CHAPTER 14: TRANSPORTATION

A. INTRODUCTION

As described in detail in other sections of this EIS, Proposed Actions are intended to facilitate vibrant, inclusive residential neighborhoods with a wide variety of local retail options, job opportunities, affordable housing options, and attractive streets for residents, workers, and visitors. The Projected Development Sites analyzed as part of this EIS are currently occupied by local retail, office, storage, factory, and other industrial uses and associated parking facilities. In the With-Action Condition, the Projected Development Sites would be redeveloped with residential, office, retail, community facility, and restaurant uses.

This chapter examines the potential effects of the Proposed Actions on the transportation systems in the Study Area and compares the Future With the Proposed Actions (the With-Action Condition) with the Future Without the Proposed Actions (the No-Action Condition). To assess the potential effects of the Proposed Actions, a reasonable worst case development scenario (RWCDS) for both the No-Action and With-Action Conditions are analyzed for an analysis year of 2030. To develop a reasonable estimate of future growth, likely development sites were identified and divided into two categories: Projected Development Sites and Potential Development Sites. The Projected Development Sites are those considered more likely to be developed within the 15-year analysis period for the Proposed Actions (i.e., by the 2030 analysis year), while Potential Development Sites are considered less likely to be developed over the same period. Significant adverse impacts from trips generated by the Proposed Actions are then identified and described in detail. Chapter 21, "Mitigation" recommends measures to mitigate these impacts, where practicable.

This chapter considers Projected Development Sites located within the following Study Areas (see Figure 14-1:

- Bay Street Corridor Study Area: 17 Projected Development Sites bounded by Victory Boulevard to the north, Sand Street to the south, the Staten Island Railway (SIR) to the east, and Van Duzer Street to the west.
- Canal Street Corridor Study Area: 8 Projected Development Sites located along Canal Street bounded by Broad Street to the south, Wright Avenue to the east, Cedar Street to the west and Canal Street to the north.
- City Disposition Sites:
    - Jersey Street Garage Site: 1 Projected Development Site bounded by Brook Street to the north, Victory Boulevard to the south, Jersey Street to the west, and Pike Street to the east.
    - 54 Central Avenue Site: 1 Projected Development Site located on Central Avenue between Hyatt Street and Slosson Terrace, adjacent to the new courthouse parking garage.
    - 55 Stuyvesant Place Site: 1 Projected Development Site located on Stuyvesant Place between Hamilton Avenue and Wall Street.

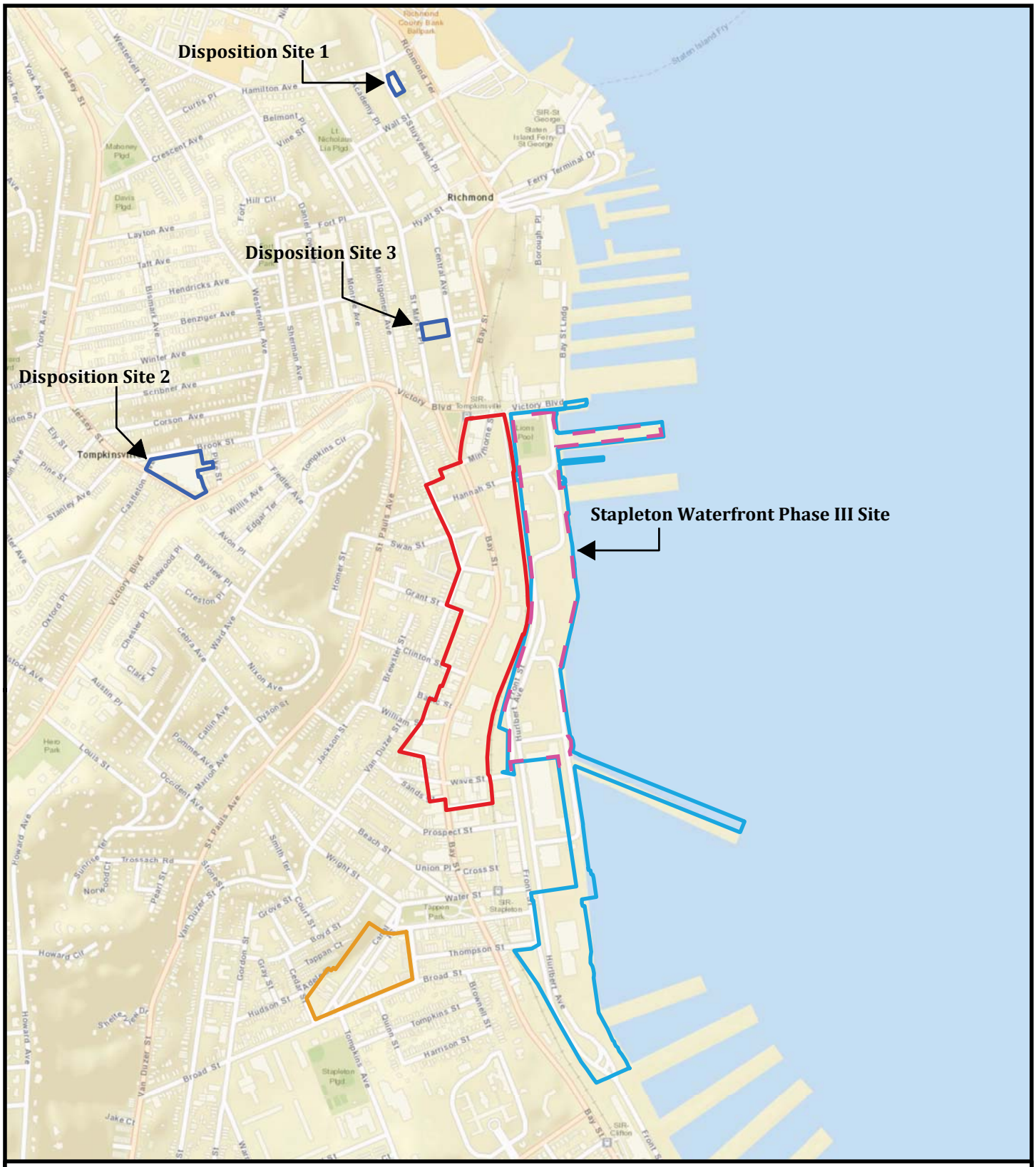


FIGURE 14-1: PROJECT AREA LOCATION MAP

BAY STREET REZONING AND RELATED ACTIONS

TOMPKINSVILLE/STAPLETON STATEN ISLAND, NY

Map Reference: Basemap: ESRI; Shapefile: NYC Dept of City Planning, MapPLUTO Data

- Stapleton Waterfront Phase III Study Area: 2 Projected Development Sites (Sites A and B1) located on Front Street between Hannah Street and Wave Street.

A total of 30 Projected Development Sites were identified and are considered for the purposes of the transportation analyses within the Study Area as shown on Figure 14-1. Table 14-1 shows the total anticipated No-Action and With-Action land uses on Projected Development Sites in 2030 under the RWCDS. As shown in Table 14-1, under the RWCDS, compared to the Existing Condition, the Proposed Actions would facilitate the incremental development of 2,563 dwelling units (DU), including 1,061 affordable DU; 135,370 square feet (sf) of local retail uses; 193,301 sf of office uses; 51,588 sf of community facility uses; 20,000 sf of medical office uses; 71,000 sf of restaurant uses; and 1,290 accessory parking spaces. However, for purposes of this analysis, no credit was taken to account for the elimination of existing uses.

Table 14-1: 2030 RWCDS No-Action and With-Action Land Uses

Land Use	Existing Condition	No-Action Condition	No-Action net Existing	With-Action Condition	With-Action net Existing	With-Action net No Action
Residential						
Total Residential	6	12	6	2,569	2,563	***2,557***
Commercial						
Local Retail	95,274	209,936	114,662	230,644	135,370	20,708
Office	123,638	99,179	-24,459	316,939	193,301	217,760
Restaurant	0	19,585	19,585	71,000	71,000	51,415
Factory	35,900	0	-35,900	0	-35,900	0
Garage	27,728	14,535	-13,193	0	-27,728	-14,535
Storage	24,092	0	-24,092	0	-24,092	0
Total Commercial	306,632	343,235	36,603	618,583	311,951	***275,348***
Other Uses						
Industrial	0	0	0	0	0	0
Medical Office	0	0	0	20,000	20,000	20,000
Community Facility	13,090	37,879	24,789	64,678	51,588	26,799
Other	73,092	0	-73,092	0	-73,092	0
Total Floor Area	86,182	37,879	-48,303	84,678	-1,504	***46,799***
Parking						
Parking Spaces	481	481	0	1,771	1,290	1,290

In June 2018, ATRs were placed at 23 out of the 68 locations from the November 2015 / June 2016 count program in order to evaluate any network changes that may have occurred between 2015 and 2018. The 23 ATR locations used for comparison purposes were selected in coordination with NYCDCP and NYCDOT and primarily located along and/or near the Bay Street corridor. While the results of the 2018 ATR counts at these 23 locations indicated slight changes in overall peak period network volumes and temporal variations compared to the data collected in 2015 /2016, these differences may be attributable to operational changes implemented by NYCDOT and traffic generated by No-Build construction in the study area. Therefore, the network derived from 2015/2016 counts was used for the analysis of Existing Conditions.

B. PRINCIPAL CONCLUSIONS

TRAFFIC

Traffic conditions were evaluated for the Weekday AM (7:45 to 8:45 AM), Weekday MD (2:30 to 3:30 PM), Weekday PM (4:45 to 5:45 PM), and Saturday MD (2:15 to 3:15 PM) peak hours at 49 intersections where traffic generated by the Proposed Actions is expected to be most heavily concentrated. As summarized in Tables 14-2, 14-3A and 14-3B, the traffic impact analysis indicates the potential for significant adverse impacts at 31 intersections during one or more analyzed peak hours. Chapter 21, "Mitigation," describes potential measures to mitigate these significant adverse traffic impacts.

Table 14-2: Number of Impacted Intersections and Lane Groups by Peak Hour

	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Impacted Lane Groups	36	43	59	37
Impacted Intersections	24	21	26	20

TRANSIT

STATEN ISLAND RAILWAY (SIR)

SIR Station Elements

The Proposed Actions would generate a net increment of approximately 433 and 578 new SIR trips during the Weekday AM and PM commuter peak hours. The analysis of SIR station elements focuses on the St. George, Tompkinsville, and Stapleton SIR stations. In the With-Action Condition, the stair and control area elements analyzed for this EIS are projected to operate at LOS B or better in both the Weekday AM and PM peak hours. Therefore, the Proposed Actions would not result in significant adverse rail station impacts.

SIR Line Haul

Line haul is the volume of transit riders passing a defined point on a given transit route. Line haul is typically measured in the peak direction at the point where the trains carry the greatest number of passengers during the peak hour (the maximum load point) on each transit route. The Study Area is served by the Stapleton, Tompkinsville, and St. George SIR stations. The peak direction of travel on these lines is typically towards the St. George Staten Island Ferry Terminal (Ferry Terminal) in the Weekday AM peak period and from the Ferry Terminal in the Weekday PM peak period. Incremental increases in SIR ridership would average 18.06 northbound trips per car in the Weekday AM peak hour and 31.08 southbound trips in the Weekday PM peak hour. Since the SIR is not projected to exceed guideline capacity in the peak direction during either peak hour in the With-Action Condition, The Proposed Actions would not result in significant adverse SIR line haul impacts.

Table 14-3A: Summary of Significantly Impacted Signalized Intersections

Signalized Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Richmond Terrace and Franklin Avenue	X		X	
Richmond Terrace and Jersey Street	X	X	X	X
Richmond Terrace and Westervelt Avenue	X	X	X	
Hamilton Avenue and Richmond Terrace				X
Wall Street and Richmond Terrace				
Richmond Terrace and Ferry Terminal (bus)		X	X	X
Richmond Terrace and Ferry Terminal (parking lot)	X	X	X	X
Bay Street and Slosson Terrace	X	X	X	X
Victory Boulevard and Bay Street/St. Marks Place			X	
Victory Boulevard and Bay Street	X	X	X	X
Bay Street and Hannah Street	X	X	X	X
Front Street and Hannah Street		X		
Bay Street and Swan Street/Van Duzer Street	X		X	
Van Duzer Street and Clinton Street				
Bay Street and Clinton Street	X	X	X	X
Bay Street and Wave Street	X	X	X	X
Front Street and Wave Street			X	
Front Street and Prospect Street	X	X	X	X
Van Duzer Street and Beach Street	X		X	
Bay Street and Water Street	X	X	X	X
Bay Street and Canal Street	X	X	X	X
Front Street and Canal Street				
Bay Street and Broad Street	X	X	X	X
Richmond Terrace and Clove Road				
Victory Boulevard and Cebra Avenue	X	X	X	X
Victory Boulevard and Jersey Street	X	X	X	X
Victory Boulevard and Forest Avenue		X	X	X
Broad Street and Canal Street				
Broad Street and Van Duzer Street				
Broad Street and Targee Street	X			
Vanderbilt Avenue and Tompkins Avenue	X	X	X	
Bay Street and Vanderbilt Avenue	X	X	X	X
Bay Street and Edgewater Drive				X
Bay Street and Hylan Boulevard	X	X	X	X
Bay Street and School Road	X	X	X	X

Table 14-3B: Summary of Significantly Impacted Unsignalized Intersections

Unsignalized Intersection	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Hamilton Avenue and Stuyvesant Place				
Wall Street and Stuyvesant Place				
Front Street and Hannah Street[1]				
Van Duzer Street and St Julian Place				
Bay Street and St Julian Place				
Bay Street and Grant Street	X			
Bay Street and Baltic Street				
Bay Street and William Street	X		X	
Bay Street and Congress Street				
Bay Street and Wave Street[1]				
Front Street and Wave Street[1]				
Front Street and Prospect Street[1]				
Bay Street and Water Street[1]				
Front Street and Canal Street[1]				
Jersey Street and Brook Street				
Pike Street and Brook Street				
Pike Street and Victory Boulevard				
Hudson Street and Cedar Street				
Broad Street and Cedar Street				
Notes: 1 - Intersection becomes signalized in No-Action Condition.				

Bus

The Project Area is served by 22 MTA bus routes. The Proposed Actions would generate approximately 860 and 1,093 incremental bus trips during the Weekday AM and PM peak hours, respectively. The Proposed Actions would result in capacity shortfalls on all the northbound and southbound S51/81, S74/84, S76/86 and S78 services during the Weekday AM and PM peak hours as shown in Table 14-4**.** Therefore, the Proposed Actions are expected to result in significant adverse impacts during the Weekday AM and PM peak hours for the northbound and southbound S51/81, S74/84, S76/86 and S78 routes. The significant impact to these bus routes could be mitigated by increasing bus service in the Weekday AM and PM peak hours. The general policy of the MTA is to provide additional bus service where demand warrants, taking into account financial and operational constraints. Chapter 21, "Mitigation," further describes potential measures to mitigate these significant adverse transit impacts.

Table 14-4: Summary of Significant Bus Impacts

Route	Direction	Impacted Time Period	
		Weekday AM	Weekday PM
S51/81	NB	X	X
	SB	X	X
S74/84	NB	X	X
	SB	X	X
S76/86	NB	X	X
	SB	X	X
S78	NB	X	X
	SB	X	X

PEDESTRIANS

The Proposed Actions would generate a net increment of approximately 1,966, 3,124, 3,423, and 3,152 pedestrian trips in the Weekday AM, Weekday MD, Weekday PM, and Saturday MD peak hours, respectively. Pedestrian volumes include walk-only trips and pedestrians walking to/from SIR stations and bus stops. The pedestrian analyses also consider pedestrians walking between Projected Development Sites and parked vehicles, if they arrived by car. Weekday peak period pedestrian conditions were evaluated at a total of 66 representative pedestrian elements where pedestrian trips generated by the Proposed Actions are expected to be most concentrated. These elements—28 sidewalks, 17 corner areas and 21 crosswalks—are primarily located in the vicinity of major Projected Development Sites and corridors connecting these sites to SIR station entrances and bus stops.

As shown in Table 14-5, a total of 16 pedestrian elements would be significantly adversely impacted due to the Proposed Actions, including three sidewalks in the Weekday AM peak hour, six sidewalks and two crosswalks in the Weekday MD peak hour, nine sidewalks and five crosswalks in the Weekday PM peak hour, and seven sidewalks and two crosswalks in the Saturday MD peak hour. Chapter 21, "Mitigation," describes potential measures to mitigate these significant adverse pedestrian impacts.

VEHICULAR AND PEDESTRIAN SAFETY

Portions of the Study Area were identified in the *Vision Zero Staten Island Pedestrian Safety Action Plan* (New York City Department of Transportation (NYCDOT), 2015) as Priority Areas where safety issues were found to occur systematically at an area-wide level. Study Area roadways identified as Priority Corridors include the following:

- Bay Street
- Tompkins Avenue
- Vanderbilt Avenue
- Victory Boulevard

One Study Area intersection was identified as Priority Intersection:

- Victory Boulevard and Bay Street

Table 14-5: Summary of Significant Pedestrian Impacts

Intersection	Impacted Element	Peak Hour			
		Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Bay Street and Hannah Street	East leg, north sidewalk	X	X	X	X
	East leg, south sidewalk	X	X	X	X
	North crosswalk		X	X	
Bay Street and Baltic Street	North leg, west sidewalk		X	X	X
Bay Street and Wave Street	North leg, east sidewalk			X	
	South leg, east sidewalk				X
	South leg, west sidewalk	X		X	
	North leg, west sidewalk			X	
	North crosswalk			X	
	South crosswalk			X	
Front Street and Hannah Street	South leg, west sidewalk		X	X	X
	West crosswalk			X	X
Front Street and Wave Street	North leg, east sidewalk			X	X
Jersey Street and Victory Boulevard	East leg, south sidewalk		X		
	East crosswalk		X	X	X
Front Street and Baltic Street	North leg, west sidewalk		X	X	X

***This table has been modified for the FEIS.**

In addition, a majority of the Study Area has been designated as a Vision Zero Priority Area, bounded by Hamilton Avenue to the north, the Staten Island Expressway to the south, Front Street to the east, and Howard Avenue to the west.

Based on data obtained from NYCDOT for the 3-year reporting period between January 1, 2012 and December 31, 2014, 262 total crashes, including 51 pedestrian-related crashes and 14 bicycle-related crashes, occurred at the Study Area intersections during the three-year period. One fatality was documented. Based on the crash data, the intersections of Richmond Terrace at Jersey Street and St. Marks Place/Bay Street at Victory Boulevard would be classified as high-pedestrian/bicycle crash locations.

NYCDOT's planned capital improvements to the Bay Street corridor between Victory Boulevard and Hannah Street intersections, along the Van Duzer Street and Targee Street corridors, and at the Ferry Terminal are expected to include measures to improve pedestrian safety, such as the installation of high visibility crosswalks, bicycle facilities, cross section reductions, lane width reductions, and the implementation of new turn prohibitions. Additional improvements that could be employed to increase pedestrian/bicyclist safety at high crash locations could include installation of pedestrian countdown signals and updating crosswalk markings.

PARKING

The parking analyses document changes in the parking supply and utilization within a ¼- mile radius of the Projected Development Sites under both No-Action and With-Action Conditions. While the parking supply and utilization for the Proposed Actions were considered for the entire ¼ mile radius of the Study Area, a detailed parking analyses was conducted for five subareas focused on the parking spaces that were more likely to be used by vehicle trips generated by Proposed Development Sites within those subareas. The subareas include the areas around St. George/Ferry Terminal, Victory

Boulevard/Jersey Street, Bay Street (north of Grant Street), Bay Street (south of Grant Street), and Canal Street.

Four off-site parking facilities are located within a ¼-mile radius of the Projected Development Sites, including those at 55 Central Avenue, 25 Wall Street, 54 Central Avenue, and 325 St. Marks Place. The off-site parking facility located at 54 Central Avenue includes a parking garage and a municipal surface parking lot (75 spaces) associated with the Staten Island Supreme Courthouse. While the off-street parking facilities are within a ¼-mile radius of the Projected Development Sites, it was conservatively assumed that the parking demand generated by the Proposed Actions would not be accommodated within the off-street parking facilities due to their location within the St. George neighborhood, whereas the majority of the development associated with the Proposed Actions would be located south of Victory Boulevard.

With the addition of the Proposed Action, the on-street parking utilization within ¼ mile of the Projected Development Sites is expected to increase to 79, 92, 77, and 87 percent during the Weekday AM, MD, PM and overnight periods, respectively, and 79 percent during the Saturday MD peak period. Detailed parking analyses conducted for five identified parking deficits during the Weekday AM, MD, PM, and overnight periods. However, these deficits were not determined to be significant as they would be either less than half the available on-street parking or due to proximity to multiple bus routes on Bay Street/Richmond Terrace, the Staten Island Ferry, and the SIR, and the availability of parking spaces in adjacent subareas. Therefore, there would be sufficient on-street parking capacity within the overall ¼-mile of the Study Area during all peak periods and the Proposed Actions would not result in significant adverse parking impacts.

C. PRELIMINARY ANALYSIS METHODOLOGY

Transportation impact analysis methodologies for Proposed Actions in New York City are defined in the *City Environmental Quality Review Technical Manual* (*CEQR Technical Manual)*, which outlines a two-tiered screening process. The Level 1 screening assessment includes a trip generation analysis to determine whether the Proposed Actions would result in more than 50 vehicle trips, 200 subway/rail or bus riders, or 200 pedestrian trips in a peak hour. The Level 2 screening is a trip assignment review that identifies intersections with 50 or more vehicle trips, pedestrian elements with 200 or more pedestrian trips, 50 bus trips in a single direction on a single route, or 200 passengers at a subway station or line during any analysis peak hour which would require detailed analyses. The results of the screening analysis are described below.

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, MD, and PM and Saturday MD 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

The Proposed Actions would allow for the development of community facility, office, local retail, medical office, restaurant, and residential uses, as well as provisions for parking. A total of 30 Projected Development Sites are considered as part of the Proposed Action: 17 within the Bay Street Corridor; eight within the Canal Street Corridor; three as part of City Disposition Sites (one at Jersey Street and Victory Street; one at 54 Central Avenue; one at 55 Stuyvesant Place); and two as part of Stapleton Waterfront Phase III. The transportation impact analysis only considers Projected Development Sites. Potential Development Sites that are considered less likely to be developed within the 15-year analysis period are not included in this assessment.

For the purposes of the screening analyses, the No-Action Condition provides a baseline condition that is evaluated and compared with the incremental changes in the With-Action Condition for the 2030 build year. The No-Action Condition for the Projected Development Sites includes the development that could occur pursuant to existing zoning. Compared to the Existing Condition of the Projected Development Sites, there would be a decrease in factory, garage, storage, and industrial uses. However, to be conservative, a credit was not taken for these existing uses. The predicted change in No-Action Condition associated with the Projected Development Sites is summarized in Table 14-1. Without accounting for existing uses, the No-Action Condition is predicted to have a total of approximately 209,936 sf of local retail uses; 99,179 sf of office uses; 37,879 sf of community facility uses; 19,585 sf of restaurant uses; and 481 accessory parking spaces.

In the With-Action Condition under the RWCDS, the Proposed Actions would facilitate the incremental development (compared to the No-Action Condition) of 2,557 DU, including 1,061 affordable DU; 20,708 square feet (sf) of local retail uses; 217,760 sf of office uses; 26,799 sf of community facility uses; 20,000 sf of medical office uses; 51,415 sf of restaurant uses; and 1,290 accessory parking spaces. The With-Action RWCDS is summarized in Table 14-1. These increments were analyzed for their potential trip generation and distribution onto the transportation network as detailed below.

TRANSPORTATION PLANNING FACTORS

Travel demand projections were prepared for the No-Action and With-Action Conditions for the Weekday AM, MD, PM, and Saturday MD peak hours. Trip generation estimates were prepared for the following critical peak hours:

- Weekday Morning (AM): 7:45 AM to 8:45 AM
- Weekday Midday (MD): 2:30 PM to 3:30 PM
- Weekday Afternoon (PM): 4:45 PM to 5:45 PM
- Saturday MD: 2:15 PM to 3:15 PM

The peak hours were determined in collaboration with the New York City Department of City Planning (NYCDCP) and NYCDOT to be consistent with the *Staten Island Transportation Improvement Strategy* (*TIS*), a parallel traffic study effort conducted by the New York City Economic Development Corporation (NYCEDC) and NYCDOT to develop transportation improvements for a partially overlapping Study Area within Staten Island.

The resulting trip increments (With-Action trips minus No-Action trips) were compared with the applicable *CEQR Technical Manual* screening thresholds to determine if additional quantified analyses were warranted. The transportation planning assumptions used in calculating the trip estimates are described below and detailed in Tables 14-6 through 14-8.

COMMUNITY FACILITY

The Proposed Actions would consist of a total of 26,799 sf of community facility space. The daily trip generation rates and temporal distributions were obtained from the *ITE Trip Generation*, 9th Edition, Land use Code 495 (Recreational Community Center). Daily truck trip generation, modal split, vehicle occupancy, truck temporal distribution, and directional distribution were obtained from the *Flushing Commons FEIS* (2010), Table 14-16, for the YMCA land use.

OFFICE

The Proposed Actions would consist of 217,760 sf of office space. The daily trip generation rates, temporal distribution, daily truck trip generation rates, and truck temporal distribution were obtained from the *CEQR Technical Manual*, Table 16-2. Directional distributions were obtained from the *New Stapleton Waterfront Development Plan Tech Memo* (2014), Tables O-14 and O-15, for the office land use. Weekday AM and PM modal split and auto vehicle occupancy were calculated from the 2014 American Community Survey (ACS) 5-year reverse journey to work estimates for Census Tract 21 for the Bay Street Corridor sites, Canal Street Corridor sites, and Stapleton Waterfront Phase III sites; Census Tract 11 for the City Disposition Site at Jersey Street; and Census Tracts 3 and 7 for the City Disposition sites at 54 Central Avenue and 55 Stuyvesant Place. Ferry trips were split proportionally to the bus, SIR, and walk-only trips. Weekday MD and Saturday MD modal splits were adjusted to increase walk trip percentages to account for local midday trips, based on similar assumptions from the *New Stapleton Waterfront Development Plan Tech Memo*.

LOCAL RETAIL

The Proposed Actions would consist of a total of 20,708 sf of local retail space. The daily trip generation rates, temporal distribution, daily truck trip generation rates, and truck temporal distribution were obtained from the *CEQR Technical Manual*, Table 16-2. Modal split, auto vehicle occupancy, and directional distribution were obtained from the *New Stapleton Waterfront Development Plan Tech Memo* (2014), Tables O-14 and O-15, for the local retail land use.

MEDICAL OFFICE

The Proposed Actions would consist of 20,000 sf of medical office space. The daily trip generation rates, temporal distribution, daily truck trip generation rates, truck temporal distribution, modal split, vehicle occupancy, directional distribution were provided by NYCDOT. It was assumed that Saturday MD travel characteristics were the same as Weekday MD.

Table 14-6: Travel Demand Factors
Bay Street/Canal Street Corridor and Stapleton Waterfront Phase III Sites

	Land Use:	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office Building	
Daily Person Trip Generation		(1)		(1)		(1)		(7)		(5)		(6)	
	Weekday	8.075		205		18.0		50.7		203.44		127	
	Saturday	9.6		240		3.9		13.7		253.4		127	
	Unit	per dwelling unit		per room		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf	
Daily Truck Trip Generation		(1)		(1)		(1)		(4)		(5)		(1)	
	Weekday	0.06		0.35		0.32		0.04		0.79		0.32	
	Saturday	0.02		0.04		0.01		0.00		0.79		0.01	
	Unit	per dwelling unit		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf	
Modal Split		**AM/PM**	**MD/Sat**	**Weekday**	**Saturday**	**AM/PM**	**MD/Sat**	**Weekday**	**Saturday**	**AM/PM/Sat**	**MD**	**Weekday**	**Saturday**
		(2)		(3)		(2)		(4)		(5)		(6)	
	Auto	35.4%	22.6%	9.0%	9.0%	66.9%	56.4%	25.0%	25.0%	25.0%	15.0%	44.0%	44.0%
	Taxi	0.5%	0.5%	2.0%	2.0%	0.0%	0.5%	0.0%	0.0%	3.0%	3.0%	2.0%	2.0%
	Bus	33.6%	33.6%	7.0%	7.0%	19.8%	3.6%	49.0%	49.0%	6.0%	6.0%	31.7%	31.7%
	Railroad	18.3%	18.3%	7.0%	7.0%	4.2%	8.5%	1.0%	1.0%	6.0%	6.0%	17.3%	17.3%
	Walk/Bike	12.2%	25.0%	75.0%	75.0%	9.1%	31.0%	25.0%	25.0%	60.0%	70.0%	5.0%	5.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy		(2, 3)		(3)		(2, 3)		(4)		(5)		(6)	
	Auto	1.26		1.65		1.06		1.50		2.00		1.50	
	Taxi	1.40		1.40		1.40		1.40		2.00		1.50	
Linked Trips (1)		0%	0%	40%	25%	0%	0%	0%	0%	15%	15%	0%	0%
Temporal Distribution		(1)		(1)		(1)		(7)		(5)		(6)	
	AM	10.0%		3.0%		12.0%		6.1%		1.0%		4.0%	
	MD	5.0%		19.0%		15.0%		9.9%		8.7%		11.0%	
	PM	11.0%		10.0%		14.0%		8.1%		10.4%		12.0%	
	Sat MD	8.0%		10.0%		17.0%		11.8%		6.0%		11.0%	
Truck Temporal Distribution		(1)		(1)		(1)		(4)		(5)		(1)	
	AM	12.0%		8.0%		10.0%		7.7%		9.7%		10.0%	
	MD	9.0%		11.0%		11.0%		11.0%		7.6%		11.0%	
	PM	2.0%		2.0%		2.0%		1.0%		1.0%		2.0%	
	Sat MD	9.0%		11.0%		11.0%		0.0%		7.6%		11.0%	
Directional Distribution		**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
		(3)		(3)		(3)		(4)		(5)		(6)	
	AM	16.0%	84.0%	50.0%	50.0%	93.0%	7.0%	66.0%	34.0%	50.0%	50.0%	89.0%	11.0%
	MD	59.0%	41.0%	50.0%	50.0%	46.0%	54.0%	58.0%	42.0%	50.0%	50.0%	51.0%	49.0%
	PM	75.0%	25.0%	50.0%	50.0%	3.0%	97.0%	34.0%	66.0%	50.0%	50.0%	48.0%	52.0%
	Sat MD	59.0%	41.0%	50.0%	50.0%	46.0%	54.0%	47.0%	53.0%	50.0%	50.0%	51.0%	49.0%
Truck Directional Distribution		(1)		(1)		(1)		(1)		(1)		(1)	
	AM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Sat MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes

(1) 2014 CEQR Technical Manual. Table 16-2. For the local retail land use, a 40% linked trip credit was applied to auto trips only and a 25% linked trip credit was applied to remaining trips.

(2) Residential modal split based on 2011-2015 American Community Survey 5-year estimates, Table B08006: Means of Transportation to Work for the average of Census Tracts 3/7/9/11/21 (Richmond County). Office modal split based on CTPP 2006-2010 Five-year estimates for Census Tract 21 (Richmond County). Ferry trips were split proportionally to the bus and railroad (SIR). Weekday MD and Saturday modal splits were adjusted to increase the walk trips to account for local midday trips. Taxi vehicle occupancy based on the New Stapleton Waterfront Development Plan Tech Memo.

(3) New Stapleton Waterfront Development Plan Tech Memo, Tables O-14 and O-15.

(4) Flushing Commons EIS, Table 14-16 (YMCA).

(5) Staten Island Lighthouse Point EAS, Table I-14. Ferry trips were split proportionally to the bus and railroad (SIR).

(6) NYCDOT. Assumed Saturday modal split, vehicle occupancy, temporal distribution, and directional distribution to be the same as Weekday MD. Non-auto mode split based on Sam Schwartz assumptions of 5% walk, and proportional split to bus and railroad/SIR based on Residential Journey to Work modal split.

(7) ITE Trip Generation Manual, 9th Edition, Volume 2: Recreational Community Center (Land Use 495).

Table 14-7: Travel Demand Factors
City Disposition Site - Jersey Street

	Land Use:	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office Building	
Daily Person Trip Generation	**Weekday**	(1) 8.075		(1) 205		(1) 18.0		(7) 50.7		(5) 203.44		(6) 127	
	Saturday	9.6		240		3.9		13.7		253.4		127	
	Unit	per dwelling unit		per room		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf	
Daily Truck Trip Generation	**Weekday**	(1) 0.06		(1) 0.35		(1) 0.32		(4) 0.04		(5) 0.79		(1) 0.32	
	Saturday	0.02		0.04		0.01		0.00		0.79		0.01	
	Unit	per dwelling unit		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf	
Modal Split		**AM/PM**	**MD/Sat**	**Weekday**	**Saturday**	**AM/PM**	**MD/Sat**	**Weekday**	**Saturday**	**AM/PM/Sat**	**MD**	**Weekday**	**Saturday**
		(2)		(3)		(2)		(4)		(5)		(6)	
	Auto	35.4%	22.6%	9.0%	9.0%	72.8%	56.4%	25.0%	25.0%	25.0%	15.0%	44.0%	44.0%
	Taxi	0.5%	0.5%	2.0%	2.0%	0.0%	0.5%	0.0%	0.0%	3.0%	3.0%	2.0%	2.0%
	Bus	39.8%	39.8%	7.0%	7.0%	17.1%	3.6%	49.0%	49.0%	7.0%	7.0%	37.6%	37.6%
	Railroad	12.1%	12.1%	7.0%	7.0%	4.4%	8.5%	1.0%	1.0%	5.0%	5.0%	11.4%	11.4%
	Walk/Bike	12.2%	25.0%	75.0%	75.0%	5.7%	31.0%	25.0%	25.0%	60.0%	70.0%	5.0%	5.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy		(2, 3)		(3)		(2, 3)		(4)		(5)		(6)	
	Auto	1.11		1.65		1.06		1.50		2.00		1.50	
	Taxi	1.40		1.40		1.40		1.40		2.00		1.50	
Linked Trips (1)		0%	0%	40%	25%	0%	0%	0%	0%	15%	15%	0%	0%
Temporal Distribution		(1)		(1)		(1)		(7)		(5)		(6)	
	AM	10.0%		3.0%		12.0%		6.1%		1.0%		4.0%	
	MD	5.0%		19.0%		15.0%		9.9%		8.7%		11.0%	
	PM	11.0%		10.0%		14.0%		8.1%		10.4%		12.0%	
	Sat MD	8.0%		10.0%		17.0%		11.8%		6.0%		11.0%	
Truck Temporal Distribution		(1)		(1)		(1)		(4)		(5)		(1)	
	AM	12.0%		8.0%		10.0%		7.7%		9.7%		10.0%	
	MD	9.0%		11.0%		11.0%		11.0%		7.6%		11.0%	
	PM	2.0%		2.0%		2.0%		1.0%		1.0%		2.0%	
	Sat MD	9.0%		11.0%		11.0%		0.0%		7.6%		11.0%	
Directional Distribution		**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
		(3)		(3)		(3)		(4)		(5)		(6)	
	AM	16.0%	84.0%	50.0%	50.0%	93.0%	7.0%	66.0%	34.0%	50.0%	50.0%	89.0%	11.0%
	MD	59.0%	41.0%	50.0%	50.0%	46.0%	54.0%	58.0%	42.0%	50.0%	50.0%	51.0%	49.0%
	PM	75.0%	25.0%	50.0%	50.0%	3.0%	97.0%	34.0%	66.0%	50.0%	50.0%	48.0%	52.0%
	Sat MD	59.0%	41.0%	50.0%	50.0%	46.0%	54.0%	47.0%	53.0%	50.0%	50.0%	51.0%	49.0%
Truck Directional Distribution		(1)		(1)		(1)		(1)		(1)		(1)	
	AM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Sat MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes

(1) 2014 CEQR Technical Manual. Table 16-2. For the local retail land use, a 40% linked trip credit was applied to auto trips only and a 25% linked trip credit was applied to remaining trips.

(2) Residential modal split based on 2011-2015 American Community Survey 5-year estimates, Table B08006: Means of Transportation to Work for the average of Census Tracts 3/7/9/11/21 (Richmond County). Office modal split based on CTPP 2006-2010 Five-year estimates for Census Tract 11 (Richmond County). Ferry trips were added to the bus trips. Weekday MD and Saturday modal splits were adjusted to increase the walk trips to account for local midday trips. Taxi vehicle occupancy based on the New Stapleton Waterfront Development Plan Tech Memo.

(3) New Stapleton Waterfront Development Plan Tech Memo, Tables O-14 and O-15.

(4) Flushing Commons EIS, Table 14-16 (YMCA).

(5) Staten Island Lighthouse Point EAS, Table I-14. Ferry trips were added to the bus trips.

(6) NYCDOT. Assumed Saturday modal split, vehicle occupancy, temporal distribution, and directional distribution to be the same as Weekday MD. Non-auto mode split based on Sam Schwartz assumptions of 5% walk, and proportional split to bus and railroad/SIR based on Residential Journey to Work modal split.

(7) ITE Trip Generation Manual, 9th Edition, Volume 2: Recreational Community Center (Land Use 495).

Table 14-8: Travel Demand Factors
City Disposition Sites - 54 Central Avenue/55 Stuyvesant Place Sites

	Land Use:	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office Building	
Daily Person Trip Generation		(1)		(1)		(1)		(7)		(5)		(1)	
	Weekday	8.075		205		18.0		50.7		203.44		127	
	Saturday	9.6		240		3.9		13.7		253.4		127	
	Unit	per dwelling unit		per room		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf	
Daily Truck Trip Generation		(1)		(1)		(1)		(4)		(5)		(1)	
	Weekday	0.06		0.35		0.32		0.04		0.79		0.32	
	Saturday	0.02		0.04		0.01		0.00		0.79		0.01	
	Unit	per dwelling unit		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf		per 1,000 gsf	
Modal Split		AM/PM	MD/Sat	Weekday	Saturday	AM/PM	MD/Sat	Weekday	Saturday	AM/PM/Sat	MD	Weekday	Saturday
		(2)		(3)		(2)		(4)		(5)		(6)	
	Auto	35.4%	35.4%	9.0%	9.0%	67.5%	56.4%	25.0%	25.0%	25.0%	15.0%	44.0%	44.0%
	Taxi	0.5%	0.5%	2.0%	2.0%	0.6%	0.5%	0.0%	0.0%	3.0%	3.0%	2.0%	2.0%
	Bus	22.2%	22.2%	7.0%	7.0%	13.7%	3.6%	49.0%	49.0%	5.0%	5.0%	31.7%	31.7%
	Railroad	12.1%	12.1%	7.0%	7.0%	9.2%	8.5%	1.0%	1.0%	5.0%	5.0%	17.3%	17.3%
	Walk/Bike	29.8%	29.8%	75.0%	75.0%	9.1%	31.0%	25.0%	25.0%	62.0%	72.0%	5.0%	5.0%
		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Vehicle Occupancy		(2, 3)		(3)		(2, 3)		(4)		(5)		(6)	
	Auto	1.12		1.65		1.08		1.50		2.00		1.50	
	Taxi	1.40		1.40		1.40		1.40		2.00		1.50	
Linked Trips (1)		0%	0%	40%	25%	0%	0%	0%	0%	15%	15%	0%	0%
Temporal Distribution		(1)		(1)		(1)		(7)		(5)		(6)	
	AM	10.0%		3.0%		12.0%		6.1%		1.0%		4.0%	
	MD	5.0%		19.0%		15.0%		9.9%		8.7%		11.0%	
	PM	11.0%		10.0%		14.0%		8.1%		10.4%		12.0%	
	Sat MD	8.0%		10.0%		17.0%		11.8%		6.0%		11.0%	
Truck Temporal Distribution		(1)		(1)		(1)		(4)		(5)		(1)	
	AM	12.0%		8.0%		10.0%		7.7%		9.7%		10.0%	
	MD	9.0%		11.0%		11.0%		11.0%		7.6%		11.0%	
	PM	2.0%		2.0%		2.0%		1.0%		1.0%		2.0%	
	Sat MD	9.0%		11.0%		11.0%		0.0%		7.6%		11.0%	
Directional Distribution		In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
		(3)		(3)		(3)		(4)		(5)		(6)	
	AM	16.0%	84.0%	50.0%	50.0%	93.0%	7.0%	66.0%	34.0%	50.0%	50.0%	89.0%	11.0%
	MD	59.0%	41.0%	50.0%	50.0%	46.0%	54.0%	58.0%	42.0%	50.0%	50.0%	51.0%	49.0%
	PM	75.0%	25.0%	50.0%	50.0%	3.0%	97.0%	34.0%	66.0%	50.0%	50.0%	48.0%	52.0%
	Sat MD	59.0%	41.0%	50.0%	50.0%	46.0%	54.0%	47.0%	53.0%	50.0%	50.0%	51.0%	49.0%
Truck Directional Distribution		(1)		(1)		(1)		(1)		(1)		(1)	
	AM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	PM	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
	Sat MD	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes
(1) 2014 CEQR Technical Manual. Table 16-2. For the local retail land use, a 40% linked trip credit was applied to auto trips only and a 25% linked trip credit was applied to remaining trips.
(2) Residential modal split based on 2011-2015 American Community Survey 5-year estimates, Table B08006: Means of Transportation to Work for the average of Census Tracts 3/7/9/11/21 (Richmond County). Office modal split based on CTPP 2006-2010 Five-year estimates for Census Tracts 3/7 (Richmond County). Ferry trips were added to the walk/bike trips. Weekday MD and Saturday modal splits were adjusted to increase the walk trips to account for local midday trips. Taxi vehicle occupancy based on the New Stapleton Waterfront Development Plan Tech Memo.
(3) New Stapleton Waterfront Development Plan Tech Memo, Tables O-14 and O-15.
(4) Flushing Commons EIS, Table 14-16 (YMCA).
(5) Staten Island Lighthouse Point EAS, Table I-14. Ferry trips were added to the walk/bike trips.
(6) NYCDOT. Assumed Saturday modal split, vehicle occupancy, temporal distribution, and directional distribution to be the same as Weekday MD. Non-auto mode split based on Sam Schwartz assumptions of 5% walk, and proportional split to bus and railroad/SIR based on Residential Journey to Work modal split.
(7) ITE Trip Generation Manual, 9th Edition, Volume 2: Recreational Community Center (Land Use 495).

RESTAURANT

The Proposed Actions would consist of 51,415 sf of restaurant space. The daily trip generation rates, temporal distribution, modal split, auto vehicle occupancy, and directional distribution were obtained from the *Staten Island Lighthouse Point EAS* (2013), Table I-14, for the restaurant land use.

RESIDENTIAL (MARKET RATE AND AFFORDABLE)

The residential component of the Proposed Actions would consist of 2,557 residential dwelling units. The daily trip generation rates, temporal distribution, daily truck trip generation rates, and truck temporal distribution were obtained from the *CEQR Technical Manual*, Table 16-2. Modal split and auto vehicle occupancy for all Projected Development sites during the Weekday AM and PM peak hours were calculated from the 2015 American Community Survey (ACS) 5-year estimates: Sex of Workers by Means of Transportation to Work based on the average of Census Tracts 3, 7, 9, 11, and 21. Ferry trips were split proportionally to the bus, SIR, and walk-only trips. Weekday MD and Saturday MD modal splits were adjusted to increase walk trip percentages to account for local midday trips, based on similar assumptions from the *New Stapleton Waterfront Development Plan Tech Memo*.

LINKED TRIPS

Linked trips are those that have multiple destinations within the Study Area and are typical for multi-use sites. A linked trip credit was applied to the local retail land use based on the mode of travel; a 40% linked trip credit was applied for auto trips, and a 25% linked trip credit was applied for all other modes. A linked trip credit of 15% was also applied to the restaurant land use.

TRAVEL DEMAND PROJECTION SUMMARY

Tables 14-9 to 14-12 summarize the travel demand in the No-Action Condition, and Tables 14-13 to 14-16 summarize the incremental travel demand estimates for the With-Action Condition; the difference in the travel demand projections between the No-Action and the With-Action Conditions. Specifically, the trip estimates summarized in Tables 14-9 to 14-12 correspond to the "No-Action" column presented in Table 14-1 and is the layer of trips that the No-Action Condition would add to the Existing Condition. Likewise, the trip estimates summarized in Tables 14-13 to 14-16 correspond to the incremental uses in the "With-Action" column presented in Table 14-1 and is the layer of trips that the With-Action Condition would add compared to the No-Action Condition. Since the numbers of peak hour trips would exceed the *CEQR Technical Manual* analysis thresholds for vehicular traffic, transit and pedestrians, a Level 2 screening assessment was undertaken to identify specific locations where additional detailed analyses may be warranted.

Table 14-17 summarizes the overall trip generation estimates for the With-Action Condition increment.

Table 14-9: No-Action Project Increment
Weekday AM Peak Hour Trip Generation Estimates

Auto	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	2	14	14	65	5	9	5	2	2	0	0	**90**	**28**	**118**
Canal Street	0	2	5	5	12	1	3	2	0	0	0	0	**20**	**10**	**30**
55 Stuy	0	0	0	0	47	4	0	0	0	0	0	0	**47**	**4**	**51**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	4	19	19	124	10	12	7	2	2	0	0	**157**	**42**	**199**

Taxi	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	10	10	0	0	0	0	2	2	0	0	**12**	**12**	**24**
Canal Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	10	10	0	0	0	0	2	2	0	0	**12**	**12**	**24**

Truck	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	1	1	1	1	0	0	1	1	0	0	**3**	**3**	**6**
Canal Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
55 Stuy	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	1	1	2	2	0	0	1	1	0	0	**4**	**4**	**8**

SIR	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	25	25	4	0	1	0	1	1	0	0	**31**	**26**	**58**
Canal Street	0	0	8	8	1	0	0	0	0	0	0	0	**9**	**8**	**18**
55 Stuy	0	0	0	0	7	1	0	0	0	0	0	0	**7**	**1**	**8**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	34	34	12	1	1	0	1	1	0	0	**48**	**36**	**84**

Bus	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	2	25	25	21	1	27	14	1	1	0	0	**74**	**43**	**118**
Canal Street	0	2	8	8	4	0	10	5	0	0	0	0	**22**	**15**	**38**
55 Stuy	0	0	0	0	10	1	0	0	0	0	0	0	**10**	**1**	**11**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	4	34	34	35	2	37	19	1	1	0	0	**107**	**60**	**167**

Walk	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	454	454	18	2	28	14	20	20	0	0	**520**	**490**	**1010**
Canal Street	0	0	91	91	2	0	5	3	0	0	0	0	**98**	**94**	**191**
55 Stuy	0	0	0	0	7	1	0	0	0	0	0	0	**7**	**1**	**8**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	545	545	27	3	33	17	20	20	0	0	**625**	**585**	**1209**

Table 14-10: No-Action Project Increment
Weekday MD Peak Hour Trip Generation Estimates

Auto	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	100	100	34	41	13	10	11	11	0	0	**158**	**162**	**320**
Canal Street	0	0	34	34	7	7	5	3	0	0	0	0	**46**	**44**	**90**
55 Stuy	0	0	0	0	24	29	0	0	0	0	0	0	**24**	**29**	**53**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	134	134	65	77	18	13	11	11	0	0	**228**	**235**	**463**

Taxi	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	66	66	0	0	0	0	4	4	0	0	**70**	**70**	**140**
Canal Street	0	0	22	22	0	0	0	0	0	0	0	0	**22**	**22**	**44**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	88	88	0	0	0	0	4	4	0	0	**92**	**92**	**184**

Truck	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	2	2	1	1	0	0	1	1	0	0	**4**	**4**	**8**
Canal Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
55 Stuy	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	2	2	2	2	0	0	1	1	0	0	**5**	**5**	**10**

SIR	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	161	161	5	6	1	1	9	9	0	0	**176**	**177**	**353**
Canal Street	0	0	54	54	1	1	0	0	0	0	0	0	**55**	**55**	**109**
55 Stuy	0	0	0	0	4	5	0	0	0	0	0	0	**4**	**5**	**9**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	215	215	10	12	1	1	9	9	0	0	**235**	**237**	**471**

Bus	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	161	161	2	3	40	29	9	9	0	0	**212**	**202**	**414**
Canal Street	0	0	54	54	0	0	14	10	0	0	0	0	**68**	**64**	**131**
55 Stuy	0	0	0	0	2	2	0	0	0	0	0	0	**2**	**2**	**4**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	215	215	4	5	54	39	9	9	0	0	**282**	**268**	**549**

Walk	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	2876	2876	40	48	40	30	206	206	0	0	**3162**	**3160**	**6321**
Canal Street	0	0	574	574	4	4	7	5	0	0	0	0	**585**	**583**	**1168**
55 Stuy	0	0	0	0	15	17	0	0	0	0	0	0	**15**	**17**	**32**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	3450	3450	59	69	47	35	206	206	0	0	**3762**	**3760**	**7522**

Table 14-11: No-Action Project Increment
Weekday PM Peak Hour Trip Generation Estimates

Auto	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	2	0	54	54	3	80	7	13	22	22	0	0	**88**	**169**	**257**
Canal Street	2	0	18	18	0	15	3	5	0	0	0	0	**23**	**38**	**61**
55 Stuy	0	0	0	0	2	57	0	0	0	0	0	0	**2**	**57**	**59**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	4	0	72	72	5	152	10	18	22	22	0	0	**113**	**264**	**377**

Taxi	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	34	34	0	0	0	0	6	6	0	0	**40**	**40**	**80**
Canal Street	0	0	12	12	0	0	0	0	0	0	0	0	**12**	**12**	**24**
55 Stuy	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	46	46	1	1	0	0	6	6	0	0	**53**	**53**	**106**

Truck	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Canal Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**

SIR	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	85	85	0	5	0	1	11	11	0	0	**96**	**102**	**198**
Canal Street	1	0	28	28	0	1	0	0	0	0	0	0	**29**	**29**	**58**
55 Stuy	0	0	0	0	0	8	0	0	0	0	0	0	**0**	**8**	**8**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	1	0	113	113	0	14	0	1	11	11	0	0	**125**	**139**	**264**

Bus	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	2	0	85	85	1	25	19	37	11	11	0	0	**118**	**158**	**276**
Canal Street	2	0	28	28	0	5	7	14	0	0	0	0	**37**	**47**	**84**
55 Stuy	0	0	0	0	0	13	0	0	0	0	0	0	**0**	**13**	**13**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	4	0	113	113	1	43	26	51	11	11	0	0	**155**	**218**	**373**

Walk	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	1513	1513	0	22	20	38	212	212	0	0	**1745**	**1785**	**3531**
Canal Street	0	0	302	302	0	3	4	7	0	0	0	0	**306**	**312**	**618**
55 Stuy	0	0	0	0	0	8	0	0	0	0	0	0	**0**	**8**	**8**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	1816	1816	0	33	24	45	212	212	0	0	**2052**	**2106**	**4157**

Table 14-12: No-Action Project Increment
Saturday MD Peak Hour Trip Generation Estimates

Auto	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	62	62	8	9	3	4	16	16	0	0	**89**	**91**	**180**
Canal Street	0	0	20	20	2	3	1	1	0	0	0	0	**23**	**24**	**47**
55 Stuy	0	0	0	0	6	7	0	0	0	0	0	0	**6**	**7**	**13**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	82	82	16	19	4	5	16	16	0	0	**118**	**122**	**240**

Taxi	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	38	38	0	0	0	0	4	4	0	0	**42**	**42**	**84**
Canal Street	0	0	12	12	0	0	0	0	0	0	0	0	**12**	**12**	**24**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	50	50	0	0	0	0	4	4	0	0	**54**	**54**	**108**

Truck	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	0	0	0	0	0	0	1	1	0	0	**1**	**1**	**2**
Canal Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	0	0	0	0	0	0	1	1	0	0	**1**	**1**	**2**

SIR	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	99	99	1	2	0	0	8	8	0	0	**108**	**109**	**217**
Canal Street	0	0	33	33	0	0	0	0	0	0	0	0	**33**	**33**	**66**
55 Stuy	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	132	132	2	3	0	0	8	8	0	0	**142**	**143**	**286**

Bus	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	99	99	1	1	10	12	8	8	0	0	**118**	**120**	**238**
Canal Street	1	0	33	33	0	0	4	4	0	0	0	0	**38**	**37**	**75**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	1	0	132	132	1	1	14	16	8	8	0	0	**156**	**157**	**314**

Walk	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	1772	1772	10	12	10	12	152	152	0	0	**1944**	**1948**	**3892**
Canal Street	0	0	354	354	1	1	2	2	0	0	0	0	**357**	**357**	**714**
55 Stuy	0	0	0	0	4	4	0	0	0	0	0	0	**4**	**4**	**8**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	2126	2126	15	17	12	14	152	152	0	0	**2305**	**2309**	**4613**

Table 14-13: With-Action Project Increment
Weekday AM Peak Hour Trip Generation Estimates

Auto	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	58	301	-2	-2	181	14	9	5	8	8	27	3	**281**	**329**	**610**
Canal Street	11	45	-2	-2	-12	-1	0	-1	0	0	0	0	**-3**	**41**	**38**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	106	8	0	0	0	0	0	0	**106**	**8**	**114**
Jersey	5	23	4	4	0	0	0	0	0	0	0	0	**9**	**27**	**36**
Stapleton A	12	61	4	4	0	0	0	0	0	0	0	0	**16**	**65**	**81**
Stapleton B1	11	59	0	0	0	0	0	0	0	0	0	0	**11**	**59**	**70**
Total	97	489	4	4	275	21	9	4	8	8	27	3	**420**	**529**	**949**

Taxi	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	5	5	-6	-6	0	0	0	0	0	0	1	1	**0**	**0**	**0**
Canal Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**
Jersey	0	0	2	2	0	0	0	0	0	0	0	0	**2**	**2**	**4**
Stapleton A	1	1	2	2	0	0	0	0	0	0	0	0	**3**	**3**	**6**
Stapleton B1	1	1	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**
Total	7	7	-2	-2	1	1	0	0	0	0	1	1	**7**	**7**	**14**

Truck	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	6	6	-1	-1	2	2	0	0	0	0	0	0	**7**	**7**	**14**
Canal Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	1	1	1	1	0	0	0	0	0	0	0	0	**2**	**2**	**4**
Stapleton B1	1	1	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**
Total	8	8	0	0	3	3	0	0	0	0	0	0	**11**	**11**	**22**

SIR	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	38	199	-7	-7	13	1	-1	0	1	1	16	2	**60**	**196**	**256**
Canal Street	6	30	-2	-2	-1	0	0	0	0	0	0	0	**3**	**28**	**30**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	16	1	0	0	0	0	0	0	**16**	**1**	**17**
Jersey	2	9	6	6	0	0	0	0	0	0	0	0	**8**	**15**	**22**
Stapleton A	8	40	7	7	0	0	0	0	0	0	0	0	**15**	**47**	**62**
Stapleton B1	7	38	0	0	0	0	0	0	0	0	0	0	**7**	**38**	**45**
Total	61	316	3	3	28	2	-1	0	1	1	16	2	**108**	**324**	**433**

Bus	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	69	359	-7	-7	56	5	28	14	1	1	29	4	**176**	**376**	**552**
Canal Street	11	53	-2	-2	-4	0	-2	-1	0	0	0	0	**3**	**50**	**52**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	23	2	0	0	0	0	0	0	**23**	**2**	**25**
Jersey	6	29	6	6	0	0	0	0	0	0	0	0	**12**	**35**	**46**
Stapleton A	14	73	7	7	0	0	0	0	0	0	0	0	**21**	**80**	**101**
Stapleton B1	13	70	0	0	0	0	0	0	0	0	0	0	**13**	**70**	**83**
Total	113	584	3	3	75	7	26	13	1	1	29	4	**247**	**612**	**860**

Walk	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	46	240	-75	-75	52	4	28	16	50	50	10	2	**111**	**237**	**348**
Canal Street	3	20	-27	-27	-2	0	-1	-1	0	0	0	0	**-27**	**-8**	**-34**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	16	1	0	0	0	0	0	0	**16**	**1**	**17**
Jersey	2	9	61	61	0	0	0	0	0	0	0	0	**63**	**70**	**132**
Stapleton A	5	26	74	74	0	0	0	0	0	0	0	0	**79**	**100**	**180**
Stapleton B1	5	25	0	0	0	0	0	0	0	0	0	0	**5**	**25**	**30**
Total	61	320	34	34	66	5	27	15	50	50	10	2	**248**	**426**	**673**

Table 14-14: With-Action Project Increment
Weekday MD Peak Hour Trip Generation Estimates

Auto	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	68	50	-24	-24	95	110	14	10	32	32	42	40	**227**	**218**	**445**
Canal Street	13	6	-11	-11	-7	-7	-1	0	0	0	0	0	**-6**	**-12**	**-18**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	55	65	0	0	0	0	0	0	**55**	**65**	**120**
Jersey	5	4	22	22	0	0	0	0	0	0	0	0	**27**	**26**	**53**
Stapleton A	13	10	27	27	0	0	0	0	0	0	0	0	**40**	**37**	**77**
Stapleton B1	13	9	0	0	0	0	0	0	0	0	0	0	**13**	**9**	**22**
Total	112	79	14	14	143	168	13	10	32	32	42	40	**356**	**343**	**699**

Taxi	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	-18	-18	2	2	0	0	18	18	4	4	**6**	**6**	**12**
Canal Street	0	0	-8	-8	0	0	0	0	0	0	0	0	**-8**	**-8**	**-16**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	2	2	0	0	0	0	0	0	**2**	**2**	**4**
Jersey	0	0	14	14	0	0	0	0	0	0	0	0	**14**	**14**	**28**
Stapleton A	0	0	18	18	0	0	0	0	0	0	0	0	**18**	**18**	**36**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	6	6	4	4	0	0	18	18	4	4	**32**	**32**	**64**

Truck	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	3	3	-2	-2	2	2	0	0	0	0	0	0	**3**	**3**	**6**
Canal Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**
Jersey	0	0	1	1	0	0	0	0	0	0	0	0	**1**	**1**	**2**
Stapleton A	1	1	1	1	0	0	0	0	0	0	0	0	**2**	**2**	**4**
Stapleton B1	1	1	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**
Total	5	5	0	0	3	3	0	0	0	0	0	0	**8**	**8**	**16**

SIR	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	69	47	-43	-43	16	18	0	-1	23	23	25	24	**90**	**68**	**158**
Canal Street	11	7	-16	-16	-1	-1	0	0	0	0	0	0	**-6**	**-10**	**-16**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	9	11	0	0	0	0	0	0	**9**	**11**	**20**
Jersey	3	2	36	36	0	0	0	0	0	0	0	0	**39**	**38**	**77**
Stapleton A	14	10	44	44	0	0	0	0	0	0	0	0	**58**	**54**	**112**
Stapleton B1	13	9	0	0	0	0	0	0	0	0	0	0	**13**	**9**	**22**
Total	110	75	21	21	24	28	0	-1	23	23	25	24	**203**	**170**	**373**

Bus	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	127	90	-43	-43	6	7	41	30	23	23	45	43	**199**	**150**	**349**
Canal Street	20	16	-16	-16	0	0	-2	-1	0	0	0	0	**2**	**-1**	**1**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	4	4	0	0	0	0	0	0	**4**	**4**	**8**
Jersey	10	7	36	36	0	0	0	0	0	0	0	0	**46**	**43**	**89**
Stapleton A	26	18	44	44	0	0	0	0	0	0	0	0	**70**	**62**	**132**
Stapleton B1	25	17	0	0	0	0	0	0	0	0	0	0	**25**	**17**	**42**
Total	208	148	21	21	10	11	39	29	23	23	45	43	**346**	**275**	**621**

Walk	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	174	120	-473	-473	110	128	44	32	454	454	14	14	**323**	**275**	**597**
Canal Street	16	10	-169	-169	-4	-4	-1	-1	0	0	0	0	**-158**	**-164**	**-322**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	33	39	0	0	0	0	0	0	**33**	**39**	**72**
Jersey	6	5	383	383	0	0	0	0	0	0	0	0	**389**	**388**	**778**
Stapleton A	19	13	471	471	0	0	0	0	0	0	0	0	**490**	**484**	**974**
Stapleton B1	18	13	0	0	0	0	0	0	0	0	0	0	**18**	**13**	**31**
Total	233	161	212	212	139	163	43	31	454	454	14	14	**1095**	**1035**	**2130**

Table 14-15: With-Action Project Increment
Weekday PM Peak Hour Trip Generation Estimates

Auto	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	296	101	-15	-15	5	220	7	13	61	61	43	47	**397**	**427**	**824**
Canal Street	44	17	-4	-4	0	-15	-1	-1	0	0	0	0	**39**	**-3**	**36**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	4	129	0	0	0	0	0	0	**4**	**129**	**133**
Jersey	23	8	12	12	0	0	0	0	0	0	0	0	**35**	**20**	**55**
Stapleton A	60	20	14	14	0	0	0	0	0	0	0	0	**74**	**34**	**108**
Stapleton B1	58	19	0	0	0	0	0	0	0	0	0	0	**58**	**19**	**77**
Total	481	165	7	7	9	334	6	12	61	61	43	47	**607**	**626**	**1233**

Taxi	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	5	5	-10	-10	0	0	0	0	18	18	4	4	**17**	**17**	**34**
Canal Street	0	0	-6	-6	0	0	0	0	0	0	0	0	**-6**	**-6**	**-12**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**
Jersey	0	0	8	8	0	0	0	0	0	0	0	0	**8**	**8**	**16**
Stapleton A	1	1	10	10	0	0	0	0	0	0	0	0	**11**	**11**	**22**
Stapleton B1	1	1	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**
Total	7	7	2	2	1	1	0	0	18	18	4	4	**32**	**32**	**64**

Truck	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**
Canal Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**

SIR	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	195	66	-23	-23	1	15	0	0	28	28	25	27	**226**	**113**	**340**
Canal Street	28	9	-8	-8	0	-1	0	0	0	0	0	0	**20**	**0**	**19**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	1	19	0	0	0	0	0	0	**1**	**19**	**20**
Jersey	9	3	19	19	0	0	0	0	0	0	0	0	**28**	**22**	**50**
Stapleton A	39	13	23	23	0	0	0	0	0	0	0	0	**62**	**36**	**98**
Stapleton B1	38	13	0	0	0	0	0	0	0	0	0	0	**38**	**13**	**51**
Total	309	104	11	11	2	33	0	0	28	28	25	27	**375**	**203**	**578**

Bus	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	354	119	-23	-23	2	69	19	38	28	28	46	50	**426**	**281**	**708**
Canal Street	53	19	-8	-8	0	-5	-1	-3	0	0	0	0	**44**	**3**	**46**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	1	28	0	0	0	0	0	0	**1**	**28**	**29**
Jersey	29	10	19	19	0	0	0	0	0	0	0	0	**48**	**29**	**77**
Stapleton A	71	24	23	23	0	0	0	0	0	0	0	0	**94**	**47**	**141**
Stapleton B1	69	23	0	0	0	0	0	0	0	0	0	0	**69**	**23**	**92**
Total	576	195	11	11	3	92	18	35	28	28	46	50	**682**	**411**	**1093**

Walk	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	234	78	-249	-249	2	66	20	38	470	470	14	16	**491**	**419**	**910**
Canal Street	20	6	-89	-89	0	-3	-1	-1	0	0	0	0	**-70**	**-87**	**-157**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	1	19	0	0	0	0	0	0	**1**	**19**	**20**
Jersey	9	3	202	202	0	0	0	0	0	0	0	0	**211**	**205**	**416**
Stapleton A	26	9	248	248	0	0	0	0	0	0	0	0	**274**	**257**	**531**
Stapleton B1	25	8	0	0	0	0	0	0	0	0	0	0	**25**	**8**	**33**
Total	314	104	112	112	3	82	19	37	470	470	14	16	**932**	**821**	**1752**

Table 14-16: With-Action Project Increment
Saturday MD Peak Hour Trip Generation Estimates

Auto	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	128	89	-17	-17	23	28	4	3	43	43	42	40	**223**	**186**	**409**
Canal Street	20	16	-5	-5	-2	-3	0	0	0	0	0	0	**13**	**8**	**21**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	14	16	0	0	0	0	0	0	**14**	**16**	**30**
Jersey	10	7	14	14	0	0	0	0	0	0	0	0	**24**	**21**	**45**
Stapleton A	26	18	17	17	0	0	0	0	0	0	0	0	**43**	**35**	**78**
Stapleton B1	25	17	0	0	0	0	0	0	0	0	0	0	**25**	**17**	**42**
Total	209	147	9	9	35	41	4	3	43	43	42	40	**342**	**283**	**625**

Taxi	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	4	4	-10	-10	0	0	0	0	16	16	4	4	**14**	**14**	**28**
Canal Street	0	0	-4	-4	0	0	0	0	0	0	0	0	**-4**	**-4**	**-8**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	10	10	0	0	0	0	0	0	0	0	**10**	**10**	**20**
Stapleton A	2	2	12	12	0	0	0	0	0	0	0	0	**14**	**14**	**28**
Stapleton B1	1	1	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**
Total	7	7	8	8	0	0	0	0	16	16	4	4	**35**	**35**	**70**

Truck	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Canal Street	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Jersey	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton A	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Stapleton B1	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
Total	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**

SIR	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	133	94	-26	-26	4	4	0	0	20	20	25	24	**156**	**116**	**271**
Canal Street	20	14	-10	-10	0	0	0	0	0	0	0	0	**10**	**4**	**15**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	2	3	0	0	0	0	0	0	**2**	**3**	**5**
Jersey	6	4	22	22	0	0	0	0	0	0	0	0	**28**	**26**	**54**
Stapleton A	26	18	27	27	0	0	0	0	0	0	0	0	**53**	**45**	**98**
Stapleton B1	26	18	0	0	0	0	0	0	0	0	0	0	**26**	**18**	**44**
Total	211	148	13	13	6	7	0	0	20	20	25	24	**275**	**212**	**487**

Bus	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	241	169	-26	-26	1	1	11	10	20	20	45	43	**292**	**217**	**508**
Canal Street	37	26	-10	-10	0	0	-1	-1	0	0	0	0	**26**	**15**	**42**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	1	1	0	0	0	0	0	0	**1**	**1**	**2**
Jersey	19	14	22	22	0	0	0	0	0	0	0	0	**41**	**36**	**77**
Stapleton A	49	34	27	27	0	0	0	0	0	0	0	0	**76**	**61**	**137**
Stapleton B1	47	33	0	0	0	0	0	0	0	0	0	0	**47**	**33**	**80**
Total	393	276	13	13	2	2	10	9	20	20	45	43	**483**	**363**	**846**

Walk	Residential		Local Retail		Office		Community Facility		Restaurant		Medical Office		Total		Total
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
Bay Street	330	230	-292	-292	28	32	12	10	342	342	14	14	**434**	**336**	**771**
Canal Street	27	20	-104	-104	-1	-1	0	0	0	0	0	0	**-78**	**-85**	**-163**
55 Stuy	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0**	**0**
54 Central	0	0	0	0	8	9	0	0	0	0	0	0	**8**	**9**	**17**
Jersey	12	9	236	236	0	0	0	0	0	0	0	0	**248**	**245**	**494**
Stapleton A	36	25	290	290	0	0	0	0	0	0	0	0	**326**	**315**	**642**
Stapleton B1	35	24	0	0	0	0	0	0	0	0	0	0	**35**	**24**	**59**
Total	440	308	131	131	35	40	12	10	342	342	14	14	**974**	**845**	**1819**

Table 14-17: Summary of Net Incremental Trips Generated Under the RWCDS

Peak Hour	Vehicle (Auto/Taxi/Truck)	SIR	Bus	Bike/Walk Only
Weekday AM	985	433	860	673
Weekday MD	779	373	621	2,130
Weekday PM	1,299	578	1,093	1,752
Saturday MD	695	487	846	1,819

E. LEVEL 2 SCREENING ASSESSMENT

A Level 2 screening assessment involves the assignment of trips generated by the Proposed Actions 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.

If the results of this analysis show that the Proposed Actions 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 SIR passengers per 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.

VEHICULAR TRAFFIC

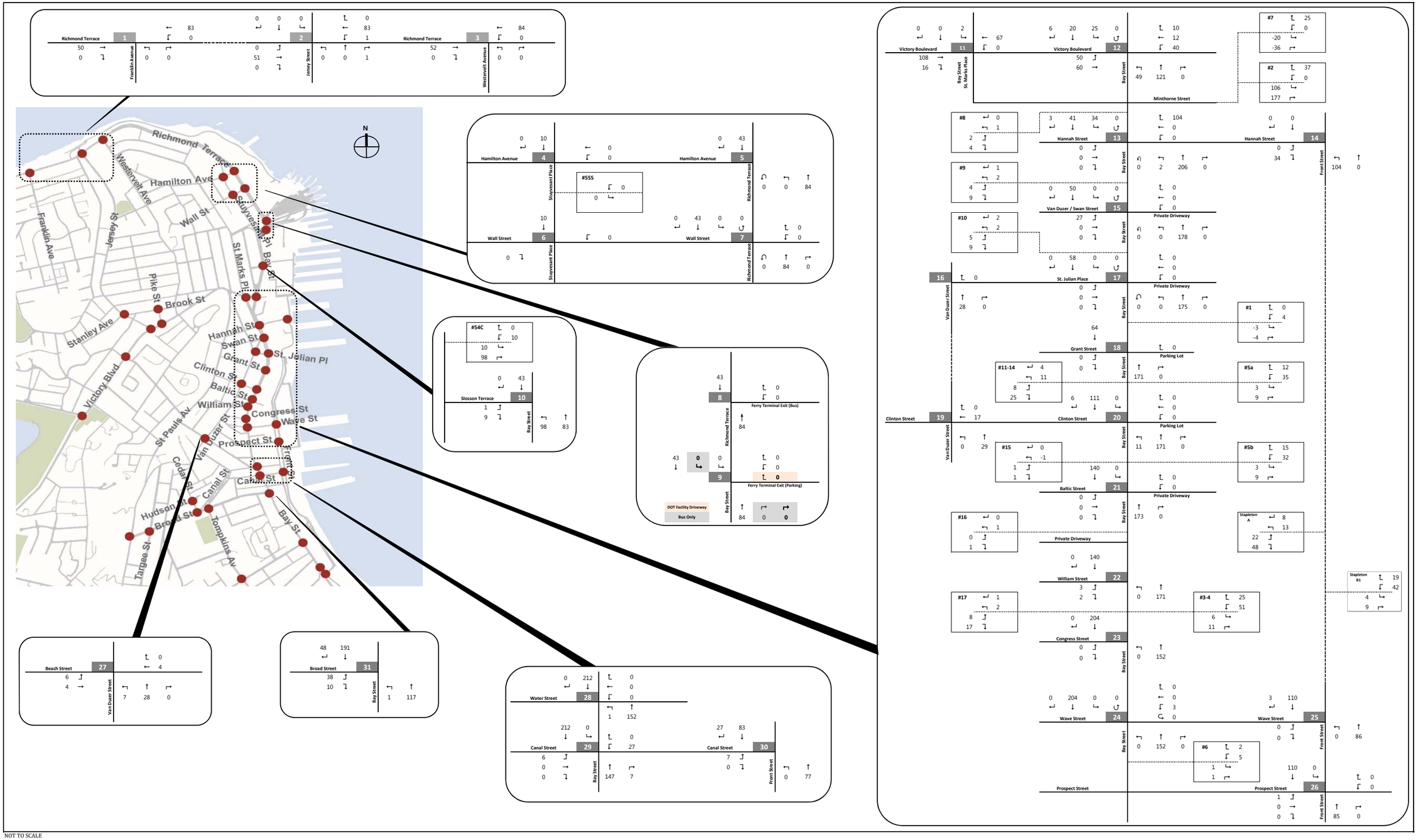
According to the criteria specified in the *CEQR Technical Manual*, traffic analyses are generally required at intersections where more than 50 new vehicle trips would be generated by a Proposed Actions during an individual peak hour based on the results of the vehicle trip assignment. It was determined that individual intersections exceed this threshold during the following four critical peak hours:

- Weekday AM peak hour: 7:45 AM to 8:45 AM
- Weekday MD peak hour: 2:30 PM to 3:30 PM
- Weekday PM peak hour: 4:45 PM to 5:45 PM
- Saturday MD peak hour: 2:15 PM to 3:15 PM

Detailed intersection analyses were conducted for all four peak hours at 49 study intersections.

Vehicle trip assignments were developed for autos, taxis, and trucks for each Projected Development Site and each land use for the four peak hours. Residential and office vehicle trip assignment assumptions were based on the geographic location of each Projected Development Site relative to major arterials and commuter routes for residents and office workers of the area based on available census data[1]. Local retail, restaurant, community facility, and medical office vehicle trip assignments were based on population density and were assumed to be the same across these four land use categories. Auto trips were assigned to each Projected Development Site and assumed to park on-site or on-street on one of the block faces of each respective Projected Development Site. Pedestrian trips generated by the parked vehicles were added to the pedestrian network. All delivery vehicles were assigned onto the traffic network via NYCDOT's designated truck routes. Details pertaining to vehicle trip assignment are included in the Travel Demand Factors Memorandum (TDF Memo) included in Appendix G. With-Action Condition vehicular project increments for each peak hour are shown on Figures 14-2 to 14-5.

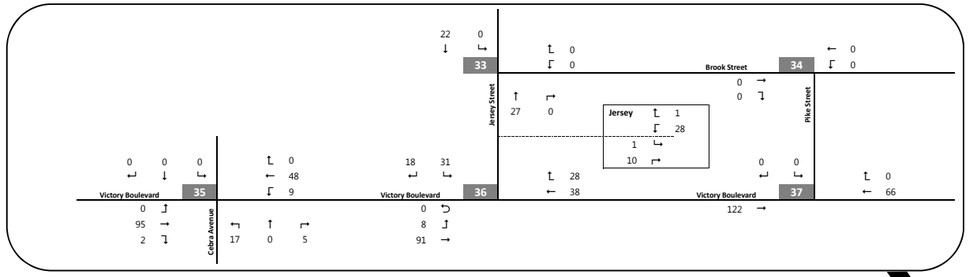
[1]OnTheMap v.6.5. *U.S. Census Bureau, Center for Economic Studies.* 2014 Census Data.



