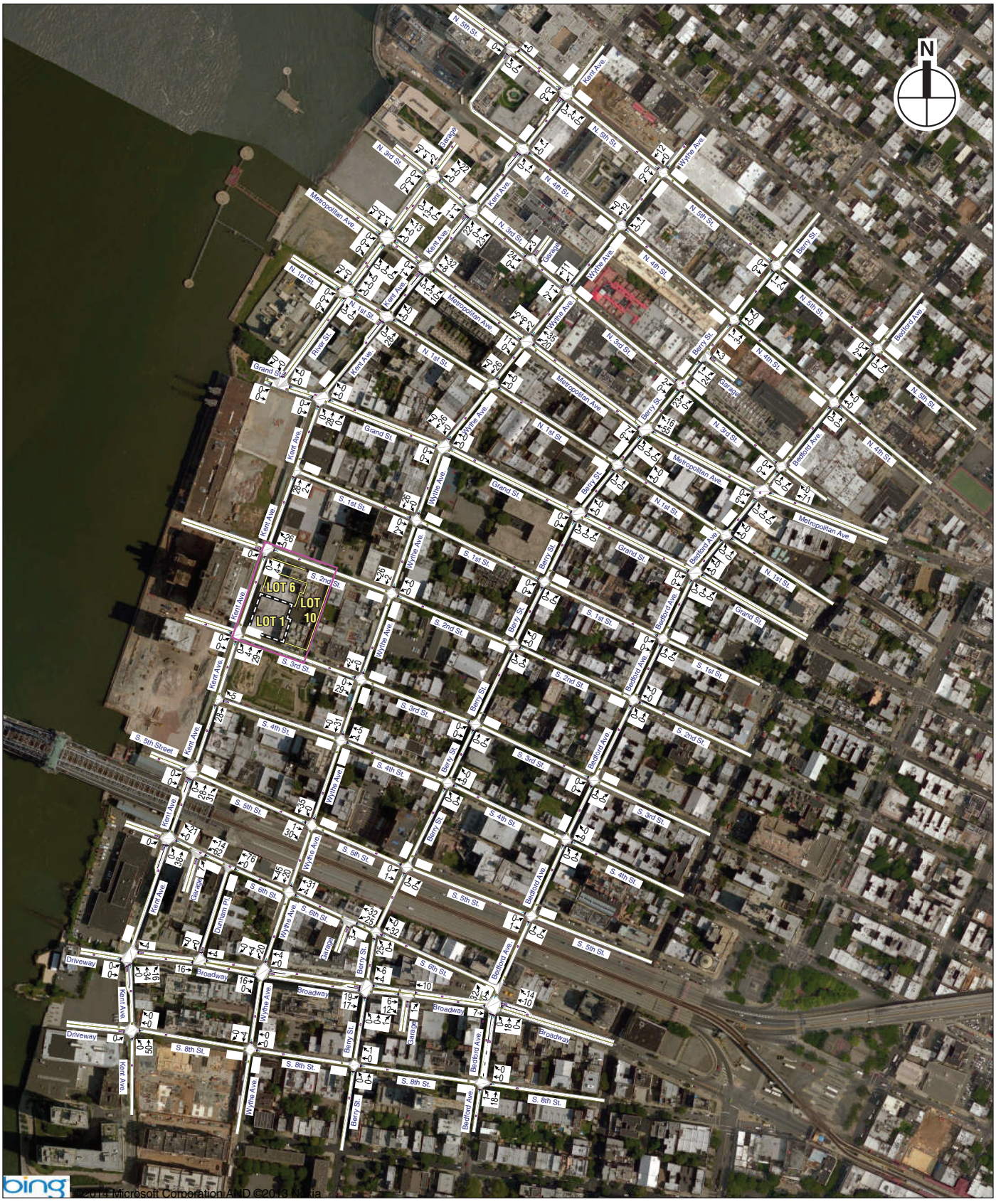
Lot 10 (Formerly Lots 10, 13, 110)

No Action Project Generated Vehicle Trips
Weekday PM Peak Hour

307 KENT AVENUE

Figure 5

5.14.19



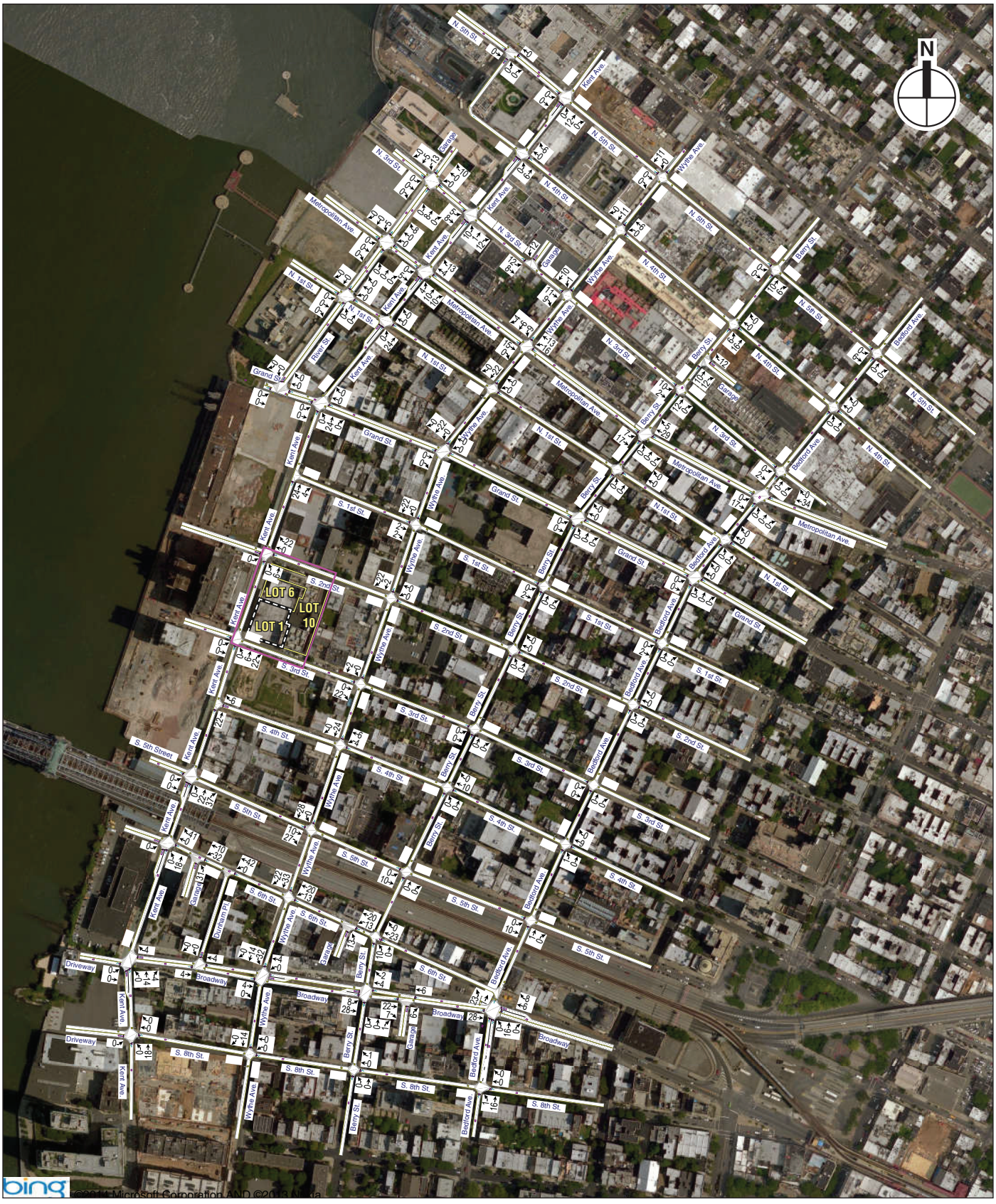
Project Site (Lot 1)
Proposed Rezoning Area
Projected Development Site (Lot 6)
Lot 10 (Formerly Lots 10, 13, 110)