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

Total Proposed Project Increment
Weekday AM Peak Hour
Figure 14-2 A


33
Jersey Street
34
Brook Street
Pike Street
35
Victory Boulevard
Cobra Avenue
36
Victory Boulevard
37
Victory Boulevard
Jersey
1
28
1
10
22
0
0
0
0
0
0
0
27
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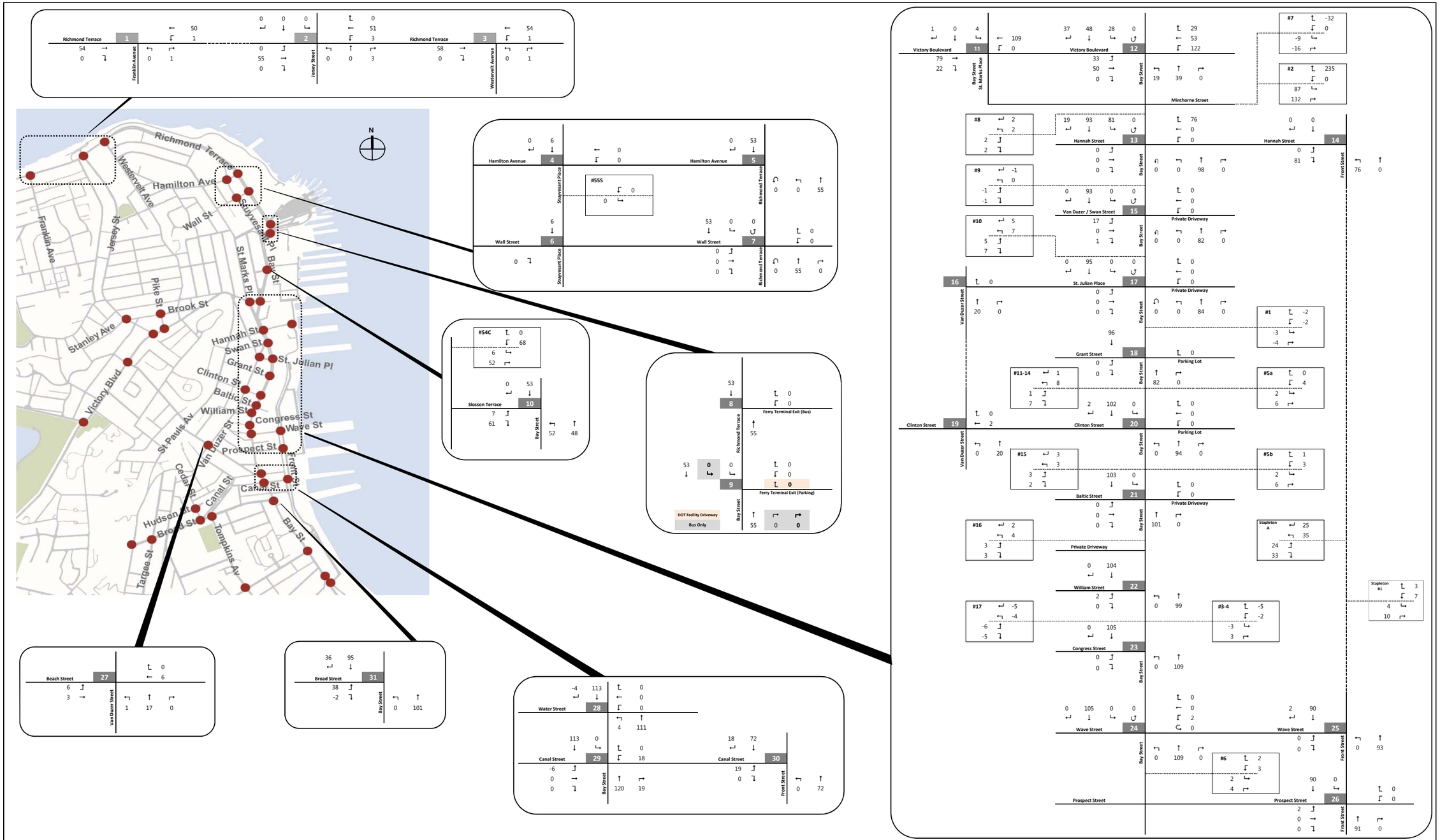
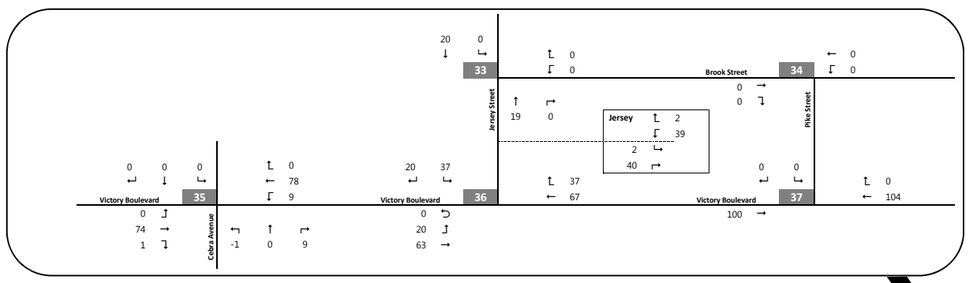
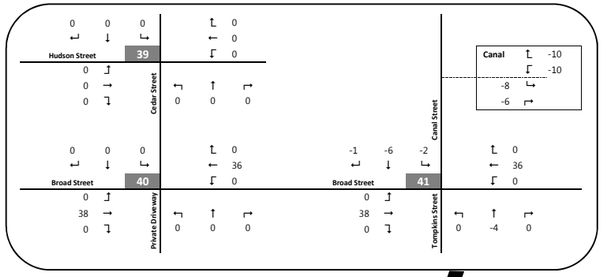


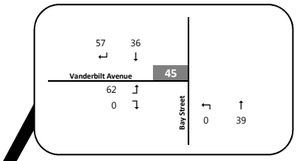
NOT TO SCALE

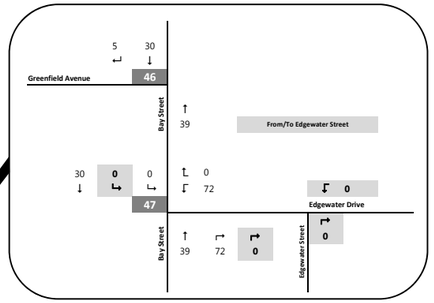
BAY STREET REZONING AND RELATED ACTIONS

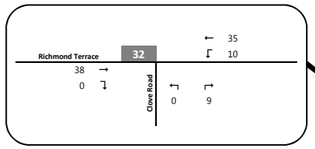
Total Proposed Project Increment
Weekday MD Peak Hour
Figure 14-3 A



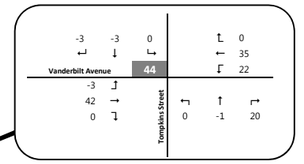


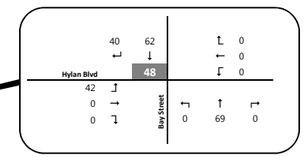




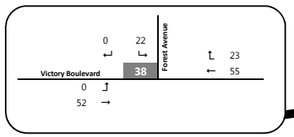


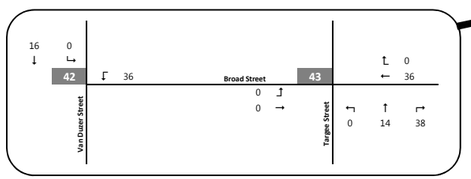








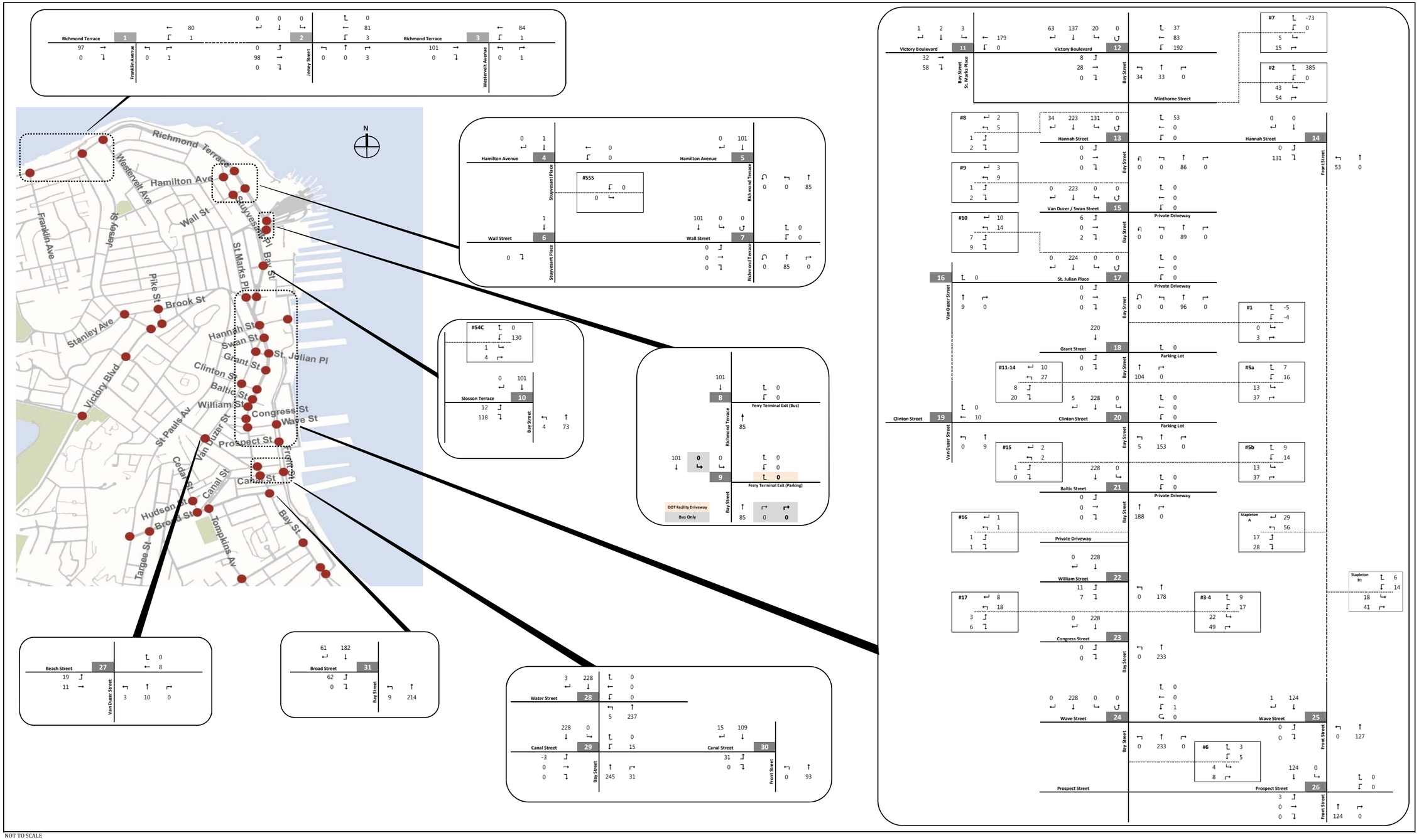




NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

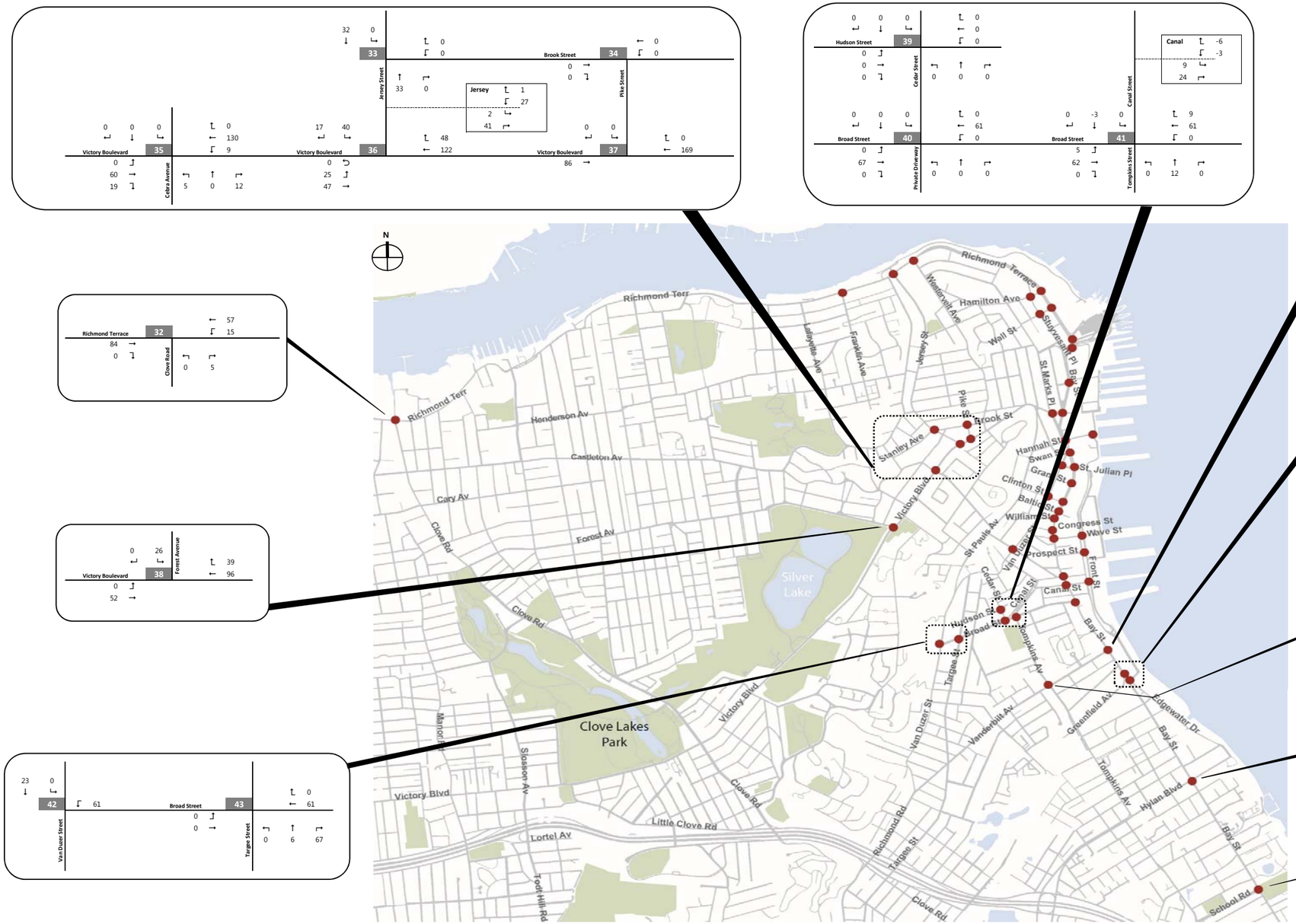
Total Proposed Project Increment
Weekday MD Peak Hour
Figure 14-3 B



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

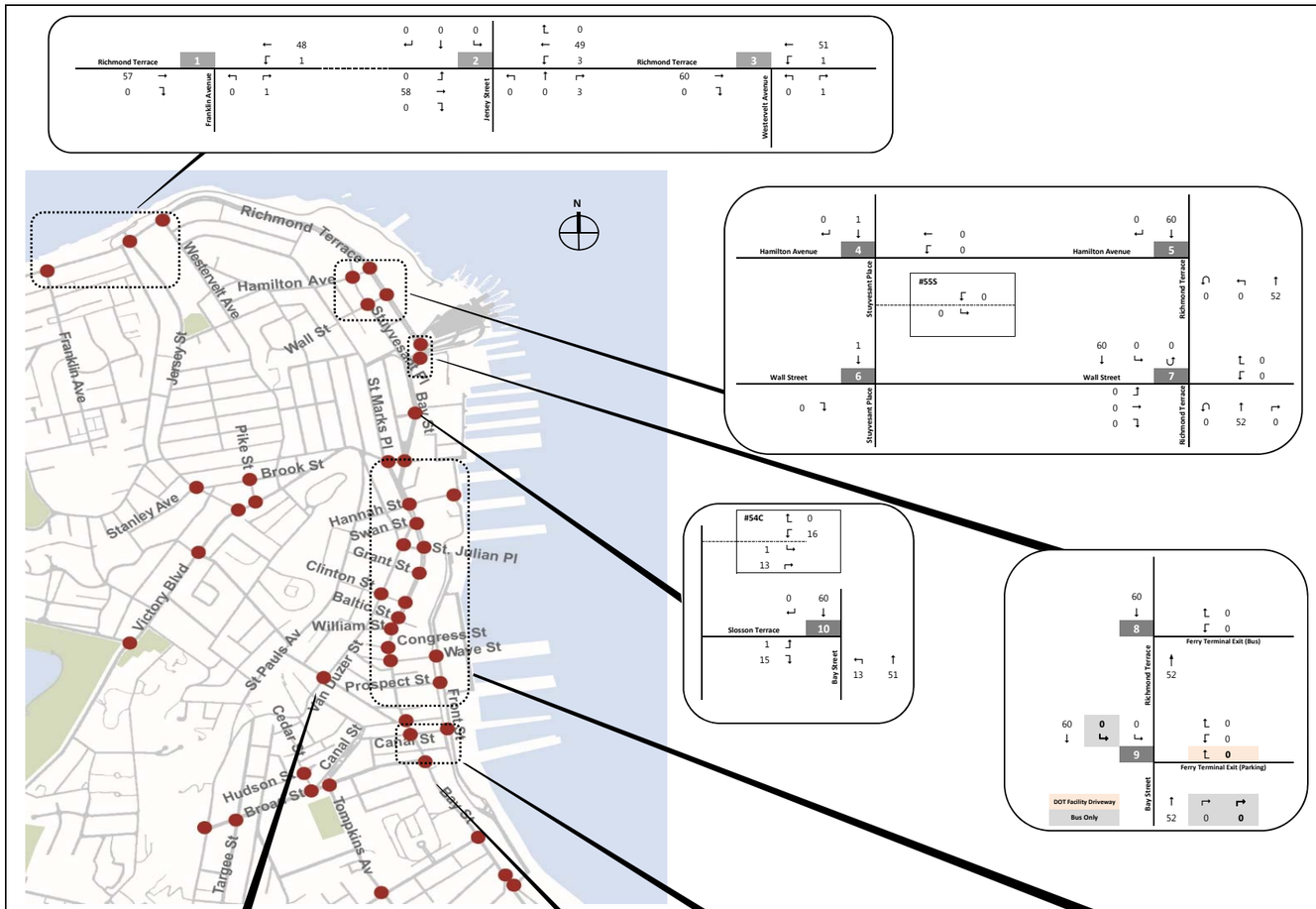
Total Proposed Project Increment
Weekday PM Peak Hour
Figure 14-4 A

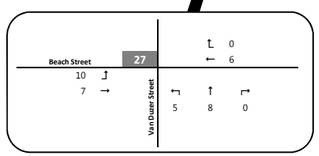


NOT TO SCALE

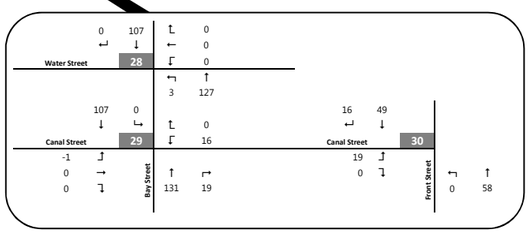
BAY STREET REZONING AND RELATED ACTIONS

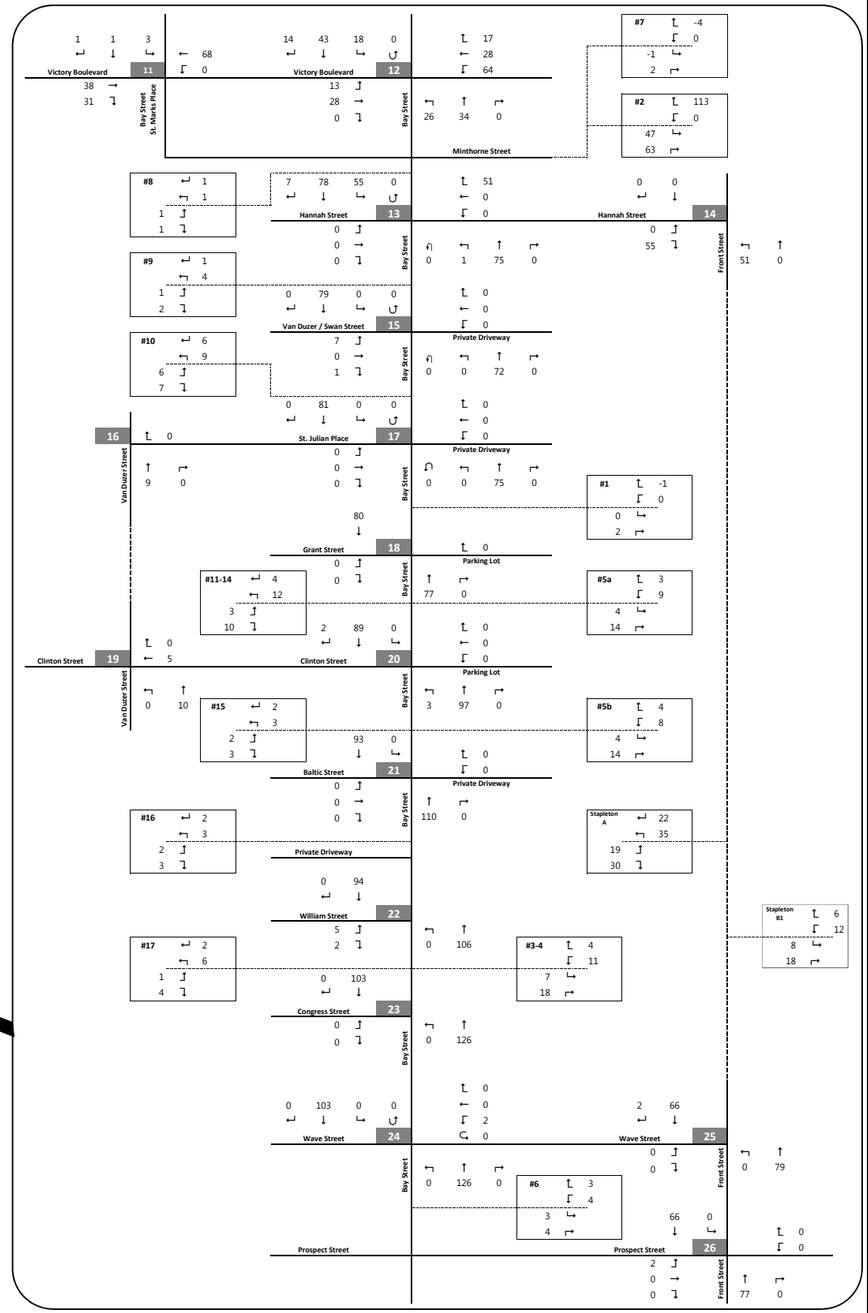
Total Proposed Project Increment
Weekday PM Peak Hour
Figure 14-4 B







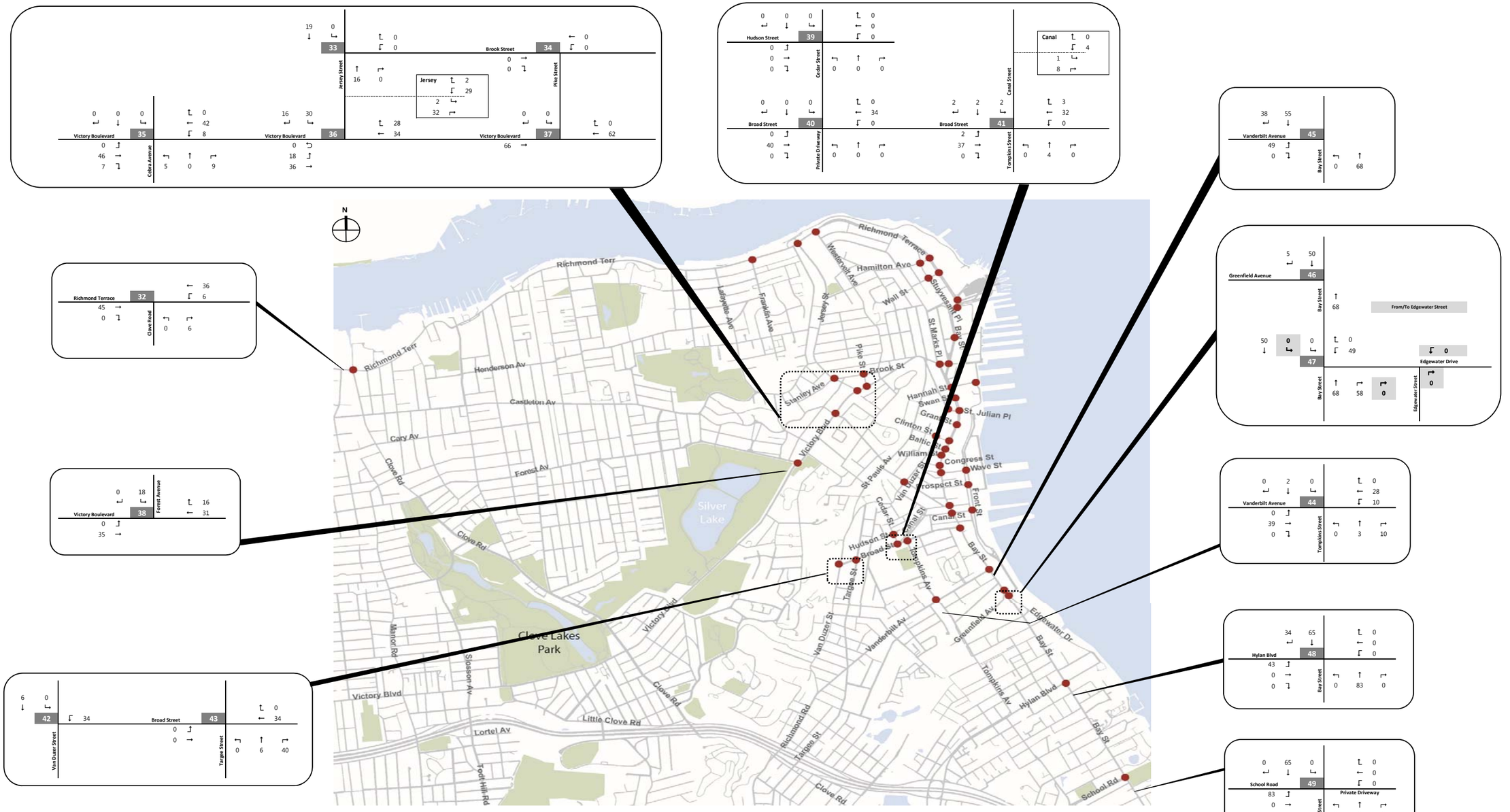




NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

Total Proposed Project Increment
Saturday MD Peak Hour
Figure 14-5 A



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

Total Proposed Project Increment
Saturday MD Peak Hour
Figure 14-5 B

As listed below and shown in Figure 14-6, the Study Area consists of the following 29 signalized intersections and 20 unsignalized intersections:

1. Richmond Terrace and Franklin Avenue (signalized)
2. Richmond Terrace and Jersey Street (signalized)
3. Richmond Terrace and Westervelt Avenue (signalized)
4. Hamilton Avenue and Stuyvesant Place (unsignalized)
5. Hamilton Avenue and Richmond Terrace (signalized)
6. Wall Street and Stuyvesant Place (unsignalized)
7. Wall Street and Richmond Terrace (signalized)
8. Richmond Terrace and Ferry Terminal (bus) (signalized)
9. Richmond Terrace and Ferry Terminal (parking lot) (signalized)
10. Bay Street and Slosson Terrace (signalized)
11. Victory Boulevard and Bay Street/St. Marks Place (signalized)
12. Victory Boulevard and Bay Street (signalized)
13. Bay Street and Hannah Street (signalized)
14. Front Street and Hannah Street (unsignalized)
15. Bay Street and Swan Street/Van Duzer Street (signalized)
16. Van Duzer Street and St. Julian Place (unsignalized)
17. Bay Street and St. Julian Place (unsignalized)
18. Bay Street and Grant Street (unsignalized)
19. Van Duzer Street and Clinton Street (signalized)
20. Bay Street and Clinton Street (signalized)
21. Bay Street and Baltic Street (unsignalized)
22. Bay Street and William Street (unsignalized)
23. Bay Street and Congress Street (unsignalized)
24. Bay Street and Wave Street (unsignalized)
25. Front Street and Wave Street (unsignalized)
26. Front Street and Prospect Street (unsignalized)
27. Van Duzer Street and Beach Street (signalized)
28. Bay Street and Water Street (unsignalized)
29. Bay Street and Canal Street (signalized)
30. Front Street and Canal Street (unsignalized)
31. Bay Street and Broad Street (signalized)
32. Richmond Terrace and Clove Road (signalized)
33. Jersey Street and Brook Street (unsignalized)
34. Pike Street and Brook Street (unsignalized)
35. Victory Boulevard and Cebra Avenue (signalized)
36. Victory Boulevard and Jersey Street (signalized)
37. Pike Street and Victory Boulevard (unsignalized)
38. Victory Boulevard and Forest Avenue (signalized)
39. Hudson Street and Cedar Street (unsignalized)
40. Broad Street and Cedar Street (unsignalized)
41. Broad Street and Canal Street (signalized)
42. Broad Street and Van Duzer Street (signalized)

43. Broad Street and Targee Street (signalized)
44. Vanderbilt Avenue and Tompkins Avenue (signalized)
45. Bay Street and Vanderbilt Avenue (signalized)
46. Bay Street and Greenfield Avenue (unsignalized)*
47. Bay Street and Edgewater Drive (signalized)
48. Bay Street and Hylan Boulevard (signalized)
49. Bay Street and School Road (signalized)

**All traffic movements at the intersection of Bay Street and Greenfield Avenue are uncontrolled; therefore, this intersection does not appear in the analysis summary tables.*

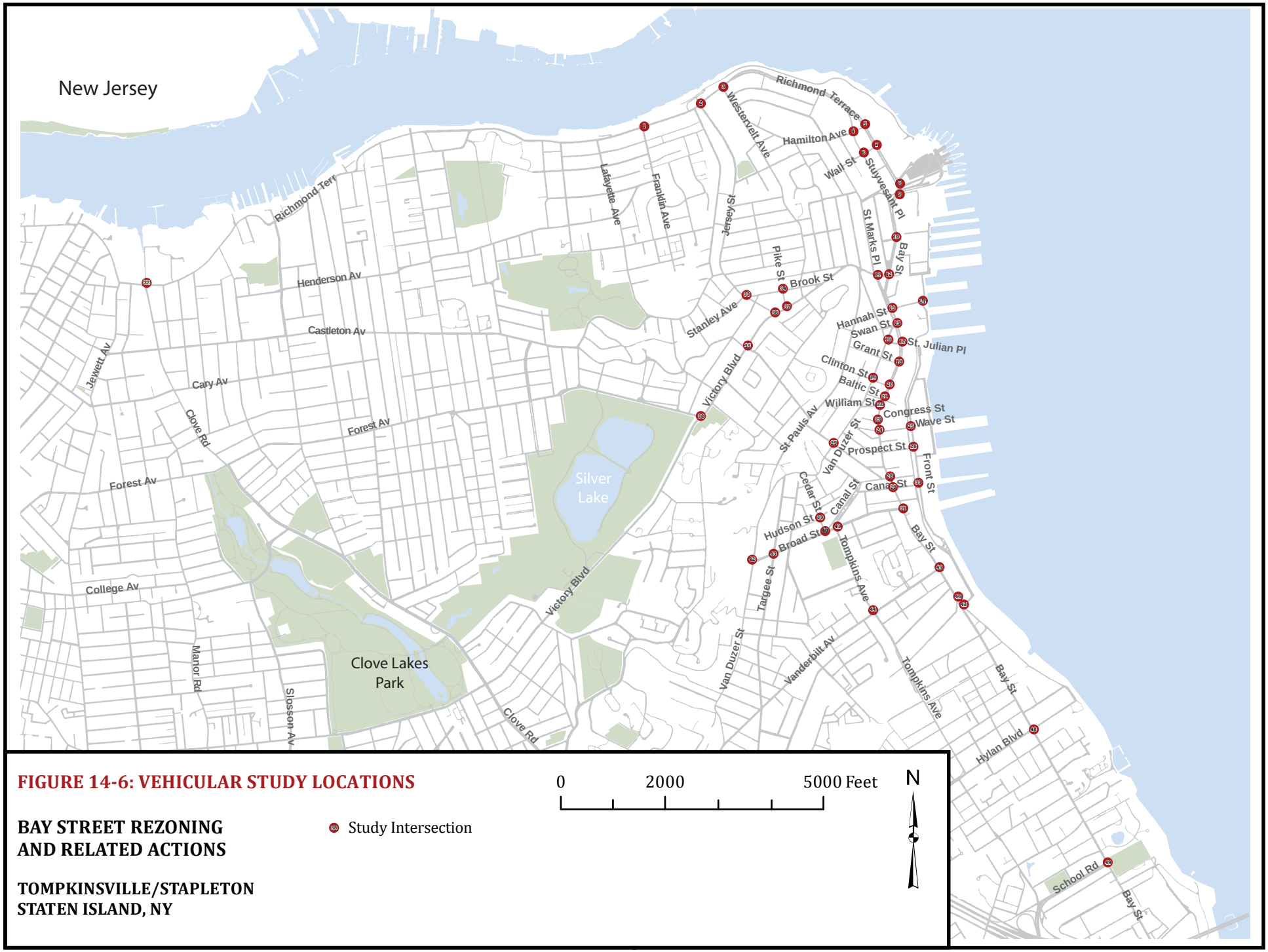


FIGURE 14-6: VEHICULAR STUDY LOCATIONS

0 2000 5000 Feet

N

Study Intersection

BAY STREET REZONING AND RELATED ACTIONS

TOMPKINSVILLE/STAPLETON STATEN ISLAND, NY

TRANSIT

The transit criteria specified in the *CEQR Technical Manual* and thresholds established by New York City Transit/Metropolitan Transportation Authority (NYCT/MTA) were used to determine which subway/rail and bus routes in the Study Area would be analyzed. According to the criteria, detailed transit analyses are generally not required if a proposed action is projected to result in fewer than 200 peak hour rail transit riders. As shown in Table 14-17, the Proposed Actions would result in 50 or more bus passengers being assigned to a single bus line (in one direction) and would result in an increase of 200 or more SIR passengers; therefore, detailed SIR and bus analyses are warranted.

The assignment of SIR trips generated by the Proposed Actions is summarized below:

- Bay Street Corridor Projected Development Sites and Stapleton Waterfront Phase III Sites
    - SIR trips generated by the Bay Street Corridor Projected Development Sites and Stapleton Waterfront Phase III Sites located north of Grant Street were assigned to the Tompkinsville SIR station and would enter/exit the station via Victory Boulevard and Minthorne Street.
    - SIR trips generated by Bay Street Corridor Projected Development Sites and Stapleton Waterfront Phase III Sites located south of Grant Street were assigned to the Stapleton SIR station and would enter/exit the station via Prospect Street.
- Canal Street Corridor Projected Development Sites
    - SIR trips generated by the Canal Street Corridor Projected Development Sites were assigned to the Stapleton SIR station and would enter/exit the station via Water Street.
- City Disposition Site: Jersey Street
    - SIR trips generated by the City Disposition Site at Jersey Street site were assigned to the Tompkinsville SIR station and would enter/exit the station via Victory Boulevard.
- City Disposition Sites: 54 Central Avenue/55 Stuyvesant Place
    - SIR trips generated by the City Disposition Sites at 54 Central Avenue and 55 Stuyvesant Place were assigned to the St. George SIR station.
    - SIR trips generated by the City Disposition Site at 54 Central Avenue would enter/exit the station via the pedestrian path to the north of Borough Hall and the bus exit ramp.
    - SIR trips generated by the City Disposition Site at 55 Stuyvesant Place would enter/exit the station via the Wall Street ramp and stairs north of the St. George Ferry Terminal.

The assignment of bus trips generated by the Proposed Actions assume project-generated trips would use bus stops closest to each site, and that the bus trips were split evenly to the routes serving each bus stop, as summarized below:

- Bay Street Corridor Projected Development Sites and Stapleton Waterfront Phase III Sites
    - Bus trips generated by these Projected Development Sites were assigned to the S51/81, S74/84, S76/86, S52, and S78 routes to the bus stops closest to each specific Projected Development Site.

  - It was assumed that half the bus trips generated by these Projected Development Sites would travel north towards the St. George Ferry terminal, and half would travel south along each bus route.

- Canal Street Corridor Projected Development Sites
  - Bus trips generated by these Projected Development Sites were assigned to the S46/96, S48/98, S61/91, S62/92, S52, and S66 to the bus stops closest to each specific Projected Development Site.
  - It was assumed that half the bus trips would travel north towards the St. George Ferry terminal, and half would travel south along each bus route.
- City Disposition Site: Jersey Street
  - Bus trips generated by the Jersey Street site were assigned to the S51/81, S74/84, S76/86, S52, and S78 routes to the bus stops closest to each specific development site.
  - It was assumed that half the bus trips would travel north towards the St. George Ferry terminal, and half would travel south/west along each bus route.
- City Disposition Site: 54 Central Avenue
  - Bus trips generated by the 54 Central Avenue site were assigned to the S42/52, S46/96, S48/98, S51/81, S61/91, S62/92, S66, S74/84, S76/86, and S78/88 routes to the bus stops closest to each specific development site.
  - It was assumed that none of the bus trips generated by the 54 Central Avenue site would travel to or from the ferry terminal. Most trips would travel on buses that serve destinations to the south with the exception of trips added to the S42/52 routes, which travel north of the ferry terminal.
- City Disposition Site: 55 Stuyvesant Place
  - Bus trips generated by the 55 Stuyvesant Place site were assigned to the S40/90, S44/94, S42/52 to the bus stops closest to each specific development site.
  - It was assumed that half the bus trips would travel north along each bus route, and half the bus trips would travel south, evenly split between the 40/90 and 44/94 routes.

SIR STATIONS

Based on the Level 2 screening, it was determined that the number of new SIR trips generated by the Proposed Actions would exceed the *CEQR Technical Manual* thresholds for stair and control area elements at the St. George, Tompkinsville and Stapleton SIR Stations, as shown in Table 14-18. Therefore, analyses of the following stairways and control areas were conducted for the Weekday AM and PM peak periods, when background commuter traffic is expected to be the greatest:

- Tompkinsville SIR Station
  - Control Area (5 low turnstiles, 2 for entry and 3 for exit)
  - Platform stairway
  - Stairway from Minthorne Street
- St. George SIR Station
  - Control Area (24 low turnstiles, 11 for entry and 13 for exit)

  - North and south stairways that connect the St. George Ferry Terminal and SIR station
- Stapleton SIR Station
  - Stairway from Prospect Street

Table 14-18: RWCDS Net Incremental Peak Hour SIR Trips by Station

SIR Station	AM Peak Hour Trips			PM Peak Hour Trips		
	Into Project	Out of Project	Total	Into Project	Out of Project	Total
Project Summary						
Peak Hour Project-Generated SIR Trips	108	324	433	375	203	578
SIR Station Summary						
Stapleton SIR Station	27	207	235	188	44	233
Tompkinsville SIR Station	65	116	181	186	140	326
St. George SIR Station (Total)	62	227	290	263	111	374
54 Central and 55 Stuyvesant	*16*	*1*	*17*	*1*	*19*	*20*
Other sites	*46*	*226*	*273*	*262*	*92*	*354*
Stairways and Control Areas	**Entering volumes**	**Exiting Volumes**	**Total**	**Entering volumes**	**Exiting Volumes**	**Total**
Stapleton SIR Station						
Platform stairway from Prospect Street	180	25	205	45	169	213
Tompkinsville SIR Station						
Platform stairway	116	65	181	140	186	326
Stairway from Minthorne Street	54	46	100	92	102	194
St. George SIR Station [(1)]						
Control Area	47	242	290	281	93	374
North stairways[(2)]	24	121	145	140	47	187
South stairways[(2)]	24	121	145	140	47	187

Notes:
1. Entering volumes include *Out of Project* trips from 54 Central Avenue/55 Stuyvesant Place and *Into Project* trips from the other sites. The opposite was assumed for Exiting volumes.
2. Projected SIR passengers were assumed to use the north and south stairways evenly (50%/50%).
3. Total trips may not sum exactly due to rounding.

SIR LINE HAUL

The Proposed Actions are expected to generate a total of 289 incremental SIR trips in the northbound direction during the Weekday AM peak hour (to the St. George Station) and 373 incremental SIR trips in the southbound direction during the Weekday PM peak hour (from the St. George Station). Based on the Level 2 screening it was determined that the number of new SIR trips generated by the Proposed Actions would exceed 200 or more new trips in one direction on one or more of these routes; therefore, an analysis of SIR line haul conditions is included in this EIS. The analysis assesses Existing, No-Action, and With-Action conditions at the maximum load points of the SIR during the Weekday AM and PM peak hours, when background commuter traffic is expected to be the greatest.

BUS TRANSIT

As shown in Table 14-17, the Proposed Actions are expected to generate a total of approximately 860 and 1,093 incremental trips during the Weekday AM and PM peak hours, respectively. Based on the assignment assumptions described above and as shown in Table 14-19, it was determined that the number of new bus trips generated by the Proposed Actions would exceed the *CEQR Technical Manual* threshold for seven MTA bus routes, including the S51/81, S74/84, S76/76, and S78. These bus routes were analyzed as part of this EIS for the Weekday AM and PM peak hours, when background commuter traffic is expected to be the greatest.

Table 14-19: RWCDS Net Incremental Peak Hour Bus Trips by Route

Route	Direction	AM Peak Hour Trips			PM Peak Hour Trips		
		Into Project	Out of Project	Total	Into Project	Out of Project	Total
S51/81	NB	30	110	140	78	58	136
	SB	35	48	83	98	35	133
S74/84	NB	27	34	61	81	30	111
	SB	36	52	88	109	33	142
S76/86	NB	26	110	136	77	58	135
	SB	35	48	83	98	32	131
S78	NB	26	34	61	77	30	108
	SB	1	123	123	11	87	98
Total		216	559	776	630	364	994

Notes:
1. Total trips may not sum exactly due to rounding.

PEDESTRIANS

Based on criteria specified in the *CEQR Technical Manual*, projected pedestrian volume increases of more than 200 pedestrians per hour at any sidewalk, crosswalk, or intersection corner would be considered a location with the potential for significant impacts and would therefore require a detailed analysis. As shown in Table 14-17, the Proposed Actions are expected to generate approximately 1,966 pedestrian trips in the Weekday AM peak hour, 3,124 in the Weekday MD, 3,423 in the Weekday PM, and 3,152 in the Saturday MD peak hour. These volumes represent the sum of pedestrians walking to/from SIR and bus transit as well as pedestrians who travel to/from the Study Area solely on-foot (walk-only).

Pedestrian trip assignments were developed to conduct the Level 2 screening assessment. Pedestrian trips associated with bus and SIR transit riders are described above. The walk-only pedestrian trips would follow assignment procedures as described below:

- Pedestrians who walk to and from the Projected Development Sites within the Study Area were distributed to the area's pedestrian facilities (*i.e.,* crosswalks, sidewalks, and corners) based on the neighborhood land-use characteristics and 2010 Census population data, which was used to identify concentrations of population and to assign residential trips and related use trips accordingly.

- Bay Street Corridor Projected Development Sites and Stapleton Waterfront Phase III Sites
    - The Bay Street Corridor Study Area, including the Stapleton Waterfront Phase III sites, were divided into four sub-areas for the purpose of assigning pedestrian (walk-only) trips: Victory Boulevard to St. Julian Place, St. Julian Place to Baltic Street, Baltic Street to Prospect Street, and the waterfront area along Front Street between Hannah Street and Baltic Streets. It was assumed that 25% of trips generated by sites within each sub-area would remain within the sub-area, and the remaining 75% of walk-only trips would be assigned to exit the sub-area along each street. The walk-only pedestrian trips were balanced at the boundaries between each sub-area so that the number of pedestrians leaving one sub-area was equal to the number of pedestrians arriving within the adjacent sub-area. At locations where there was an imbalance, pedestrian trips were carried through the adjacent sub-areas to be conservative.
    - The pedestrian trips were assigned to each portal (either the sub-area boundary or the roadways) based on estimated population density.
- Canal Street Corridor Projected Development Sites and City Disposition Sites
    - Pedestrian (walk-only) trips generated by the remainder of the sites were assigned to the adjacent roadways based on estimated population density.

As the Proposed Actions would generate more than 200 pedestrians per hour at 47 locations (22 sidewalks, 14 crosswalks, and 11 corners) within the Study Area during at least one peak hour based on a combination of walk, SIR, and bus trips, a detailed pedestrian analysis was conducted for those locations during the four peak hours. The pedestrian elements at Clinton Street and Bay Street (2 sidewalks, 3 crosswalks, and 2 corners), and at Wave Street and Bay Street (4 sidewalks, 4 crosswalks, and 4 corners) did not meet the Level 2 screening analysis thresholds, but were included in the analysis at the request of NYCDOT. In total, the 66 locations (28 sidewalks, 21 crosswalks, and 17 corners) shown on Figure 14-7 and summarized in Table 14-20, were analyzed for this EIS.

PARKING CONDITIONS

A parking analysis identifies the extent to which on-street and off-street parking is available and utilized under Existing, No-Action, and With-Action Conditions. Typically, this analysis encompasses an area within ¼-mile of the Proposed Actions. If the analysis identifies a shortfall in parking in the ¼-mile Study Area, the Study Area could be extended to ½ mile to identify additional parking supply. The analysis, which takes into consideration anticipated changes in area parking supply, provides a comparison of parking needs versus availability to determine if a parking shortfall is likely to result from additional demand generated by the Proposed Actions.

It is anticipated that the incremental on-site parking supply provided as part of the Proposed Actions would not be sufficient to accommodate the overall incremental parking demand. As such, detailed existing on-street and off-street parking inventories for each of the analysis peak periods, as well as the weekday overnight period, when residential parking demand is expected to peak, are provided in this EIS to document the existing supply and demand during each period. The parking analyses consider changes in the parking supply and utilization within a ¼-mile radius of the Study Area under both No-Action and With-Action conditions.

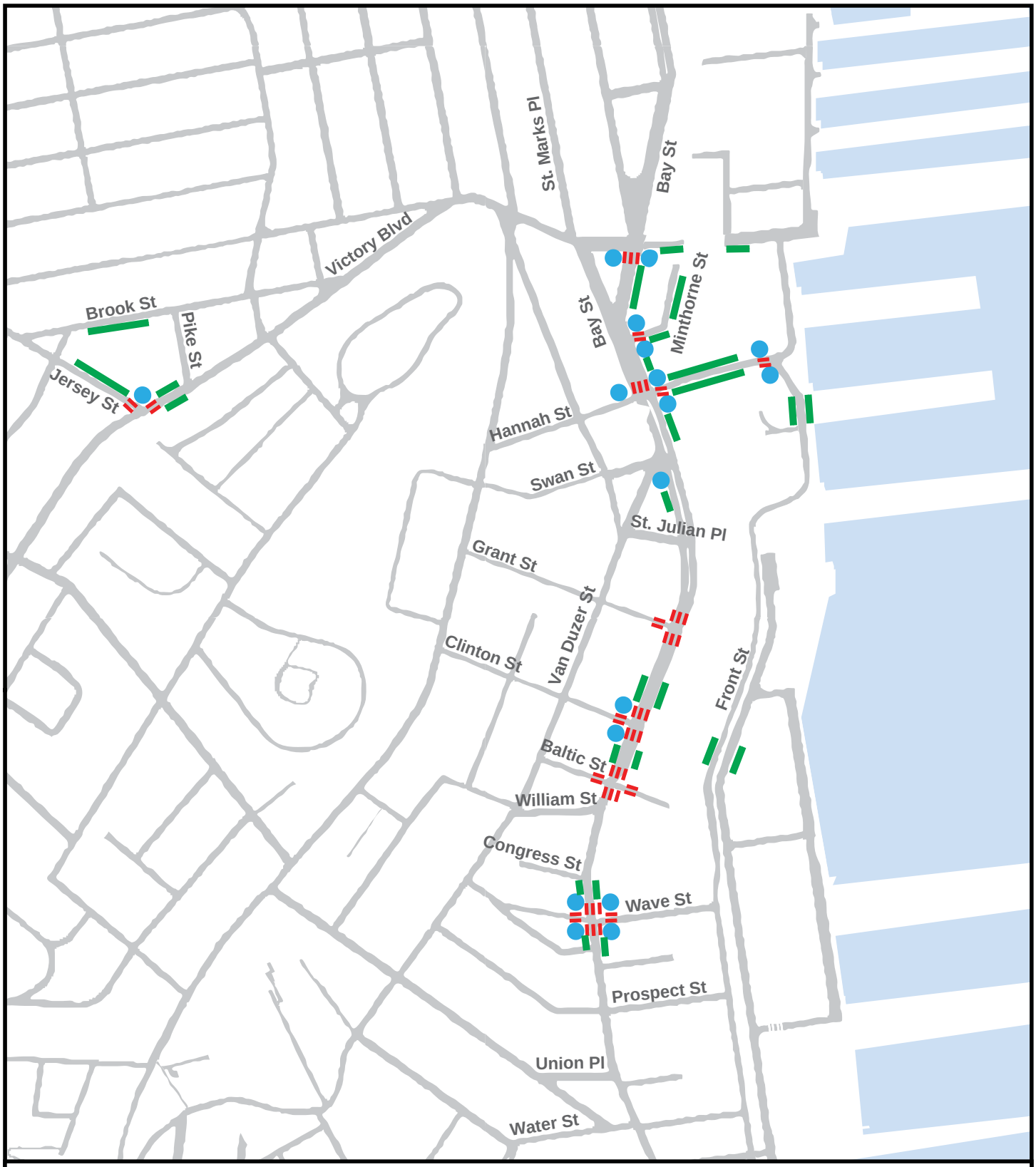


FIGURE 14-7: PEDESTRIAN STUDY LOCATIONS

BAY STREET REZONING AND RELATED ACTIONS

TOMPKINSVILLE/STAPLETON STATEN ISLAND, NY

Sidewalk

Corner

Crosswalk

N

Table 14-20: Pedestrian Study Elements

	Crosswalks	Corners	Sidewalks
Bay Street and Victory Boulevard (4 elements)	South	SE	SE corner, N-S leg
		SW	
Bay Street and Hannah Street (9 elements)	North	NE	NE corner, N-S leg
	East	SE	NE corner, E-W leg
		NW	SE corner, N-S leg
			SE corner, E-W leg
Bay Street and Swan Street (2 elements)		SW	SW corner, N-S leg
Bay Street and Grant Street (3 elements)	North		
	South		
	West		
Bay Street and Clinton Street (7 elements)	North	SW	NE corner, N-S leg
	South	NW	NW corner, N-S leg
	West		
Bay Street and Baltic Street (6 elements)	North		NE corner, N-S leg
	East		NW corner, N-S leg
	South		
	West		
Bay Street and Wave Street (12 elements)	North	NE	NE corner, N-S leg
	East	SE	SE corner, N-S leg
	South	SW	SW corner, N-S leg
	West	NW	NW corner, N-S leg
Front Street and Hannah Street (5 elements)	West	SW	SE corner, N-S leg
		NW	SW corner, N-S leg
Front Street and Wave Street (2 elements)			NE corner, N-S leg
			NW corner, N-S leg
Pike Street and Brook Street (1 element)			SW corner, E-W leg
Jersey Street and Victory Boulevard (6 elements)	North	NE	NE corner, N-S leg
	East		NE corner, E-W leg
			SE corner, E-W leg
Bay Street and Minthorne Street (4 elements)	East	NE	SE corner, E-W leg
		SE	
Minthorne Street and Victory Boulevard (3 elements)			SE corner, N-S leg
			SE corner, E-W leg
			SW corner, E-W leg
Front Street and Baltic Street (2 elements)			NE corner, N-S leg
			NW corner, N-S leg

VEHICULAR AND PEDESTRIAN SAFETY ASSESSMENT

An evaluation of traffic safety is necessary for locations within the Study Area that have been identified as high-crash locations as specified in the *CEQR Technical Manual*. These locations are defined as those with more than 48 total reportable and non-reportable crashes or five or more pedestrian/bicycle injury crashes that occur during any consecutive 12 months of the most recent three-year period for which data is available. Crash histories are reviewed to determine whether projected vehicular and pedestrian traffic would further impact safety as these locations or whether existing unsafety conditions could adversely impact the flow of the projected new vehicular or pedestrian/bicycle trips. The safety assessment was conducted for all vehicular and pedestrian study locations.

F. OPERATIONAL ANALYSIS METHODOLOGY

The following sections summarize the operational analysis methodologies and significant impact criteria in accordance with the *CEQR Technical Manual* guidance for traffic, pedestrians, parking, and safety.

TRAFFIC OPERATIONS

The operations of the Study Area intersections were analyzed in accordance with the *CEQR Technical Manual* guidance by applying the methodologies presented in the *2000 Highway Capacity Manual* (HCM 2000) using Synchro (Version 8.0). A description of these methodologies is provided below.

SIGNALIZED INTERSECTIONS

The Level of Service (LOS) of a signalized intersection is defined in terms of control delay per vehicle (seconds per vehicle). Control delay is the portion of total delay experienced by a motorist that is attributed to the traffic signal. Several factors contribute to the delay at a signalized intersection including cycle length, pedestrian crossing times, progression/signal coordination, and volume to capacity (v/c) ratios. For signalized intersections, LOS A describes operations with minimal delays, up to 10 seconds per vehicle, while LOS F describes operations with delays in excess of 80 seconds per vehicle. Delays experienced at LOS A, B, C or mid-D (less than 45 seconds per vehicle) are generally considered "acceptable" operating conditions according to the *CEQR Technical Manual*. Conversely, LOS E and F are generally considered "unacceptable" operating conditions. The LOS criteria for signalized intersections, as defined in the *2000 Highway Capacity Manual* (HCM 2000), are provided in Table 14-21.

Table 14-21: LOS Criteria for Signalized Intersections

Level of Service (LOS)	Average Delay
A	≤ 10.0 seconds
B	> 10.0 and ≤ 20.0 seconds
C	> 20.0 and ≤ 35.0 seconds
D	> 35.0 and ≤ 55.0 seconds
E	> 55.0 and ≤ 80.0 seconds
F	> 80.0 seconds

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

UNSIGNALIZED INTERSECTIONS

For unsignalized intersections, the total delay is defined as the total elapsed time from which a vehicle stops at the end of the queue until the vehicle departs from the stop line. This includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The average control total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. The LOS thresholds for unsignalized intersections are different from those for signalized intersections and are summarized in Table 14-22.

Table 14-22: LOS Criteria for Unsignalized Intersections

Level of Service (LOS)	Average Delay
A	≤ 10.0 seconds
B	> 10.0 and ≤ 15.0 seconds
C	> 15.0 and ≤ 25.0 seconds
D	> 25.0 and ≤ 35.0 seconds
E	> 35.0 and ≤ 50.0 seconds
F	> 50.0 seconds

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

SIGNIFICANT IMPACT CRITERIA: TRAFFIC OPERATIONS

According to the criteria presented in the *CEQR Technical Manual* for signalized intersections, a lane group under the With-Action Condition operating within LOS A, B, or C, or mid-LOS D up to a maximum average control delay of 45.0 seconds/vehicle is not considered significant. However, if a lane group under the No-Action Condition is within LOS A, B, or C, then deterioration under the With-Action Condition to worse than mid-LOS D (delay greater than 45.0 seconds/vehicle) is considered a significant impact.

For lane groups operating at LOS D, E, or F under the No-Action Condition, then deterioration under the With-Action Condition that meet the following criteria are considered significant impacts:

- For a lane group operating at LOS D under the No-Action Condition, an increase in projected average control delay of five or more seconds is considered significant if the With-Action Condition delay exceeds mid-LOS D.

- For a lane group operating at LOS E under the No-Action Condition, an increase in projected average control delay of four or more seconds is considered significant when compared with the With-Action Condition delay.

- For a lane group operating at LOS F under the No-Action Condition, impacts are considered significant and require examination of mitigation if they result in an increase of three or more seconds when compared with the With-Action Condition.

The same criteria for signalized intersections apply to unsignalized intersections (mid-LOS D for unsignalized intersections is 30 seconds of delay); however, for the minor approach to trigger a significant impact, 90 passenger-car-equivalents (PCEs) must be identified in the With-Action Condition in any peak hour.

TRANSIT OPERATIONS

SIR linehaul and station elements and bus transit operations were analyzed in accordance with the *CEQR Technical Manual* guidance. A description of these methodologies is provided below.

SIR linehaul operations and station elements including stairways and control areas were considered for this analysis. A platform analysis was not performed, as they are typically not conducted for existing stations. As described in the *CEQR Technical Manual*, platform analyses are conducted for projects such as the design of new stations or large station renovations.

SIR STAIRWAYS

The v/c ratio and LOS for stairways are based on the peak 15-minute passenger volume divided by the capacity. The NYCT guideline capacity for stairways is 10 PFM. This rate is based on the Volume/SVCD (Service Volume between LOS C and D) capacity ratio. The breakpoint between LOS C and LOS D at a v/c ratio of 1.00 has been established by NYCT as the minimum acceptable standard for pedestrian conditions. Therefore, the v/c ratio is used to determine the design capacity of the critical stairway locations in a station during each peak 15-minute period.

To calculate the service level of a stairway, the v/c ratio of the entering flow is calculated separately from the v/c ratio of the exiting flow. These ratios are added together to generate the overall v/c ratio of the stairway. The data needed to derive the capacity of a stair include the effective width of the stair, 15-minute passenger volumes, SVCD (based on NYCT capacity guidelines), surge factor, and friction factor. The effective width of a stair is adjusted by reducing its width at the narrowest point by six inches on each side of the stair and three inches total if a center handrail is present. Exiting passenger flows within subway stations can be "surged" which reduces the calculated capacity because there is a disproportionate number of pedestrians concentrated within portions of the 15-minute period. Circulation elements closest to the platform level have the highest reduction in capacity (25 percent) due to surging. Surging factors decrease for each level above the platform level as a result of passenger volumes dissipating each level towards the street. The effect of surging is also less for elements that serve three or more tracks. It is estimated by NYCT that the capacity on stairs is reduced by 10 percent due to friction if opposing flows are less than 95 percent in one direction. The LOS criteria for subway stairways and control area elements (see next section) are defined in Table 14-23.

Table 14-23: LOS Criteria for Subway Station Stairways and Control Areas

LOS	Description	Volume/SVCD 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

CEQR Technical Manual (2014).

CONTROL AREAS

Station control areas separate the unpaid and paid areas of the station and are comprised of regular (low) turnstiles, High Entrance/Exit Turnstiles (HEETs), High Exit Turnstiles (HXT), and Service Gates. Regular and HEET turnstiles and Service Gates are bi-directional, where HXT turnstiles only serve exiting passengers. The v/c ratios of these fare control elements providing access to the station are based on the peak 15-minute passenger volume divided by the 15-minute capacity. The NYCT guideline capacities are 420 entries and 645 exits at regular turnstiles, 255 entries and 540 exits at HEETs, 555 exits HXTs, and 750 (combined entries and exits) at Service Gates. For these control area elements, overall capacity is measured by the number of elements, the NYCT guideline capacity per element, surging factors, and friction factors. The application of surging and friction factors to calculate capacity is the same as for stairways. The LOS criteria for control area elements are defined in Table 14-23.

SIR LINE HAUL

Line haul capacity is based on the guideline capacity per subway/rail car multiplied by the number of subway/rail cars crossing the maximum load point in the peak hour. The maximum peak-period loading guideline capacities are provided in the *CEQR Technical Manual* for each car class:

- 51-foot subway/rail car (guideline capacity of 110 passengers/car)
- 60-foot subway/rail car (guideline capacity of 145 passengers/car)
- 75-foot subway/rail car (guideline capacity of 175 passengers/car)

SIR line haul capacity is based on a guideline capacity of 140 passengers/car, as provided by NYCT. The number of passengers per subway/rail car at the maximum load point on the line is quantified using methods outlined in the *CEQR Technical Manual* and is compared to the guideline capacities to determine if there is capacity available to accommodate additional project-generated trips. The *CEQR Technical Manual* does not define LOS thresholds for the subway/SIR line haul analysis.

BUS LOAD LEVELS

The methodology for assessing bus load levels is provided in the *CEQR Technical Manual* and considers the capacity of the various models of buses that are used to provide service in the Study Area. The various bus transit operators use three models of buses and have adopted guideline capacities for each:

- 40-foot standard buses (guideline capacity of 54 passengers)
- 60-foot articulated buses (guideline capacity of 85 passengers)
- 45-foot over-the-road coaches (guideline capacity of 55 passengers)

The number of passengers per bus at the maximum load point is quantified using methods outlined in the *CEQR Technical Manual* and is compared to the guideline capacities to determine if there is capacity available to accommodate additional project-generated trips. The *CEQR Technical Manual* does not define LOS thresholds for the bus load level analysis.

SIGNIFICANT IMPACT CRITERIA: TRANSIT OPERATIONS

NYCT has defined significant stairway impacts in terms of the width increment threshold (WIT). The WIT is used only to determine significant impact and is not the actual widening that would be required to mitigate a significant impact. For stairways, the WIT is calculated using the formulas provided in the *CEQR Technical Manual* if the With-Action Condition v/c ratio is greater than 1.00. Significant impacts are typically considered to occur once the WIT levels for stairways have reached or exceeded the thresholds provided in the *CEQR Technical Manual*.

For regular turnstiles, HEETs, and HXTs, if the No-Action Condition v/c ratio is less than 1.00 but the With-Action Condition v/c ratio increases to 1.00 or greater, the impact is considered significant. If both the No-Action and With-Action Condition v/c ratios are 1.00 or greater, a 0.01 change in v/c ratio is considered significant.

For subway/rail line haul capacity, any increases in average per car load levels that remain within the guideline capacity limits are not defined as significant impacts. If the No-Action Condition is within guideline capacity limits but the With-Action Condition exceeds guideline capacity and the Proposed Actions are generating five or more transit riders per car, the impact is considered significant.

According to MTA bus operating guidelines, increases in bus load levels to above their maximum capacity at any load point as a result of a project is defined as a significant impact since it necessitates adding more bus service along that route.

PEDESTRIAN OPERATIONS

The pedestrian crosswalk, corner, and sidewalk elements were analyzed in accordance with the *CEQR Technical Manual* guidance. A description of these methodologies is provided below.

CROSSWALK/CORNER

Crosswalk and corner analyses are conducted at signalized intersections using the analytical procedures described in the *2010 Highway Capacity Manual* (HCM 2010), using the analysis spreadsheets provided by NYCDOT. The capacity of crosswalks and corners at signalized intersections are evaluated on the basis of pedestrian space measured in terms of square feet per pedestrian (ft^2/p). To calculate pedestrian space, effective crosswalk widths and corner areas, hourly pedestrian volumes (crosswalk and corner), conflicting hourly turning vehicles, average walking speed (3.5 feet/second or 3.0 feet/second if 20 percent of pedestrians are seniors and/or school children or the intersection is in a Senior Pedestrian Focus Area), and signal timing are required. Table 14-24 shows the LOS criteria for crosswalks and corners.

Table 14-24: LOS Criteria for Crosswalks and Corners (Signalized Intersections)

Level of Service (LOS)	Pedestrian Space (ft^2/p)
A	> 60
B	60 to > 40
C	40 to > 24
D	24 to > 15
E	15 to > 8
F	≤ 8

Transportation Research Board. *Highway Capacity Manual, 2010*.

Crosswalk analyses are conducted at unsignalized intersections using the analytical procedures described in the HCM 2000. The capacity of crosswalks at unsignalized intersections are evaluated on the basis of the average delay per pedestrian in terms of seconds. To calculate average delay per pedestrian, effective crosswalk widths, crosswalk lengths, hourly pedestrian volumes, conflicting hourly vehicles, average walking speed (3.5 feet/second), and pedestrian start-up and end clearance time (3.0 seconds) are required. Table 14-25 shows the LOS criteria for crosswalks at unsignalized intersections based on average pedestrian delay.

Table 14-25: LOS Criteria for Crosswalks (Unsignalized Intersections)

Level of Service (LOS)	Average Delay Per Pedestrian (s)
A	< 5
B	≥ 5 - 10
C	> 10 - 20
D	> 20 - 30
E	> 30 - 45
F	> 45

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

SIDEWALK

As identified in the HCM 2010, the primary performance measure for sidewalks is pedestrian space, expressed as square feet per pedestrian (ft^2/p). Sidewalks were analyzed using spreadsheets provided by NYCDOT that are based on the HCM 2010 methodology.

To calculate pedestrian space, effective sidewalk width in feet (taking into account a buffer between walls, curbs, and obstructions), hourly pedestrian volumes (sidewalk), and average walking speed (3.5 feet/second or 3.0 feet/second if 20 percent of pedestrians are seniors and/or school children or the intersection is in a Senior Pedestrian Focus Area) are required. Table 14-26 shows the LOS criteria for sidewalks. To accurately calculate sidewalk LOS, it is important to determine whether the pedestrian operations are generally "platoon" (with surges from a bus stop, subway station, or a crosswalk) or "non-platoon" (uniform) within the peak period being analyzed. Accounting for platoons generally results in a poorer LOS. Table 14-26 shows the non-platoon and platoon LOS criteria for sidewalks based on pedestrian space (ft^2/p).

Table 14-26: LOS Criteria for Sidewalks

Level of Service (LOS)	Non-Platoon Pedestrian Space (ft^2/p)	Platoon Pedestrian Space (ft^2/p)
A	> 60	> 530
B	> 40 to 60	> 90 to 530
C	> 24 to 40	> 40 to 90
D	> 15 to 24	> 23 to 40
E	> 8 to 15	> 11 to 23
F	≤ 8	≤ 11

Transportation Research Board. *Highway Capacity Manual*, 2010.

SIGNIFICANT IMPACT CRITERIA: PEDESTRIAN OPERATIONS

The *CEQR Technical Manual* provides guidance on the impact criteria for pedestrian facilities based on the general comfort and convenience levels of pedestrians, according to the location of the Study Area. Pedestrians in central business district (CBD) areas have become accustomed to higher pedestrian volumes and generally are more tolerant of restricted LOS conditions that might not be acceptable in other less congested (non-CBD) locations. An acceptable LOS for CBD areas is generally a mid-LOS D or better while an acceptable LOS for non-CBD areas is generally the upper limit of LOS C or better. For purposes of the pedestrian operations analysis, the pedestrian elements in the Study Area were not considered to be part of a CBD area.

For corners and crosswalks at signalized intersections in non-CBD areas, the average pedestrian space that is considered acceptable ranges from LOS A to LOS C. If the pedestrian space deteriorates to worse than LOS C (less than 24.0 ft^2/p), significant impacts are determined based on a sliding scale, as follows:

- If the average pedestrian space under the No-Action Condition is greater than 26.6 ft^2/p, then a decrease to 24.0 ft^2/p or less under the With-Action Condition is considered a significant impact.
- If the average pedestrian space under the No-Action Condition is between 5.1 and 26.6 ft^2/p, a decrease in space under the With-Action Condition should be considered significant if it is greater than or equal to ((No-Action pedestrian space ft^2/p / 9.0) – 0.31). The With-Action Condition increments are provided in Table 16-12 in the *CEQR Technical Manual*.
- If the average pedestrian space under the No-Action Condition is less than 5.1 ft^2/p, then a decrease in pedestrian space greater than or equal to 0.2 ft^2/p under the With-Action Condition is considered a significant impact.

For crosswalks at unsignalized intersections in non-CBD areas, the average pedestrian delay that is considered acceptable is to be determined in coordination with NYCDOT.

For sidewalks in non-CBD areas, the average pedestrian space that is considered acceptable ranges from LOS A to LOS C. If the pedestrian flow rate deteriorates to worse than LOS C (less than 24.0 ft^2/p for non-platoon flow and less than 40.0 ft^2/p for platoon flow), significant impacts are determined based on a sliding scale, as follows:

Non-Platoon Conditions

- If the average pedestrian space under the No-Action condition is greater than 26.6 ft^2/p, then a decrease in pedestrian space under the With-Action condition to 24.0 ft^2/p or less (LOS C or worse) should be considered a significant impact. If the average pedestrian space under the With-Action condition is greater than 24.0 ft^2/p, the impact should not be considered significant.
- If the average pedestrian space under the No-Action condition is between 5.1 and 26.6 ft^2/p, a decrease in pedestrian space under the With-Action condition should be considered significant if it is greater than or equal to ((No-Action pedestrian space ft^2/p / 9.0) – 0.31). The With-Action increments are provided in Table 16-14 in the *CEQR Technical Manual*.
- If the average pedestrian space under the No-Action condition is less than 5.1 ft^2/p, then a decrease in pedestrian space greater than or equal to 0.2 ft^2/p should be considered significant.

Platoon Conditions

- If the average pedestrian space under the No-Action condition is greater than 44.3 ft^2/p, then a decrease in pedestrian space under the With-Action condition to 40.0 ft^2/p or less (LOS C or worse) should be considered a significant impact. If the average pedestrian space under the With-Action condition is greater than 40.0 ft^2/p, the impact should not be considered significant.
- If the average pedestrian space under the No-Action condition is between 6.4 and 44.3 ft^2/p, a decrease in pedestrian space under the With-Action condition should be considered significant if it is greater than or equal to ((No-Action pedestrian space ft^2/p) / (9.5-0.321)). The With-Action increments are provided in Table 16-16 in the *CEQR Technical Manual*.
- If the average pedestrian space under the No-Action condition is less than 6.4 ft^2/p, then a decrease in pedestrian space greater than or equal to 0.3 ft^2/p should be considered significant.

PARKING CONDITIONS ASSESSMENT

A parking analysis identifies the extent to which on-street and off-street parking is available and utilized under Existing, No-Action, and With-Action Conditions. Typically, this analysis encompasses an area within ¼-mile of the Proposed Actions. If the analysis identifies a shortfall in parking in the ¼-mile Study Area, the Study Area could be extended to ½ mile to identify additional parking supply. The analysis, which takes into consideration anticipated changes in area parking supply, provides a comparison of parking needs versus availability to determine if a parking shortfall is likely to result from additional demand generated by the Proposed Actions. For the purpose of this study, a detailed parking analyses was conducted for five subareas focused on the parking spaces that were more likely to be used by vehicle trips generated by Proposed Development Sites within those subareas.

DETERMINATION OF SIGNIFICANT PARKING SHORTFALLS

According to the *CEQR Technical Manual*, if the Proposed Actions generate more parking demand than it supplies, this shortfall may be considered significant. However, the available parking supply should consider the parking spaces within a ¼-mile of the Study Area. If the Proposed Actions generated parking demand can be accommodated with the on-site project parking supply and on-street/off-street parking spaces within a ¼-mile radius of the Study Area, then the shortfall would

not be considered significant depending on the location of the Proposed Actions. For projects in locations outside the *CEQR Technical Manual* parking zones 1 and 2, a parking shortfall may be considered significant if the parking demand a project generates would consume more than half the available on-street and off-street parking spaces within a ¼-mile of the project site. The Proposed Actions are located outside parking zones 1 and 2, which means that a parking shortfall can be considered significant, as determined by the lead agency based on a review of additional factors such as availability and extent of transit in the area and features of the Proposed Actions that are considered trip reduction or travel demand management measures.

VEHICULAR AND PEDESTRIAN SAFETY ASSESSMENT

Crash data is collected for the most recent three-year period from NYCDOT and classified as Reportable, Non-Reportable, or Property Damage Only. For locations that are identified as a high-crash location, the assessment of safety should include accident type and severity (including pedestrian and bicycle crashes), type of intersection control, and any discernible patterns of crashes. Other factors should be considered such as high volumes of at-risk pedestrian age groups (children or the elderly), crossing locations with difficult sight lines, or uncontrolled locations. High-crash locations are defined as those with more than 48 total reportable and non-reportable crashes or five or more pedestrian/bicycle injury crashes during any consecutive 12 months of the most recent three-year period for which data is available.

ASSESSMENT OF VEHICULAR AND SAFETY ISSUES

The assessment of safety impacts is often subjective and depends largely on the location of the Proposed Actions and the circumstances under which historic crashes took place. It is the goal of this analysis to determine whether the Proposed Actions would increase the potential for pedestrian and bicycle crashes at study intersections that are considered high-crash locations. In cases where this determination is made, measures to improve pedestrian and bicycle safety should be identified and coordinated with NYCDOT.

G. TRAFFIC

EXISTING CONDITIONS

STUDY AREA INTERSECTION AND ROADWAY CHARACTERISTICS

The physical and operational characteristics of the major roadways in the Study Area are as follows:

- Bay Street/Richmond Terrace: a two-way north-south roadway designated as Richmond Terrace north of the St. George Ferry Terminal and Bay Street south of the St. George Ferry Terminal. South of Clinton Street, Bay Street operates with one travel lane in each direction, shared lane markings on both sides of the street (with bicycle lanes on certain segments), and curbside parking on both sides of the street. North of Clinton Street, Bay Street operates with two travel lanes in each direction and is divided by a median along certain segments. East of Westervelt Avenue, Richmond Terrace operates as a two-way east-west roadway that operates with two travel lanes in each direction, one bicycle lane in each direction, and curbside parking on both sides of the street. West of Westervelt Avenue, Richmond Terrace

transitions to one travel lane in each direction with no curbside parking. The street has one curbside bicycle lane in each direction from York Avenue to Lafayette Avenue.

- Front Street: a two-way north-south roadway that operates with one travel lane in each direction and no curbside parking. It is being realigned and restriped as part of the Stapleton development project.
- Victory Boulevard: a two-way east-west roadway that generally operates with one travel lane in each direction and curbside parking on both sides of the street. During weekday peak periods, the curbside lane in the direction of peak travel is designated as a bus-only lane, with right turns permitted but no parking permitted. Between 7:00 AM and 9:00 AM, Monday-Friday, the eastbound curbside lane operates as a bus lane. Between 4:00 PM and 9:00 PM, the westbound curbside lane operates as a bus lane.
- Jersey Street: a two-way north-south roadway that operates with one travel lane in each direction and curbside parking on the west side of the street.
- Broad Street: a two-way east-west roadway that operates with one travel lane in each direction, a painted center median, and curbside parking on both sides of the street.
- Hannah Street: a two-way east-west roadway that operates with one travel lane in each direction. Curbside parking is permitted on the southbound side on the segment between St Pauls Avenue and Van Duzer Street.
- Canal Street: an east-west roadway. Between Broad Street and the intersection with Water Street and Wright Street, Canal Street operates as a two-way roadway with one travel lane in each direction, angle parking on both sides of the central median, and curbside parking on both sides of the street. Between the intersection with Water Street and Wright Street eastward to Bay Street, Canal Street operates as a one-way eastbound roadway with curbside parking permitted on both sides of the street. This segment is paired with the westbound Water Street to the north. Between Bay Street and Front Street, Canal Street operates as a two-way roadway with curbside parking permitted on both sides of the street.
- Wave Street: an east-west roadway. Between Bay Street and Front Street, Wave Street operates as a two-way roadway with one travel lane in each direction and curbside parking on both sides of the street. From Bay Street westward to Sands Street, Wave Street operates as a one-way westbound roadway with curbside parking permitted on the north side of the street.
- Clinton Street: a one-way east-west roadway that operates with one westbound travel lane and curbside parking on one side of the street. Curbside parking is permitted on the south side of the street on the segment between St Pauls Avenue and Brewster Street and the segment between Van Duzer Street and Bay Street. Curbside parking is permitted on the north side of the street on the segment between Van Duzer Street and Brewster Street.
- Van Duzer Street: operates as a one-way northbound roadway north of Targee Street, with one northbound travel lane and curbside parking generally permitted on both sides of the street. This segment is paired with St Pauls Avenue. South of Targee Street, Van Duzer Street operates as a one-way southbound roadway. The street operates with one southbound travel lane between Targee Street and St Pauls Avenue and between Broad Street and Hillside Avenue. The street operates with two southbound travel lanes between St Pauls Avenue and Broad Street and between Hillside Avenue and Richmond Road. Curbside parking is generally permitted on one side of the street (east side from St Pauls Avenue to Broad Street; west side from Broad Street to Hillside Avenue).

- St Pauls Avenue operates as a one-way southbound roadway with one southbound travel lane and curbside parking on both sides of the street. In addition, the east side parking lane is generally buffered from the travel lane.

TRAFFIC CONDITIONS

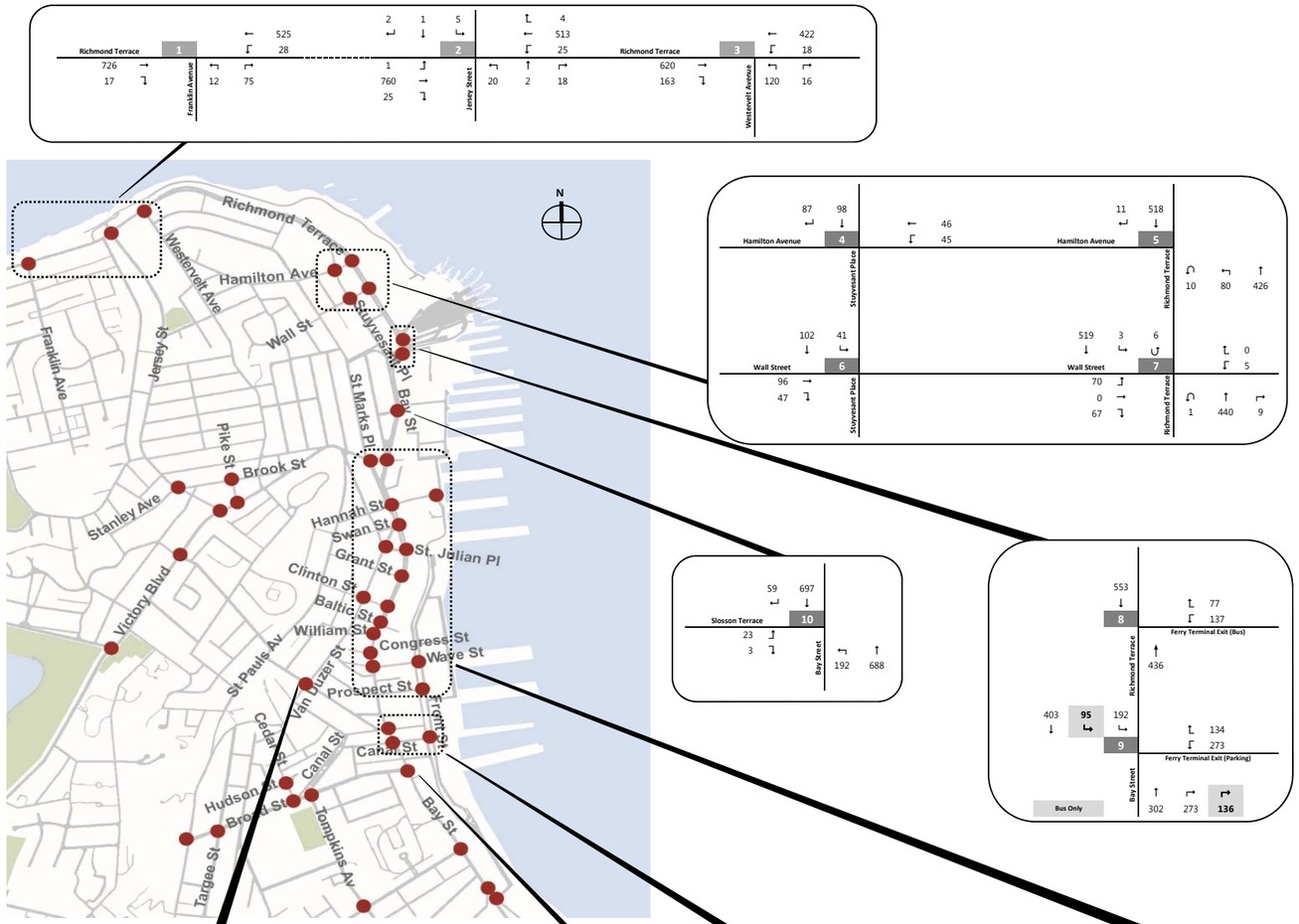
Existing traffic volumes were based on traffic data collected in November 2015 and June 2016 during peak periods when background traffic is typically greatest and/or when the Proposed Actions are projected to generate the greatest number of trips that would be added to the roadway network. The data collection program included Miovision and manual turning movement counts at study locations during the Weekday AM, Weekday MD, Weekday PM, and Saturday MD peak periods while local schools were in session. Crosswalk counts were collected during all peak periods for all intersections.

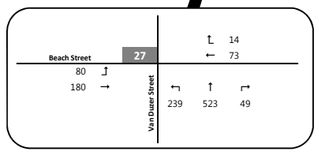
Turning movement counts and vehicle classification counts were performed at each study intersection. Traffic volumes were balanced between intersections where appropriate. Automated Traffic Recorders (ATRs) were placed at 68 locations for a continuous nine-day period in November 2015 and/or June 2016 to collect 24-hour counts. The ATR counts were used to identify daily and temporal traffic variations. In June 2018, ATRs were placed at 23 out of the 68 locations from the November 2015 / June 2016 count program in order to evaluate any network changes that may have occurred between 2015 and 2018. The 23 ATR locations used for comparison purposes were selected in coordination with NYCDCP and NYCDOT and primarily located along and/or near the Bay Street corridor. While the results of the 2018 ATR counts at these 23 locations indicated slight changes in overall peak period network volumes and temporal variations compared to the data collected in 2015 /2016, these differences may be attributable to operational changes implemented by NYCDOT and traffic generated by No-Build construction in the study area. Therefore, the network derived from 2015/2016 counts was used for the analysis of Existing Conditions.

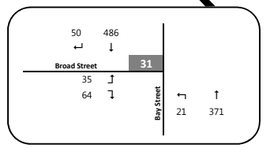
An inventory of the study intersections was performed to determine traffic signal timing, phasing, and cycle length; street and curbside signage; pavement markings; and lane dimensions to be used in the calculation of street capacities. Also, official signal timing data were obtained from NYCDOT to confirm field observations and for incorporation into the capacity analysis.

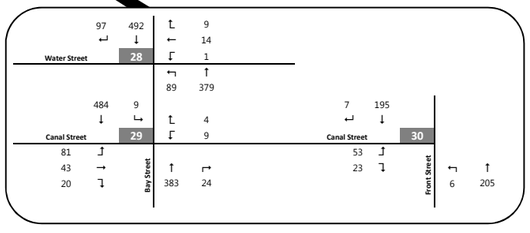
Figures 14-8 through 14-11 show the Existing Conditions traffic volumes for the four peak hours. The representative peak hours of background traffic in the Study Area were determined to be:

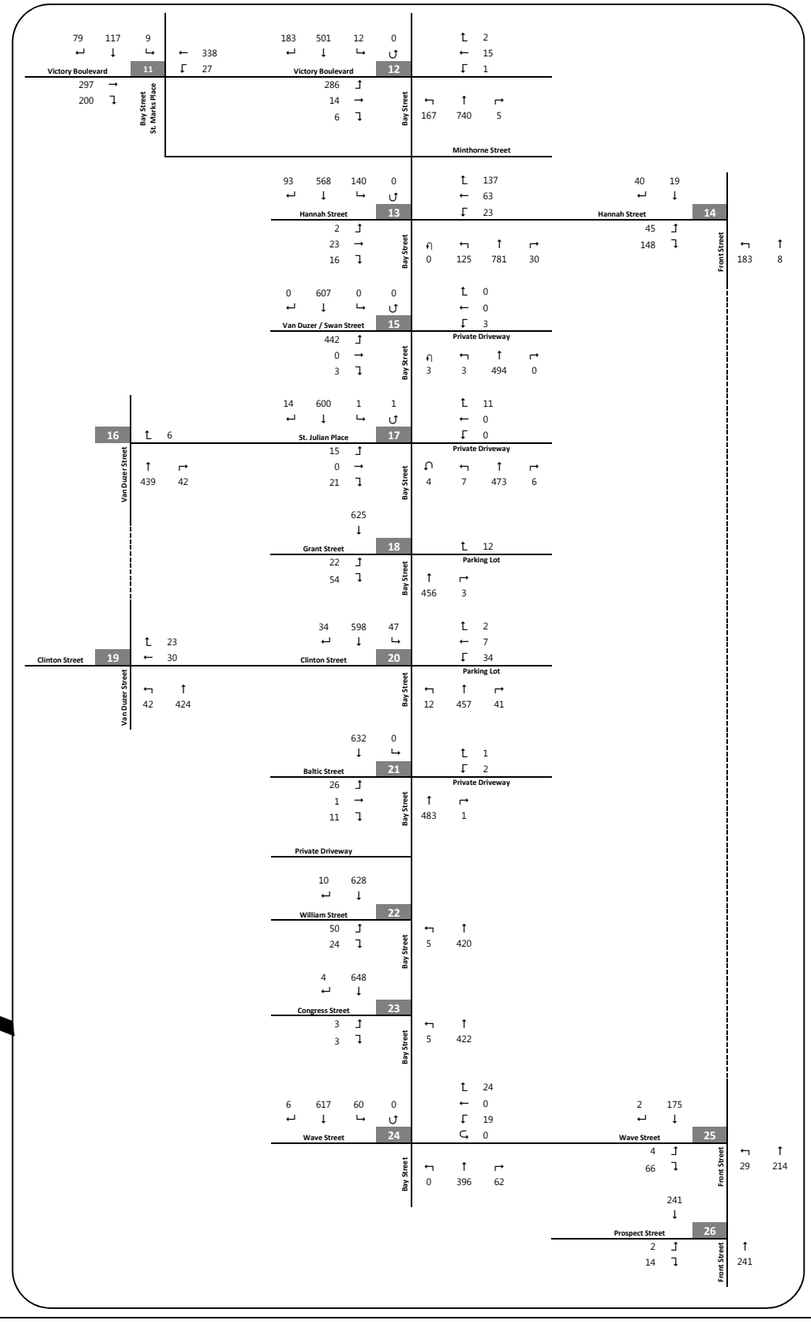
- Weekday AM peak hour: 7:45 AM to 8:45 AM
- Weekday MD peak hour: 2:30 PM to 3:30 PM
- Weekday PM peak hour: 4:45 PM to 5:45 PM
- Saturday MD peak hour: 2:15 PM to 3:15 PM







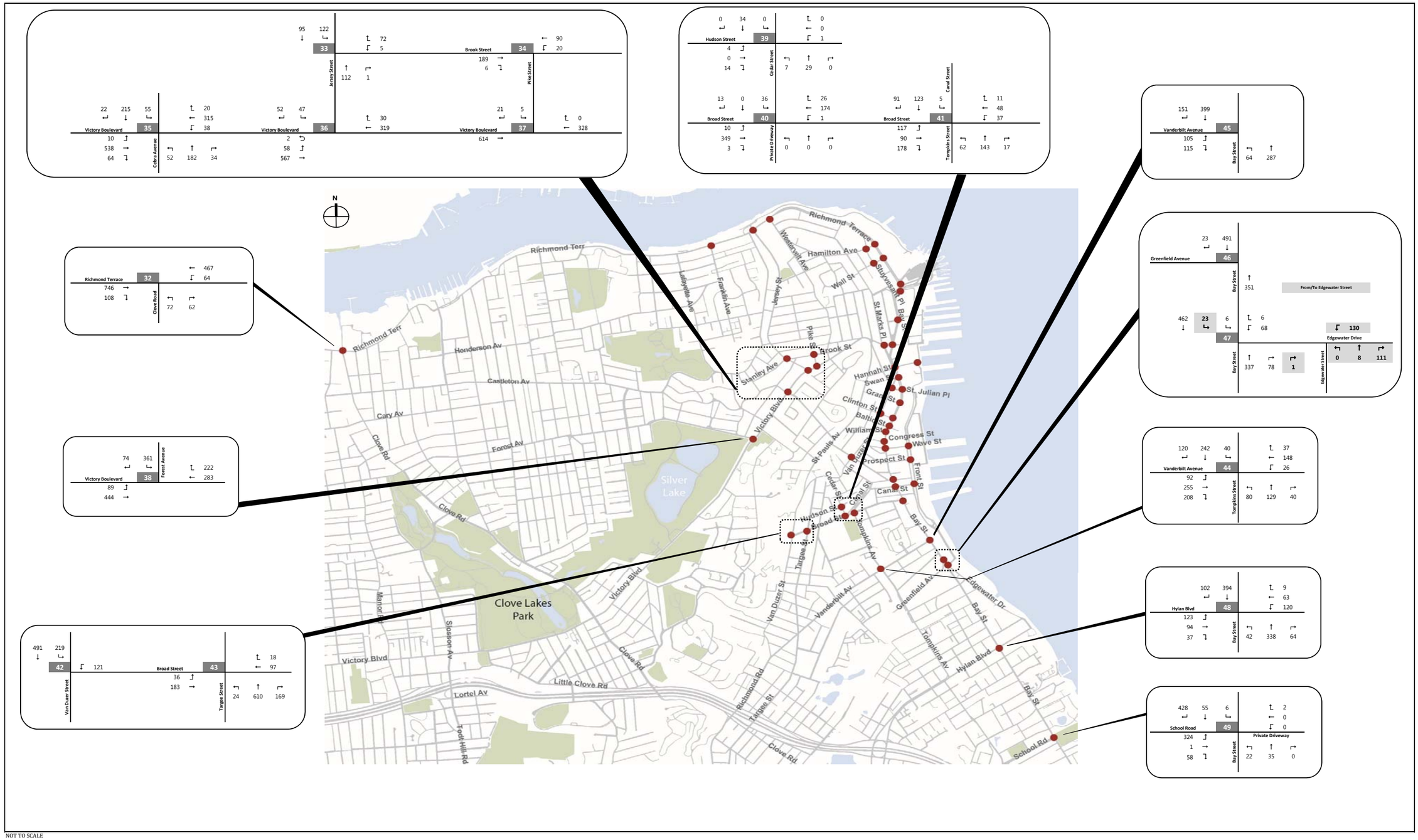




NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

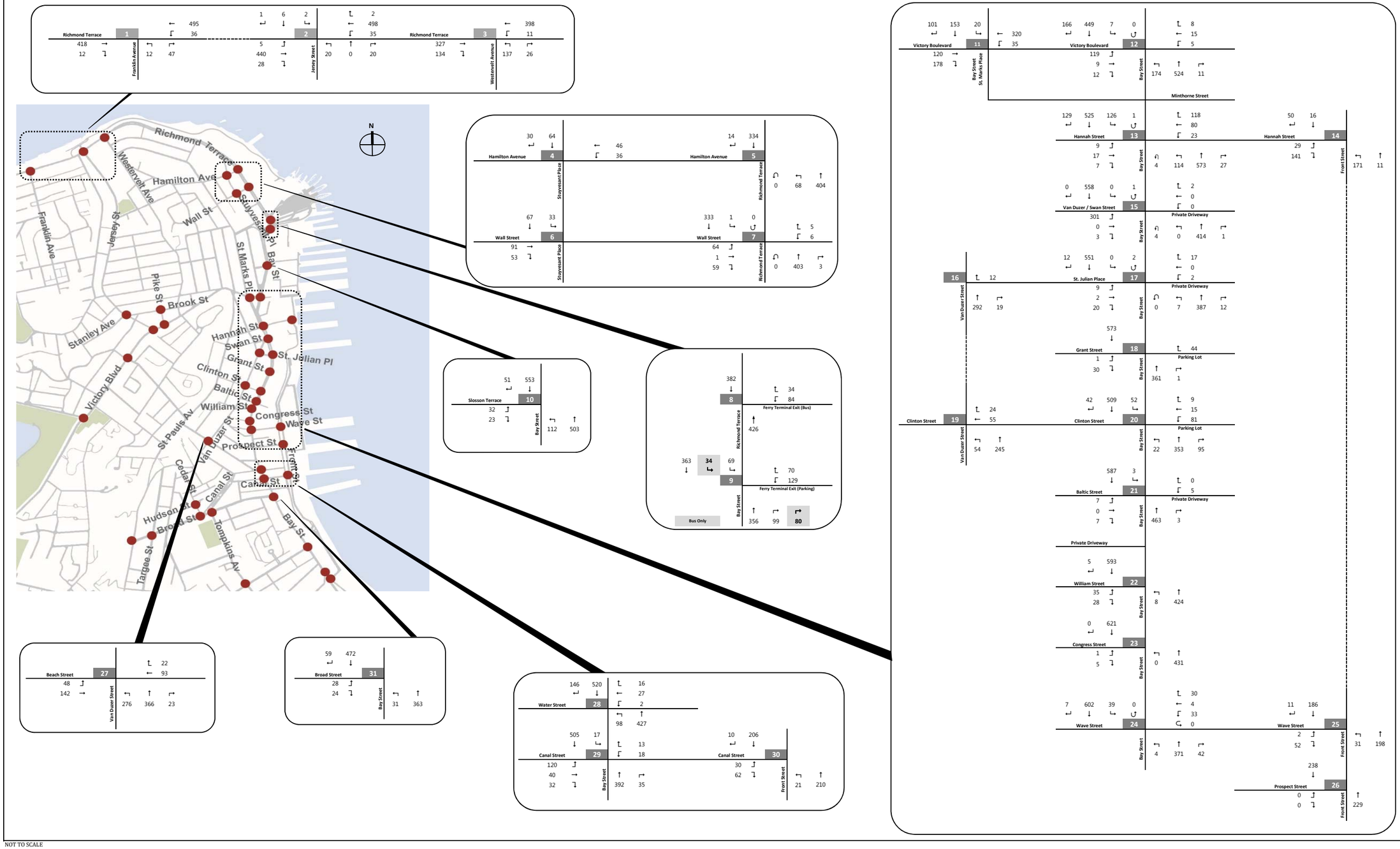
Existing Traffic Conditions
Weekday AM Peak Hour
Figure 14-8 A



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

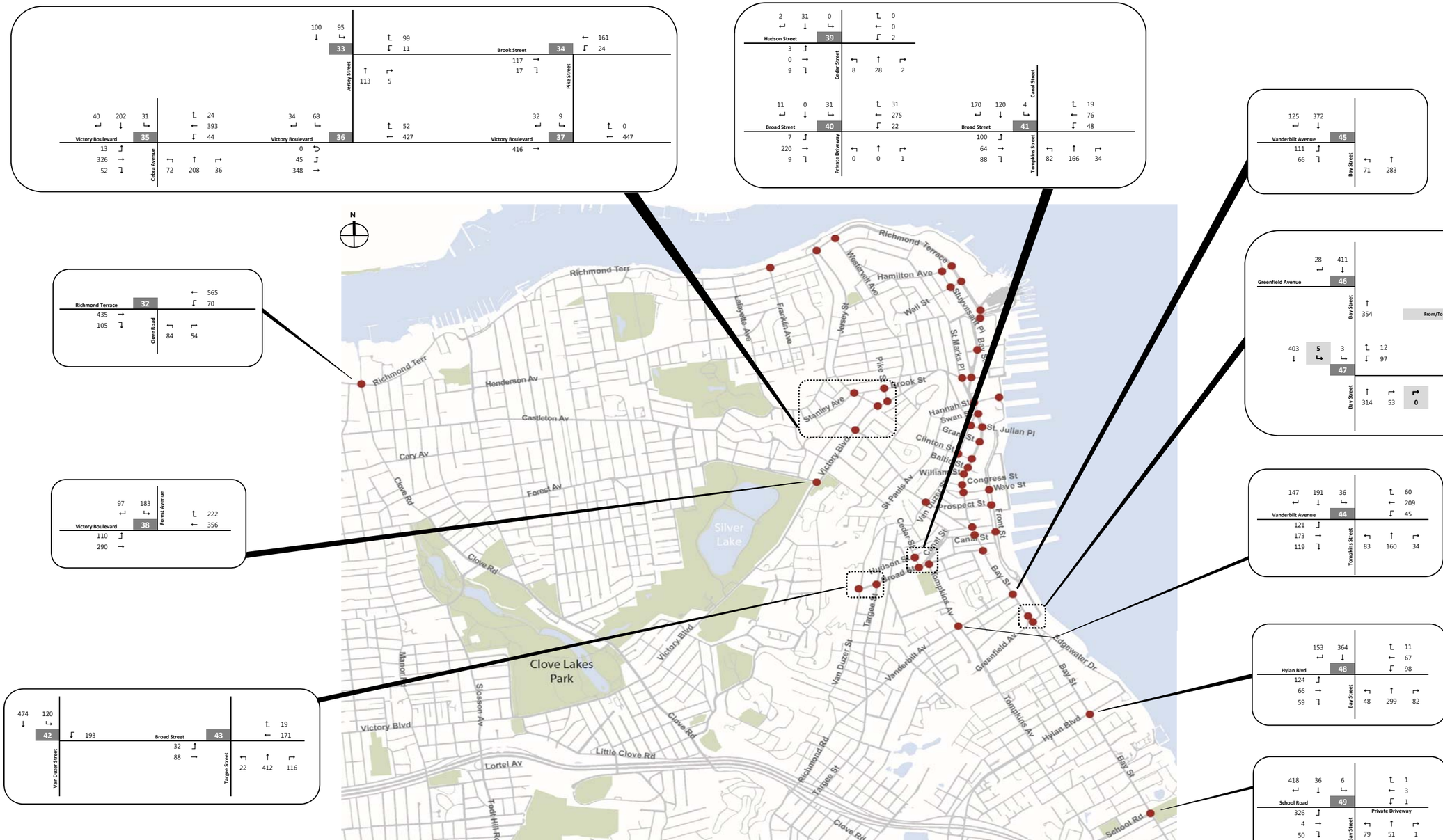
Existing Traffic Conditions
Weekday AM Peak Hour
Figure 14-8 B