With Action Project Generated Vehicle Trips
Weekday AM Peak Hour

307 KENT AVENUE

Figure 6

5.14.19



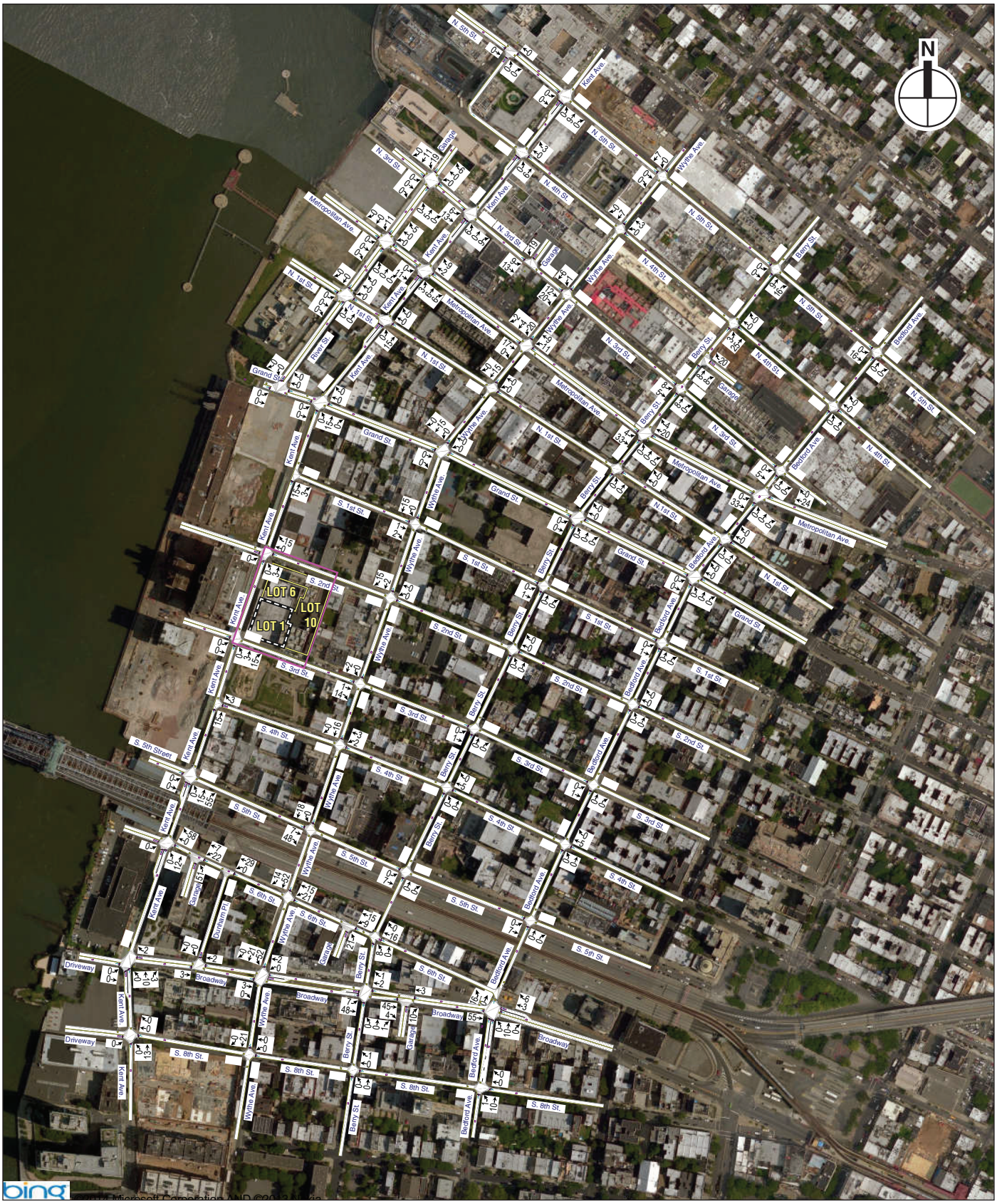
Project Site (Lot 1)
Proposed Rezoning Area
Projected Development Site (Lot 6)
Lot 10 (Formerly Lots 10, 13, 110)

With Action Project Generated Vehicle Trips
Weekday Midday Peak Hour

307 KENT AVENUE

Figure 7

5.14.19



Project Site (Lot 1)

Proposed Rezoning Area

Projected Development Site (Lot 6)

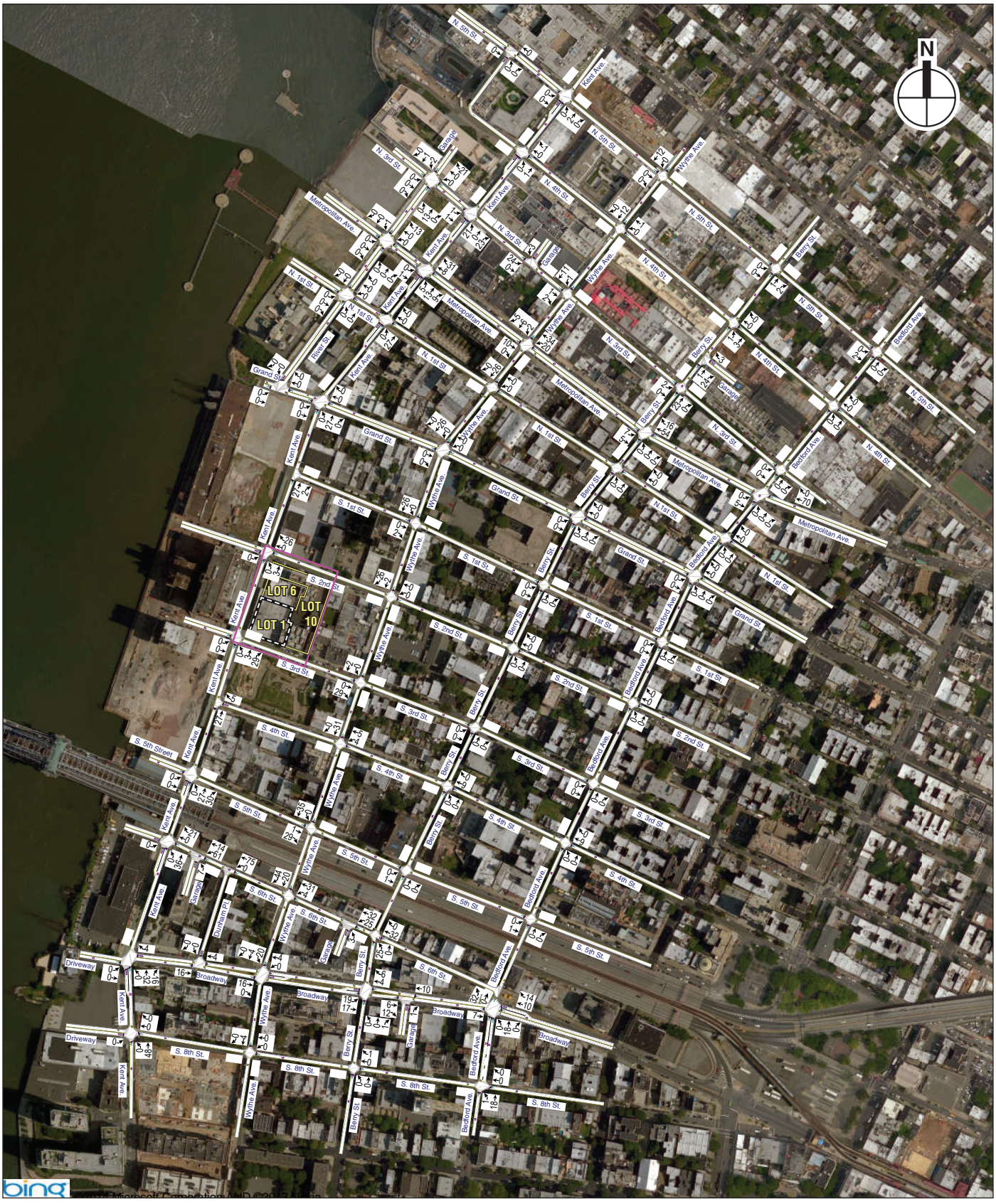
Lot 10 (Formerly Lots 10, 13, 110)