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

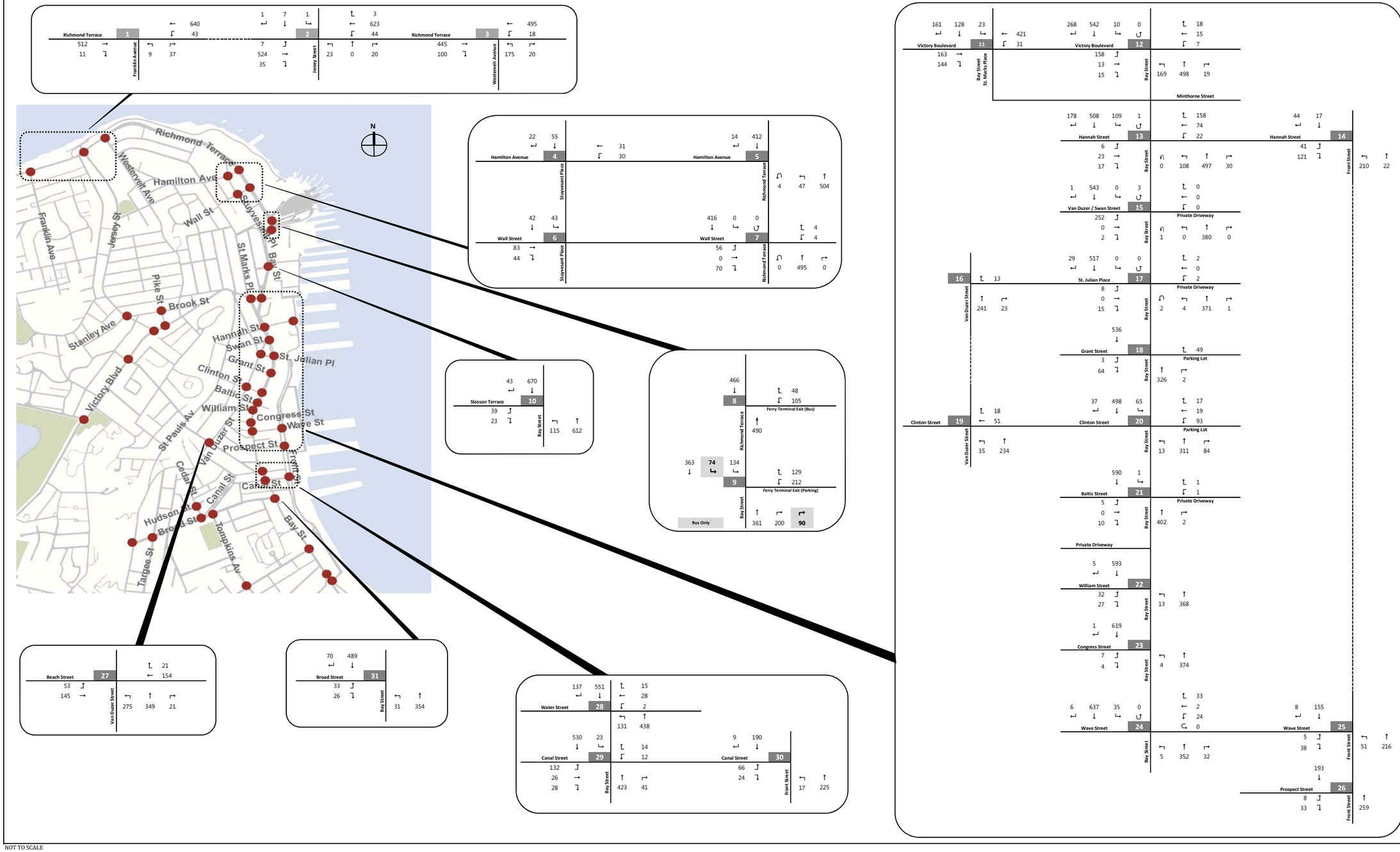
Existing Traffic Conditions
Weekday MD Peak Hour
Figure 14-9 A



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

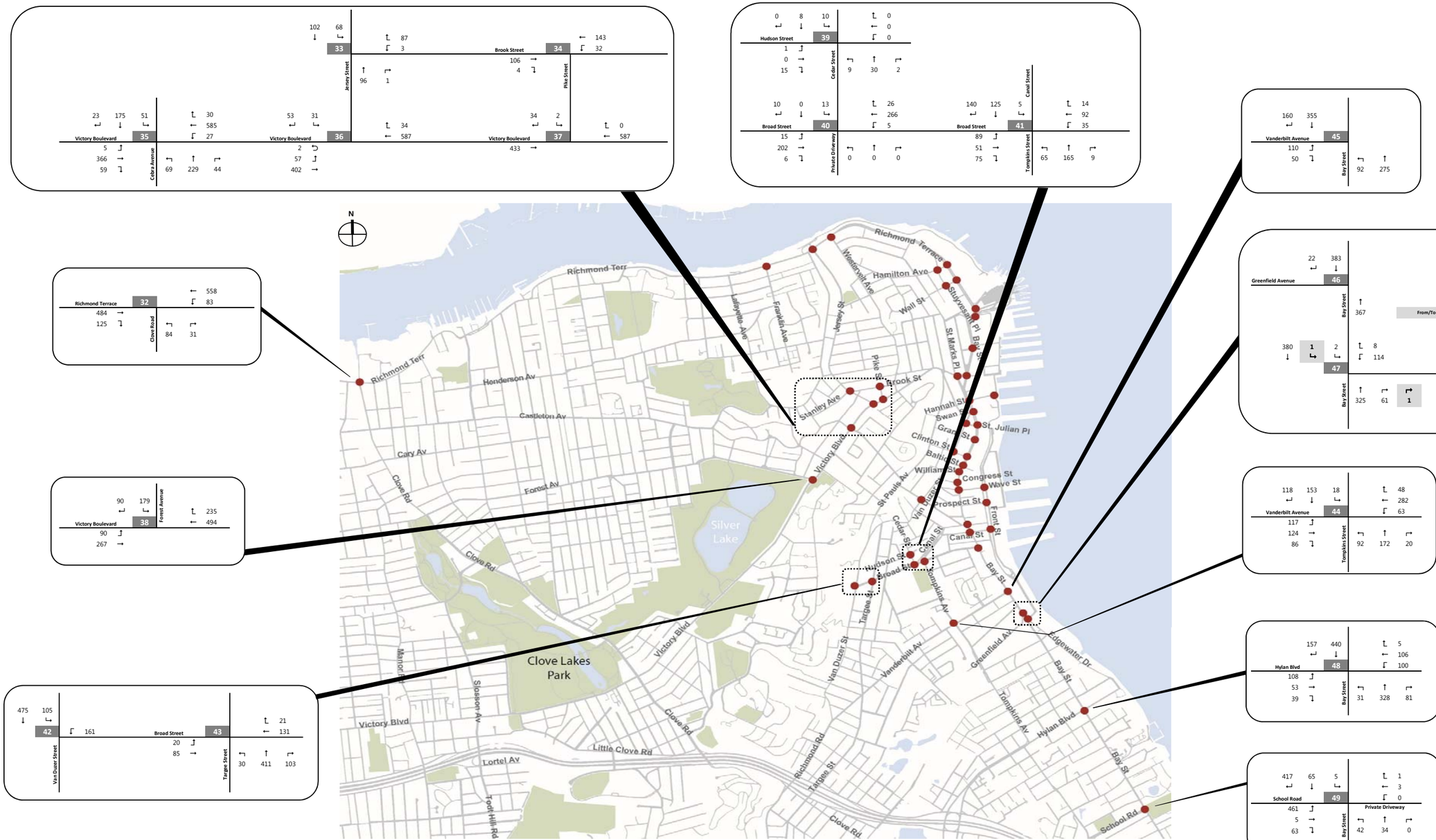
Existing Traffic Conditions
Weekday MD Peak Hour
Figure 14-9 B



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

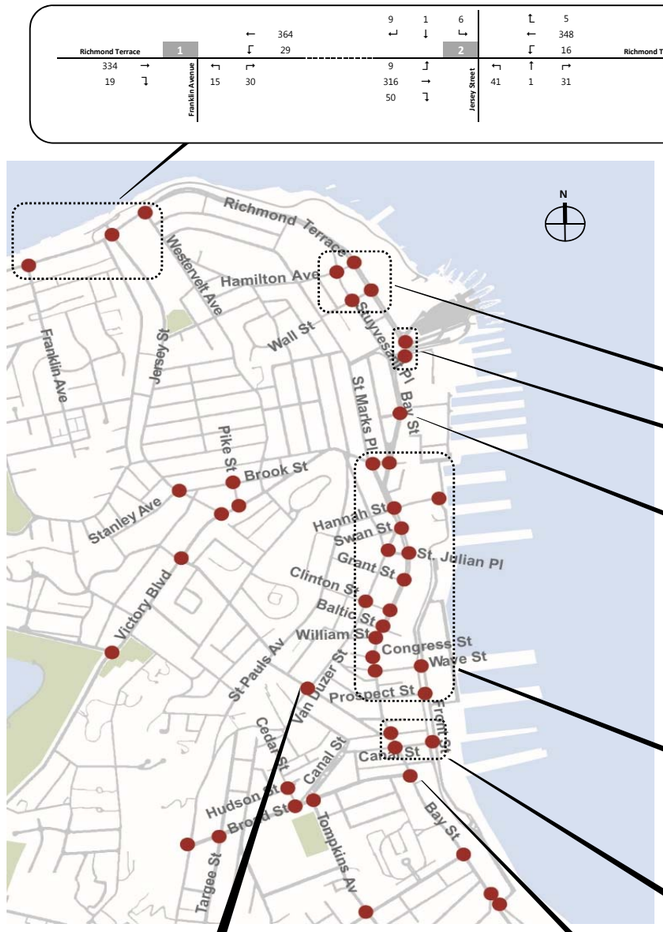
Existing Traffic Conditions
Weekday PM Peak Hour
Figure 14-10 A

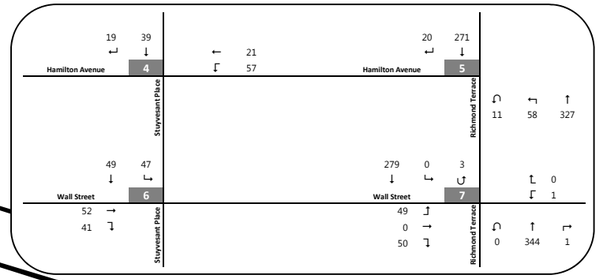


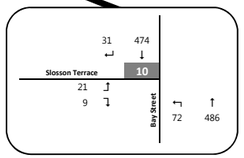
NOT TO SCALE

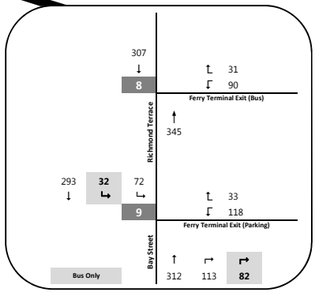
BAY STREET REZONING AND RELATED ACTIONS

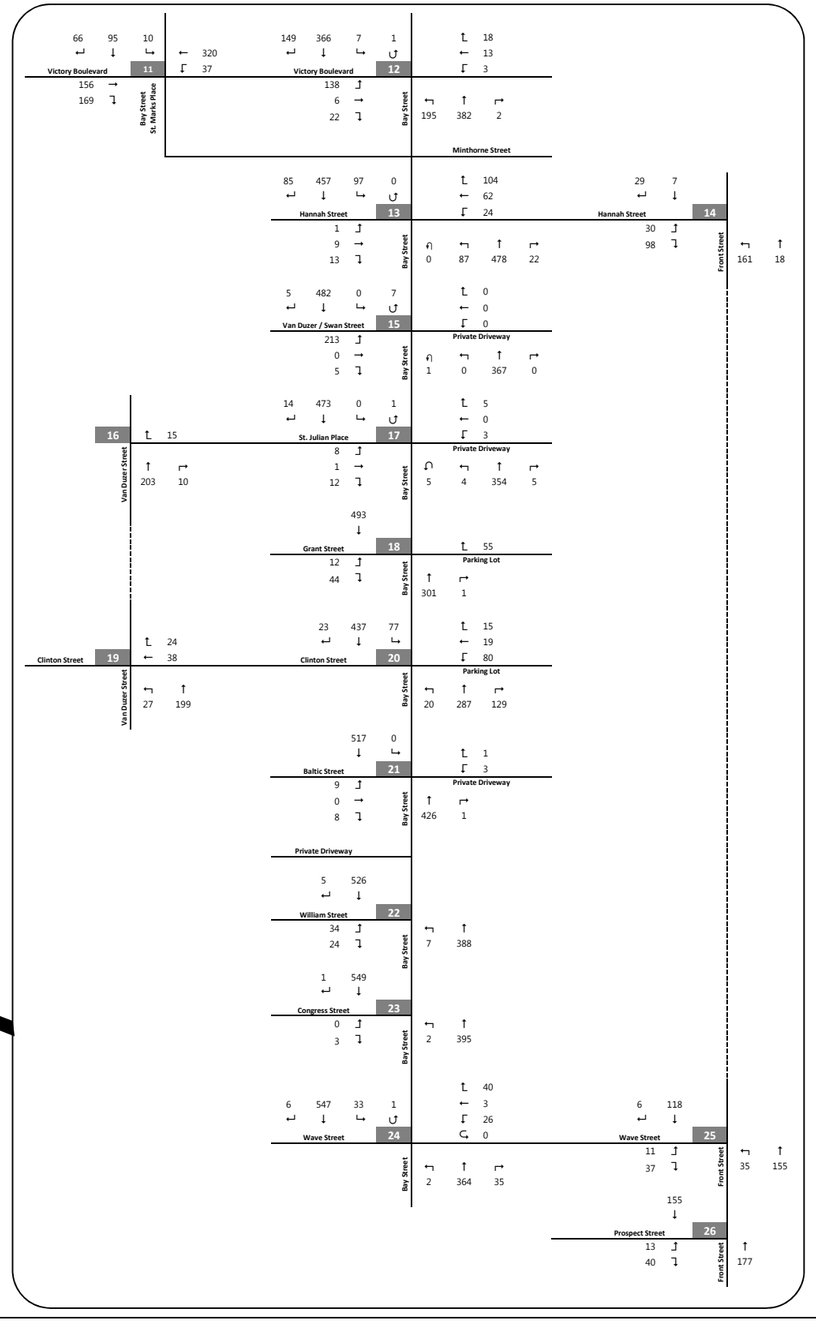
Existing Traffic Conditions
Weekday PM Peak Hour
Figure 14-10 B

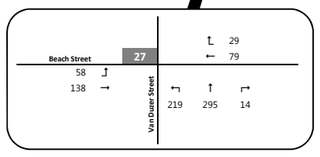


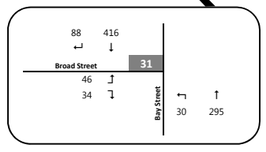


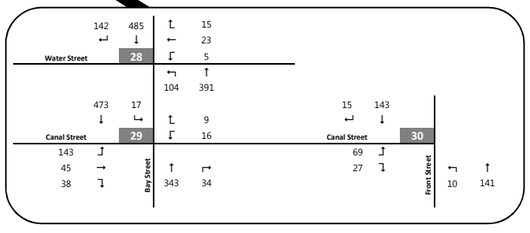








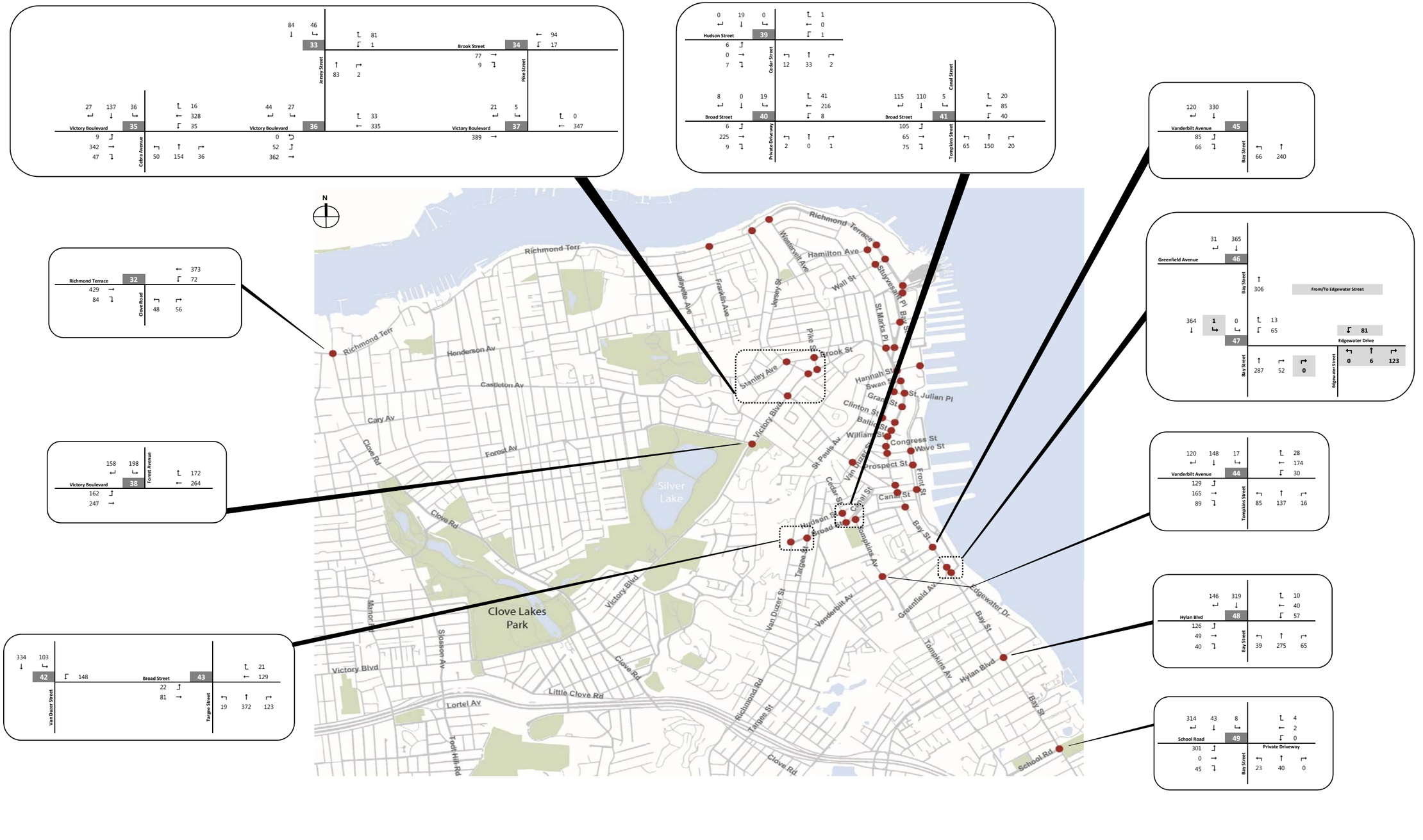




NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

Existing Traffic Conditions
Saturday MD Peak Hour
Figure 14-11 A



Richmond Terrace & Clove Road					
			←	373	
Richmond Terrace	32		⌜	72	
429 →					
84 ⌝		Clove Road	↵	48	↱ 56

Victory Boulevard & Forest Avenue					
				↰ 172	
Victory Boulevard	38			← 264	
162 ⌡		Forest Avenue			
247 →					

Victory Boulevard & Van Duzer Street / Targee Street								
334	103					↰	21	
↓	↳					←	129	
	42	⌜ 148	Broad Street	43				
		22 ⌡						
		81 →				↵	↑	↱
Van Duzer Street				Targee Street		19	372	123

Victory Boulevard & Jersey Street / Pike Street										
		84	46					↰	94	
		↓	↳					⌜	17	
			33	↰ 81	Brook Street	34				
				⌜ 1						
		↑	↱		77 →					
		83	2		9 ⌝		Pike Street			
27	137	36								
↵	↓	↳								
Victory Boulevard	35			↰ 16			21	5		↰ 0
9 ⌡				← 328			↵	↳		← 347
342 →				⌜ 35			389 →			
47 ⌝		Cebra Avenue			Victory Boulevard	36				
		↵	↑	↱	0 ⌙					
		50	154	36	52 ⌡					
					362 →					
						↰	33			
						←	335			

Hudson Street & Broad Street / Cedar Street & Canal Street										
0	19	0				↰	1			
↵	↓	↳				←	0			
Hudson Street	39					⌜	1			
6 ⌡										
0 →										
7 ⌝										
			↰	↑	↱					
			12	33	2					
8	0	19				↰	41			
↵	↓	↳				←	216			
Broad Street	40					⌜	8	Canal Street		
6 ⌡										
225 →										
9 ⌝		Private Driveway								
		↵	↑	↱						
		2	0	1						
						115	110	5		↰ 20
						↵	↓	↳		← 85
					Broad Street	41				⌜ 40
					6 ⌡					
					105 →					
					65 →					
					75 ⌝					
					↵	↑	↱			
					65	150	20			

Vanderbilt Avenue & Bay Street					
120	330				
↵	↓				
Vanderbilt Avenue	45				
85 ⌡					
66 ⌝		Bay Street	↵	↑	
			66	240	

Greenfield Avenue & Bay Street / Edgewater Street									
		31	365						
		↵	↓						
Greenfield Avenue		46							
				Bay Street	↑				
					306	From/To Edgewater Street			
364	1	0							
↓	↳	↰			↰ 13				
	47	⌜			⌜ 65		↰ 81		
						Edgewater Drive			
			Bay Street	↑	↱	↱	↰	↑	↱
				287	52	0	0	6	123
							Edgewater Street		

Vanderbilt Avenue & Tompkins Street					
120	148	17			↰ 28
↵	↓	↳			← 174
Vanderbilt Avenue	44				⌜ 30
129 ⌡					
165 →					
89 ⌝		Tompkins Street	↵	↑	↱
			85	137	16

Hylan Blvd & Bay Street					
	146	319			↰ 10
	↵	↓			← 40
Hylan Blvd	48				⌜ 57
126 ⌡					
49 →					
40 ⌝		Bay Street	↵	↑	↱
			39	275	65

School Road & Bay Street / Private Driveway					
314	43	8			↰ 4
↵	↓	↳			← 2
School Road	49				⌜ 0
301 ⌡					Private Driveway
0 →					
45 ⌝		Bay Street	↵	↑	↱
			23	40	0

NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

Existing Traffic Conditions
Saturday MD Peak Hour
Figure 14-11 B

LEVEL OF SERVICE – SIGNALIZED INTERSECTIONS

Table 14-27 presents the capacity analysis results for the signalized intersections included in the Study Area. The majority of the analyzed intersection approaches and lane groups operate at an acceptable level of mid-LOS D or better (45.0 seconds of delay for signalized intersections) during the four analysis peak hours. The exceptions are as follows:

Richmond Terrace and Jersey Street

- During the **Weekday PM** peak hour, the westbound through/left-turn lane group operates at LOS E with an average delay of 74.7 seconds and a v/c ratio of 0.91.

Richmond Terrace and Westervelt Avenue

- During the **Weekday PM** peak hour, the westbound approach operates at LOS F with an average delay of 94.9 seconds and a v/c ratio of 0.98.

Wall Street and Richmond Terrace

- During the **Weekday AM** peak hour, the eastbound approach operates at LOS D with an average delay of 50.5 seconds and a v/c ratio of 0.60.
- During the **Weekday MD** peak hour, the eastbound approach operates at LOS D with an average delay of 47.3 seconds and a v/c ratio of 0.53.
- During the **Weekday PM** peak hour, the eastbound approach operates at LOS D with an average delay of 45.9 seconds and a v/c ratio of 0.50.

Richmond Terrace and Ferry Terminal (parking lot)

- During the **Weekday AM** peak hour, the westbound right-turn lane group operates at LOS F with an average delay of 131.2 seconds and a v/c ratio of 0.32. The southbound left-turn lane group operates at LOS F with an average delay of 106.6 seconds and a v/c ratio of 0.74.
- During the **Weekday MD** peak hour, the westbound right-turn lane group operates at LOS F with an average delay of 127.3 seconds and a v/c ratio of 0.16. The southbound left-turn lane group operates at LOS F with an average delay of 96.9 seconds and a v/c ratio of 0.31.
- During the **Weekday PM** peak hour, the westbound right-turn lane group operates at LOS F with an average delay of 129.0 seconds and a v/c ratio of 0.28. The southbound left-turn lane group operates at LOS F with an average delay of 111.3 seconds and a v/c ratio of 0.65.
- During the **Saturday MD** peak hour, the westbound right-turn lane group operates at LOS F with an average delay of 171.0 seconds and a v/c ratio of 0.08. The southbound left-turn lane group operates at LOS F with an average delay of 102.1 seconds and a v/c ratio of 0.31.

Victory Boulevard and Bay Street/St. Marks Place

- During the **Weekday PM** peak hour, the southbound right-turn lane group operates at LOS E with an average delay of 65.3 seconds and a v/c ratio of 0.78.

Bay Street and Swan Street/Van Duzer Street

- During the **Weekday AM** peak hour, the eastbound left-turn lane group operates at LOS D with an average delay of 48.3 seconds and a v/c ratio of 0.65. The eastbound left/through/right-turn lane group operates at LOS E with an average delay of 59.4 seconds and a v/c ratio of 0.74.

Van Duzer Street and Beach Street

- During the **Weekday AM** peak hour, the eastbound approach operates at LOS D with an average delay of 45.4 seconds and a v/c ratio of 0.73.

Victory Boulevard and Cebra Avenue

- During the **Weekday AM** peak hour, the eastbound left-turn lane group operates at LOS D with an average delay of 47.1 seconds and a v/c ratio of 0.43. The eastbound through/right-turn lane group operates at LOS D with an average delay of 53.8 seconds and a v/c ratio of 0.75. The westbound left-turn lane group operates at LOS D with an average delay of 47.1 seconds and a v/c ratio of 0.41. The westbound through/right-turn lane group operates at LOS D with an average delay of 46.1 seconds and a v/c ratio of 0.60.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group operates at LOS E with an average delay of 76.3 seconds and a v/c ratio of 0.67. The eastbound through/right-turn lane group operates at LOS D with an average delay of 50.5 seconds and a v/c ratio of 0.66. The westbound left-turn lane group operates at LOS D with an average delay of 50.4 seconds and a v/c ratio of 0.47. The westbound through/right-turn lane group operates at LOS E with an average delay of 62.0 seconds and a v/c ratio of 0.83.

Victory Boulevard and Forest Avenue

- During the **Weekday AM** peak hour, the northbound through lane group operates at LOS E with an average delay of 74.9 seconds and a v/c ratio of 0.48.

Broad Street and Van Duzer Street

- During the **Weekday AM** peak hour, the westbound approach operates at LOS F with an average delay of 89.7 seconds and a v/c ratio of 0.65.
- During the **Weekday MD** peak hour, the westbound approach operates at LOS E with an average delay of 67.2 seconds and a v/c ratio of 0.69.
- During the **Weekday PM** peak hour, the westbound approach operates at LOS F with an average delay of 88.7 seconds and a v/c ratio of 0.70.
- During the **Saturday MD** peak hour, the westbound approach operates at LOS E with an average delay of 69.5 seconds and a v/c ratio of 0.61.

Vanderbilt Avenue and Tompkins Avenue

- During the **Weekday AM** peak hour, the northbound approach operates at LOS E with an average delay of 59.4 seconds and a v/c ratio of 0.85. The southbound approach operates at LOS E with an average delay of 61.7 seconds and a v/c ratio of 0.92.

Bay Street and Edgewater Drive

- During the **Weekday AM** peak hour, the westbound approach operates at LOS D with an average delay of 47.7 seconds and a v/c ratio of 0.55.
- During the **Weekday PM** peak hour, the westbound approach operates at LOS D with an average delay of 46.7 seconds and a v/c ratio of 0.53. The north-westbound approach operates at LOS E with an average delay of 59.0 seconds and a v/c ratio of 0.89.

Bay Street and Hylan Boulevard

- During the **Weekday AM** peak hour, the westbound approach operates at LOS D with an average delay of 47.2 seconds and a v/c ratio of 0.60.

- During the **Weekday PM** peak hour, the westbound approach operates at LOS D with an average delay of 45.5 seconds and a v/c ratio of 0.58.

Table 14-27: Existing Conditions Level of Service Analysis – Signalized Intersections

Int #	Intersection & Approach	Weekday AM Peak Hour					Weekday MD Peak Hour					Weekday PM Peak Hour					Saturday Peak Hour				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
	Richmond Terrace and Franklin Avenue																				
1	Eastbound	TR	0.63	5.2	A	82	TR	0.38	4.9	A	147	TR	0.47	7.4	A	240	TR	0.35	19.3	B	248
	Westbound	LT	0.52	29.1	C	541	LT	0.49	2.5	A	29	LT	0.60	2.7	A	37	LT	0.38	15.5	B	303
	Northbound	LR	0.23	36.7	D	102	LR	0.17	35.8	D	73	LR	0.12	35.1	D	61	LR	0.10	22.7	C	45
		Intersection		16.9	B		Intersection		5.6	A		Intersection		6.0	A		Intersection		17.7	B	
	Richmond Terrace and Jersey Street																				
2	Eastbound	L	0.00	8.0	A	0	L	0.02	11.6	B	5	L	0.04	11.3	B	5	L	0.03	7.0	A	4
		TR	0.96	34.4	C	896	TR	0.56	22.3	C	398	TR	0.67	26.0	C	490	TR	0.49	11.2	B	74
	Westbound	LT	0.92	42.3	D	674	LT	0.71	24.8	C	355	LT	0.91	74.7	E	552	LT	0.58	9.6	A	77
		R	0.01	10.0	A	2	R	0.00	11.5	B	1	R	0.00	12.3	B	1	R	0.01	5.4	A	2
	Northbound	L	0.06	25.1	C	28	L	0.06	27.1	C	29	L	0.07	27.2	C	33	L	0.12	19.0	B	37
		TR	0.07	35.8	D	33	TR	0.07	35.1	D	38	TR	0.07	35.1	D	38	TR	0.12	26.9	C	39
	Southbound	L	0.01	24.4	C	11	L	0.00	26.0	C	6	L	0.00	26.0	C	4	L	0.02	17.8	B	11
		TR	0.01	35.0	C	9	TR	0.02	34.1	C	17	TR	0.02	34.2	C	18	TR	0.03	25.5	C	17
		Intersection		37.2	D		Intersection		24.0	C		Intersection		51.3	D		Intersection		11.8	B	
	Richmond Terrace and Westervelt Avenue																				
3	Eastbound	TR	0.84	12.6	B	151	TR	0.51	12.5	B	137	TR	0.59	11.2	B	145	TR	0.42	3.0	A	33
	Westbound	LT	0.54	25.3	C	450	LT	0.44	23.2	C	192	LT	0.98	94.9	F	629	LT	0.36	42.3	D	285
	Northbound	LR	0.33	34.3	C	143	LR	0.41	35.9	D	168	LR	0.47	37.2	D	201	LR	0.19	21.2	C	81
		Intersection		19.1	B		Intersection		20.8	C		Intersection		48.3	D		Intersection		21.0	C	
	Hamilton Avenue and Richmond Terrace																				
5	Northbound	LT	0.44	5.0	A	46	LT	0.37	4.9	A	45	LT	0.39	3.1	A	37	LT	0.35	3.3	A	23
	Southbound	TR	0.34	9.7	A	72	TR	0.23	8.3	A	71	TR	0.28	11.9	B	101	TR	0.23	4.2	A	23
		Intersection		7.4	A		Intersection		6.3	A		Intersection		6.8	A		Intersection		3.7	A	
	Wall Street and Richmond Terrace																				
7	Eastbound	LTR	0.60	50.5	D	198	LTR	0.53	47.3	D	153	LTR	0.50	45.9	D	172	LTR	0.29	25.1	C	97
	Westbound	LTR	0.02	26.0	C	13	LTR	0.03	22.9	C	21	LTR	0.02	22.6	C	16	LTR	0.00	14.0	B	3
	Northbound	TR	0.34	2.2	A	15	TR	0.32	8.3	A	46	TR	0.68	38.3	D	167	TR	0.30	36.2	D	167
	Southbound	LT	0.75	16.9	B	325	LT	0.52	36.8	D	391	LT	0.64	43.0	D	470	LT	0.51	28.1	C	195
		Intersection		15.8	B		Intersection		25.4	C		Intersection		41.0	D		Intersection		31.4	C	
	Richmond Terrace and Ferry Terminal (bus)																				
8	Westbound	L	0.35	37.8	D	151	L	0.26	32.9	C	95	L	0.33	35.2	D	118	L	0.29	28.1	C	84
		R	0.32	38.4	D	92	R	0.16	36.5	D	52	R	0.21	37.2	D	66	R	0.13	28.1	C	38
	Northbound	T	0.46	18.1	B	96	T	0.46	10.7	B	54	T	0.52	16.2	B	92	T	0.35	14.3	B	39
	Southbound	T	0.30	14.0	B	134	T	0.22	5.3	A	48	T	0.27	4.0	A	43	T	0.17	4.7	A	24
		Intersection		19.8	B		Intersection		11.8	B		Intersection		14.2	B		Intersection		13.0	B	
	Richmond Terrace and Ferry Terminal (parking lot)																				
9	Westbound	L	0.54	39.8	D	286	L	0.26	31.9	C	131	L	0.42	34.9	C	209	L	0.27	27.0	C	101
		R	0.32	131.2	F	143	R	0.16	127.3	F	79	R	0.28	129.0	F	133	R	0.08	171.0	F	37
	Northbound	T	0.31	19.9	B	129	T	0.37	34.4	C	170	T	0.37	18.8	B	148	T	0.31	27.2	C	89
		R	0.29	2.3	A	12	R	0.11	7.9	A	50	R	0.21	1.4	A	8	R	0.12	13.1	B	75
		R	0.25	2.4	A	7	R	0.16	8.8	A	46	R	0.17	1.6	A	4	R	0.14	13.8	B	59
	Southbound	L	0.74	106.6	F	329	L	0.31	96.9	F	148	L	0.65	111.3	F	271	L	0.31	102.1	F	116
		TR	0.14	0.1	A	0	TR	0.13	0.1	A	0	TR	0.13	0.1	A	0	TR	0.10	0.1	A	0
		Intersection		37.6	D		Intersection		31.5	C		Intersection		35.7	D		Intersection		29.4	C	
	Bay Street and Slosson Terrace																				
10	Eastbound	LR	0.09	32.7	C	40	LR	0.16	24.6	C	54	LR	0.19	34.3	C	77	LR	0.09	23.5	C	34
	Northbound	L	0.54	14.6	B	87	L	0.34	8.9	A	26	L	0.31	9.7	A	59	L	0.16	9.2	A	30
		T	0.47	15.2	B	203	T	0.36	8.3	A	57	T	0.38	10.1	B	176	T	0.30	9.5	A	81
	Southbound	TR	0.56	13.5	B	133	TR	0.51	13.6	B	196	TR	0.52	13.5	B	137	TR	0.40	33.6	C	201
		Intersection		14.7	B		Intersection		11.7	B		Intersection		12.8	B		Intersection		21.0	C	
	Victory Boulevard and Bay Street/St. Marks Place																				
11	Eastbound	TR	0.45	4.5	A	35	TR	0.37	17.8	B	154	TR	0.19	1.0	A	1	TR	0.27	26.3	C	223
		R	0.09	2.3	A	6	R	0.04	15.3	B	23	R	0.14	0.4	A	1	R	0.16	19.9	B	115
	Westbound	T	0.33	10.2	B	163	T	0.36	43.3	D	279	T	0.37	4.1	A	56	T	0.35	24.9	C	234
		L	0.07	4.6	A	11	L	0.08	23.5	C	44	L	0.05	2.2	A	4	L	0.07	14.7	B	30
	Southbound	LT	0.39	41.7	D	149	LT	0.46	30.1	C	147	LT	0.47	43.8	D	179	LT	0.28	26.9	C	92
		R	0.31	40.9	D	106	R	0.41	30.6	C	95	R	0.78	65.3	E	210	R	0.21	26.5	C	66
		Intersection		14.1	B		Intersection		30.3	C		Intersection		20.6	C		Intersection		24.6	C	
	Victory Boulevard and Bay Street																				
12	Eastbound	L	0.79	43.1	D	323	L	0.32	28.0	C	64	L	0.42	42.9	D	183	L	0.34	4.0	A	10
		TR	0.05	17.0	B	21	TR	0.05	22.7	C	19	TR	0.07	32.1	C	44	TR	0.07	1.9	A	4
	Westbound	LTR	0.04	30.8	C	29	LTR	0.06	21.6	C	31	LTR	0.10	31.8	C	53	LTR	0.07	21.7	C	35
	Northbound						L	0.51	24.8	C	103	L	0.46	21.7	C	191					
							TR	0.82	30.2	C	460	TR	0.70	27.7	C	490					
		LTR	0.83	17.5	B	260											LTR	0.61	15.9	B	142
	Southbound	LT	0.36	3.0	A	23	LT	0.36	32.9	C	185	LT	0.38	5.4	A	51	LT	0.29	33.1	C	150
		R	0.29	3.4	A	19	R	0.32	33.9	C	155	R	0.38	2.4	A	14	R	0.22	14.6	B	97
		Intersection		15.7	B		Intersection		30.4	C		Intersection		17.3	B		Intersection		19.5	B	

Table 14-27 (con't): Existing Conditions Level of Service Analysis – Signalized Intersections

Int #	Intersection & Approach	Weekday AM Peak Hour					Weekday MD Peak Hour					Weekday PM Peak Hour					Saturday Peak Hour				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
	Bay Street and Hannah Street																				
	Eastbound	LTR	0.08	30.1	C	53	LTR	0.06	17.6	B	32	LTR	0.09	30.3	C	58	LTR	0.04	17.3	B	24
	Westbound	LTR	0.44	36.2	D	227	LTR	0.34	21.0	C	153	LTR	0.49	37.5	D	260	LTR	0.29	20.3	C	132
13	Northbound	LTR	0.78	34.7	C	461	LTR	0.73	26.0	C	288	LTR	0.52	19.4	B	291	LTR	0.54	19.1	B	216
	Southbound	L	0.64	26.2	C	97	L	0.54	18.6	B	138	L	0.32	26.0	C	118	L	0.33	12.9	B	40
		T	0.22	9.8	A	67	T	0.23	8.9	A	43	T	0.19	20.5	C	139	T	0.21	10.2	B	46
		R	0.13	4.2	A	13	R	0.23	4.1	A	20	R	0.23	8.2	A	83	R	0.14	1.9	A	0
		Intersection		25.7	C		Intersection		18.1	B		Intersection		22.0	C		Intersection		15.0	B	
	Bay Street and Swan Street/Van Duzer Street																				
	Eastbound	L	0.65	48.3	D	252	L	0.50	26.2	C	177	L	0.57	41.4	D	213	L	0.44	24.6	C	138
		LTR	0.74	59.4	E	338	LTR	0.21	20.6	C	76	LTR	0.22	32.7	C	98	LTR	0.09	18.7	B	49
15	Westbound	LTR	0.02	29.7	C	11	LTR	0.00	17.5	B	5	LTR	0.00	0.0	0.0	0	LTR	0.00	0.0	0.0	0
	Northbound	LTR	0.34	6.8	A	48	LTR	0.32	10.8	B	127	LTR	0.24	10.6	B	91	LTR	0.27	11.7	B	106
	Southbound	LTR	0.37	9.7	A	95	LTR	0.40	5.0	A	31	LTR	0.34	5.9	A	242	LTR	0.37	5.0	A	29
		Intersection		22.5	C		Intersection		11.6	B		Intersection		15.3	B		Intersection		11.3	B	
	Van Duzer Street and Clinton Street																				
19	Westbound	TR	0.20	42.0	D	62	TR	0.27	27.8	C	65	TR	0.23	40.5	D	83	TR	0.21	26.8	C	59
	Northbound	LT	0.55	11.6	B	239	LT	0.38	7.7	A	108	LT	0.33	8.5	A	119	LT	0.28	6.6	A	77
		Intersection		14.8	B		Intersection		11.8	B		Intersection		15.1	B		Intersection		10.8	B	
	Bay Street and Clinton Street																				
	Westbound	LTR	0.10	30.3	C	54	LTR	0.21	22.0	C	79	LTR	0.30	33.6	C	135	LTR	0.24	22.5	C	90
	Northbound	L	0.04	9.9	A	13	L	0.08	10.6	B	19	L	0.04	9.8	A	13	L	0.06	10.2	B	17
20		TR	0.30	11.1	B	124	TR	0.31	9.5	A	89	TR	0.24	9.7	A	91	TR	0.27	6.1	A	58
	Southbound	L	0.12	10.3	B	43	L	0.14	3.2	A	13	L	0.14	4.0	A	12	L	0.21	3.9	A	18
		TR	0.68	24.2	C	423	TR	0.65	7.6	A	201	TR	0.56	8.1	A	127	TR	0.57	7.4	A	77
		Intersection		18.5	B		Intersection		9.6	A		Intersection		11.7	B		Intersection		8.5	A	
	Van Duzer Street and Beach Street																				
	Eastbound	LT	0.73	45.4	D	294	LT	0.58	31.2	C	161	LT	0.56	37.2	D	214	LT	0.53	29.4	C	170
27	Westbound	TR	0.22	28.4	C	95	TR	0.32	24.1	C	95	TR	0.41	31.8	C	174	TR	0.27	23.3	C	88
	Northbound	L	0.28	14.9	B	149	L	0.35	13.0	B	141	L	0.37	16.2	B	178	L	0.25	11.7	B	106
		TR	0.77	28.4	C	530	TR	0.57	17.3	B	242	TR	0.52	19.4	B	273	TR	0.39	13.7	B	163
		Intersection		29.8	C		Intersection		20.1	C		Intersection		24.2	C		Intersection		18.3	B	
	Bay Street and Canal Street																				
	Eastbound	L	0.28	34.6	C	99	L	0.32	21.9	C	97	L	0.47	39.9	D	157	L	0.35	22.3	C	113
		TR	0.16	31.5	C	77	TR	0.14	18.8	B	59	TR	0.16	31.7	C	67	TR	0.16	18.9	B	66
29	Westbound	LTR	0.03	29.5	C	24	LTR	0.07	17.8	B	31	LTR	0.08	30.3	C	39	LTR	0.05	17.6	B	26
	Northbound	TR	0.40	4.0	A	44	TR	0.51	8.1	A	57	TR	0.48	8.4	A	122	TR	0.42	9.3	A	80
	Southbound	LT	0.53	15.9	B	319	LT	0.66	21.4	C	335	LT	0.65	19.3	B	406	LT	0.59	19.2	B	305
		Intersection		13.9	B		Intersection		16.3	B		Intersection		18.1	B		Intersection		16.2	B	
	Bay Street and Broad Street																				
	Eastbound	LR	0.23	39.6	D	134	LR	0.10	26.7	C	49	LR	0.12	36.9	D	79	LR	0.16	23.3	C	68
31	Northbound	LT	0.42	12.2	B	161	LT	0.47	9.5	A	131	LT	0.41	13.1	B	269	LT	0.38	7.0	A	99
	Southbound	T	0.53	10.9	B	131	T	0.56	11.8	B	146	T	0.51	6.8	A	68	T	0.50	10.4	B	105
		R	0.06	8.3	A	20	R	0.08	9.5	A	22	R	0.09	0.3	A	0	R	0.12	1.3	A	6
		Intersection		14.1	B		Intersection		11.5	B		Intersection		10.5	B		Intersection		9.5	A	
	Richmond Terrace and Clove Road																				
	Eastbound	LT	0.78	17.6	B	439	LT	0.44	11.6	B	351	LT	0.52	13.7	B	403	LT	0.49	5.6	A	54
		R	0.14	4.1	A	20	R	0.12	2.3	A	24	R	0.15	2.5	A	29	R	0.11	0.7	A	0
32	Westbound	L	0.33	10.8	B	26	L	0.18	17.1	B	70	L	0.22	18.7	B	81	L	0.21	9.6	A	45
		TR	0.50	10.4	B	216	TR	0.60	27.9	C	549	TR	0.55	27.0	C	559	TR	0.41	12.1	B	235
	Northbound	LTR	0.38	37.1	D	170	LTR	0.40	37.4	D	171	LTR	0.30	35.2	D	136	LTR	0.23	34.2	C	30
		Intersection		16.2	B		Intersection		21.1	C		Intersection		20.3	C		Intersection		10.9	B	
	Victory Boulevard and Cebra Avenue																				
	Eastbound	L	0.43	47.1	D	83	L	0.23	28.9	C	39	L	0.67	76.3	E	99	L	0.22	27.9	C	43
		TR	0.75	53.8	D	273	TR	0.69	38.2	D	215	TR	0.66	50.5	D	230	TR	0.45	30.1	C	138
	Westbound	L	0.41	47.1	D	81	L	0.46	35.2	D	78	L	0.47	50.4	D	105	L	0.23	27.2	C	53
		TR	0.60	46.1	D	252	TR	0.63	35.0	D	217	TR	0.83	62.0	E	341	TR	0.49	30.6	C	158
35	Northbound	LT	0.54	13.5	B	208	LTR	0.50	18.7	B	234	LTR	0.45	10.2	B	181	LTR	0.49	16.3	B	230
		R	0.09	9.6	A	20															
	Southbound	LTR	0.47	14.6	B	161	LTR	0.64	14.2	B	194						LTR	0.51	13.2	B	156
												LT	0.63	12.2	B	372					
												R	0.04	5.0	A	7					
		Intersection		27.9	C		Intersection		24.8	C		Intersection		29.3	C		Intersection		20.7	C	
	Victory Boulevard and Jersey Street																				
	Eastbound	L	0.13	8.0	A	27	L	0.17	9.0	A	17	L	0.21	10.1	B	36	L	0.15	7.8	A	19
		T	0.56	10.9	B	209	T	0.56	13.4	B	116	T	0.53	12.4	B	176	T	0.55	10.9	B	118
36	Westbound	T	0.40	22.4	C	258	T	0.60	22.6	C	316	T	0.57	23.5	C	404	T	0.48	4.7	A	33
		R	0.06	15.3	B	0	R	0.12	14.5	B	48	R	0.05	10.5	B	28	R	0.07	0.6	A	1
	Southbound	LR	0.35	37.7	D	128	LR	0.28	23.6	C	85	LR	0.30	37.1	D	101	LR	0.18	22.1	C	58
		Intersection		17.3	B		Intersection		18.4	B		Intersection		19.7	B		Intersection		8.9	A	

Table 14-27 (con't): Existing Conditions Level of Service Analysis – Signalized Intersections

Int #	Intersection & Approach	Weekday AM Peak Hour					Weekday MD Peak Hour					Weekday PM Peak Hour					Saturday Peak Hour				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
	Victory Boulevard and Forest Avenue																				
38	Eastbound	LR	0.61	40.9	D	213	LR	0.36	26.1	C	109	LR	0.39	40.0	D	139	LR	0.47	27.6	C	131
	Northbound	L	0.20	13.6	B	65	L	0.32	16.0	B	79	L	0.24	12.3	B	63	L	0.34	15.5	B	104
		T	0.48	74.9	E	286	T	0.37	15.0	B	163	T	0.27	11.5	B	145	T	0.29	13.7	B	129
	Southbound	T	0.34	19.3	B	160	T	0.47	14.4	B	120	T	0.49	11.2	B	131	T	0.34	15.3	B	147
		R	0.27	4.2	A	15	R	0.29	2.4	A	6	R	0.27	1.3	A	2	R	0.23	2.6	A	31
		Intersection		39.5	D		Intersection		15.3	B		Intersection		15.5	B		Intersection		17.3	B	
	Broad Street and Canal Street																				
41	Eastbound	L	0.21	12.9	B	76	L	0.22	8.4	A	43	L	0.17	9.1	A	47	L	0.20	8.4	A	46
		TR	0.39	15.7	B	187	TR	0.24	8.4	A	61	TR	0.17	8.7	A	60	TR	0.20	8.0	A	52
	Westbound	LTR	0.13	13.8	B	70	LTR	0.21	15.0	B	114	LTR	0.20	10.1	B	80	LTR	0.22	15.1	B	119
	Northbound	L	0.33	38.4	D	82	L	0.31	26.2	C	76	L	0.32	37.9	D	87	L	0.21	24.1	C	61
		TR	0.47	39.2	D	174	TR	0.51	29.6	C	170	TR	0.52	41.0	D	191	TR	0.35	25.8	C	137
	Southbound	LT	0.34	36.1	D	141	LT	0.27	24.4	C	104	LT	0.34	36.0	D	141	LT	0.23	23.8	C	94
		Intersection		25.2	C		Intersection		19.5	B		Intersection		25.2	C		Intersection		17.5	B	
	Broad Street and Van Duzer Street																				
42	Westbound	L	0.65	89.7	F	173	L	0.69	67.2	E	158	L	0.70	88.7	F	169	L	0.61	69.5	E	161
	Southbound	L	0.20	4.2	A	78	L	0.13	5.8	A	51	L	0.10	4.5	A	43	L	0.09	4.2	A	37
		T	0.42	5.7	A	199	T	0.49	8.8	A	215	T	0.37	6.1	A	204	T	0.30	5.2	A	114
		Intersection		16.6	B		Intersection		21.2	C		Intersection		23.4	C		Intersection		20.2	C	
	Broad Street and Targee Street																				
43	Eastbound	LT	0.44	34.8	C	221	TR	0.26	31.2	C	128	LT	0.20	42.7	D	149	LT	0.20	31.4	C	111
	Westbound	TR	0.24	40.6	D	131	TR	0.38	23.4	C	134	TR	0.29	24.3	C	140	TR	0.29	21.9	C	106
	Northbound	LTR	0.56	18.6	B	271	LTR	0.44	13.4	B	140	LTR	0.38	15.7	B	176	LTR	0.35	12.1	B	124
		Intersection		23.8	C		Intersection		17.8	B		Intersection		20.6	C		Intersection		16.5	B	
	Vanderbilt Avenue and Tompkins Avenue																				
44	Eastbound	LTR	0.72	28.3	C	493	LTR	0.70	26.1	C	312	LTR	0.51	22.9	C	266	LTR	0.57	21.2	C	258
	Westbound	LTR	0.29	15.2	B	100	LTR	0.45	9.2	A	77	LTR	0.46	29.1	C	312	LTR	0.28	5.5	A	38
	Northbound	LTR	0.85	59.4	E	308	LTR	0.79	42.2	D	285	LTR	0.66	40.6	D	296	LTR	0.55	28.7	C	180
	Southbound	LTR	0.92	61.7	E	467	LTR	0.81	40.8	D	382	LTR	0.56	35.8	D	284	LTR	0.53	27.5	C	213
		Intersection		42.5	D		Intersection		29.9	C		Intersection		31.8	C		Intersection		21.4	C	
	Bay Street and Vanderbilt Avenue																				
45	Eastbound	L	0.28	21.5	C	69	L	0.23	25.8	C	71	L	0.28	33.2	C	143	L	0.16	28.4	C	74
		R	0.34	22.4	C	79	R	0.16	25.3	C	40	R	0.14	30.0	C	71	R	0.15	28.9	C	57
	Northbound	LT	0.47	2.5	A	14	LT	0.54	10.4	B	62	LT	0.49	7.9	A	111	LT	0.46	10.6	B	53
	Southbound	T	0.48	23.2	C	318	T	0.52	6.7	A	130	T	0.41	5.3	A	49	T	0.45	7.0	A	107
		R	0.18	6.8	A	69	R	0.19	2.1	A	18	R	0.19	0.6	A	3	R	0.17	2.5	A	19
		Intersection		14.2	B		Intersection		10.7	B		Intersection		9.6	A		Intersection		11.2	B	
	Bay Street and Edgewater Drive																				
47	Westbound	LR	0.55	47.7	D	236	LR	0.62	40.6	D	203	LR	0.53	46.7	D	240	LR	0.49	37.5	D	152
	Northbound	TR	0.59	16.7	B	227	TR	0.62	37.1	D	297	TR	0.50	14.2	B	114	TR	0.61	35.7	D	271
	Southbound	T	0.62	21.4	C	355	T	0.61	38.5	D	317	T	0.45	17.1	B	177	T	0.51	35.0	D	280
	Northwestbound	LTR	0.42	17.0	B	82	LTR	0.41	12.2	B	79	LTR	0.89	59.0	E	321	LTR	0.43	20.6	C	102
		Intersection		23.7	C		Intersection		34.6	C		Intersection		30.6	C		Intersection		33.5	C	
	Bay Street and Hylan Boulevard																				
48	Eastbound	LTR	0.47	19.5	B	122	LTR	0.48	36.3	D	216	LTR	0.39	32.2	C	221	LTR	0.40	10.7	B	38
	Westbound	LTR	0.60	47.2	D	226	LTR	0.56	37.2	D	166	LTR	0.58	45.5	D	241	LTR	0.31	30.6	C	102
	Northbound	LTR	0.68	32.1	C	494	LTR	0.73	29.0	C	368	LTR	0.66	43.0	D	490	LTR	0.59	24.6	C	338
	Southbound	T	0.58	18.9	B	113	T	0.57	30.7	C	257	T	0.62	28.5	C	251	T	0.47	26.3	C	210
		R	0.15	4.2	A	15	R	0.23	10.2	B	63	R	0.21	10.6	B	65	R	0.21	9.6	A	48
		Intersection		26.1	C		Intersection		29.7	C		Intersection		34.0	C		Intersection		21.2	C	
	Bay Street and School Road																				
49	Eastbound	L	0.70	40.7	D	342	L	0.78	40.1	D	319	L	0.81	40.1	D	521	L	0.69	34.6	C	256
		TR	0.13	13.5	B	44	TR	0.13	15.5	B	41	TR	0.11	2.8	A	19	TR	0.10	9.8	A	29
	Westbound	LTR	0.00	23.5	C	7	LTR	0.01	19.6	B	9	LTR	0.01	17.8	B	8	LTR	0.01	19.7	B	11
	Northbound	LTR	0.08	13.5	B	43	LTR	0.17	10.9	B	64	LTR	0.12	19.2	B	68	LTR	0.08	10.1	B	36
	Southbound	LTR	0.10	7.8	A	33	LTR	0.11	17.4	B	66	LTR	0.13	14.3	B	48	LTR	0.23	21.3	C	142
		R	0.52	3.2	A	34	R	0.45	6.9	A	102	R	0.62	8.2	A	90	R	0.28	9.5	A	98
		Intersection		17.9	B		Intersection		19.8	B		Intersection		22.5	C		Intersection		21.5	C	

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service.

LEVEL OF SERVICE – UNSIGNALIZED INTERSECTIONS

Table 14-28 presents the capacity analysis results for the unsignalized intersections included in the Study Area. The majority of the analyzed intersection approaches and lane groups operate at an acceptable level of mid-LOS D or better (30.0 seconds of delay for unsignalized intersections) during the four analysis peak hours. The exceptions are as follows:

Bay Street and Baltic Street

- During the **Weekday AM** peak hour, the eastbound approach operates at LOS E with an average delay of 46.3 seconds and a v/c ratio of 0.36. The westbound approach (driveway) operates at LOS F with an average delay of 50.3 seconds and a v/c ratio of 0.05.
- During the **Weekday MD** peak hour, the westbound approach (driveway) operates at LOS E with an average delay of 45.7 seconds and a v/c ratio of 0.07.
- During the **Saturday MD** peak hour, the westbound approach (driveway) operates at LOS D with an average delay of 35.1 seconds and a v/c ratio of 0.04.

Bay Street and William Street

- During the **Weekday AM** peak hour, the eastbound approach operates at LOS E with an average delay of 38.0 seconds and a v/c ratio of 0.47.
- During the **Weekday MD** peak hour, the eastbound approach operates at LOS D with an average delay of 31.0 seconds and a v/c ratio of 0.36.

Bay Street and Wave Street

- During the **Weekday AM** peak hour, the westbound approach operates at LOS E with an average delay of 41.3 seconds and a v/c ratio of 0.32.
- During the **Weekday MD** peak hour, the westbound approach operates at LOS E with an average delay of 41.5 seconds and a v/c ratio of 0.43.
- During the **Weekday PM** peak hour, the westbound approach operates at LOS D with an average delay of 33.7 seconds and a v/c ratio of 0.34.
- During the **Saturday MD** peak hour, the westbound approach operates at LOS D with an average delay of 30.5 seconds and a v/c ratio of 0.35.

Bay Street and Water Street

- During the **Weekday AM** peak hour, the westbound approach operates at LOS D with an average delay of 31.7 seconds and a v/c ratio of 0.18.
- During the **Weekday MD** peak hour, the westbound approach operates at LOS F with an average delay of 82.7 seconds and a v/c ratio of 0.57.
- During the **Weekday PM** peak hour, the westbound approach operates at LOS F with an average delay of 119.7 seconds and a v/c ratio of 0.69.
- During the **Saturday MD** peak hour, the westbound approach operates at LOS F with an average delay of 89.0 seconds and a v/c ratio of 0.59.

Table 14-28: Existing Conditions Level of Service Analysis – Unsignalized Intersections

Int #	Intersection & Approach	Weekday AM Peak Hour					Weekday MD Peak Hour					Weekday PM Peak Hour					Saturday Peak Hour				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
4	**Hamilton Avenue and Stuyvesant Place**																				
	Southbound	TR	0.33	12.8	B	36.0	TR	0.15	10.6	B	14.0	TR	0.12	10.2	B	10.0	TR	0.10	10.3	B	8.0
6	**Wall Street and Stuyvesant Place**																				
	Southbound	LT	0.37	17.7	C	42.0	LT	0.22	13.1	B	21.0	LT	0.18	12.5	B	17.0	LT	0.17	11.1	B	15.0
14	**Front Street and Hannah Street**																				
	Northbound	LR	0.26	11.5	B	26.0	LR	0.26	11.4	B	26.0	LR	0.32	11.8	B	35.0	LR	0.23	10.4	B	22.0
	Westbound	LT	0.02	2.8	A	1.0	LT	0.01	1.9	A	1.0	LT	0.02	2.3	A	1.0	LT	0.01	1.5	A	0.0
16	**Van Duzer Street and St Julian Place**																				
	Westbound	R	0.02	13.9	B	1.0	R	0.02	10.5	B	2.0	R	0.02	10.3	B	2.0	R	0.03	10.0	A	2.0
17	**Bay Street and St Julian Place**																				
	Eastbound	LTR	0.11	15.0	B	9.0	LTR	0.10	15.4	C	8.0	LTR	0.07	13.7	B	5.0	LTR	0.05	12.8	B	4.0
	Westbound	LTR	0.02	10.4	B	2.0	LTR	0.04	11.8	B	3.0	LTR	0.01	13.2	B	1.0	LTR	0.03	14.6	B	2.0
	Northbound	LTR	0.01	0.4	A	1.0	LTR	0.01	0.4	A	1.0	LTR	0.00	0.2	A	0.0	LTR	0.00	0.2	A	0.0
18	**Bay Street and Grant Street**																				
	Eastbound	LTR	0.32	22.5	C	33.0	LTR	0.12	17.8	C	10.0	LTR	0.25	19.6	C	25.0	LTR	0.20	17.9	C	18.0
	Westbound	R	0.02	9.7	A	1.0	R	0.08	11.1	B	7.0	R	0.08	10.3	B	7.0	R	0.09	10.5	B	8.0
21	**Bay Street and Baltic Street**																				
	Eastbound	LTR	0.36	46.3	E	37.0	LTR	0.11	29.3	D	9.0	LTR	0.08	22.4	C	6.0	LTR	0.11	25.9	D	9.0
	Westbound	LTR	0.05	50.3	F	3.0	LTR	0.07	45.7	E	5.0	LTR	0.01	25.5	D	1.0	LTR	0.04	35.1	E	3.0
	Southbound	LT	0.00	0.0	--	0.0	LT	0.00	0.1	A	0.0	LT	0.00	0.0	A	0.0	LT	0.00	0.0	--	0.0
22	**Bay Street and William Street**																				
	Eastbound	LR	0.47	38.0	E	56.0	LR	0.36	31.0	D	39.0	LR	0.31	27.0	D	32.0	LR	0.24	21.0	C	23.0
	Northbound	LT	0.01	0.2	A	1.0	LT	0.01	0.3	A	1.0	LT	0.02	0.6	A	1.0	LT	0.01	0.3	A	1.0
23	**Bay Street and Congress Street**																				
	Eastbound	LR	0.03	21.1	C	3.0	LR	0.02	16.4	C	2.0	LR	0.06	21.2	C	5.0	LR	0.01	12.2	B	1.0
	Northbound	LT	0.01	0.2	A	1.0	LT	0.00	0.0	--	0.0	LT	0.01	0.2	A	0.0	LT	0.00	0.1	A	0.0
24	**Bay Street and Wave Street**																				
	Westbound	LTR	0.32	41.3	E	32.0	LTR	0.43	41.5	E	49.0	LTR	0.34	33.7	D	35.0	LTR	0.35	30.5	D	37.0
	Northbound	LT	0.00	0.0	--	0.0	LT	0.01	0.2	A	0.0	LT	0.01	0.2	A	1.0	LT	0.00	0.1	A	0.0
	Southbound	LTR	0.07	1.8	A	6.0	LTR	0.05	1.2	A	4.0	LTR	0.04	1.0	A	3.0	LTR	0.04	1.0	A	3.0
25	**Front Street and Wave Street**																				
	Eastbound	LR	0.11	10.1	B	9.0	LR	0.08	9.9	A	7.0	LR	0.07	9.8	A	5.0	LR	0.07	9.8	A	6.0
	Northbound	LT	0.02	1.1	A	2.0	LT	0.02	1.2	A	2.0	LT	0.04	1.7	A	3.0	LT	0.03	1.6	A	2.0
26	**Front Street and Prospect Street**																				
	Eastbound	LTR	0.02	10.2	B	2.0	LTR	0.00	0.0	A	0.0	LTR	0.07	10.3	B	6.0	LTR	0.09	10.2	B	7.0
	Westbound	LTR	0.00	0.0	A	0.0	LTR	0.00	0.0	A	0.0	LTR	0.00	0.0	A	0.0	LTR	0.00	0.0	A	0.0
	Southbound	LT	0.00	0.0	--	0.0	LT	0.00	0.0	--	0.0	LT	0.00	0.0	--	0.0	LT	0.00	0.0	--	0.0
28	**Bay Street and Water Street**																				
	Westbound	LTR	0.18	31.7	D	16.0	LTR	0.57	82.7	F	65.0	LTR	0.69	119.7	F	80.0	LTR	0.59	89.0	F	68.0
	Northbound	LT	0.11	3.0	A	10.0	LT	0.14	3.6	A	12.0	LT	0.18	4.6	A	17.0	LT	0.14	3.7	A	12.0
30	**Front Street and Canal Street**																				
	Eastbound	LR	0.16	12.0	B	14.0	LR	0.17	11.5	B	16.0	LR	0.18	12.4	B	16.0	LR	0.17	11.3	B	16.0
	Northbound	LT	0.01	0.3	A	0.0	LT	0.02	0.9	A	1.0	LT	0.01	0.7	A	1.0	LT	0.01	0.6	A	1.0
33	**Jersey Street and Brook Street**																				
	Westbound	LR	0.13	10.6	B	11.0	LR	0.18	10.6	B	16.0	LR	0.15	10.8	B	13.0	LR	0.12	9.8	A	10.0
	Southbound	LT	0.11	5.0	A	9.0	LT	0.09	4.2	A	7.0	LT	0.07	3.6	A	5.0	LT	0.04	3.0	A	3.0
34	**Pike Street and Brook Street**																				
	Westbound	LT	0.02	1.5	A	1.0	LT	0.02	1.3	A	2.0	LT	0.03	1.7	A	2.0	LT	0.02	1.4	A	1.0
37	**Pike Street and Victory Boulevard**																				
	Southbound	LR	0.09	15.3	C	7.0	LR	0.12	15.0	B	10.0	LR	0.11	15.2	C	9.0	LR	0.07	13.4	B	6.0
39	**Hudson Street and Cedar Street**																				
	Eastbound	LTR	0.03	9.8	A	2.0	LTR	0.02	9.1	A	1.0	LTR	0.02	8.9	A	2.0	LTR	0.02	9.1	A	1.0
	Westbound	LTR	0.00	10.1	B	0.0	LTR	0.00	9.7	A	0.0	LTR	0.00	0.0	A	0.0	LTR	0.00	9.1	A	0.0
	Northbound	LTR	0.01	1.7	A	1.0	LTR	0.01	1.6	A	1.0	LTR	0.01	1.7	A	1.0	LTR	0.01	1.9	A	1.0
	Southbound	LTR	0.00	0.0	--	0.0	LTR	0.00	0.0	--	0.0	LTR	0.01	4.1	A	1.0	LTR	0.00	0.0	--	0.0
40	**Broad Street and Cedar Street**																				
	Eastbound	LTR	0.01	0.3	A	1.0	LTR	0.01	0.3	A	1.0	LTR	0.02	0.7	A	1.0	LTR	0.01	0.3	A	0.0
	Westbound	LT	0.00	0.1	A	0.0	LT	0.02	0.9	A	2.0	LT	0.01	0.2	A	0.0	LT	0.01	0.4	A	1.0
	Northbound	LTR	0.00	0.0	A	0.0	LTR	0.00	11.9	B	0.0	LTR	0.00	0.0	A	0.0	LTR	0.01	15.5	C	1.0
	Southbound	LR	0.20	20.0	C	19.0	LR	0.18	19.6	C	16.0	LR	0.09	17.5	C	7.0	LR	0.10	17.4	C	9.0

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour.

THE FUTURE WITHOUT THE PROPOSED ACTION

The future without the Proposed Actions ("No-Action Condition") builds on the Existing Conditions analysis by incorporating background growth, other nearby projects expected to be completed by the build year, development of the land use parcels within the Project Area that could occur pursuant to existing zoning, and anticipated changes in the transportation network. The No-Action Condition analysis focuses on conditions in 2030, when the Proposed Actions are expected to be complete. The analysis of the No-Action Condition serves as the baseline to which the future condition with the Proposed Actions will be compared to identify potential impacts.

The *CEQR Technical Manual* guidance (Table 16-4) provide an annual background growth rate of 0.50 percent for the first five years and 0.25 percent for the years beyond for the St. George area, which is the area of Staten Island generally bounded by Wall Street, Richmond Terrace/Bay Street, Victory Boulevard, and St. Marks Place/Montgomery Avenue. Other locations in Staten Island have an annual growth rate of 1.0 percent for the first five years and 0.5 percent for the years beyond. The annual growth rates were applied for the respective areas, over a period of 15 years, to the 2015 Existing Condition volumes to develop the 2030 No-Action Condition background traffic volumes. In addition to the background growth, the development projects expected to be completed by 2030 located within and adjacent to the ¼-mile as shown in Chapter 2, Table 2-9 and Figure 2-8, and development

of the land use parcels within the Project Area that could occur pursuant to existing zoning as shown in Table 14-1, were considered to forecast the No-Action Condition volumes.

Roadway improvements and other relevant project-related transportation improvements were incorporated into the No-Action Condition as described below:

ROADWAY IMPROVEMENTS

- Completion of the NYCDOT St. George Bay Street Improvement project at the St. George Ferry Terminal that would improve the Richmond Terrace and Ferry Terminal (bus) and Richmond Terrace and Ferry Terminal (parking lot) intersections. The transportation analysis considers the revised lane geometries and signal timing at these intersections. The most significant of these changes is the addition of a protected bike/pedestrian-only phase to the signal phasing.
- Completion of the NYCDOT Street Improvement Project (SIP) on Bay Street between Central Avenue and Hannah Street. At the intersection of Bay Street and Victory Boulevard, the SIP would include a turn restriction for eastbound right-turns onto Bay Street, the addition of a northbound left-turn bay, and other modifications to lane geometries. At the intersection of Bay Street and Hannah Street, the SIP would modify the lane striping, reduce the number of southbound lanes on Bay Street, and formalize a Class II bicycle facility.
- Completion of the NYCDOT SIPs on Van Duzer Street, Targee Street, and Swan Street.
    - Within the Study Area, elements of the Van Duzer Street SIP would include designation as a Class III bicycle route with striped chevron markings between St. Julian Place and Wright Street, and a Class II bicycle route with on-street lane markings between Wright Street to intersections south of Broad Street. Improvements include high visibility crosswalk marking and bicycle facility markings at the intersections with Clinton Street, Beach Street, and Broad Street.
    - Within the Study Area, elements of the Targee Street SIP would include a reduction in the number of travel lanes to accommodate Class II parking-protected bicycle lanes. Improvements at the intersection with Broad Street include the removal of one travel lane and the addition of one 117-foot northbound right-turn bay, and changes to lane widths.
    - Within the Study Area, elements of the Swan Street SIR would include modifications to the intersection with Van Duzer Street. Class II parking-protected bicycle lanes would be provided on Swan Street between Bay Street and Van Duzer Street, and on the Van Duzer Street Extension between St. Julian Place and Bay Street. The lane striping on the Van Duzer Street Extension would be modified to accommodate the bicycle infrastructure by narrowing the travel lanes, eliminating one of the through lanes and providing a 75-foot eastbound left-turn bay.

NO-ACTION PROJECT-RELATED INTERSECTION IMPROVEMENTS

The following improvement has been identified as a project improvement in the *Staten Island Lighthouse Point Environmental Assessment Statement* (2013):

- Completion of modifications to the intersection of Bay Street and Stuyvesant Place, south of the Ferry Terminal, to include a new driveway access to the development site.

The following improvements have been identified as project improvements and mitigation measures for the *Stapleton Waterfront Development Plan Technical Memorandum* (2010):

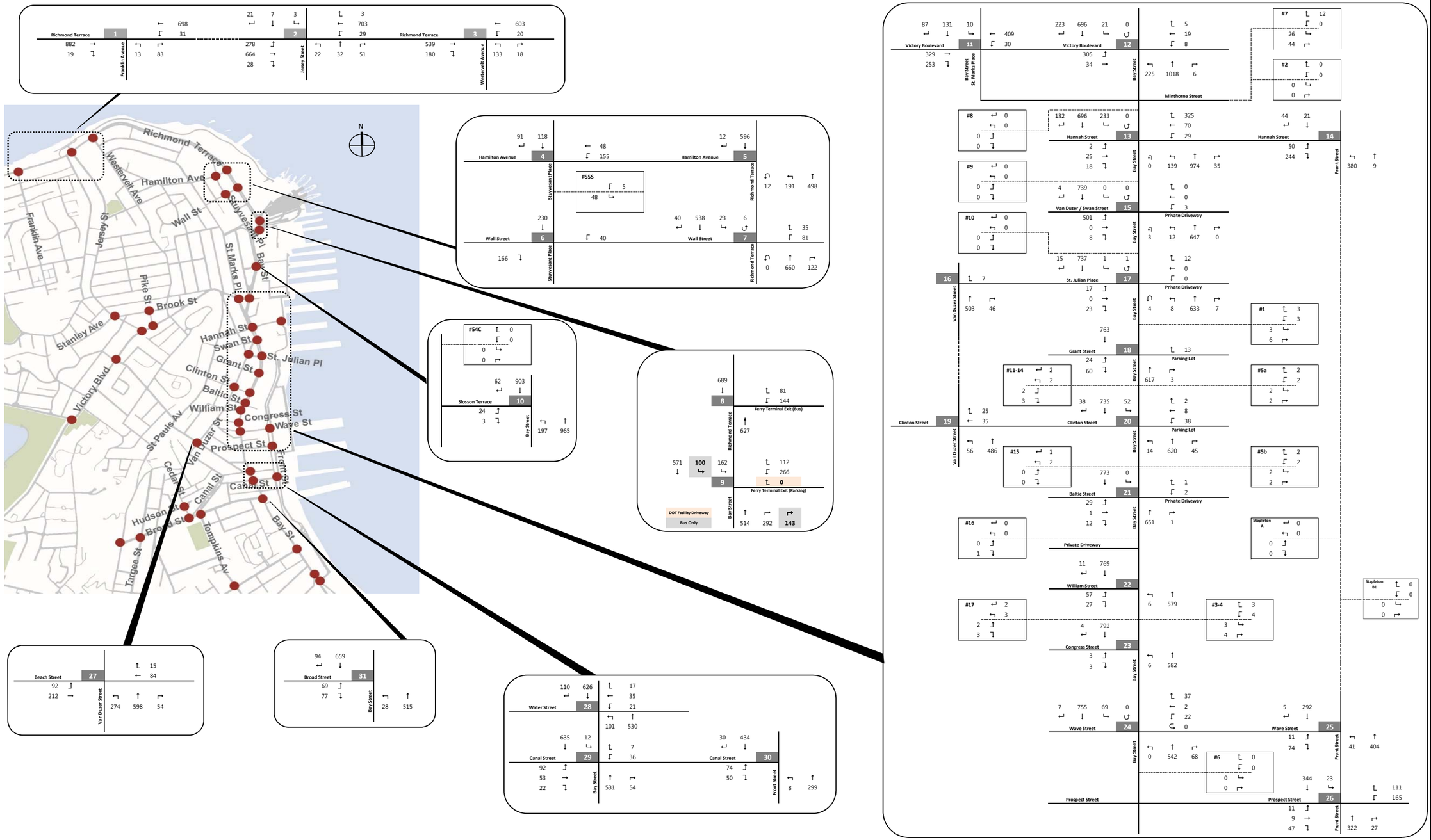
- Completion of roadway improvements on Front Street between Wave Street and Thompson Street to include 11-foot travel lanes, parking lanes, and bicycle lanes.
- Installation of new traffic signals at the intersections of Front Street with Wave Street, Prospect Street, Canal Street, and Hannah Street. New crosswalks and modified lane striping would be included in the intersection improvements.
- Completion of improvements at the intersection of Edgewater Street, Front Street and Bay Street to include a turn restriction for northbound traffic on Edgewater Street, traffic calming elements, new crosswalks, other modifications to lane geometries, and updated signal timing.
- Installation of new traffic signals at the intersections of Bay Street with Wave Street and Water Street. New crosswalks and modified lane striping would be included in the intersection improvements.
    - At the Bay Street and Wave Street intersection, the southbound approach on Bay Street would be restriped to include one exclusive 80-foot left-turn lane and one through lane, resulting in modified parking regulations 150-feet from the intersection.
    - At the Bay Street and Water Street intersection, the centerline on southbound Bay Street would be shifted to the west to allow for the addition of an exclusive 80-foot northbound left-turn lane. Parking regulations would be modified on the northbound and southbound approaches on Bay Street.

The following improvement has been identified as a project improvement in the *St. George Redevelopment Environmental Impact Statement* (2013):

- Completion of signal timing adjustments at the intersection of Richmond Terrace and Ferry Terminal (parking lot).
- Completion of the street reversals of Wall Street and Schuyler Streets between Richmond Terrace and Stuyvesant Place and the associated traffic diversions.
- Completion of the intersection modification at the Richmond Terrace and Wall Street intersection, which would include the prohibition of northbound left- and u-turns from Richmond Terrace and the addition of a 150-foot northbound right-turn bay.
- Completion of the intersection modifications at the intersection of Richmond Terrace and Jersey Street, which would include signal phasing and timing changes.
- Completion of the intersection modifications at the intersection of Bay Street and School Road, which would include signal timing changes.

TRAFFIC CONDITIONS

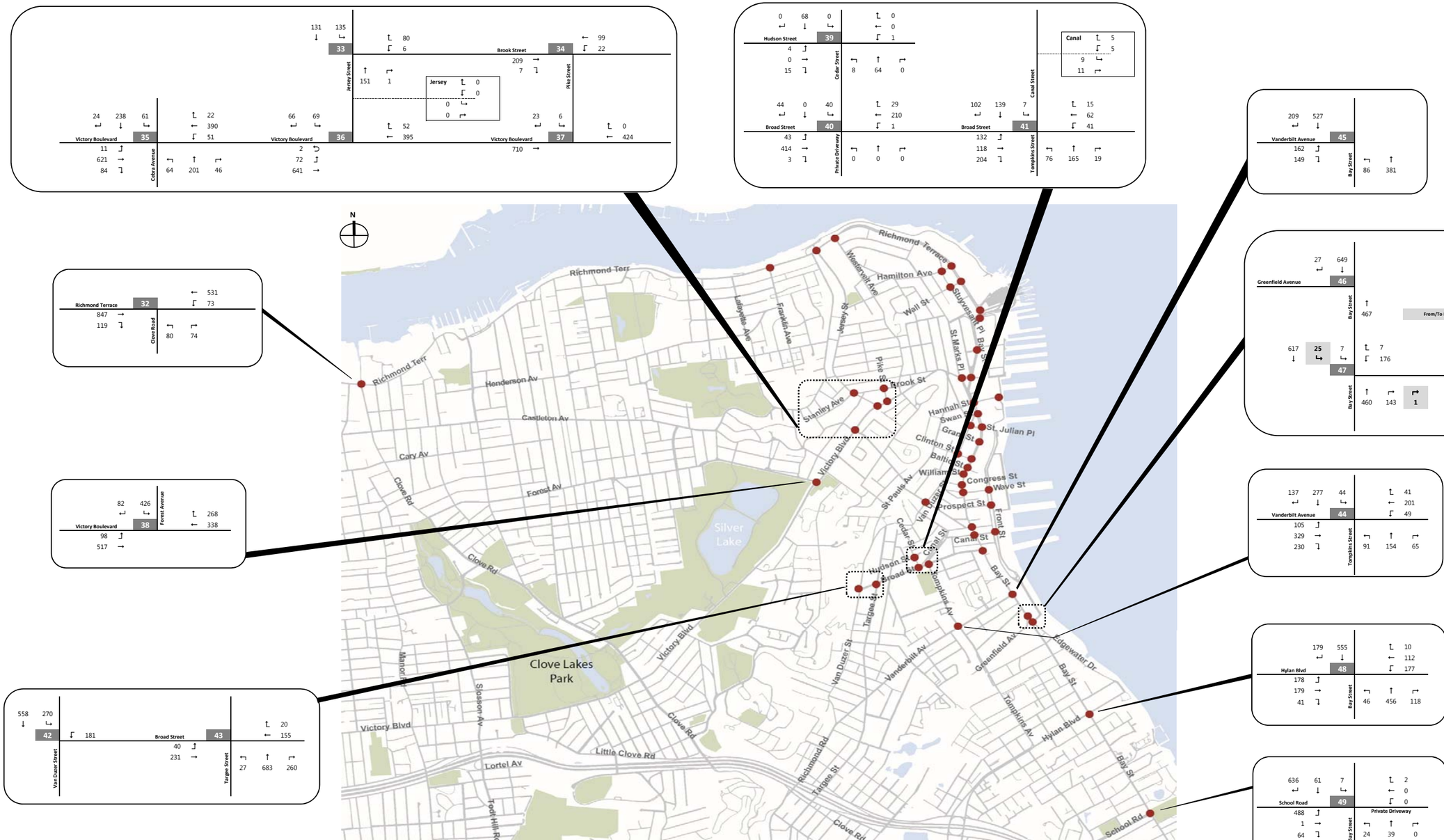
Figures 14-12 through 14-15 show the No-Action traffic volumes for the four peak hours.



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

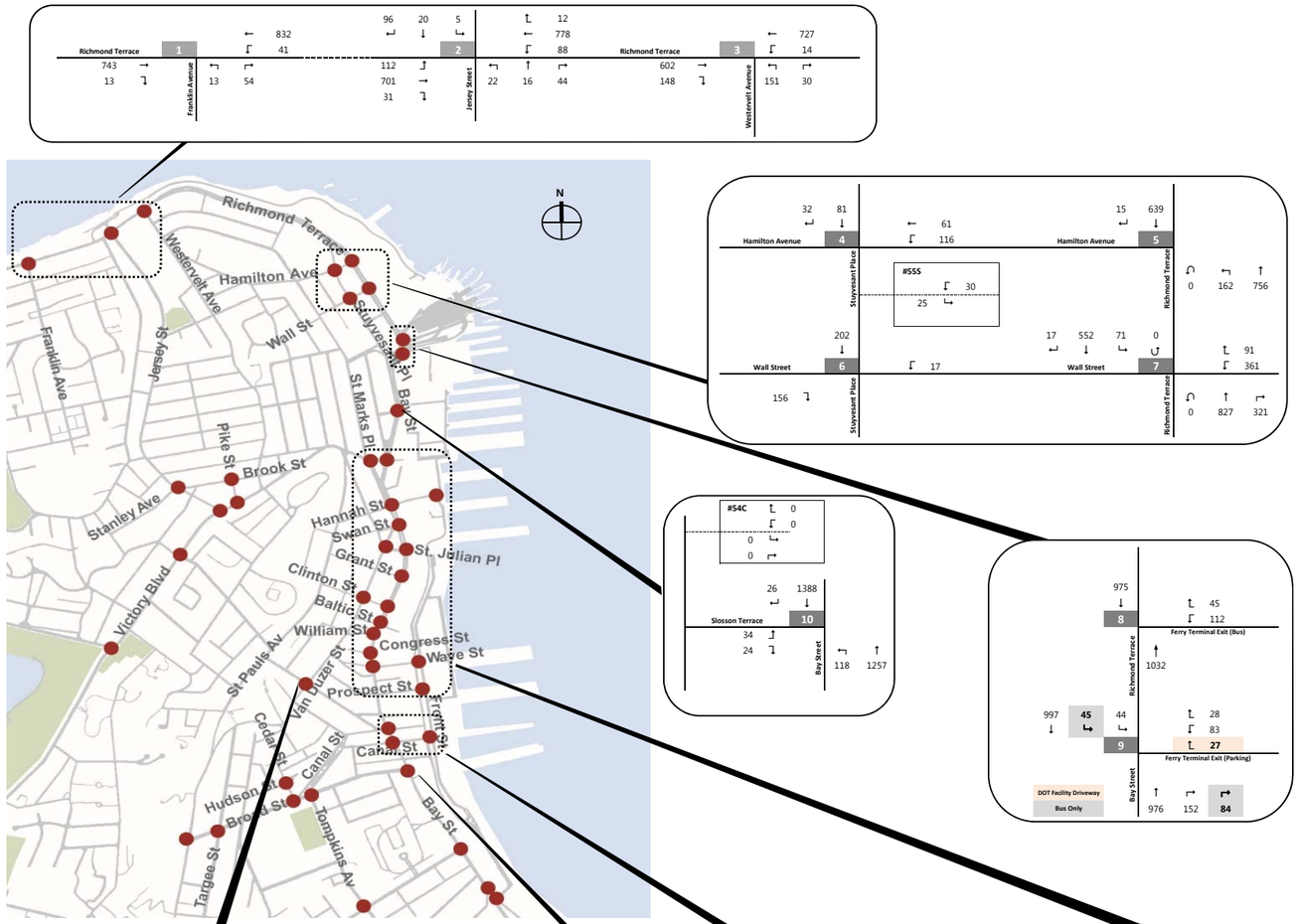
No Action Traffic Conditions
Weekday AM Peak Hour
Figure 14-12 A

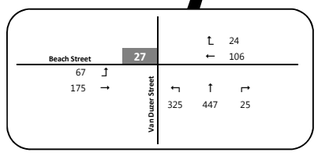


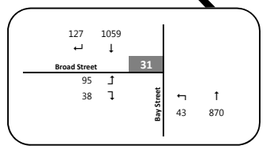
NOT TO SCALE

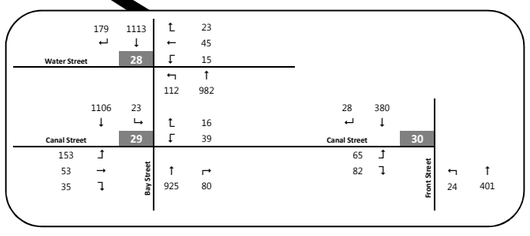
BAY STREET REZONING AND RELATED ACTIONS

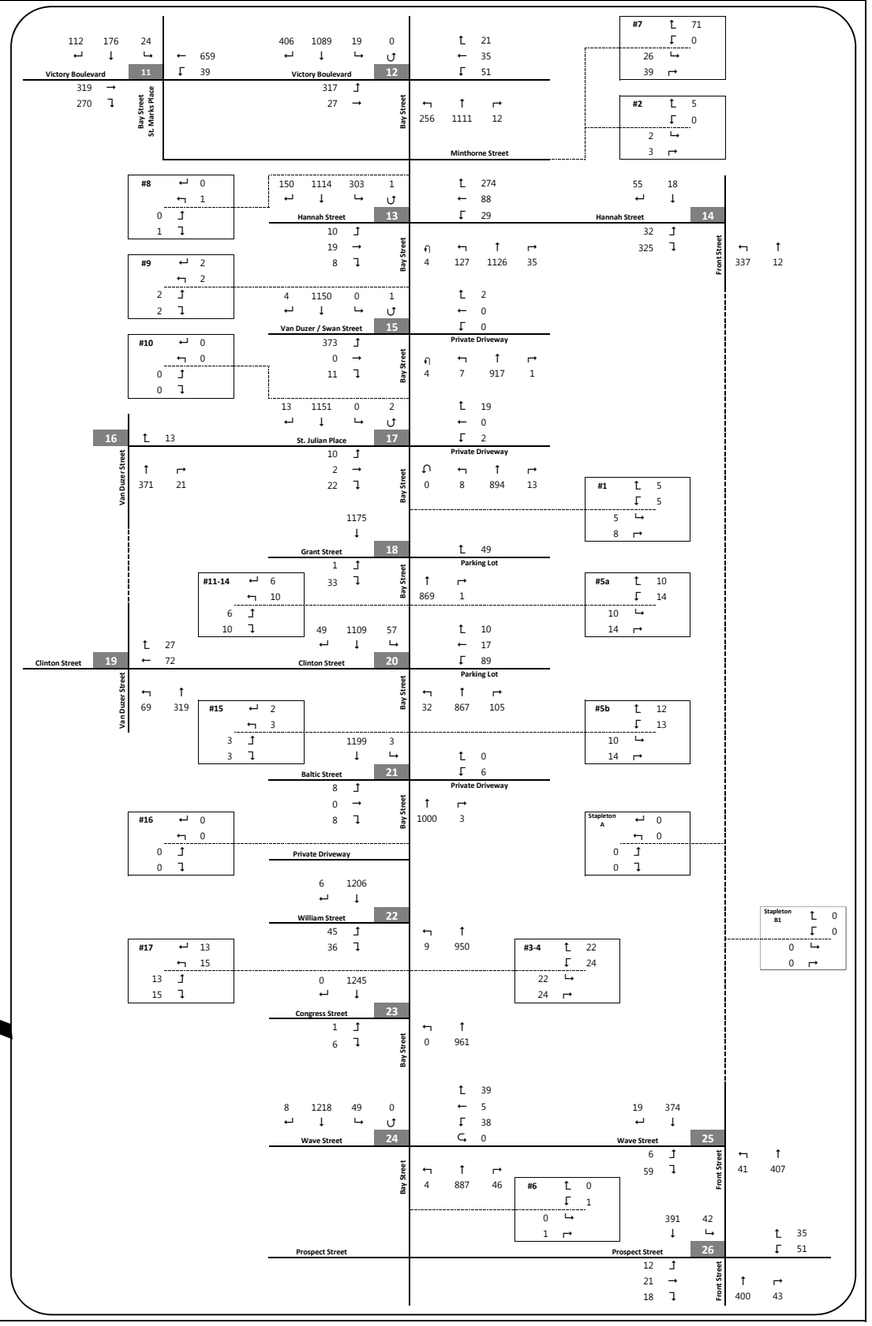
No Action Traffic Conditions
Weekday AM Peak Hour
Figure 14-12 B







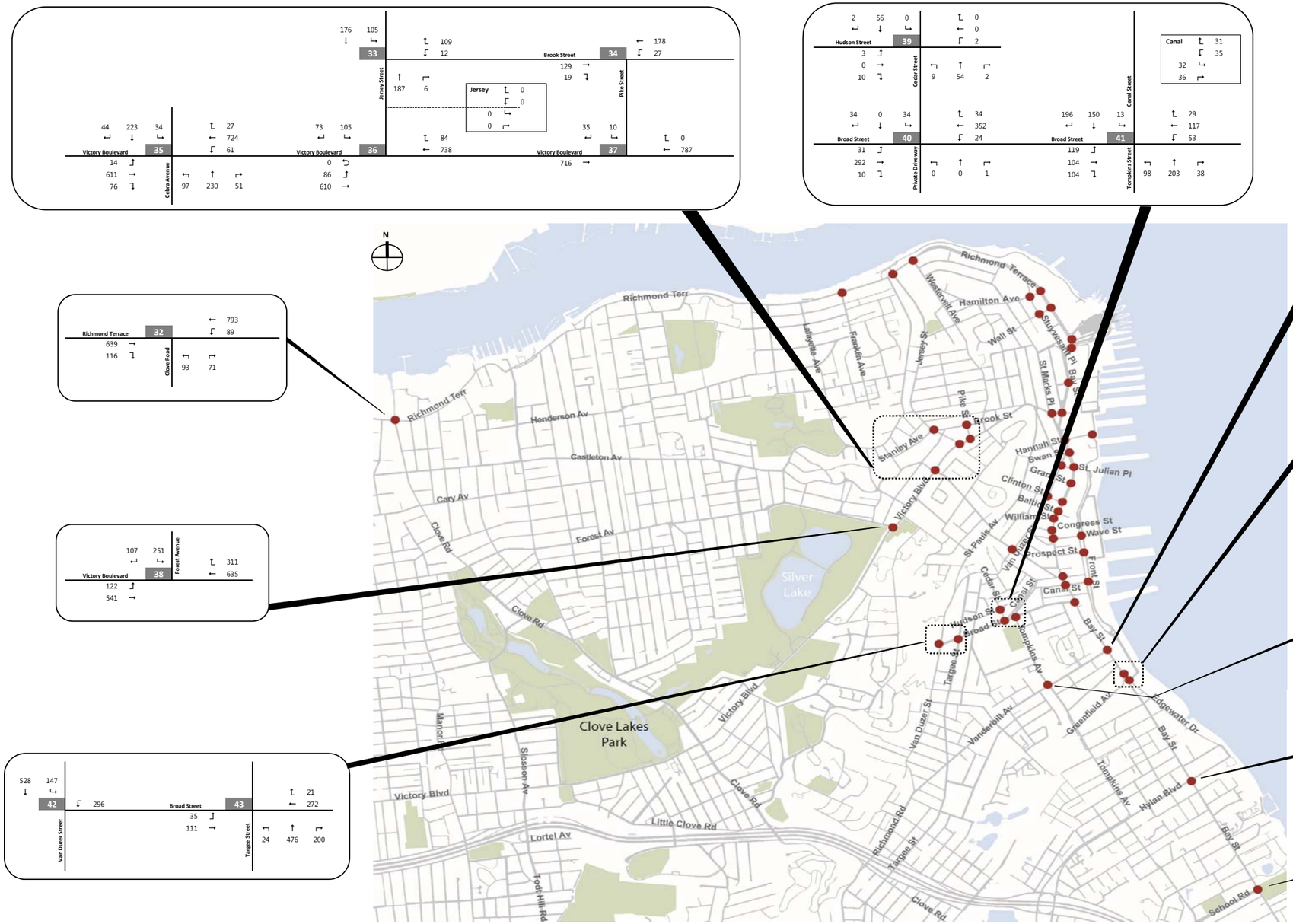




NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

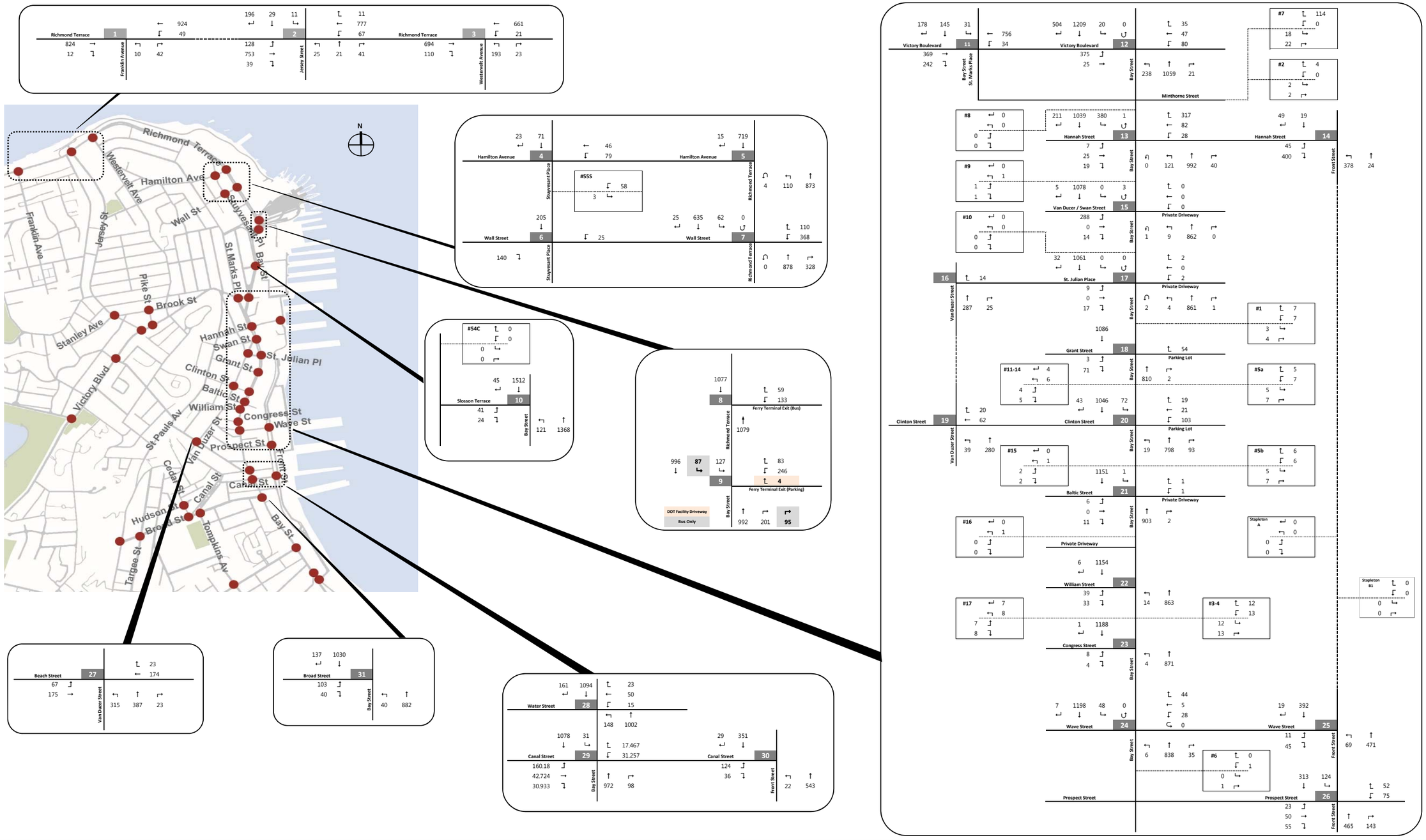
No Action Traffic Conditions
Weekday MD Peak Hour
Figure 14-13 A



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

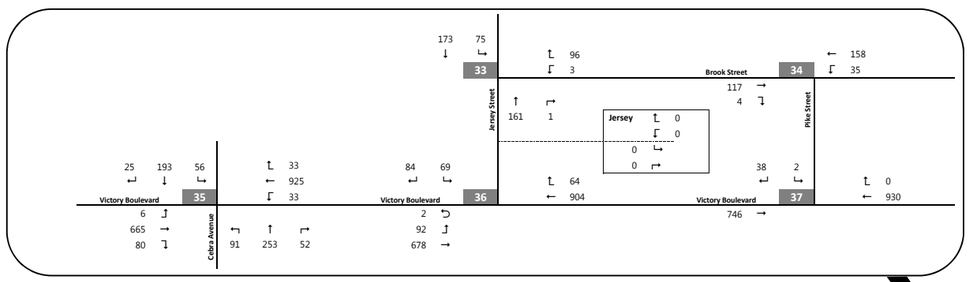
No Action Traffic Conditions
Weekday MD Peak Hour
Figure 14-13 B

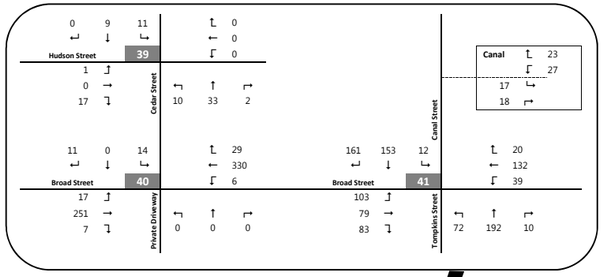


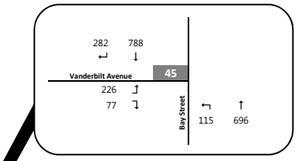
NOT TO SCALE

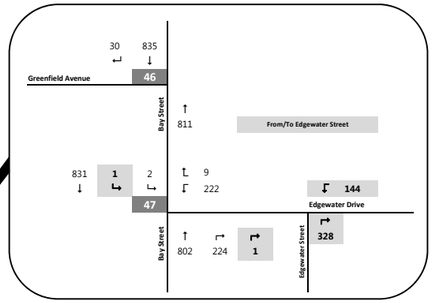
BAY STREET REZONING AND RELATED ACTIONS

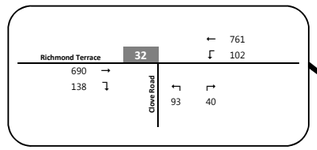
No Action Traffic Conditions
Weekday PM Peak Hour
Figure 14-14 A



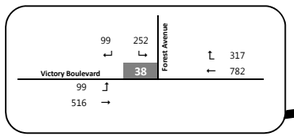


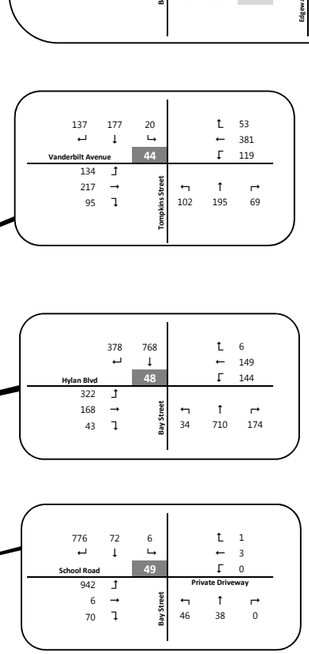


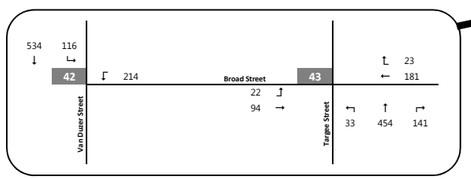








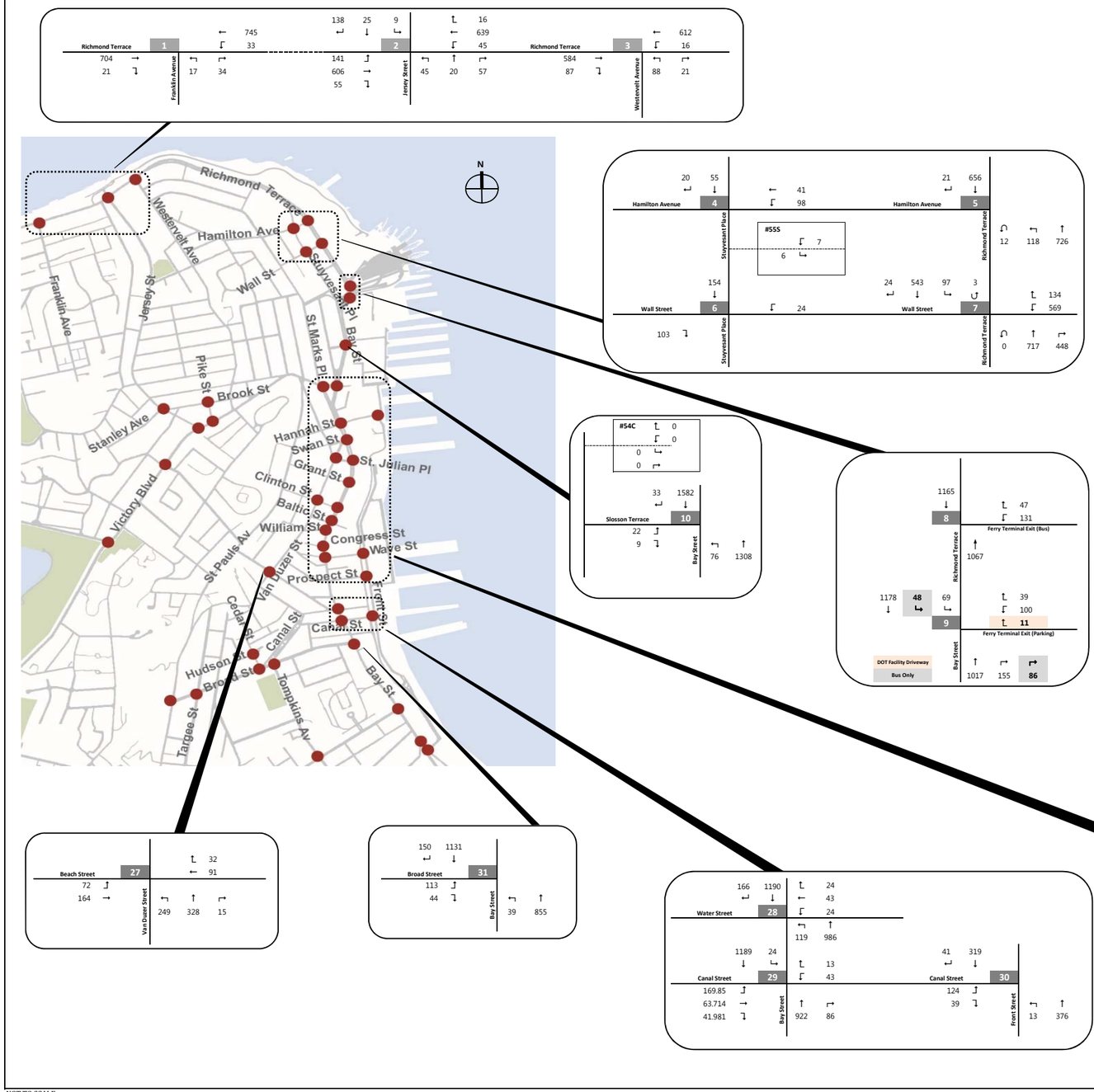


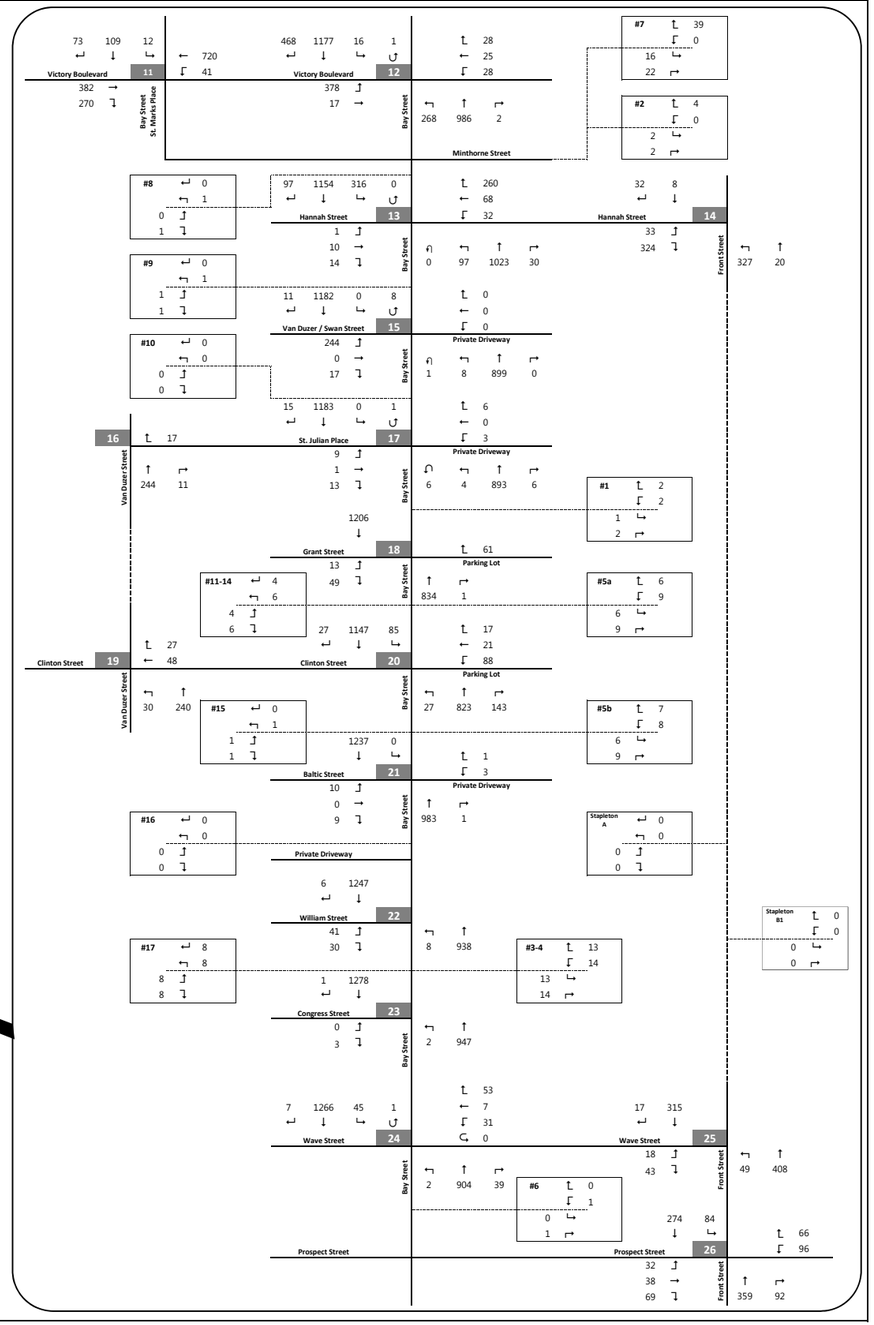


NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

No Action Traffic Conditions
Weekday PM Peak Hour
Figure 14-14 B

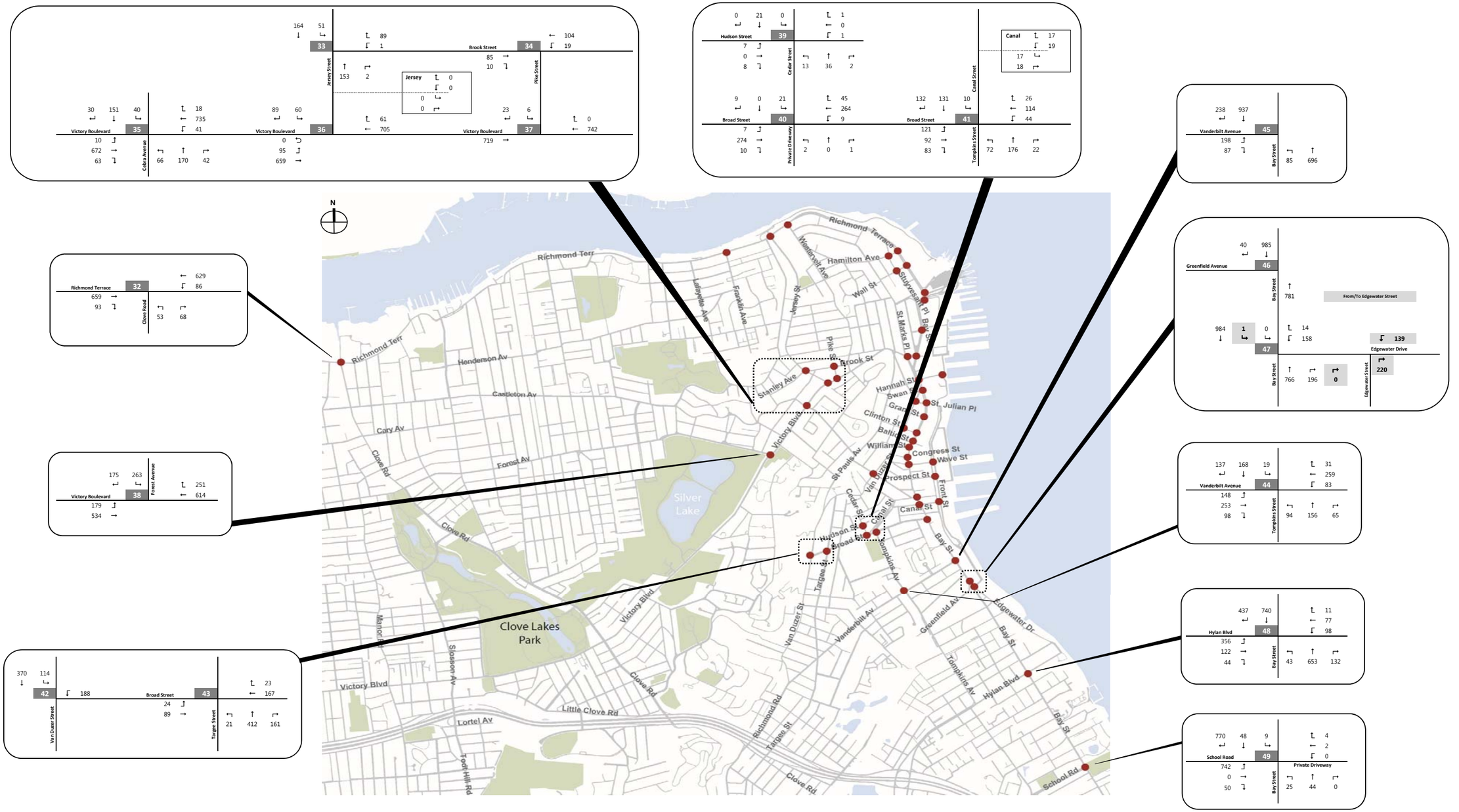




NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

No Action Traffic Conditions
Saturday MD Peak Hour
Figure 14-15 A



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

No Action Traffic Conditions
Saturday MD Peak Hour
Figure 14-15 B

LEVEL OF SERVICE – SIGNALIZED INTERSECTIONS

Table 14-29 presents a comparison of Existing and No-Action Conditions for the signalized study intersections. Based on the analysis results, the majority of the approaches/lane groups would operate at the same LOS as in the existing conditions. At the following locations, the addition of No-Action traffic would result in changes in LOS beyond mid-LOS D:

Richmond Terrace and Franklin Avenue

- During the **Weekday PM** peak hour, the westbound through/left-turn lane group would deteriorate from LOS A with an average delay of 2.7 seconds and a v/c ratio of 0.60 to LOS F with an average delay of 81.4 seconds and a v/c ratio of 1.14.

Richmond Terrace and Jersey Street

- During the **Weekday AM** peak hour, the eastbound left-turn lane group would deteriorate from LOS A with an average delay of 8.0 seconds and a v/c ratio of 0.00 to LOS F with an average delay of 87.4 seconds and a v/c ratio of 1.07. The westbound through/left-turn lane group would deteriorate from LOS D from an average delay of 42.3 seconds and a v/c ratio of 0.92 to LOS E with an average delay of 68.6 seconds and a v/c ratio of 1.06.
- During the **Weekday MD** peak hour, the westbound through/left-turn lane group would deteriorate from LOS C with an average delay of 24.8 and a v/c ratio of 0.71 to LOS F with an average delay of 227.7 seconds and a v/c ratio of 1.44.
- During the **Weekday PM** peak hour, the westbound through/left-turn lane group would deteriorate from LOS E with an average delay of 74.7 seconds and a v/c ratio of 0.91 to LOS F with an average delay of 163.2 seconds and a v/c ratio of 1.29. The southbound through/right-turn lane group would deteriorate from LOS C with an average delay of 34.2 seconds and a v/c ratio of 0.02 to LOS D with an average delay of 49.9 seconds and a v/c ratio of 0.68.
- During the **Saturday MD** peak hour, the westbound through/left-turn lane group would deteriorate from LOS A with an average delay of 9.6 seconds and a v/c ratio of 0.58 to LOS E with an average delay of 78.1 seconds and a v/c ratio of 1.10.

Richmond Terrace and Westervelt Avenue

- During the **Weekday AM** peak hour, the westbound approach would deteriorate from LOS C with an average delay of 25.3 seconds and a v/c ratio of 0.54 to LOS D with an average delay of 47.0 seconds and a v/c ratio of 0.71.
- During the **Weekday MD** peak hour, the westbound approach would deteriorate from LOS C with an average delay of 23.2 seconds and a v/c ratio of 0.44 to LOS E with an average delay of 71.4 seconds and a v/c ratio of 0.80.
- During the **Weekday PM** peak hour, the westbound approach would operate at LOS E with an average delay of 78.1 seconds and a v/c ratio of 0.78.

Wall Street and Richmond Terrace

- During the **Weekday MD** peak hour, the westbound approach would deteriorate from LOS C with an average delay of 22.9 seconds and a v/c ratio of 0.03 to LOS E with an average delay

of 66.0 seconds and a v/c ratio of 0.86. The new westbound left-turn movement would operate at LOS F with an average delay of 93.5 seconds and a v/c ratio of 0.98.

- During the **Weekday PM** peak hour, the westbound approach would deteriorate from LOS C with an average delay of 22.6 seconds and a v/c ratio of 0.02 to LOS F with an average delay of 185.5 seconds and a v/c ratio of 0.66. The new westbound left-turn movement would operate at LOS F with an average delay of 175.4 seconds and a v/c ratio of 0.62.
- During the **Saturday MD** peak hour, the westbound approach would deteriorate from LOS B with an average delay of 14.0 seconds and a v/c ratio of 0.00 to LOS F with an average delay of 94.2 seconds and a v/c ratio of 0.80. The new westbound left-turn movement would operate at LOS F with an average delay of 93.1 seconds and a v/c ratio of 0.80. The southbound approach would deteriorate from LOS C with an average delay of 28.1 seconds and a v/c ratio of 0.51 to LOS E with an average delay of 60.0 seconds and a v/c ratio of 0.67.

Richmond Terrace and Ferry Terminal (bus)

- During the **Weekday AM** peak hour, the westbound left-turn lane group would deteriorate within LOS D from an average delay of 37.8 seconds and a v/c ratio of 0.35 to an average delay of 45.7 seconds and a v/c ratio of 0.47. The westbound right-turn lane group would deteriorate within LOS D from an average delay of 38.4 seconds and a v/c ratio of 0.32 to an average delay of 45.5 seconds and a v/c ratio of 0.41. The southbound approach would deteriorate from LOS B with an average delay of 14.0 seconds and a v/c ratio of 0.30 to LOS F with an average delay of 85.6 seconds and a v/c ratio of 0.63.
- During the **Weekday MD** peak hour, the westbound left-turn lane group would deteriorate from LOS C with an average delay of 32.9 seconds and a v/c ratio of 0.26 to LOS F with an average delay of 134.0 seconds and a v/c ratio of 0.98. The westbound right-turn lane group would deteriorate within LOS D from an average delay of 36.5 seconds and a v/c ratio of 0.16 to an average delay of 51.0 seconds and a v/c ratio of 0.46. The southbound approach would deteriorate from LOS A with an average delay of 5.3 seconds and a v/c ratio of 0.22 to LOS E with an average delay of 65.2 seconds and a v/c ratio of 0.88.
- During the **Weekday PM** peak hour, the westbound left-turn lane group would deteriorate from LOS D with an average delay of 35.2 seconds and a v/c ratio of 0.33 to LOS E with an average delay of 57.7 seconds and a v/c ratio of 0.67. The northbound approach would deteriorate from LOS B with an average delay of 16.2 seconds and a v/c ratio of 0.52 to LOS E with an average delay of 75.4 seconds and a v/c ratio of 0.72. The southbound approach would deteriorate from LOS A with an average delay of 4.0 seconds and a v/c ratio of 0.27 to LOS F with an average delay of 80.1 seconds and a v/c ratio of 0.90.
- During the **Saturday MD** peak hour, the westbound left-turn lane group would deteriorate from LOS C with an average delay of 28.1 seconds and a v/c ratio of 0.29 to LOS F with an average delay of 195.9 seconds and a v/c ratio of 1.24. The westbound right-turn lane group would deteriorate from LOS C with an average delay of 28.1 seconds and a v/c ratio of 0.13 to LOS D with an average delay of 48.3 seconds and a v/c ratio of 0.44.

Richmond Terrace and Ferry Terminal (parking lot)

- During the **Weekday AM** peak hour, the westbound left-turn lane group would deteriorate from LOS D with an average delay of 39.8 seconds and a v/c ratio of 0.54 to LOS E with an average delay of 55.7 seconds and a v/c ratio of 0.74. The southbound left-turn lane group

would deteriorate within LOS F from an average delay of 106.6 seconds and a v/c ratio of 0.74 to an average delay of 2,211.1 seconds and a v/c ratio of 5.82.

- During the **Weekday MD** peak hour, the westbound left-turn lane group would deteriorate from LOS C with an average delay of 31.9 seconds and a v/c ratio of 0.26 to LOS D with an average delay of 48.4 seconds and a v/c ratio of 0.53. The northbound through lane group would deteriorate from LOS C with an average delay of 34.4 seconds and a v/c ratio of 0.37 to LOS E with an average delay of 64.6 seconds and a v/c ratio of 0.98. The southbound left-turn lane group would deteriorate within LOS F from an average delay of 96.9 seconds and a v/c ratio of 0.31 to an average delay of 425.3 seconds and a v/c ratio of 1.80. The southbound through/right-turn lane group would deteriorate from LOS A with an average delay of 0.1 seconds and a v/c ratio of 0.13 to LOS E with an average delay of 69.4 seconds and a v/c ratio of 1.11.
- During the **Weekday PM** peak hour, the westbound left-turn lane group would deteriorate from LOS C with an average delay of 34.9 seconds and a v/c ratio of 0.42 to LOS E with an average delay of 58.0 seconds and a v/c ratio of 0.77. The northbound through lane group would deteriorate from LOS B with an average delay of 18.8 seconds and a v/c ratio of 0.37 to LOS F with an average delay of 208.0 seconds and a v/c ratio of 1.38. The southbound left-turn lane group would deteriorate within LOS F from an average delay of 111.3 seconds and a v/c ratio of 0.65 to an average delay of 1,457.1 seconds and a v/c ratio of 4.16. The southbound through/right-turn lane group would deteriorate from LOS A with an average delay of 0.1 seconds and a v/c ratio of 0.13 to LOS E with an average delay of 55.7 seconds and a v/c ratio of 0.91.
- During the **Saturday MD** peak hour, the westbound left-turn lane group would deteriorate from LOS C with an average delay of 27.0 seconds and a v/c ratio of 0.27 to LOS D with an average delay of 54.3 seconds and a v/c ratio of 0.64. The northbound through lane group would deteriorate from LOS C with an average delay of 27.2 seconds and a v/c ratio of 0.31 to LOS E with an average delay of 70.9 seconds and a v/c ratio of 1.03. The southbound left-turn lane group would deteriorate within LOS F from an average delay of 102.1 seconds and a v/c ratio of 0.31 to an average delay of 386.7 seconds and a v/c ratio of 1.71. The southbound through/right-turn lane group would deteriorate from LOS A with an average delay of 0.1 seconds and a v/c ratio of 0.10 to LOS F with an average delay of 130.3 seconds and a v/c ratio of 1.24.

Slosson Terrace and Bay Street

- During the **Weekday MD** peak hour, the southbound approach would deteriorate from LOS B with an average delay of 13.6 seconds and a v/c ratio of 0.51 to LOS F with an average delay of 103.1 seconds and a v/c ratio of 1.17.
- During the **Weekday PM** peak hour, the northbound through lane group would deteriorate from LOS B with an average delay of 10.1 seconds and a v/c ratio of 0.38 to LOS D with an average delay of 46.1 seconds and a v/c ratio of 0.86. The southbound approach would deteriorate from LOS B with an average delay of 13.5 seconds and a v/c ratio of 0.52 to LOS F with an average delay of 95.5 seconds and a v/c ratio of 1.13.
- During the **Saturday MD** peak hour, the southbound approach would deteriorate from LOS C with an average delay of 33.6 seconds and a v/c ratio of 0.40 to LOS F with an average delay of 142.3 seconds and a v/c ratio of 1.26.

Victory Boulevard and Bay Street/St. Marks Place

- During the **Weekday MD** peak hour, the westbound through lane group would deteriorate from LOS D with an average delay of 43.3 seconds and a v/c ratio of 0.36 to LOS F with an average delay of 89.8 seconds and a v/c ratio of 0.81.
- During the **Weekday PM** peak hour, the southbound through/left-turn lane group would deteriorate within LOS D from an average delay of 43.8 seconds and a v/c ratio of 0.47 to an average delay of 46.6 seconds and a v/c ratio of 0.56. The southbound right-turn lane group would deteriorate from LOS E with an average delay of 65.3 seconds and a v/c ratio of 0.78 to LOS F with an average delay of 84.4 seconds and a v/c ratio of 0.91.
- During the **Saturday MD** peak hour, the westbound through lane group would deteriorate from LOS C with an average delay of 24.9 seconds and a v/c ratio of 0.35 to LOS E with an average delay of 74.7 seconds and a v/c ratio of 0.84.

Victory Boulevard and Bay Street

- During the **Weekday MD** peak hour, the northbound left-turn lane group would deteriorate from LOS C with an average delay of 24.8 seconds and a v/c ratio of 0.51 to LOS F with an average delay of 829.5 seconds and a v/c ratio of 2.78. The southbound right-turn lane group would deteriorate from LOS C with an average delay of 33.9 seconds and a v/c ratio of 0.32 to LOS F with an average delay of 93.8 seconds and a v/c ratio of 0.90.
- During the **Weekday PM** peak hour, eastbound left-turn lane group would deteriorate from LOS D with an average delay of 42.6 seconds and a v/c ratio of 0.42 to LOS E with an average delay of 72.0 seconds and a v/c ratio of 0.84. The eastbound through lane group would deteriorate from LOS C with an average delay of 32.0 seconds and a v/c ratio of 0.07 to LOS E with an average delay of 72.9 seconds and a v/c ratio of 0.84. The westbound approach would deteriorate from LOS C with an average delay of 31.8 seconds and a v/c ratio of 0.10 to LOS E with an average delay of 57.8 seconds and a v/c ratio of 0.75. The northbound left-turn lane group would deteriorate from LOS C with an average delay of 21.7 seconds and a v/c ratio of 0.46 to LOS F with an average delay of 577.1 seconds and a v/c ratio of 2.23.
- During the **Saturday MD** peak hour, the new northbound left-turn lane group would operate at LOS F with an average delay of 1,171.5 seconds and a v/c ratio of 3.55.

Bay Street and Hannah Street

- During the **Weekday AM** peak hour, the westbound approach would deteriorate from LOS D with an average delay of 36.2 seconds and a v/c ratio of 0.44 to LOS E with an average delay of 56.7 and a v/c ratio of 0.86. The northbound approach would deteriorate from LOS C with an average delay of 34.7 seconds and a v/c ratio of 0.78 to LOS F with an average delay of 82.4 seconds and a v/c ratio of 1.09. The southbound left-turn lane group would deteriorate from LOS C with an average delay of 26.2 seconds and a v/c ratio of 0.64 to LOS F with an average delay of 284.4 seconds and a v/c ratio of 1.52.
- During the **Weekday MD** peak hour, the northbound approach would deteriorate from LOS C with an average delay of 26.0 seconds and a v/c ratio of 0.73 to LOS F with an average delay of 394.1 seconds and a v/c ratio of 1.82. The southbound left-turn lane group would deteriorate from LOS B with an average delay of 18.6 seconds and a v/c ratio of 0.54 to LOS F with an average delay of 1,675.8 seconds and a v/c ratio of 4.65.

- During the **Weekday PM** peak hour, the westbound approach would deteriorate from LOS D with an average delay of 37.5 seconds and a v/c ratio of 0.49 to LOS E with an average delay of 58.9 seconds and a v/c ratio of 0.88. The northbound approach would deteriorate from LOS B with an average delay of 19.4 seconds and a v/c ratio of 0.52 to LOS F with an average delay of 118.7 seconds and a v/c ratio of 1.18. The southbound left-turn lane group would deteriorate from LOS C with an average delay of 26.0 seconds and a v/c ratio of 0.32 to LOS F with an average delay of 711.6 seconds and a v/c ratio of 2.51.
- During the **Saturday MD** peak hour, the northbound approach would deteriorate from LOS B with an average delay of 19.1 seconds and a v/c ratio of 0.54 to LOS F with an average delay of 217.9 seconds and a v/c ratio of 1.43. The southbound left-turn lane group would deteriorate from LOS B with an average delay of 12.9 seconds and a v/c ratio of 0.33 to LOS F with an average delay of 1,064.7 seconds and a v/c ratio of 3.30.

Bay Street and Swan Street/Van Duzer Street

- During the **Weekday AM** peak hour, the eastbound left-turn lane group would deteriorate from LOS D with an average delay of 48.3 seconds and a v/c ratio of 0.65 to LOS F with an average delay of 125.1 seconds and a v/c ratio of 0.94. The eastbound left/through/right-turn lane group would deteriorate from LOS E with an average delay of 59.4 seconds and a v/c ratio of 0.74 to LOS F with an average delay of 125.2 seconds and a v/c ratio of 1.09.
- During the **Weekday MD** peak hour, the northbound approach would deteriorate from LOS B with an average delay of 10.8 seconds and a v/c ratio of 0.32 to LOS E with an average delay of 64.5 seconds and a v/c ratio of 0.71.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group would deteriorate from LOS D with an average delay of 41.4 seconds and a v/c ratio of 0.57 to LOS E with an average delay of 70.6 seconds and a v/c ratio of 0.63. The eastbound left/through/right-turn lane group would deteriorate from LOS C with an average delay of 32.7 seconds and a v/c ratio of 0.22 to LOS E with an average delay of 65.9 seconds and a v/c ratio of 0.61.
- During the **Saturday MD** peak hour, the northbound approach would deteriorate from LOS B with an average delay of 11.7 seconds and a v/c ratio of 0.27 to LOS E with an average delay of 62.1 seconds and a v/c ratio of 0.68.

Bay Street and Clinton Street

- During the **Weekday MD** peak hour, the southbound through lane group would deteriorate from LOS A with an average delay of 7.6 and a v/c ratio of 0.65 to LOS F with an average delay of 188.1 seconds and a v/c ratio of 1.37.
- During the **Weekday PM** peak hour, the westbound approach would deteriorate from LOS C with an average delay of 33.6 seconds and a v/c ratio of 0.30 to LOS F with an average delay of 117.0 seconds and a v/c ratio of 0.39. The southbound through lane group would deteriorate from LOS A with an average delay of 8.1 and a v/c ratio of 0.56 to LOS F with an average delay of 89.3 seconds and a v/c ratio of 1.14.
- During the **Saturday MD** peak hour, the southbound through lane group would deteriorate from LOS A with an average delay of 7.4 and a v/c ratio of 0.57 to LOS F with an average delay of 222.8 seconds and a v/c ratio of 1.45.

Bay Street and Wave Street (signalized in the No-Action Condition)

- During the **Weekday MD** peak hour, the northbound through/left-turn lane group would operate at LOS F with an average delay of 204.3 seconds and a v/c ratio of 1.38. The southbound through/right-turn lane group would operate at LOS F with an average delay of 215.4 seconds and a v/c ratio of 1.43.
- During the **Weekday PM** peak hour, the northbound through/left-turn lane group would operate at LOS F with an average delay of 84.0 seconds and a v/c ratio of 1.11. The southbound through/right-turn lane group would operate at LOS F with an average delay of 110.2 seconds and a v/c ratio of 1.17.
- During the **Saturday MD** peak hour, the northbound through/left-turn lane group would operate at LOS F with an average delay of 141.6 seconds and a v/c ratio of 1.24. The southbound through/right-turn lane group would operate at LOS F with an average delay of 268.3 seconds and a v/c ratio of 1.54.

Front Street and Prospect Street (signalized in the No-Action Condition)

- During the **Weekday AM** peak hour, the westbound approach would operate at LOS D with an average delay of 45.1 seconds and a v/c ratio of 0.83.
- During the **Weekday MD** peak hour, the northbound approach would operate at LOS E with an average delay of 72.5 seconds and a v/c ratio of 1.00. The southbound approach would operate at LOS F with an average delay of 231.4 seconds and a v/c ratio of 1.43.
- During the **Weekday PM** peak hour, the northbound approach would operate at LOS F with an average delay of 194.0 seconds and a v/c ratio of 1.34. The southbound approach would operate at LOS F with an average delay of 2,797.4 seconds and a v/c ratio of 7.14.
- During the **Saturday MD** peak hour, the northbound approach would operate at LOS F with an average delay of 80.4seconds and a v/c ratio of 1.04. The southbound approach would operate at LOS F with an average delay of 410.8 seconds and a v/c ratio of 1.83.

Van Duzer Street and Beach Street

- During the **Weekday AM** peak hour, the eastbound approach would deteriorate from LOS D with an average delay of 45.4 seconds and a v/c ratio of 0.73 to LOS E with an average delay of 57.7 seconds and a v/c ratio of 0.87.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate within LOS D from an average delay of 37.2 seconds and a v/c ratio of 0.56 to an average delay of 49.3 seconds and a v/c ratio of 0.77.

Bay Street and Water Street (signalized in the No-Action Condition)

- During the **Weekday AM** peak hour, the southbound approach would operate at LOS E with an average delay of 67.8 seconds and a v/c ratio of 0.81.
- During the **Weekday MD** peak hour, the northbound left-turn lane group would operate at LOS F with an average delay of 348.4 seconds and a v/c ratio of 1.72. The northbound through lane group would operate at LOS E with an average delay of 63.8 seconds and a v/c ratio of 1.10. The southbound approach would operate at LOS F with an average delay of 204.5 seconds and a v/c ratio of 1.38.

- During the **Weekday PM** peak hour, the westbound approach would operate at LOS E with an average delay of 79.6 seconds and a v/c ratio of 0.28. The northbound left-turn lane group would operate at LOS F with an average delay of 921.0 seconds and a v/c ratio of 3.00. The northbound through lane group would operate at LOS E with an average delay of 74.3 seconds and a v/c ratio of 1.01. The southbound approach would operate at LOS F with an average delay of 174.3 seconds and a v/c ratio of 1.31.
- During the **Saturday MD** peak hour, the northbound left-turn lane group would operate at LOS F with an average delay of 359.2 seconds and a v/c ratio of 1.74. The northbound through lane group would operate at LOS E with an average delay of 61.3 seconds and a v/c ratio of 1.06. The southbound approach would operate at LOS F with an average delay of 240.6 seconds and a v/c ratio of 1.46.

Bay Street and Canal Street

- During the **Weekday AM** peak hour, the southbound approach would deteriorate from LOS B with an average delay of 15.9 seconds and a v/c ratio of 0.53 to LOS E with an average delay of 71.9 seconds and a v/c ratio of 0.71.
- During the **Weekday MD** peak hour, the eastbound left-turn lane group would deteriorate from LOS C with an average delay of 21.9 seconds and a v/c ratio of 0.32 to LOS F with an average delay of 171.3 seconds and a v/c ratio of 0.73. The westbound approach would deteriorate from LOS B with an average delay of 17.8 seconds and a v/c ratio of 0.07 to LOS F with an average delay of 141.3 seconds and a v/c ratio of 0.20. The northbound approach would deteriorate from LOS A with an average delay of 8.1 seconds and a v/c ratio of 0.51 to LOS F with an average delay of 119.4seconds and a v/c ratio of 1.22. The southbound approach would deteriorate from LOS C with an average delay of 21.4 seconds and a v/c ratio of 0.66 to LOS F with an average delay of 1,052.7 seconds and a v/c ratio of 3.31.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group would deteriorate from LOS D with an average delay of 39.9 seconds and a v/c ratio of 0.47 to LOS F with an average delay of 82.7 seconds and a v/c ratio of 0.89. The northbound approach would deteriorate from LOS A with an average delay of 8.4 seconds and a v/c ratio of 0.48 to LOS F with an average delay of 84.1 seconds and a v/c ratio of 1.13. The southbound approach would deteriorate from LOS B with an average delay of 19.3 seconds and a v/c ratio of 0.65 to LOS F with an average delay of 1,303.9 seconds and a v/c ratio of 3.86.
- During the **Saturday MD** peak hour, the eastbound left-turn lane group would deteriorate from LOS C with an average delay of 22.3 seconds and a v/c ratio of 0.35 to LOS F with an average delay of 145.5 seconds and a v/c ratio of 0.62. The westbound approach would deteriorate from LOS B with an average delay of 17.6 seconds and a v/c ratio of 0.05 to LOS F with an average delay of 134.0 seconds and a v/c ratio of 0.20. The northbound approach would deteriorate from LOS B with an average delay of 9.3 seconds and a v/c ratio of 0.42 to LOS F with an average delay of 97.7 seconds and a v/c ratio of 1.17. The southbound approach would deteriorate from LOS B with an average delay of 19.2 seconds and a v/c ratio of 0.59 to LOS F with an average delay of 1,167.3 seconds and a v/c ratio of 3.56.

Bay Street and Broad Street

- During the **Weekday MD** peak hour, the northbound approach would deteriorate from LOS A with an average delay of 9.5 seconds and a v/c ratio of 0.47 to LOS F with an average delay of 1,234.7 seconds and a v/c ratio of 3.71. The southbound through lane group would

deteriorate from LOS B with an average delay of 11.8 seconds and a v/c ratio of 0.56 to LOS F with an average delay of 136.3 seconds and a v/c ratio of 1.25.

- During the **Weekday PM** peak hour, the northbound approach would deteriorate from LOS B with an average delay of 13.1 seconds and a v/c ratio of 0.41 to LOS F with an average delay of 1,091.2 seconds and a v/c ratio of 3.39. The southbound through lane group would deteriorate from LOS A with an average delay of 6.8 seconds and a v/c ratio of 0.51 to LOS E with an average delay of 62.0 seconds and a v/c ratio of 1.07.
- During the **Saturday MD** peak hour, the northbound approach would deteriorate from LOS A with an average delay of 7.0 seconds and a v/c ratio of 0.38 to LOS F with an average delay of 1,024.5 seconds and a v/c ratio of 3.24. The southbound through lane group would deteriorate from LOS B with an average delay of 10.4 seconds and a v/c ratio of 0.50 to LOS F with an average delay of 180.6 seconds and a v/c ratio of 1.35.

Victory Boulevard and Cebra Avenue

- During the **Weekday AM** peak hour, the eastbound left-turn lane group would deteriorate from LOS D with an average delay of 47.1 seconds and a v/c ratio of 0.43 to LOS E with an average delay of 56.2 seconds and a v/c ratio of 0.55. The eastbound through/right-turn lane group would deteriorate from LOS D with an average delay of 53.8 seconds and a v/c ratio of 0.75 to LOS E with an average delay of 60.2 seconds and a v/c ratio of 0.82. The westbound left-turn lane group would deteriorate from LOS D with an average delay of 47.1 seconds and a v/c ratio of 0.41 to LOS E with an average delay of 60.5 seconds and a v/c ratio of 0.59. The westbound through/right-turn lane group would deteriorate within LOS D from an average delay of 46.1 seconds and a v/c ratio of 0.60 to an average delay of 50.2 seconds and a v/c ratio of 0.69.
- During the **Weekday MD** peak hour, the westbound left-turn lane group would deteriorate within LOS D from an average delay of 35.2 seconds and a v/c ratio of 0.46 to an average delay of 51.5 seconds and a v/c ratio of 0.69. The southbound approach would deteriorate from LOS B with an average delay of 14.2 seconds and a v/c ratio of 0.64 to LOS F with an average delay of 105.3 seconds and a v/c ratio of 1.17.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group would deteriorate from LOS E with an average delay of 76.3 seconds and a v/c ratio of 0.67 to LOS F with an average delay of 150.8 seconds and a v/c ratio of 0.99. The eastbound through/right-turn lane group would deteriorate within LOS D from an average delay of 50.5 seconds and a v/c ratio of 0.66 to an average delay of 54.2 seconds and a v/c ratio of 0.72. The westbound left-turn lane group would deteriorate from LOS D with an average delay of 50.4 seconds and a v/c ratio of 0.47 to LOS E with an average delay of 68.4 seconds and a v/c ratio of 0.70. The westbound through/right-turn lane group would deteriorate within LOS E from an average delay of 62.0 seconds and a v/c ratio of 0.83 to an average delay of 76.6 seconds and a v/c ratio of 0.93. The southbound approach would deteriorate from LOS B with an average delay of 12.2 seconds and a v/c ratio of 0.63 seconds to LOS D with an average delay of 47.0 seconds and a v/c ratio of 1.05.
- During the **Saturday MD** peak hour, the southbound approach would deteriorate from LOS B with an average delay of 13.2 seconds and a v/c ratio of 0.51 to LOS E with an average delay of 65.3 seconds and a v/c ratio of 1.07.

Victory Boulevard and Jersey Street

- During the **Weekday MD** peak hour, the westbound through lane group would deteriorate from LOS C with an average delay of 22.6 seconds and a v/c ratio of 0.60 to LOS E with an average delay of 70.0 seconds and a v/c ratio of 1.05.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group would deteriorate from LOS B with an average delay of 10.1 seconds and a v/c ratio of 0.21 to LOS E with an average delay of 66.3 seconds and a v/c ratio of 0.94. The westbound through lane group would deteriorate from LOS C with an average delay of 23.5 seconds and a v/c ratio of 0.57 to LOS E with an average delay of 79.3 seconds and a v/c ratio of 0.91.
- During the **Saturday MD** peak hour, the westbound through lane group would deteriorate from LOS A with an average delay of 4.7 seconds and a v/c ratio of 0.48 to LOS D with an average delay of 50.2 seconds and a v/c ratio of 1.00.

Victory Boulevard and Forest Avenue

- During the **Weekday AM** peak hour, the northbound through lane group would operate at LOS E with an average delay of74.4 seconds and a v/c ratio of 0.58.
- During the **Weekday MD** peak hour, the northbound left-turn lane group would deteriorate from LOS B with an average delay of 16.0 seconds and a v/c ratio of 0.32 to LOS D with an average delay of 52.2 seconds and a v/c ratio of 0.78. The southbound through lane group would deteriorate from LOS B with an average delay of 14.4 seconds and a v/c ratio of 0.47 to LOS E with an average delay of 75.8 seconds and a v/c ratio of 0.83.
- During the **Weekday PM** peak hour, the southbound through lane group would deteriorate from LOS B with an average delay of 11.2 seconds and a v/c ratio of 0.49 to LOS E with an average delay of 74.1 seconds and a v/c ratio of 0.82.
- During the **Saturday MD** peak hour, the northbound left-turn lane group would deteriorate from LOS B with an average delay of 15.5 seconds and a v/c ratio of 0.34 to LOS E with an average delay of 67.8 seconds and a v/c ratio of 0.92. The southbound through lane group would deteriorate from LOS B with an average delay of 15.3 seconds and a v/c ratio of 0.34 to LOS E with an average delay of 64.8 seconds and a v/c ratio of 0.78.

Broad Street and Van Duzer Street

- During the **Weekday AM** peak hour, the westbound left-turn lane group would deteriorate within LOS F from an average delay of 89.7 seconds and a v/c ratio of 0.65 to an average delay of 91.9 seconds and a v/c ratio of 0.74.
- During the **Weekday MD** peak hour, the westbound left-turn lane group would operate at LOS E with an average delay of 56.0 seconds and a v/c ratio of 0.78.
- During the **Weekday PM** peak hour, the westbound left-turn lane group would operate at LOS E with an average delay of 77.9 seconds and a v/c ratio of 0.75.
- During the **Saturday MD** peak hour, the westbound left-turn lane group would operate at LOS E with an average delay of 68.3 seconds and a v/c ratio of 0.66.

Broad Street and Targee Street

- During the **Weekday AM** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 34.8 seconds and a v/c ratio of 0.44 to LOS D with an average delay of 47.4 seconds and a v/c ratio of 0.55. The northbound approach would deteriorate from LOS B with an average delay of 18.6 seconds and a v/c ratio of 0.56 to LOS D with an average delay of 52.5 seconds and a v/c ratio of 0.98.

Vanderbilt Avenue and Tompkins Avenue

- During the **Weekday AM** peak hour, the northbound approach would deteriorate from LOS E with an average delay of 59.4 seconds and a v/c ratio of 0.85 to LOS F with an average delay of 177.2 seconds and a v/c ratio of 1.26. The southbound approach would deteriorate from LOS E with an average delay of 61.7 seconds and a v/c ratio of 0.92 to LOS F with an average delay of 99.8 seconds and a v/c ratio of 1.08.
- During the **Weekday MD** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 26.1 seconds and a v/c ratio of 0.70 to LOS E with an average delay of 63.3 seconds and a v/c ratio of 1.00. The northbound approach would deteriorate from LOS D with an average delay of 42.2 seconds and a v/c ratio of 0.79 to LOS F with an average delay of 162.3 seconds and a v/c ratio of 1.25. The southbound approach would deteriorate from LOS D with an average delay of 40.8 seconds and a v/c ratio of 0.81 to LOS E with an average delay of 69.1 seconds and a v/c ratio of 0.99.
- During the **Weekday PM** peak hour, the northbound approach would deteriorate from LOS D with an average delay of 40.6 seconds and a v/c ratio of 0.66 to LOS E with an average delay of 79.9 seconds and a v/c ratio of 0.99.

Bay Street and Vanderbilt Avenue

- During the **Weekday MD** peak hour, the northbound left-turn lane group would deteriorate from LOS B with an average delay of 10.4 seconds and a v/c ratio of 0.54 to LOS F with an average delay of 1,912.8 seconds and a v/c ratio of 5.20. The southbound through lane group would deteriorate from LOS A with an average delay of 6.7 seconds and a v/c ratio of 0.52 to LOS F with an average delay of 105.3 seconds and a v/c ratio of 1.20.
- During the **Weekday PM** peak hour, the northbound left-turn lane group would deteriorate from LOS A with an average delay of 7.9 seconds and a v/c ratio of 0.49 to LOS F with an average delay of 508.0 seconds and a v/c ratio of 2.07.
- During the **Saturday MD** peak hour, the northbound left-turn lane group would deteriorate from LOS B with an average delay of 10.6 seconds and a v/c ratio of 0.46 to LOS F with an average delay of 3,246.2 seconds and a v/c ratio of 8.16. The southbound through lane group would deteriorate from LOS A with an average delay of 7.0 seconds and a v/c ratio of 0.45 to LOS F with an average delay of 145.4 seconds and a v/c ratio of 1.28.

Bay Street and Hylan Boulevard

- During the **Weekday AM** peak hour, the westbound approach would deteriorate from LOS D with an average delay of 47.2 seconds and a v/c ratio of 0.60 to LOS F with an average delay of 100.6 seconds and a v/c ratio of 1.01. The northbound approach would deteriorate from

LOS C with an average delay of 32.1 seconds and a v/c ratio of 0.68 to LOS F with an average delay of 176.2 seconds and a v/c ratio of 1.31.

- During the **Weekday MD** peak hour, the eastbound approach would deteriorate from LOS D with an average delay of 36.3 seconds and a v/c ratio of 0.48 to LOS F with an average delay of 81.1 seconds and a v/c ratio of 1.03. The westbound approach would deteriorate from LOS D with an average delay of 37.2 seconds and a v/c ratio of 0.56 to LOS E with an average delay of 66.8 seconds and a v/c ratio of 0.90. The northbound approach would deteriorate from LOS C with an average delay of 29.0 seconds and a v/c ratio of 0.73 to LOS F with an average delay of 1,762.1 seconds and a v/c ratio of 4.89. The southbound through lane group would deteriorate from LOS C with an average delay of 30.8 seconds and a v/c ratio of 0.57 to LOS F with an average delay of 97.0 seconds and a v/c ratio of 1.12.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 32.2 seconds and a v/c ratio of 0.39to LOS F with an average delay of 95.8 seconds and a v/c ratio of 1.09. The westbound approach would deteriorate from LOS D with an average delay of 45.5 seconds and a v/c ratio of 0.58 to LOS F with an average delay of 89.2 seconds and a v/c ratio of 0.98. The northbound approach would deteriorate from LOS D with an average delay of 43.0 seconds and a v/c ratio of 0.66 to LOS F with an average delay of 1,326.7 seconds and a v/c ratio of 3.91. The southbound through lane group would deteriorate from LOS C with an average delay of 28.5 seconds and a v/c ratio of 0.62 to LOS F with an average delay of 85.3 seconds and a v/c ratio of 1.08.
- During the **Saturday MD** peak hour, the eastbound approach would deteriorate from LOS B with an average delay of 10.7 seconds and a v/c ratio of 0.40 to LOS E with an average delay of 77.9 seconds and a v/c ratio of 1.06. The northbound approach would deteriorate from LOS C with an average delay of 24.6 seconds and a v/c ratio of 0.59 to LOS F with an average delay of 1,540.4 seconds and a v/c ratio of 4.39. The southbound through lane group would deteriorate from LOS C with an average delay of 26.3 seconds and a v/c ratio of 0.47 to LOS F with an average delay of 90.6 seconds and a v/c ratio of 1.10.

Bay Street and School Road

- During the **Weekday AM** peak hour, the eastbound left-turn lane group would deteriorate from LOS D with an average delay of 40.7 seconds and a v/c ratio of 0.70 to LOS F with an average delay of 93.1 seconds and a v/c ratio of 1.06.
- During the **Weekday MD** peak hour, the eastbound left-turn lane group would deteriorate from LOS D with an average delay of 40.1 seconds and a v/c ratio of 0.78 to LOS F with an average delay of 195.2 seconds and a v/c ratio of 1.35.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group would deteriorate from LOS D with an average delay of 40.1 seconds and a v/c ratio of 0.81 to LOS F with an average delay of 233.4 seconds and a v/c ratio of 1.44.
- During the **Saturday MD** peak hour, the eastbound left-turn lane group would deteriorate from LOS C with an average delay of 34.6 seconds and a v/c ratio of 0.69 to LOS F with an average delay of 210.7 seconds and a v/c ratio of 1.39.

Table 14-29: Signalized Level of Service Analysis – Weekday AM Peak Hour
Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
1	**Richmond Terrace and Franklin Avenue**										
	Eastbound	TR	0.63	5.2	A	82	TR	0.77	9.2	A	332
	Westbound	LT	0.52	29.1	C	541	LT	0.88	37.3	D	634
	Northbound	LR	0.23	36.7	D	102	LR	0.25	37.1	D	112
		Intersection		16.9	B		Intersection		22.7	C	
2	**Richmond Terrace and Jersey Street**										
	Eastbound	L	0.00	8.0	A	0	L	1.07	87.4	F	197
		TR	0.96	34.4	C	896	TR	0.70	7.4	A	332
	Westbound	LT	0.92	42.3	D	674	LT	1.06	68.6	E	941
		R	0.01	10.0	A	2	R	0.00	7.7	A	1
	Northbound	L	0.06	25.1	C	28	L	0.09	35.6	D	37
		TR	0.07	35.8	D	33	TR	0.26	38.3	D	102
	Southbound	L	0.01	24.4	C	11	L	0.01	34.0	C	11
		TR	0.01	35.0	C	9	TR	0.08	35.3	D	43
		Intersection		37.2	D		Intersection		45.9	D	
3	**Richmond Terrace and Westervelt Avenue**										
	Eastbound	TR	0.84	12.6	B	151	TR	0.78	13.9	B	231
	Westbound	LT	0.54	25.3	C	450	LT	0.71	47.0	D	636
	Northbound	LR	0.33	34.3	C	143	LR	0.37	35.0	D	158
		Intersection		19.1	B		Intersection		29.9	C	
5	**Hamilton Avenue and Richmond Terrace**										
	Northbound	LT	0.44	5.0	A	46	LT	0.71	13.2	B	139
	Southbound	TR	0.34	9.7	A	72	TR	0.39	9.0	A	87
		Intersection		7.4	A		Intersection		11.2	B	
7	**Wall Street and Richmond Terrace**										
	Eastbound	LTR	0.60	50.5	D	198					
	Westbound	LTR	0.02	26.0	C	13	LTR	0.18	28.8	C	75
							L	0.23	29.9	C	71
	Northbound	TR	0.34	2.2	A	15	T	0.48	11.7	B	134
							R	0.29	10.9	B	63
	Southbound	LT	0.75	16.9	B	325	LTR	0.46	7.4	A	43
		Intersection		15.8	B		Intersection		11.4	B	
8	**Richmond Terrace and Ferry Terminal (bus)**										
	Westbound	L	0.35	37.8	D	151	L	0.47	45.7	D	173
		R	0.32	38.4	D	92	R	0.41	45.5	D	108
	Northbound	T	0.46	18.1	B	96	T	0.41	13.2	B	80
	Southbound	T	0.30	14.0	B	134	T	0.63	85.6	F	478
		Intersection		19.8	B		Intersection		50.2	D	
9	**Richmond Terrace and Ferry Terminal (parking lot)**										
	Westbound	L	0.54	39.8	D	286	L	0.74	55.7	E	315
		R	0.32	131.2	F	143	R	0.20	11.8	B	47
	Northbound	T	0.31	19.9	B	129	T	0.78	39.0	D	257
		R	0.29	2.3	A	12	R	0.35	16.1	B	209
		R	0.25	2.4	A	7	R	0.32	15.4	B	121
	Southbound	L	0.74	106.6	F	329	L	5.82	2211.1	F	573
		TR	0.14	0.1	A	0	TR	0.55	2.6	A	5
		Intersection		37.6	D		Intersection		285.6	F	
10	**Bay Street and Slosson Terrace**										
	Eastbound	LR	0.09	32.7	C	40	LR	0.10	32.7	C	41
	Northbound	L	0.54	14.6	B	87	L	0.69	30.0	C	158
		T	0.47	15.2	B	203	T	0.66	14.1	B	254
	Southbound	TR	0.56	13.5	B	133	TR	0.71	19.9	B	314
		Intersection		14.7	B		Intersection		18.4	B	
11	**Victory Boulevard and Bay Street/St. Marks Place**										
	Eastbound	TR	0.45	4.5	A	35	TR	0.35	6.2	A	56
		R	0.09	2.3	A	6	R	0.36	6.3	A	43
	Westbound	T	0.33	10.2	B	163	T	0.44	16.8	B	248
		L	0.07	4.6	A	11	L	0.07	4.9	A	11
	Southbound	LT	0.39	41.7	D	149	LT	0.44	42.8	D	166
		R	0.31	40.9	D	106	R	0.35	41.9	D	115
		Intersection		14.1	B		Intersection		16.6	B	

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday AM Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
12	**Victory Boulevard and Bay Street**										
	Eastbound	L	0.79	43.1	D	323	L	0.58	31.3	C	197
		TR	0.05	17.0	B	21	LT	0.58	31.4	C	198
	Westbound	LTR	0.04	30.8	C	29	LTR	0.09	31.8	C	45
	Northbound						L	0.88	32.8	C	123
							TR	0.67	17.6	B	243
		LTR	0.83	17.5	B	260					
	Southbound	LT	0.36	3.0	A	23	LT	0.53	7.1	A	43
		R	0.29	3.4	A	19	R	0.36	7.0	A	30
		Intersection		15.7	B		Intersection		17.1	B	
13	**Bay Street and Hannah Street**										
	Eastbound	LTR	0.08	30.1	C	53	LTR	0.09	30.2	C	57
	Westbound	LTR	0.44	36.2	D	227	LTR	0.86	56.7	E	518
	Northbound	LTR	0.78	34.7	C	461	LTR	1.09	82.4	F	352
	Southbound	L	0.64	26.2	C	97	L	1.52	284.4	F	436
		T	0.22	9.8	A	67	T	0.39	8.2	A	104
		R	0.13	4.2	A	13	R	0.17	2.1	A	16
		Intersection		25.7	C		Intersection		71.8	E	
14	**Front Street and Hannah Street**										
	Eastbound						TR	0.32	4.0	A	61
	Westbound						LT	0.08	13.2	B	45
	Northbound						LR	0.56	23.9	C	264
							Intersection		15.0	B	
15	**Bay Street and Swan Street/Van Duzer Street**										
	Eastbound	L	0.65	48.3	D	252	L	0.94	125.1	F	362
		LTR	0.74	59.4	E	338	LTR	1.09	125.2	F	488
	Westbound	LTR	0.02	29.7	C	11	LTR	0.03	30.0	C	11
	Northbound	LTR	0.34	6.8	A	48	LTR	0.45	6.8	A	46
	Southbound	LTR	0.37	9.7	A	95	LTR	0.45	11.2	B	111
		Intersection		22.5	C		Intersection		42.4	D	
19	**Van Duzer Street and Clinton Street**										
	Westbound	TR	0.20	42.0	D	62	TR	0.22	41.1	D	60
	Northbound	LT	0.55	11.6	B	239	LT	0.64	13.8	B	305
		Intersection		14.8	B		Intersection		16.5	B	
20	**Bay Street and Clinton Street**										
	Westbound	LTR	0.10	30.3	C	54	LTR	0.11	30.6	C	59
	Northbound	L	0.04	9.9	A	13	L	0.07	20.3	C	17
		TR	0.30	11.1	B	124	TR	0.41	24.6	C	305
	Southbound	L	0.12	10.3	B	43	L	0.17	12.3	B	51
		TR	0.68	24.2	C	423	TR	0.84	33.8	C	563
		Intersection		18.5	B		Intersection		29.0	C	
24	**Bay Street and Wave Street**										
	Westbound						LTR	0.18	28.4	C	53
	Northbound						LT	0.54	18.7	B	264
							R	0.11	14.0	B	43
	Southbound						L	0.26	7.0	A	23
							TR	0.85	23.5	C	807
							Intersection		20.8	C	
25	**Front Street and Wave Street**										
	Eastbound						LR	0.30	19.3	B	68
	Northbound						LT	0.66	5.0	A	29
	Southbound						TR	0.40	10.7	B	116
							Intersection		8.7	A	
26	**Front Street and Prospect Street**										
	Eastbound						LTR	0.26	21.8	C	47
	Westbound						LTR	0.83	45.1	D	227
	Northbound						TR	0.77	41.6	D	218
	Southbound						LT	0.83	31.7	C	301
							Intersection		37.9	D	

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday AM Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
27	**Van Duzer Street and Beach Street**										
	Eastbound	LT	0.73	45.4	D	294	LT	0.87	57.7	E	391
	Westbound	TR	0.22	28.4	C	95	TR	0.25	28.9	C	106
	Northbound	L	0.28	14.9	B	149	L	0.32	15.5	B	172
		TR	0.77	28.4	C	530	TR	0.88	37.0	D	731
		Intersection		29.8	C		Intersection		37.2	D	
28	**Bay Street and Water Street**										
	Westbound						LTR	0.20	32.9	C	85
	Northbound						L	0.56	24.5	C	73
							T	0.60	24.7	C	277
	Southbound						TR	0.81	67.8	E	299
							Intersection		47.0	D	
29	**Bay Street and Canal Street**										
	Eastbound	L	0.28	34.6	C	99	L	0.34	38.1	D	112
		TR	0.16	31.5	C	77	TR	0.20	32.2	C	89
	Westbound	LTR	0.03	29.5	C	24	LTR	0.18	29.8	C	49
	Northbound	TR	0.40	4.0	A	44	TR	0.61	8.2	A	81
	Southbound	LT	0.53	15.9	B	319	LT	0.71	71.9	E	694
		Intersection		13.9	B		Intersection		40.6	D	
30	**Front Street and Canal Street**										
	Eastbound						LR	0.39	24.1	C	79
	Northbound						LT	0.42	11.0	B	122
	Southbound						TR	0.55	10.9	B	92
							Intersection		13.0	B	
31	**Bay Street and Broad Street**										
	Eastbound	LR	0.23	39.6	D	134	LR	0.34	41.0	D	186
	Northbound	LT	0.42	12.2	B	161	LT	0.62	18.9	B	332
	Southbound	T	0.53	10.9	B	131	T	0.71	11.0	B	221
		R	0.06	8.3	A	20	R	0.12	6.9	A	35
		Intersection		14.1	B		Intersection		16.8	B	
32	**Richmond Terrace and Clove Road**										
	Eastbound	LT	0.78	17.6	B	439	LT	0.89	27.9	C	895
		R	0.14	4.1	A	20	R	0.16	4.4	A	27
	Westbound	L	0.33	10.8	B	26	L	0.56	25.1	C	56
		TR	0.50	10.4	B	216	TR	0.57	12.4	B	284
	Northbound	LTR	0.38	37.1	D	170	LTR	0.44	38.4	D	193
		Intersection		16.2	B		Intersection		22.5	C	
35	**Victory Boulevard and Cebra Avenue**										
	Eastbound	L	0.43	47.1	D	83	L	0.55	56.2	E	95
		TR	0.75	53.8	D	273	TR	0.82	60.2	E	304
	Westbound	L	0.41	47.1	D	81	L	0.59	60.5	E	112
		TR	0.60	46.1	D	252	TR	0.69	50.2	D	292
	Northbound	LT	0.54	13.5	B	208	LT	0.66	16.2	B	284
		R	0.09	9.6	A	20	R	0.11	10.0	A	30
	Southbound	LTR	0.47	14.6	B	161	LTR	0.68	19.7	B	473
		Intersection		27.9	C		Intersection		31.8	C	0
36	**Victory Boulevard and Jersey Street**										
	Eastbound	L	0.13	8.0	A	27	L	0.18	8.1	A	27
		T	0.56	10.9	B	209	T	0.68	12.1	B	238
	Westbound	T	0.40	22.4	C	258	T	0.50	21.2	C	303
		R	0.06	15.3	B	0	R	0.10	13.3	B	47
	Southbound	LR	0.35	37.7	D	128	LR	0.47	40.9	D	172
		Intersection		17.3	B		Intersection		18.0	B	
38	**Victory Boulevard and Forest Avenue**										
	Eastbound	LR	0.61	40.9	D	213	LR	0.72	44.1	D	253
	Northbound	L	0.20	13.6	B	65	L	0.24	14.5	B	74
		T	0.48	74.9	E	286	T	0.58	74.4	E	373
	Southbound	T	0.34	19.3	B	160	T	0.40	21.3	C	186
		R	0.27	4.2	A	15	R	0.32	4.1	A	22
		Intersection		39.5	D		Intersection		41.0	D	

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday AM Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
41	**Broad Street and Canal Street**										
	Eastbound	L	0.21	12.9	B	76	L	0.24	12.3	B	97
		TR	0.39	15.7	B	187	TR	0.47	15.9	B	219
	Westbound	LTR	0.13	13.8	B	70	LTR	0.16	16.9	B	86
	Northbound	L	0.33	38.4	D	82	L	0.47	44.2	D	102
		TR	0.47	39.2	D	174	TR	0.54	41.2	D	199
	Southbound	LT	0.34	36.1	D	141	LT	0.39	37.2	D	161
		Intersection		25.2	C		Intersection		26.5	C	
42	**Broad Street and Van Duzer Street**										
	Westbound	L	0.65	89.7	F	173	L	0.74	91.9	F	225
	Southbound	L	0.20	4.2	A	78	L	0.27	6.4	A	122
		T	0.42	5.7	A	199	T	0.50	8.8	A	301
		Intersection		16.6	B		Intersection		22.0	C	
43	**Broad Street and Targee Street**										
	Eastbound	LT	0.44	34.8	C	221	LT	0.55	47.4	D	336
	Westbound	TR	0.24	40.6	D	131	TR	0.36	41.7	D	193
	Northbound	LTR	0.56	18.6	B	271	LT	0.98	52.5	D	834
							R	0.45	18.5	B	188
		Intersection		23.8	C		Intersection		44.4	D	
44	**Vanderbilt Avenue and Tompkins Avenue**										
	Eastbound	LTR	0.72	28.3	C	493	LTR	0.88	40.4	D	741
	Westbound	LTR	0.29	15.2	B	100	LTR	0.43	15.2	B	145
	Northbound	LTR	0.85	59.4	E	308	LTR	1.26	177.2	F	476
	Southbound	LTR	0.92	61.7	E	467	LTR	1.08	99.8	F	587
		Intersection		42.5	D		Intersection		79.8	E	
45	**Bay Street and Vanderbilt Avenue**										
	Eastbound	L	0.28	21.5	C	69	L	0.44	24.7	C	96
		R	0.34	22.4	C	79	R	0.44	24.9	C	89
	Northbound	LT	0.47	2.5	A	14	LT	0.74	13.9	B	235
	Southbound	T	0.48	23.2	C	318	T	0.63	28.8	C	491
		R	0.18	6.8	A	69	R	0.25	5.9	A	77
		Intersection		14.2	B		Intersection		20.2	C	
47	**Bay Street and Edgewater Drive**										
	Westbound	LR	0.55	47.7	D	236	LR	0.42	34.5	C	182
	Northbound	TR	0.59	16.7	B	227	TR	0.37	8.5	A	70
	Southbound	T	0.62	21.4	C	355	T	0.69	12.3	B	361
	Northwestbound	LTR	0.42	17.0	B	82	R	0.19	0.5	A	0
		Intersection		23.7	C		Intersection		14.9	B	
48	**Bay Street and Hylan Boulevard**										
	Eastbound	LTR	0.47	19.5	B	122	LTR	0.73	29.8	C	208
	Westbound	LTR	0.60	47.2	D	226	LTR	1.02	100.6	F	449
	Northbound	LTR	0.68	32.1	C	494	LTR	1.31	176.2	F	696
	Southbound	T	0.58	18.9	B	113	T	0.82	39.1	D	546
		R	0.15	4.2	A	15	R	0.26	10.0	A	67
		Intersection		26.1	C		Intersection		85.5	F	
49	**Bay Street and School Road**										
	Eastbound	L	0.70	40.7	D	342	L	1.06	93.1	F	660
		TR	0.13	13.5	B	44	TR	0.14	13.3	B	48
	Westbound	LTR	0.00	23.5	C	7	LTR	0.00	23.5	C	7
	Northbound	LTR	0.08	13.5	B	43	LTR	0.09	13.6	B	47
	Southbound	LTR	0.10	7.8	A	33	LTR	0.09	6.4	A	20
		R	0.52	3.2	A	34	R	0.70	3.9	A	30
		Intersection		17.9	B		Intersection		37.9	D	

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday MD Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
	Richmond Terrace and Franklin Avenue										
1	Eastbound	TR	0.38	4.9	A	147	TR	0.66	11.7	B	366
	Westbound	LT	0.49	2.5	A	29	LT	0.91	11.8	B	129
	Northbound	LR	0.17	35.8	D	73	LR	0.19	36.2	D	81
		Intersection		5.6	A		Intersection		12.8	B	
	Richmond Terrace and Jersey Street										
2	Eastbound	L	0.02	11.6	B	5	L	0.66	37.6	D	111
		TR	0.56	22.3	C	398	TR	0.78	27.1	C	558
	Westbound	LT	0.71	24.8	C	355	LT	1.44	227.7	F	1256
		R	0.00	11.5	B	1	R	0.02	8.5	A	4
	Northbound	L	0.06	27.1	C	29	L	0.10	34.5	C	37
		TR	0.07	35.1	D	38	TR	0.18	35.4	D	83
	Southbound	L	0.00	26.0	C	6	L	0.02	32.8	C	13
		TR	0.02	34.1	C	17	TR	0.33	37.8	D	131
		Intersection		24.0	C		Intersection		118.0	F	
	Richmond Terrace and Westervelt Avenue										
3	Eastbound	TR	0.51	12.5	B	137	TR	0.81	20.9	C	346
	Westbound	LT	0.44	23.2	C	192	LT	0.80	71.4	E	424
	Northbound	LR	0.41	35.9	D	168	LR	0.45	37.0	D	186
		Intersection		20.8	C		Intersection		44.9	D	
	Hamilton Avenue and Richmond Terrace										
5	Northbound	LT	0.37	4.9	A	45	LT	0.90	22.7	C	526
	Southbound	TR	0.23	8.3	A	71	TR	0.43	12.1	B	153
		Intersection		6.3	A		Intersection		18.3	B	
	Wall Street and Richmond Terrace										
7	Eastbound	LTR	0.53	47.3	D	153					
	Westbound	LTR	0.03	22.9	C	21	LTR	0.86	66.0	E	376
							L	0.98	93.5	F	350
	Northbound	TR	0.32	8.3	A	46	T	0.56	10.4	B	337
							R	0.51	11.5	B	292
	Southbound	LT	0.52	36.8	D	391	LTR	0.59	14.6	B	95
		Intersection		25.4	C		Intersection		27.4	C	
	Richmond Terrace and Ferry Terminal (bus)										
8	Westbound	L	0.26	32.9	C	95	L	0.98	134.0	F	165
		R	0.16	36.5	D	52	R	0.46	51.0	D	63
	Northbound	T	0.46	10.7	B	54	T	0.66	19.0	B	57
	Southbound	T	0.22	5.3	A	48	T	0.88	65.2	E	521
		Intersection		11.8	B		Intersection		47.1	D	
	Richmond Terrace and Ferry Terminal (parking lot)										
9	Westbound	L	0.26	31.9	C	131	L	0.53	48.4	D	95
		R	0.16	127.3	F	79	R	0.11	15.8	B	19
	Northbound	T	0.37	34.4	C	170	T	0.98	64.6	E	429
		R	0.11	7.9	A	50	R	0.18	17.0	B	58
		R	0.16	8.8	A	46	R	0.20	17.5	B	32
	Southbound	L	0.31	96.9	F	148	L	1.80	425.3	F	92
		TR	0.13	0.1	A	0	TR	1.11	69.4	E	882
		Intersection		31.5	C		Intersection		74.0	E	
	Bay Street and Slosson Terrace										
10	Eastbound	LR	0.16	24.6	C	54	LR	0.17	24.7	C	56
	Northbound	L	0.34	8.9	A	26	L	0.61	31.2	C	61
		T	0.36	8.3	A	57	T	0.90	15.7	B	180
	Southbound	TR	0.51	13.6	B	196	TR	1.17	103.1	F	689
		Intersection		11.7	B		Intersection		59.8	E	
	Victory Boulevard and Bay Street/St. Marks Place										
11	Eastbound	TR	0.37	17.8	B	154	TR	0.42	18.5	B	188
		R	0.04	15.3	B	23	R	0.45	18.6	B	167
	Westbound	T	0.36	43.3	D	279	T	0.81	89.8	F	382
		L	0.08	23.5	C	44	L	0.11	18.8	B	18
	Southbound	LT	0.46	30.1	C	147	LT	0.53	31.9	C	171
		R	0.41	30.6	C	95	R	0.49	33.3	C	107
		Intersection		30.3	C		Intersection		50.2	D	

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday MD Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
12	**Victory Boulevard and Bay Street**										
	Eastbound	L	0.32	28.0	C	64	L	0.62	31.5	C	186
		TR	0.05	22.7	C	19	LT	0.61	30.6	C	144
	Westbound	LTR	0.06	21.6	C	31	LTR	0.35	26.7	C	93
	Northbound	L	0.51	24.8	C	103	L	2.78	829.5	F	176
		TR	0.82	30.2	C	460	TR	0.86	26.3	C	172
	Southbound	LT	0.36	32.9	C	185	LT	0.90	41.9	D	318
		R	0.32	33.9	C	155	R	0.90	93.8	F	225
		Intersection		30.4	C		Intersection		98.4	F	
13	**Bay Street and Hannah Street**										
	Eastbound	LTR	0.06	17.6	B	32	LTR	0.07	17.8	B	35
	Westbound	LTR	0.34	21.0	C	153	LTR	0.67	15.2	B	76
	Northbound	LTR	0.73	26.0	C	288	LTR	1.82	394.1	F	799
	Southbound	L	0.54	18.6	B	138	L	4.65	1675.8	F	429
		T	0.23	8.9	A	43	T	0.73	11.9	B	142
		R	0.23	4.1	A	20	R	0.30	3.0	A	1
		Intersection		18.1	B	0	Intersection		321.1	F	0
14	**Front Street and Hannah Street**										
	Eastbound						TR	0.38	10.2	B	0
	Westbound						LT	0.10	13.4	B	47
	Northbound						LR	0.52	23.1	C	243
							Intersection		16.2	B	0
15	**Bay Street and Swan Street/Van Duzer Street**										
	Eastbound	L	0.50	26.2	C	177	L	0.61	31.9	C	185
		LTR	0.21	20.6	C	76	LTR	0.60	31.6	C	177
	Westbound	LTR	0.00	17.5	B	5	LTR	0.00	17.5	B	5
	Northbound	LTR	0.32	10.8	B	127	LTR	0.71	64.5	E	309
	Southbound	LTR	0.40	5.0	A	31	LTR	0.83	17.3	B	146
		Intersection		11.6	B		Intersection		37.5	D	
19	**Van Duzer Street and Clinton Street**										
	Westbound	TR	0.27	27.8	C	65	TR	0.36	34.4	C	62
	Northbound	LT	0.38	7.7	A	108	LT	0.50	9.3	A	152
		Intersection		11.8	B		Intersection		14.2	B	
20	**Bay Street and Clinton Street**										
	Westbound	LTR	0.21	22.0	C	79	LTR	0.29	23.7	C	89
	Northbound	L	0.08	10.6	B	19	L	0.41	20.1	C	11
		TR	0.31	9.5	A	89	TR	0.66	18.0	B	138
	Southbound	L	0.14	3.2	A	13	L	0.35	7.9	A	12
		TR	0.65	7.6	A	201	TR	1.37	188.1	F	1236
		Intersection		9.6	A		Intersection		101.7	F	
24	**Bay Street and Wave Street**										
	Westbound						LTR	0.31	25.4	C	77
	Northbound						LT	1.38	204.3	F	826
							R	0.13	13.6	B	26
	Southbound						L	0.84	41.2	D	17
							TR	1.43	215.4	F	658
							Intersection		196.0	F	
25	**Front Street and Wave Street**										
	Eastbound						LR	0.28	18.7	B	47
	Northbound						LT	0.65	6.2	A	12
	Southbound						TR	0.47	11.4	B	154
							Intersection		9.4	A	
26	**Front Street and Prospect Street**										
	Eastbound						LTR	0.20	21.5	C	43
	Westbound						LTR	0.29	22.4	C	65
	Northbound						TR	1.00	72.5	E	369
	Southbound						LT	1.43	231.4	F	380
							Intersection		133.2	F	

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday MD Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
27	**Van Duzer Street and Beach Street**										
	Eastbound	LT	0.58	31.2	C	161	LT	0.77	41.3	D	215
	Westbound	TR	0.32	24.1	C	95	TR	0.35	24.8	C	105
	Northbound	L	0.35	13.0	B	141	L	0.41	13.9	B	171
		TR	0.57	17.3	B	242	TR	0.69	21.0	C	326
		Intersection		20.1	C		Intersection		24.3	C	
28	**Bay Street and Water Street**										
	Westbound						LTR	0.28	26.8	C	81
	Northbound						L	1.72	348.4	F	89
							T	1.10	63.8	E	187
	Southbound						TR	1.38	204.5	F	897
							Intersection		147.8	F	
29	**Bay Street and Canal Street**										
	Eastbound	L	0.32	21.9	C	97	L	0.73	171.3	F	186
		TR	0.14	18.8	B	59	TR	0.24	20.9	C	73
	Westbound	LTR	0.07	17.8	B	31	LTR	0.20	141.3	F	51
	Northbound	TR	0.51	8.1	A	57	TR	1.22	119.4	F	59
	Southbound	LT	0.66	21.4	C	335	LT	3.31	1052.7	F	618
		Intersection		16.3	B		Intersection		547.2	F	
30	**Front Street and Canal Street**										
	Eastbound						LR	0.60	27.5	C	98
	Northbound						LT	0.60	14.1	B	189
	Southbound						TR	0.49	11.7	B	60
							Intersection		15.4	B	
31	**Bay Street and Broad Street**										
	Eastbound	LR	0.10	26.7	C	49	LR	0.25	26.7	C	107
	Northbound	LT	0.47	9.5	A	131	LT	3.71	1234.7	F	239
	Southbound	T	0.56	11.8	B	146	T	1.25	136.3	F	114
		R	0.08	9.5	A	22	R	0.20	14.3	B	15
		Intersection		11.5	B		Intersection		574.6	F	
32	**Richmond Terrace and Clove Road**										
	Eastbound	LT	0.44	11.6	B	351	LT	0.65	18.4	B	539
		R	0.12	2.3	A	24	R	0.13	2.3	A	26
	Westbound	L	0.18	17.1	B	70	L	0.35	21.1	C	98
		TR	0.60	27.9	C	549	TR	0.85	37.6	D	826
	Northbound	LTR	0.40	37.4	D	171	LTR	0.47	39.4	D	202
		Intersection		21.1	C		Intersection		28.0	C	
35	**Victory Boulevard and Cebra Avenue**										
	Eastbound	L	0.23	28.9	C	39	L	0.30	31.8	C	43
		TR	0.69	38.2	D	215	TR	0.76	42.7	D	240
	Westbound	L	0.46	35.2	D	78	L	0.69	51.5	D	120
		TR	0.63	35.0	D	217	TR	0.73	40.2	D	262
	Northbound	LTR	0.50	18.7	B	234	LTR	0.90	35.4	D	616
	Southbound	LTR	0.64	14.2	B	194	LTR	1.17	105.3	F	579
		Intersection		24.8	C		Intersection		62.9	E	
36	**Victory Boulevard and Jersey Street**										
	Eastbound	L	0.17	9.0	A	17	L	0.78	43.6	D	36
		T	0.56	13.4	B	116	T	0.98	39.7	D	485
	Westbound	T	0.60	22.6	C	316	T	1.05	70.0	E	700
		R	0.12	14.5	B	48	R	0.19	13.8	B	67
	Southbound	LR	0.28	23.6	C	85	LR	0.50	28.3	C	146
		Intersection		18.4	B		Intersection		50.1	D	
38	**Victory Boulevard and Forest Avenue**										
	Eastbound	LR	0.36	26.1	C	109	LR	0.45	27.5	C	138
	Northbound	L	0.32	16.0	B	79	L	0.78	52.2	D	171
		T	0.37	15.0	B	163	T	0.69	22.1	C	366
	Southbound	T	0.47	14.4	B	120	T	0.83	75.8	E	349
		R	0.29	2.4	A	6	R	0.39	2.9	A	10
		Intersection		15.3	B		Intersection		39.2	D	