With Action Project Generated Vehicle Trips
Weekday PM Peak Hour

307 KENT AVENUE

Figure 8

5.14.19



Project Site (Lot 1)

Proposed Rezoning Area

Projected Development Site (Lot 6)

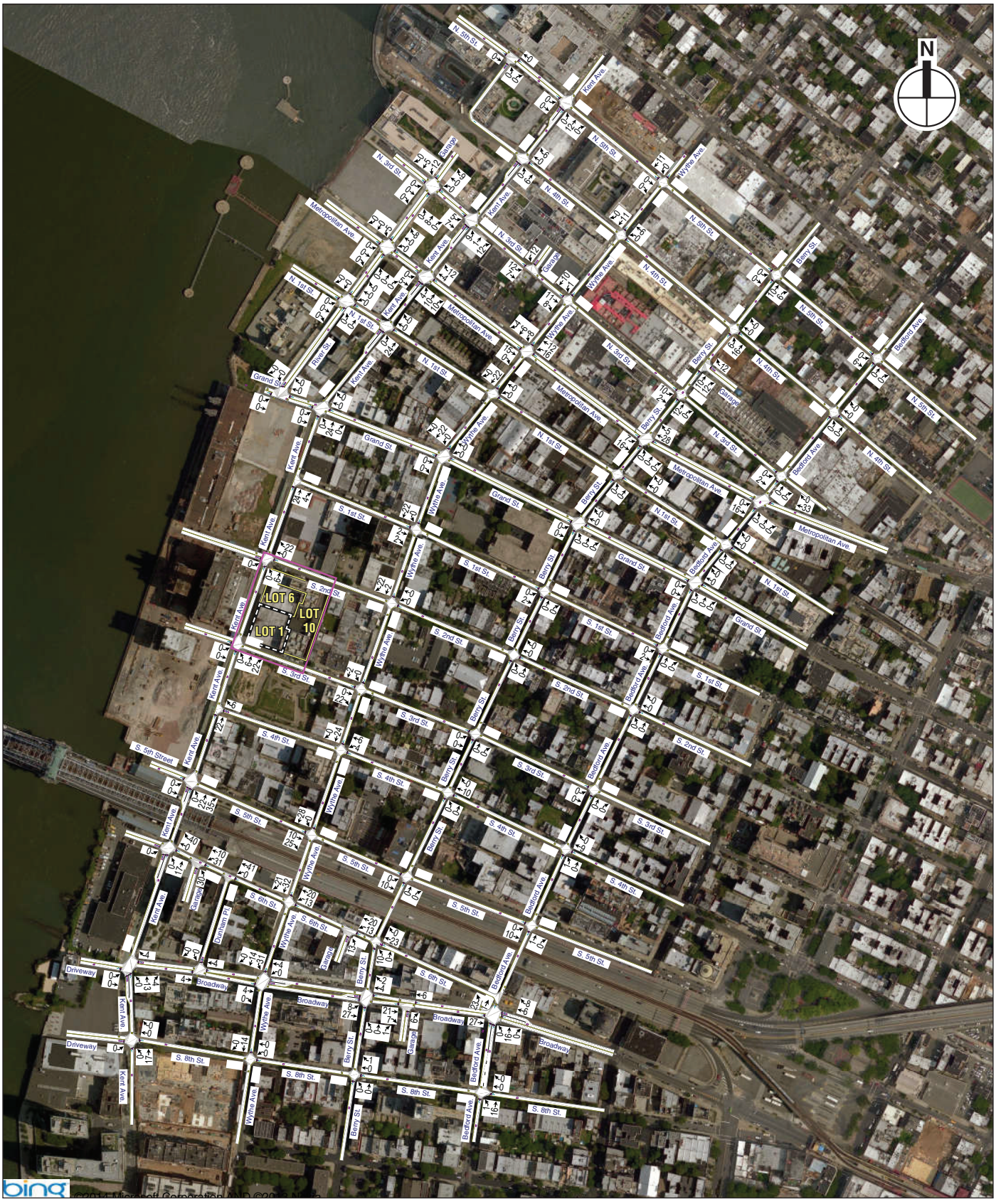
Lot 10 (Formerly Lots 10, 13, 110)

With Action Incremental Vehicle Trips
Weekday AM Peak Hour

Figure 9

307 KENT AVENUE

5.14.19



Project Site (Lot 1)

Proposed Rezoning Area

Projected Development Site (Lot 6)