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday MD Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
41	**Broad Street and Canal Street**										
	Eastbound	L	0.22	8.4	A	43	L	0.31	10.4	B	65
		TR	0.24	8.4	A	61	TR	0.34	9.8	A	95
	Westbound	LTR	0.21	15.0	B	114	LTR	0.30	20.0	C	144
	Northbound	L	0.31	26.2	C	76	L	0.49	33.0	C	98
		TR	0.51	29.6	C	170	TR	0.63	33.6	C	211
	Southbound	LT	0.27	24.4	C	104	LT	0.37	26.2	C	136
		Intersection		19.5	B		Intersection		22.6	C	
42	**Broad Street and Van Duzer Street**										
	Westbound	L	0.69	67.2	E	158	L	0.78	56.0	E	168
	Southbound	L	0.13	5.8	A	51	L	0.18	8.9	A	76
		T	0.49	8.8	A	215	T	0.60	14.3	B	314
		Intersection		21.2	C		Intersection		25.0	C	
43	**Broad Street and Targee Street**										
	Eastbound	TR	0.26	31.2	C	128	TR	0.33	29.8	C	155
	Westbound	TR	0.38	23.4	C	134	TR	0.58	29.9	C	227
	Northbound	LTR	0.44	13.4	B	140	LT	0.77	24.7	C	355
							R	0.40	14.3	B	113
		Intersection		17.8	B		Intersection		24.6	C	
44	**Vanderbilt Avenue and Tompkins Avenue**										
	Eastbound	LTR	0.70	26.1	C	312	LTR	1.00	63.3	E	552
	Westbound	LTR	0.45	9.2	A	77	LTR	0.78	9.9	A	71
	Northbound	LTR	0.79	42.2	D	285	LTR	1.25	162.3	F	463
	Southbound	LTR	0.81	40.8	D	382	LTR	0.99	69.1	E	497
		Intersection		29.9	C		Intersection		72.3	E	
45	**Bay Street and Vanderbilt Avenue**										
	Eastbound	L	0.23	25.8	C	71	L	0.48	27.1	C	106
		R	0.16	25.3	C	40	R	0.21	24.2	C	36
	Northbound	LT	0.54	10.4	B	62	LT	5.20	1912.8	F	1176
	Southbound	T	0.52	6.7	A	130	T	1.20	105.3	F	458
		R	0.19	2.1	A	18	R	0.37	1.5	A	10
		Intersection		10.7	B		Intersection		730.2	F	
47	**Bay Street and Edgewater Drive**										
	Westbound	LR	0.62	40.6	D	203	LR	0.36	23.2	C	124
	Northbound	TR	0.62	37.1	D	297	TR	0.59	16.9	B	74
	Southbound	T	0.61	38.5	D	317	T	0.96	28.7	C	328
	Northwestbound	LTR	0.41	12.2	B	79	R	0.25	0.6	A	0
		Intersection		34.6	C		Intersection		20.8	C	
48	**Bay Street and Hylan Boulevard**										
	Eastbound	LTR	0.48	36.3	D	216	LTR	1.03	81.1	F	534
	Westbound	LTR	0.56	37.2	D	166	LTR	0.90	66.8	E	300
	Northbound	LTR	0.73	29.0	C	368	LTR	4.89	1762.1	F	751
	Southbound	T	0.57	30.7	C	257	T	1.12	97.0	F	572
		R	0.23	10.2	B	63	R	0.58	18.0	B	170
		Intersection		29.7	C		Intersection		587.6	F	
49	**Bay Street and School Road**										
	Eastbound	L	0.78	40.1	D	319	L	1.35	195.2	F	786
		TR	0.13	15.5	B	41	TR	0.12	12.1	B	39
	Westbound	LTR	0.01	19.6	B	9	LTR	0.01	15.2	B	8
	Northbound	LTR	0.17	10.9	B	64	LTR	0.22	15.2	B	83
	Southbound	LTR	0.11	17.4	B	66	LTR	0.08	16.7	B	23
		R	0.45	6.9	A	102	R	0.71	6.7	A	325
		Intersection		19.8	B		Intersection		82.1	F	

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday PM Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
	Richmond Terrace and Franklin Avenue										
1	Eastbound	TR	0.47	7.4	A	240	TR	0.75	28.8	C	738
	Westbound	LT	0.60	2.7	A	37	LT	1.14	81.4	F	278
	Northbound	LR	0.12	35.1	D	61	LR	0.14	35.3	D	67
		Intersection		6.0	A		Intersection		56.4	E	
	Richmond Terrace and Jersey Street										
2	Eastbound	L	0.04	11.3	B	5	L	0.72	39.2	D	106
		TR	0.67	26.0	C	490	TR	0.83	28.1	C	598
	Westbound	LT	0.91	74.7	E	552	LT	1.29	163.2	F	1186
		R	0.00	12.3	B	1	R	0.01	11.1	B	4
	Northbound	L	0.07	27.2	C	33	L	0.20	39.5	D	42
		TR	0.07	35.1	D	38	TR	0.19	37.0	D	88
	Southbound	L	0.00	26.0	C	4	L	0.04	34.7	C	23
		TR	0.02	34.2	C	18	TR	0.68	49.9	D	255
		Intersection		51.3	D		Intersection		85.2	F	
	Richmond Terrace and Westervelt Avenue										
3	Eastbound	TR	0.59	11.2	B	145	TR	0.88	25.8	C	409
	Westbound	LT	0.98	94.9	F	629	LT	0.78	78.1	E	344
	Northbound	LR	0.47	37.2	D	201	LR	0.52	38.5	D	223
		Intersection		48.3	D		Intersection		47.6	D	
	Hamilton Avenue and Richmond Terrace										
5	Northbound	LT	0.39	3.1	A	37	LT	0.87	21.5	C	371
	Southbound	TR	0.28	11.9	B	101	TR	0.48	34.0	C	331
		Intersection		6.8	A		Intersection		26.8	C	
	Wall Street and Richmond Terrace										
7	Eastbound	LTR	0.50	45.9	D	172					
	Westbound	LTR	0.02	22.6	C	16	LTR	0.66	185.5	F	312
							L	0.62	175.4	F	273
	Northbound	TR	0.68	38.3	D	167	T	0.55	4.5	A	38
							R	0.51	5.6	A	32
	Southbound	LT	0.64	43.0	D	470	LTR	0.61	8.3	A	73
		Intersection		41.0	D		Intersection		45.1	D	
	Richmond Terrace and Ferry Terminal (bus)										
8	Westbound	L	0.33	35.2	D	118	L	0.67	57.7	E	174
		R	0.21	37.2	D	66	R	0.34	44.1	D	84
	Northbound	T	0.52	16.2	B	92	T	0.72	75.4	E	65
	Southbound	T	0.27	4.0	A	43	T	0.90	80.1	F	712
		Intersection		14.2	B		Intersection		75.5	E	
	Richmond Terrace and Ferry Terminal (parking lot)										
9	Westbound	L	0.42	34.9	C	209	L	0.77	58.0	E	286
		R	0.28	129.0	F	133	R	0.16	13.2	B	40
	Northbound	T	0.37	18.8	B	148	T	1.38	208.0	F	695
		R	0.21	1.4	A	8	R	0.26	2.1	A	12
		R	0.17	1.6	A	4	R	0.30	3.2	A	6
	Southbound	L	0.65	111.3	F	271	L	4.16	1457.1	F	350
		TR	0.13	0.1	A	0	TR	0.91	55.7	E	332
		Intersection		35.7	D		Intersection		206.2	F	
	Bay Street and Slosson Terrace										
10	Eastbound	LR	0.19	34.3	C	77	LR	0.20	34.4	C	80
	Northbound	L	0.31	9.7	A	59	L	0.57	32.6	C	89
		T	0.38	10.1	B	176	T	0.86	46.1	D	381
	Southbound	TR	0.52	13.5	B	137	TR	1.13	95.5	F	928
		Intersection		12.8	B		Intersection		69.9	E	
	Victory Boulevard and Bay Street/St. Marks Place										
11	Eastbound	TR	0.19	1.0	A	1	TR	0.39	12.6	B	157
		R	0.14	0.4	A	1	R	0.33	11.9	B	105
	Westbound	T	0.37	4.1	A	56	T	0.74	37.6	D	151
		L	0.05	2.2	A	4	L	0.08	3.2	A	3
	Southbound	LT	0.47	43.8	D	179	LT	0.56	46.6	D	209
		R	0.78	65.3	E	210	R	0.91	84.4	F	263
		Intersection		20.6	C		Intersection		34.9	C	

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday PM Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
12	**Victory Boulevard and Bay Street**										
	Eastbound	L	0.42	42.9	D	183	L	0.84	72.0	E	320
		TR	0.07	32.1	C	44	LT	0.84	72.9	E	325
	Westbound	LTR	0.10	31.8	C	53	LTR	0.75	57.8	E	204
	Northbound	L	0.46	21.7	C	191	L	2.23	577.1	F	222
		TR	0.70	27.7	C	490	TR	0.70	16.7	B	262
	Southbound	LT	0.38	5.4	A	51	LT	0.86	14.1	B	130
		R	0.38	2.4	A	14	R	0.76	11.9	B	70
		Intersection		17.3	B		Intersection		60.2	E	
13	**Bay Street and Hannah Street**										
	Eastbound	LTR	0.09	30.3	C	58	LTR	0.11	30.5	C	64
	Westbound	LTR	0.49	37.5	D	260	LTR	0.88	58.9	E	529
	Northbound	LTR	0.52	19.4	B	291	LTR	1.18	118.7	F	740
	Southbound	L	0.32	26.0	C	118	L	2.51	711.6	F	666
		T	0.19	20.5	C	139	T	0.55	24.3	C	374
		R	0.23	8.2	A	83	R	0.29	7.6	A	67
		Intersection		22.0	C		Intersection		141.5	F	
14	**Front Street and Hannah Street**										
	Eastbound						TR	0.45	3.7	A	67
	Westbound						LT	0.10	13.3	B	47
	Northbound						LR	0.61	25.2	C	289
							Intersection		13.8	B	
15	**Bay Street and Swan Street/Van Duzer Street**										
	Eastbound	L	0.57	41.4	D	213	L	0.63	70.6	E	192
		LTR	0.22	32.7	C	98	LTR	0.61	65.9	E	215
	Westbound	LTR	0.00	0.0	0.0	0	LTR	0.00	0.0	0.0	0
	Northbound	LTR	0.24	10.6	B	91	LTR	0.55	20.5	C	262
	Southbound	LTR	0.34	5.9	A	242	LTR	0.67	5.9	A	41
		Intersection		15.3	B		Intersection		20.8	C	
19	**Van Duzer Street and Clinton Street**										
	Westbound	TR	0.23	40.5	D	83	TR	0.28	37.4	D	79
	Northbound	LT	0.33	8.5	A	119	LT	0.39	9.2	A	146
		Intersection		15.1	B		Intersection		15.1	B	
20	**Bay Street and Clinton Street**										
	Westbound	LTR	0.30	33.6	C	135	LTR	0.39	117.0	F	153
	Northbound	L	0.04	9.8	A	13	L	0.33	11.4	B	5
		TR	0.24	9.7	A	91	TR	0.53	5.7	A	113
	Southbound	L	0.14	4.0	A	12	L	0.31	9.7	A	20
		TR	0.56	8.1	A	127	TR	1.14	89.3	F	1319
		Intersection		11.7	B		Intersection		54.8	D	
24	**Bay Street and Wave Street**										
	Westbound						LTR	0.40	37.1	D	74
	Northbound						LT	1.11	84.0	F	944
							R	0.06	7.7	A	16
	Southbound						L	0.30	17.7	B	28
							TR	1.17	110.2	F	1011
							Intersection		93.9	F	
25	**Front Street and Wave Street**										
	Eastbound						LR	0.22	16.0	B	41
	Northbound						LT	0.82	7.3	A	21
	Southbound						TR	0.49	11.6	B	161
							Intersection		9.6	A	
26	**Front Street and Prospect Street**										
	Eastbound						LTR	0.53	28.6	C	81
	Westbound						LTR	0.41	24.6	C	90
	Northbound						TR	1.34	194.0	F	889
	Southbound						LT	7.14	2797.4	F	906
							Intersection		1048.1	F	

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday PM Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
27	**Van Duzer Street and Beach Street**										
	Eastbound	LT	0.56	37.2	D	214	LT	0.77	49.3	D	286
	Westbound	TR	0.41	31.8	C	174	TR	0.46	33.0	C	195
	Northbound	L	0.37	16.2	B	178	L	0.42	17.1	B	208
		TR	0.52	19.4	B	273	TR	0.58	20.9	C	316
		Intersection		24.2	C		Intersection		27.9	C	
28	**Bay Street and Water Street**										
	Westbound						LTR	0.28	79.6	E	109
	Northbound						L	3.00	921.0	F	177
							T	1.01	74.3	E	737
	Southbound						TR	1.31	174.3	F	1338
							Intersection		176.8	F	
29	**Bay Street and Canal Street**										
	Eastbound	L	0.47	39.9	D	157	L	0.89	82.7	F	268
		TR	0.16	31.7	C	67	TR	0.25	33.8	C	91
	Westbound	LTR	0.08	30.3	C	39	LTR	0.25	40.6	D	66
	Northbound	TR	0.48	8.4	A	122	TR	1.13	84.1	F	140
	Southbound	LT	0.65	19.3	B	406	LT	3.86	1303.9	F	1227
		Intersection		18.1	B		Intersection		627.9	F	
30	**Front Street and Canal Street**										
	Eastbound						LR	0.59	18.6	B	65
	Northbound						LT	0.76	19.7	B	303
	Southbound						TR	0.46	10.9	B	36
							Intersection		16.5	B	
31	**Bay Street and Broad Street**										
	Eastbound	LR	0.12	36.9	D	79	LR	0.29	37.5	D	150
	Northbound	LT	0.41	13.1	B	269	LT	3.39	1091.2	F	763
	Southbound	T	0.51	6.8	A	68	T	1.07	62.0	E	45
		R	0.09	0.3	A	0	R	0.17	0.8	A	0
		Intersection		10.5	B		Intersection		483.8	F	
32	**Richmond Terrace and Clove Road**										
	Eastbound	LT	0.52	13.7	B	403	LT	0.74	17.1	B	647
		R	0.15	2.5	A	29	R	0.17	3.1	A	27
	Westbound	L	0.22	18.7	B	81	L	0.43	14.3	B	85
		TR	0.55	27.0	C	559	TR	0.75	19.3	B	708
	Northbound	LTR	0.30	35.2	D	136	LTR	0.35	36.2	D	157
		Intersection		20.3	C		Intersection		18.3	B	
35	**Victory Boulevard and Cebra Avenue**										
	Eastbound	L	0.67	76.3	E	99	L	0.99	150.8	F	129
		TR	0.66	50.5	D	230	TR	0.72	54.2	D	252
	Westbound	L	0.47	50.4	D	105	L	0.70	68.4	E	160
		TR	0.83	62.0	E	341	TR	0.93	76.6	E	407
	Northbound	LTR	0.45	10.2	B	181	LTR	0.91	40.8	D	851
	Southbound										
		LT	0.63	12.2	B	372	LT	1.05	47.0	D	1036
		R	0.04	5.0	A	7	R	0.04	3.7	A	4
		Intersection		29.3	C		Intersection		52.8	D	
36	**Victory Boulevard and Jersey Street**										
	Eastbound	L	0.21	10.1	B	36	L	0.94	66.3	E	63
		T	0.53	12.4	B	176	T	0.90	27.6	C	445
	Westbound	T	0.57	23.5	C	404	T	0.91	79.3	E	986
		R	0.05	10.5	B	28	R	0.10	7.4	A	40
	Southbound	LR	0.30	37.1	D	101	LR	0.53	43.3	D	176
		Intersection		19.7	B		Intersection		54.6	D	
38	**Victory Boulevard and Forest Avenue**										
	Eastbound	LR	0.39	40.0	D	139	LR	0.51	42.2	D	181
	Northbound	L	0.24	12.3	B	63	L	0.59	30.4	C	131
		T	0.27	11.5	B	145	T	0.52	16.1	B	324
	Southbound	T	0.49	11.2	B	131	T	0.82	74.1	E	453
		R	0.27	1.3	A	2	R	0.37	7.0	A	61
		Intersection		15.5	B		Intersection		41.8	D	

Table 14-29 (con't): Signalized Level of Service Analysis – Weekday PM Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
41	**Broad Street and Canal Street**										
	Eastbound	L	0.17	9.1	A	47	L	0.22	8.3	A	50
		TR	0.17	8.7	A	60	TR	0.22	7.8	A	70
	Westbound	LTR	0.20	10.1	B	80	LTR	0.27	16.7	B	113
	Northbound	L	0.32	37.9	D	87	L	0.44	43.1	D	101
		TR	0.52	41.0	D	191	TR	0.61	44.0	D	223
	Southbound	LT	0.34	36.0	D	141	LT	0.45	38.4	D	177
		Intersection		25.2	C		Intersection		27.4	C	
42	**Broad Street and Van Duzer Street**										
	Westbound	L	0.70	88.7	F	169	L	0.75	77.9	E	175
	Southbound	L	0.10	4.5	A	43	L	0.12	6.0	A	55
		T	0.37	6.1	A	204	T	0.44	8.5	A	284
		Intersection		23.4	C		Intersection		25.0	C	
43	**Broad Street and Targee Street**										
	Eastbound	LT	0.20	42.7	D	149	LT	0.22	44.9	D	163
	Westbound	TR	0.29	24.3	C	140	TR	0.39	28.7	C	192
	Northbound	LTR	0.38	15.7	B	176	LT	0.65	22.8	C	403
							R	0.26	15.0	B	96
		Intersection		20.6	C		Intersection		25.3	C	
44	**Vanderbilt Avenue and Tompkins Avenue**										
	Eastbound	LTR	0.51	22.9	C	266	LTR	0.74	31.8	C	433
	Westbound	LTR	0.46	29.1	C	312	LTR	0.74	37.2	D	384
	Northbound	LTR	0.66	40.6	D	296	LTR	0.99	79.9	E	485
	Southbound	LTR	0.56	35.8	D	284	LTR	0.65	39.0	D	337
		Intersection		31.8	C		Intersection		45.9	D	
45	**Bay Street and Vanderbilt Avenue**										
	Eastbound	L	0.28	33.2	C	143	L	0.58	39.1	D	236
		R	0.14	30.0	C	71	R	0.21	30.2	C	63
	Northbound	LT	0.49	7.9	A	111	LT	2.07	508.0	F	1327
	Southbound	T	0.41	5.3	A	49	T	0.91	9.7	A	110
		R	0.19	0.6	A	3	R	0.34	2.2	A	10
		Intersection		9.6	A		Intersection		197.5	F	
47	**Bay Street and Edgewater Drive**										
	Westbound	LR	0.53	46.7	D	240	LR	0.40	34.1	C	174
	Northbound	TR	0.50	14.2	B	114	TR	0.56	8.5	A	54
	Southbound	T	0.45	17.1	B	177	T	0.77	12.1	B	178
	Northwestbound	LTR	0.89	59.0	E	321	R	0.59	12.9	B	111
		Intersection		30.6	C		Intersection		14.0	B	
48	**Bay Street and Hylan Boulevard**										
	Eastbound	LTR	0.39	32.2	C	221	LTR	1.09	95.8	F	734
	Westbound	LTR	0.58	45.5	D	241	LTR	0.98	89.2	F	441
	Northbound	LTR	0.66	43.0	D	490	LTR	3.91	1326.7	F	946
	Southbound	T	0.62	28.5	C	251	T	1.08	85.3	F	964
		R	0.21	10.6	B	65	R	0.51	15.4	B	188
		Intersection		34.0	C		Intersection		471.8	F	
49	**Bay Street and School Road**										
	Eastbound	L	0.81	40.1	D	521	L	1.44	233.4	F	1331
		TR	0.11	2.8	A	19	TR	0.11	2.0	A	17
	Westbound	LTR	0.01	17.8	B	8	LTR	0.01	13.8	B	7
	Northbound	LTR	0.12	19.2	B	68	LTR	0.16	24.7	C	86
	Southbound	LTR	0.13	14.3	B	48	LTR	0.32	30.3	C	82
		R	0.62	8.2	A	90	R	1.00	29.6	C	190
		Intersection		22.5	C		Intersection		125.7	F	

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 14-29 (con't): Signalized Level of Service Analysis – Saturday MD Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
	Richmond Terrace and Franklin Avenue										
1	Eastbound	TR	0.35	19.3	B	248	TR	0.71	18.4	B	506
	Westbound	LT	0.38	15.5	B	303	LT	0.86	18.0	B	382
	Northbound	LR	0.10	22.7	C	45	LR	0.11	22.8	C	48
		Intersection		17.7	B		Intersection		18.4	B	
	Richmond Terrace and Jersey Street										
2	Eastbound	L	0.03	7.0	A	4	L	0.58	33.7	C	77
		TR	0.49	11.2	B	74	TR	0.75	6.9	A	52
	Westbound	LT	0.58	9.6	A	77	LT	1.10	78.1	E	687
		R	0.01	5.4	A	2	R	0.03	9.9	A	6
	Northbound	L	0.12	19.0	B	37	L	0.21	27.7	C	49
		TR	0.12	26.9	C	39	TR	0.24	27.1	C	73
	Southbound	L	0.02	17.8	B	11	L	0.03	24.1	C	16
		TR	0.03	25.5	C	17	TR	0.44	30.4	C	139
		Intersection		11.8	B		Intersection		39.3	D	
	Richmond Terrace and Westervelt Avenue										
3	Eastbound	TR	0.42	3.0	A	33	TR	0.79	16.2	B	270
	Westbound	LT	0.36	42.3	D	285	LT	0.74	19.2	B	495
	Northbound	LR	0.19	21.2	C	81	LR	0.21	21.4	C	89
		Intersection		21.0	C		Intersection		17.9	B	
	Hamilton Avenue and Richmond Terrace										
5	Northbound	LT	0.35	3.3	A	23	LT	0.95	31.4	C	376
	Southbound	TR	0.23	4.2	A	23	TR	0.53	24.8	C	244
		Intersection		3.7	A		Intersection		28.5	C	
	Wall Street and Richmond Terrace										
7	Eastbound	LTR	0.29	25.1	C	97					
	Westbound	LTR	0.00	14.0	B	3	LTR	0.80	94.2	F	383
							L	0.80	93.1	F	304
	Northbound	TR	0.30	36.2	D	167	T	0.50	5.5	A	133
							R	0.80	23.9	C	424
	Southbound	LT	0.51	28.1	C	195	LTR	0.67	60.0	E	73
		Intersection		31.4	C		Intersection		49.0	D	
	Richmond Terrace and Ferry Terminal (bus)										
8	Westbound	L	0.29	28.1	C	84	L	1.24	195.9	F	206
		R	0.13	28.1	C	38	R	0.44	48.3	D	63
	Northbound	T	0.35	14.3	B	39	T	0.67	25.0	C	48
	Southbound	T	0.17	4.7	A	24	T	0.77	27.3	C	193
		Intersection		13.0	B		Intersection		37.2	D	
	Richmond Terrace and Ferry Terminal (parking lot)										
9	Westbound	L	0.27	27.0	C	101	L	0.64	54.3	D	111
		R	0.08	171.0	F	37	R	0.13	15.5	B	23
	Northbound	T	0.31	27.2	C	89	T	1.03	70.9	E	398
		R	0.12	13.1	B	75	R	0.21	2.5	A	5
		R	0.14	13.8	B	59	R	0.29	3.2	A	3
	Southbound	L	0.31	102.1	F	116	L	1.71	386.7	F	147
		TR	0.10	0.1	A	0	TR	1.24	130.3	F	1108
		Intersection		29.4	C		Intersection		102.5	F	
	Bay Street and Slosson Terrace										
10	Eastbound	LR	0.09	23.5	C	34	LR	0.09	23.6	C	35
	Northbound	L	0.16	9.2	A	30	L	0.34	14.3	B	25
		T	0.30	9.5	A	81	T	0.81	13.4	B	188
	Southbound	TR	0.40	33.6	C	201	TR	1.26	142.3	F	822
		Intersection		21.0	C		Intersection		82.1	F	
	Victory Boulevard and Bay Street/St. Marks Place										
11	Eastbound	TR	0.27	26.3	C	223	TR	0.48	13.7	B	206
		R	0.16	19.9	B	115	R	0.43	12.7	B	151
	Westbound	T	0.35	24.9	C	234	T	0.84	74.7	E	365
		L	0.07	14.7	B	30	L	0.12	15.2	B	22
	Southbound	LT	0.28	26.9	C	92	LT	0.33	27.6	C	105
		R	0.21	26.5	C	66	R	0.24	27.3	C	72
		Intersection		24.6	C		Intersection		42.0	D	

Table 14-29 (con't): Signalized Level of Service Analysis – Saturday MD Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
12	**Victory Boulevard and Bay Street**										
	Eastbound	L	0.34	4.0	A	10	L	0.62	18.2	B	54
		TR	0.07	1.9	A	4	LT	0.63	18.9	B	55
	Westbound	LTR	0.07	21.7	C	35	LTR	0.23	24.2	C	72
	Northbound						L	3.55	1171.5	F	247
							TR	0.74	24.2	C	185
		LTR	0.61	15.9	B	142					
	Southbound	LT	0.29	33.1	C	150	LT	0.93	43.6	D	315
		R	0.22	14.6	B	97	R	0.57	13.6	B	68
		Intersection		19.5	B		Intersection		119.1	F	
13	**Bay Street and Hannah Street**										
	Eastbound	LTR	0.04	17.3	B	24	LTR	0.04	17.4	B	26
	Westbound	LTR	0.29	20.3	C	132	LTR	0.60	10.3	B	52
	Northbound	LTR	0.54	19.1	B	216	LTR	1.43	217.9	F	666
	Southbound	L	0.33	12.9	B	40	L	3.30	1064.7	F	410
		T	0.21	10.2	B	46	T	0.72	11.2	B	141
		R	0.14	1.9	A	0	R	0.17	3.1	A	0
		Intersection		15.0	B		Intersection		194.8	F	
14	**Front Street and Hannah Street**										
	Eastbound						TR	0.38	10.5	B	0
	Westbound						LT	0.05	12.9	B	30
	Northbound						LR	0.52	23.1	C	242
							Intersection		16.5	B	
15	**Bay Street and Swan Street/Van Duzer Street**										
	Eastbound	L	0.44	24.6	C	138	L	0.66	33.6	C	178
		LTR	0.09	18.7	B	49	LTR	0.17	19.9	B	66
	Westbound	LTR	0.00	0.0	0.0	0	LTR	0.00	0.0	0.0	0
	Northbound	LTR	0.27	11.7	B	106	LTR	0.68	62.1	E	273
	Southbound	LTR	0.37	5.0	A	29	LTR	0.90	21.4	C	480
		Intersection		11.3	B		Intersection		37.8	D	
19	**Van Duzer Street and Clinton Street**										
	Westbound	TR	0.21	26.8	C	59	TR	0.27	33.1	C	53
	Northbound	LT	0.28	6.6	A	77	LT	0.33	7.1	A	95
		Intersection		10.8	B		Intersection		12.6	B	
20	**Bay Street and Clinton Street**										
	Westbound	LTR	0.24	22.5	C	90	LTR	0.30	23.6	C	100
	Northbound	L	0.06	10.2	B	17	L	0.34	19.0	B	10
		TR	0.27	6.1	A	58	TR	0.63	17.4	B	147
	Southbound	L	0.21	3.9	A	18	L	0.54	14.2	B	25
		TR	0.57	7.4	A	77	TR	1.45	222.8	F	1228
		Intersection		8.5	A		Intersection		118.3	F	
24	**Bay Street and Wave Street**										
	Westbound						LTR	0.34	26.2	C	87
	Northbound						LT	1.24	141.6	F	820
							R	0.10	12.9	B	22
	Southbound						L	0.81	38.7	D	16
							TR	1.54	268.3	F	707
							Intersection		201.4	F	
25	**Front Street and Wave Street**										
	Eastbound						LR	0.25	17.9	B	43
	Northbound						LT	0.74	8.5	A	29
	Southbound						TR	0.39	10.4	B	125
							Intersection		10.0	B	
26	**Front Street and Prospect Street**										
	Eastbound						LTR	0.62	34.7	C	123
	Westbound						LTR	0.53	27.5	C	113
	Northbound						TR	1.04	80.4	F	380
	Southbound						LT	1.83	410.8	F	345
							Intersection		172.3	F	

Table 14-29 (con't): Signalized Level of Service Analysis – Saturday MD Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
27	**Van Duzer Street and Beach Street**										
	Eastbound	LT	0.53	29.4	C	170	LT	0.65	33.9	C	212
	Westbound	TR	0.27	23.3	C	88	TR	0.31	23.9	C	99
	Northbound	L	0.25	11.7	B	106	L	0.29	12.1	B	121
		TR	0.39	13.7	B	163	TR	0.44	14.3	B	184
		Intersection		18.3	B		Intersection		20.1	C	
28	**Bay Street and Water Street**										
	Westbound						LTR	0.31	27.3	C	84
	Northbound						L	1.74	359.2	F	107
							T	1.06	61.3	E	200
	Southbound						TR	1.46	240.6	F	1067
							Intersection		169.3	F	
29	**Bay Street and Canal Street**										
	Eastbound	L	0.35	22.3	C	113	L	0.62	145.5	F	163
		TR	0.16	18.9	B	66	TR	0.25	20.8	C	85
	Westbound	LTR	0.05	17.6	B	26	LTR	0.20	134.0	F	52
	Northbound	TR	0.42	9.3	A	80	TR	1.17	97.7	F	77
	Southbound	LT	0.59	19.2	B	305	LT	3.56	1167.3	F	664
		Intersection		16.2	B		Intersection		606.5	F	
30	**Front Street and Canal Street**										
	Eastbound						LR	0.65	30.2	C	110
	Northbound						LT	0.53	12.8	B	165
	Southbound						TR	0.44	10.4	B	63
							Intersection		15.3	B	
31	**Bay Street and Broad Street**										
	Eastbound	LR	0.16	23.3	C	68	LR	0.30	25.2	C	127
	Northbound	LT	0.38	7.0	A	99	LT	3.24	1024.5	F	244
	Southbound	T	0.50	10.4	B	105	T	1.35	180.6	F	108
		R	0.12	1.3	A	6	R	0.20	6.3	A	0
		Intersection		9.5	A		Intersection		482.3	F	
32	**Richmond Terrace and Clove Road**										
	Eastbound	LT	0.49	5.6	A	54	LT	0.76	19.4	B	333
		R	0.11	0.7	A	0	R	0.13	6.8	A	38
	Westbound	L	0.21	9.6	A	45	L	0.47	15.6	B	37
		TR	0.41	12.1	B	235	TR	0.69	12.3	B	177
	Northbound	LTR	0.23	34.2	C	30	LTR	0.27	22.7	C	31
		Intersection		10.9	B		Intersection		16.0	B	
35	**Victory Boulevard and Cebra Avenue**										
	Eastbound	L	0.22	27.9	C	43	L	0.27	29.4	C	47
		TR	0.45	30.1	C	138	TR	0.50	31.2	C	153
	Westbound	L	0.23	27.2	C	53	L	0.32	29.5	C	68
		TR	0.49	30.6	C	158	TR	0.55	32.1	C	176
	Northbound	LTR	0.49	16.3	B	230	LTR	0.92	37.7	D	663
	Southbound	LTR	0.51	13.2	B	156	LTR	1.07	65.3	E	561
		Intersection		20.7	C		Intersection		46.3	D	
36	**Victory Boulevard and Jersey Street**										
	Eastbound	L	0.15	7.8	A	19	L	0.74	36.0	D	40
		T	0.55	10.9	B	118	T	1.00	42.9	D	509
	Westbound	T	0.48	4.7	A	33	T	1.00	50.2	D	664
		R	0.07	0.6	A	1	R	0.12	6.4	A	24
	Southbound	LR	0.18	22.1	C	58	LR	0.38	25.4	C	112
		Intersection		8.9	A		Intersection		42.6	D	
38	**Victory Boulevard and Forest Avenue**										
	Eastbound	LR	0.47	27.6	C	131	LR	0.57	29.4	C	162
	Northbound	L	0.34	15.5	B	104	L	0.92	67.8	E	238
		T	0.29	13.7	B	129	T	0.63	19.8	B	326
	Southbound	T	0.34	15.3	B	147	T	0.78	64.8	E	448
		R	0.23	2.6	A	31	R	0.33	3.0	A	37
		Intersection		17.3	B		Intersection		37.7	D	

Table 14-29 (con't): Signalized Level of Service Analysis – Saturday MD Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
41	**Broad Street and Canal Street**										
	Eastbound	L	0.20	8.4	A	46	L	0.27	9.5	A	65
		TR	0.20	8.0	A	52	TR	0.25	8.6	A	70
	Westbound	LTR	0.22	15.1	B	119	LTR	0.28	13.4	B	120
	Northbound	L	0.21	24.1	C	61	L	0.28	25.8	C	68
		TR	0.35	25.8	C	137	TR	0.41	26.9	C	158
	Southbound	LT	0.23	23.8	C	94	LT	0.29	24.7	C	113
		Intersection		17.5	B		Intersection		17.8	B	
42	**Broad Street and Van Duzer Street**										
	Westbound	L	0.61	69.5	E	161	L	0.66	68.3	E	173
	Southbound	L	0.09	4.2	A	37	L	0.11	5.1	A	45
		T	0.30	5.2	A	114	T	0.34	6.5	A	144
		Intersection		20.2	C		Intersection		22.4	C	
43	**Broad Street and Targee Street**										
	Eastbound	LT	0.20	31.4	C	111	LT	0.22	30.9	C	119
	Westbound	TR	0.29	21.9	C	106	TR	0.37	23.3	C	137
	Northbound	LTR	0.35	12.1	B	124	LT	0.58	16.8	B	265
							R	0.27	12.0	B	89
		Intersection		16.5	B		Intersection		19.0	B	
44	**Vanderbilt Avenue and Tompkins Avenue**										
	Eastbound	LTR	0.57	21.2	C	258	LTR	0.81	32.3	C	445
	Westbound	LTR	0.28	5.5	A	38	LTR	0.53	4.4	A	33
	Northbound	LTR	0.55	28.7	C	180	LTR	0.83	44.8	D	273
	Southbound	LTR	0.53	27.5	C	213	LTR	0.61	29.6	C	248
		Intersection		21.4	C		Intersection		27.9	C	
45	**Bay Street and Vanderbilt Avenue**										
	Eastbound	L	0.16	28.4	C	74	L	0.38	28.7	C	124
		R	0.15	28.9	C	57	R	0.20	26.6	C	51
	Northbound	LT	0.46	10.6	B	53	LT	8.16	3246.2	F	1218
	Southbound	T	0.45	7.0	A	107	T	1.28	145.4	F	483
		R	0.17	2.5	A	19	R	0.35	1.5	A	9
		Intersection		11.2	B		Intersection		1195.9	F	
47	**Bay Street and Edgewater Drive**										
	Westbound	LR	0.49	37.5	D	152	LR	0.30	22.5	C	105
	Northbound	TR	0.61	35.7	D	271	TR	0.60	16.8	B	84
	Southbound	T	0.51	35.0	D	280	T	1.01	36.9	D	328
	Northwestbound	LTR	0.43	20.6	C	102	R	0.37	3.8	A	25
		Intersection		33.5	C		Intersection		24.1	C	
48	**Bay Street and Hylan Boulevard**										
	Eastbound	LTR	0.40	10.7	B	38	LTR	1.06	77.9	E	551
	Westbound	LTR	0.31	30.6	C	102	LTR	0.65	41.9	D	185
	Northbound	LTR	0.59	24.6	C	338	LTR	4.39	1540.4	F	709
	Southbound	T	0.47	26.3	C	210	T	1.10	90.6	F	529
		R	0.21	9.6	A	48	R	0.63	18.8	B	179
		Intersection		21.2	C		Intersection		515.8	F	
49	**Bay Street and School Road**										
	Eastbound	L	0.69	34.6	C	256	L	1.39	210.7	F	831
		TR	0.10	9.8	A	29	TR	0.09	8.3	A	28
	Westbound	LTR	0.01	19.7	B	11	LTR	0.01	15.3	B	9
	Northbound	LTR	0.08	10.1	B	36	LTR	0.10	13.9	B	46
	Southbound	LTR	0.23	21.3	C	142	LTR	0.19	19.9	B	65
		R	0.28	9.5	A	98	R	0.70	11.3	B	153
		Intersection		21.5	C		Intersection		98.3	F	

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

LEVEL OF SERVICE – UNSIGNALIZED INTERSECTIONS

Table 14-30 presents a comparison of Existing and No-Action Conditions for the unsignalized study intersections. At the following locations, the addition of No-Action traffic would result in changes in LOS beyond mid-LOS D:

Wall Street and Stuyvesant Place

- During the **Weekday AM** peak hour, the southbound approach would deteriorate from LOS C with an average delay of 17.7 seconds and a v/c ratio of 0.37 to LOS E with an average delay of 42.9seconds and a v/c ratio of 0.35.

Bay Street and Grant Street

- During the **Weekday AM** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 22.5 seconds and a v/c ratio of 0.32 to LOS F with an average delay of 56.1 seconds and a v/c ratio of 0.62.
- During the **Weekday MD** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 17.8 seconds and a v/c ratio of 0.12 to LOS F with an average delay exceeding the maximum limit provided by the analysis software and a v/c ratio of 8.60.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 19.6 seconds and a v/c ratio of 0.25 to LOS F with an average delay exceeding the maximum limit provided by the analysis software and a v/c ratio of 5.65.
- During the **Saturday MD** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 17.9 seconds and a v/c ratio of 0.20 to LOS F with an average delay exceeding the maximum limit provided by the analysis software and a v/c ratio of 4.08.

Bay Street and Baltic Street

- During the **Weekday AM** peak hour, the eastbound approach would deteriorate from LOS E with an average delay of 46.3 seconds and a v/c ratio of 0.36 to LOS F with an average delay of 58.9 seconds and a v/c ratio of 0.45. The westbound approach (driveway) would deteriorate from LOS F with an average delay of 50.3 seconds and a v/c ratio of 0.05 to LOS F with an average delay of 68.3 seconds and a v/c ratio of 0.06.
- During the **Weekday MD** peak hour, the eastbound approach would deteriorate from LOS D with an average delay of 29.3 seconds and a v/c ratio of 0.11 to LOS F with an average delay of exceeding the maximum limit provided by the analysis software and a v/c ratio of 3.03. The westbound approach (driveway) would deteriorate from LOS E with an average delay of 45.7 seconds and a v/c ratio of 0.07 to LOS F with an average delay exceeding the maximum limit provided by the analysis software and a v/c ratio exceeding the maximum limit provided by the analysis software.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 22.4 seconds and a v/c ratio of 0.08 to LOS F with an average delay of 683.4 seconds and a v/c ratio of 1.30. The westbound approach (driveway) would deteriorate from LOS D with an average delay of 25.5 seconds and a v/c ratio of 0.01 to LOS F with an average delay of 2,659.2 and a v/c ratio of 1.17.
- During the **Saturday MD** peak hour, the eastbound approach would deteriorate from LOS D with an average delay of 25.9 seconds and a v/c ratio of 0.11 to LOS F with an average delay of 675.4 seconds and a v/c ratio of 1.39. The westbound approach (driveway) would

deteriorate from LOS E with an average delay of 35.1 seconds and a v/c ratio of 0.04 to LOS F with an average delay exceeding the maximum limit provided by the analysis software and a v/c ratio of 5.02.

Bay Street and William Street

- During the **Weekday AM** peak hour, the eastbound approach would deteriorate within LOS E from an average delay of 38.0 seconds and a v/c ratio of 0.47 to an average delay of 48.6 seconds and a v/c ratio of 0.58.
- During the **Weekday MD** peak hour, the eastbound approach would deteriorate from LOS D with an average delay of 31.0 seconds and a v/c ratio of 0.36 to LOS F with an average delay exceeding the maximum limit provided by the analysis software and a v/c ratio of 4.41.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate from LOS D with an average delay of 27.0 seconds and a v/c ratio of 0.31 to LOS F with an average delay exceeding the maximum limit provided by the analysis software and a v/c ratio of 3.01.
- During the **Saturday MD** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 21.0 seconds and a v/c ratio of 0.24 to LOS F with an average delay of 568.0 seconds and a v/c ratio of 1.81.

Bay Street and Congress Street

- During the **Weekday MD** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 16.4 seconds and a v/c ratio of 0.02 to LOS F with an average delay of 213.2 seconds and a v/c ratio of 0.35.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 21.2 seconds and a v/c ratio of 0.06 to LOS F with an average delay of 155.2 seconds and a v/c ratio of 0.40
- During the **Saturday MD** peak hour, the eastbound approach would deteriorate from LOS B with an average delay of 12.2 seconds and a v/c ratio of 0.01 to LOS F with an average delay of 96.7 seconds and a v/c ratio of 0.09.

Pike Street and Victory Boulevard

- During the **Weekday MD** peak hour, the southbound approach would deteriorate from LOS B with an average delay of 15.0 seconds and a v/c ratio of 0.12 to LOS F with an average delay of 59.7 seconds and a v/c ratio of 0.47.
- During the **Weekday PM** peak hour, the southbound approach would deteriorate from LOS C with an average delay of 15.2 seconds and a v/c ratio of 0.11 to LOS E with an average delay of 35.6 seconds and a v/c ratio of 0.30.
- During the **Saturday MD** peak hour, the southbound approach would deteriorate from LOS B with an average delay of 13.4 seconds and a v/c ratio of 0.07 to LOS E with an average delay of 48.4 seconds and a v/c ratio of 0.31.

Broad Street and Cedar Street

- During the **Weekday AM** peak hour, the southbound approach would deteriorate from LOS C with an average delay of 20.0 seconds and a v/c ratio of 0.20 to LOS D with an average delay of 33.0 seconds and a v/c ratio of 0.46.

- During the **Weekday MD** peak hour, the southbound approach would deteriorate from LOS C with an average delay of 19.6 seconds and a v/c ratio of 0.18 to LOS F with an average delay of 80.0 seconds and a v/c ratio of 0.68.
- During the **Saturday MD** peak hour, the southbound approach would deteriorate from LOS C with an average delay of 17.4 seconds and a v/c ratio of 0.10 to LOS D with an average delay of 30.3 seconds and a v/c ratio of 0.21.

Table 14-30: Unsignalized Level of Service Analysis – Weekday AM Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
4	**Hamilton Avenue and Stuyvesant Place**										
	Southbound	TR	0.33	12.8	B	36.0	TR	0.54	21.2	C	78.0
6	**Wall Street and Stuyvesant Place**										
	Eastbound						R	0.44	18.6	C	56.0
	Southbound	LT	0.37	17.7	C	42.0	L	0.35	42.9	E	36.0
14	**Front Street and Hannah Street**										
	Northbound	LR	0.26	11.5	B	26.0	Signalized in No-Action				
	Westbound	LT	0.02	2.8	A	1.0					
16	**Van Duzer Street and St Julian Place**										
	Westbound	R	0.02	13.9	B	1.0	R	0.03	15.7	C	2.0
17	**Bay Street and St Julian Place**										
	Eastbound	LTR	0.11	15.0	B	9.0	LTR	0.14	16.4	C	12.0
	Westbound	LTR	0.02	10.4	B	2.0	LTR	0.02	10.3	B	2.0
	Northbound	LTR	0.01	0.4	A	1.0	LTR	0.01	0.4	A	1.0
18	**Bay Street and Grant Street**										
	Eastbound	LTR	0.32	22.5	C	33.0	LTR	0.62	56.1	F	86.0
	Westbound	R	0.02	9.7	A	1.0	R	0.02	9.6	A	2.0
21	**Bay Street and Baltic Street**										
	Eastbound	LTR	0.36	46.3	E	37.0	LTR	0.45	58.9	F	49.0
	Westbound	LTR	0.05	50.3	F	3.0	LTR	0.06	68.3	F	5.0
	Southbound	LT	0.00	0.0	--	0.0	LT	0.00	0.0	--	0.0
22	**Bay Street and William Street**										
	Eastbound	LR	0.47	38.0	E	56.0	LR	0.58	48.6	E	77.0
	Northbound	LT	0.01	0.2	A	1.0	LT	0.01	0.4	A	1.0
23	**Bay Street and Congress Street**										
	Eastbound	LR	0.03	21.1	C	3.0	LR	0.04	23.2	C	3.0
	Northbound	LT	0.01	0.2	A	1.0	LT	0.01	0.3	A	1.0
24	**Bay Street and Wave Street**										
	Westbound	LTR	0.32	41.3	E	32.0	Signalized in No-Action				
	Northbound	LT	0.00	0.0	--	0.0					
	Southbound	LTR	0.07	1.8	A	6.0					
25	**Front Street and Wave Street**										
	Eastbound	LR	0.11	10.1	B	9.0	Signalized in No-Action				
	Northbound	LT	0.02	1.1	A	2.0					
26	**Front Street and Prospect Street**										
	Eastbound	LTR	0.02	10.2	B	2.0	Signalized in No-Action				
	Westbound	LTR	0.00	0.0	A	0.0					
	Southbound	LT	0.00	0.0	--	0.0					
28	**Bay Street and Water Street**										
	Westbound	LTR	0.18	31.7	D	16.0	Signalized in No-Action				
	Northbound	LT	0.11	3.0	A	10.0					
30	**Front Street and Canal Street**										
	Eastbound	LR	0.16	12.0	B	14.0	Signalized in No-Action				
	Northbound	LT	0.01	0.3	A	0.0					
33	**Jersey Street and Brook Street**										
	Westbound	LR	0.13	10.6	B	11.0	LR	0.16	11.4	B	14.0
	Southbound	LT	0.11	5.0	A	9.0	LT	0.12	4.8	A	11.0
34	**Pike Street and Brook Street**										
	Westbound	LT	0.02	1.5	A	1.0	LT	0.02	1.6	A	2.0
37	**Pike Street and Victory Boulevard**										
	Southbound	LR	0.09	15.3	C	7.0	LR	0.14	20.6	C	12.0
39	**Hudson Street and Cedar Street**										
	Eastbound	LTR	0.03	9.8	A	2.0	LTR	0.03	10.4	B	3.0
	Westbound	LTR	0.00	10.1	B	0.0	LTR	0.00	11.0	B	0.0
	Northbound	LTR	0.01	1.7	A	1.0	LTR	0.01	1.0	A	1.0
	Southbound	LTR	0.00	0.0	--	0.0	LTR	0.00	0.0	--	0.0
40	**Broad Street and Cedar Street**										
	Eastbound	LTR	0.01	0.3	A	1.0	LTR	0.05	1.4	A	4.0
	Westbound	LT	0.00	0.1	A	0.0	LT	0.00	0.1	A	0.0
	Northbound	LTR	0.00	0.0	A	0.0	LTR	0.00	0.0	A	0.0
	Southbound	LR	0.20	20.0	C	19.0	LR	0.46	33.0	D	55.0

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

Table 14-30 (con't): Unsignalized Level of Service Analysis – Weekday MD Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
4	**Hamilton Avenue and Stuyvesant Place**										
	Southbound	TR	0.15	10.6	B	14.0	TR	0.25	13.6	B	25.0
6	**Wall Street and Stuyvesant Place**										
	Eastbound						R	0.31	13.4	B	34.0
	Southbound	LT	0.22	13.1	B	21.0	L	0.10	23.9	C	8.0
14	**Front Street and Hannah Street**										
	Northbound	LR	0.26	11.4	B	26.0	Signalized in No-Action				
	Westbound	LT	0.01	1.9	A	1.0					
16	**Van Duzer Street and St Julian Place**										
	Westbound	R	0.02	10.5	B	2.0	R	0.04	14.2	B	3.0
17	**Bay Street and St Julian Place**										
	Eastbound	LTR	0.10	15.4	C	8.0	LTR	0.19	24.4	C	17.0
	Westbound	LTR	0.04	11.8	B	3.0	LTR	0.04	10.8	B	3.0
	Northbound	LTR	0.01	0.4	A	1.0	LTR	0.02	0.7	A	2.0
18	**Bay Street and Grant Street**										
	Eastbound	LTR	0.12	17.8	C	10.0	LTR	8.60	Err	F	Err
	Westbound	R	0.08	11.1	B	7.0	R	0.08	10.1	B	6.0
21	**Bay Street and Baltic Street**										
	Eastbound	LTR	0.11	29.3	D	9.0	LTR	3.03	Err	F	Err
	Westbound	LTR	0.07	45.7	E	5.0	LTR	Err	Err	F	Err
	Southbound	LT	0.00	0.1	A	0.0	LT	0.02	2.8	A	2.0
22	**Bay Street and William Street**										
	Eastbound	LR	0.36	31.0	D	39.0	LR	4.41	Err	F	Err
	Northbound	LT	0.01	0.3	A	1.0	LT	0.15	25.8	D	12.0
23	**Bay Street and Congress Street**										
	Eastbound	LR	0.02	16.4	C	2.0	LR	0.35	213.2	F	27.0
	Northbound	LT	0.00	0.0	--	0.0	LT	0.00	0.0	--	0.0
24	**Bay Street and Wave Street**										
	Westbound	LTR	0.43	41.5	E	49.0	Signalized in No-Action				
	Northbound	LT	0.01	0.2	A	0.0					
	Southbound	LTR	0.05	1.2	A	4.0					
25	**Front Street and Wave Street**										
	Eastbound	LR	0.08	9.9	A	7.0	Signalized in No-Action				
	Northbound	LT	0.02	1.2	A	2.0					
26	**Front Street and Prospect Street**										
	Eastbound	LTR	0.00	0.0	A	0.0	Signalized in No-Action				
	Westbound	LTR	0.00	0.0	A	0.0					
	Southbound	LT	0.00	0.0	--	0.0					
28	**Bay Street and Water Street**										
	Westbound	LTR	0.57	82.7	F	65.0	Signalized in No-Action				
	Northbound	LT	0.14	3.6	A	12.0					
30	**Front Street and Canal Street**										
	Eastbound	LR	0.17	11.5	B	16.0	Signalized in No-Action				
	Northbound	LT	0.02	0.9	A	1.0					
33	**Jersey Street and Brook Street**										
	Westbound	LR	0.18	10.6	B	16.0	LR	0.22	11.9	B	21.0
	Southbound	LT	0.09	4.2	A	7.0	LT	0.10	3.7	A	9.0
34	**Pike Street and Brook Street**										
	Westbound	LT	0.02	1.3	A	2.0	LT	0.03	1.3	A	2.0
37	**Pike Street and Victory Boulevard**										
	Southbound	LR	0.12	15.0	B	10.0	LR	0.47	59.7	F	52.0
39	**Hudson Street and Cedar Street**										
	Eastbound	LTR	0.02	9.1	A	1.0	LTR	0.02	10.1	B	2.0
	Westbound	LTR	0.00	9.7	A	0.0	LTR	0.00	10.5	B	0.0
	Northbound	LTR	0.01	1.6	A	1.0	LTR	0.01	1.1	A	1.0
	Southbound	LTR	0.00	0.0	--	0.0	LTR	0.00	0.0	--	0.0
40	**Broad Street and Cedar Street**										
	Eastbound	LTR	0.01	0.3	A	1.0	LTR	0.05	1.6	A	4.0
	Westbound	LT	0.02	0.9	A	2.0	LT	0.03	0.9	A	2.0
	Northbound	LTR	0.00	11.9	B	0.0	LTR	0.00	13.0	B	0.0
	Southbound	LR	0.18	19.6	C	16.0	LR	0.68	80.0	F	92.0

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

Table 14-30 (con't): Unsignalized Level of Service Analysis – Weekday PM Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
4	**Hamilton Avenue and Stuyvesant Place**										
	Southbound	TR	0.12	10.2	B	10.0	TR	0.18	11.8	B	16.0
6	**Wall Street and Stuyvesant Place**										
	Eastbound						R	0.30	13.8	B	31.0
	Southbound	LT	0.18	12.5	B	17.0	L	0.14	23.3	C	12.0
14	**Front Street and Hannah Street**										
	Northbound	LR	0.32	11.8	B	35.0	Signalized in No-Action				
	Westbound	LT	0.02	2.3	A	1.0					
16	**Van Duzer Street and St Julian Place**										
	Westbound	R	0.02	10.3	B	2.0	R	0.03	12.1	B	3.0
17	**Bay Street and St Julian Place**										
	Eastbound	LTR	0.07	13.7	B	5.0	LTR	0.11	19.3	C	10.0
	Westbound	LTR	0.01	13.2	B	1.0	LTR	0.01	14.7	B	1.0
	Northbound	LTR	0.00	0.2	A	0.0	LTR	0.01	0.2	A	1.0
18	**Bay Street and Grant Street**										
	Eastbound	LTR	0.25	19.6	C	25.0	LTR	5.65	Err	F	Err
	Westbound	R	0.08	10.3	B	7.0	R	0.08	9.7	A	7.0
21	**Bay Street and Baltic Street**										
	Eastbound	LTR	0.08	22.4	C	6.0	LTR	1.30	683.4	F	76.0
	Westbound	LTR	0.01	25.5	D	1.0	LTR	1.17	2659.2	F	25.0
	Southbound	LT	0.00	0.0	A	0.0	LT	0.00	0.2	A	0.0
22	**Bay Street and William Street**										
	Eastbound	LR	0.31	27.0	D	32.0	LR	3.01	Err	F	Err
	Northbound	LT	0.02	0.6	A	1.0	LT	0.14	13.8	B	12.0
23	**Bay Street and Congress Street**										
	Eastbound	LR	0.06	21.2	C	5.0	LR	0.40	155.2	F	34.0
	Northbound	LT	0.01	0.2	A	0.0	LT	0.03	2.1	A	2.0
24	**Bay Street and Wave Street**										
	Westbound	LTR	0.34	33.7	D	35.0	Signalized in No-Action				
	Northbound	LT	0.01	0.2	A	1.0					
	Southbound	LTR	0.04	1.0	A	3.0					
25	**Front Street and Wave Street**										
	Eastbound	LR	0.07	9.8	A	5.0	Signalized in No-Action				
	Northbound	LT	0.04	1.7	A	3.0					
26	**Front Street and Prospect Street**										
	Eastbound	LTR	0.07	10.3	B	6.0	Signalized in No-Action				
	Westbound	LTR	0.00	0.0	A	0.0					
	Southbound	LT	0.00	0.0	--	0.0					
28	**Bay Street and Water Street**										
	Westbound	LTR	0.69	119.7	F	80.0	Signalized in No-Action				
	Northbound	LT	0.18	4.6	A	17.0					
30	**Front Street and Canal Street**										
	Eastbound	LR	0.18	12.4	B	16.0	Signalized in No-Action				
	Northbound	LT	0.01	0.7	A	1.0					
33	**Jersey Street and Brook Street**										
	Westbound	LR	0.15	10.8	B	13.0	LR	0.19	11.8	B	17.0
	Southbound	LT	0.07	3.6	A	5.0	LT	0.08	3.0	A	6.0
34	**Pike Street and Brook Street**										
	Westbound	LT	0.03	1.7	A	2.0	LT	0.03	1.7	A	2.0
37	**Pike Street and Victory Boulevard**										
	Southbound	LR	0.11	15.2	C	9.0	LR	0.30	35.6	E	30.0
39	**Hudson Street and Cedar Street**										
	Eastbound	LTR	0.02	8.9	A	2.0	LTR	0.03	9.3	A	2.0
	Westbound	LTR	0.00	0.0	A	0.0	LTR	0.00	0.0	A	0.0
	Northbound	LTR	0.01	1.7	A	1.0	LTR	0.01	1.7	A	1.0
	Southbound	LTR	0.01	4.1	A	1.0	LTR	0.01	4.1	A	1.0
40	**Broad Street and Cedar Street**										
	Eastbound	LTR	0.02	0.7	A	1.0	LTR	0.02	0.9	A	2.0
	Westbound	LT	0.01	0.2	A	0.0	LT	0.01	0.2	A	1.0
	Northbound	LTR	0.00	0.0	A	0.0	LTR	0.00	0.0	A	0.0
	Southbound	LR	0.09	17.5	C	7.0	LR	0.17	28.8	D	15.0

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

Table 14-30 (con't): Unsignalized Level of Service Analysis – Saturday MD Peak Hour Existing vs. No-Action Conditions

#	Intersection & Approach	Existing Conditions					No-Action Conditions				
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)
4	**Hamilton Avenue and Stuyvesant Place**										
	Southbound	TR	0.10	10.3	B	8.0	TR	0.15	11.8	B	13.0
6	**Wall Street and Stuyvesant Place**										
	Eastbound						R	0.17	11.0	B	15.0
	Southbound	LT	0.17	11.1	B	15.0	L	0.08	15.0	C	6.0
14	**Front Street and Hannah Street**										
	Northbound	LR	0.23	10.4	B	22.0	Signalized in No-Action				
	Westbound	LT	0.01	1.5	A	0.0					
16	**Van Duzer Street and St Julian Place**										
	Westbound	R	0.03	10.0	A	2.0	R	0.04	11.7	B	3.0
17	**Bay Street and St Julian Place**										
	Eastbound	LTR	0.05	12.8	B	4.0	LTR	0.09	17.9	C	8.0
	Westbound	LTR	0.03	14.6	B	2.0	LTR	0.02	13.2	B	2.0
	Northbound	LTR	0.00	0.2	A	0.0	LTR	0.01	0.2	A	1.0
18	**Bay Street and Grant Street**										
	Eastbound	LTR	0.20	17.9	C	18.0	LTR	4.08	Err	F	Err
	Westbound	R	0.09	10.5	B	8.0	R	0.09	9.9	A	8.0
21	**Bay Street and Baltic Street**										
	Eastbound	LTR	0.11	25.9	D	9.0	LTR	1.39	675.4	F	86.0
	Westbound	LTR	0.04	35.1	E	3.0	LTR	5.02	Err	F	Err
	Southbound	LT	0.00	0.0	--	0.0	LT	0.00	0.0	--	0.0
22	**Bay Street and William Street**										
	Eastbound	LR	0.24	21.0	C	23.0	LR	1.81	568.0	F	219.0
	Northbound	LT	0.01	0.3	A	1.0	LT	0.07	6.5	A	6.0
23	**Bay Street and Congress Street**										
	Eastbound	LR	0.01	12.2	B	1.0	LR	0.09	96.7	F	7.0
	Northbound	LT	0.00	0.1	A	0.0	LT	0.01	1.2	A	1.0
24	**Bay Street and Wave Street**										
	Westbound	LTR	0.35	30.5	D	37.0	Signalized in No-Action				
	Northbound	LT	0.00	0.1	A	0.0					
	Southbound	LTR	0.04	1.0	A	3.0					
25	**Front Street and Wave Street**										
	Eastbound	LR	0.07	9.8	A	6.0	Signalized in No-Action				
	Northbound	LT	0.03	1.6	A	2.0					
26	**Front Street and Prospect Street**										
	Eastbound	LTR	0.09	10.2	B	7.0	Signalized in No-Action				
	Westbound	LTR	0.00	0.0	A	0.0					
	Southbound	LT	0.00	0.0	--	0.0					
28	**Bay Street and Water Street**										
	Westbound	LTR	0.59	89.0	F	68.0	Signalized in No-Action				
	Northbound	LT	0.14	3.7	A	12.0					
30	**Front Street and Canal Street**										
	Eastbound	LR	0.17	11.3	B	16.0	Signalized in No-Action				
	Northbound	LT	0.01	0.6	A	1.0					
33	**Jersey Street and Brook Street**										
	Westbound	LR	0.12	9.8	A	10.0	LR	0.15	10.6	B	13.0
	Southbound	LT	0.04	3.0	A	3.0	LT	0.05	2.2	A	4.0
34	**Pike Street and Brook Street**										
	Westbound	LT	0.02	1.4	A	1.0	LT	0.02	1.4	A	1.0
37	**Pike Street and Victory Boulevard**										
	Southbound	LR	0.07	13.4	B	6.0	LR	0.31	48.4	E	30.0
39	**Hudson Street and Cedar Street**										
	Eastbound	LTR	0.02	9.1	A	1.0	LTR	0.02	9.6	A	2.0
	Westbound	LTR	0.00	9.1	A	0.0	LTR	0.00	9.2	A	0.0
	Northbound	LTR	0.01	1.9	A	1.0	LTR	0.01	2.0	A	1.0
	Southbound	LTR	0.00	0.0	--	0.0	LTR	0.00	0.0	--	0.0
40	**Broad Street and Cedar Street**										
	Eastbound	LTR	0.01	0.3	A	0.0	LTR	0.01	0.4	A	1.0
	Westbound	LT	0.01	0.4	A	1.0	LT	0.01	0.4	A	1.0
	Northbound	LTR	0.01	15.5	C	1.0	LTR	0.01	19.1	C	1.0
	Southbound	LR	0.10	17.4	C	9.0	LR	0.21	30.3	D	19.0

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

THE FUTURE WITH THE PROPOSED ACTION

TRAFFIC CONDITIONS

The vehicle trips generated by the Proposed Actions were assigned to the study intersections and the various block fronts surrounding the Projected Development Sites. While there are no specific roadway or intersection improvements associated with the Proposed Actions, it is recommended that the southbound left-turn and westbound left-turn at the intersection of Bay Street/Little Bay Street and Minthorne Street be prohibited in the future condition with the Proposed Actions. Vehicle trips generated by the Projected Development Sites in the vicinity of this intersection were assigned assuming the turn prohibitions would be implemented.

The incremental peak hour trips resulting from the Proposed Actions are shown on Figures 14-2 to 14-5, and the total With-Action traffic volumes are shown on Figures 14-16 to 14-19.

LEVEL OF SERVICE – SIGNALIZED INTERSECTIONS

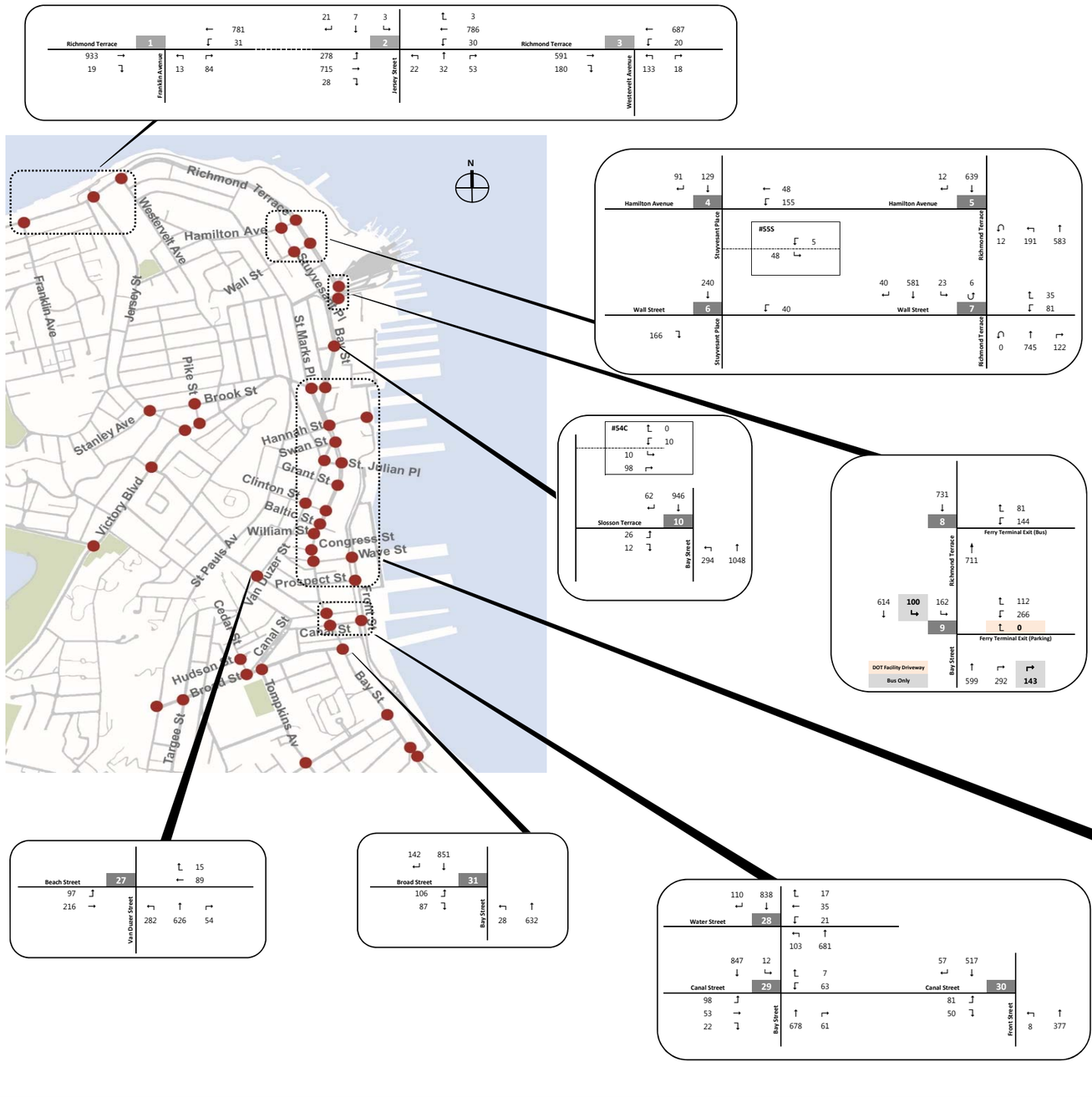
Table 14-31 presents a comparison of No-Action and With-Action Conditions for the signalized study intersections. Based on the significance criteria described in the *CEQR Technical Manual*, significantly impacted lane groups are denoted with a "+" sign in the tables and are detailed below.

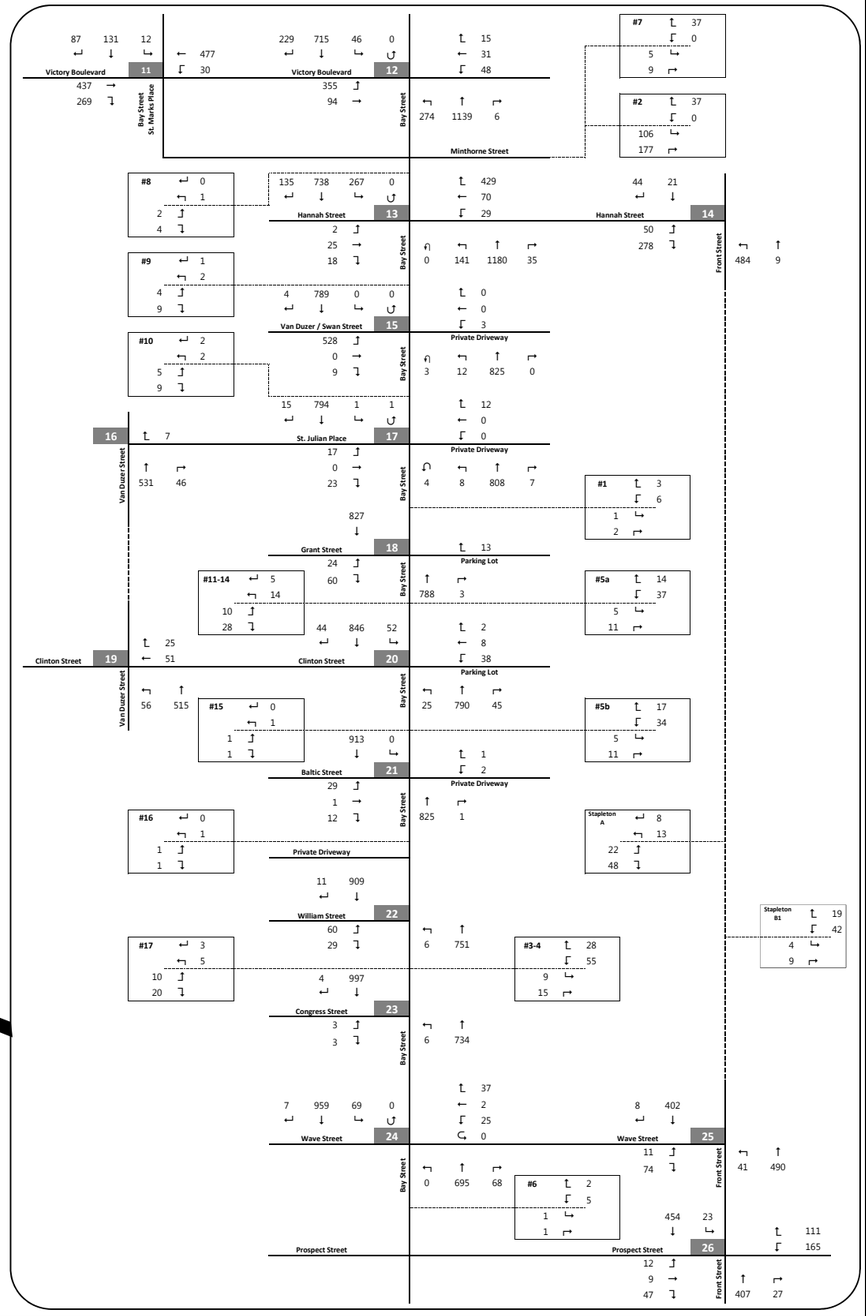
Richmond Terrace and Franklin Avenue

- During the **Weekday AM** peak hour, the westbound through/left-turn lane group would deteriorate from LOS D with an average delay of 37.3seconds and a v/c ratio of 0.88 to LOS F with an average delay of 80.3 seconds and a v/c ratio of 1.09.
- During the **Weekday PM** peak hour, the westbound through/left-turn lane group would deteriorate within LOS F from an average delay of 81.4 seconds and a v/c ratio of 1.14 to an average delay of 253.0 seconds and a v/c ratio of 1.52.

Richmond Terrace and Jersey Street

- During the **Weekday AM** peak hour, the eastbound left-turn lane group would deteriorate within LOS F from an average delay of 87.4 seconds and a v/c ratio of 1.07 to an average delay of 208.5 seconds and a v/c ratio of 1.36. The westbound through/left-turn lane group would deteriorate from LOS E with an average delay of 68.6 seconds and a v/c ratio of 1.06 to LOS F with an average delay of 110.7 seconds and a v/c ratio of 1.18.
- During the **Weekday MD** peak hour, the westbound through/left-turn lane group would deteriorate within LOS F from an average delay of 227.7 seconds and a v/c ratio of 1.44 to an average delay of 337.5 seconds and a v/c ratio of 1.69.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group would deteriorate within LOS D from an average delay of 39.2 seconds and a v/c ratio of 0.72 to an average delay of 48.3 seconds and a v/c ratio of 0.81. The westbound through/left-turn lane group would determinate within LOS F from an average delay of 163.2 seconds and a v/c ratio of 1.29 to an average delay of 353.4 seconds and a v/c ration of 1.73.
- During the **Saturday MD** peak hour, the westbound through/left-turn lane group would deteriorate from LOS E with an average delay of 78.1 seconds and a v/c ratio of 1.10 to LOS F with an average delay of 113.9 seconds and a v/c ratio of 1.19.

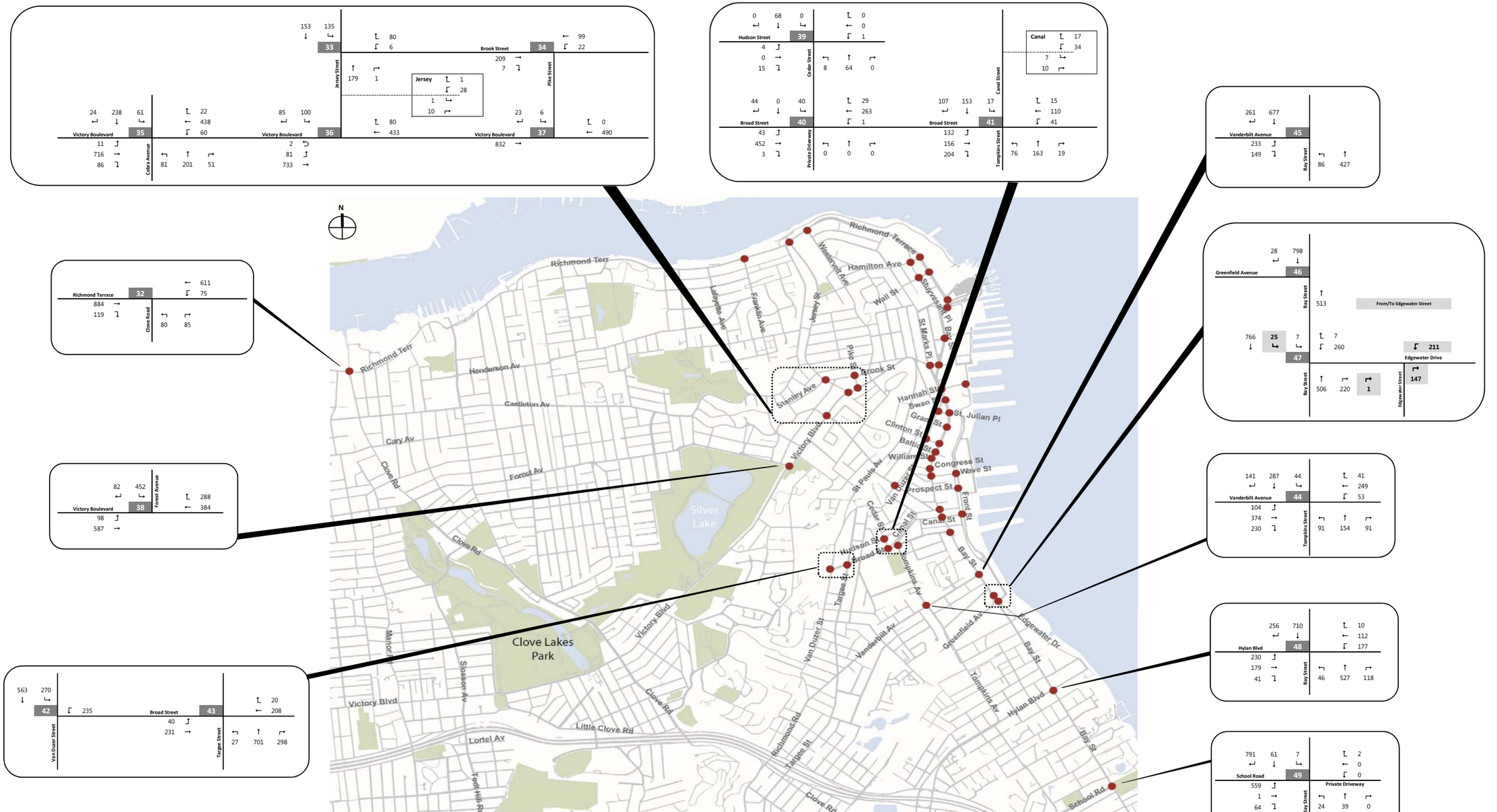




NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

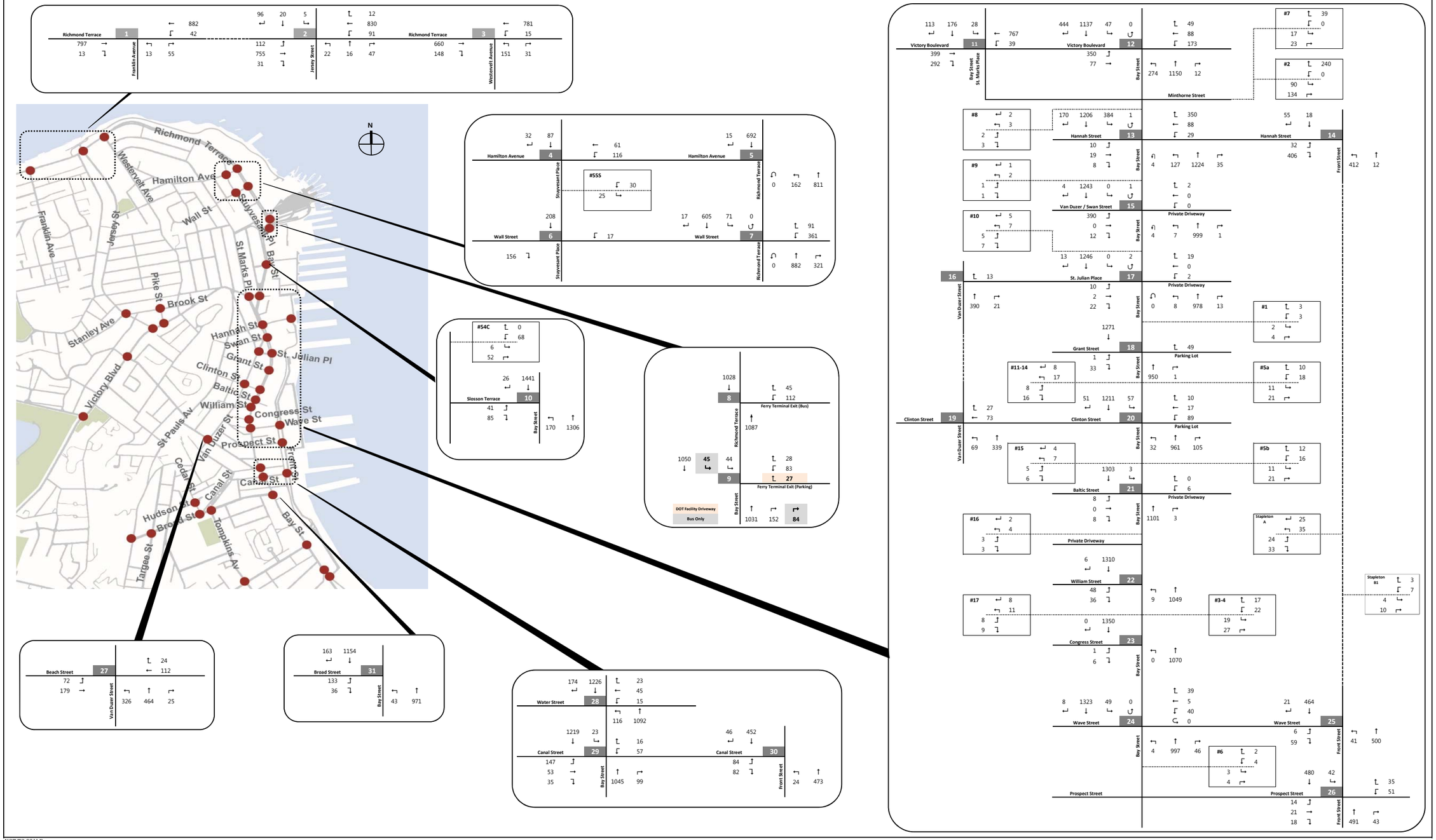
With Action Traffic Conditions
Weekday AM Peak Hour
Figure 14-16 A



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

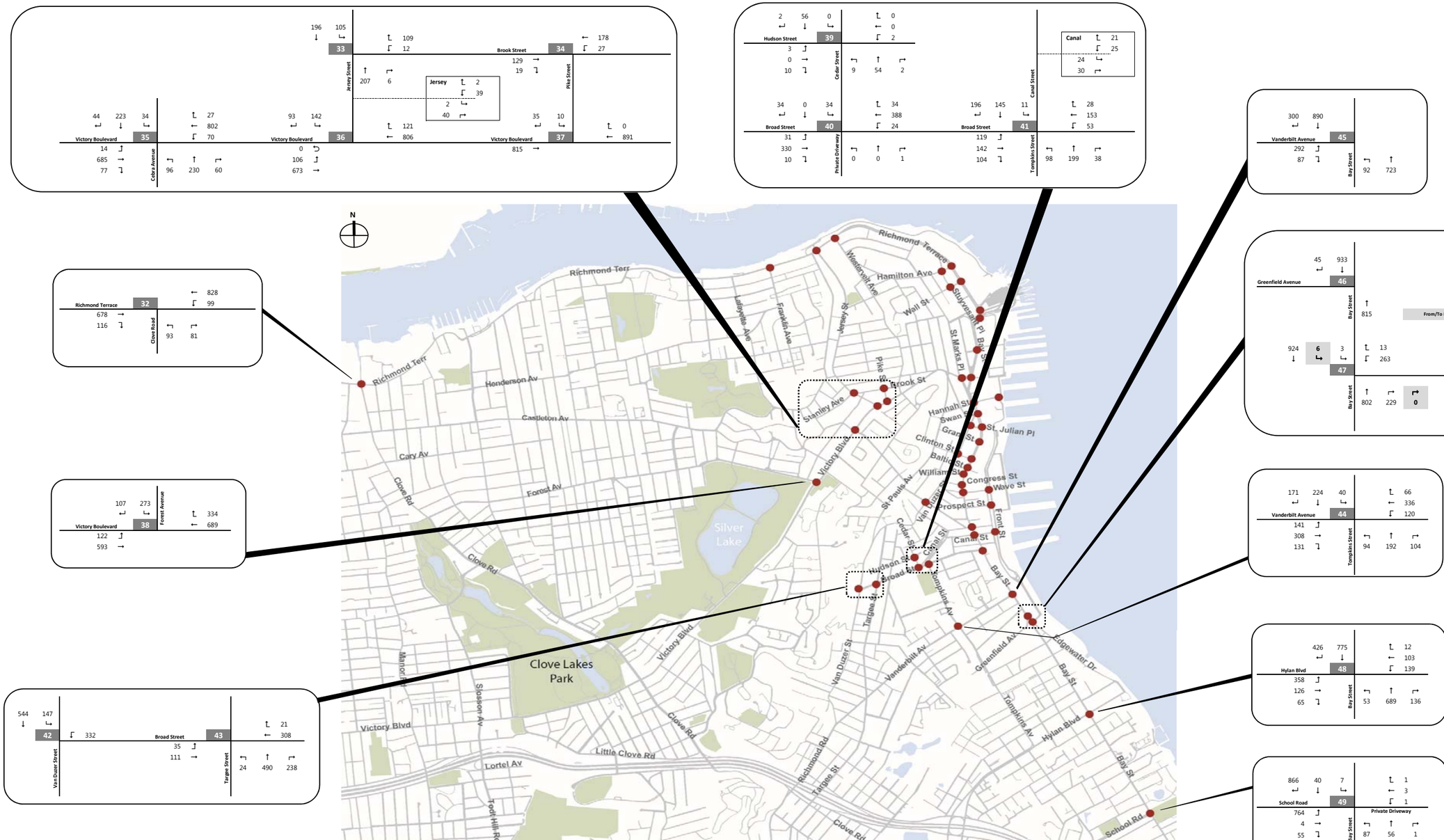
With Action Traffic Conditions
Weekday AM Peak Hour
Figure 14-16 B



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

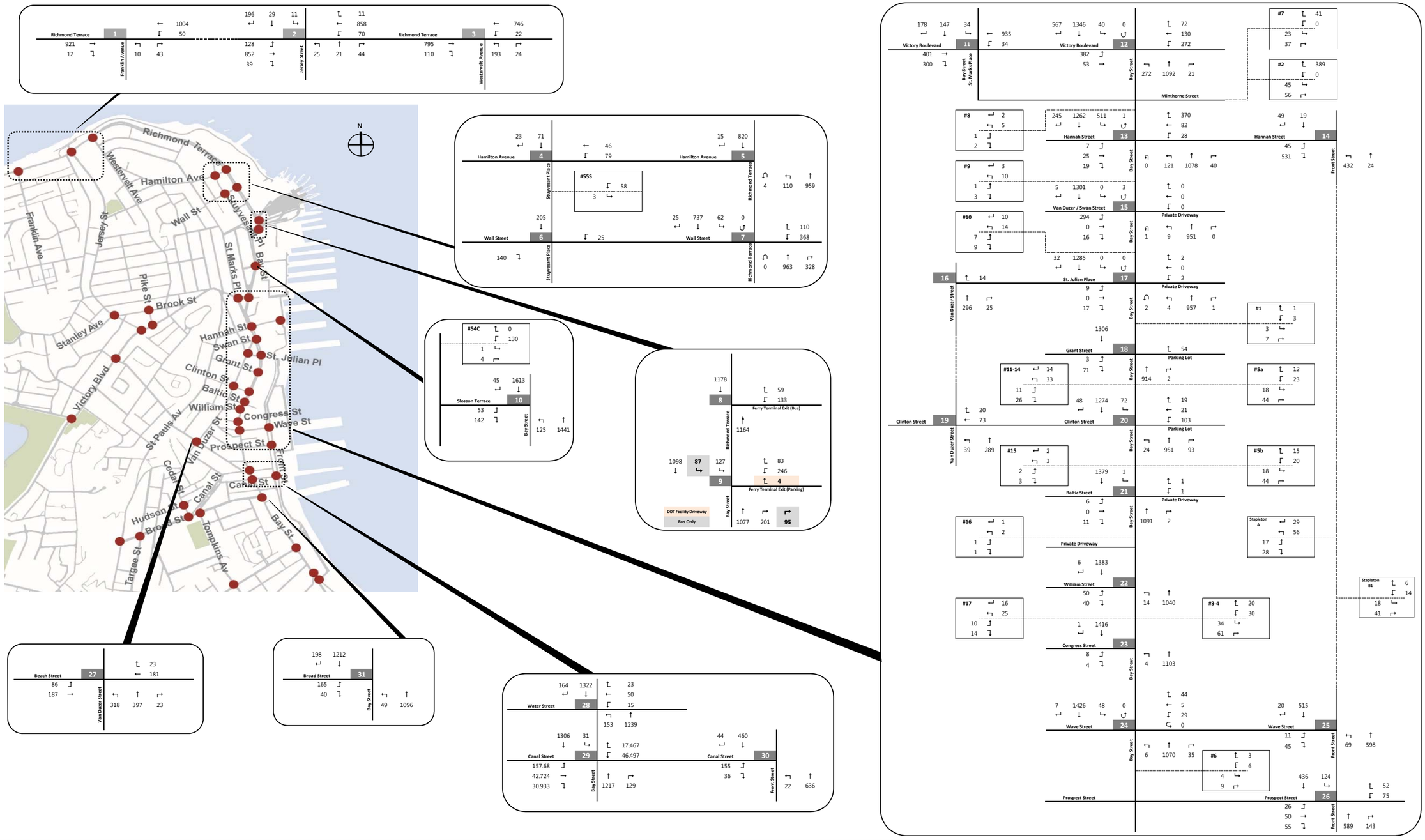
With Action Traffic Conditions
Weekday MD Peak Hour
Figure 14-17 A



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

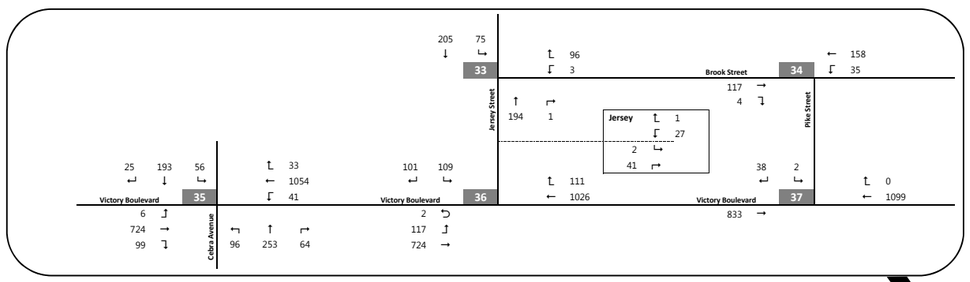
With Action Traffic Conditions
Weekday MD Peak Hour
Figure 14-17 B

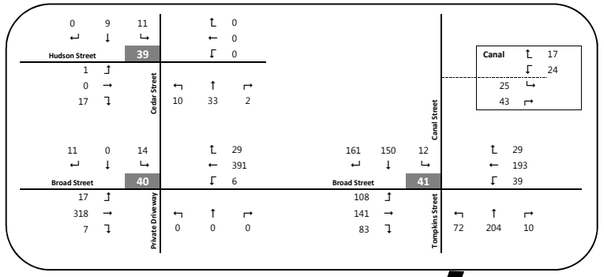


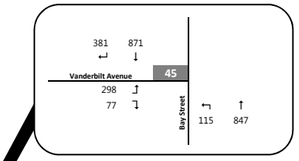
NOT TO SCALE

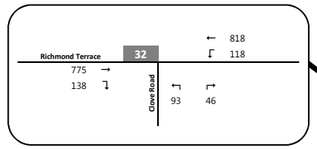
BAY STREET REZONING AND RELATED ACTIONS

With Action Traffic Conditions
Weekday PM Peak Hour
Figure 14-18 A

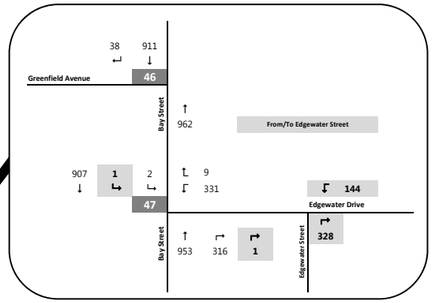


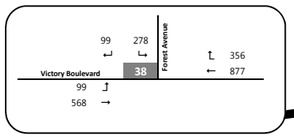


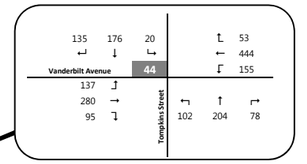


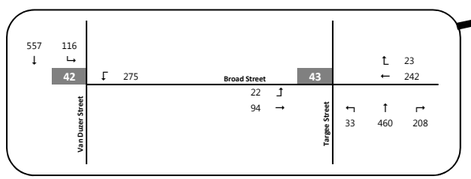


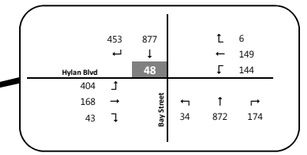


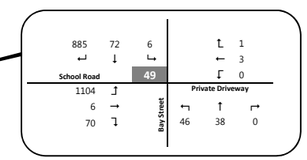








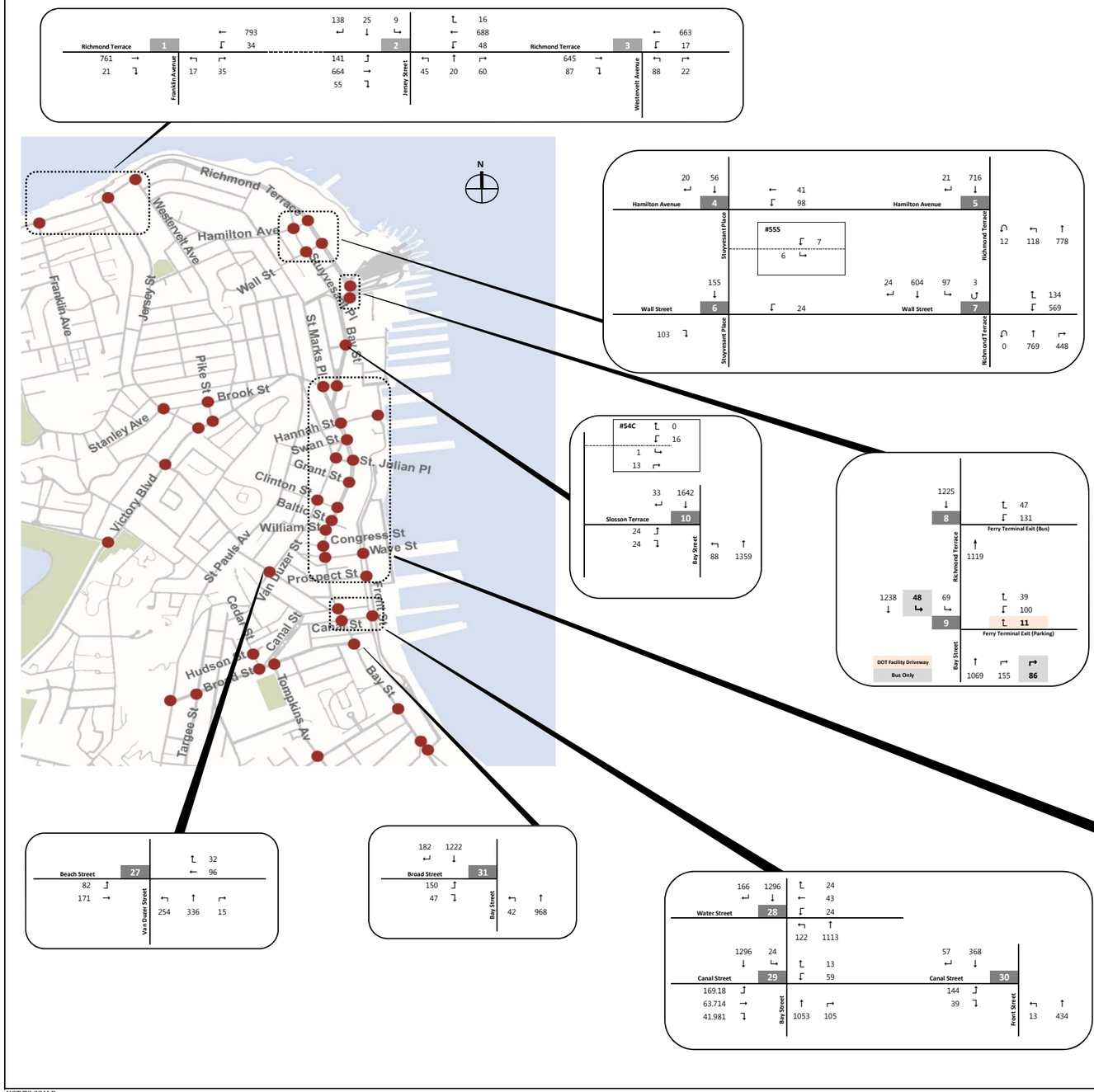


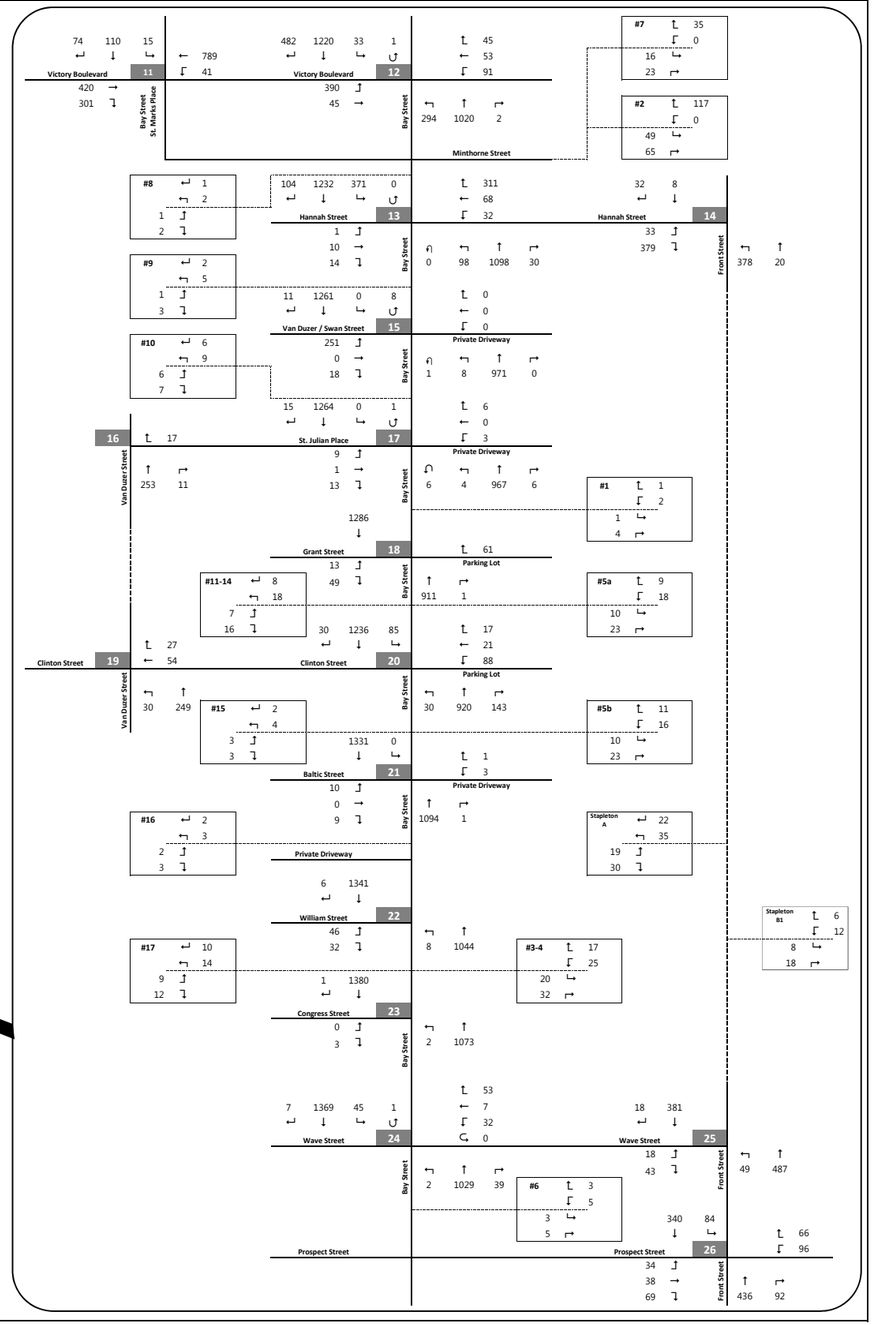


NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

With Action Traffic Conditions
Weekday PM Peak Hour
Figure 14-18 B

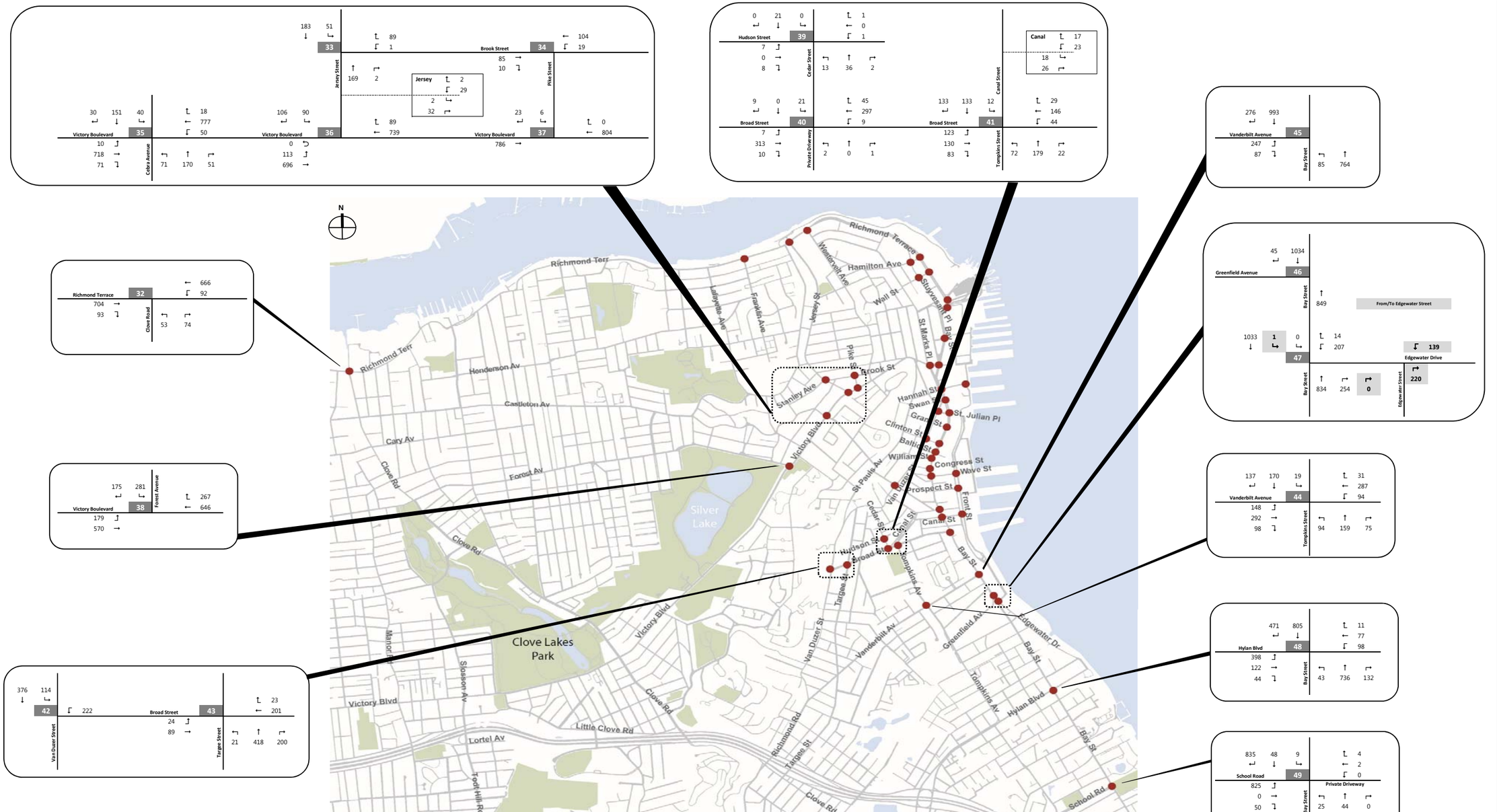




NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

With Action Traffic Conditions
Saturday MD Peak Hour
Figure 14-19 A



NOT TO SCALE

BAY STREET REZONING AND RELATED ACTIONS

With Action Traffic Conditions
Saturday MD Peak Hour
Figure 14-19 B

Richmond Terrace and Westervelt Avenue

- During the **Weekday AM** peak hour, the westbound approach would deteriorate from LOS D with an average delay of 47.0 seconds and a v/c ratio of 0.71 to LOS F with an average delay of 88.8 seconds and a v/c ratio of 0.87.
- During the **Weekday MD** peak hour, the westbound approach would deteriorate from LOS E with an average delay of 71.4 seconds and a v/c ratio of 0.80 to LOS F with an average delay of 80.8 seconds and a v/c ratio of 0.91.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate from LOS C with an average delay of 25.8 seconds and a v/c ratio of 0.88 to LOS D with an average delay of 47.9 seconds and a v/c ratio of 0.98. The westbound approach would deteriorate from LOS E with an average delay of 78.1 seconds and a v/c ratio of 0.78 to LOS F with an average delay of 101.3 seconds and a v/c ratio of 1.10.

Hamilton Avenue and Richmond Terrace

- During the **Saturday MD** peak hour, the northbound approach would deteriorate from LOS C with an average delay of 31.4 seconds and a v/c ratio of 0.95 to LOS D with an average delay of 53.2 seconds and a v/c ratio of 1.03.

Richmond Terrace and Ferry Terminal (bus)

- During the **Weekday MD** peak hour, the westbound left-turn lane group would deteriorate within LOS F from an average delay of 134.0 seconds and a v/c ratio of 0.98 to an average delay of 139.4 seconds and a v/c ratio of 0.98. The southbound approach would deteriorate from LOS E with an average delay of 65.2 seconds and a v/c ratio of 0.88 to LOS F with an average delay of 82.4 seconds and a v/c ratio of 0.92.
- During the **Weekday PM** peak hour, the northbound approach would deteriorate from LOS E with an average delay of 75.4 seconds and a v/c ratio of 0.72 to LOS F with an average delay of 80.1 seconds and a v/c ratio of 0.78. The southbound approach would deteriorate within LOS F from an average delay of 80.1 seconds and a v/c ratio of 0.90 to an average delay of 87.1 seconds and a v/c ratio of 0.98.
- During the **Saturday MD** peak hour, the southbound approach would deteriorate from LOS C with an average delay of 27.3 seconds and a v/c ratio of 0.77 to LOS D with an average delay of 46.0 seconds and a v/c ratio of 0.81.

Richmond Terrace and Ferry Terminal (parking lot)

- During the **Weekday AM** peak hour, the northbound through lane group would deteriorate within LOS D from an average delay of 39.0 seconds and a v/c ratio of 0.78 to an average delay of 51.5seconds and a v/c ratio of 0.91.
- During the **Weekday MD** peak hour, the northbound through lane group would deteriorate from LOS E with an average delay of 64.6 seconds and a v/c ratio of 0.98 to LOS F with an average delay of 91.1 seconds and a v/c ratio of 1.03. The southbound through/right-turn lane group would deteriorate from LOS E with an average delay of 69.4 seconds and a v/c ratio of 1.11 to LOS F with an average delay of 93.8 seconds and a v/c ratio of 1.17.
- During the **Weekday PM** peak hour, the northbound through lane group would deteriorate within LOS F from an average delay of 208.0 seconds and a v/c ratio of 1.38 to an average delay of 260.0 seconds and a v/c ratio of 1.50. The southbound through/right-turn lane group

would deteriorate within LOS E from an average delay of 55.7 seconds and a v/c ratio of 0.91 to an average delay of 64.5 seconds and a v/c ratio of 1.00.

- During the **Saturday MD** peak hour, the northbound through lane group would deteriorate within LOS E from an average delay of 70.9 seconds and a v/c ratio of 1.03 to an average delay of 77.3 seconds and a v/c ratio of 1.09. The southbound through/right-turn lane group would deteriorate within LOS F from an average delay of 130.3 seconds and a v/c ratio of 1.24 to an average delay of 158.4 seconds and a v/c ratio of 1.31.

Slosson Terrace and Bay Street

- During the **Weekday AM** peak hour, the northbound left-turn lane group would deteriorate from LOS C with an average delay of 30.0 seconds and a v/c ratio of 0.69 to LOS F with an average delay of 89.9 seconds and a v/c ratio of 1.07.
- During the **Weekday MD** peak hour, the northbound left-turn lane group would deteriorate from LOS C with an average delay of 31.2 seconds and a v/c ratio of 0.61 to LOS D with an average delay of 50.0 seconds and a v/c ratio of 0.89. The southbound approach would deteriorate within LOS F from an average delay of 103.1 seconds and a v/c ratio of 1.17 to an average delay of 122.1 seconds and a v/c ratio of 1.21.
- During the **Weekday PM** peak hour, the northbound through lane group would deteriorate from LOS D with an average delay of 46.1seconds and a v/c ratio of 0.86 to LOS E with an average delay of 64.1 seconds and a v/c ratio of 0.90. The southbound approach would deteriorate within LOS F from an average delay of 95.5 seconds and a v/c ratio of 1.13 to an average delay of 125.6 seconds and a v/c ratio of 1.20.
- During the **Saturday MD** peak hour, the southbound approach would deteriorate within LOS F from an average delay of 142.3 seconds and a v/c ratio of 1.26 to an average delay of 162.7 seconds and a v/c ratio of 1.30.

Victory Boulevard and Bay Street/St. Marks Place

- During the **Weekday PM** peak hour, the westbound through lane group would deteriorate from LOS D with an average delay of 37.6 seconds and a v/c ratio of 0.74 to LOS E with an average delay of 62.5 seconds and a v/c ratio of 0.91. The southbound right-turn lane group would deteriorate within LOS F from an average delay of 84.4 seconds and a v/c ratio of 0.91 to an average delay of 98.1 seconds and a v/c ratio of 0.97.

Victory Boulevard and Bay Street

- During the **Weekday AM** peak hour, the eastbound left-turn lane group would deteriorate from LOS C with an average delay of 31.3seconds and a v/c ratio of 0.58 to LOS D with an average delay of 49.9seconds and a v/c ratio of 0.82. The northbound left-turn lane group would deteriorate from LOS C with an average delay of 32.8 seconds and a v/c ratio of 0.88 to LOS F with an average delay of 97.3seconds and a v/c ratio of 1.15.
- During the **Weekday MD** peak hour, the eastbound left-turn lane group would deteriorate from LOS C with an average delay of 31.5 seconds and a v/c ratio of 0.62 to LOS E with an average delay of 60.2 seconds and a v/c ratio of 0.90. The westbound approach would deteriorate from LOS C with an average delay of 26.7 seconds and a v/c ratio of 0.35 to LOS F with an average delay of 228.6 seconds and a v/c ratio of 1.40. The northbound left-turn lane group would deteriorate within LOS F from an average delay of 829.5 seconds and a v/c ratio of 2.78 to an average delay of 1,204.3 seconds and a v/c ratio of 3.62. The southbound through/left-turn lane group would deteriorate from LOS D with an average delay of 41.9

seconds and a v/c ratio of 0.90 to LOS F with an average delay of 126.2 seconds and a v/c ratio of 1.20.

- During the **Weekday PM** peak hour, eastbound left-turn lane group would deteriorate from LOS E with an average delay of 72.0seconds and a v/c ratio of 0.84 to LOS F with an average delay of 83.1seconds and a v/c ratio of 0.90. The eastbound through/left-turn lane group would deteriorate from LOS E with an average delay of 72.9 seconds and a v/c ratio of 0.84 to LOS F with an average delay of 95.2 seconds and a v/c ratio of 0.88. The westbound approach would deteriorate from LOS E with an average delay of 57.8 seconds and a v/c ratio of 0.75 to LOS F with an average delay of 756.6 seconds and a v/c ratio of 2.61. The northbound left-turn lane group would deteriorate within LOS F from an average delay of 577.1seconds and a v/c ratio of 2.23 to an average delay of 1,255.3seconds and a v/c ratio of 3.75. The southbound through/left-turn lane group would deteriorate from LOS B with an average delay of 14.1 seconds and a v/c ratio of 0.86 to LOS E with an average delay of 55.4 seconds and a v/c ratio of 1.08.
- During the **Saturday MD** peak hour, the westbound approach would deteriorate from LOS C with an average delay of 24.2 seconds and a v/c ratio of 0.23 to LOS D with an average delay of 49.2 seconds and a v/c ratio of 0.76. The northbound left-turn lane group would deteriorate within LOS F from an average delay of 1,171.5 seconds and a v/c ratio of 3.55 to an average delay of 1,549.4 seconds and a v/c ratio of 4.38. The southbound through/left-turn lane group would deteriorate from LOS D with an average delay of 43.6 seconds and a v/c ratio of 0.93 to LOS E with an average delay of 72.4 seconds and a v/c ratio of 1.06.

Bay Street and Hannah Street

- During the **Weekday AM** peak hour, the westbound approach would deteriorate from LOS E with an average delay of 56.7 seconds and a v/c ratio of 0.86 to LOS F with an average delay of 117.1 seconds and a v/c ratio of 1.12. The northbound approach would deteriorate within LOS F from an average delay of 82.4 seconds and a v/c ratio of 1.09 to an average delay of 158.2 seconds and a v/c ratio of 1.28. The southbound left-turn lane group would deteriorate within LOS F from an average delay of 284.4 seconds and a v/c ratio of 1.52 to an average delay of 798.1 seconds and a v/c ratio of 2.69.
- During the **Weekday MD** peak hour, the northbound approach would deteriorate within LOS F from an average delay of 394.1 seconds and a v/c ratio of 1.82 to an average delay of 488.8 seconds and a v/c ratio of 2.04. The southbound left-turn lane group would deteriorate within LOS F from an average delay of 1,675.8 seconds and a v/c ratio of 4.65 to an average delay of 2,255.1 seconds and a v/c ratio of 5.97.
- During the **Weekday PM** peak hour, the westbound approach would deteriorate from to LOS E with an average delay of 58.9 seconds and a v/c ratio of 0.88 to LOS F with an average delay of 122.3 seconds and a v/c ratio of 1.13. The northbound approach would deteriorate within LOS F from an average delay of 118.7 seconds and a v/c ratio of 1.18 to an average delay of 208.7 seconds and a v/c ratio of 1.39. The southbound left-turn lane group would deteriorate within LOS F from an average delay of 711.6 seconds and a v/c ratio of 2.51 to an average delay of 1,404.1 seconds and a v/c ratio of 4.09.
- During the **Saturday MD** peak hour, the northbound approach would deteriorate within LOS F from an average delay of 217.9 seconds and a v/c ratio of 1.43 to an average delay of 290.2 seconds and a v/c ratio of 1.59. The southbound left-turn lane group would deteriorate within LOS F from an average delay of 1,064.7 seconds and a v/c ratio of 3.30 to an average delay of 1,760.5 seconds and a v/c ratio of 4.86.

Front Street and Hannah Street

- During the **Weekday MD** peak hour, the northbound approach would deteriorate from LOS C with an average delay of 23.1 seconds and a v/c ratio of 0.52 to LOS D with an average delay of 45.8 seconds and a v/c ratio of 0.88.

Bay Street and Swan Street/Van Duzer Street

- During the **Weekday AM** peak hour, the eastbound left-turn lane group would deteriorate within LOS F from an average delay of 125.1 seconds and a v/c ratio of 0.94 to an average delay of 128.3 seconds and a v/c ratio of 1.11.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group would deteriorate from LOS E with an average delay of 70.6 seconds and a v/c ratio of 0.63 to LOS F with an average delay of 114.9 seconds and a v/c ratio of 0.68. The eastbound left/through/right-turn lane group would deteriorate from LOS E with an average delay of 65.9 seconds and a v/c ratio of 0.61 to LOS F with an average delay of 115.4 seconds and a v/c ratio of 0.67.

Bay Street and Clinton Street

- During the **Weekday AM** peak hour, the southbound through/right-turn lane group would deteriorate from LOS C with an average delay of 33.8 seconds and a v/c ratio of 0.84 to LOS D with an average delay of 66.1 seconds and a v/c ratio of 0.97.
- During the **Weekday MD** peak hour, the southbound through/right-turn lane group would deteriorate within LOS F from an average delay of 188.1 seconds and a v/c ratio of 1.37 to an average delay of 242.5 seconds and a v/c ratio of 1.49.
- During the **Weekday PM** peak hour, the westbound approach would deteriorate within LOS F from an average delay of 117.0 seconds and a v/c ratio of 0.39 to an average delay of 710.4 seconds and a v/c ratio of 0.41. The southbound through/right-turn lane group would deteriorate within LOS F with an average delay of 89.3 seconds and a v/c ratio of 1.14 to an average delay of 193.5 seconds and a v/c ratio of 1.38.
- During the **Saturday MD** peak hour, the southbound through lane group would deteriorate within LOS F from an average delay of 222.8 seconds and a v/c ratio of 1.45 to an average delay of 273.7 seconds and a v/c ratio of 1.56.

Bay Street and Wave Street

- During the **Weekday AM** peak hour, the southbound through/right-turn lane group would deteriorate at LOS C with an average delay of 23.5 seconds and a v/c ratio of 0.85 to LOS F with an average delay of 77.8 seconds and a v/c ratio of 1.08.
- During the **Weekday MD** peak hour, the northbound through/left-turn lane group would deteriorate within LOS F from an average delay of 204.3 seconds and a v/c ratio of 1.38 to an average delay of 279.3 seconds and a v/c ratio of 1.56. The southbound through/right-turn lane group would deteriorate within LOS F from an average delay of 215.4 seconds and a v/c ratio of 1.43 to an average delay of 268.9 seconds and a v/c ratio of 1.55.
- During the **Weekday PM** peak hour, the northbound through/left-turn lane group would deteriorate within LOS F from an average delay of 84.0 seconds and a v/c ratio of 1.11 to an average delay of 215.9 seconds and a v/c ratio of 1.42. The southbound left-turn lane group would deteriorate from LOS B with an average delay of 17.7 seconds and a v/c ratio of 0.30 to LOS F with an average delay of 99.4 seconds and a v/c ratio of 1.08. The southbound

through/right-turn lane group would deteriorate within LOS F from an average delay of 110.2 seconds and a v/c ratio of 1.17 to an average delay of 207.1 seconds and a v/c ratio of 1.39.

- During the **Saturday MD** peak hour, the northbound through/left-turn lane group would deteriorate within LOS F from an average delay of 141.6 seconds and a v/c ratio of 1.24to an average delay of 214.7 seconds and a v/c ratio of 1.41. The southbound through/right-turn lane group would deteriorate within LOS F from an average delay of 268.3 seconds and a v/c ratio of 1.54 to an average delay of 323.9 seconds and a v/c ratio of 1.67.

Front Street and Wave Street

- During the **Weekday PM** peak hour, the northbound approach would deteriorate from LOS A with an average delay of 7.3 seconds and a v/c ratio of 0.82 to LOS E with an average delay of 59.5 seconds and a v/c ratio of 1.09.

Front Street and Prospect Street

- During the **Weekday AM** peak hour, the northbound approach would deteriorate from LOS D with an average delay of 41.6 seconds and a v/c ratio of 0.77 to LOS E with an average delay of 70.6 seconds and a v/c ratio of 0.96. The southbound approach would deteriorate from LOS C with an average delay of 31.7 seconds and a v/c ratio of 0.83 to LOS F with an average delay of 152.2 seconds and a v/c ratio of 1.25.
- During the **Weekday MD** peak hour, the northbound approach would deteriorate from LOS E with an average delay of 72.5 seconds and a v/c ratio of 1.00 to LOS F with an average delay of 141.8 seconds and a v/c ratio of 1.22. The southbound approach would deteriorate within LOS F from an average delay of 231.4 seconds and a v/c ratio of 1.43 to an average delay of 731.1 seconds and a v/c ratio of 2.56.
- During the **Weekday PM** peak hour, the northbound approach would deteriorate within LOS F from an average delay of 194.0 seconds and a v/c ratio of 1.34 to an average delay of 322.2 seconds and a v/c ratio of 1.64. The southbound approach would deteriorate within LOS F from an average delay of 2,797.4 seconds and a v/c ratio of 7.14 to an average delay of 3,902.7 seconds and a v/c ratio of 9.60.
- During the **Saturday MD** peak hour, the northbound approach would deteriorate within LOS F from an average delay of 80.4 seconds and a v/c ratio of 1.04 to an average delay of 150.2 seconds and a v/c ratio of 1.24. The southbound approach would deteriorate within LOS F from an average delay of 410.8 seconds and a v/c ratio of 1.83 to an average delay of 1,119.2 seconds and a v/c ratio of 3.42.

Van Duzer Street and Beach Street

- During the **Weekday AM** peak hour, the eastbound approach would deteriorate within LOS E from an average delay of 57.7 seconds and a v/c ratio of 0.87 to an average delay of 62.5 seconds and a v/c ratio of 0.90.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate from LOS D with an average delay of 49.3 seconds and a v/c ratio of 0.77 to LOS F with an average delay of 80.1 seconds and a v/c ratio of 0.97.

Bay Street and Water Street

- During the **Weekday AM** peak hour, the northbound left-turn lane group would deteriorate from LOS C with an average delay of 24.5 seconds and a v/c ratio of 0.56 to LOS F with an average delay of 388.5 seconds and a v/c ratio of 1.72. The northbound through lane group

would deteriorate from LOS C with an average delay of 24.7 seconds and a v/c ratio of 0.60 to LOS E with an average delay of 73.9 seconds and a v/c ratio of 0.77. The southbound approach would deteriorate from LOS E with an average delay of 67.8 seconds and a v/c ratio of 0.81 to LOS F with an average delay of 80.7 seconds and a v/c ratio of 1.04.

- During the **Weekday MD** peak hour, the northbound left-turn lane group would deteriorate within LOS F from an average delay of 348.4 seconds and a v/c ratio of 1.72 to an average delay of 373.4 seconds and a v/c ratio of 1.77. The northbound through lane group would deteriorate from LOS E with an average delay of 63.8 seconds and a v/c ratio of 1.10 to LOS F with an average delay of 120.2 seconds and a v/c ratio of 1.23. The southbound approach would deteriorate within LOS F from an average delay of 204.5 seconds and a v/c ratio of 1.38 to an average delay of 252.9 seconds and a v/c ratio of 1.49.
- During the **Weekday PM** peak hour, the northbound left-turn lane group would deteriorate within LOS F from an average delay of 921.0 seconds and a v/c ratio of 3.00 to an average delay of 971.4 seconds and a v/c ratio of 3.11. The northbound through lane group would deteriorate from LOS E with an average delay of 74.3 seconds and a v/c ratio of 1.01 to LOS F with an average delay of 143.6 seconds and a v/c ratio of 1.25. The southbound approach would deteriorate within LOS F from an average delay of 174.3 seconds and a v/c ratio of 1.31 to an average delay of 277.2 seconds and a v/c ratio of 1.55.
- During the **Saturday MD** peak hour, the northbound left-turn lane group would deteriorate within LOS F from an average delay of 359.2 seconds and a v/c ratio of 1.74 to an average delay of 383.0 seconds and a v/c ratio of 1.80. The northbound through lane group would deteriorate from LOS E with an average delay of 61.3 seconds and a v/c ratio of 1.06 to LOS F with an average delay of 107.5 seconds and a v/c ratio of 1.20. The southbound approach would deteriorate within LOS F from an average delay of 240.6 seconds and a v/c ratio of 1.46 to an average delay of 290.6 seconds and a v/c ratio of 1.57.

Bay Street and Canal Street

- During the **Weekday AM** peak hour, the northbound approach would deteriorate from LOS A with an average delay of 8.2 seconds and a v/c ratio of 0.61 to LOS E with an average delay of 58.0 seconds and a v/c ratio of 0.77.
- During the **Weekday MD** peak hour, the northbound approach would deteriorate within LOS F from an average delay of 119.5 seconds and a v/c ratio of 1.22 to an average delay of 196.5 seconds and a v/c ratio of 1.39. The southbound approach would deteriorate within LOS F from an average delay of 1,052.7 seconds and a v/c ratio of 3.31 to an average delay of 1,201.2 seconds and a v/c ratio of 3.64.
- During the **Weekday PM** peak hour, the northbound approach would deteriorate within LOS F from an average delay of 84.1 seconds and a v/c ratio of 1.13 to an average delay of 217.2 seconds and a v/c ratio of 1.43. The southbound approach would deteriorate within LOS F from an average delay of 1,303.9 seconds and a v/c ratio of 3.86 to an average delay of 1,652.0 seconds and a v/c ratio of 4.64.
- During the **Saturday MD** peak hour, the northbound approach would deteriorate within LOS F from an average delay of 97.7 seconds and a v/c ratio of 1.17 to an average delay of 179.3 seconds and a v/c ratio of 1.35. The southbound approach would deteriorate within LOS F from an average delay of 1,167.3 seconds and a v/c ratio of 3.56 to an average delay of 1,309.0 seconds and a v/c ratio of 3.88.

Bay Street and Broad Street

- During the **Weekday AM** peak hour, the northbound approach would deteriorate from LOS B with an average delay of18.9seconds and a v/c ratio of 0.62 to LOS E with an average delay of 69.0 seconds and a v/c ratio of 1.04.
- During the **Weekday MD** peak hour, the northbound approach would deteriorate within LOS F from an average delay of 1,234.7 seconds and a v/c ratio of 3.71 to an average delay of 1,418.4 seconds and a v/c ratio of 4.11. The southbound through lane group would deteriorate within LOS F from an average delay of 136.3 seconds and a v/c ratio of 1.25 to an average delay of 186.7 seconds and a v/c ratio of 1.36.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate from LOS D with an average delay of 37.5 seconds and a v/c ratio of 0.29 to LOS F with an average delay of 114.0 seconds and a v/c ratio of 0.42. The northbound approach would deteriorate within LOS F from an average delay of 1,091.2 seconds and a v/c ratio of 3.39 to an average delay of 1,867.4 seconds and a v/c ratio of 5.12. The southbound through lane group would deteriorate LOS E with an average delay of 62.0 seconds and a v/c ratio of 1.07 to LOS F with an average delay of 133.8 seconds and a v/c ratio of 1.25.
- During the **Saturday MD** peak hour, the northbound approach would deteriorate within LOS F from an average delay of 1,024.5 seconds and a v/c ratio of 3.24 to an average delay of 1,339.0 seconds and a v/c ratio of 3.94. The southbound through lane group would deteriorate within LOS F from an average delay of 180.6 seconds and a v/c ratio of 1.35 to an average delay of 229.5 seconds and a v/c ratio of 1.46.

Victory Boulevard and Cebra Avenue

- During the **Weekday AM** peak hour, the westbound left-turn lane group would deteriorate within LOS E from an average delay of 60.5 seconds and a v/c ratio of 0.59 to an average delay of 76.0 seconds and a v/c ratio of 0.74.
- During the **Weekday MD** peak hour, the northbound approach would deteriorate within LOS D from an average delay of 35.4 seconds and a v/c ratio of 0.90 to an average delay of 52.7 seconds and a v/c ratio of 1.00. The southbound approach would deteriorate within LOS F from an average delay of 105.3 seconds and a v/c ratio of 1.17 to an average delay of 181.5 seconds and a v/c ratio of 1.35.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group would deteriorate within LOS F with an average delay of 150.8 seconds and a v/c ratio of 0.99 to an average delay of 197.4 seconds and a v/c ratio of 1.13. The westbound through/right-turn lane group would deteriorate from LOS E from an average delay of 76.6 seconds and a v/c ratio of 0.93 to LOS F with an average delay of 87.0 seconds and a v/c ratio of 0.98. The northbound approach would deteriorate from LOS D with an average delay of 40.8 seconds and a v/c ratio of 0.91 to LOS F with an average delay of 191.0 seconds and a v/c ratio of 1.34. The southbound approach would deteriorate LOS D with an average delay of 47.0 seconds and a v/c ratio of 1.05 to LOS F with an average delay of 113.6 seconds and a v/c ratio of 1.22.
- During the **Saturday MD** peak hour, the northbound approach would deteriorate within LOS D from an average delay of 37.7 seconds and a v/c ratio of 0.92 to an average delay of 50.5 seconds and a v/c ratio of 0.99. The southbound approach would deteriorate from LOS E with an average delay of 65.3 seconds and a v/c ratio of 1.07 to LOS F with an average delay of 103.8 seconds and a v/c ratio of 1.17.

Victory Boulevard and Jersey Street

- During the **Weekday AM** peak hour, the southbound approach would deteriorate within LOS D from an average delay of 40.9 seconds and a v/c ratio of 0.47 to an average delay of 50.2 seconds and a v/c ratio of 0.68.
- During the **Weekday MD** peak hour, the eastbound left-turn lane group would deteriorate from LOS D with an average delay of 43.6 seconds and a v/c ratio of 0.78 to LOS F with an average delay of 235.8 seconds and a v/c ratio of 1.42. The eastbound through lane group would deteriorate from LOS D with an average delay of 39.7 seconds and a v/c ratio of 0.98 to LOS E with an average delay of 68.2 seconds and a v/c ratio of 1.08. The westbound through lane group would deteriorate from LOS E with an average delay of 70.0 seconds and a v/c ratio of 1.05 to LOS F with an average delay of 103.6 seconds and a v/c ratio of 1.14. The southbound approach would deteriorate from LOS C with an average delay of 28.3 seconds and a v/c ratio of 0.50 to LOS E with an average delay of 67.5 seconds and a v/c ratio of 0.93.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group would deteriorate LOS E with an average delay of 66.3 seconds and a v/c ratio of 0.94 to LOS F with an average delay of 807.5 seconds and a v/c ratio of 2.74. The westbound through lane group would deteriorate from LOS E with an average delay of 79.3 seconds and a v/c ratio of 0.91 to LOS F with an average delay of 93.0 seconds and a v/c ratio of 1.04. The southbound approach would deteriorate from LOS D with an average delay of 43.3 seconds and a v/c ratio of 0.53 to LOS E with an average delay of 70.5 seconds and a v/c ratio of 0.87.
- During the **Saturday MD** peak hour, the eastbound left-turn lane group would deteriorate from LOS D with an average delay of 36.0 seconds and a v/c ratio of 0.74to LOS F with an average delay of 91.7 seconds and a v/c ratio of 1.05. The eastbound through lane group would deteriorate from LOS D with an average delay of 42.9 seconds and a v/c ratio of 1.00 to LOS E with an average delay of 58.0 seconds and a v/c ratio of 1.06. The westbound through lane group would deteriorate from LOS D with an average delay of 50.2 seconds and a v/c ratio of 1.00 to LOS E with an average delay of 64.2 seconds and a v/c ratio of 1.05.

Victory Boulevard and Forest Avenue

- During the **Weekday MD** peak hour, the northbound left-turn lane group would deteriorate from LOS D with an average delay of 52.2 seconds and a v/c ratio of 0.78 to LOS F with an average delay of 103.9 seconds and a v/c ratio of 0.99. The southbound through lane group would deteriorate from LOS E with an average delay of 75.8 seconds and a v/c ratio of 0.83 to LOS F with an average delay of 80.3 seconds and a v/c ratio of 0.90.
- During the **Weekday PM** peak hour, the northbound left-turn lane group would deteriorate from LOS C with an average delay of 30.4 seconds and a v/c ratio of 0.59 to LOS F with an average delay of 86.4 seconds and a v/c ratio of 0.91. The southbound through lane group would deteriorate within LOS E from an average delay of 74.1 seconds and a v/c ratio of 0.82 to an average delay of 79.8 seconds and a v/c ratio of 0.92.
- During the **Saturday MD** peak hour, the northbound left-turn lane group would deteriorate from LOS E with an average delay of 67.8 seconds and a v/c ratio of 0.92 to LOS F with an average delay of 100.8 seconds and a v/c ratio of 1.03. The southbound through lane group would deteriorate within LOS E from an average delay of 64.8 seconds and a v/c ratio of 0.78 to an average delay of 78.7 seconds and a v/c ratio of 0.82.

Broad Street and Targee Street

- During the **Weekday AM** peak hour, the eastbound approach would deteriorate within LOS D from an average delay of 47.4 seconds and a v/c ratio of 0.55 to an average delay of 53.7 seconds and a v/c ratio of 0.56. The northbound through/left-turn lane group would deteriorate from LOS D with an average delay of 52.5 seconds and a v/c ratio of 0.98 to LOS E with an average delay of 58.7 seconds and a v/c ratio of 1.00.

Vanderbilt Avenue and Tompkins Avenue

- During the **Weekday AM** peak hour, the eastbound approach would deteriorate within LOS D from an average delay of 40.4 seconds and a v/c ratio of 0.88 to an average delay of 49.9 seconds and a v/c ratio of 0.95. The northbound approach would deteriorate within LOS F from an average delay of 177.2 seconds and a v/c ratio of 1.26 to an average delay of 220.2 seconds and a v/c ratio of 1.37. The southbound approach would deteriorate within LOS F from an average delay of 99.8 seconds and a v/c ratio of 1.08 to an average delay of 113.7 seconds and a v/c ratio of 1.12.
- During the **Weekday MD** peak hour, the eastbound approach would deteriorate from LOS E with an average delay of 63.3 seconds and a v/c ratio of 1.00 to LOS F with an average delay of 79.5 seconds and a v/c ratio of 1.06. The northbound approach would deteriorate within LOS F from an average delay of 162.3 seconds and a v/c ratio of 1.25 to an average delay of 177.3 seconds and a v/c ratio of 1.29.
- During the **Weekday PM** peak hour, the westbound approach would deteriorate within LOS D from an average delay of 37.2 seconds and a v/c ratio of 0.74 to an average delay of 50.7 seconds and a v/c ratio of 0.94. The northbound approach would deteriorate from LOS E with an average delay of 79.9 seconds and a v/c ratio of 0.99 to LOS F with an average delay of 87.8 seconds and a v/c ratio of 1.02.

Bay Street and Vanderbilt Avenue

- During the **Weekday AM** peak hour, the northbound through/left-turn lane group would deteriorate from LOS B with an average delay of 13.9 seconds and a v/c ratio of 0.74 to LOS D with an average delay of 46.8 seconds and a v/c ratio of 0.99.
- During the **Weekday MD** peak hour, the northbound through/left-turn lane group would deteriorate within LOS F from an average delay of 1,912.8 seconds and a v/c ratio of 5.20 to an average delay of 3,368.1 seconds and a v/c ratio of 8.44. The southbound through lane group would deteriorate within LOS F from an average delay of 105.3 seconds and a v/c ratio of 1.20 to an average delay of 128.1 seconds and a v/c ratio of 1.25.
- During the **Weekday PM** peak hour, the northbound through/left-turn lane group would deteriorate within LOS D from an average delay of 508.0 seconds and a v/c ratio of 2.07 to an average delay of 997.9 seconds and a v/c ratio of 3.17.
- During the **Saturday MD** peak hour, the northbound through/left-turn lane group would deteriorate within LOS F from an average delay of 3,246.2 seconds and a v/c ratio of 8.16 to an average delay of 3,598.7 seconds and a v/c ratio of 8.95. The southbound through lane group would deteriorate within LOS F from an average delay of 145.4 seconds and a v/c ratio of 1.28 to an average delay of 180.4 seconds and a v/c ratio of 1.36.

Bay Street and Edgewater Drive

- During the **Saturday MD** peak hour, the southbound approach would deteriorate from LOS D with an average delay of 36.9 seconds and a v/c ratio of 1.01 to LOS E with an average delay of 55.5 seconds and a v/c ratio of 1.06.

Bay Street and Hylan Boulevard

- During the **Weekday AM** peak hour, the westbound approach would deteriorate within LOS F from an average delay of 100.6 seconds and a v/c ratio of 1.02 to an average delay of 106.0 seconds and a v/c ratio of 1.04. The northbound approach would deteriorate within LOS F from an average delay of 176.2 seconds and a v/c ratio of 1.31 to an average delay of 713.8 seconds and a v/c ratio of 2.54. The southbound through lane group would deteriorate from LOS D with an average delay of 39.1 seconds and a v/c ratio of 0.82 to LOS E with an average delay of 73.0 seconds and a v/c ratio of 1.05.
- During the **Weekday MD** peak hour, the eastbound approach would deteriorate within LOS F from an average delay of 81.1 seconds and a v/c ratio of 1.03 to an average delay of 110.0 seconds and a v/c ratio of 1.12. The northbound approach would deteriorate within LOS F from an average delay of 1,762.1 seconds and a v/c ratio of 4.89 to an average delay of 2,463.6 seconds and a v/c ratio of 6.45. The southbound through lane group would deteriorate within LOS F from an average delay of 97.0 seconds and a v/c ratio of 1.12 to an average delay of 134.6 seconds and a v/c ratio of 1.21.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate within LOS F from an average delay of 95.8 seconds and a v/c ratio of 1.09 to an average delay of 169.4 seconds and a v/c ratio of 1.28. The westbound approach would deteriorate within LOS F from an average delay of 89.2 seconds and a v/c ratio of 0.98 to an average delay of 92.4 seconds and a v/c ratio of 0.99. The northbound approach would deteriorate within LOS F from an average delay of 1,326.7 seconds and a v/c ratio of 3.91 to an average delay of 1,869.2 seconds and a v/c ratio of 5.13. The southbound through lane group would deteriorate within LOS F from an average delay of 85.3 seconds and a v/c ratio of 1.08 to an average delay of 143.6 seconds and a v/c ratio of 1.23.
- During the **Saturday MD** peak hour, the eastbound approach would deteriorate from LOS E with an average delay of 77.9 seconds and a v/c ratio of 1.06 to LOS F with an average delay of 110.3 seconds and a v/c ratio of 1.15. The northbound approach would deteriorate within LOS F from an average delay of 1,540.4 seconds and a v/c ratio of 4.39 to an average delay of 1,909.6 seconds and a v/c ratio of 5.22. The southbound through lane group would deteriorate within LOS F from an average delay of 90.6 seconds and a v/c ratio of 1.10 to an average delay of 128.0 seconds and a v/c ratio of 1.20.

Bay Street and School Road

- During the **Weekday AM** peak hour, the eastbound left-turn lane group would deteriorate within LOS F from an average delay of 93.1 seconds and a v/c ratio of 1.06 to an average delay of 146.1 seconds and a v/c ratio of 1.21.
- During the **Weekday MD** peak hour, the eastbound left-turn lane group would deteriorate within LOS F from an average delay of 195.2 seconds and a v/c ratio of 1.35 to an average delay of 252.6 seconds and a v/c ratio of 1.48.
- During the **Weekday PM** peak hour, the eastbound left-turn lane group would deteriorate within LOS F from an average delay of 233.4 seconds and a v/c ratio of 1.44 to an average delay of 341.1 seconds and a v/c ratio of 1.69.

- During the **Saturday MD** peak hour, the eastbound left-turn lane group would deteriorate within LOS F from an average delay of 210.7 seconds and a v/c ratio of 1.39 to an average delay of 277.4 seconds and a v/c ratio of 1.54.

LEVEL OF SERVICE – UNSIGNALIZED INTERSECTIONS

Table 14-32 presents a comparison of No-Action and With-Action Conditions for the unsignalized study intersections. Based on the significance criteria described in the *CEQR Technical Manual*, significantly impacted lane groups are denoted with a "+" sign in the tables and are detailed below. The results presented in these tables assume the implementation of the project improvements listed above.

Bay Street and Grant Street

- During the **Weekday AM** peak hour, the eastbound approach would deteriorate within LOS F from an average delay of 56.1 seconds and a v/c ratio of 0.62 to an average delay of 70.3 seconds and a v/c ratio of 0.69.

Bay Street and William Street

- During the **Weekday AM** peak hour, the eastbound approach would deteriorate from LOS E with an average delay of 48.6 seconds and a v/c ratio of 0.58 to LOS F with an average delay of 138.8 seconds and a v/c ratio of 0.95.
- During the **Weekday PM** peak hour, the eastbound approach would deteriorate within LOS F from a v/c ratio of 3.01 to 6.82. The average delay would exceed the maximum limit provided by the analysis software for the No-Action and With-Action Conditions so it was assumed that the Proposed Actions would result in a significant impact during this peak hour. The northbound approach would deteriorate from LOS B with an average delay of 13.8 seconds and a v/c ratio of 0.14 to LOS F with an average delay of 91.8 seconds and a v/c ratio of 0.31.

Significant impacts were not identified at the following intersections as the traffic volume on the minor approach is expected to less than 90 PCE during the With-Action condition during all peak hours:

- Bay Street and Baltic Street
- Bay Street and Congress Street
- Pike Street and Victory Boulevard
- Broad Street and Cedar Street

Table 14-31: Signalized Level of Service Analysis – Weekday AM Peak Hour
No-Action vs. With-Action Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Richmond Terrace and Franklin Avenue											
1	Eastbound	TR	0.77	9.2	A	332	TR	0.81	11.0	B	363	
	Westbound	LT	0.88	37.3	D	634	LT	1.09	80.3	F	640	+
	Northbound	LR	0.25	37.1	D	112	LR	0.26	37.1	D	112	
		Intersection		22.7	C		Intersection		42.5	D		
	Richmond Terrace and Jersey Street											
2	Eastbound	L	1.07	87.4	F	197	L	1.36	208.5	F	360	+
		TR	0.70	7.4	A	332	TR	0.75	8.6	A	432	
	Westbound	LT	1.06	68.6	E	941	LT	1.18	110.7	F	1051	+
		R	0.00	7.7	A	1	R	0.00	9.0	A	1	
	Northbound	L	0.09	35.6	D	37	L	0.09	35.6	D	37	
		TR	0.26	38.3	D	102	TR	0.27	38.4	D	103	
	Southbound	L	0.01	34.0	C	11	L	0.01	34.0	C	11	
		TR	0.08	35.3	D	43	TR	0.08	35.3	D	43	
		Intersection		45.9	D		Intersection		80.4	F		
	Richmond Terrace and Westervelt Avenue											
3	Eastbound	TR	0.78	13.9	B	231	TR	0.83	17.0	B	279	
	Westbound	LT	0.71	47.0	D	636	LT	0.87	88.8	F	779	+
	Northbound	LR	0.37	35.0	D	158	LR	0.37	35.0	D	158	
		Intersection		29.9	C		Intersection		49.6	D		
	Hamilton Avenue and Richmond Terrace											
5	Northbound	LT	0.71	13.2	B	139	LT	0.81	19.3	B	147	
	Southbound	TR	0.39	9.0	A	87	TR	0.42	9.7	A	101	
		Intersection		11.2	B		Intersection		14.9	B		
	Wall Street and Richmond Terrace											
7	Eastbound											
	Westbound	LTR	0.18	28.8	C	75	LTR	0.18	28.8	C	75	
		L	0.23	29.9	C	71	L	0.23	29.9	C	71	
	Northbound	T	0.48	11.7	B	134	T	0.54	12.9	B	223	
		R	0.29	10.9	B	63	R	0.29	10.7	B	61	
	Southbound	LTR	0.46	7.4	A	43	LTR	0.50	7.7	A	45	
		Intersection		11.4	B		Intersection		12.0	B		
	Richmond Terrace and Ferry Terminal (bus)											
8	Westbound	L	0.47	45.7	D	173	L	0.47	45.7	D	173	
		R	0.41	45.5	D	108	R	0.41	45.5	D	108	
	Northbound	T	0.41	13.2	B	80	T	0.47	18.0	B	80	
	Southbound	T	0.63	85.6	F	478	T	0.67	88.0	F	512	
		Intersection		50.2	D		Intersection		52.4	D		
	Richmond Terrace and Ferry Terminal (parking lot)											
9	Westbound	L	0.74	55.7	E	315	L	0.74	55.7	E	315	
		R	0.20	11.8	B	47	R	0.20	11.8	B	47	
	Northbound	T	0.78	39.0	D	257	T	0.91	51.5	D	358	+
		R	0.35	16.1	B	209	R	0.35	16.5	B	233	
		R	0.32	15.4	B	121	R	0.32	16.0	B	133	
	Southbound	L	5.82	2211.1	F	573	L	5.70	2156.9	F	573	
		TR	0.55	2.6	A	5	TR	0.59	3.4	A	17	
		Intersection		285.6	F		Intersection		268.9	F		
	Bay Street and Slosson Terrace											
10	Eastbound	LR	0.10	32.7	C	41	LR	0.13	33.3	C	52	
	Northbound	L	0.69	30.0	C	158	L	1.07	89.9	F	328	+
		T	0.66	14.1	B	254	T	0.72	14.9	B	315	
	Southbound	TR	0.71	19.9	B	314	TR	0.74	22.2	C	467	
		Intersection		18.4	B		Intersection		27.5	C		
	Victory Boulevard and Bay Street/St. Marks Place											
11	Eastbound	TR	0.35	6.2	A	56	TR	0.47	9.2	A	107	
		R	0.36	6.3	A	43	R	0.38	8.1	A	63	
	Westbound	T	0.44	16.8	B	248	T	0.51	27.5	C	244	
		L	0.07	4.9	A	11	L	0.08	5.0	A	11	
	Southbound	LT	0.44	42.8	D	166	LT	0.45	43.0	D	169	
		R	0.35	41.9	D	115	R	0.35	42.2	D	116	
		Intersection		16.6	B		Intersection		20.5	C		

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday AM Peak Hour No-Action vs. With-Action Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
12	**Victory Boulevard and Bay Street**											
	Eastbound	L	0.58	31.3	C	197	L	0.82	49.9	D	328	+
		LT	0.58	31.4	C	198	LT	0.77	43.5	D	320	
	Westbound	LTR	0.09	31.8	C	45	LTR	0.40	39.2	D	115	
	Northbound	L	0.88	32.8	C	123	L	1.15	97.3	F	142	+
		TR	0.67	17.6	B	243	TR	0.75	19.6	B	230	
	Southbound	LT	0.53	7.1	A	43	LT	0.68	9.3	A	48	
		R	0.36	7.0	A	30	R	0.38	7.1	A	32	
		Intersection		17.1	B		Intersection		28.0	C		
13	**Bay Street and Hannah Street**											
	Eastbound	LTR	0.09	30.2	C	57	LTR	0.09	30.2	C	57	
	Westbound	LTR	0.86	56.7	E	518	LTR	1.12	117.1	F	734	+
	Northbound	LTR	1.09	82.4	F	352	LTR	1.28	158.2	F	830	+
	Southbound	L	1.52	284.4	F	436	L	2.69	798.1	F	555	+
		T	0.39	8.2	A	104	T	0.41	9.7	A	138	
		R	0.17	2.1	A	16	R	0.18	3.0	A	20	
		Intersection		71.8	E		Intersection		162.4	F		
14	**Front Street and Hannah Street**											
	Eastbound	TR	0.32	4.0	A	61	TR	0.36	3.9	A	63	
	Westbound	LT	0.08	13.2	B	45	LT	0.09	13.2	B	45	
	Northbound	LR	0.56	23.9	C	264	LR	0.77	32.1	C	381	
		Intersection		15.0	B		Intersection		20.0	B		
15	**Bay Street and Swan Street/Van Duzer Street**											
	Eastbound	L	0.94	125.1	F	362	L	1.11	128.3	F	449	+
		LTR	1.09	125.2	F	488	LTR	1.06	127.8	F	467	
	Westbound	LTR	0.03	30.0	C	11	LTR	0.03	30.0	C	11	
	Northbound	LTR	0.45	6.8	A	46	LTR	0.57	9.4	A	48	
	Southbound	LTR	0.45	11.2	B	111	LTR	0.48	10.7	B	105	
		Intersection		42.4	D		Intersection		41.5	D		
19	**Van Duzer Street and Clinton Street**											
	Westbound	TR	0.22	41.1	D	60	TR	0.28	43.9	D	75	
	Northbound	LT	0.64	13.8	B	305	LT	0.67	14.8	B	333	
		Intersection		16.5	B		Intersection		18.2	B		
20	**Bay Street and Clinton Street**											
	Westbound	LTR	0.11	30.6	C	59	LTR	0.12	31.1	C	59	
	Northbound	L	0.07	20.3	C	17	L	0.23	27.7	C	29	
		TR	0.41	24.6	C	305	TR	0.51	27.5	C	398	
	Southbound	L	0.17	12.3	B	51	L	0.22	16.1	B	54	
		TR	0.84	33.8	C	563	TR	0.97	66.1	E	940	+
		Intersection		29.0	C		Intersection		45.8	D		
24	**Bay Street and Wave Street**											
	Westbound	LTR	0.18	28.4	C	53	LTR	0.19	28.2	C	49	
	Northbound	LT	0.54	18.7	B	264	LT	0.70	18.5	B	327	
		R	0.11	14.0	B	43	R	0.13	12.0	B	34	
	Southbound	L	0.26	7.0	A	23	L	0.38	10.6	B	27	
		TR	0.85	23.5	C	807	TR	1.08	77.8	E	1021	+
		Intersection		20.8	C		Intersection		49.0	D		
25	**Front Street and Wave Street**											
	Eastbound	LR	0.30	19.3	B	68	LR	0.32	19.9	B	60	
	Northbound	LT	0.66	5.0	A	29	LT	0.79	7.6	A	23	
	Southbound	TR	0.40	10.7	B	116	TR	0.55	13.2	B	176	
		Intersection		8.7	A		Intersection		11.0	B		
26	**Front Street and Prospect Street**											
	Eastbound	LTR	0.26	21.8	C	47	LTR	0.26	22.2	C	47	
	Westbound	LTR	0.83	45.1	D	227	LTR	0.84	45.7	D	228	
	Northbound	TR	0.77	41.6	D	218	TR	0.96	70.6	E	514	+
	Southbound	LT	0.83	31.7	C	301	LT	1.25	152.2	F	665	+
		Intersection		37.9	D		Intersection		93.2	F		

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday AM Peak Hour No-Action vs. With-Action Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Van Duzer Street and Beach Street											
27	Eastbound	LT	0.87	57.7	E	391	LT	0.90	62.5	E	413	+
	Westbound	TR	0.25	28.9	C	106	TR	0.26	29.1	C	110	
	Northbound	L	0.32	15.5	B	172	L	0.33	15.7	B	178	
		TR	0.88	37.0	D	731	TR	0.91	41.6	D	783	
		Intersection		37.2	D		Intersection		40.6	D		
	Bay Street and Water Street											
28	Westbound	LTR	0.20	32.9	C	85	LTR	0.21	33.0	C	85	
	Northbound	L	0.56	24.5	C	73	L	1.72	388.5	F	190	+
		T	0.60	24.7	C	277	T	0.77	73.9	E	419	+
	Southbound	TR	0.81	67.8	E	299	TR	1.04	80.7	F	862	+
		Intersection		47.0	D		Intersection		93.4	F		
	Bay Street and Canal Street											
29	Eastbound	L	0.34	38.1	D	112	L	0.37	39.3	D	119	
		TR	0.20	32.2	C	89	TR	0.20	32.3	C	89	
	Westbound	LTR	0.18	29.8	C	49	LTR	0.31	33.9	C	68	
	Northbound	TR	0.61	8.2	A	81	TR	0.77	58.0	E	102	+
	Southbound	LT	0.71	71.9	E	694	LT	0.94	75.0	E	755	
	Intersection			40.6	D		Intersection		62.9	E		
	Front Street and Canal Street											
30	Eastbound	LR	0.39	24.1	C	79	LR	0.41	23.3	C	77	
	Northbound	LT	0.42	11.0	B	122	LT	0.53	12.6	B	162	
	Southbound	TR	0.55	10.9	B	92	TR	0.68	10.8	B	90	
		Intersection		13.0	B		Intersection		13.1	B		
	Bay Street and Broad Street											
31	Eastbound	LR	0.34	41.0	D	186	LR	0.44	42.3	D	235	
	Northbound	LT	0.62	18.9	B	332	LT	1.04	69.0	E	691	+
	Southbound	T	0.71	11.0	B	221	T	0.92	39.2	D	404	
		R	0.12	6.9	A	35	R	0.18	11.8	B	52	
		Intersection		16.8	B		Intersection		48.1	D		
	Richmond Terrace and Clove Road											
32	Eastbound	LT	0.89	27.9	C	895	LT	0.93	33.7	C	962	
		R	0.16	4.4	A	27	R	0.16	4.5	A	27	
	Westbound	L	0.56	25.1	C	56	L	0.68	42.0	D	87	
		TR	0.57	12.4	B	284	TR	0.66	15.3	B	390	
	Northbound	LTR	0.44	38.4	D	193	LTR	0.47	39.2	D	208	
		Intersection		22.5	C		Intersection		26.8	C		
	Victory Boulevard and Cebra Avenue											
35	Eastbound	L	0.55	56.2	E	95	L	0.56	57.5	E	96	
		TR	0.82	60.2	E	304	TR	0.82	60.2	E	304	
	Westbound	L	0.59	60.5	E	112	L	0.74	76.0	E	152	+
		TR	0.69	50.2	D	292	TR	0.71	51.3	D	300	
	Northbound	LT	0.66	16.2	B	284	LT	0.76	19.8	B	421	
		R	0.11	10.0	A	30	R	0.12	10.0	B	33	
	Southbound	LTR	0.68	19.7	B	473	LTR	0.93	42.2	D	649	
		Intersection		31.8	C		Intersection		38.9	D		
	Victory Boulevard and Jersey Street											
36	Eastbound	L	0.18	8.1	A	27	L	0.22	9.4	A	34	
		T	0.68	12.1	B	238	T	0.78	15.0	B	351	
	Westbound	T	0.50	21.2	C	303	T	0.55	20.4	C	325	
		R	0.10	13.3	B	47	R	0.16	12.9	B	61	
	Southbound	LR	0.47	40.9	D	172	LR	0.68	50.2	D	242	+
		Intersection		18.0	B		Intersection		20.8	C		
	Victory Boulevard and Forest Avenue											
38	Eastbound	LR	0.72	44.1	D	253	LR	0.75	45.6	D	268	
	Northbound	L	0.24	14.5	B	74	L	0.27	15.0	B	76	
		T	0.58	74.4	E	373	T	0.66	75.8	E	454	
	Southbound	T	0.40	21.3	C	186	T	0.45	24.1	C	216	
		R	0.32	4.1	A	22	R	0.34	4.2	A	25	
		Intersection		41.0	D		Intersection		42.8	D		

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday AM Peak Hour No-Action vs. With-Action Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
41	**Broad Street and Canal Street**											
	Eastbound	L	0.24	12.3	B	97	L	0.26	12.4	B	91	
		TR	0.47	15.9	B	219	TR	0.52	16.2	B	235	
	Westbound	LTR	0.16	16.9	B	86	LTR	0.22	16.1	B	102	
	Northbound	L	0.47	44.2	D	102	L	0.50	46.2	D	103	
		TR	0.54	41.2	D	199	TR	0.53	41.1	D	198	
	Southbound	LT	0.39	37.2	D	161	LT	0.47	39.3	D	187	
		Intersection		26.5	C		Intersection		26.4	C		
42	**Broad Street and Van Duzer Street**											
	Westbound	L	0.74	91.9	F	225	L	0.78	89.9	F	243	
	Southbound	L	0.27	6.4	A	122	L	0.29	8.3	A	143	
		T	0.50	8.8	A	301	T	0.53	11.5	B	356	
		Intersection		22.0	C		Intersection		26.7	C		
43	**Broad Street and Targee Street**											
	Eastbound	LT	0.55	47.4	D	336	LT	0.56	53.7	D	336	+
	Westbound	TR	0.36	41.7	D	193	TR	0.47	41.3	D	249	
	Northbound	LT	0.98	52.5	D	834	LT	1.00	58.7	E	868	+
		R	0.45	18.5	B	188	R	0.51	20.1	C	225	
		Intersection		44.4	D		Intersection		48.2	D		
44	**Vanderbilt Avenue and Tompkins Avenue**											
	Eastbound	LTR	0.88	40.4	D	741	LTR	0.95	49.9	D	826	+
	Westbound	LTR	0.43	15.2	B	145	LTR	0.51	16.2	B	141	
	Northbound	LTR	1.26	177.2	F	476	LTR	1.37	220.2	F	529	+
	Southbound	LTR	1.08	99.8	F	587	LTR	1.12	113.7	F	618	+
		Intersection		79.8	E		Intersection		94.6	F		
45	**Bay Street and Vanderbilt Avenue**											
	Eastbound	L	0.44	24.7	C	96	L	0.63	27.7	C	141	
		R	0.44	24.9	C	89	R	0.44	25.4	C	82	
	Northbound	LT	0.74	13.9	B	235	LT	0.99	46.8	D	659	+
	Southbound	T	0.63	28.8	C	491	T	0.81	35.8	D	567	
		R	0.25	5.9	A	77	R	0.31	8.2	A	86	
		Intersection		20.2	C		Intersection		33.1	C		
47	**Bay Street and Edgewater Drive**											
	Westbound	LR	0.42	34.5	C	182	LR	0.51	36.2	D	224	
	Northbound	TR	0.37	8.5	A	70	TR	0.45	9.3	A	62	
	Southbound	T	0.69	12.3	B	361	T	0.85	23.4	C	533	
	Northwestbound	R	0.19	0.5	A	0	R	0.20	0.6	A	0	
		Intersection		14.9	B		Intersection		19.8	B		
48	**Bay Street and Hylan Boulevard**											
	Eastbound	LTR	0.73	29.8	C	208	LTR	0.86	41.0	D	505	
	Westbound	LTR	1.02	100.6	F	449	LTR	1.04	106.0	F	454	+
	Northbound	LTR	1.31	176.2	F	696	LTR	2.54	713.8	F	800	+
	Southbound	T	0.82	39.1	D	546	T	1.05	73.0	E	876	+
		R	0.26	10.0	A	67	R	0.37	11.8	B	90	
		Intersection		85.5	F		Intersection		249.5	F		
49	**Bay Street and School Road**											
	Eastbound	L	1.06	93.1	F	660	L	1.21	146.1	F	792	+
		TR	0.14	13.3	B	48	TR	0.14	13.3	B	48	
	Westbound	LTR	0.00	23.5	C	7	LTR	0.00	23.5	C	7	
	Northbound	LTR	0.09	13.6	B	47	LTR	0.09	13.6	B	47	
	Southbound	LTR	0.09	6.4	A	20	LTR	0.18	5.6	A	25	
		R	0.70	3.9	A	30	R	0.77	4.9	A	20	
		Intersection		37.9	D		Intersection		56.6	E		

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday MD Peak Hour No-Action vs. With-Action Conditions

		No-Action Conditions					With-Action Conditions					
Int #	Intersection & Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Richmond Terrace and Franklin Avenue											
	Eastbound	TR	0.66	11.7	B	366	TR	0.71	13.2	B	404	
1	Westbound	LT	0.91	11.8	B	129	LT	1.04	35.5	D	116	
	Northbound	LR	0.19	36.2	D	81	LR	0.19	36.2	D	81	
		Intersection		12.8	B		Intersection		25.5	C		
	Richmond Terrace and Jersey Street											
	Eastbound	L	0.66	37.6	D	111	L	0.66	36.5	D	102	
		TR	0.78	27.1	C	558	TR	0.84	32.1	C	612	
	Westbound	LT	1.44	227.7	F	1256	LT	1.69	337.5	F	1332	+
2		R	0.02	8.5	A	4	R	0.02	8.3	A	3	
	Northbound	L	0.10	34.5	C	37	L	0.10	34.5	C	37	
		TR	0.18	35.4	D	83	TR	0.19	35.5	D	88	
	Southbound	L	0.02	32.8	C	13	L	0.02	32.8	C	13	
		TR	0.33	37.8	D	131	TR	0.33	37.8	D	131	
		Intersection		118.0	F		Intersection		169.4	F		
	Richmond Terrace and Westervelt Avenue											
	Eastbound	TR	0.81	20.9	C	346	TR	0.87	24.6	C	633	
3	Westbound	LT	0.80	71.4	E	424	LT	0.91	80.8	F	863	+
	Northbound	LR	0.45	37.0	D	186	LR	0.45	37.0	D	187	
		Intersection		44.9	D		Intersection		50.7	D		
	Hamilton Avenue and Richmond Terrace											
5	Northbound	LT	0.90	22.7	C	526	LT	0.98	33.9	C	589	
	Southbound	TR	0.43	12.1	B	153	TR	0.46	13.0	B	172	
		Intersection		18.3	B		Intersection		25.1	C		
	Wall Street and Richmond Terrace											
	Eastbound											
	Westbound	LTR	0.86	66.0	E	376	LTR	0.86	66.5	E	376	
7		L	0.98	93.5	F	350	L	0.98	95.3	F	350	
	Northbound	T	0.56	10.4	B	337	T	0.59	11.8	B	370	
		R	0.51	11.5	B	292	R	0.51	11.5	B	292	
	Southbound	LTR	0.59	14.6	B	95	LTR	0.65	15.5	B	101	
		Intersection		27.4	C		Intersection		27.8	C		
	Richmond Terrace and Ferry Terminal (bus)											
	Westbound	L	0.98	134.0	F	165	L	0.98	139.4	F	165	+
8		R	0.46	51.0	D	63	R	0.46	51.0	D	63	
	Northbound	T	0.66	19.0	B	57	T	0.70	34.1	C	57	
	Southbound	T	0.88	65.2	E	521	T	0.92	82.4	F	569	+
		Intersection		47.1	D		Intersection		62.0	E		
	Richmond Terrace and Ferry Terminal (parking lot)											
	Westbound	L	0.53	48.4	D	95	L	0.53	48.4	D	95	
		R	0.11	15.8	B	19	R	0.11	16.6	B	19	
	Northbound	T	0.98	64.6	E	429	T	1.03	91.1	F	469	+
9		R	0.18	17.0	B	58	R	0.18	16.7	B	58	
		R	0.20	17.5	B	32	R	0.20	17.2	B	32	
	Southbound	L	1.80	425.3	F	92	L	1.76	404.1	F	90	
		TR	1.11	69.4	E	882	TR	1.17	93.8	F	890	+
		Intersection		74.0	E		Intersection		93.8	F		
	Bay Street and Slosson Terrace											
	Eastbound	LR	0.17	24.7	C	56	LR	0.38	28.2	C	109	
10	Northbound	L	0.61	31.2	C	61	L	0.89	50.0	D	90	+
		T	0.90	15.7	B	180	T	0.93	17.3	B	287	
	Southbound	TR	1.17	103.1	F	689	TR	1.21	122.1	F	724	+
		Intersection		59.8	E		Intersection		69.4	E		
	Victory Boulevard and Bay Street/St. Marks Place											
	Eastbound	TR	0.42	18.5	B	188	TR	0.53	22.8	C	237	
		R	0.45	18.6	B	167	R	0.51	20.2	C	184	
11	Westbound	T	0.81	89.8	F	382	T	0.95	86.1	F	344	
		L	0.11	18.8	B	18	L	0.13	17.6	B	13	
	Southbound	LT	0.53	31.9	C	171	LT	0.54	32.3	C	174	
		R	0.49	33.3	C	107	R	0.53	35.5	D	111	
		Intersection		50.2	D		Intersection		50.5	D		

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday MD Peak Hour No-Action vs. With-Action Conditions

		No-Action Conditions					With-Action Conditions					
Int #	Intersection & Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
12	**Victory Boulevard and Bay Street**											
	Eastbound	L	0.62	31.5	C	186	L	0.90	60.2	E	272	+
		LT	0.61	30.6	C	144	LT	0.79	41.1	D	262	
	Westbound	LTR	0.35	26.7	C	93	LTR	1.40	228.6	F	401	+
	Northbound	L	2.78	829.5	F	176	L	3.62	1204.3	F	164	+
		TR	0.86	26.3	C	172	TR	0.89	26.2	C	162	
	Southbound	LT	0.90	41.9	D	318	LT	1.20	126.2	F	348	+
		R	0.90	93.8	F	225	R	1.05	90.4	F	245	
		Intersection		98.4	F		Intersection		165.8	F		
13	**Bay Street and Hannah Street**											
	Eastbound	LTR	0.07	17.8	B	35	LTR	0.07	17.9	B	35	
	Westbound	LTR	0.67	15.2	B	76	LTR	0.93	30.9	C	359	
	Northbound	LTR	1.82	394.1	F	799	LTR	2.04	488.8	F	853	+
	Southbound	L	4.65	1675.8	F	429	L	5.97	2255.1	F	426	+
		T	0.73	11.9	B	142	T	0.79	14.5	B	141	
		R	0.30	3.0	A	1	R	0.41	8.9	A	26	
		Intersection		321.1	F		Intersection		439.6	F		
14	**Front Street and Hannah Street**											
	Eastbound	TR	0.38	10.2	B	0	TR	0.45	10.1	B	0	
	Westbound	LT	0.10	13.4	B	47	LT	0.10	13.4	B	47	
	Northbound	LR	0.52	23.1	C	243	LR	0.88	45.8	D	424	+
		Intersection		16.2	B		Intersection		26.4	C		
15	**Bay Street and Swan Street/Van Duzer Street**											
	Eastbound	L	0.61	31.9	C	185	L	0.68	36.2	D	220	
		LTR	0.60	31.6	C	177	LTR	0.67	35.8	D	210	
	Westbound	LTR	0.00	17.5	B	5	LTR	0.00	17.5	B	5	
	Northbound	LTR	0.71	64.5	E	309	LTR	0.78	66.3	E	407	
	Southbound	LTR	0.83	17.3	B	146	LTR	0.90	19.9	B	183	
		Intersection		37.5	D		Intersection		40.2	D		
19	**Van Duzer Street and Clinton Street**											
	Westbound	TR	0.36	34.4	C	62	TR	0.36	34.1	C	60	
	Northbound	LT	0.50	9.3	A	152	LT	0.52	9.6	A	163	
		Intersection		14.2	B		Intersection		14.3	B		
20	**Bay Street and Clinton Street**											
	Westbound	LTR	0.29	23.7	C	89	LTR	0.29	23.7	C	89	
	Northbound	L	0.41	20.1	C	11	L	0.41	20.1	C	10	
		TR	0.66	18.0	B	138	TR	0.73	18.7	B	136	
	Southbound	L	0.35	7.9	A	12	L	0.42	10.5	B	12	
		TR	1.37	188.1	F	1236	TR	1.49	242.5	F	1310	+
		Intersection		101.7	F		Intersection		129.3	F		
24	**Bay Street and Wave Street**											
	Westbound	LTR	0.31	25.4	C	77	LTR	0.30	25.0	C	78	
	Northbound	LT	1.38	204.3	F	826	LT	1.56	279.3	F	940	+
		R	0.13	13.6	B	26	R	0.13	13.3	B	25	
	Southbound	L	0.84	41.2	D	17	L	0.82	38.8	D	16	
		TR	1.43	215.4	F	658	TR	1.55	268.9	F	665	+
		Intersection		196.0	F		Intersection		255.4	F		
25	**Front Street and Wave Street**											
	Eastbound	LR	0.28	18.7	B	47	LR	0.29	19.0	B	47	
	Northbound	LT	0.65	6.2	A	12	LT	0.79	9.9	A	11	
	Southbound	TR	0.47	11.4	B	154	TR	0.58	13.2	B	203	
		Intersection		9.4	A		Intersection		12.0	B		
26	**Front Street and Prospect Street**											
	Eastbound	LTR	0.20	21.5	C	43	LTR	0.21	21.6	C	45	
	Westbound	LTR	0.29	22.4	C	65	LTR	0.29	22.5	C	65	
	Northbound	TR	1.00	72.5	E	369	TR	1.22	141.8	F	466	+
	Southbound	LT	1.43	231.4	F	380	LT	2.56	731.1	F	517	+
		Intersection		133.2	F		Intersection		384.1	F		

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday MD Peak Hour No-Action vs. With-Action Conditions

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
27	**Van Duzer Street and Beach Street**											
	Eastbound	LT	0.77	41.3	D	215	LT	0.81	44.7	D	232	
	Westbound	TR	0.35	24.8	C	105	TR	0.37	25.2	C	111	
	Northbound	L	0.41	13.9	B	171	L	0.41	13.9	B	171	
		TR	0.69	21.0	C	326	TR	0.71	22.0	C	344	
		Intersection		24.3	C		Intersection		25.6	C		
28	**Bay Street and Water Street**											
	Westbound	LTR	0.28	26.8	C	81	LTR	0.28	26.7	C	80	
	Northbound	L	1.72	348.4	F	89	L	1.77	373.4	F	82	+
		T	1.10	63.8	E	187	T	1.23	120.2	F	175	+
	Southbound	TR	1.38	204.5	F	897	TR	1.49	252.9	F	996	+
		Intersection		147.8	F		Intersection		195.7	F		
29	**Bay Street and Canal Street**											
	Eastbound	L	0.73	171.3	F	186	L	0.64	161.1	F	165	
		TR	0.24	20.9	C	73	TR	0.24	20.8	C	73	
	Westbound	LTR	0.20	141.3	F	51	LTR	0.28	144.2	F	66	
	Northbound	TR	1.22	119.4	F	59	TR	1.39	196.5	F	71	+
	Southbound	LT	3.31	1052.7	F	618	LT	3.64	1201.2	F	642	+
		Intersection		547.2	F		Intersection		643.7	F		
30	**Front Street and Canal Street**											
	Eastbound	LR	0.60	27.5	C	98	LR	0.67	31.3	C	113	
	Northbound	LT	0.60	14.1	B	189	LT	0.69	16.9	B	240	
	Southbound	TR	0.49	11.7	B	60	TR	0.60	13.5	B	48	
		Intersection		15.4	B		Intersection		17.8	B		
31	**Bay Street and Broad Street**											
	Eastbound	LR	0.25	26.7	C	107	LR	0.32	25.6	C	140	
	Northbound	LT	3.71	1234.7	F	239	LT	4.11	1418.4	F	272	+
	Southbound	T	1.25	136.3	F	114	T	1.36	186.7	F	119	+
		R	0.20	14.3	B	15	R	0.25	14.5	B	19	
		Intersection		574.6	F		Intersection		666.5	F		
32	**Richmond Terrace and Clove Road**											
	Eastbound	LT	0.65	18.4	B	539	LT	0.69	20.1	C	571	
		R	0.13	2.3	A	26	R	0.13	2.5	A	30	
	Westbound	L	0.35	21.1	C	98	L	0.42	24.2	C	117	
		TR	0.85	37.6	D	826	TR	0.89	40.7	D	898	
	Northbound	LTR	0.47	39.4	D	202	LTR	0.50	40.2	D	215	
		Intersection		28.0	C		Intersection		30.2	C		
35	**Victory Boulevard and Cebra Avenue**											
	Eastbound	L	0.30	31.8	C	43	L	0.31	32.7	C	43	
		TR	0.76	42.7	D	240	TR	0.76	42.7	D	240	
	Westbound	L	0.69	51.5	D	120	L	0.69	51.0	D	119	
		TR	0.73	40.2	D	262	TR	0.76	42.2	D	291	
	Northbound	LTR	0.90	35.4	D	616	LTR	1.00	52.7	D	721	+
	Southbound	LTR	1.17	105.3	F	579	LTR	1.35	181.5	F	611	+
		Intersection		62.9	E		Intersection		97.3	F		
36	**Victory Boulevard and Jersey Street**											
	Eastbound	L	0.78	43.6	D	36	L	1.42	235.8	F	98	+
		T	0.98	39.7	D	485	T	1.08	68.2	E	493	+
	Westbound	T	1.05	70.0	E	700	T	1.14	103.6	F	796	+
		R	0.19	13.8	B	67	R	0.34	16.8	B	95	
	Southbound	LR	0.50	28.3	C	146	LR	0.93	67.5	E	263	+
		Intersection		50.1	D		Intersection		88.2	F		
38	**Victory Boulevard and Forest Avenue**											
	Eastbound	LR	0.45	27.5	C	138	LR	0.48	27.9	C	146	
	Northbound	L	0.78	52.2	D	171	L	0.99	103.9	F	192	+
		T	0.69	22.1	C	366	T	0.76	25.1	C	424	
	Southbound	T	0.83	75.8	E	349	T	0.90	80.3	F	474	+
		R	0.39	2.9	A	10	R	0.41	3.0	A	11	
		Intersection		39.2	D		Intersection		44.5	D		

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday MD Peak Hour No-Action vs. With-Action Conditions

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
41	**Broad Street and Canal Street**											
	Eastbound	L	0.31	10.4	B	65	L	0.31	11.4	B	73	
		TR	0.34	9.8	A	95	TR	0.39	11.3	B	136	
	Westbound	LTR	0.30	20.0	C	144	LTR	0.34	22.0	C	173	
	Northbound	L	0.49	33.0	C	98	L	0.47	31.8	C	97	
		TR	0.63	33.6	C	211	TR	0.62	32.9	C	207	
	Southbound	LT	0.37	26.2	C	136	LT	0.35	25.8	C	130	
		Intersection		22.6	C		Intersection		22.5	C		
42	**Broad Street and Van Duzer Street**											
	Westbound	L	0.78	56.0	E	168	L	0.82	54.3	D	196	
	Southbound	L	0.18	8.9	A	76	L	0.19	9.5	A	76	
		T	0.60	14.3	B	314	T	0.64	16.0	B	327	
		Intersection		25.0	C		Intersection		26.3	C		
43	**Broad Street and Targee Street**											
	Eastbound	TR	0.33	29.8	C	155	TR	0.34	29.7	C	156	
	Westbound	TR	0.58	29.9	C	227	TR	0.65	32.0	C	262	
	Northbound	LT	0.77	24.7	C	355	LT	0.79	26.0	C	373	
		R	0.40	14.3	B	113	R	0.48	15.8	B	139	
		Intersection		24.6	C		Intersection		25.8	C		
44	**Vanderbilt Avenue and Tompkins Avenue**											
	Eastbound	LTR	1.00	63.3	E	552	LTR	1.06	79.5	E	603	+
	Westbound	LTR	0.78	9.9	A	71	LTR	0.92	14.3	B	243	
	Northbound	LTR	1.25	162.3	F	463	LTR	1.29	177.3	F	489	+
	Southbound	LTR	0.99	69.1	E	497	LTR	0.98	67.3	E	489	
		Intersection		72.3	E		Intersection		79.9	E		
45	**Bay Street and Vanderbilt Avenue**											
	Eastbound	L	0.48	27.1	C	106	L	0.61	28.9	C	134	
		R	0.21	24.2	C	36	R	0.21	24.1	C	35	
	Northbound	LT	5.20	1912.8	F	1176	LT	8.44	3368.1	F	1266	+
	Southbound	T	1.20	105.3	F	458	T	1.25	128.1	F	366	+
		R	0.37	1.5	A	10	R	0.46	1.8	A	12	
		Intersection		730.2	F		Intersection		1216.8	F		
47	**Bay Street and Edgewater Drive**											
	Westbound	LR	0.36	23.2	C	124	LR	0.42	24.1	C	150	
	Northbound	TR	0.59	16.9	B	74	TR	0.67	17.6	B	73	
	Southbound	T	0.96	28.7	C	328	T	1.00	33.6	C	326	
	Northwestbound	R	0.25	0.6	A	0	R	0.27	0.8	A	0	
		Intersection		20.8	C		Intersection		23.0	C		
48	**Bay Street and Hylan Boulevard**											
	Eastbound	LTR	1.03	81.1	F	534	LTR	1.12	110.0	F	594	+
	Westbound	LTR	0.90	66.8	E	300	LTR	0.92	69.9	E	302	
	Northbound	LTR	4.89	1762.1	F	751	LTR	6.45	2463.6	F	774	+
	Southbound	T	1.12	97.0	F	572	T	1.21	134.6	F	642	+
		R	0.58	18.0	B	170	R	0.64	18.7	B	190	
		Intersection		587.6	F		Intersection		821.6	F		
49	**Bay Street and School Road**											
	Eastbound	L	1.35	195.2	F	786	L	1.48	252.6	F	881	+
		TR	0.12	12.1	B	39	TR	0.12	12.1	B	39	
	Westbound	LTR	0.01	15.2	B	8	LTR	0.01	15.2	B	8	
	Northbound	LTR	0.22	15.2	B	83	LTR	0.22	15.2	B	83	
	Southbound	LTR	0.08	16.7	B	23	LTR	0.08	17.0	B	21	
		R	0.71	6.7	A	325	R	0.71	7.0	A	325	
		Intersection		82.1	F		Intersection		107.0	F		

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday PM Peak Hour No-Action vs. With-Action Conditions