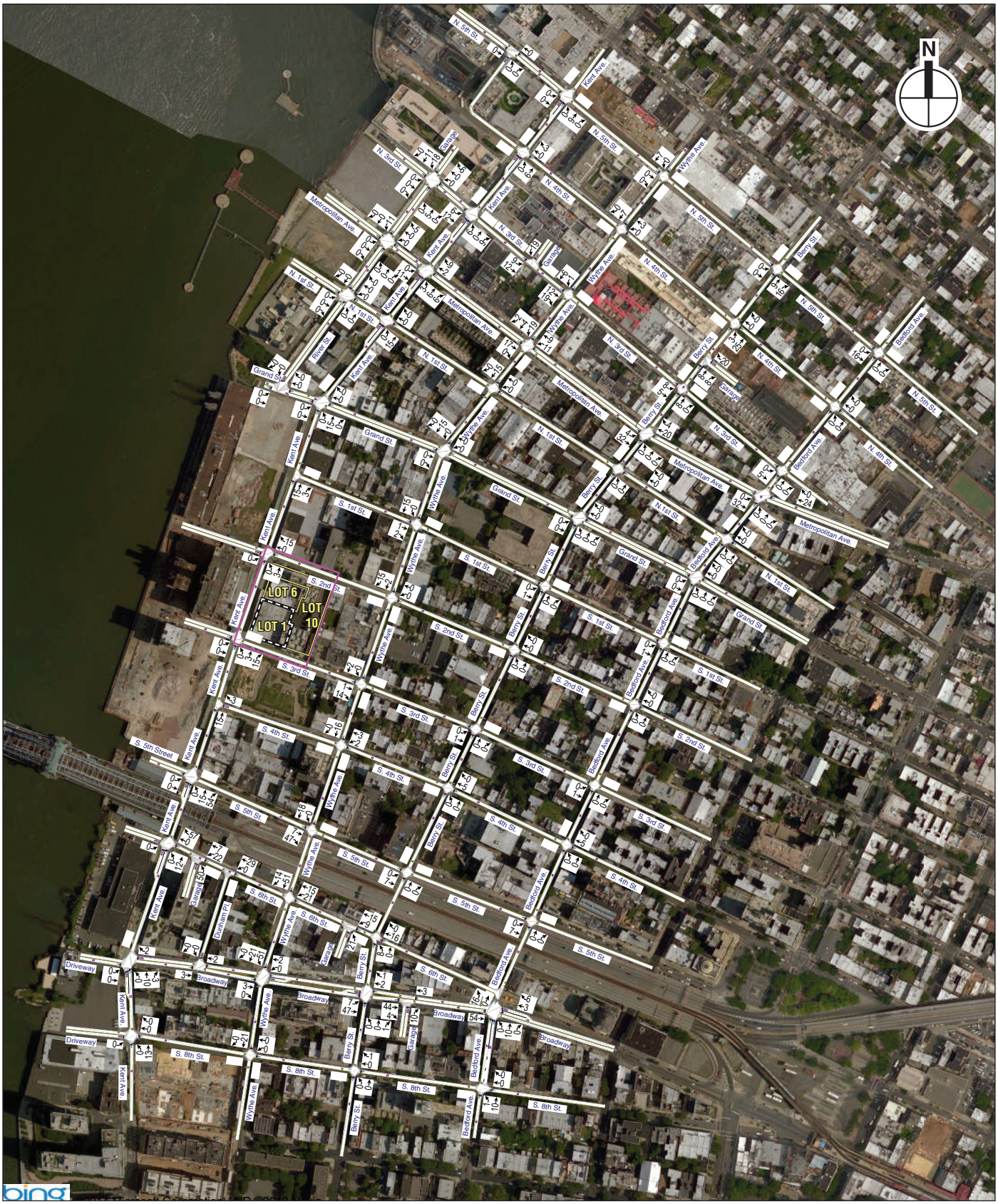
Lot 10 (Formerly Lots 10, 13, 110)

With Action Incremental Vehicle Trips
Weekday Midday Peak Hour

Figure 10

307 KENT AVENUE

5.14.19

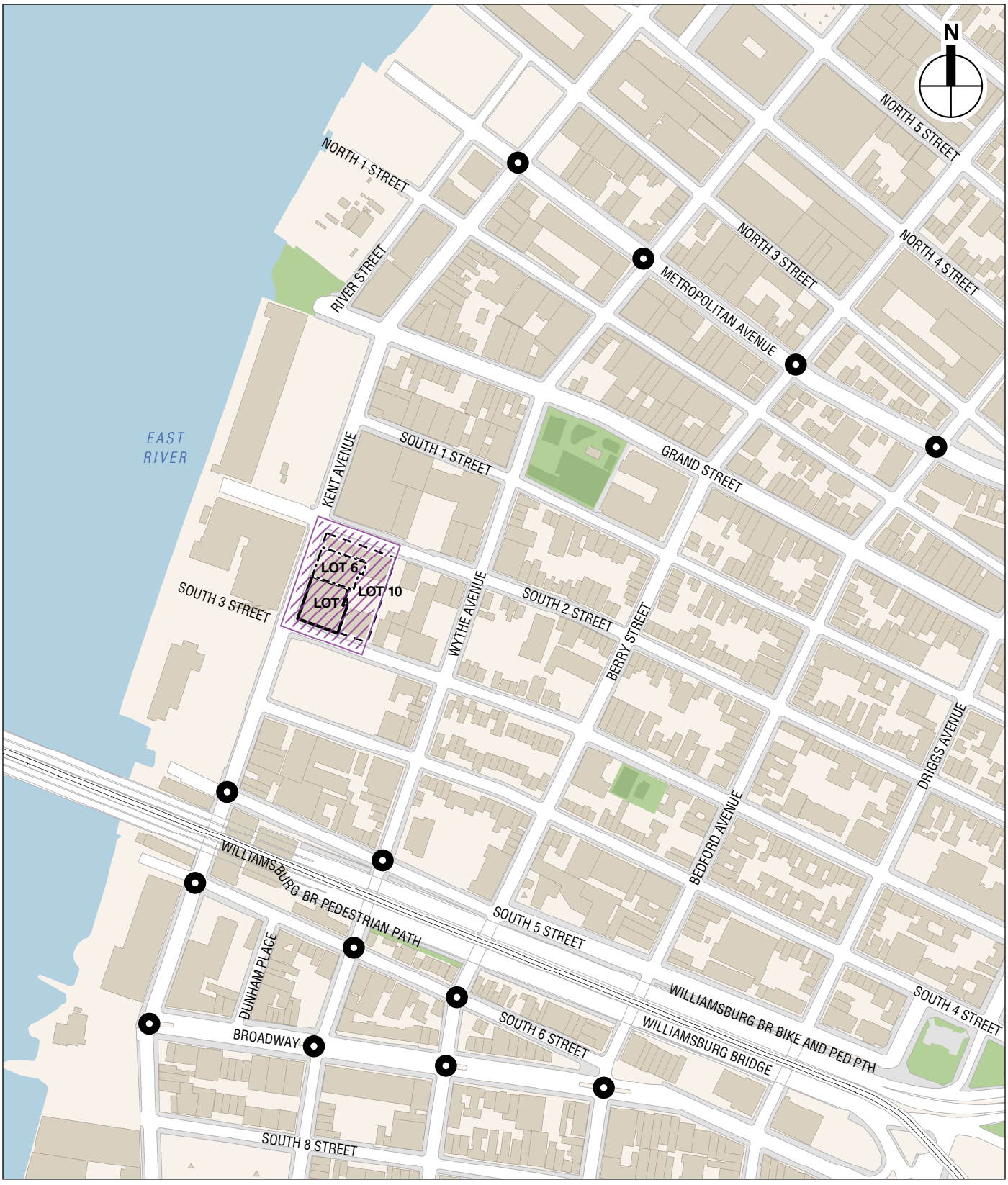


With Action Incremental Vehicle Trips
Weekday PM Peak Hour

Figure 11

307 KENT AVENUE

2.13.19



Project Site (Lot 1)

Proposed Rezoning Area

Projected Development Site (Lot 6)

Lot 10 (Formerly Lots 10, 13, 110)

Traffic Analysis Location

Recommended Traffic Analysis Locations

Figure 12

307 KENT AVENUE

Table 7 (cont'd)
Traffic Level 2 Screening Analysis Results

Intersection	Incremental Vehicle Trips (Weekday)			Recommended Analysis Location
	AM	MD	PM	
Berry Street & N. 4th Street	4	22	28	
Berry Street & N. 3rd Street	25	24	21	
Berry Street & Metropolitan Avenue	**82**	**56**	**60**	✓
Berry Street & N. 1st Street	0	0	0	
Berry Street & Grand Street	0	0	0	
Berry Street & S. 1st Street	0	2	1	
Berry Street & S. 2nd Street	0	0	0	
Berry Street & S. 3rd Street	0	0	1	
Berry Street & S. 4th Street	9	10	5	
Berry Street & S. 5th Street	1	10	7	
Berry Street & S. 6th Street	**57**	33	24	✓
Berry Street & Broadway	47	42	**58**	✓
Berry Street & S. 8th Street	1	1	1	
Bedford Avenue & N. 5th Street	2	6	16	
Bedford Avenue & N. 4th Street	0	0	0	
Bedford Avenue & N. 3rd Street	0	2	5	
Bedford Avenue & Metropolitan Avenue	**75**	49	**56**	✓
Bedford Avenue & N. 1st Street	0	0	0	
Bedford Avenue & Grand Street	0	0	0	
Bedford Avenue & S. 1st Street	0	2	1	
Bedford Avenue & S. 2nd Street	0	0	0	
Bedford Avenue & S. 3rd Street	0	0	1	
Bedford Avenue & S. 4th Street	9	10	5	
Bedford Avenue & S. 5th Street	1	11	7	
Bedford Avenue & S. 6th Street	32	24	16	
Bedford Avenue & Broadway	49	**57**	**73**	✓
Bedford Avenue & S. 8th Street	19	17	11	
N. 5th Street & Northside Piers	0	0	0	
River Street & N. 3rd Street	37	34	40	
River Street & Metropolitan Avenue	14	13	16	
River Street & N. 1st Street	0	0	0	
River Street & Grand Street	0	0	0	

Notes: ✓ Denotes intersections recommended for detailed analysis.
** Intersection has no conflicting traffic movements and is absent of traffic controls (not signalized or stop-controlled). Not recommended for detailed analysis.

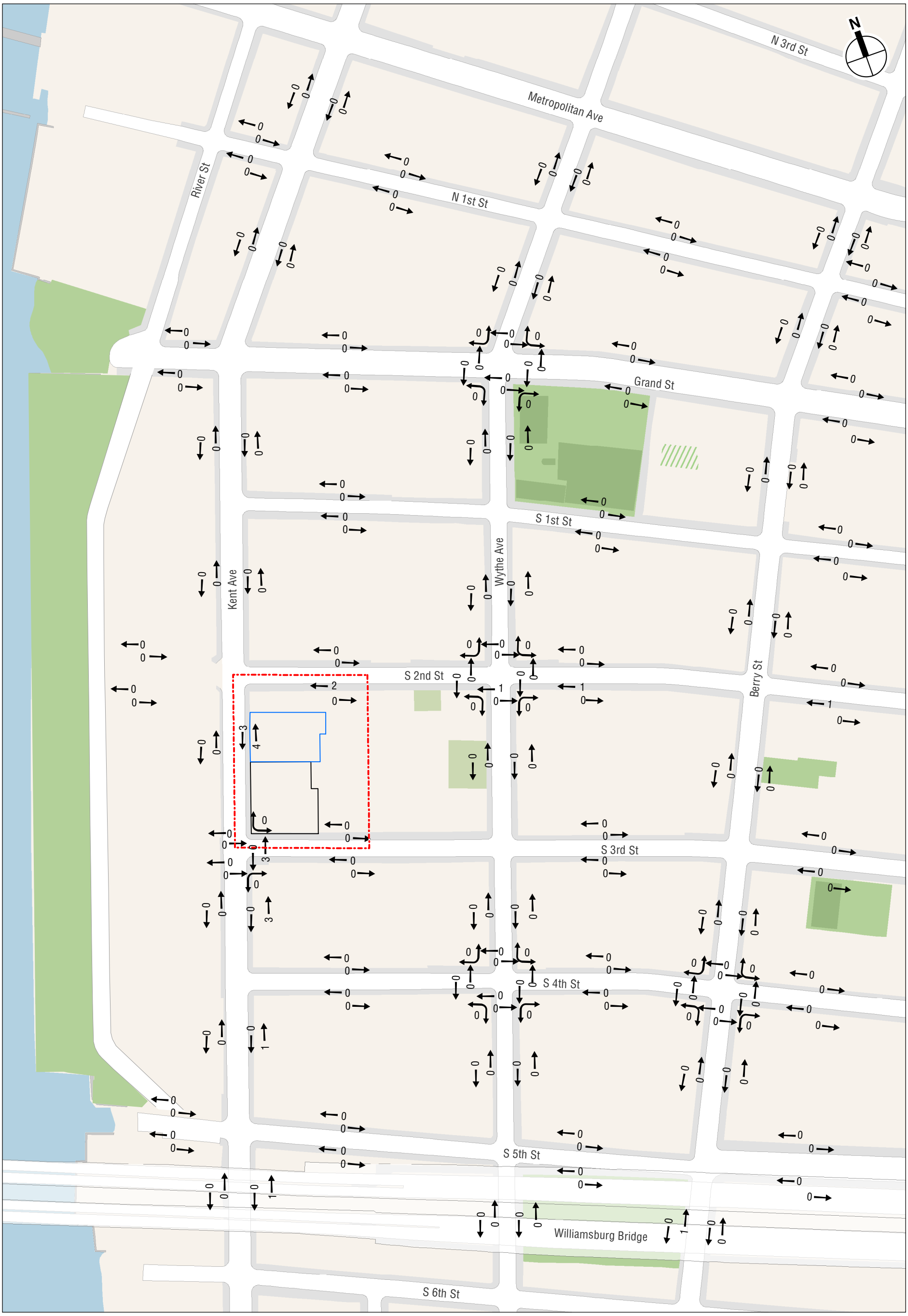
TRANSIT

As described above, the incremental subway trips would be dispersed onto the area's subway stations/lines such that trip-making for any single subway station/line would not exceed the *CEQR Technical Manual* analysis threshold of 200 or more peak hour subway trips. Therefore, a detailed analysis of subway facilities is not warranted and the Proposed Action is not expected to result in any significant adverse subway impacts. Incremental bus trips would be dispersed among the local bus routes serving the study area, however, considering the distance from the study area subway stations to the Rezoning Area, it is expected that a significant number of subway riders would subsequently transfer to buses to reach the Rezoning Area. As a result, the two bus lines serving the Rezoning Area, the B32 and B62 buses, would exceed the 50 trips per line per hour and direction threshold during the weekday AM and PM peak hours.

PEDESTRIANS

Level 2 pedestrian trip assignments have been individually developed for the No Action project generated, With Action project generated, and With Action incremental pedestrian trips. These trip assignments are shown in **Figures 13 through 21** and discussed below.

10/1/2019



Project Area (Proposed Rezoning Area)