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Richmond Terrace and Franklin Avenue											
	Eastbound	TR	0.75	28.8	C	738	TR	0.84	34.6	C	837	
1	Westbound	LT	1.14	81.4	F	278	LT	1.52	253.0	F	689	+
	Northbound	LR	0.14	35.3	D	67	LR	0.14	35.4	D	68	
		Intersection		56.4	E		Intersection		147.0	F		
	Richmond Terrace and Jersey Street											
	Eastbound	L	0.72	39.2	D	106	L	0.81	48.3	D	92	+
		TR	0.83	28.1	C	598	TR	0.93	36.8	D	956	
	Westbound	LT	1.29	163.2	F	1186	LT	1.73	353.4	F	1134	+
2		R	0.01	11.1	B	4	R	0.01	9.8	A	3	
	Northbound	L	0.20	39.5	D	42	L	0.20	39.5	D	42	
		TR	0.19	37.0	D	88	TR	0.20	37.3	D	91	
	Southbound	L	0.04	34.7	C	23	L	0.04	34.7	C	23	
		TR	0.68	49.9	D	255	TR	0.68	49.9	D	255	
		Intersection		85.2	F		Intersection		165.5	F		
	Richmond Terrace and Westervelt Avenue											
3	Eastbound	TR	0.88	25.8	C	409	TR	0.98	47.9	D	456	+
	Westbound	LT	0.78	78.1	E	344	LT	1.10	101.3	F	935	+
	Northbound	LR	0.52	38.5	D	223	LR	0.52	38.5	D	223	
		Intersection		47.6	D		Intersection		67.3	E		
	Hamilton Avenue and Richmond Terrace											
5	Northbound	LT	0.87	21.5	C	371	LT	0.99	36.3	D	612	
	Southbound	TR	0.48	34.0	C	331	TR	0.54	33.6	C	366	
		Intersection		26.8	C		Intersection		35.1	D		
	Wall Street and Richmond Terrace											
	Eastbound											
	Westbound	LTR	0.66	185.5	F	312	LTR	0.66	185.5	F	312	
7		L	0.62	175.4	F	273	L	0.62	177.9	F	273	
	Northbound	T	0.55	4.5	A	38	T	0.60	5.2	A	52	
		R	0.51	5.6	A	32	R	0.51	6.1	A	39	
	Southbound	LTR	0.61	8.3	A	73	LTR	0.71	11.7	B	93	
		Intersection		45.1	D		Intersection		44.1	D		
	Richmond Terrace and Ferry Terminal (bus)											
	Westbound	L	0.67	57.7	E	174	L	0.67	57.7	E	174	
8		R	0.34	44.1	D	84	R	0.34	44.1	D	84	
	Northbound	T	0.72	75.4	E	65	T	0.78	80.1	F	63	+
	Southbound	T	0.90	80.1	F	712	T	0.98	87.1	F	832	+
		Intersection		75.5	E		Intersection		81.0	F		
	Richmond Terrace and Ferry Terminal (parking lot)											
	Westbound	L	0.77	58.0	E	286	L	0.77	58.0	E	286	
		R	0.16	13.2	B	40	R	0.16	13.2	B	40	
	Northbound	T	1.38	208.0	F	695	T	1.50	260.0	F	775	+
9		R	0.26	2.1	A	12	R	0.26	3.2	A	22	
		R	0.30	3.2	A	6	R	0.30	4.5	A	11	
	Southbound	L	4.16	1457.1	F	350	L	4.16	1451.3	F	314	
		TR	0.91	55.7	E	332	TR	1.00	64.5	E	1022	+
		Intersection		206.2	F		Intersection		222.4	F		
	Bay Street and Slosson Terrace											
	Eastbound	LR	0.20	34.4	C	80	LR	0.60	44.6	D	218	
10	Northbound	L	0.57	32.6	C	89	L	0.59	30.8	C	82	
		T	0.86	46.1	D	381	T	0.90	64.1	E	402	+
	Southbound	TR	1.13	95.5	F	928	TR	1.20	125.6	F	1023	+
		Intersection		69.9	E		Intersection		91.2	F		
	Victory Boulevard and Bay Street/St. Marks Place											
	Eastbound	TR	0.39	12.6	B	157	TR	0.42	13.3	B	175	
		R	0.33	11.9	B	105	R	0.42	13.2	B	133	
11	Westbound	T	0.74	37.6	D	151	T	0.91	62.5	E	225	+
		L	0.08	3.2	A	3	L	0.08	5.0	A	4	
	Southbound	LT	0.56	46.6	D	209	LT	0.58	47.3	D	214	
		R	0.91	84.4	F	263	R	0.97	98.1	F	275	+
		Intersection		34.9	C		Intersection		47.1	D		

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday PM Peak Hour No-Action vs. With-Action Conditions

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
12	**Victory Boulevard and Bay Street**											
	Eastbound	L	0.84	72.0	E	320	L	0.90	83.1	F	351	+
		LT	0.84	72.9	E	325	LT	0.88	95.2	F	363	+
	Westbound	LTR	0.75	57.8	E	204	LTR	2.61	756.6	F	863	+
	Northbound	L	2.23	577.1	F	222	L	3.75	1255.3	F	246	+
		TR	0.70	16.7	B	262	TR	0.73	17.8	B	204	
	Southbound	LT	0.86	14.1	B	130	LT	1.08	55.4	E	172	+
		R	0.76	11.9	B	70	R	0.89	27.9	C	108	
		Intersection		60.2	E		Intersection		210.2	F		
13	**Bay Street and Hannah Street**											
	Eastbound	LTR	0.11	30.5	C	64	LTR	0.11	30.7	C	64	
	Westbound	LTR	0.88	58.9	E	529	LTR	1.13	122.3	F	683	+
	Northbound	LTR	1.18	118.7	F	740	LTR	1.39	208.7	F	866	+
	Southbound	L	2.51	711.6	F	666	L	4.09	1404.1	F	698	+
		T	0.55	24.3	C	374	T	0.66	22.3	C	331	
		R	0.29	7.6	A	67	R	0.38	10.8	B	69	
		Intersection		141.5	F		Intersection		281.9	F		
14	**Front Street and Hannah Street**											
	Eastbound	TR	0.45	3.7	A	67	TR	0.55	4.0	A	72	
	Westbound	LT	0.10	13.3	B	47	LT	0.10	13.4	B	47	
	Northbound	LR	0.61	25.2	C	289	LR	0.83	37.5	D	424	
		Intersection		13.8	B		Intersection		18.4	B		
15	**Bay Street and Swan Street/Van Duzer Street**											
	Eastbound	L	0.63	70.6	E	192	L	0.68	114.9	F	202	+
		LTR	0.61	65.9	E	215	LTR	0.67	115.4	F	228	+
	Westbound	LTR	0.00	0.0	0.0	0	LTR	0.00	0.0	0.0	0	
	Northbound	LTR	0.55	20.5	C	262	LTR	0.61	21.9	C	318	
	Southbound	LTR	0.67	5.9	A	41	LTR	0.81	8.2	A	42	
		Intersection		20.8	C		Intersection		27.8	C		
19	**Van Duzer Street and Clinton Street**											
	Westbound	TR	0.28	37.4	D	79	TR	0.32	38.3	D	86	
	Northbound	LT	0.39	9.2	A	146	LT	0.40	9.3	A	150	
		Intersection		15.1	B		Intersection		15.8	B		
20	**Bay Street and Clinton Street**											
	Westbound	LTR	0.39	117.0	F	153	LTR	0.41	710.4	F	154	+
	Northbound	L	0.33	11.4	B	5	L	0.40	10.2	B	5	
		TR	0.53	5.7	A	113	TR	0.62	5.8	A	100	
	Southbound	L	0.31	9.7	A	20	L	0.40	11.1	B	15	
		TR	1.14	89.3	F	1319	TR	1.38	193.5	F	1725	+
		Intersection		54.8	D		Intersection		144.6	F		
24	**Bay Street and Wave Street**											
	Westbound	LTR	0.40	37.1	D	74	LTR	0.41	35.2	D	54	
	Northbound	LT	1.11	84.0	F	944	LT	1.42	215.9	F	1267	+
		R	0.06	7.7	A	16	R	0.07	7.9	A	16	
	Southbound	L	0.30	17.7	B	28	L	1.08	99.4	F	33	+
		TR	1.17	110.2	F	1011	TR	1.39	207.1	F	1029	+
		Intersection		93.9	F		Intersection		201.0	F		
25	**Front Street and Wave Street**											
	Eastbound	LR	0.22	16.0	B	41	LR	0.25	17.5	B	33	
	Northbound	LT	0.82	7.3	A	21	LT	1.09	59.5	E	20	+
	Southbound	TR	0.49	11.6	B	161	TR	0.64	14.4	B	233	
		Intersection		9.6	A		Intersection		38.3	D		
26	**Front Street and Prospect Street**											
	Eastbound	LTR	0.53	28.6	C	81	LTR	0.54	28.9	C	80	
	Westbound	LTR	0.41	24.6	C	90	LTR	0.42	24.8	C	90	
	Northbound	TR	1.34	194.0	F	889	TR	1.64	322.2	F	1058	+
	Southbound	LT	7.14	2797.4	F	906	LT	9.60	3902.7	F	1149	+
		Intersection		1048.1	F		Intersection		1588.3	F		

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday PM Peak Hour No-Action vs. With-Action Conditions

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Van Duzer Street and Beach Street											
27	Eastbound	LT	0.77	49.3	D	286	LT	0.97	80.1	F	394	+
	Westbound	TR	0.46	33.0	C	195	TR	0.47	33.4	C	202	
	Northbound	L	0.42	17.1	B	208	L	0.43	17.2	B	211	
		TR	0.58	20.9	C	316	TR	0.59	21.3	C	326	
		Intersection		27.9	C		Intersection		35.6	D		
	Bay Street and Water Street											
28	Westbound	LTR	0.28	79.6	E	109	LTR	0.28	74.9	E	109	
	Northbound	L	3.00	921.0	F	177	L	3.11	971.4	F	139	+
		T	1.01	74.3	E	737	T	1.25	143.6	F	761	+
	Southbound	TR	1.31	174.3	F	1338	TR	1.55	277.2	F	1611	+
		Intersection		176.8	F		Intersection		253.2	F		
	Bay Street and Canal Street											
29	Eastbound	L	0.89	82.7	F	268	L	0.88	79.9	E	263	
		TR	0.25	33.8	C	91	TR	0.25	33.8	C	91	
	Westbound	LTR	0.25	40.6	D	66	LTR	0.34	43.5	D	76	
	Northbound	TR	1.13	84.1	F	140	TR	1.43	217.2	F	153	+
	Southbound	LT	3.86	1303.9	F	1227	LT	4.64	1652.0	F	1266	+
		Intersection		627.9	F		Intersection		841.9	F		
	Front Street and Canal Street											
30	Eastbound	LR	0.59	18.6	B	65	LR	0.70	21.2	C	71	
	Northbound	LT	0.76	19.7	B	303	LT	0.88	28.9	C	414	
	Southbound	TR	0.46	10.9	B	36	TR	0.61	11.9	B	36	
		Intersection		16.5	B		Intersection		21.4	C		
	Bay Street and Broad Street											
31	Eastbound	LR	0.29	37.5	D	150	LR	0.42	114.0	F	210	+
	Northbound	LT	3.39	1091.2	F	763	LT	5.12	1867.4	F	827	+
	Southbound	T	1.07	62.0	E	45	T	1.25	133.8	F	46	+
		R	0.17	0.8	A	0	R	0.24	1.0	A	0	
		Intersection		483.8	F		Intersection		845.5	F		
	Richmond Terrace and Clove Road											
32	Eastbound	LT	0.74	17.1	B	647	LT	0.83	22.8	C	778	
		R	0.17	3.1	A	27	R	0.17	3.6	A	32	
	Westbound	L	0.43	14.3	B	85	L	0.64	29.1	C	157	
		TR	0.75	19.3	B	708	TR	0.81	22.6	C	791	
	Northbound	LTR	0.35	36.2	D	157	LTR	0.36	36.5	D	165	
		Intersection		18.3	B		Intersection		22.8	C		
	Victory Boulevard and Cebra Avenue											
35	Eastbound	L	0.99	150.8	F	129	L	1.13	197.4	F	137	+
		TR	0.72	54.2	D	252	TR	0.72	54.2	D	252	
	Westbound	L	0.70	68.4	E	160	L	0.73	72.2	E	170	
		TR	0.93	76.6	E	407	TR	0.98	87.0	F	434	+
	Northbound	LTR	0.91	40.8	D	851	LTR	1.34	191.0	F	1180	+
	Southbound											
		LT	1.05	47.0	D	1036	LT	1.22	113.6	F	1089	+
		R	0.04	3.7	A	4	R	0.04	3.6	A	4	
		Intersection		52.8	D		Intersection		127.5	F		
	Victory Boulevard and Jersey Street											
36	Eastbound	L	0.94	66.3	E	63	L	2.74	807.5	F	125	+
		T	0.90	27.6	C	445	T	0.96	27.9	C	299	
	Westbound	T	0.91	79.3	E	986	T	1.04	93.0	F	1208	+
		R	0.10	7.4	A	40	R	0.18	8.2	A	68	
	Southbound	LR	0.53	43.3	D	176	LR	0.87	70.5	E	284	+
		Intersection		54.6	D		Intersection		103.2	F		
	Victory Boulevard and Forest Avenue											
38	Eastbound	LR	0.51	42.2	D	181	LR	0.55	43.1	D	195	
	Northbound	L	0.59	30.4	C	131	L	0.91	86.4	F	197	+
		T	0.52	16.1	B	324	T	0.58	17.4	B	373	
	Southbound	T	0.82	74.1	E	453	T	0.92	79.8	E	664	+
		R	0.37	7.0	A	61	R	0.42	8.2	A	81	
		Intersection		41.8	D		Intersection		47.2	D		

Table 14-31 (con't): Signalized Level of Service Analysis – Weekday PM Peak Hour No-Action vs. With-Action Conditions

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
41	**Broad Street and Canal Street**											
	Eastbound	L	0.22	8.3	A	50	L	0.24	12.6	B	76	
		TR	0.22	7.8	A	70	TR	0.29	12.0	B	137	
	Westbound	LTR	0.27	16.7	B	113	LTR	0.37	17.5	B	150	
	Northbound	L	0.44	43.1	D	101	L	0.43	42.8	D	101	
		TR	0.61	44.0	D	223	TR	0.65	45.6	D	237	
	Southbound	LT	0.45	38.4	D	177	LT	0.44	38.3	D	175	
		Intersection		27.4	C		Intersection		27.5	C		
42	**Broad Street and Van Duzer Street**											
	Westbound	L	0.75	77.9	E	175	L	0.80	66.9	E	179	
	Southbound	L	0.12	6.0	A	55	L	0.13	7.8	A	64	
		T	0.44	8.5	A	284	T	0.48	11.4	B	351	
		Intersection		25.0	C		Intersection		26.7	C		
43	**Broad Street and Targee Street**											
	Eastbound	LT	0.22	44.9	D	163	LT	0.23	44.5	D	162	
	Westbound	TR	0.39	28.7	C	192	TR	0.50	35.1	D	270	
	Northbound	LT	0.65	22.8	C	403	LT	0.65	23.1	C	412	
		R	0.26	15.0	B	96	R	0.38	17.0	B	144	
		Intersection		25.3	C		Intersection		26.8	C		
44	**Vanderbilt Avenue and Tompkins Avenue**											
	Eastbound	LTR	0.74	31.8	C	433	LTR	0.85	40.0	D	587	
	Westbound	LTR	0.74	37.2	D	384	LTR	0.94	50.7	D	488	+
	Northbound	LTR	0.99	79.9	E	485	LTR	1.02	87.8	F	517	+
	Southbound	LTR	0.65	39.0	D	337	LTR	0.65	38.8	D	333	
		Intersection		45.9	D		Intersection		53.7	D		
45	**Bay Street and Vanderbilt Avenue**											
	Eastbound	L	0.58	39.1	D	236	L	0.76	41.9	D	295	
		R	0.21	30.2	C	63	R	0.21	27.4	C	54	
	Northbound	LT	2.07	508.0	F	1327	LT	3.17	997.9	F	1667	+
	Southbound	T	0.91	9.7	A	110	T	1.00	23.1	C	101	
		R	0.34	2.2	A	10	R	0.45	2.5	A	12	
		Intersection		197.5	F		Intersection		384.6	F		
47	**Bay Street and Edgewater Drive**											
	Westbound	LR	0.40	34.1	C	174	LR	0.51	36.2	D	227	
	Northbound	TR	0.56	8.5	A	54	TR	0.70	9.7	A	56	
	Southbound	T	0.77	12.1	B	178	T	0.84	13.5	B	171	
	Northwestbound	R	0.59	12.9	B	111	R	0.63	18.4	B	160	
		Intersection		14.0	B		Intersection		16.2	B		
48	**Bay Street and Hylan Boulevard**											
	Eastbound	LTR	1.09	95.8	F	734	LTR	1.28	169.4	F	899	+
	Westbound	LTR	0.98	89.2	F	441	LTR	0.99	92.4	F	444	+
	Northbound	LTR	3.91	1326.7	F	946	LTR	5.13	1869.2	F	981	+
	Southbound	T	1.08	85.3	F	964	T	1.23	143.6	F	1166	+
		R	0.51	15.4	B	188	R	0.61	17.6	B	241	
		Intersection		471.8	F		Intersection		687.2	F		
49	**Bay Street and School Road**											
	Eastbound	L	1.44	233.4	F	1331	L	1.69	341.1	F	1621	+
		TR	0.11	2.0	A	17	TR	0.11	2.0	A	17	
	Westbound	LTR	0.01	13.8	B	7	LTR	0.01	13.8	B	7	
	Northbound	LTR	0.16	24.7	C	86	LTR	0.17	24.9	C	86	
	Southbound	LTR	0.32	30.3	C	82	LTR	0.50	32.8	C	113	
		R	1.00	29.6	C	190	R	1.03	38.9	D	166	
		Intersection		125.7	F		Intersection		185.1	F		

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 14-31 (con't): Signalized Level of Service Analysis – Saturday MD Peak Hour No-Action vs. With-Action Conditions

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Richmond Terrace and Franklin Avenue											
	Eastbound	TR	0.71	18.4	B	506	TR	0.76	20.6	C	552	
1	Westbound	LT	0.86	18.0	B	382	LT	1.02	32.3	C	479	
	Northbound	LR	0.11	22.8	C	48	LR	0.11	22.9	C	49	
		Intersection		18.4	B		Intersection		26.4	C		
	Richmond Terrace and Jersey Street											
	Eastbound	L	0.58	33.7	C	77	L	0.58	32.9	C	70	
		TR	0.75	6.9	A	52	TR	0.81	9.5	A	60	
	Westbound	LT	1.10	78.1	E	687	LT	1.19	113.9	F	670	+
2		R	0.03	9.9	A	6	R	0.03	12.4	B	5	
	Northbound	L	0.21	27.7	C	49	L	0.21	27.7	C	49	
		TR	0.24	27.1	C	73	TR	0.25	27.3	C	75	
	Southbound	L	0.03	24.1	C	16	L	0.03	24.1	C	16	
		TR	0.44	30.4	C	139	TR	0.44	30.4	C	139	
		Intersection		39.3	D		Intersection		53.7	D		
	Richmond Terrace and Westervelt Avenue											
	Eastbound	TR	0.79	16.2	B	270	TR	0.87	21.2	C	609	
3	Westbound	LT	0.74	19.2	B	495	LT	0.89	31.6	C	613	
	Northbound	LR	0.21	21.4	C	89	LR	0.22	21.5	C	90	
		Intersection		17.9	B		Intersection		25.8	C		
	Hamilton Avenue and Richmond Terrace											
5	Northbound	LT	0.95	31.4	C	376	LT	1.03	53.2	D	425	+
	Southbound	TR	0.53	24.8	C	244	TR	0.57	25.2	C	266	
		Intersection		28.5	C		Intersection		40.7	D		
	Wall Street and Richmond Terrace											
	Eastbound											
	Westbound	LTR	0.80	94.2	F	383	LTR	0.80	94.2	F	383	
7		L	0.80	93.1	F	304	L	0.80	93.1	F	304	
	Northbound	T	0.50	5.5	A	133	T	0.54	6.8	A	190	
		R	0.80	23.9	C	424	R	0.80	24.6	C	424	
	Southbound	LTR	0.67	60.0	E	73	LTR	0.75	62.2	E	171	
		Intersection		49.0	D		Intersection		49.5	D		
	Richmond Terrace and Ferry Terminal (bus)											
	Westbound	L	1.24	195.9	F	206	L	1.24	195.9	F	206	
8		R	0.44	48.3	D	63	R	0.44	48.3	D	63	
	Northbound	T	0.67	25.0	C	48	T	0.71	42.6	D	48	
	Southbound	T	0.77	27.3	C	193	T	0.81	46.0	D	208	+
		Intersection		37.2	D		Intersection		53.4	D		
	Richmond Terrace and Ferry Terminal (parking lot)											
	Westbound	L	0.64	54.3	D	111	L	0.64	54.3	D	111	
		R	0.13	15.5	B	23	R	0.13	16.3	B	23	
	Northbound	T	1.03	70.9	E	398	T	1.09	77.3	E	440	+
9		R	0.21	2.5	A	5	R	0.21	2.8	A	6	
		R	0.29	3.2	A	3	R	0.29	3.5	A	3	
	Southbound	L	1.71	386.7	F	147	L	1.69	374.4	F	138	
		TR	1.24	130.3	F	1108	TR	1.31	158.4	F	1194	+
		Intersection		102.5	F		Intersection		116.8	F		
	Bay Street and Slosson Terrace											
	Eastbound	LR	0.09	23.6	C	35	LR	0.14	24.3	C	49	
10	Northbound	L	0.34	14.3	B	25	L	0.39	16.1	B	27	
		T	0.81	13.4	B	188	T	0.84	14.0	B	198	
	Southbound	TR	1.26	142.3	F	822	TR	1.30	162.7	F	865	+
		Intersection		82.1	F		Intersection		92.6	F		
	Victory Boulevard and Bay Street/St. Marks Place											
	Eastbound	TR	0.48	13.7	B	206	TR	0.52	16.1	B	243	
		R	0.43	12.7	B	151	R	0.50	15.2	B	185	
11	Westbound	T	0.84	74.7	E	365	T	0.92	77.5	E	401	
		L	0.12	15.2	B	22	L	0.13	16.2	B	19	
	Southbound	LT	0.33	27.6	C	105	LT	0.34	27.9	C	109	
		R	0.24	27.3	C	72	R	0.26	27.8	C	74	
		Intersection		42.0	D		Intersection		44.3	D		

Table 14-31 (con't): Signalized Level of Service Analysis – Saturday MD Peak Hour No-Action vs. With-Action Conditions

		No-Action Conditions					With-Action Conditions					
Int #	Intersection & Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
12	**Victory Boulevard and Bay Street**											
	Eastbound	L	0.62	18.2	B	54	L	0.81	34.5	C	250	
		LT	0.63	18.9	B	55	LT	0.79	30.6	C	248	
	Westbound	LTR	0.23	24.2	C	72	LTR	0.76	49.2	D	194	+
	Northbound	L	3.55	1171.5	F	247	L	4.38	1549.4	F	254	+
		TR	0.74	24.2	C	185	TR	0.76	23.8	C	171	
	Southbound	LT	0.93	43.6	D	315	LT	1.06	72.4	E	322	+
		R	0.57	13.6	B	68	R	0.65	23.1	C	103	
		Intersection		119.1	F		Intersection		163.9	F		
13	**Bay Street and Hannah Street**											
	Eastbound	LTR	0.04	17.4	B	26	LTR	0.04	17.4	B	26	
	Westbound	LTR	0.60	10.3	B	52	LTR	0.76	14.9	B	90	
	Northbound	LTR	1.43	217.9	F	666	LTR	1.59	290.2	F	719	+
	Southbound	L	3.30	1064.7	F	410	L	4.86	1760.5	F	461	+
		T	0.72	11.2	B	141	T	0.77	13.6	B	153	
		R	0.17	3.1	A	0	R	0.20	3.6	A	4	
		Intersection		194.8	F		Intersection		306.4	F		
14	**Front Street and Hannah Street**											
	Eastbound	TR	0.38	10.5	B	0	TR	0.43	10.4	B	0	
	Westbound	LT	0.05	12.9	B	30	LT	0.05	12.9	B	30	
	Northbound	LR	0.52	23.1	C	242	LR	0.74	32.0	C	326	
		Intersection		16.5	B		Intersection		20.6	C		
15	**Bay Street and Swan Street/Van Duzer Street**											
	Eastbound	L	0.66	33.6	C	178	L	0.71	36.6	D	188	
		LTR	0.17	19.9	B	66	LTR	0.19	20.2	C	69	
	Westbound	LTR	0.00	0.0	0.0	0	LTR	0.00	0.0	0.0	0	
	Northbound	LTR	0.68	62.1	E	273	LTR	0.73	63.1	E	336	
	Southbound	LTR	0.90	21.4	C	480	LTR	0.96	26.9	C	528	
		Intersection		37.8	D		Intersection		41.4	D		
19	**Van Duzer Street and Clinton Street**											
	Westbound	TR	0.27	33.1	C	53	TR	0.29	33.5	C	56	
	Northbound	LT	0.33	7.1	A	95	LT	0.34	7.2	A	98	
		Intersection		12.6	B		Intersection		13.0	B		
20	**Bay Street and Clinton Street**											
	Westbound	LTR	0.30	23.6	C	100	LTR	0.31	23.9	C	101	
	Northbound	L	0.34	19.0	B	10	L	0.38	19.6	B	10	
		TR	0.63	17.4	B	147	TR	0.69	18.2	B	144	
	Southbound	L	0.54	14.2	B	25	L	0.65	21.4	C	32	
		TR	1.45	222.8	F	1228	TR	1.56	273.7	F	1256	+
		Intersection		118.3	F		Intersection		143.6	F		
24	**Bay Street and Wave Street**											
	Westbound	LTR	0.34	26.2	C	87	LTR	0.34	25.9	C	87	
	Northbound	LT	1.24	141.6	F	820	LT	1.41	214.7	F	949	+
		R	0.10	12.9	B	22	R	0.10	12.7	B	23	
	Southbound	L	0.81	38.7	D	16	L	0.79	37.6	D	15	
		TR	1.54	268.3	F	707	TR	1.67	323.9	F	722	+
		Intersection		201.4	F		Intersection		259.9	F		
25	**Front Street and Wave Street**											
	Eastbound	LR	0.25	17.9	B	43	LR	0.27	18.4	B	44	
	Northbound	LT	0.74	8.5	A	29	LT	0.87	11.4	B	24	
	Southbound	TR	0.39	10.4	B	125	TR	0.48	11.5	B	156	
		Intersection		10.0	B		Intersection		11.9	B		
26	**Front Street and Prospect Street**											
	Eastbound	LTR	0.62	34.7	C	123	LTR	0.63	35.0	C	124	
	Westbound	LTR	0.53	27.5	C	113	LTR	0.54	27.7	C	113	
	Northbound	TR	1.04	80.4	F	380	TR	1.24	150.2	F	463	+
	Southbound	LT	1.83	410.8	F	345	LT	3.42	1119.2	F	449	+
		Intersection		172.3	F		Intersection		445.7	F		

Table 14-31 (con't): Signalized Level of Service Analysis – Saturday MD Peak Hour No-Action vs. With-Action Conditions

Int #	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
	Van Duzer Street and Beach Street											
27	Eastbound	LT	0.65	33.9	C	212	LT	0.71	37.2	D	252	
	Westbound	TR	0.31	23.9	C	99	TR	0.33	24.1	C	103	
	Northbound	L	0.29	12.1	B	121	L	0.29	12.2	B	124	
		TR	0.44	14.3	B	184	TR	0.45	14.5	B	190	
		Intersection		20.1	C		Intersection		21.3	C		
	Bay Street and Water Street											
28	Westbound	LTR	0.31	27.3	C	84	LTR	0.31	27.3	C	84	
	Northbound	L	1.74	359.2	F	107	L	1.80	383.0	F	93	+
		T	1.06	61.3	E	200	T	1.20	107.5	F	190	+
	Southbound	TR	1.46	240.6	F	1067	TR	1.57	290.6	F	1182	+
		Intersection		169.3	F		Intersection		212.9	F		
	Bay Street and Canal Street											
29	Eastbound	L	0.62	145.5	F	163	L	0.62	145.2	F	161	
		TR	0.25	20.8	C	85	TR	0.25	20.7	C	84	
	Westbound	LTR	0.20	134.0	F	52	LTR	0.25	134.8	F	64	
	Northbound	TR	1.17	97.7	F	77	TR	1.35	179.2	F	86	+
	Southbound	LT	3.56	1167.3	F	664	LT	3.88	1309.0	F	677	+
		Intersection		606.5	F		Intersection		697.8	F		
	Front Street and Canal Street											
30	Eastbound	LR	0.65	30.2	C	110	LR	0.73	35.1	D	141	
	Northbound	LT	0.53	12.8	B	165	LT	0.61	14.4	B	200	
	Southbound	TR	0.44	10.4	B	63	TR	0.52	11.1	B	55	
		Intersection		15.3	B		Intersection		17.1	B		
	Bay Street and Broad Street											
31	Eastbound	LR	0.30	25.2	C	127	LR	0.38	25.1	C	156	
	Northbound	LT	3.24	1024.5	F	244	LT	3.94	1339.0	F	189	+
	Southbound	T	1.35	180.6	F	108	T	1.46	229.5	F	111	+
		R	0.20	6.3	A	0	R	0.24	6.6	A	0	
		Intersection		482.3	F		Intersection		627.8	F		
	Richmond Terrace and Clove Road											
32	Eastbound	LT	0.76	19.4	B	333	LT	0.81	21.9	C	366	
		R	0.13	6.8	A	38	R	0.13	7.0	A	39	
	Westbound	L	0.47	15.6	B	37	L	0.60	25.3	C	120	
		TR	0.69	12.3	B	177	TR	0.73	13.8	B	198	
	Northbound	LTR	0.27	22.7	C	31	LTR	0.28	22.9	C	32	
		Intersection		16.0	B		Intersection		18.2	B		
	Victory Boulevard and Cebra Avenue											
35	Eastbound	L	0.27	29.4	C	47	L	0.28	29.9	C	48	
		TR	0.50	31.2	C	153	TR	0.50	31.2	C	153	
	Westbound	L	0.32	29.5	C	68	L	0.35	30.2	C	73	
		TR	0.55	32.1	C	176	TR	0.58	33.0	C	185	
	Northbound	LTR	0.92	37.7	D	663	LTR	0.99	50.5	D	739	+
	Southbound	LTR	1.07	65.3	E	561	LTR	1.17	103.8	F	601	+
		Intersection		46.3	D		Intersection		65.7	E		
	Victory Boulevard and Jersey Street											
36	Eastbound	L	0.74	36.0	D	40	L	1.05	91.7	F	91	+
		T	1.00	42.9	D	509	T	1.06	58.0	E	502	+
	Westbound	T	1.00	50.2	D	664	T	1.05	64.2	E	712	+
		R	0.12	6.4	A	24	R	0.21	7.1	A	35	
	Southbound	LR	0.38	25.4	C	112	LR	0.59	31.6	C	156	
		Intersection		42.6	D		Intersection		57.1	E		
	Victory Boulevard and Forest Avenue											
38	Eastbound	LR	0.57	29.4	C	162	LR	0.59	29.9	C	169	
	Northbound	L	0.92	67.8	E	238	L	1.03	100.8	F	253	+
		T	0.63	19.8	B	326	T	0.67	21.1	C	360	
	Southbound	T	0.78	64.8	E	448	T	0.82	78.7	E	541	+
		R	0.33	3.0	A	37	R	0.34	3.1	A	38	
		Intersection		37.7	D		Intersection		44.8	D		

Table 14-31 (con't): Signalized Level of Service Analysis – Saturday MD Peak Hour No-Action vs. With-Action Conditions

		No-Action Conditions					With-Action Conditions					
Int #	Intersection & Approach	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
41	**Broad Street and Canal Street**											
	Eastbound	L	0.27	9.5	A	65	L	0.28	9.7	A	64	
		TR	0.25	8.6	A	70	TR	0.29	9.2	A	89	
	Westbound	LTR	0.28	13.4	B	120	LTR	0.33	14.2	B	143	
	Northbound	L	0.28	25.8	C	68	L	0.28	25.8	C	68	
		TR	0.41	26.9	C	158	TR	0.42	27.0	C	160	
	Southbound	LT	0.29	24.7	C	113	LT	0.30	24.9	C	117	
		Intersection		17.8	B		Intersection		17.7	B		
42	**Broad Street and Van Duzer Street**											
	Westbound	L	0.66	68.3	E	173	L	0.70	66.6	E	178	
	Southbound	L	0.11	5.1	A	45	L	0.11	5.9	A	49	
		T	0.34	6.5	A	144	T	0.36	7.5	A	161	
		Intersection		22.4	C		Intersection		24.5	C		
43	**Broad Street and Targee Street**											
	Eastbound	LT	0.22	30.9	C	119	LT	0.22	30.2	C	120	
	Westbound	TR	0.37	23.3	C	137	TR	0.43	24.6	C	163	
	Northbound	LT	0.58	16.8	B	265	LT	0.58	17.0	B	270	
		R	0.27	12.0	B	89	R	0.33	12.8	B	111	
		Intersection		19.0	B		Intersection		19.3	B		
44	**Vanderbilt Avenue and Tompkins Avenue**											
	Eastbound	LTR	0.81	32.3	C	445	LTR	0.88	38.4	D	501	
	Westbound	LTR	0.53	4.4	A	33	LTR	0.60	4.5	A	35	
	Northbound	LTR	0.83	44.8	D	273	LTR	0.87	48.4	D	305	
	Southbound	LTR	0.61	29.6	C	248	LTR	0.61	29.7	C	248	
		Intersection		27.9	C		Intersection		30.4	C		
45	**Bay Street and Vanderbilt Avenue**											
	Eastbound	L	0.38	28.7	C	124	L	0.47	30.3	C	149	
		R	0.20	26.6	C	51	R	0.20	26.6	C	48	
	Northbound	LT	8.16	3246.2	F	1218	LT	8.95	3598.7	F	1302	+
	Southbound	T	1.28	145.4	F	483	T	1.36	180.4	F	475	+
		R	0.35	1.5	A	9	R	0.40	1.7	A	10	
		Intersection		1195.9	F		Intersection		1322.7	F		
47	**Bay Street and Edgewater Drive**											
	Westbound	LR	0.30	22.5	C	105	LR	0.35	23.0	C	121	
	Northbound	TR	0.60	16.8	B	84	TR	0.68	17.6	B	85	
	Southbound	T	1.01	36.9	D	328	T	1.06	55.5	E	324	+
	Northwestbound	R	0.37	3.8	A	25	R	0.39	5.6	A	42	
		Intersection		24.1	C		Intersection		31.5	C		
48	**Bay Street and Hylan Boulevard**											
	Eastbound	LTR	1.06	77.9	E	551	LTR	1.15	110.3	F	614	+
	Westbound	LTR	0.65	41.9	D	185	LTR	0.66	42.4	D	187	
	Northbound	LTR	4.39	1540.4	F	709	LTR	5.22	1909.6	F	718	+
	Southbound	T	1.10	90.6	F	529	T	1.20	128.0	F	580	+
		R	0.63	18.8	B	179	R	0.68	19.5	B	191	
		Intersection		515.8	F		Intersection		654.4	F		
49	**Bay Street and School Road**											
	Eastbound	L	1.39	210.7	F	831	L	1.54	277.4	F	943	+
		TR	0.09	8.3	A	28	TR	0.09	8.3	A	28	
	Westbound	LTR	0.01	15.3	B	9	LTR	0.01	15.3	B	9	
	Northbound	LTR	0.10	13.9	B	46	LTR	0.10	13.9	B	46	
	Southbound	LTR	0.19	19.9	B	65	LTR	0.20	20.3	C	63	
		R	0.70	11.3	B	153	R	0.73	12.1	B	137	
		Intersection		98.3	F		Intersection		130.1	F		

Notes: L = Left Turn, T = Through, R = Right Turn, DefL = Defacto Left Turn, LOS = Level of Service, "+" implies a significant adverse impact.

Table 14-32: Unsignalized Level of Service Analysis – Weekday AM Peak Hour
No-Action vs. With-Action Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
4	**Hamilton Avenue and Stuyvesant Place**											
	Southbound	TR	0.54	21.2	C	78	TR	0.58	22.9	C	89	
6	**Wall Street and Stuyvesant Place**											
	Eastbound	R	0.44	18.6	C	56	R	0.45	19.0	C	57	
	Southbound	L	0.35	42.9	E	36	L	0.36	44.5	E	37	
16	**Van Duzer Street and St Julian Place**											
	Westbound	R	0.03	15.7	C	2	R	0.03	16.4	C	2	
17	**Bay Street and St Julian Place**											
	Eastbound	LTR	0.14	16.4	C	12	LTR	0.12	15.1	C	10	
	Westbound	LTR	0.02	10.3	B	2	LTR	0.02	9.9	A	2	
	Northbound	LTR	0.01	0.4	A	1	LTR	0.01	0.4	A	1	
18	**Bay Street and Grant Street**											
	Eastbound	LTR	0.62	56.1	F	86	LTR	0.69	70.3	F	100	+
	Westbound	R	0.02	9.6	A	2	R	0.02	9.4	A	1	
21	**Bay Street and Baltic Street**											
	Eastbound	LTR	0.45	58.9	F	49	LTR	0.91	210.3	F	104	
	Westbound	LTR	0.06	68.3	F	5	LTR	0.20	239.2	F	14	
	Southbound	LT	0.00	0.0	--	0	LT	0.00	0.0	--	0	
22	**Bay Street and William Street**											
	Eastbound	LR	0.58	48.6	E	77	LR	0.95	138.8	F	152	+
	Northbound	LT	0.01	0.4	A	1	LT	0.02	0.7	A	2	
23	**Bay Street and Congress Street**											
	Eastbound	LR	0.04	23.2	C	3	LR	0.07	42.2	E	6	
	Northbound	LT	0.01	0.3	A	1	LT	0.02	0.9	A	2	
33	**Jersey Street and Brook Street**											
	Westbound	LR	0.16	11.4	B	14	LR	0.17	12.0	B	16	
	Southbound	LT	0.12	4.8	A	11	LT	0.13	4.7	A	11	
34	**Pike Street and Brook Street**											
	Westbound	LT	0.02	1.6	A	2	LT	0.02	1.6	A	2	
37	**Pike Street and Victory Boulevard**											
	Southbound	LR	0.14	20.6	C	12	LR	0.22	32.4	D	20	
39	**Hudson Street and Cedar Street**											
	Eastbound	LTR	0.03	10.4	B	3	LTR	0.03	10.4	B	3	
	Westbound	LTR	0.00	11.0	B	0	LTR	0.00	11.0	B	0	
	Northbound	LTR	0.01	1.0	A	1	LTR	0.01	1.0	A	1	
	Southbound	LTR	0.00	0.0	--	0	LTR	0.00	0.0	--	0	
40	**Broad Street and Cedar Street**											
	Eastbound	LTR	0.05	1.4	A	4	LTR	0.05	1.4	A	4	
	Westbound	LT	0.00	0.1	A	0	LT	0.00	0.1	A	0	
	Northbound	LTR	0.00	0.0	A	0	LTR	0.00	0.0	A	0	
	Southbound	LR	0.46	33.0	D	55	LR	0.52	40.9	E	67	

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

Table 14-32 (con't): Unsignalized Level of Service Analysis – Weekday MD Peak Hour No-Action vs. With-Action Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
4	**Hamilton Avenue and Stuyvesant Place**											
	Southbound	TR	0.25	13.6	B	25	TR	0.27	13.8	B	27	
6	**Wall Street and Stuyvesant Place**											
	Eastbound	R	0.31	13.4	B	34	R	0.32	13.6	B	34	
	Southbound	L	0.10	23.9	C	8	L	0.10	24.2	C	8	
16	**Van Duzer Street and St Julian Place**											
	Westbound	R	0.04	14.2	B	3	R	0.04	15.2	C	3	
17	**Bay Street and St Julian Place**											
	Eastbound	LTR	0.19	24.4	C	17	LTR	0.15	20.0	C	13	
	Westbound	LTR	0.04	10.8	B	3	LTR	0.04	10.3	B	3	
	Northbound	LTR	0.02	0.7	A	2	LTR	0.02	0.6	A	2	
18	**Bay Street and Grant Street**											
	Eastbound	LTR	8.60	Err	F	Err	LTR	5.65	Err	F	Err	
	Westbound	R	0.08	10.1	B	6	R	0.08	10.4	B	7	
21	**Bay Street and Baltic Street**											
	Eastbound	LTR	3.03	Err	F	Err	LTR	2.25	1391.6	F	88	
	Westbound	LTR	Err	Err	F	Err	LTR	Err	Err	F	Err	
	Southbound	LT	0.02	2.8	A	2	LT	0.03	4.9	A	2	
22	**Bay Street and William Street**											
	Eastbound	LR	4.41	Err	F	Err	LR	4.43	Err	F	Err	
	Northbound	LT	0.15	25.8	D	12	LT	0.13	24.0	C	11	
23	**Bay Street and Congress Street**											
	Eastbound	LR	0.35	213.2	F	27	LR	0.36	217.3	F	27	
	Northbound	LT	0.00	0.0	--	0	LT	0.00	0.0	--	0	
33	**Jersey Street and Brook Street**											
	Westbound	LR	0.22	11.9	B	21	LR	0.29	14.5	B	29	
	Southbound	LT	0.10	3.7	A	9	LT	0.12	3.9	A	11	
34	**Pike Street and Brook Street**											
	Westbound	LT	0.03	1.3	A	2	LT	0.03	1.3	A	2	
37	**Pike Street and Victory Boulevard**											
	Southbound	LR	0.47	59.7	F	52	LR	1.93	727.5	F	164	
39	**Hudson Street and Cedar Street**											
	Eastbound	LTR	0.02	10.1	B	2	LTR	0.02	9.9	A	2	
	Westbound	LTR	0.00	10.5	B	0	LTR	0.00	10.4	B	0	
	Northbound	LTR	0.01	1.1	A	1	LTR	0.01	1.1	A	1	
	Southbound	LTR	0.00	0.0	--	0	LTR	0.00	0.0	--	0	
40	**Broad Street and Cedar Street**											
	Eastbound	LTR	0.05	1.6	A	4	LTR	0.05	1.5	A	4	
	Westbound	LT	0.03	0.9	A	2	LT	0.03	0.9	A	2	
	Northbound	LTR	0.00	13.0	B	0	LTR	0.00	13.4	B	0	
	Southbound	LR	0.68	80.0	F	92	LR	0.64	71.4	F	85	

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

Table 14-32 (con't): Unsignalized Level of Service Analysis – Weekday PM Peak Hour No-Action vs. With-Action Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
4	**Hamilton Avenue and Stuyvesant Place**											
	Southbound	TR	0.18	11.8	B	16	TR	0.18	11.8	B	16	
6	**Wall Street and Stuyvesant Place**											
	Eastbound	R	0.30	13.8	B	31	R	0.30	13.8	B	31	
	Southbound	L	0.14	23.3	C	12	L	0.14	23.3	C	12	
16	**Van Duzer Street and St Julian Place**											
	Westbound	R	0.03	12.1	B	3	R	0.04	12.8	B	3	
17	**Bay Street and St Julian Place**											
	Eastbound	LTR	0.11	19.3	C	10	LTR	0.11	18.9	C	9	
	Westbound	LTR	0.01	14.7	B	1	LTR	0.01	12.9	B	1	
	Northbound	LTR	0.01	0.2	A	1	LTR	0.01	0.3	A	1	
18	**Bay Street and Grant Street**											
	Eastbound	LTR	5.65	Err	F	Err	LTR	13.71	Err	F	Err	
	Westbound	R	0.08	9.7	A	7	R	0.08	9.8	A	7	
21	**Bay Street and Baltic Street**											
	Eastbound	LTR	1.30	683.4	F	76	LTR	3.00	1965.6	F	92	
	Westbound	LTR	1.17	2659.2	F	25	LTR	Err	Err	F	Err	
	Southbound	LT	0.00	0.2	A	0	LT	0.01	3.7	A	1	
22	**Bay Street and William Street**											
	Eastbound	LR	3.01	Err	F	Err	LR	6.82	Err	F	Err	+
	Northbound	LT	0.14	13.8	B	12	LT	0.31	91.8	F	27	+
23	**Bay Street and Congress Street**											
	Eastbound	LR	0.40	155.2	F	34	LR	0.58	261.5	F	45	
	Northbound	LT	0.03	2.1	A	2	LT	0.06	11.9	B	5	
33	**Jersey Street and Brook Street**											
	Westbound	LR	0.19	11.8	B	17	LR	0.22	13.3	B	21	
	Southbound	LT	0.08	3.0	A	6	LT	0.09	3.0	A	7	
34	**Pike Street and Brook Street**											
	Westbound	LT	0.03	1.7	A	2	LT	0.03	1.7	A	2	
37	**Pike Street and Victory Boulevard**											
	Southbound	LR	0.30	35.6	E	30	LR	0.98	249.4	F	107	
39	**Hudson Street and Cedar Street**											
	Eastbound	LTR	0.03	9.3	A	2	LTR	0.03	9.2	A	2	
	Westbound	LTR	0.00	0.0	A	0	LTR	0.00	0.0	A	0	
	Northbound	LTR	0.01	1.7	A	1	LTR	0.01	1.7	A	1	
	Southbound	LTR	0.01	4.1	A	1	LTR	0.01	4.1	A	1	
40	**Broad Street and Cedar Street**											
	Eastbound	LTR	0.02	0.9	A	2	LTR	0.02	0.8	A	2	
	Westbound	LT	0.01	0.2	A	1	LT	0.01	0.2	A	1	
	Northbound	LTR	0.00	0.0	A	0	LTR	0.00	0.0	A	0	
	Southbound	LR	0.17	28.8	D	15	LR	0.19	32.4	D	17	

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

Table 14-32 (con't): Unsignalized Level of Service Analysis – Saturday MD Peak Hour No-Action vs. With-Action Conditions

#	Intersection & Approach	No-Action Conditions					With-Action Conditions					
		Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	Lane Group	v/c Ratio	Delay (sec)	LOS	Queue Length (ft)	
4	**Hamilton Avenue and Stuyvesant Place**											
	Southbound	TR	0.15	11.8	B	13	TR	0.15	11.9	B	13	
6	**Wall Street and Stuyvesant Place**											
	Eastbound	R	0.17	11.0	B	15	R	0.17	11.0	B	15	
	Southbound	L	0.08	15.0	C	6	L	0.08	15.0	C	6	
16	**Van Duzer Street and St Julian Place**											
	Westbound	R	0.04	11.7	B	3	R	0.04	12.2	B	3	
17	**Bay Street and St Julian Place**											
	Eastbound	LTR	0.09	17.9	C	8	LTR	0.08	16.1	C	7	
	Westbound	LTR	0.02	13.2	B	2	LTR	0.02	11.7	B	2	
	Northbound	LTR	0.01	0.2	A	1	LTR	0.01	0.2	A	1	
18	**Bay Street and Grant Street**											
	Eastbound	LTR	4.08	Err	F	Err	LTR	5.09	Err	F	Err	
	Westbound	R	0.09	9.9	A	8	R	0.10	10.2	B	8	
21	**Bay Street and Baltic Street**											
	Eastbound	LTR	1.39	675.4	F	86	LTR	2.18	1230.9	F	97	
	Westbound	LTR	5.02	Err	F	Err	LTR	Err	Err	F	Err	
	Southbound	LT	0.00	0.0	--	0	LT	0.00	0.0	--	0	
22	**Bay Street and William Street**											
	Eastbound	LR	1.81	568.0	F	219	LR	2.91	1110.4	F	281	
	Northbound	LT	0.07	6.5	A	6	LT	0.09	11.6	B	7	
23	**Bay Street and Congress Street**											
	Eastbound	LR	0.09	96.7	F	7	LR	0.12	140.5	F	10	
	Northbound	LT	0.01	1.2	A	1	LT	0.02	2.3	A	1	
33	**Jersey Street and Brook Street**											
	Westbound	LR	0.15	10.6	B	13	LR	0.17	11.7	B	16	
	Southbound	LT	0.05	2.2	A	4	LT	0.06	2.3	A	4	
34	**Pike Street and Brook Street**											
	Westbound	LT	0.02	1.4	A	1	LT	0.02	1.5	A	1	
37	**Pike Street and Victory Boulevard**											
	Southbound	LR	0.31	48.4	E	30	LR	0.73	181.2	F	73	
39	**Hudson Street and Cedar Street**											
	Eastbound	LTR	0.02	9.6	A	2	LTR	0.02	9.5	A	2	
	Westbound	LTR	0.00	9.2	A	0	LTR	0.00	9.2	A	0	
	Northbound	LTR	0.01	2.0	A	1	LTR	0.01	2.0	A	1	
	Southbound	LTR	0.00	0.0	--	0	LTR	0.00	0.0	--	0	
40	**Broad Street and Cedar Street**											
	Eastbound	LTR	0.01	0.4	A	1	LTR	0.01	0.3	A	1	
	Westbound	LT	0.01	0.4	A	1	LT	0.01	0.3	A	1	
	Northbound	LTR	0.01	19.1	C	1	LTR	0.02	20.5	C	1	
	Southbound	LR	0.21	30.3	D	19	LR	0.22	31.5	D	20	

Notes: L = Left Turn, T= Through, R = Right Turn, DefL = Defacto Left Turn; LOS = Level of Service, -- = Approach has no volume recorded during this peak hour, "+" implies a significant adverse impact, Err = v/c or delay exceeds the maximum limit reportable in the analysis software

H. TRANSIT

EXISTING CONDITIONS

The SIR and 22 bus routes in Staten Island, as shown as Figure 14-20, have been identified as the transit options most likely to accommodate transit trips generated by the Proposed Actions.

STATEN ISLAND RAILWAY

The SIR is a rail transit line running along the eastern side of Staten Island. The line serves three stations within the Study Area:

- St. George Station located within the St. George Ferry Terminal
    - This station is the northern terminus of the line and provides connections to several buses and the Staten Island Ferry. This station is accessible from Wall Street, east of Richmond Terrace, and the Ferry Terminal Viaduct roadway that leads to the bus platforms.
- Tompkinsville Station located at Victory Boulevard, east of Bay Street
    - The station is accessible from a stairway on Minthorne Street to the south, a ramp along the south sidewalk of Victory Boulevard from Bay Street to the west, and a stairway on the south sidewalk of Victory Boulevard from Front Street to the east.
- Stapleton Station located near Bay Street and Prospect Street
    - This station is accessible from two stairways directly underneath the rail tracks on Water Street and Prospect Street.

SIR fares are $2.75, equal to the fare on other MTA buses and subways. Staten Island Railway fares are paid only for trips that have either the St. George or Tompkinsville Stations as an origin or destination. Riders to or from these stations may transfer for free between SIR and local MTA Staten Island buses, and between MTA Manhattan buses or subways at select stations in lower Manhattan (via the Staten Island Ferry).

The SIR operates 24 hours a day, 7 days a week, with headways of approximately 15 minutes during rush hours and approximately 30 minutes at other times. Express trains from the New Dorp Station towards the St. George Station operate during the Weekday AM peak hour, and express trains to Great Kills Station from the St. George Station operate during the Weekday AM and PM peak periods.

BUS ROUTES

22 MTA bus routes provide local or limited-stop bus service in the Study Area. The characteristics for each bus route are summarized in Table 14-33.

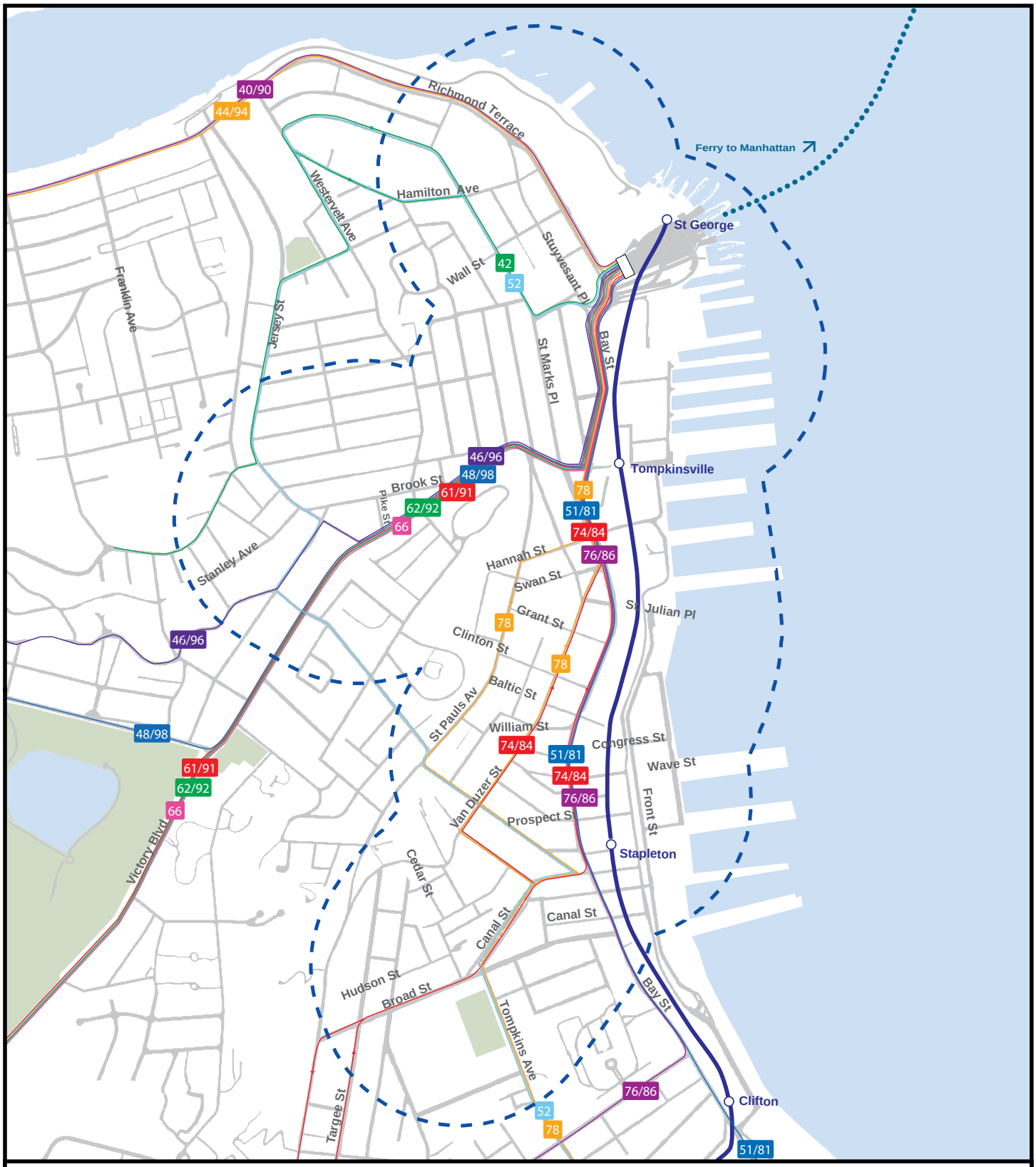


FIGURE 14-20: TRANSIT ROUTES

BAY STREET REZONING AND RELATED ACTIONS

TOMPKINSVILLE/STAPLETON STATEN ISLAND, NY

0 1000 2500 Feet

N

36 Bus Route

Staten Island Railway

Staten Island Ferry

1/4 mile study area

Table 14-33: Existing Bus Transit Service

Route	Route Type	Route Start Point	Route End Point	Operating Hours	Peak Period Headway (mins)			
					AM	MD	PM	Sat MD
S40	Local	Goethals Homes	St. George Ferry Terminal	24/7	12	15	15	15
S90	Limited	Goethals Homes	St. George Ferry Terminal	Weekdays: 6:00am-9:00am, 3:30pm-10:30pm	12	N/A	20	N/A
S52	Local	South Beach	St. George Ferry Terminal	Weekdays: 4:10am-2:10am Weekends: 5:30am-1:15am	15	20	20	30
S42	Limited	New Brighton	St. George Ferry Terminal	Weekdays: 5:00-10:15am, 2:30pm-1:15am	30	30	15	N/A
S44	Local	New Springville	St. George Ferry Terminal	Weekdays: 4:30am-1:10am Weekends: 4:35am-12:40am	10	12	15	15
S94	Limited	New Springville	St. George Ferry Terminal	Weekdays: 6:20am-8:20am, 4:30pm-9:45pm	15	N/A	15	N/A
S46	Local	West Shore Plaza	St. George Ferry Terminal	24/7	10	12	12	15
S96	Limited	West Shore Plaza	St. George Ferry Terminal	Weekdays: 5:45am-9:00am, 4:00pm-10:40pm	10	N/A	15	N/A
S48	Local	Mariners Harbor	St. George Ferry Terminal	24/7	10	12	12	15
S98	Limited	Mariners Harbor	St. George Ferry Terminal	Weekdays: 6:10am-8:40am, 4:00pm-10:35pm	10	N/A	15	N/A
S51	Local	Grant City	St. George Ferry Terminal	24/7	8	20	15	30
S81	Limited	Grant City	St. George Ferry Terminal	Weekdays: 4:30pm-9:30pm	N/A	N/A	15	N/A
S61	Local	New Springville	St. George Ferry Terminal	Weekdays: 4:45am-12:40am Saturdays: 6:00am-11:40pm Sundays: 6:45am-9:40pm	10	15	15	15
S91	Limited	New Springville	St. George Ferry Terminal	Weekdays: 6:00am-9:00am, 4:30pm-8:10pm	12	N/A	15	N/A
S62	Local	Travis	St. George Ferry Terminal	24/7	15	15	15	12
S92	Limited	Travis	St. George Ferry Terminal	Weekdays: 5:50am-9:00am, 4:50pm-7:20pm	15	N/A	15	N/A
S66	Local	Port Richmond	St. George Ferry Terminal	Weekdays: 5:40am-2:00am	15	30	15	N/A
S74	Local	Bricktown Mall	St. George Ferry Terminal	24/7	9	20	20	15
S84	Limited	Bricktown Mall	St. George Ferry Terminal	Weekdays: 3:30pm-10:30pm	N/A	N/A	20	N/A
S76	Local	Oakwood Beach	St. George Ferry Terminal	Weekdays: 4:45am-12:35am Weekends: 6:15am-12:30am	10	12	15	30
S86	Limited	Oakwood Beach	St. George Ferry Terminal	Weekdays: 4:00pm-7:15pm	N/A	N/A	30	N/A
S78	Local	Bricktown Mall	St. George Ferry Terminal	24/7	10	15	15	15

EXISTING TRANSIT OPERATIONS

The number of person trips generated by the Proposed Actions would exceed the *CEQR Technical Manual* screening threshold for transit for the St. George, Tompkinsville and Stapleton SIR stations, the SIR line, and the following NYCT bus routes: S51/S81, S74/84, S76/86, and S78. Detailed SIR station pedestrian element analyses were conducted for key stairways and fare control gate elements during the Weekday AM and Weekday PM peak hours. Also, an existing condition bus load level analysis was conducted for the S51/S81, S74/84, S76/86, and S78 bus routes during the Weekday AM and Weekday PM peak hours.

SIR

Entering and exiting volumes on the two stairways between the Staten Island Ferry level and the SIR platform level at St. George Station, the main stairway between the fare control level and the SIR platform level at Tompkinsville Station, and at the fare control areas at St. George and Tompkinsville SIR Stations were counted in June 2016 during the Weekday AM and Weekday PM peak periods. Entering and exiting volumes were counted during these periods at the stairs between Minthorne Street level and the station's fare control level in September 2016. Entering and exiting volumes at the stairs between Prospect Street level and the SIR platform level at the Stapleton Station were estimated based on projected 2015 volumes from the *New Stapleton Waterfront Development Project Draft* EIS, adjusted to 2017 volumes using an annual background growth rate of 1.0 percent. Measurements of the total width were taken at the five stairways. The effective stairway widths were calculated according to the *CEQR Technical Manual* guidance and the count data was summarized into 15-minute intervals.

Detailed stairway analyses were conducted for the five analysis stairways at the St. George, Tompkinsville, and Stapleton SIR Stations. The results of the analyses provided in Table 14-34 indicate that the five stairways operate at LOS A during all peak periods analyzed.

Table 14-34: Existing Conditions – Vertical Circulation Analysis
St. George, Tompkinsville& Stapleton SIR Station Stairways

Location	Vertical Element	ID	15-Minute Entering Volume [1]	15-Minute Exiting Volume [1]	Tread Width (feet) [2]	Number of Intermediate Handrails	Effective Width (feet)	Friction Factor	Surge Factor (onto platform)	Surge Factor (off of platform)	15 Minute Entering Capacity [3]	15 Minute Exiting Capacity [3]	V/C [4]	LOS [4]
Weekday AM														
St. George	North Stairway	-	31	370	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.19	A
	South Stairway	-	35	308	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.16	A
Tompkinsville	Main Stairway (to/from platform)	-	12	14	7	1	5.75	0.9	0.8	0.75	621	582	0.04	A
	Minthorne Street Stairway	-	3	0	4.5	0	3.50	0.9	0.9	0.8	425	378	0.01	A
Stapleton[5]	North Stairway	-	39	23	4.5	0	3.50	0.9	0.8	0.75	378	354	0.17	A
Weekday PM														
St. George	North Stairway	-	208	48	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.11	A
	South Stairway	-	372	14	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.17	A
Tompkinsville	Main Stairway (to/from platform)	-	12	20	7	1	5.75	0.9	0.8	0.75	621	582	0.05	A
	Minthorne Street Stairway	-	0	1	4.5	0	3.50	0.9	0.9	0.8	425	378	0.01	A
Stapleton[5]	North Stairway	-	30	69	4.5	0	3.50	0.9	0.8	0.75	378	354	0.17	A

Notes:
(1) Source: SSE June 2016 field counts except for Minthorne Street stairway (SSE September 2016 field counts).
(2) Vertical elements measured at the narrowest location.
(3) Fare array capacity based on NYCT guidelines in accordance with the *2014 CEQR Technical Manual* .
(4) v/c ratios and LOS ratings were calculated based on rates presented in the *2014 CEQR Technical Manual* .
(5) Source: New Stapleton Waterfront Development Project Draft EIS, Appendix D - Transit and Pedestrian Technical Back-up Data, page 24. 2015 pedestrian volumes grown by 1% per year for two years as per *2014 CEQR Technical Manual* guidelines (table 16-4).

Detailed analyses were also conducted for the St. George and Tompkinsville SIR Station control areas. Control array capacity was based on NYCT guidelines in accordance with the *CEQR Technical Manual*. The results of the analyses provided in Table 14-35 indicate that the two control areas operate at LOS A during all peak periods analyzed.

Table 14-35: Existing Conditions – Turnstile Analysis
St. George & Tompkinsville SIR Station Turnstiles

Station	Station Elements	Quantity (Entry)	Quantity (Exit)	15-Minute Entering Volume [1]	15-Minute Exiting Volume [1]	Friction Factor [2]	Surge Factor (onto platform)	Surge Factor (off of platform)	15 Minute Entering Capacity [3]	15 Minute Exiting Capacity [3]	V/C [4]	LOS [4]
Weekday AM												
St. George Station	Turnstile	11	13	42	627	1	0.8	0.75	4620	7095	**0.13**	**A**
Tompkinsville Station	Turnstile	2	3	12	14	1	0.8	0.75	840	1290	**0.03**	**A**
Weekday PM												
St. George Station	Turnstile	11	13	531	48	1	0.8	0.75	4620	7095	**0.15**	**A**
Tompkinsville Station	Turnstile	2	3	12	20	1	0.8	0.75	840	1290	**0.04**	**A**

Notes:
(1) Source: SSE June 2016 field counts.
(2) A friction factor of 1 was assumed as entries and exists are clearly separated and assigned to specific turnstiles.
(3) Fare array capacity based on NYCT guidelines in accordance with the *2014 CEQR Technical Manual* .
(4) v/c ratios and LOS ratings were calculated based on rates presented in the *2014 CEQR Technical Manual* .

Detailed SIR line haul analyses were conducted for the Weekday AM and Weekday PM peak hours. Table 14-36 summarizes the results of the existing SIR conditions, including the number of trains per hour, maximum passenger volume at the peak load point, number of cars per train, average passengers per car, total capacity, and available capacity for each direction during the two peak hours. Available capacity was based on a maximum of 140 passengers per car, provided by NYCT. The results of the analysis indicate that the SIR line currently operates under capacity at their peak load points in both directions during the two peak hours.

Table 14-36: Existing Conditions – SIR Line Haul Analysis

Peak Direction	Maximum Load Point Station	Peak Hour Trains [1]	Passengers per Train at peak Load Point [1]	Peak Hour Passengers at peak Load Point	Cars per Train [1]	Average Peak Hour Passengers Per Car	Total Capacity per Hour [2]	Available Capacity per Hour
Weekday AM								
To St. George	Clifton	4	263	1052	4	66	2240	1188
Weekday PM								
From St. George	Stapleton	3	230	690	4	58	1680	990

Notes:
(1) Based on most currently available data from NYCT.
(2) Available capacity based on a maximum of 140 passengers per car from NYCT.

Bus

The most recent bus ridership data were provided for the S51/S81, S74/84, S76/86, and S78 NYCT bus routes based on the NYCT Ride-Check survey results. This data was utilized to determine the peak hour bus service during the Weekday AM and Weekday PM peak hours. Table 14-37 summarizes the results of the existing bus conditions, including the number of buses per hour, maximum passenger volume at the peak load point, average passengers per bus, total route capacity, and available capacity for each of the analyzed bus routes by direction during the two peak hours. Available capacity was based on a maximum of 54 passengers per bus as these routes use 40-foot standard buses. The results of the analysis indicate that the S74/84, S76/86, and S78 bus routes currently operate over capacity at its peak load point in the northbound direction during the Weekday AM peak hour. These three bus routes operate under capacity at their peak load points in the southbound direction during the Weekday AM peak hour and in both directions during the Weekday PM peak hour.

Table 14-37: Existing Conditions – Local Bus Line Haul Analysis

Route	Peak Direction	Maximum Load Point	Peak Hour Buses [1]	Peak Hour Passengers [1]	Average Passengers Per Bus	Total Capacity [2]	Available Capacity
Weekday AM							
S51/81	NB	Bay Street and Canal Street	7	345	49	378	33
S51/81	SB	Bay Street and Victory Boulevard	4	82	21	216	134
S74/84	NB	Bay Street and Victory Boulevard	6	350	58	324	-26
S74/84	SB	Richmond Road and Clove Road	4	152	38	216	64
S76/86	NB	Bay Street and Victory Boulevard	7	403	58	378	-25
S76/86	SB	Richmond Road and Clove Road	6	185	31	324	139
S78	NB	Bay Street and Victory Boulevard	6	419	70	324	-95
S78	SB	Hylan Boulevard and Clove Road	7	291	42	378	87
Weekday PM							
S51/81	NB	Bay Street and Victory Boulevard	4	139	35	216	77
S51/81	SB	Bay Street and Victory Boulevard	7	214	31	378	164
S74/84	NB	Targee Street and DeKalb Street	4	124	31	216	92
S74/84	SB	Bay Street and Victory Boulevard	5	170	34	270	100
S76/86	NB	Bay Street and Victory Boulevard	4	127	32	216	89
S76/86	SB	Bay Street and Victory Boulevard	5	213	43	270	57
S78	NB	Hylan Boulevard and Clove Road	4	187	47	216	29
S78	SB	Bay Street and Victory Boulevard	5	197	39	270	73

Notes:
(1) Based on most currently available data from NYCT/MTA.
(2) Available capacity based on a maximum of 54 passengers per bus (40-foot standard buses).

THE FUTURE WITHOUT THE PROPOSED ACTION

The future without the 2030 No-Action Condition for the transit analyses builds on the Existing Conditions analysis by incorporating background growth, transit trips generated by other nearby projects expected to be completed by the build year, development of the land use parcels within the Project Area that could occur pursuant to existing zoning, and anticipated changes to transit operations in the Study Area. The No-Action Condition serves as the baseline to which the With-Action Condition will be compared to identify potential impacts.

The same annual background growth rates as used for the vehicular traffic analyses were used to estimate increases in transit trips associated with growth through 2030. An annual background growth rate of 0.50 percent for the first five years and 0.25 percent for the years beyond were applied for the St. George area. An annual growth rate of 1.0 percent for the first five years and 0.5 percent for the years beyond were applied for other locations in Staten Island. The annual growth rates were applied for the respective areas, over a period of 15 years, to develop the 2030 No-Action Condition background transit volumes. In addition to the background growth, the development projects expected to be completed by 2030 located within and adjacent to the ¼-mileas shown in Chapter 2, Table 2-9 and Figure 2-8, and development of the land use parcels within the Study Area that could occur pursuant to existing zoning as shown in Table 14-1, were considered to forecast the No-Action Condition transit volumes.

No improvements to transit operation/service were considered for the No-Action Condition.

SIR

Subway stair and turnstile volumes associated with the general annual background growth rates and the development projects planned for 2030 were added to the existing volumes to generate peak period subway stair and turnstile volumes for the No-Action Condition analysis.

As shown in Table 14-38, the results of the No-Action Condition analysis indicate that the SIR stairways at the St. George, Tompkinsville, and Stapleton SIR stations are projected to operate at LOS A during all peak hours analyzed.

Table 14-38: No-Action Condition– Vertical Circulation Analysis
St. George, Tompkinsville& Stapleton SIR Station Stairways

Location	Vertical Element	ID	15-Minute Entering Volume [1]	15-Minute Exiting Volume [1]	Tread Width (feet) [2]	Number of Intermediate Handrails	Effective Width (feet)	Friction Factor	Surge Factor (onto platform)	Surge Factor (off of platform)	15 Minute Entering Capacity [3]	15 Minute Exiting Capacity [3]	V/C [4]	LOS [4]
Weekday AM														
St.George	North Stairway	-	43	410	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.21	A
	South Stairway	-	47	344	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.18	A
Tompkinsville	Main Stairway (to/from platform)	-	17	19	7	1	5.75	0.9	0.8	0.75	621	582	0.06	A
	Minthorne Street Stairway	-	6	2	4.5	0	3.50	0.9	0.9	0.8	425	378	0.02	A
Stapleton[5]	North Stairway	-	75	48	4.5	0	3.50	0.9	0.8	0.75	378	354	0.33	A
Weekday PM														
St.George	North Stairway	-	265	84	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.16	A
	South Stairway	-	437	48	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.22	A
Tompkinsville	Main Stairway (to/from platform)	-	24	33	7	1	5.75	0.9	0.8	0.75	621	582	0.10	A
	Minthorne Street Stairway	-	7	9	4.5	0	3.50	0.9	0.9	0.8	425	378	0.02	A
Stapleton[5]	North Stairway	-	90	139	4.5	0	3.50	0.9	0.8	0.75	378	354	0.33	A

Notes:
(1) St. George station: Projected SIR passengers were assumed to use the north and south stairways evenly (50%/50%). New stairway volumes associated with the general background growth were distributed based on the existing counts.
(2) Vertical elements measured at the narrowest location.
(3) Fare array capacity based on NYCT guidelines in accordance with the *2014 CEQR Technical Manual* .
(4) v/c ratios and LOS ratings were calculated based on rates presented in the *2014 CEQR Technical Manual* .
(5) Source: New Stapleton Waterfront Development Project Draft EIS, Appendix D - Transit and Pedestrian Technical Back-up Data, page 24. 2015 pedestrian volumes grown by 1% per year for two years as per *2014 CEQR Technical Manual* guidelines (table 16-4).

As shown in Table 14-39, the results of the No-Action Condition analysis indicate that the control areas at the St. George and Tompkinsville SIR stations are projected to operate at LOS A during all peak hours analyzed.

Table 14-39: No-Action Condition – Turnstile Analysis
St. George & Tompkinsville SIR Station Turnstiles

Station	Station Elements	Quantity (Entry)	Quantity (Exit)	15-Minute Entering Volume	15-Minute Exiting Volume	Friction Factor [1]	Surge Factor (onto platform)	Surge Factor (off of platform)	15 Minute Entering Capacity [2]	15 Minute Exiting Capacity [2]	V/C [3]	LOS [3]
Weekday AM												
St. George Station	Turnstile	11	13	65	700	1	0.8	0.75	4620	7095	**0.15**	**A**
Tompkinsville Station	Turnstile	2	3	17	19	1	0.8	0.75	840	1290	**0.04**	**A**
Weekday PM												
St. George Station	Turnstile	11	13	651	118	1	0.8	0.75	4620	7095	**0.20**	**A**
Tompkinsville Station	Turnstile	2	3	24	33	1	0.8	0.75	840	1290	**0.07**	**A**

Notes:
(1) A friction factor of 1 was assumed as entries and exists are clearly separated and assigned to specific turnstiles.
(2) Fare array capacity based on NYCT guidelines in accordance with the *2014 CEQR Technical Manual* .
(3) v/c ratios and LOS ratings were calculated based on rates presented in the *2014 CEQR Technical Manual* .

As shown in Table 14-40, the results of the No-Action Condition linehaul analysis indicate that the SIR line is projected to operate under capacity at its peak load points in both directions during the Weekday AM and PM peak hours.

Table 14-40: No-Action Condition – SIR Line Haul Analysis

Peak Direction	Maximum Load Point Station	Peak Hour Trains [1]	Peak Hour Passengers at peak Load Point	Cars per Train [1]	Average Peak Hour Passengers Per Car	Total Capacity per Hour [2]	Available Capacity per Hour
Weekday AM							
To St. George	Clifton	4	1345	4	84	2240	895
Weekday PM							
From St. George	Stapleton	3	1194	4	99	1680	486

Notes:
(1) Based on most currently available data from NYCT.
(2) Available capacity based on a maximum of 140 passengers per car from NYCT.

BUS

As shown in Table 14-41, the results of the No-Action Condition bus analyses indicate that the S51/81, S74/84, S76/86, and S78 bus routes are projected to operate over capacity at their peak load points in the northbound direction during the Weekday AM peak hour. The S51/81 and S74/84 bus routes are projected to operate over capacity at their peak load points in the southbound direction during the Weekday AM peak hour; the S76/86 and S78 bus routes are projected to operate under capacity at their peak load points in the southbound direction during the Weekday AM peak hour. During the Weekday PM peak hour, the S51/81, S76/86, and S78 bus routes are projected to operate over capacity at its peak load point in the both directions, and the S74/84 bus route is projected to operate under capacity at their peak load points in both directions.

Table 14-41: No-Action Condition - Local Bus Line Haul Analysis

Route	Peak Direction	Maximum Load Point	Peak Hour Buses (1)	Peak Hour Passengers	Average Passengers Per Bus	Total Capacity (2)	Available Capacity
Weekday AM							
S51/81	NB	Bay Street and Canal Street	7	504	72	378	-126
S51/81	SB	Bay Street and Victory Boulevard	4	233	58	216	-17
S74/84	NB	Bay Street and Victory Boulevard	6	442	74	324	-118
S74/84	SB	Richmond Road and Clove Road	4	234	58	216	-18
S76/86	NB	Bay Street and Victory Boulevard	7	558	80	378	-180
S76/86	SB	Richmond Road and Clove Road	6	323	54	324	1
S78	NB	Bay Street and Victory Boulevard	6	493	82	324	-169
S78	SB	Hylan Boulevard and Clove Road	7	348	50	378	30
Weekday PM							
S51/81	NB	Bay Street and Victory Boulevard	4	337	84	216	-121
S51/81	SB	Bay Street and Victory Boulevard	7	402	57	378	-24
S74/84	NB	Targee Street and DeKalb Street	4	192	48	216	24
S74/84	SB	Bay Street and Victory Boulevard	5	255	51	270	15
S76/86	NB	Bay Street and Victory Boulevard	4	281	70	216	-65
S76/86	SB	Bay Street and Victory Boulevard	5	368	74	270	-98
S78	NB	Hylan Boulevard and Clove Road	4	262	65	216	-46
S78	SB	Bay Street and Victory Boulevard	5	293	59	270	-23

Notes:

(1) Based on most currently available data from NYCT/MTA.
(2) Available capacity based on a maximum of 54 passengers per bus (40-foot standard buses).

THE FUTURE WITH THE PROPOSED ACTION

As discussed above in Section E, "Level 2 Screening Assessment," the transit trips generated by the Proposed Actions were assigned to the SIR stations and bus routes serving the Study Area.

SIR

Subway stair and turnstile volumes associated with the Proposed Actions were added to the No-Action Condition volumes to generate peak period subway stair and turnstile volumes for the With-Action Condition analysis.

As shown in Table 14-42, the results of the With-Action Condition analysis indicate that the SIR stairways at the St. George and Tompkinsville SIR stations are projected to operate at LOS and that the SIR stairway at the Stapleton SIR station is projected to operate at LOS B during all peak hours analyzed. Therefore, this would not constitute a significant adverse impact for the SIR Station stairways.

Table 14-42: With-Action Condition – Vertical Circulation Analysis
St. George, Tompkinsville and Stapleton SIR Station Stairways

Location	Vertical Element	ID	15-Minute Entering Volume [1]	15-Minute Exiting Volume [1]	Tread Width (feet) [2]	Number of Intermediate Handrails	Effective Width (feet)	Friction Factor	Surge Factor (onto platform)	Surge Factor (off of platform)	15 Minute Entering Capacity [3]	15 Minute Exiting Capacity [3]	V/C [4]	LOS [4]
Weekday AM														
St.George	North Stairway	-	50	447	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.23	A
	South Stairway	-	55	382	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.20	A
Tompkinsville	Main Stairway (to/from platform)	-	53	39	7	1	5.75	0.9	0.8	0.75	621	582	0.15	A
	Minthorne Street Stairway	-	23	17	4.5	0	3.50	0.9	0.9	0.8	425	378	0.10	A
Stapleton[5]	North Stairway	-	131	56	4.5	0	3.50	0.9	0.8	0.75	378	354	0.51	B
Weekday PM														
St.George	North Stairway	-	309	99	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.18	A
	South Stairway	-	481	63	22.5	2	21.00	0.9	0.8	0.75	2268	2126	0.24	A
Tompkinsville	Main Stairway (to/from platform)	-	68	92	7	1	5.75	0.9	0.8	0.75	621	582	0.27	A
	Minthorne Street Stairway	-	35	41	4.5	0	3.50	0.9	0.9	0.8	425	378	0.10	A
Stapleton[5]	North Stairway	-	104	191	4.5	0	3.50	0.9	0.8	0.75	378	354	0.51	B

Notes:
(1) St. George station: Projected SIR passengers were assumed to use the north and south stairways evenly (50%/50%).
(2) Vertical elements measured at the narrowest location.
(3) Fare array capacity based on NYCT guidelines in accordance with the *2014 CEQR Technical Manual* .
(4) v/c ratios and LOS ratings were calculated based on rates presented in the *2014 CEQR Technical Manual* .
(5) Source: New Stapleton Waterfront Development Project Draft EIS, Appendix D - Transit and Pedestrian Technical Back-up Data, page 24. 2015 pedestrian volumes grown by 1% per year for two years as per *2014 CEQR Technical Manual* guidelines (table 16-4).

As shown in **Table 14-43**, the results of the With-Action Condition analysis indicate that the control areas at the St. George and Tompkinsville SIR stations are projected to operate at LOS A during all peak hours analyzed. Therefore, this would not constitute a significant adverse impact for the SIR Station turnstiles.

Table 14-43: With-Action Condition – Turnstile Analysis
St. George & Tompkinsville SIR Station Turnstiles

Station	Station Elements	Quantity (Entry)	Quantity (Exit)	15-Minute Entering Volume	15-Minute Exiting Volume	Friction Factor [1]	Surge Factor (onto platform)	Surge Factor (off of platform)	15 Minute Entering Capacity [2]	15 Minute Exiting Capacity [2]	V/C [3]	LOS [3]
Weekday AM												
St. George Station	Turnstile	11	13	80	776	1	0.8	0.75	4620	7095	**0.17**	**A**
Tompkinsville Station	Turnstile	2	3	53	39	1	0.8	0.75	840	1290	**0.12**	**A**
Weekday PM												
St. George Station	Turnstile	11	13	739	147	1	0.8	0.75	4620	7095	**0.23**	**A**
Tompkinsville Station	Turnstile	2	3	68	92	1	0.8	0.75	840	1290	**0.20**	**A**

Notes:
(1) A friction factor of 1 was assumed as entries and exists are clearly separated and assigned to specific turnstiles.
(2) Fare array capacity based on NYCT guidelines in accordance with the *2014 CEQR Technical Manual* .
(3) v/c ratios and LOS ratings were calculated based on rates presented in the *2014 CEQR Technical Manual* .

As shown in Table 14-44, the results of the With-Action Condition SIR line haul analysis indicate that the SIR is projected to operate under capacity at its peak load points in both directions during all peak hours analyzed. Therefore, this would not constitute a significant adverse impact for the SIR line haul.

Table 14-44: With-Action Condition – SIR Line Haul Analysis

Peak Direction	Maximum Load Point Station	Peak Hour Trains [1]	Peak Hour Passengers at peak Load Point	Cars per Train [1]	Average Peak Hour Passengers Per Car	Total Capacity per Hour [2]	Available Capacity per Hour
Weekday AM							
To St. George	Clifton	4	1634	4	102	2240	606
Weekday PM							
From St. George	Stapleton	3	1567	4	131	1680	113

Notes:
(1) Based on most currently available data from NYCT.
(2) Available capacity based on a maximum of 140 passengers per car from NYCT.

BUS

As shown in Table14-45, the results of the With-Action Condition bus analysis indicate that the S51/81, S74/84, S76/86, and S78 bus routes are projected to operate over capacity at their respective peak load points in the northbound and southbound directions during all peak hours analyzed. Therefore, this constitutes a significant adverse impact for each bus route included in the analysis.

Table 14-45: With-Action Condition - Local Bus Line Haul Analysis

Route	Peak Direction	Maximum Load Point	Peak Hour Buses [1]	Peak Hour Passengers	Average Passengers Per Bus	Total Capacity [2]	Available Capacity
Weekday AM							
S51/81	NB	Bay Street and Canal Street	7	644	92	378	-266
S51/81	SB	Bay Street and Victory Boulevard	4	317	79	216	-101
S74/84	NB	Bay Street and Victory Boulevard	6	503	84	324	-179
S74/84	SB	Richmond Road and Clove Road	4	321	80	216	-105
S76/86	NB	Bay Street and Victory Boulevard	7	694	99	378	-316
S76/86	SB	Richmond Road and Clove Road	6	406	68	324	-82
S78	NB	Bay Street and Victory Boulevard	6	554	92	324	-230
S78	SB	Hylan Boulevard and Clove Road	7	472	67	378	-94
Weekday PM							
S51/81	NB	Bay Street and Victory Boulevard	4	473	118	216	-257
S51/81	SB	Bay Street and Victory Boulevard	7	536	77	378	-158
S74/84	NB	Targee Street and DeKalb Street	4	304	76	216	-88
S74/84	SB	Bay Street and Victory Boulevard	5	397	79	270	-127
S76/86	NB	Bay Street and Victory Boulevard	4	417	104	216	-201
S76/86	SB	Bay Street and Victory Boulevard	5	499	100	270	-229
S78	NB	Hylan Boulevard and Clove Road	4	370	92	216	-154
S78	SB	Bay Street and Victory Boulevard	5	391	78	270	-121

Notes:
(1) Based on most currently available data from NYCT/MTA.
(2) Available capacity based on a maximum of 54 passengers per bus (40-foot standard buses).

I. PEDESTRIAN

EXISTING CONDITIONS

The existing operations of the Study Area's sidewalks, corner reservoirs, and crosswalks were assessed during the Weekday AM, MD, PM, and Saturday MD peak hours. The specific elements analyzed were selected based on meeting the criteria of a projected pedestrian volume increase of more than 200 pedestrians per hour at any sidewalk, corner reservoir, or crosswalk during at least one of the four peak hours. The analyses were performed at a total of 66 locations within the Study Area including 28 sidewalks, 17 corner reservoirs, and 21 crosswalks located at key intersections in the vicinity of the Projected Development Sites. These locations are shown on Figure 14-7.

Pedestrian (sidewalk, corner reservoir, and crosswalk) counts were conducted within the Study Area in November 2015 and June 2016 during the four peak periods. These counts were recorded in 15-minute intervals and were summarized into one-hour intervals.

CORNERS

Corner reservoir locations were analyzed using the pedestrian data within the Study Area. The following corners met the pedestrian increment threshold but are located at unsignalized intersections and therefore cannot be analyzed:

- Bay Street and Wave Street – NE corner
- Bay Street and Wave Street – SE corner
- Bay Street and Wave Street – SW corner
- Bay Street and Wave Street – NW corner
- Front Street and Hannah Street – SW corner
- Front Street and Hannah Street – NW corner
- Bay Street and Minthorne Street – NE corner
- Bay Street and Minthorne Street – SE corner

As presented in Table 14-46, the remaining 9 corner reservoirs included in the transportation analysis operate at LOS A or better during the four analysis peak hours.

SIDEWALKS

As presented in Table 14-47**,** all 28 sidewalk locations analyzed as part of the transportation analysis operate at LOS B or better for the non-platoon conditions and at LOS C or better for platoon conditions during the four peak hours.

CROSSWALKS

A total of 21 crosswalks (8 at signalized intersections and 13 at unsignalized intersections) were included in the pedestrian analysis. The following crosswalks located at unsignalized intersections are currently unmarked and can therefore not be analyzed for the Existing Condition:

- Bay Street and Grant Street – N leg
- Bay Street and Grant Street – S leg
- Bay Street and Baltic Street – N leg
- Bay Street and Baltic Street – E leg
- Bay Street and Baltic Street – S leg
- Bay Street and Wave Street – N leg
- Bay Street and Wave Street – S leg
- Front Street and Hannah Street – W leg

The remaining 8 crosswalks at signalized intersections and 5 crosswalks at unsignalized intersections within the Study Area were analyzed. As presented in Table 14-48 and Table 14-49, all crosswalks included in the transportation analysis operate at a LOS A during the four peak hours.