Development Site

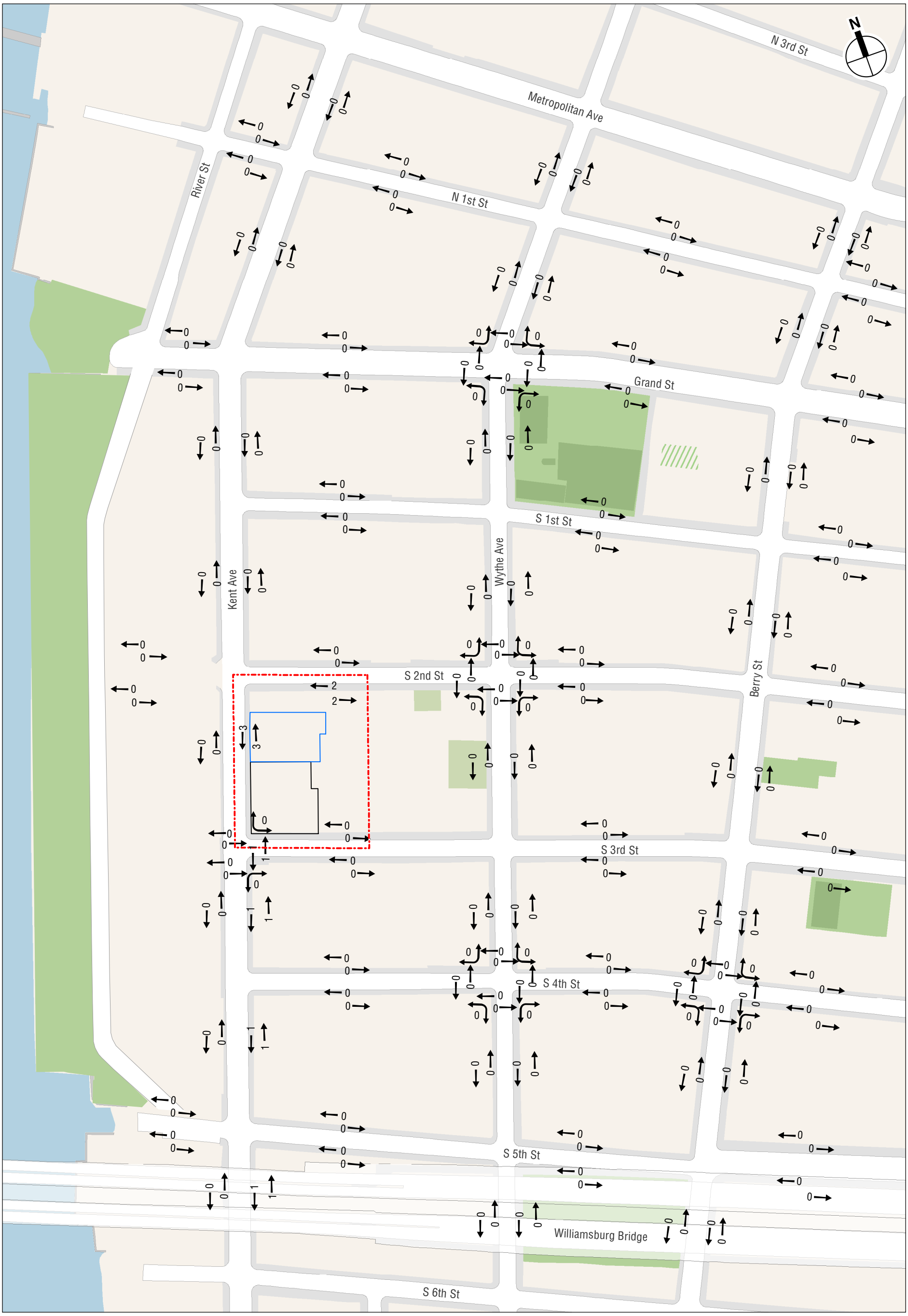
Projected Development Site

0 400 FEET

No Action Project Generated Pedestrian Trips
Weekday AM Peak Hour

Figure 13

10/1/2019



Project Area (Proposed Rezoning Area)

Development Site

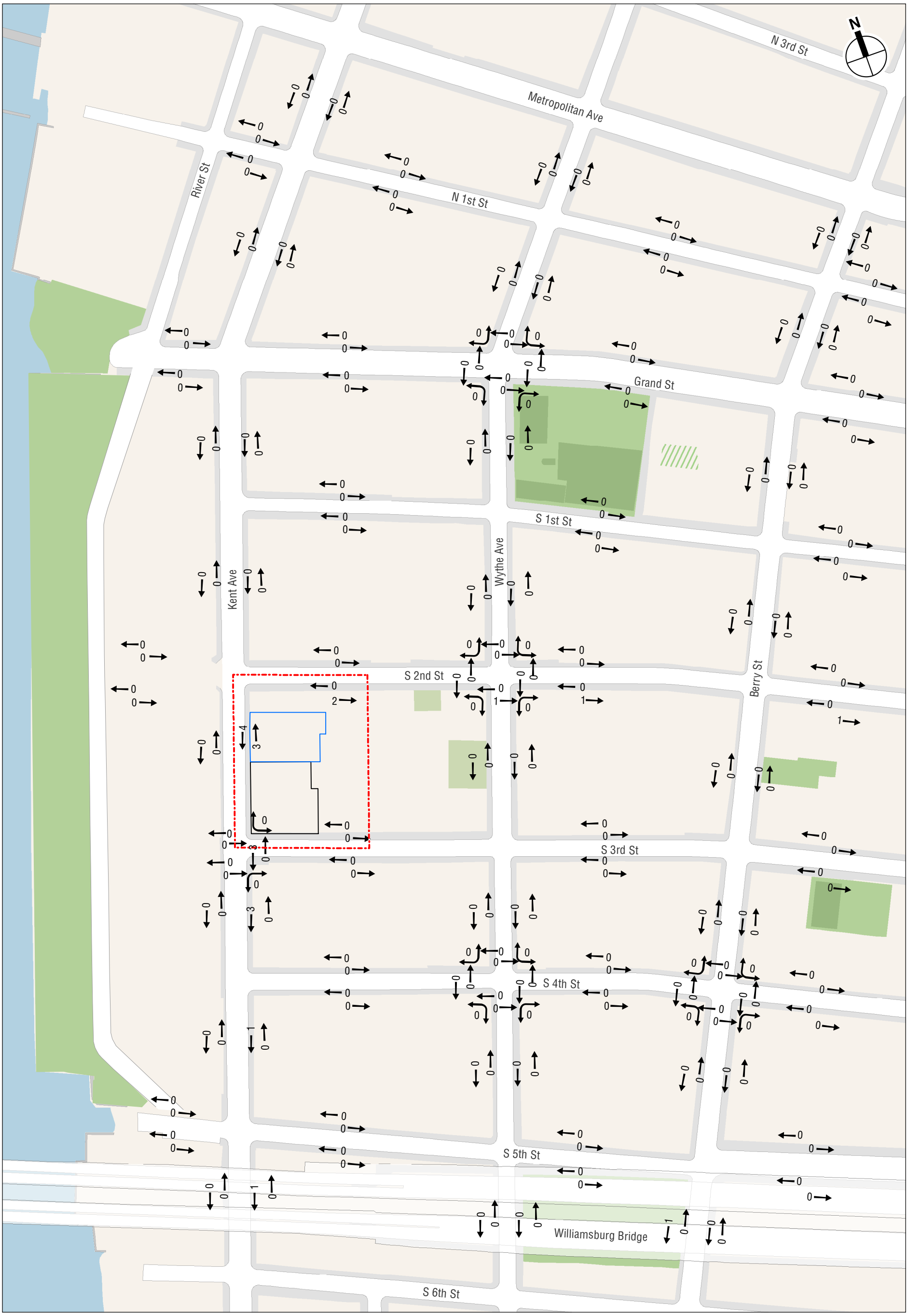
Projected Development Site

0 400 FEET

No Action Project Generated Pedestrian Trips
Weekday Midday Peak Hour

Figure 14

10/1/2019



Project Area (Proposed Rezoning Area)

Development Site

Projected Development Site

0 400 FEET

No Action Project Generated Pedestrian Trips
Weekday PM Peak Hour

Figure 15

9/4/2019



Project Area (Proposed Rezoning Area)

Development Site

Projected Development Site

0 400 FEET

With Action Project Generated Pedestrian Trips
Weekday AM Peak Hour

307 KENT AVENUE

Figure 16

5/19/2020



Project Area (Proposed Rezoning Area)

Development Site

Projected Development Site

0 400 FEET

With Action Project Generated Pedestrian Trips
Weekday Midday Peak Hour

Figure 17

307 KENT AVENUE

5/19/2020



Project Area (Proposed Rezoning Area)

Development Site

Projected Development Site

0 400 FEET

With Action Project Generated Pedestrian Trips
Weekday PM Peak Hour

307 KENT AVENUE

Figure 18

5/19/2020



Project Area (Proposed Rezoning Area)

Development Site

Projected Development Site

0 400 FEET

With Action Incremental Pedestrian Trips
Weekday AM Peak Hour

307 KENT AVENUE

Figure 19

5/19/2020



Project Area (Proposed Rezoning Area)

Development Site

Projected Development Site

0 400 FEET

With Action Incremental Pedestrian Trips
Weekday Midday Peak Hour

307 KENT AVENUE

Figure 20

5/19/2020



Project Area (Proposed Rezoning Area)

Development Site

Projected Development Site

0 400 FEET

With Action Incremental Pedestrian Trips
Weekday PM Peak Hour

307 KENT AVENUE

Figure 21

- Auto Trips: Motorists to all components of the No Action project and all motorists to the Proposed Action are assigned to available neighborhood off-street parking spaces.
- Taxi Trips: Taxi patrons would get dropped off and picked up along the Rezoning Area block faces.
- City Bus Trips: City bus riders would use buses stopping on Kent Avenue, Wythe Avenue, Bedford Avenue, and Driggs Avenue, and would get off at bus stops nearest to the Rezoning Area.
- Subway Trips: Subway riders are assigned to the Bedford Avenue (L train) and Marcy Avenue (J, M, and Z trains) Subway Stations.
- Walk-Only Trips: Pedestrian walk-only trips have been developed by distributing project generated person trips to surrounding pedestrian facilities (i.e., sidewalks, corner reservoirs, and crosswalks) based on population density data, U.S. Census RJTW O-D data, as well as the land use characteristics of the surrounding neighborhood.

Based on the detailed assignment of incremental pedestrian trips illustrated in **Figures 18 through 20**, seven sidewalks, eight corners, and three crosswalks have been recommended for detailed pedestrian analysis, as summarized in **Table 8** and **Figure 22**.

Table 8
Pedestrian Level 2 Screening Analysis Results

Pedestrian Elements	Incremental Pedestrian Trips			Recommended Analysis Location
	AM	Midday	PM	
Berry Street and North 1st Street				
East Sidewalk along Berry Street between North 1st Street and Metropolitan Avenue	15	24	18	
North Sidewalk along North 1st Street between Berry Street and Bedford Avenue	9	32	16	
East Sidewalk along Berry Street between North 1st Street and Grand Street	32	89	51	
South Sidewalk along North 1st Street between Berry Street and Bedford Avenue	9	32	16	
West Sidewalk along Berry Street between North 1st Street and Grand Street	16	31	21	
South Sidewalk along North 1st Street between Berry Street and Wythe Avenue	0	0	0	
West Sidewalk along Berry Street between North 1st Street and Metropolitan Avenue	16	31	21	
North Sidewalk along North 1st Street between Berry Street and Wythe Avenue	0	0	0	
Berry Street and Grand Street				
North Sidewalk along Grand Street between Berry Street and Bedford Avenue	9	32	16	
East Sidewalk along Berry Street between Grand Street and South 1st Street	31	80	49	
South Sidewalk along Grand Street between Berry Street and Bedford Avenue	9	32	16	
West Sidewalk along Berry Street between Grand Street and South 1st Street	21	44	28	
South Sidewalk along Grand Street between Berry Street and Wythe Avenue	7	29	14	
North Sidewalk along Grand Street between Berry Street and Wythe Avenue	7	29	14	
Berry Street and South 1st Street				
North Sidewalk along South 1st Street between Berry Street and Bedford Avenue	9	32	16	
East Sidewalk along Berry Street between South 1st Street and South 2nd Street	45	135	77	
South Sidewalk along South 1st Street between Berry Street and Bedford Avenue	9	32	16	
West Sidewalk along Berry Street between South 1st Street and South 2nd Street	16	27	19	
South Sidewalk along South 1st Street between Berry Street and Wythe Avenue	4	15	7	
North Sidewalk along South 1st Street between Berry Street and Wythe Avenue	2	9	3	
Berry Street and South 2nd Street				
North Sidewalk along South 2nd Street between Berry Street and Bedford Avenue	9	32	16	
East Sidewalk along Berry Street between South 2nd Street and South 3rd Street	0	0	0	
South Sidewalk along South 2nd Street between Berry Street and Bedford Avenue	111	140	122	
West Sidewalk along Berry Street between South 2nd Street and South 3rd Street	0	0	0	
South Sidewalk along South 2nd Street between Berry Street and Wythe Avenue	149	250	183	✓
North Sidewalk along South 2nd Street between Berry Street and Wythe Avenue	31	85	52	
Berry Street and South 3rd Street				
North Sidewalk along South 3rd Street between Berry Street and Bedford Avenue	0	0	0	
East Sidewalk along Berry Street between South 3rd Street and South 4th Street	0	0	0	
South Sidewalk along South 3rd Street between Berry Street and Bedford Avenue	0	0	0	
West Sidewalk along Berry Street between South 3rd Street and South 4th Street	0	0	0	
South Sidewalk along South 3rd Street between Berry Street and Wythe Avenue	0	0	0	
North Sidewalk along South 3rd Street between Berry Street and Wythe Avenue	0	0	0	

10/1/2019



Project Area (Proposed Rezoning Area)
Development Site
Projected Development Site