Table 14-46: Existing Conditions Level of Service Analysis - Corners

Location	Peak Hour Volume				Available Circulation Space (ft^2/p)				Corner Circulation LOS			
	Weekday			Sat	Weekday			Sat	Weekday			Sat
	AM	MD	PM	MD	AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Victory Blvd (SE corner)	383	470	403	234	505	390	443	859	A	A	A	A
Bay St and Victory Blvd (SW corner)	358	456	370	272	456	345	447	628	A	A	A	A
Bay St and Hannah St (NE corner)	73	69	94	63	3029	2823	2041	2705	A	A	A	A
Bay St and Hannah St (SE corner)	66	71	92	56	3085	3019	2293	3312	A	A	A	A
Bay St and Hannah St (NW corner)	96	109	127	113	1162	778	791	934	A	A	A	A
Bay St and Swan St (SW corner)	83	100	110	81	2700	1779	1970	2388	A	A	A	A
Bay St and Clinton St (SW corner)	67	116	95	108	962	393	472	587	A	A	A	A
Bay St and Clinton St (NW corner)	50	106	95	84	1468	554	575	854	A	A	A	A
Bay St and Wave St (NE corner)*	123	138	140	168								
Bay St and Wave St (SE corner)*	123	135	136	159								
Bay St and Wave St (SW corner)*	104	101	117	102								
Bay St and Wave St (NW corner)*	106	110	126	111								
Front St and Hannah St (SW corner)*	3	1	1	2								
Front St and Hannah St (NW corner)*	6	5	5	2								
Jersey St and Victory Blvd (NE corner)	113	102	79	82	639	659	790	856	A	A	A	A
Bay St and Minthorne St (NE corner)*	106	76	93	66								
Bay St and Minthorne St (SE corner)*	90	71	87	62								

Note: * - Level of Service results cannot be generated for unsignalized intersections

Table 14-47: Existing Conditions Level of Service Analysis – Sidewalks

Location	Total Width (ft)	Obstruc-tion Width (ft)	Effective Width (ft)	Available Circulation Space (ft^2/p)				Non-Platoon Conditions LOS				Platoon Conditions LOS			
				Weekday			Sat	Weekday			Sat	Weekday			Sat
				AM	MD	PM	MD	AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Victory Blvd (S leg, E sidewalk)	20.0	11.5	8.5	717	534	510	717	A	A	A	A	A	A	B	A
Bay St and Hannah St (N leg, E sidewalk)	20.0	11.5	8.5	1434	1434	956	1147	A	A	A	A	A	A	A	A
Bay St and Hannah St (E leg, N sidewalk)	5.0	4.5	0.5	337	337	675	450	A	A	A	A	B	B	A	B
Bay St and Hannah St (S leg, E sidewalk)	7.0	3.0	4.0	675	514	432	491	A	A	A	A	A	B	B	B
Bay St and Hannah St (E leg, S sidewalk)	3.5	3.0	0.5	1350	337	675	~	A	A	A	-	A	B	A	~
Bay St and Swan St (S leg, W sidewalk)	14.5	11.0	3.5	411	363	326	337	A	A	A	A	B	B	B	B
Bay St and Clinton St (N leg, E sidewalk)	13.0	8.0	5.0	900	750	794	794	A	A	A	A	A	A	A	A
Bay St and Clinton St (N leg, W sidewalk)	8.5	6.8	1.8	472	169	131	175	A	A	A	A	B	B	B	B
Bay St and Baltic St (N leg, E sidewalk)	16.0	9.5	6.5	877	566	516	428	A	A	A	A	A	A	B	B
Bay St and Baltic St (N leg, W sidewalk)	4.5	3.5	1.0	208	89.7	76.8	81.5	A	A	A	A	B	C	C	C
Bay St and Wave St (N leg, E sidewalk)	5.1	3.0	2.1	195	183	129	92.7	A	A	A	A	B	B	B	B
Bay St and Wave St (S leg, E sidewalk)	7.3	3.0	4.3	267	410	287	234	A	A	A	A	B	B	B	B
Bay St and Wave St (S leg, W sidewalk)	4.2	3.5	0.7	55.8	49.5	46.8	48.1	B	B	B	B	C	C	C	C
Bay St and Wave St (N leg, W sidewalk)	5.0	3.5	1.5	176	130	98.5	135	A	A	A	A	B	B	B	B
Front St and Hannah St (S leg, E sidewalk)***	0.0	0.0													
Front St and Hannah St (S leg, W sidewalk)	3.5	3.0	0.5	450	337	1350	1350	A	A	A	A	B	B	A	A
Front St and Wave St (N leg, E sidewalk)	17.0	14.0	3.0	4050	2700	~	~	A	A	~	~	A	A	~	~
Front St and Wave St (N leg, W sidewalk)	12.0	6.0	6.0	~	~	~	16200	~	~	~	A	~	~	~	A
Pike St and Brook St (W leg, S sidewalk)	6.0	3.0	3.0	1620	311	2025	1620	A	A	A	A	A	B	A	A
Jersey St and Victory Blvd (N leg, E sidewalk)	10.0	6.3	3.8	633	633	723	723	A	A	A	A	A	A	A	A
Jersey St and Victory Blvd (E leg, N sidewalk)	8.0	3.0	5.0	587	614	1227	964	A	A	A	A	A	A	A	A
Jersey St and Victory Blvd (E leg, S sidewalk)	4.0	3.0	1.0	675	270	386	300	A	A	A	A	A	B	B	B
Bay St and Minthorne St (E leg, S sidewalk)	10.0	4.5	5.5	2475	4950	7425	7425	A	A	A	A	A	A	A	A
Minthorne St and Victory Blvd (S leg, E sidewalk)	5.0	3.0	2.0	2700	1800	5400	900	A	A	A	A	A	A	A	A
Minthorne St and Victory Blvd (E leg, S sidewalk)	8.5	3.0	5.5	825	707	928	825	A	A	A	A	A	A	A	A
Minthorne St and Victory Blvd (W leg, S sidewalk)	8.5	3.0	5.5	437	203	337	330	A	A	A	A	B	B	B	B
Front St and Baltic St (N leg, E sidewalk)	12.0	3.0	9.0	24300	8100	~	~	A	A	~	~	A	A	~	~
Front St and Baltic St (N leg, W sidewalk)	5.5	3.0	2.5	~	~	6750	6750	~	~	A	A	~	~	A	A

Note: *** - Sidewalk does not currently exist but will be constructed before the build year, ~ - Location has no volume during peak hour

Table 14-48: Existing Conditions Level of Service Analysis Crosswalks at Signalized Intersections

Location	Length (ft)	Width (ft)	Available Circulation Space (ft^2/p)				Crosswalk Circulation LOS			
			Weekday			Sat	Weekday			Sat
			AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Victory Blvd (S leg)	60.0	13.5	92.7	73.3	95.4	138	A	A	A	A
Bay St and Hannah St (N leg)	92.0	11.0	625	1256	406	959	A	A	A	A
Bay St and Hannah St (E leg)	32.0	12.5	915	626	650	608	A	A	A	A
Bay St and Clinton St (N leg)	60.0	11.5	1926	840	516	1172	A	A	A	A
Bay St and Clinton St (S leg)	59.5	13.0	1268	366	460	520	A	A	A	A
Bay St and Clinton St (W leg)	24.0	11.0	961	293	395	479	A	A	A	A
Bay St and Wave St (N leg)*										
Bay St and Wave St (E leg)*										
Bay St and Wave St (S leg)*										
Bay St and Wave St (W leg)*										
Front St and Hannah St (W leg)*										
Jersey St and Victory Blvd (N leg)	36.0	10.0	546	472	769	637	A	A	A	A
Jersey St and Victory Blvd (E leg)	40.0	10.0	2394	1872	1565	5878	A	A	A	A

Note: * - Unsignalized intersection in existing conditions

Table 14-49: Existing Conditions Level of Service Analysis Crosswalks at Unsignalized Intersections

Location	Length (ft)	Width (ft)	Average Pedestrian Delay (s)				Crosswalk Circulation LOS			
			Weekday			Sat	Weekday			Sat
			AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Grant St (W leg)	37.4	8.0	2.2	0.8	1.9	1.6	A	A	A	A
Bay St and Baltic St (W leg)	23.5	12.0	0.5	0.2	0.2	0.2	A	A	A	A
Bay St and Wave St (E leg)	30.3	11.3	3.7	3.3	2.7	3.0	A	A	A	A
Bay St and Wave St (W leg)	21.3	10.6	0.1	0.2	0.2	0.1	A	A	A	A
Bay St and Minthorne St (E leg)	29.5	10.0	0.6	0.4	1.2	0.4	A	A	A	A

THE FUTURE WITHOUT THE PROPOSED ACTIONS

The future without the 2030 No-Action Condition for the pedestrian analyses builds on the Existing Conditions analysis by incorporating background growth, pedestrian trips generated by other nearby projects expected to be completed by the build year, development of the land use parcels within the Project Area that could occur pursuant to existing zoning, and anticipated changes to the pedestrian/roadway infrastructure and/or operations in the Study Area. The No-Action Condition serves as the baseline to which the future condition with the project will be compared to identify potential impacts.

The same annual background growth rates as used for the vehicular traffic analyses were used to estimate increases in pedestrian trips associated with growth through 2030. An annual background growth rate of 0.50 percent for the first five years and 0.25 percent for the years beyond were applied for the St. George area. An annual growth rate of 1.0 percent for the first five years and 0.5 percent for the years beyond were applied for other locations in Staten Island. The annual growth rates were applied for the respective areas, over a period of 15 years, to develop the 2030 No-Action Condition background pedestrian volumes. In addition to the background growth, the development projects expected to be completed by 2030 located within and adjacent to the ¼-mile as shown in Chapter 2, Table 2-9 and Figure 2-8, and development of the land use parcels within the Project Area that could occur pursuant to existing zoning as shown in Table 14-1, were considered to forecast the No-Action Condition transit volumes.

Elements of the roadway improvements and other relevant project-related transportation improvements described for the No-Action Condition for the vehicular traffic analyses that would affect pedestrian operations during the No-Action Condition, such as new signalized intersections and updated signal timing, were incorporated into the No-Action Condition for the pedestrian analyses, as described below:

ROADWAY IMPROVEMENTS

- Completion of the NYCDOT St. George Bay Street Improvement project at the St. George Ferry Terminal that would improve the Richmond Terrace and Ferry Terminal (bus) and Richmond Terrace and Ferry Terminal (parking lot) intersections to add a protected bike/pedestrian-only phase to the signal phasing.

NO-ACTION PROJECT-RELATED INTERSECTION IMPROVEMENTS

The following improvements have been identified as project improvements and mitigation measures for the *Stapleton Waterfront Development Plan Technical Memorandum* (2010):

- Installation of new traffic signals at the intersections of Front Street with Wave Street, Prospect Street, Canal Street, and Hannah Street. New crosswalks and modified lane striping would be included in the intersection improvements.

- Completion of improvements at the intersection of Edgewater Street, Front Street, and Bay Street to include a turn restriction for northbound traffic on Edgewater Street, traffic calming elements, new crosswalks, other modifications to lane geometries, and updated signal timing.

- Installation of new traffic signals at the intersections of Bay Street with Wave Street and Water Street. New crosswalks and modified lane striping would be included in the intersection improvements.

The following improvement has been identified as a project improvement in the *St. George Redevelopment Environmental Impact* S*tatement* (2013):

- Completion of signal timing adjustments at the intersection of Richmond Terrace and Ferry Terminal (parking lot).
- Completion of the intersection modifications at the intersection of Richmond Terrace and Jersey Street, which would include signal phasing and timing changes.
- Completion of the intersection modifications at the intersection of Bay Street and School Road, which would include signal timing changes.

CORNERS

With the implementation of roadway and intersection improvements that would signalize the intersections of Bay Street/Wave Street and Front Street/Hannah Street, all but two corners included in the transportation analysis would be located at signalized intersections. The following corners would still be located at an unsignalized intersection and therefore cannot be analyzed during the No-Action Condition:

- Bay Street and Minthorne Street – NE corner
- Bay Street and Minthorne Street – SE corner

As presented in Table 14-50, the remaining 15 corner reservoirs included in the transportation analysis are projected to operate at LOS B or better during the four peak hours during the No-Action Condition.

Table 14-50: No-Action Conditions Level of Service Analysis – Corners

Location	Peak Hour Volume				Available Circulation Space (ft^2/p)				Corner Circulation LOS			
	Weekday			Sat	Weekday			Sat	Weekday			Sat
	AM	MD	PM	MD	AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Victory Blvd (SE corner)	492	904	700	506	1425	731	906	1353	A	A	A	A
Bay St and Victory Blvd (SW corner)	452	812	607	496	355	187	270	341	A	A	A	A
Bay St and Hannah St (NE corner)	170	534	393	357	1291	305	437	424	A	A	A	A
Bay St and Hannah St (SE corner)	150	484	353	316	1323	375	544	523	A	A	A	A
Bay St and Hannah St (NW corner)	162	427	314	315	691	187	282	313	A	A	A	A
Bay St and Swan St (SW corner)	130	354	261	241	1691	483	821	810	A	A	A	A
Bay St and Clinton St (SW corner)	125	439	270	309	505	86.1	156	194	A	A	A	A
Bay St and Clinton St (NW corner)	121	541	326	355	452	91.6	154	163	A	A	A	A
Bay St and Wave St (NE corner)	331	1438	936	1097	215	42.6	59.0	43.4	A	B	B	B
Bay St and Wave St (SE corner)	302	1134	791	918	239	52.7	56.4	52.4	A	B	B	B
Bay St and Wave St (SW corner)	230	839	627	691	253	51.9	57.3	59.1	A	B	B	B
Bay St and Wave St (NW corner)	251	1014	699	776	302	61.0	69.0	76.0	A	A	A	A
Front St and Hannah St (SW corner)	9	41	26	27	3780	794	3011	1191	A	A	A	A
Front St and Hannah St (NW corner)	6	6	5	2	2909	2546	2909	5092	A	A	A	A
Jersey St and Victory Blvd (NE corner)	125	113	87	90	578	596	715	774	A	A	A	A
Bay St and Minthorne St (NE corner)*	203	654	469	431								
Bay St and Minthorne St (SE corner)*	185	649	463	426								

Note: * - Level of Service results cannot be generated for unsignalized intersections

SIDEWALKS

The sidewalk locations included in the transportation analysis for the No-Action Condition are presented in Table 14-51. During non-platoon conditions, the 28 sidewalk locations are expected to operate at acceptable LOS C or better (average circulation space greater than24.0 ft^2/p), except at the following locations:

Bay Street and Wave Street (north leg, east sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 21.0 ft^2/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 19.6 ft^2/p.

Bay Street and Wave Street (south leg, west sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 10.8 ft^2/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 17.6 ft^2/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 15.0 ft^2/p.

Bay Street and Wave Street (north leg, west sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 14.7 ft^2/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 18.7 ft^2/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 19.2 ft^2/p.

During platoon conditions, the 28 sidewalk locations are expected to operate at acceptable LOS C or better (average circulation space greater than 40.0 ft^2/p), except at the following locations:

Bay Street and Clinton Street (north leg, west sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 32.8 ft^2/p.

Bay Street and Baltic Street (north leg, west sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 32.3 ft^2/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 38.2 ft^2/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 38.8 ft^2/p.

Bay Street and Wave Street (north leg, east sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 21.0 ft^2/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 30.3 ft^2/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 19.6 ft^2/p.

Bay Street and Wave Street (south leg, west sidewalk)

- During the **Weekday AM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 31.7 ft^2/p.
- During the **Weekday MD peak hour**, the sidewalk would operate at LOS F with an average circulation space of 10.8 ft^2/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS E with an average circulation space of 17.6 ft^2/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 15.0 ft^2/p.

Bay Street and Wave Street (north leg, west sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 14.7 ft^2/p.

- During the **Weekday PM peak hour**, the sidewalk would operate at LOS E with an average circulation space of 18.7 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 19.2 ft²/p.

Table 14-51: No-Action Conditions Level of Service Analysis – Sidewalks

Location	Total Width (ft)	Obstruc-tion Width (ft)	Effective Width (ft)	Available Circulation Space (ft²/p)				Non-Platoon Conditions LOS				Platoon Conditions LOS			
				Weekday			Sat	Weekday			Sat	Weekday			Sat
				AM	MD	PM	MD	AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Victory Blvd (S leg, E sidewalk)	20.0	11.5	8.5	344	138	148	133	A	A	A	A	B	B	B	B
Bay St and Hannah St (N leg, E sidewalk)	20.0	11.5	8.5	528	155	177	177	A	A	A	A	B	B	B	B
Bay St and Hannah St (E leg, N sidewalk)	5.0	4.5	0.5	205	59.4	140	94.1	A	B	A	A	B	C	B	B
Bay St and Hannah St (S leg, E sidewalk)	7.0	3.0	4.0	347	118	134	141	A	A	A	A	B	B	B	B
Bay St and Hannah St (E leg, S sidewalk)	3.5	3.0	0.5	205	63.6	93.5	178	A	A	A	A	B	C	B	B
Bay St and Swan St (S leg, W sidewalk)	14.5	11.0	3.5	190	71.1	106	98.1	A	A	A	A	B	C	B	B
Bay St and Clinton St (N leg, E sidewalk)	13.0	8.0	5.0	252	59.1	98.7	114	A	B	A	A	B	C	B	B
Bay St and Clinton St (N leg, W sidewalk)	8.5	6.8	1.8	174	32.8	49.2	47.2	A	C	B	B	B	D	C	C
Bay St and Baltic St (N leg, E sidewalk)	16.0	9.5	6.5	404	106	158	110	A	A	A	A	B	B	B	B
Bay St and Baltic St (N leg, W sidewalk)	4.5	3.5	1.0	115	32.3	38.2	38.8	A	C	C	C	B	D	D	D
Bay St and Wave St (N leg, E sidewalk)	5.1	3.0	2.1	83.4	21.0	30.3	19.6	A	D	C	D	C	E	D	E
Bay St and Wave St (S leg, E sidewalk)	7.3	3.0	4.3	137	53.7	65.6	51.2	A	B	A	B	B	C	C	C
Bay St and Wave St (S leg, W sidewalk)	4.2	3.5	0.7	31.7	10.8	17.6	15.0	C	E	D	E	D	F	E	E
Bay St and Wave St (N leg, W sidewalk)	5.0	3.5	1.5	62.0	14.7	18.7	19.2	A	E	D	D	C	E	E	E
Front St and Hannah St (S leg, E sidewalk)	8.0	3.0	5.0	2470	612	1016	546	A	A	A	A	A	A	A	A
Front St and Hannah St (S leg, W sidewalk)	6.0	3.0	3.0	1228	384	609	327	A	A	A	A	A	B	A	B
Front St and Wave St (N leg, E sidewalk)	17.0	14.0	3.0	1055	314	332	343	A	A	A	A	A	B	B	B
Front St and Wave St (N leg, W sidewalk)	12.0	6.0	6.0	1605	288	1039	234	A	A	A	A	A	B	A	B
Pike St and Brook St (W leg, S sidewalk)	6.0	3.0	3.0	1466	282	1833	1466	A	A	A	A	A	B	A	A
Jersey St and Victory Blvd (N leg, E sidewalk)	10.0	6.3	3.8	573	573	655	655	A	A	A	A	A	A	A	A
Jersey St and Victory Blvd (E leg, N sidewalk)	8.0	3.0	5.0	531	555	1111	873	A	A	A	A	A	A	A	A
Jersey St and Victory Blvd (E leg, S sidewalk)	4.0	3.0	1.0	611	244	349	271	A	A	A	A	A	B	B	B
Bay St and Minthorne St (E leg, S sidewalk)	10.0	4.5	5.5	1367	554	657	1078	A	A	A	A	A	A	A	A
Minthorne St and Victory Blvd (S leg, E sidewalk)	5.0	3.0	2.0	2444	1629	4888	815	A	A	A	A	A	A	A	A
Minthorne St and Victory Blvd (E leg, S sidewalk)	8.5	3.0	5.5	747	640	840	747	A	A	A	A	A	A	A	A
Minthorne St and Victory Blvd (W leg, S sidewalk)	8.5	3.0	5.5	328	133	210	189	A	A	A	A	B	B	B	B
Front St and Baltic St (N leg, E sidewalk)	12.0	3.0	9.0	3698	941	997	1029	A	A	A	A	A	A	A	A
Front St and Baltic St (N leg, W sidewalk)	5.5	3.0	2.5	1235	300	265	273	A	A	A	A	A	B	B	B

CROSSWALKS

Of the 21 crosswalks analyzed for the No-Action Condition, 13 would be located at signalized intersections and 3 would be located at unsignalized intersections. The following remaining 5 crosswalks would be located at unsignalized intersections and would remain unmarked, and therefore cannot be analyzed for the No-Action Condition:

- Bay Street and Grant Street – N leg
- Bay Street and Grant Street – S leg
- Bay Street and Baltic Street – N leg
- Bay Street and Baltic Street – E leg
- Bay Street and Baltic Street – S leg

The crosswalks at signalized intersections included in the transportation analysis for the No-Action Condition are presented in Table 14-52. The 13 crosswalk locations are expected to operate at acceptable LOS C or better (average circulation space greater than 24.0 ft^2/p), except at the following locations:

Bay Street and Wave Street (north crosswalk)

- During the **Weekday MD peak hour**, the crosswalk would operate at LOS D with an average circulation space of 23.5 ft^2/p.
- During the **Weekday PM peak hour**, the crosswalk would operate at LOS D with an average circulation space of 18.6 ft^2/p.

Bay Street and Wave Street (south crosswalk)

- During the **Weekday PM peak hour**, the crosswalk would operate at LOS D with an average circulation space of 21.1 ft^2/p.

As presented in Table 14-53, those crosswalks included in the analysis that are located at unsignalized intersections are expected to operate at LOS A during the four peak hours during the No-Action Condition.

Table 14-52: No-Action Conditions Level of Service Analysis
Crosswalks at Signalized Intersections

Location	Length (ft)	Width (ft)	Available Circulation Space (ft^2/p)				Crosswalk Circulation LOS			
			Weekday			Sat	Weekday			Sat
			AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Victory Blvd (S leg)	60.0	21.5	117.2	64.5	83.7	119.8	A	A	A	A
Bay St and Hannah St (N leg)	92.0	11.0	212	59.2	51.1	96.5	A	B	B	A
Bay St and Hannah St (E leg)	32.0	12.5	370	79.2	142	98.4	A	A	A	A
Bay St and Clinton St (N leg)	60.0	11.5	200	47.8	79.3	76.8	A	B	A	A
Bay St and Clinton St (S leg)	59.5	13.0	397	50.9	104	134	A	B	A	A
Bay St and Clinton St (W leg)	24.0	11.0	609	104	181	202	A	A	A	A
Bay St and Wave St (N leg)	35.5	10.0	158	23.5	18.6	28.8	A	D	D	C
Bay St and Wave St (E leg)	30.3	11.3	162	38.7	75.9	44.3	A	C	A	B
Bay St and Wave St (S leg)	36.8	10.0	224	31.1	21.1	31.7	A	C	D	C
Bay St and Wave St (W leg)	21.3	10.6	222	57.7	99.7	70.4	A	B	A	A
Front St and Hannah St (W leg)	34.5	10.0	7377	~	7344	4084	A	~	A	A
Jersey St and Victory Blvd (N leg)	36.0	10.0	483	406	671	549	A	A	A	A
Jersey St and Victory Blvd (E leg)	40.0	10.0	2106	1627	1347	5140	A	A	A	A

Note: ~ - Location has no volume during peak hour

Table 14-53: No-Action Conditions Level of Service Analysis
Crosswalks at Unsignalized Intersections

Location	Length (ft)	Width (ft)	Average Pedestrian Delay (s)				Crosswalk Circulation LOS			
			Weekday			Sat	Weekday			Sat
			AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Grant St (W leg)	37.4	8.0	2.4	0.9	2.1	1.7	A	A	A	A
Bay St and Baltic St (W leg)	23.5	12.0	0.6	0.2	0.2	0.3	A	A	A	A
Bay St and Minthorne St (E leg)	29.5	10.0	1.6	1.0	0.9	0.9	A	A	A	A

Note: * - Intersection becomes signalized in No Action/With Action conditions.

THE FUTURE WITH THE PROPOSED ACTIONS

As discussed above in Section E, "Level 2 Screening Assessment," the pedestrian trip increment generated by the Proposed Actions were assigned to the pedestrian elements within the Study Area.

CORNERS

The With-Action Condition results for the 15 corner reservoirs located at signalized intersections were compared with the No-Action Condition results for the four peak hours. The remaining two corners located at unsignalized intersections could not be analyzed for the With-Action Condition.

As shown in Table 14-54, all corners at signalized intersections are projected to operate at LOS B or better. Therefore, the Proposed Actions would not result in a significant adverse impact any of the studied corner reservoirs.

Table 14-54: With-Action Conditions Level of Service Analysis – Corners

Location	Peak Hour Volume				Available Circulation Space (ft^2/p)				Corner Circulation LOS			
	Weekday			Sat	Weekday			Sat	Weekday			Sat
	AM	MD	PM	MD	AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Victory Blvd (SE corner)	698	1355	1052	857	1005	487	595	756	A	A	A	A
Bay St and Victory Blvd (SW corner)	596	1134	855	741	263	129	186	224	A	A	A	A
Bay St and Hannah St (NE corner)	427	1246	970	878	505	113	151	153	A	A	A	A
Bay St and Hannah St (SE corner)	561	1363	1119	1026	215	115	169	160	A	A	A	A
Bay St and Hannah St (NW corner)	237	688	532	524	466	107	140	172	A	A	A	A
Bay St and Swan St (SW corner)	229	622	506	470	744	253	376	359	A	A	A	A
Bay St and Clinton St (SW corner)	185	472	355	374	337	80.0	113	151	A	A	A	A
Bay St and Clinton St (NW corner)	185	445	381	359	287	118	131	167	A	A	A	A
Bay St and Wave St (NE corner)	540	1141	1039	1102	130	57.3	55.3	45.3	A	B	B	B
Bay St and Wave St (SE corner)	593	1029	1040	1077	117	58.4	40.3	42.6	A	B	B	B
Bay St and Wave St (SW corner)	304	770	719	734	187	56.4	44.8	54.0	A	B	B	B
Bay St and Wave St (NW corner)	300	809	699	724	246	81.9	71.3	83.9	A	A	A	A
Front St and Hannah St (SW corner)	261	710	506	552	121	57.9	106	56.2	A	B	A	B
Front St and Hannah St (NW corner)	71	244	154	172	156	122	60	53	A	A	A	B
Jersey St and Victory Blvd (NE corner)	266	807	480	546	189	41.0	84.6	67.0	A	B	A	A
Bay St and Minthorne St (NE corner)*	401	1121	807	783								
Bay St and Minthorne St (SE corner)*	383	1116	801	779								

Note: * - Level of Service results cannot be generated for unsignalized intersections, "+" implies a significant adverse impact.

SIDEWALKS

The With-Action Condition results for the sidewalk locations were compared with the No-Action Condition results for all four peak hours, as shown in Table 14-55. Sidewalks that are expected to be significantly adversely impacted based on *CEQR Technical Manual* criteria are denoted with a "+" sign in Table 14-55 and are detailed below. Six of the 28 sidewalks studied are expected to experience a significant adverse impact during the non-platoon conditions due to the addition of pedestrian trips generated by the Proposed Actions as follows:

Bay Street and Hannah Street (east leg, north sidewalk)

- During the **Weekday AM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 17.5 ft^2/p.
- During the **Weekday MD peak hour**, the sidewalk would operate at LOS F with an average circulation space of 3.5 ft^2/p.

- During the **Weekday PM peak hour**, the sidewalk would operate at LOS E with an average circulation space of 11.4 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 8.8 ft²/p.

Bay Street and Hannah Street (east leg, south sidewalk)

- During the **Weekday AM peak hour**, the sidewalk would operate at LOS F with an average circulation space of 4.6 ft²/p.
- During the **Weekday MD peak hour**, the sidewalk would operate at LOS F with an average circulation space of 4.6 ft²/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS F with an average circulation space of 6.2 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 11.3 ft²/p.

Bay Street and Wave Street (north leg, east sidewalk)

- During the **Saturday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 19.0 ft²/p.

Bay Street and Wave Street (south leg, west sidewalk)

- During the **Weekday AM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 23.9 ft²/p.
- During the **Weekday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 12.9 ft²/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS E with an average circulation space of 14.9 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 13.9 ft²/p.

Bay Street and Wave Street (north leg, west sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 17.0 ft²/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 16.7 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 18.9 ft²/p.

Front Street and Hannah Street (south leg, west sidewalk)

- During the **Saturday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 15.3 ft²/p.

Eleven of the 28 sidewalks studied are expected to experience a significant adverse impact during platoon conditions:

Bay Street and Hannah Street (east leg, north sidewalk)

- During the **Weekday AM peak hour**, the sidewalk would operate at LOS E with an average circulation space of 17.5 ft²/p.
- During the **Weekday MD peak hour**, the sidewalk would operate at LOS F with an average circulation space of 3.5 ft²/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS E with an average circulation space of 11.4 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS F with an average circulation space of 8.8 ft²/p.

Bay Street and Hannah Street (east leg, south sidewalk)

- During the **Weekday AM peak hour**, the sidewalk would operate at LOS F with an average circulation space of 4.6 ft²/p.
- During the **Weekday MD peak hour**, the sidewalk would operate at LOS F with an average circulation space of 4.6 ft²/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS F with an average circulation space of 6.2 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 11.3 ft²/p.

Bay Street and Baltic Street (north leg, west sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 27.5 ft²/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 28.7 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 30.5 ft²/p.

Bay Street and Wave Street (north leg, east sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 30.1 ft²/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 24.5 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 19.0 ft²/p.

Bay Street and Wave Street (south leg, east sidewalk)

- During the **Saturday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 39.7 ft²/p.

Bay Street and Wave Street (south leg, west sidewalk)

- During the **Weekday AM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 23.9 ft²/p.
- During the **Weekday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 12.9 ft²/p.

- During the **Weekday PM peak hour**, the sidewalk would operate at LOS E with an average circulation space of 14.9 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 13.9 ft²/p.

Bay Street and Wave Street (north leg, west sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 17.0 ft²/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS E with an average circulation space of 16.7 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 18.9 ft²/p.

Front Street and Hannah Street (south leg, west sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 28.4 ft²/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 35.7 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS E with an average circulation space of 15.3 ft²/p.

Front Street and Wave Street (north leg, east sidewalk)

- During the **Weekday PM peak hour**, the sidewalk would operate at LOS C with an average circulation space of 34.1 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS C with an average circulation space of 33.0 ft²/p.

Jersey Street and Victory Boulevard (east leg, south sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 39.5 ft²/p.

Front Street and Baltic Street (north leg, west sidewalk)

- During the **Weekday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 29.6 ft²/p.
- During the **Weekday PM peak hour**, the sidewalk would operate at LOS D with an average circulation space of 32.2 ft²/p.
- During the **Saturday MD peak hour**, the sidewalk would operate at LOS D with an average circulation space of 26.0 ft²/p.

Table 14-55: With-Action Conditions Level of Service Analysis – Sidewalks

Location	Total Width (ft.)	Obstruction Width (ft.)	Effective Width	Available Circulation Space (ft^2/p)				Non-Platoon Conditions LOS				Platoon Conditions LOS			
				Weekday			Sat	Weekday			Sat	Weekday			Sat
				AM	MD	PM	MD	AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Victory Blvd (S leg, E sidewalk)	20	11.5	8.5	179.0	80.7	87.1	66.2	A	A	A	A	B	C	C	C
Bay St and Hannah St (N leg, E sidewalk)	20	11.5	8.5	151.0	56.6	56.1	62.8	A	B	B	A	B	C	C	C
Bay St and Hannah St (E leg, N sidewalk)	5	4.5	0.5	17.5	3.5	11.4	8.8	D +	F +	E +	E +	E +	F +	E +	F +
Bay St and Hannah St (S leg, E sidewalk)	7	3	4	112.0	56.7	49.7	58.7	A	B	B	B	B	C	C	C
Bay St and Hannah St (E leg, S sidewalk)	3.5	3	0.5	4.6	4.6	6.2	11.3	F +	F +	F +	E +	F +	F +	F +	E +
Bay St and Swan St (S leg, W sidewalk)	14.5	11	3.5	83.9	41.9	49.1	50.0	A	B	B	B	C	C	C	C
Bay St and Clinton St (N leg, E sidewalk)	13	8	5	107.0	64.9	64.5	93.4	A	A	A	A	B	C	C	B
Bay St and Clinton St (N leg, W sidewalk)	8.5	6.8	1.8	108.0	40.3	40.6	45.8	A	B	B	B	B	C	C	C
Bay St and Baltic St (N leg, E sidewalk)	16	9.5	6.5	193.0	119.0	108.0	89.9	A	A	A	A	B	B	B	C
Bay St and Baltic St (N leg, W sidewalk)	4.5	3.5	1	75.9	27.5	28.7	30.5	A	C	C	C	C	D +	D +	D +
Bay St and Wave St (N leg, E sidewalk)	5.1	3	2.1	42.8	30.1	24.5	19.0	B	C	C	D +	C	D +	D +	E +
Bay St and Wave St (S leg, E sidewalk)	7.3	3	4.3	63.4	56.3	44.6	39.7	A	B	B	C	C	C	C	D +
Bay St and Wave St (S leg, W sidewalk)	4.2	3.5	0.7	23.9	12.9	14.9	13.9	D +	E +	E +	E +	D +	E +	E +	E +
Bay St and Wave St (N leg, W sidewalk)	5	3.5	1.5	45.1	17.0	16.7	18.9	B	D +	D +	D +	C	E +	E +	E +
Front St and Hannah St (S leg, E sidewalk)	8	3	5	750.0	1240.0	1472.0	461.0	A	A	A	A	A	A	A	B
Front St and Hannah St (S leg, W sidewalk)	6	3	3	55.2	28.4	35.7	15.3	B	C	C	D +	C	D +	D +	E +
Front St and Wave St (N leg, E sidewalk)	17	14	3	54.0	53.5	34.1	33.0	B	B	C	C	C	C	D +	D +
Front St and Wave St (N leg, W sidewalk)	12	6	6	228.0	106.0	337.0	78.3	A	A	A	A	B	B	B	C
Pike St and Brook St (W leg, S sidewalk)	6	3	3	842.0	201.0	767.0	662.0	A	A	A	A	A	B	A	A
Jersey St and Victory Blvd (N leg, E sidewalk)	10	6.3	3.8	315.0	132.0	180.0	159.0	A	A	A	A	B	B	B	B
Jersey St and Victory Blvd (E leg, N sidewalk)	8	3	5	181.0	48.0	80.0	71.0	A	B	A	A	B	C	C	C
Jersey St and Victory Blvd (E leg, S sidewalk)	4	3	1	190.0	39.5	44.2	64.1	A	C	B	A	B	D +	C	C
Bay St and Minthorne St (E leg, S sidewalk)	10	4.5	5.5	126.0	66.3	52.6	121.0	A	A	B	A	B	C	C	B
Minthorne St and Victory Blvd (S leg, E sidewalk)	5	3	2	2444.0	1629.0	4888.0	815.0	A	A	A	A	A	A	A	A
Minthorne St and Victory Blvd (E leg, S sidewalk)	8.5	3	5.5	747.0	640.0	840.0	747.0	A	A	A	A	A	A	A	A
Minthorne St and Victory Blvd (W leg, S sidewalk)	8.5	3	5.5	249.0	106.0	163.0	115.0	A	A	A	A	B	B	B	B
Front St and Baltic St (N leg, E sidewalk)	12	3	9	172.0	474.0	152.0	157.0	A	A	A	A	B	B	B	B
Front St and Baltic St (N leg, W sidewalk)	5.5	3	2.5	99.0	29.6	32.2	26.0	A	C	C	C	B	D +	D +	D +

Note: "+" implies a significant adverse impact.

***This table has been modified for the FEIS.**

CROSSWALKS

Of the 21 crosswalks analyzed for the With-Action Condition, 13 would be located at signalized intersections and 3 would be located at unsignalized intersections. The remaining 5 crosswalks would be located at unsignalized intersections but would remain unmarked, and were therefore not analyzed for the With-Action Condition:

- Bay Street and Grant Street – N leg
- Bay Street and Grant Street – S leg
- Bay Street and Baltic Street – N leg
- Bay Street and Baltic Street – E leg
- Bay Street and Baltic Street – S leg

The With-Action Condition results for the signalized crosswalk locations were compared with the No-Action Condition results for all four peak hours, as shown in Table 14-56. Crosswalks that are expected to be significantly adversely impacted based on *CEQR Technical Manual* criteria are denoted with a "+" sign in Table 14-56 and are detailed below. Five out of 13 crosswalks at signalized intersections are expected to have a significant adverse impact as follows:

Bay Street and Hannah Street (north crosswalk)

- During the **Weekday MD peak hour**, the crosswalk would operate at LOS D with an average circulation space of 18.8 ft²/p.
- During the **Weekday PM peak hour**, the crosswalk would operate at LOS E with an average circulation space of 14.8 ft²/p.

Bay Street and Wave Street (north crosswalk)

- During the **Weekday PM peak hour**, the crosswalk would operate at LOS D with an average circulation space of 20.4 ft²/p.

Bay Street and Wave Street (south crosswalk)

- During the **Weekday PM peak hour**, the crosswalk would operate at LOS D with an average circulation space of 16.7 ft²/p.

Front Street and Hannah Street (west crosswalk)

- During the **Weekday PM peak hour**, the crosswalk would operate at LOS D with an average circulation space of 22.7 ft²/p.
- During the **Saturday MD peak hour**, the crosswalk would operate at LOS D with an average circulation space of 22.1 ft²/p.

Jersey Street and Victory Boulevard (east crosswalk)

- During the **Weekday MD peak hour**, the crosswalk would operate at LOS E with an average circulation space of 13.2 ft²/p.
- During the **Weekday PM peak hour**, the crosswalk would operate at LOS D with an average circulation space of 23.1 ft²/p.
- During the **Saturday MD peak hour**, the crosswalk would operate at LOS D with an average circulation space of 22.2 ft²/p.

Table 14-56: With-Action Conditions Level of Service Analysis
Crosswalks at Signalized Intersections

Location	Length (ft.)	Width (ft.)	Available Circulation Space (ft^2/p)				Crosswalk Circulation LOS			
			Weekday			SAT	Weekday			Sat
			AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Victory Blvd (S leg)	60.0	21.5	75.1	33.8	40.1	64.2	A	C	B	A
Bay St and Hannah St (N leg)	92.0	11.0	80.7	18.8	14.8	31.3	A	D +	E +	C
Bay St and Hannah St (E leg)	32.0	12.5	148	33.8	54.8	41	A	C	B	B
Bay St and Clinton St (N leg)	60.0	11.5	121	73	74.1	87.1	A	A	A	A
Bay St and Clinton St (S leg)	59.5	13.0	231	49.2	79.4	111	A	B	A	A
Bay St and Clinton St (W leg)	24.0	11.0	438	98.8	136	172	A	A	A	A
Bay St and Wave St (N leg)	35.5	10.0	134	35	20.4	34.5	A	C	D +	C
Bay St and Wave St (E leg)	30.3	11.3	82.6	45.5	58	38.7	A	B	B	C
Bay St and Wave St (S leg)	36.8	10.0	140	32.8	16.7	28.4	A	C	D +	C
Bay St and Wave St (W leg)	21.3	10.6	175	64.8	92.8	69.3	A	A	A	A
Front St and Hannah St (W leg)	34.5	10.0	49.5	45.3	22.7	22.1	B	B	D +	D +
Jersey St and Victory Blvd (N leg)	36.0	10.0	289	77.3	167	137	A	A	A	A
Jersey St and Victory Blvd (E leg)	40.0	10.0	69.8	13.2	23.1	22.2	A	E +	D +	D +

Note: "+" implies a significant adverse impact.

This table has been modified for the FEIS.

As presented in Table 14-57, all unsignalized crosswalks are expected to operate at a LOS A during all peak hours during the With-Action Condition. Therefore, the Proposed Actions would not result in a significant adverse impact at any of the studied unsignalized crosswalks.

Table 14-57: With-Action Conditions Level of Service Analysis
Crosswalks at Unsignalized Intersections

Location	Length (ft)	Width (ft)	Average Pedestrian Delay (s)				Crosswalk Circulation LOS			
			Weekday			Sat	Weekday			Sat
			AM	MD	PM	MD	AM	MD	PM	MD
Bay St and Grant St (W leg)	37.4	8.0	2.4	0.9	2.1	1.7	A	A	A	A
Bay St and Baltic St (W leg)	23.5	12.0	0.6	0.2	0.2	0.3	A	A	A	A
Bay St and Minthorne St (E leg)	29.5	10.0	5.0	3.6	2.4	2.3	A	A	A	A

J. VEHICULAR AND PEDESTRIAN SAFETY ASSESSMENT

SAFETY AT INTERSECTIONS

Crash data for the study intersections were obtained from NYCDOT for the 3-year period from January 1, 2012 and December 31, 2014. The data obtained quantify the total number of reportable crashes (involving fatality, injury, or more than $1,000 in property damage), fatalities, and injuries during the study period, as well as a yearly breakdown of pedestrian- and bicycle-related crashes at each location. According to the *CEQR Technical Manual*, a high-crash location is one with more than 48 total reportable and non-reportable crashes or five or more pedestrian/bicycle injury crashes during any consecutive 12 months of the most recent 3-year period for which data is available.

Table 14-58 depicts total crash characteristics by intersection during the study period, as well as a breakdown of pedestrian and bicycle crashes by year and location. During this three-year period, 262 total crashes, including 51 pedestrian-related crashes and 14 bicycle-related crashes, occurred at the Study Area intersections. One fatality was documented. Based on the crash data, the intersections of Richmond Terrace at Jersey Street and St. Marks Place/Bay Street at Victory Boulevard would be classified as high-pedestrian/bicycle crash locations as per the *CEQR Technical Manual*.

Based on the crash data, the intersections of Richmond Terrace at Jersey Street and St. Marks Place/Bay Street at Victory Boulevard would be classified as high-crash locations per the *CEQR Technical Manual*, as there were five and six pedestrian/bicycle crashes in 2012 at those intersections, respectively, exceeding the threshold of five crashes in a 12-month period. There was no discernable pattern in the type of crashes recorded at these intersections. The Proposed Actions would increase the vehicular and pedestrian activity at these intersections, which could exacerbate any potential safety issues at this location.

In addition to the implementation of the City-wide reduction in speed limit in 2015 (of which any potential effects on improving safety are not reflected in the 2012, 2013, and 2014 data), which is anticipated to improve safety at all study intersections, improvements are recommended at the two intersections classified as high-crash locations.

RICHMOND TERRACE AND JERSEY STREET

The intersection of Richmond Terrace and Jersey Street has crosswalks on all approaches with advanced stop-bars. Pedestrian countdown signals are not provided. Based on current signal phasing, there are protected turn phases for the north, south, and eastbound directions, so drivers turning left from the westbound approach only are expected to yield to pedestrians. In the future No-Action and With-Action Conditions, the signal phasing would be modified such that drivers would be expected to yield to pedestrians on all approaches.

The recommendations provided in the *TIS* include altering the lane configuration (with striping only),

The following measures are recommended to improvement pedestrian safety at this intersection:.

- Install pedestrian count-down signals.

Altering the lane configuration as described in the *TIS* would be considered as part of the overall mitigation measures proposed for this intersection.

ST. MARKS PLACE/BAY STREET AND VICTORY BOULEVARD

The intersection of St. Marks Place/Bay Street and Victory Boulevard has crosswalks on all approaches with advanced stop-bars. Pedestrian count down signals are not provided, but a leading pedestrian interval (LPI) is provided for the crosswalks across Victory Boulevard. Based on current signal phasing, there are no protected turn phases, so drivers are expected to yield to pedestrians in all crosswalks.

The recommendations provided in the *TIS* include optimizing signal timing to reduce congestion, increase pedestrian and vehicle safety, and produce travel time savings.

The following measures are recommended to improvement pedestrian safety at this intersection:

- Install pedestrian count-down signals.
- Optimize signal timing as described in the TIS, in coordination with the development of traffic operation mitigation measures.

As this intersection is along a Vision Zero Priority Corridor, NYCDOT may implement other improvements to address overall pedestrian safety on Victory Boulevard.

Table 14-58: Crash Data

Intersection	Total Crashes			Fatalities			Pedestrian			Bicyclist			Combined Ped/Bike		
	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014	2012	2013	2014
Richmond Terrace and Franklin Avenue	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Richmond Terrace and Jersey Street	7	5	4	0	0	0	3	1	1	2	1	1	5	2	2
Richmond Terrace and Westervelt Avenue	0	3	0	0	0	0	0	0	0	0	1	0	0	1	0
Hamilton Avenue and Stuyvesant Place	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Richmond Terrace and Hamilton Avenue	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Wall Street and Stuyvesant Place	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0
Wall Street and Richmond Terrace	0	1	6	0	0	0	0	0	2	0	0	0	0	0	2
Richmond Terrace and Ferry Terminal (bus & parking lot)	6	3	5	0	0	0	0	0	2	0	0	0	0	0	2
Bay Street and Slosson Terrace	2	5	3	0	0	0	0	1	0	0	0	0	0	1	0
St Marks Place/Bay Street and Victory Blvd	12	6	9	1	0	0	5	2	2	1	0	2	6	2	4
Bay Street and Victory Blvd	0	1	3	0	0	0	0	0	1	0	1	0	0	1	1
Bay Street and Hannah Street	2	3	3	0	0	0	0	0	0	0	0	0	0	0	0
Front Street and Hannah Street	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Bay Street and Swan Street	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Van Duzer Street and St Julian	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bay Street and St Julian Pl	1	1	4	0	0	0	0	0	0	0	0	0	0	0	0
Bay Street and Grant Street	2	2	1	0	0	0	0	1	0	0	0	0	0	1	0
Van Duzer Street and Clinton Street	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Bay Street and Clinton Street	1	4	2	0	0	0	0	1	0	0	1	0	0	2	0
Bay Street and Baltic Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bay Street and Williams Street	1	2	0	0	0	0	0	1	0	0	0	0	0	1	0
Bay Street and Congress Street	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Bay Street and Wave Street	2	3	0	0	0	0	0	1	0	0	0	0	0	1	0
Front Street and Wave Street	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Front Street and Prospect Street	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Van Duzer and Beach Street	0	2	3	0	0	0	0	0	1	0	0	0	0	0	1
Bay Street and Water Street	1	1	0	0	0	0	0	1	0	0	0	0	0	1	0
Bay Street and Canal Street	2	3	1	0	0	0	1	2	0	0	0	0	1	2	0
Front Street and Canal Street	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1
Bay Street and Broad Street	1	1	3	0	0	0	0	0	0	0	0	0	0	0	0
Richmond Terrace and Clove Road	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Jersey Street and Brook Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brook Street and Pike Street	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0
Cebra Ave and Victory Blvd	3	8	4	0	0	0	0	3	0	0	0	0	0	3	0
Jersey Street and Victory Blvd	2	2	3	0	0	0	0	1	1	1	0	0	1	1	1
Pike Street and Victory Blvd	1	1	1	0	0	0	1	0	0	0	0	0	1	0	0
Forest Ave and Victory Blvd	3	3	2	0	0	0	1	1	0	0	0	0	1	1	0
Hudson Street and Cedar Street	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Broad Street and Cedar Street	1	1	0	0	0	0	1	1	0	0	0	0	1	1	0
Canal Street and Broad Street	3	3	5	0	0	0	1	2	1	0	0	0	1	2	1
Broad Street and Van Duzer	2	1	4	0	0	0	0	0	1	0	0	0	0	0	1
Broad Street and Targee Street	3	3	2	0	0	0	0	1	0	0	1	0	0	2	0
Vanderbilt Avenue and Tompkins Street	3	10	4	0	0	0	0	0	1	0	1	0	0	1	1
Bay Street and Vanderbilt Avenue	1	3	2	0	0	0	0	0	1	0	0	0	0	0	1
Bay Street and Greenfield Street	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bay Street and Edgewater Drive	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Bay Street and Hylan Boulevard	3	0	3	0	0	0	1	0	1	0	0	0	1	0	1
Bay Street and School Road	1	1	4	0	0	0	0	0	1	0	0	0	0	0	1
Total	**76**	**92**	**94**	**1**	**0**	**0**	**14**	**21**	**16**	**4**	**6**	**4**	**18**	**27**	**20**
Grand Total	**262**			**1**			**51**			**14**			**65**		

Note: Intersections where the total combined ped/bike crashes are highlighted denote high-crash locations.

K. PARKING

EXISTING CONDITIONS

PARKING SUPPLY AND INVENTORY

Existing parking conditions for on-street and off-street parking in the Study Area were evaluated through site visits. On-street parking regulations are shown on Figure 14-21 and summarized in Table 14-59. Parking utilization surveys were conducted for on-street parking facilities within a ¼ mile of the Study Area. While the parking supply and utilization for the Proposed Actions were considered for the entire ¼-mile radius of the Study Area, a detailed parking analyses was conducted for five subareas focused on the parking spaces that were more likely to be used by vehicle trips generated by Proposed Development Sites within those subareas. The subareas, shown on Figure 14-21, included:

- St. George/Ferry Terminal: associated with the Projected Development Sites at 55 Central Avenue and 55 Stuyvesant Place;
- Victory Boulevard/Jersey Street: associated with the Projected Development Site at the Jersey Street Garage;
- Bay Street North: associated with the Projected Development Sites on Bay Street north of Grant Street and at Stapleton;
- Bay Street South: associated with the Projected Development Sites on Bay Street south of Grant Street; and
- Canal Street: associated with the Projected Development Sites within the Canal Street corridor.

Four off-street parking facilities are located within a ¼-mile radius of the Study Area, and all are within the St. George/Ferry Terminal subarea: 55 Central Avenue, 25 Wall Street, 54 Central Avenue, and 325 St. Marks Place. The off-site parking facility located at 54 Central Avenue includes a parking garage and a municipal surface parking lot (75 spaces) associated with the Staten Island Supreme Courthouse. The redevelopment of the surface parking lot is included as part of the Proposed Actions. While the off-street parking facilities are within a ¼-mile radius of the Projected Development Sites, it was conservatively assumed that the parking demand generated by the Proposed Actions would not be accommodated within the off-street parking facilities due to their location within the St. George neighborhood, whereas the majority of the development associated with the Proposed Actions would be located south of Victory Boulevard.

Bay Street Corridor Sites 4, 6, 11, 12, 14, and 15 also include existing off-street parking spaces. Based on visual inspection of these off-street parking spaces, they are associated with the specific uses that exist on those sites, such as a car dealership and auto repair shop parking lot for customers on Projected Development Site 6, and are not available for public use. Therefore, the parking analysis assumes that the existing parking supply or demand associated with the uses on these Projected Development Sites would be eliminated as a result of the Proposed Actions.

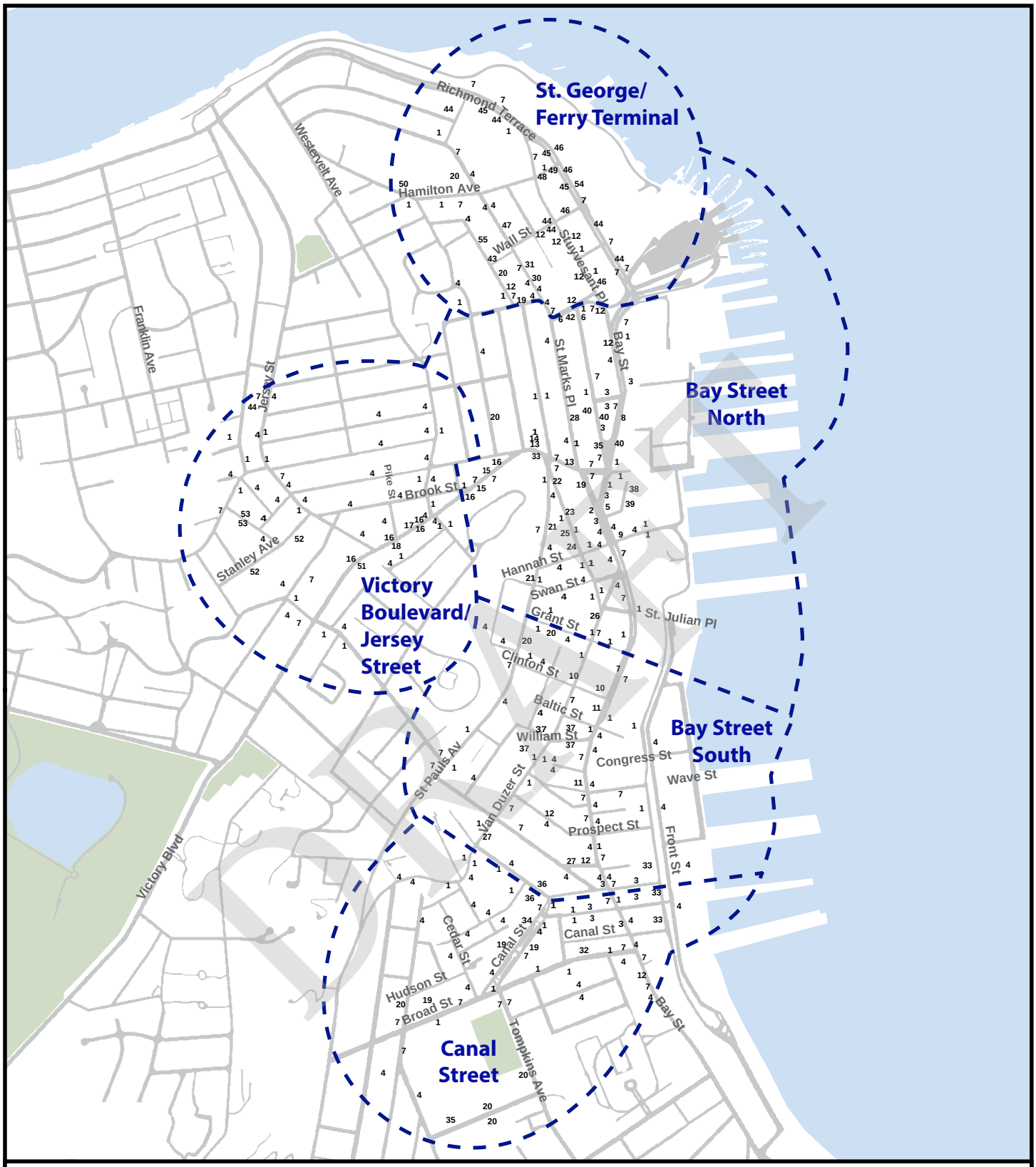


FIGURE 14-21: PARKING REGULATIONS

BAY STREET REZONING AND RELATED ACTIONS

TOMPKINSVILLE/STAPLETON STATEN ISLAND, NY

1/4 mile study area

Victory Subarea

Table 14-59
On-Street Parking Regulation Legend

Map #	Regulation
1	No Standing Anytime
2	No Parking (Street Cleaning) 12 AM - 3 AM Monday
3	2 Hour Metered Parking 8 AM - 7 PM Except Sunday
4	No Parking Anytime
5	No Parking (Street Cleaning) 3 AM - 6 AM Tuesday
6	2 Hour Metered Parking 8 AM - 6 PM, Monday - Friday
7	Bus Stop Sign - No Standing Anytime
8	Truck Loading Only 6 AM - 4 PM, Monday - Friday
9	No Standing 7 AM - 10 AM, 4 PM-7 PM Except Sunday
10	30 Minute Parking 8 AM - 7 PM Except Sunday
11	1 Hour Parking 8 AM - 4 PM Except Sunday
12	1 Hour Metered Parking 8 AM - 7 PM Except Sunday
13	No Standing 4 PM - 7 PM, Monday, Thursday, Friday
14	2 Hour Metered Parking 8 AM - 4 PM Monday - Friday, 8 AM - 7 PM Saturday
15	2 Hour Metered Parking 8 AM - 4 PM Except Sunday
16	No Standing 4 PM - 7 PM, Monday - Friday
17	1 Hour Metered Parking 8 AM - 4 PM Monday - Friday, 8 AM - 7 PM Saturday & Sunday
18	1 Hour Metered Parking 8 AM - 4 PM Monday - Friday, 8 AM - 7 PM Saturday
19	2 Hour Parking 8 AM - 7 PM Except Sunday
20	No Standing 7 AM - 4 PM School Days
21	4 Hour Muni-Meter Parking 8 AM-7 PM Except Sunday
22	No Standing 7 AM - 7 PM Except Sunday
23	4 Hour Parking 8 AM - 7 PM Including Sunday
24	No Standing 7 AM - 9 AM Monday, Thursday, Friday
25	4 Hour Muni-Meter Parking 9 AM - 7 PM Except Sunday
26	No Parking 7 AM - 7 PM Except Sunday
27	1 Hour Parking 8 AM - 7 PM Monday - Friday
28	No Standing 8 AM - 6 PM Monday - Friday
29	Administrative Parking 7 AM - 7 PM, Monday - Friday
30	No Standing Anytime Except Authorized Vehicles 8 AM -6 PM Monday, Thursday, Friday
31	US Probation Officer Vehicles
32	Back in Angle Parking Only
33	No Stopping Anytime
34	No Standing Except Truck Loadings & Unloadings 7 AM - 10 PM Except Sunday
35	Back in 90 Deg Parking Only
36	2 Hour Muni-Meter Parking 8 AM-7 PM Except Sunday
37	No Parking 8 AM - 6 PM Monday, Thursday, Friday
38	No Standing 7 AM - 9 AM Except Sunday
39	2 Hour Metered Parking 9 AM-7 PM Except Sunday
40	2 Hour Muni-Meter Parking 8 AM - 6 PM Monday, Thursday, Friday
41	No Standing 7 AM-7 PM, Monday - Friday
42	Authorized Vehicles Only 7 AM - 5 PM, Monday - Friday
43	No Standing (Street Cleaning) 11 PM 6:30 AM Including Sunday
44	1 Hour Parking 8 AM - 7 PM Except Sunday
45	1 Hour Parking 8 AM - 7 PM Including Sunday
46	No Standing Anytime Except Authorized Vehicles
47	Authorized Vehicles Only School Days 7 AM - 4 PM
48	Authorized Vehicles Only 8 AM - 6 PM Monday, Thursday, Friday
49	No Parking Anytime Except Authorized Vehicles
50	No Standing Fire Zone
51	No Standing 7 AM - 9 AM, Monday - Friday
52	No Parking 7 AM - 7 PM Except Authorized Vehicles
53	2 Hour Parking 8 AM - 4 PM Except Sunday
54	No Standing Anytime - Taxi Stand
55	No Standing 11 PM - 6:30 AM Including Sunday

EXISTING PARKING CONDITIONS

Existing on-street parking conditions in the Study Area were evaluated by performing a field inventory of parking regulations and utilization within a ¼-mile radius of the Projected Development Sites, for each subarea. Parking utilization surveys were conducted under typical weekday and Saturday conditions in June 2016 during the four peak hours as well as the weekday overnight condition, when residential parking demand is expected to be the greatest. Individual street capacities and an hourly assessment of on-street parking utilization were collected for each street in the Study Area. Table 14-60 presents a summary of the survey results, in terms of the average percentage of available on-street spaces utilized during each peak hour, by subarea.

The results indicate that within ¼-mile of the Study Area, total on-street parking utilization is 60, 70, 58, and 60 percent of available spaces during the Weekday AM, MD, PM, and overnight periods, respectively. The total on-street parking utilization was 62 percent for the Saturday MD period. The subarea with the most highly utilized on-street parking during every analysis period is the St. George/Ferry Terminal subarea, with on-street parking utilization of 70, 95, 68, and 67 percent of available spaces during the Weekday AM, MD, PM, and overnight periods, respectively, and 73 percent for the Saturday MD period.

Table 14-60
Existing On-Street Parking Utilization Summary (Subareas and Total)

2016 Existing	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD
St. George/Ferry Terminal Area Capacity	1098	1098	1098	1098	1098
St. George/Ferry Terminal Area Demand	769	1039	751	738	797
St. George/Ferry Terminal Area Available Spaces	329	59	347	360	301
St. George/Ferry Terminal Subarea Utilization	***70%***	***95%***	***68%***	***67%***	***73%***
Bay Street North Area Capacity	1319	1319	1319	1319	1319
Bay Street North Area Demand	791	1047	713	733	752
Bay Street North Area Available Spaces	528	272	606	586	567
Bay Street North Subarea Utilization	***60%***	***79%***	***54%***	***56%***	***57%***
Victory Boulevard/Jersey Street Area Capacity	1295	1295	1295	1295	1295
Victory Boulevard/Jersey Street Area Demand	706	684	708	746	719
Victory Boulevard/Jersey Street Area Available Spaces	589	611	587	549	576
Victory Boulevard/Jersey Street Subarea Utilization	***55%***	***53%***	***55%***	***58%***	***56%***
Canal Street Area Capacity	1363	1363	1363	1363	1363
Canal Street Area Demand	805	904	821	857	906
Canal Street Area Available Spaces	558	459	542	506	457
Canal Street Subarea Utilization	***59%***	***66%***	***60%***	***63%***	***66%***
Bay Street South Area Capacity	1090	1090	1090	1090	1090
Bay Street South Area Demand	610	671	556	651	652
Bay Street South Area Available Spaces	480	419	534	439	438
Bay Street South Subarea Utilization	***56%***	***62%***	***51%***	***60%***	***60%***
Total Capacity	6165	6165	6165	6165	6165
Total Demand	3681	4345	3549	3725	3826
Total Available Spaces	2484	1820	2616	2440	2339
Total Utilization	***60%***	***70%***	***58%***	***60%***	***62%***

FUTURE CONDITIONS WITHOUT THE PROPOSED ACTION

The utilization of on-street parking spaces in the Study Area is expected to increase in the No-Action Condition based on background growth, other development projects in the Study Area, and changes associated with development of the Projected Development Sites pursuant to existing zoning as described below.

- Background Growth: Future parking demands reflect annual background growth rates of 0.50 percent for the first five years and 0.25 percent for the years beyond for the streets

within the St. George area, and growth rates of 1.0 percent for the first five years and 0.5 percent for the years beyond the remaining area of Staten Island (*CEQR Technical Manual*, Table 16-4).

- Other Development Projects: Additional demand generated by other development projects was assumed to be accommodated by on-site parking for each respective development with the exception of the Lighthouse Point, New Stapleton Waterfront Development Plan, and 533 Bay Street development projects, which would experience an on-site parking shortfall at some point:
    - The *Lighthouse Point EAS* identified a parking deficiency during the Weekday MD and PM periods. Therefore, the parking shortfall was assumed to utilize available on-street parking spaces.
    - The *New Stapleton Waterfront Development Plan Tech Memo* identified a parking deficiency the Weekday AM peak hour and overnight periods. Therefore, the parking shortfall was assumed to utilize available on-street parking spaces.
    - The 533 Bay Street project would not include on-site parking. Therefore, the parking demand generated by this development project was assumed to utilize available on-street parking spaces.
- The *St. George Waterfront Redevelopment FEIS* did not identify a parking deficiency; however, 22 on-street parking spaces would be lost as part of the project frontage on Richmond Terrace. The change in on-street parking supply is reflected in the No-Action analysis.
- Parking Demand Pursuant to Existing Zoning: The redevelopment of the Projected Development Sites pursuant to current zoning would result in the addition of 481 off-street parking spaces. The weekday and Saturday parking accumulation by land use associated with the project sites in the No-Action Condition are shown on Tables 14-61 and 14-62. The total parking demand of the Projected Development Sites on a typical Weekday would peak at 286 spaces between 1:00 PM and 2:00 PM. The total parking demand on a typical Saturday would peak at 71 spaces between 1:00 PM and 2:00 PM. The parking demand that could not be accommodated on-site was assumed to increase the demand for the on-street parking spaces within the ¼-mile radius of the Study Area.

All existing off-street public parking facilities are expected to remain in the No-Action Condition, so none of the existing parking demand at those facilities would be displaced.

Table 14-61
No-Action Weekday Hourly Parking Accumulation by Land Use

	Residential[1]			Local Retail[1]			Office[1]			Community Facility[2]			Restaurant[1]			Medical Office Building[3]			Total		
	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation
Before 12			11			0			0			0			0			0			11
12-1 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
1-2 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
2-3 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
3-4 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
4-5 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
5-6 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
6-7 AM	0	0	11	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	11
7-8 AM	0	1	10	2	2	0	11	2	9	9	3	5	0	0	0	0	0	0	22	8	25
8-9 AM	0	4	6	21	21	0	124	9	124	13	7	12	2	2	0	0	0	0	160	43	142
9-10 AM	0	1	5	6	6	0	122	14	232	14	19	7	2	1	1	0	0	0	145	41	246
10-11 AM	0	1	4	19	19	0	25	19	238	11	14	4	8	2	7	0	0	0	63	55	254
11-12 PM	0	1	4	31	31	0	22	47	213	12	12	4	18	10	16	0	0	0	83	101	237
12-1 PM	1	0	4	85	85	0	90	83	220	14	10	7	46	33	28	0	0	0	236	213	260
1-2 PM	0	0	4	123	123	0	44	29	236	11	7	11	21	15	34	0	0	0	200	174	286
2-3 PM	1	0	5	133	133	0	66	76	226	18	13	17	11	11	34	0	0	0	230	234	281
3-4 PM	0	0	5	29	29	0	21	22	224	10	8	20	9	9	34	0	0	0	70	69	283
4-5 PM	1	1	5	62	62	0	14	72	167	13	18	15	9	7	36	0	0	0	99	160	223
5-6 PM	4	1	8	69	69	0	6	152	20	10	18	8	22	22	36	0	0	0	111	262	72
6-7 PM	2	1	9	58	58	0	5	24	0	14	14	7	28	16	48	0	0	0	105	113	64
7-8 PM	2	1	9	35	35	0	2	2	0	8	10	6	29	21	56	0	0	0	75	68	71
8-9 PM	1	0	10	15	15	0	0	0	0	2	9	0	6	28	35	0	0	0	25	52	45
9-10 PM	1	0	10	8	8	0	0	0	0	0	0	0	1	21	14	0	0	0	9	29	25
10-11 PM	1	0	11	2	2	0	0	0	0	0	0	0	0	11	3	0	0	0	3	14	14
11-12 PM	0	0	11	2	2	0	0	0	0	0	0	0	0	3	0	0	0	0	2	5	11

Notes:
1. New Stapleton Waterfront Development Plan Technical Memorandum (December, 2010). The peak hour temporal and directional distribution was adjusted to match factors used in trip generation.
2. Flushing Commons FEIS (2010), Table 14-37 and 14-38 for YMCA Component. The peak hour temporal and directional distribution was adjusted to match factors used in trip generation.
3. Information provided by NYCDOT via e-mail in January 2016. The peak hour temporal and directional distribution was adjusted to match factors used in trip generation.

Table 14-62
No-Action Saturday Hourly Parking Accumulation by Land Use

	Residential[1]			Local Retail[1]			Office[1]			Community Facility[2]			Restaurant[1]			Medical Office Building[1]			Total		
	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation
Before 12			11			0			0			0			0			0			11
12-1 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
1-2 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
2-3 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
3-4 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
4-5 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
5-6 AM	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
6-7 AM	0	0	11	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	11
7-8 AM	0	1	10	3	3	0	2	0	2	0	0	0	0	0	0	0	0	0	5	4	12
8-9 AM	0	2	9	8	8	0	23	2	23	7	3	4	2	0	1	0	0	0	40	15	37
9-10 AM	0	1	8	8	8	0	21	3	42	3	5	2	2	1	2	0	0	0	34	18	54
10-11 AM	0	1	7	39	39	0	4	3	43	3	5	0	4	3	4	0	0	0	51	50	54
11-12 PM	0	0	7	55	55	0	4	9	37	4	4	0	11	5	9	0	0	0	74	74	54
12-1 PM	0	0	7	124	124	0	17	14	41	5	3	2	26	19	16	0	0	0	173	161	66
1-2 PM	0	0	7	242	242	0	5	3	44	6	4	4	24	23	16	0	0	0	277	272	71
2-3 PM	1	1	8	82	82	0	17	19	42	5	5	3	16	16	16	0	0	0	121	123	69
3-4 PM	0	0	8	91	91	0	4	4	42	5	4	4	5	5	16	0	0	0	105	104	70
4-5 PM	1	1	8	91	91	0	3	15	29	3	5	3	8	6	18	0	0	0	105	118	58
5-6 PM	2	1	9	105	105	0	1	26	4	3	6	0	16	7	26	0	0	0	126	145	39
6-7 PM	1	1	9	87	87	0	1	5	0	0	0	0	21	12	35	0	0	0	110	105	45
7-8 PM	1	1	10	53	53	0	0	1	0	0	0	0	21	15	41	0	0	0	75	69	51
8-9 PM	1	0	10	22	22	0	0	0	0	0	0	0	2	21	23	0	0	0	25	43	33
9-10 PM	0	0	10	11	11	0	0	0	0	0	0	0	2	16	8	0	0	0	13	27	19
10-11 PM	0	0	11	3	3	0	0	0	0	0	0	0	0	8	0	0	0	0	3	11	11
11-12 PM	0	0	11	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	11

Notes:
1. It is assumed that Saturday temporal and directional distribution would be same as Weekday. The peak hour temporal and directional distribution was adjusted to match factors used in trip generation.
2. Flushing Commons FEIS (2010), Table 14-37 and 14-38 for YMCA Component. The peak hour temporal and directional distribution was adjusted to match factors used in trip generation.

As shown in Table 14-63, accounting for changes in parking demand in the No-Action Condition, the on-street parking utilization within ¼ mile of the Study Area is expected to increase to 70, 83, 66 and 69 percent during the Weekday AM, MD, PM, and overnight periods, respectively, and to 69 percent for the Saturday MD period. The subarea with the most highly utilized on-street parking during most analysis periods is the St. George/Ferry Terminal subarea, with on-street parking utilization of 81, 112, 76, and 74 percent of available spaces during the Weekday AM, MD, PM, and overnight periods, respectively, and 81 percent for the Saturday MD period. The St. George/Ferry Terminal and Bay Street North subareas would both experience on-street parking shortfalls during the Weekday MD, with demand exceeding available capacity by 129 and 27 vehicles, respectively.

Table 14-63
No-Action ¼-Mile On-Street Parking Utilization Summary (Subareas and Total)

2030 No-Action	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD
St. George/Ferry Terminal Area No-Action On-Street Capacity	1076	1076	1076	1076	1076
St. George/Ferry Terminal Area Existing Demand	*769*	*1039*	*751*	*738*	*797*
St. George/Ferry Terminal Area Demand from Background Growth [1]	*60*	*79*	*55*	*56*	*60*
St. George/Ferry Terminal Area No-Action Demand From Projected Development Sites [2]	*47*	*86*	*8*	*0*	*17*
St. George/Ferry Terminal Area No-Action Demand From Other Development Projects [2]	*0*	*0*	*0*	*0*	*0*
St. George/Ferry Terminal Area No-Action Total On-Street Demand	876	1205	814	794	874
St. George/Ferry Terminal Area Available Spaces	200	-129	262	282	202
St. George/Ferry Terminal Subarea: No-Action Utilization	***81%***	***112%***	***76%***	***74%***	***81%***
Bay Street North Area No-Action On-Street Capacity	1319	1319	1319	1319	1319
Bay Street North Area Existing Demand	*791*	*1047*	*713*	*733*	*752*
Bay Street North Area Demand from Background Growth [1]	*67*	*86*	*62*	*62*	*61*
Bay Street North Area No-Action Demand From Projected Development Sites [2]	*64*	*148*	*48*	*1*	*38*
Bay Street North Area No-Action Demand From Other Development Projects [2]	*0*	*66*	*79*	*0*	*10*
Bay Street North Area No-Action Total On-Street Demand	922	1346	902	796	861
Bay Street North Area Available Spaces	397	-27	417	523	458
Bay Street North Subarea: No-Action Utilization	***70%***	***102%***	***68%***	***60%***	***65%***
Victory Boulevard/Jersey Street Area No-Action On-Street Capacity	1295	1295	1295	1295	1295
Victory Boulevard/Jersey Street Area Existing Demand	*706*	*684*	*708*	*746*	*719*
Victory Boulevard/Jersey Street Area Demand from Background Growth [1]	*70*	*68*	*70*	*74*	*71*
Victory Boulevard/Jersey Street Area No-Action Demand From Projected Development Sites [2]	*0*	*0*	*0*	*0*	*0*
Victory Boulevard/Jersey Street Area No-Action Demand From Other Development Projects [2]	*0*	*0*	*0*	*0*	*0*
Victory Boulevard/Jersey Street Area No-Action Total On-Street Demand	776	752	778	820	790
Victory Boulevard/Jersey Street Area Available Spaces	519	543	517	475	505
Victory Boulevard/Jersey Street Subarea: No-Action Utilization	***60%***	***58%***	***60%***	***63%***	***61%***
Canal Street Area No-Action On-Street Capacity	1363	1363	1363	1363	1363
Canal Street Area Existing Demand	*805*	*904*	*821*	*857*	*906*
Canal Street Area Demand from Background Growth [1]	*80*	*90*	*81*	*85*	*90*
Canal Street Area No-Action Demand From Projected Development Sites [2]	*0*	*0*	*0*	*0*	*0*
Canal Street Area No-Action Demand From Other Development Projects [2]	*66*	*24*	*0*	*42*	*0*
Canal Street Area No-Action Total On-Street Demand	951	1018	902	984	996
Canal Street Area Available Spaces	412	345	461	379	367
Canal Street Subarea: No-Action Utilization	***70%***	***75%***	***66%***	***72%***	***73%***
Bay Street South Area No-Action On-Street Capacity	1090	1090	1090	1090	1090
Bay Street South Area Existing Demand	*610*	*671*	*556*	*651*	*652*
Bay Street South Area Demand from Background Growth [1]	*61*	*67*	*55*	*65*	*65*
Bay Street South Area No-Action Demand From Projected Development Sites [2]	*4*	*5*	*2*	*3*	*3*
Bay Street South Area No-Action Demand From Other Development Projects [2]	*83*	*32*	*42*	*100*	*28*
Bay Street South Area No-Action Total On-Street Demand	757	775	655	819	747
Bay Street South Area Available Spaces	333	315	435	271	343
Bay Street South Subarea: No-Action Utilization	***69%***	***71%***	***60%***	***75%***	***69%***
Total Existing Capacity	*6165*	*6165*	*6165*	*6165*	*6165*
Net Change in No-Action On-Street Parking Supply [3]	*-22*	*-22*	*-22*	*-22*	*-22*
Total No-Action On-Street Capacity	6143	6143	6143	6143	6143
Total Existing Demand	*3681*	*4345*	*3549*	*3725*	*3826*
Total Demand from Background Growth [1]	*337*	*389*	*323*	*342*	*347*
Total No-Action Demand From Projected Development Sites [2]	*115*	*239*	*58*	*4*	*57*
Total No-Action Demand From Other Development Projects [2]	*149*	*122*	*121*	*142*	*38*
Total No-Action On-Street Demand	4282	5095	4052	4213	4269
Total Available Spaces	1861	1048	2091	1930	1874
Total No-Action Utilization	***70%***	***83%***	***66%***	***69%***	***69%***

Notes:
1. Reflects annual background growth rates of 0.50 percent for the first five years and 0.25 percent for the years beyond for the intersections within the St. George area and growth rates of 1.0 percent for the first five years and 0.5 percent for the years beyond for the remaining area of Staten Island (CEQR Technical Manual, Table 16-4).
2. Excludes demand that would be accommodated on-site.
3. Reflects a loss of on-street parking spaces on Richmond Terrace (project frontage) associated with the St. George Waterfront Redevelopment FEIS.

FUTURE CONDITIONS WITH THE PROPOSED ACTION

The Proposed Actions would result in a total increase of 1,290 off-street parking spaces in the Study Area compared to the No-Action Condition, including 636 spaces along the Bay Street corridor, -16 spaces along the Canal Street Corridor, 189 spaces within the Jersey Street/Victory Boulevard City Disposition site, 138 spaces within the 54 Central Avenue City Disposition Site, and 343 spaces within the Stapleton Waterfront Phase III Projected Development Sites. The existing public off-street parking facility at the City Disposition Site at 54 Central Avenue would be redeveloped as part of the Proposed Actions during the With-Action Condition, displacing demand served by 75 off-street public parking spaces. It was assumed that this demand would be accommodated on-street during all peak periods. No new off-street public parking spaces would be provided as part of the Proposed Actions.

Tables 14-64 and 14-65 show the hourly net incremental change in parking demand for each land use as part of the Proposed Actions compared to the No-Action Condition for the Weekday and Saturday conditions, respectively. Parking demand generated by the various commercial, retail, and community facility uses that would be developed under the Proposed Actions would typically peak during the midday and evening hours, whereas residential parking demand would typically peak during the overnight period. The total parking demand of the Projected Development Sites on a typical Weekday would peak at 2,267 spaces between 10:00 PM and 11:00 PM. The total parking demand on a typical Saturday would peak at 2,235 spaces overnight between11:00 PM and 7:00 AM. The parking demand that could not be accommodated on-site was assumed to increase the demand for the on-street parking spaces within the ¼-mile radius of the Study Area.

Table 14-64
With-Action Net Incremental Weekday Hourly Parking Accumulation by Land Use

	Residential[1]			Local Retail[1]			Office[1]			Community Facility[2]			Restaurant[1]			Medical Office Building[3]			Total		
	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation
Before 12			2235			0			0			0			0			0			2235
12-1 AM	53	53	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53	53	2235
1-2 AM	26	26	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	26	2235
2-3 AM	13	13	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	2235
3-4 AM	13	13	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	2235
4-5 AM	13	13	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	2235
5-6 AM	13	13	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	2235
6-7 AM	13	13	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	14	2235
7-8 AM	25	206	2055	0	0	0	42	3	38	6	2	4	0	0	0	0	0	0	73	212	2097
8-9 AM	98	490	1663	2	2	0	276	21	294	7	4	7	7	10	-3	27	3	23	417	530	1984
9-10 AM	81	332	1411	1	1	0	298	31	562	10	14	3	5	2	1	50	25	49	445	405	2025
10-11 AM	83	237	1257	2	2	0	70	46	586	8	9	2	20	14	7	42	32	59	226	339	1911
11-12 PM	84	124	1216	3	3	0	58	109	535	8	9	2	51	17	41	42	47	54	246	310	1847
12-1 PM	128	89	1255	8	8	0	166	191	510	10	7	4	101	67	75	24	28	49	437	390	1893
1-2 PM	84	84	1255	10	10	0	96	53	552	8	5	7	34	30	79	34	40	44	266	222	1937
2-3 PM	110	79	1286	13	14	0	142	169	525	13	10	10	30	30	79	42	40	45	350	343	1945
3-4 PM	101	96	1291	1	1	0	37	44	518	7	5	12	30	29	80	36	31	51	213	206	1952
4-5 PM	242	146	1386	6	6	0	33	183	368	9	14	8	28	20	88	31	51	31	349	419	1881
5-6 PM	479	162	1704	8	8	0	8	334	42	6	12	3	60	61	88	43	47	26	604	624	1863
6-7 PM	380	208	1877	7	7	0	11	50	4	10	10	2	77	44	120	2	28	0	487	347	2003
7-8 PM	349	196	2030	4	4	0	3	7	0	6	7	1	79	57	142	0	0	0	442	271	2173
8-9 PM	164	77	2117	1	1	0	0	0	0	7	6	0	27	74	95	0	0	0	200	159	2212
9-10 PM	122	57	2183	1	1	0	0	0	0	0	0	0	3	57	41	0	0	0	126	114	2223
10-11 PM	146	68	2261	0	0	0	0	0	0	0	0	0	1	34	7	0	0	0	146	102	2267
11-12 PM	99	124	2235	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	99	132	2234

Notes:
1. New Stapleton Waterfront Development Plan Technical Memorandum (December, 2010). The peak hour temporal and directional distribution was adjusted to match factors used in trip generation.
2. Flushing Commons FEIS (2010), Table 14-37 and 14-38 for YMCA Component. The peak hour temporal and directional distribution was adjusted to match factors used in trip generation.
3. Information provided by NYCDOT via e-mail in January 2016. The peak hour temporal and directional distribution was adjusted to match factors used in trip generation.

Table 14-65
With-Action Net Incremental Saturday Hourly Parking Accumulation by Land Use

	Residential[1]			Local Retail[1]			Office[1]			Community Facility[2]			Restaurant[1]			Medical Office Building[3]			Total		
	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation	IN	OUT	Accumulation
Before 12			2235			0			0			0			0			0			2235
12-1 AM	40	40	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40	40	2235
1-2 AM	20	20	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	20	2235
2-3 AM	10	10	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	2235
3-4 AM	10	10	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	2235
4-5 AM	10	10	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	2235
5-6 AM	10	10	2235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	2235
6-7 AM	10	10	2235	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	2235
7-8 AM	20	160	2096	0	0	0	4	1	4	0	0	0	0	0	0	0	0	0	25	161	2100
8-9 AM	70	358	1807	1	1	0	52	4	52	5	2	3	4	1	4	27	3	23	159	369	1889
9-10 AM	60	253	1614	1	1	0	48	6	95	2	4	1	4	2	6	50	25	49	165	289	1765
10-11 AM	60	171	1503	4	4	0	11	7	98	2	3	0	12	8	10	42	32	59	131	225	1671
11-12 PM	61	91	1473	5	5	0	8	20	87	3	3	0	25	7	28	42	47	54	144	173	1642
12-1 PM	90	60	1503	20	20	0	29	39	77	4	2	1	72	55	45	24	28	49	238	204	1676
1-2 PM	27	27	1503	11	11	0	9	6	79	4	3	3	54	43	55	34	40	44	139	130	1684
2-3 PM	209	145	1567	11	11	0	34	41	72	3	2	4	44	44	55	42	40	45	343	283	1744
3-4 PM	76	76	1567	5	5	0	8	8	72	4	3	5	12	12	55	36	31	51	142	136	1750
4-5 PM	174	159	1582	10	10	0	8	35	45	2	3	4	20	16	60	43	46	47	256	269	1738
5-6 PM	364	132	1813	11	11	0	11	45	11	2	6	0	42	19	83	31	51	27	461	264	1935
6-7 PM	273	149	1937	7	7	0	2	11	2	0	0	0	59	36	106	2	29	0	343	233	2046
7-8 PM	237	143	2030	5	5	0	1	1	0	0	0	0	44	51	99	0	0	0	287	201	2130
8-9 PM	117	54	2093	2	2	0	0	0	0	0	0	0	21	55	65	0	0	0	140	111	2159
9-10 PM	90	40	2143	1	1	0	0	0	0	0	0	0	0	42	24	0	0	0	91	83	2167
10-11 PM	110	50	2202	0	0	0	0	0	0	0	0	0	0	21	3	0	0	0	111	72	2205
11-12 PM	74	41	2235	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	74	44	2235

Notes:
1. It is assumed that Saturday temporal and directional distribution would be same as Weekday. The peak hour temporal and directional distribution was adjusted to match factors used in trip generation.
2. Flushing Commons FEIS (2010), Table 14-37 and 14-38 for YMCA Component. The peak hour temporal and directional distribution was adjusted to match factors used in trip generation.

Table 14-66
With-Action ¼-Mile On-Street Parking Utilization Summary (Subareas and Total)

2030 With-Action	Weekday AM	Weekday MD	Weekday PM	Weekday Overnight	Saturday MD
St. George/Ferry Terminal Area No-Action On-Street Capacity	1076	1076	1076	1076	1076
St. George/Ferry Terminal Area No-Action On-Street Demand	*876*	*1205*	*814*	*794*	*874*
St. George/Ferry Terminal Area Incremental Demand from With-Action Projected Development Sites [1]	*1*	*4*	*0*	*0*	*-4*
St. George/Ferry Terminal Area With-Action Total On-Street Demand	877	1209	814	794	870
St. George/Ferry Terminal Area Available Spaces	199	-133	262	282	206
St. George/Ferry Terminal Subarea: With-Action Utilization	***82%***	***112%***	***76%***	***74%***	***81%***
Bay Street North Area No-Action On-Street Capacity	1319	1319	1319	1319	1319
Bay Street North Area No-Action On-Street Demand	*922*	*1346*	*902*	*796*	*861*
54 Central Displaced Demand	*75*	*75*	*75*	*75*	*75*
Bay Street North Area Incremental Demand from With-Action Projected Development Sites [1]	*34*	*175*	*70*	*218*	*53*
Bay Street North Area With-Action Total On-Street Demand	1030	1596	1047	1089	989
Bay Street North Area Available Spaces	289	-277	272	230	330
Bay Street North Subarea: With-Action Utilization	***78%***	***121%***	***79%***	***83%***	***75%***
Victory Boulevard/Jersey Street Area No-Action On-Street Capacity	1295	1295	1295	1295	1295
Victory Boulevard/Jersey Street Area No-Action On-Street Demand	*776*	*752*	*778*	*820*	*790*
Victory Boulevard/Jersey Street Area Incremental Demand from With-Action Projected Development Sites [1]	*0*	*0*	*0*	*0*	*0*
Victory Boulevard/Jersey Street Area With-Action Total On-Street Demand	776	752	778	820	790
Victory Boulevard/Jersey Street Area Available Spaces	519	543	517	475	505
Victory Boulevard/Jersey Street Subarea: With-Action Utilization	***60%***	***58%***	***60%***	***63%***	***61%***
Canal Street Area No-Action On-Street Capacity	1363	1363	1363	1363	1363
Canal Street Area No-Action On-Street Demand	*951*	*1018*	*902*	*984*	*996*
Canal Street Area Incremental Demand from With-Action Projected Development Sites [1]	*50*	*32*	*52*	*90*	*39*
Canal Street Area With-Action Total On-Street Demand	1001	1049	955	1074	1035
Canal Street Area Available Spaces	362	314	408	289	328
Canal Street Subarea: With-Action Utilization	***73%***	***77%***	***70%***	***79%***	***76%***
Bay Street South Area No-Action On-Street Capacity	1090	1090	1090	1090	1090
Bay Street South Area No-Action On-Street Demand	*757*	*775*	*655*	*819*	*747*
Bay Street South Area Incremental Demand from With-Action Projected Development Sites [1]	*428*	*276*	*506*	*757*	*400*
Bay Street South Area With-Action Total On-Street Demand	1186	1051	1162	1576	1147
Bay Street South Area Available Spaces	-96	39	-72	-486	-57
Bay Street South Subarea: With-Action Utilization	***109%***	***96%***	***107%***	***145%***	***105%***
Total No-Action Capacity	*6143*	*6143*	*6143*	*6143*	*6143*
Net Change in With-Action On-Street Parking Supply [2]	*0*	*0*	*0*	*0*	*0*
Total With-Action On-Street Capacity	6143	6143	6143	6143	6143
Total No-Action On-Street Demand	*4282*	*5095*	*4052*	*4213*	*4269*
Total 54 Central Displaced Demand	*75*	*75*	*75*	*75*	*75*
Total Incremental Demand from With-Action Projected Development Sites [1]	*513*	*486*	*629*	*1065*	*487*
Total With-Action On-Street Demand	4870	5657	4755	5353	4831
Total Available Spaces	1273	486	1388	790	1312
Total With-Action Utilization	***79%***	***92%***	***77%***	***87%***	***79%***

Notes:
1. Excludes demand that would be accommodated on-site.
2. Assumed no lost spaces due to project curb cuts.

As shown in **Table 14-66**, with the addition of the Proposed Actions, on-street parking within ¼ mile of the Study Area is expected to be 79, 92, 77, and 87 percent utilized during the Weekday AM, MD, PM and overnight periods, respectively, and 79 percent utilized during the Saturday MD peak period. However, at the subarea level, parking demand is expected to exceed available on-street parking for the following conditions:

- St. George/Ferry Terminal: a parking deficit of 133 parking spaces of the total 1,076 on-street spaces is expected during the Weekday MD period.
- Bay Street North: a parking deficit of 277 parking spaces of the total 1,319 on-street spaces is expected during the Weekday MD period.
- Bay Street South: a parking deficit of 96, 72, and 486 parking spaces of the total 1,090 on-street spaces is expected during the Weekday AM, Weekday PM, and Weekday overnight periods, respectively.

The *CEQR Technical Manual* identifies that parking shortfalls in Staten Island may be significant if the project's parking shortfall exceeds more than half the available on-street parking spaces within ¼ mile of the project site, while also considering proximity, availability, and extent of transit in the area, and available parking within a larger ½-mile area around the project site. The expected on-street parking deficits in the Bay Street South subarea during the Weekday AM and Weekday PM periods would be less than half the available on-street parking spaces (96 of 333 available spaces and 72 of 435 available spaces, respectively), and would therefore not be considered significant. The expected on-street parking deficits within the St. George/Ferry Terminal, Bay Street North, and Bay Street

South would be greater than half the available on-street parking spaces. However, given the proximity to multiple bus routes on Bay Street/Richmond Terrace, the Staten Island Ferry, and the SIR, and the availability of parking spaces in adjacent subareas, the expected parking deficits are not considered significant. Furthermore, as shown in Table 14-66, the total parking availability within the ¼-mile radius of the overall Study Area would be sufficient to accommodate any shortfall within a specific subarea.