Pedestrian Analysis Locations
Corner
Crosswalk
Sidewalk

0 300 FEET

307 KENT AVENUE

Recommended Pedestrian Analysis Locations
Figure 22

Table 8 (cont'd)
Pedestrian Level 2 Screening Analysis Results

Pedestrian Elements	Incremental Pedestrian Trips			Recommended Analysis Location
	AM	Midday	PM	
Berry Street and South 4th Street				
North Crosswalk	39	165	64	
East Crosswalk	22	94	39	
South Crosswalk	22	94	39	
West Crosswalk	30	85	44	
Northeast Corner	61	259	103	✓
Southeast Corner	44	188	78	
Southwest Corner	62	185	87	
Northwest Corner	70	256	117	✓
North Sidewalk along South 4th Street between Berry Street and Bedford Avenue	16	71	25	
East Sidewalk along Berry Street between South 4th Street and South 5th Street	32	129	56	
South Sidewalk along South 4th Street between Berry Street and Bedford Avenue	14	61	22	
West Sidewalk along Berry Street between South 4th Street and South 5th Street	31	50	39	
South Sidewalk along South 4th Street between Berry Street and Wythe Avenue	21	58	30	
North Sidewalk along South 4th Street between Berry Street and Wythe Avenue	68	249	108	✓
Berry Street and South 5th Street				
North Sidewalk along South 5th Street between Berry Street and Bedford Avenue	43	73	52	
East Sidewalk along Berry Street between South 5th Street and South 6th Street	11	44	19	
South Sidewalk along South 5th Street between Berry Street and Bedford Avenue	11	44	19	
West Sidewalk along Berry Street between South 5th Street and South 6th Street	63	99	74	
South Sidewalk along South 5th Street between Berry Street and Wythe Avenue	11	12	13	
North Sidewalk along South 5th Street between Berry Street and Wythe Avenue	51	65	57	
Wythe Avenue and North 1st Street				
East Sidewalk along Wythe Avenue between North 1st Street and Metropolitan Avenue	49	56	54	
East Sidewalk along Wythe Avenue between North 1st Street and Grand Street	49	56	54	
West Sidewalk along Wythe Avenue between North 1st Street and Grand Street	50	63	57	
West Sidewalk along Wythe Avenue between North 1st Street and Grand Street	0	0	0	
South Sidewalk along North 1st Street between Wythe Avenue and Kent Avenue	50	63	57	
West Sidewalk along Wythe Avenue between North 1st Street and Metropolitan Avenue	0	0	0	
North Sidewalk along North 1st Street between Wythe Avenue and Kent Avenue	0	0	0	
Wythe Avenue and Grand Street				
North Crosswalk	10	29	15	
East Crosswalk	46	60	53	
South Crosswalk	8	27	14	
West Crosswalk	49	65	56	
Northeast Corner	57	103	76	
Southeast Corner	59	99	72	
Southwest Corner	58	100	78	
Northwest Corner	68	102	76	
East Sidewalk along Wythe Avenue between Grand Street and South 1st Street	44	62	53	
West Sidewalk along Wythe Avenue between Grand Street and South 1st Street	44	61	51	
South Sidewalk along Grand Street between Wythe Avenue and Kent Avenue	13	31	18	
North Sidewalk along Grand Street between Wythe Avenue and Kent Avenue	12	28	17	
Wythe Avenue and South 1st Street				
East Sidewalk along Wythe Avenue between South 1st Street and South 2nd Street	49	78	62	
West Sidewalk along Wythe Avenue between South 1st Street and South 2nd Street	40	47	43	
South Sidewalk along South 1st Street between Wythe Avenue and Kent Avenue	2	11	3	
North Sidewalk along South 1st Street between Wythe Avenue and Kent Avenue	2	11	3	
Wythe Avenue and South 2nd Street				
North Crosswalk	22	63	38	
East Crosswalk	59	100	77	
South Crosswalk	209	352	260	✓
West Crosswalk	51	74	61	
Northeast Corner	81	163	115	
Southeast Corner	268	452	337	✓
Southwest Corner	299	460	349	✓
Northwest Corner	76	152	123	
East Sidewalk along Wythe Avenue between South 2nd Street and South 3rd Street	0	0	0	
West Sidewalk along Wythe Avenue between South 2nd Street and South 3rd Street	42	49	52	
South Sidewalk along South 2nd Street between Wythe Avenue and Kent Avenue	300	479	373	✓
North Sidewalk along South 2nd Street between Wythe Avenue and Kent Avenue	13	36	20	
Wythe Avenue and South 3rd Street				
East Sidewalk along Wythe Avenue between South 3rd Street and South 4th Street	2	2	3	
West Sidewalk along Wythe Avenue between South 3rd Street and South 4th Street	14	14	13	
South Sidewalk along South 3rd Street between Wythe Avenue and Kent Avenue	4	4	4	
North Sidewalk along South 3rd Street between Wythe Avenue and Kent Avenue	12	12	11	

Table 8 (cont'd)
Pedestrian Level 2 Screening Analysis Results

Pedestrian Elements	Incremental Pedestrian Trips			Recommended Analysis Location
	AM	Midday	PM	
Wythe Avenue and South 4th Street				
North Crosswalk	95	321	144	✓
East Crosswalk	28	73	38	
South Crosswalk	27	69	36	
West Crosswalk	37	71	46	
Northeast Corner	125	395	183	✓
Southeast Corner	55	143	76	
Southwest Corner	71	152	87	
Northwest Corner	133	407	199	✓
East Sidewalk along Wythe Avenue between South 4th Street and South 5th Street	32	84	44	
West Sidewalk along Wythe Avenue between South 4th Street and South 5th Street	28	48	33	
South Sidewalk along South 4th Street between Wythe Avenue and Kent Avenue	18	44	25	
North Sidewalk along South 4th Street between Wythe Avenue and Kent Avenue	120	376	178	✓
Wythe Avenue and South 5th Street				
East Sidewalk along Wythe Avenue between South 5th Street and South 6th Street	12	47	19	
West Sidewalk along Wythe Avenue between South 5th Street and South 6th Street	12	47	19	
South Sidewalk along South 5th Street between Wythe Avenue and Kent Avenue	0	0	0	
North Sidewalk along South 5th Street between Wythe Avenue and Kent Avenue	23	39	28	
Kent Avenue and North 1st Street				
East Sidewalk along Kent Avenue between North 1st Street and Metropolitan Avenue	47	67	57	
East Sidewalk along Kent Avenue between North 1st Street and Grand Street	40	46	44	
West Sidewalk along Kent Avenue between North 1st Street and Grand Street	21	22	24	
West Sidewalk along Kent Avenue between North 1st Street and Grand Street	0	0	0	
South Sidewalk along North 1st Street between Kent Avenue and River Street	0	0	0	
West Sidewalk along Kent Avenue between North 1st Street and Metropolitan Avenue	21	22	24	
North Sidewalk along North 1st Street between Kent Avenue and River Street	0	0	0	
Kent Avenue and Grand Street				
East Sidewalk along Kent Avenue between Grand Street and South 1st Street	64	99	77	
West Sidewalk along Kent Avenue between Grand Street and South 1st Street	21	22	24	
South Sidewalk along Grand Street between Kent Avenue and River Street	0	0	0	
North Sidewalk along Grand Street between Kent Avenue and River Street	0	0	0	
Kent Avenue and South 1st Street				
East Sidewalk along Kent Avenue between South 1st Street and South 2nd Street	70	121	86	
West Sidewalk along Kent Avenue between South 1st Street and South 2nd Street	21	22	24	
Kent Avenue and South 2nd Street				
East Sidewalk along Kent Avenue between South 2nd Street and South 3rd Street – North Segment	367	610	393	✓
East Sidewalk along Kent Avenue between South 2nd Street and South 3rd Street – South Segment	388	751	547	✓
West Sidewalk along Kent Avenue between South 2nd Street and South 3rd Street	21	22	24	
South Sidewalk along South 2nd Street between Kent Avenue and the East river	0	0	0	
North Sidewalk along South 2nd Street between Kent Avenue and the East River	0	0	0	
Kent Avenue and South 3rd Street				
North Crosswalk	21	22	24	
East Crosswalk	267	625	360	✓
South Crosswalk	0	0	0	
Northeast Corner	300	653	387	✓
Southeast Corner	267	631	368	✓
East Sidewalk along Kent Avenue between South 3rd Street and South 4th Street	263	621	355	✓
West Sidewalk along Kent Avenue between South 3rd Street and South 4th Street	0	0	0	
Kent Avenue and South 4th Street				
East Sidewalk along Kent Avenue between South 4th Street and South 5th Street	127	197	153	
West Sidewalk along Kent Avenue between South 4th Street and South 5th Street	0	0	0	
Kent Avenue and South 5th Street				
East Sidewalk along Kent Avenue between South 5th Street and South 6th Street	99	157	125	
West Sidewalk along Kent Avenue between South 5th Street and South 6th Street	0	0	0	
South Sidewalk along South 5th Street between Kent Avenue and the East river	0	0	0	
North Sidewalk along South 5th Street between Kent Avenue and the East River	0	0	0	
Notes: ✓ denotes pedestrian elements recommended for detailed analysis.				

✷