Chapter 13: Transportation

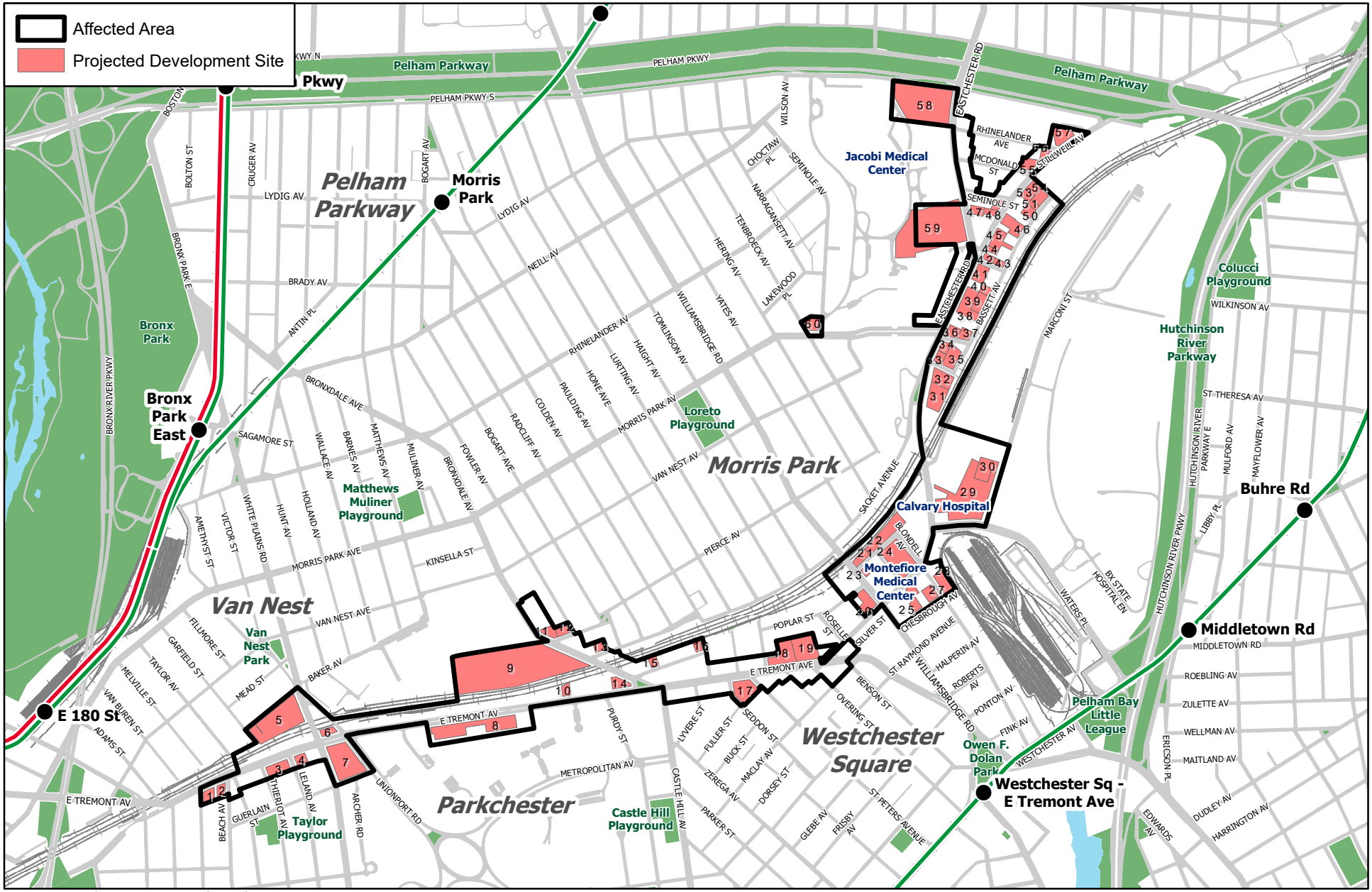
13.1. Introduction

This chapter describes the transportation characteristics and potential impacts associated with the Proposed Actions, which would affect an approximately 46-block area primarily along major corridors — East Tremont Avenue, White Plains Road, Bronxdale Avenue, Eastchester Road, and Stillwell Avenue — near the future Parkchester/Van Nest and Morris Park Metro-North stations in Bronx Community Districts 9, 10 and 11 (the "Affected Area"). The approximately 28-block area closest to the future Parkchester/Van Nest station is generally bound by Baker Avenue and Van Nest Avenue to the north, Silver Street to the east, East Tremont Avenue to the south, and St. Lawrence Avenue to the west. The approximately 18-block area closest to the future Morris Park station is generally bound by Pelham Parkway to the north, Marconi Street to the east, Williamsbridge Road to the south, and Tenbroeck Avenue to the west.

In order to assess the potential effects of the Proposed Actions, a Reasonable Worst-Case Development Scenario (RWCDS) for both the future without the Proposed Actions (No-Action) and the future with the Proposed Actions (With-Action) conditions are analyzed for an analysis year of 2033. To develop a reasonable estimate of future growth that would occur in the future with the Proposed Actions, likely development sites were identified in the RWCDS and divided into two categories: projected development sites and potential development sites. The projected development sites are those most likely to be developed within the ten-year analysis period for the Proposed Actions (i.e., by the 2033 analysis year), while potential sites are considered less likely to be developed over the same period.

The New York City Department of City Planning (DCP) identified and considered a total of 60 projected development sites for the purposes of the transportation analyses of the RWCDS (see Figure 13-1, "RWCDS Projected Development Sites"). Table 13-1, "RWCDS No-Action and With-Action Land Uses," lists the total anticipated No-Action and With-Action land uses on projected development sites in 2033 in the RWCDS. As listed in Table 13-1, in the RWCDS, the Proposed Actions would facilitate the incremental development of up to approximately 7,474 dwelling units (DUs); 1,231,972 gross square feet (gsf) of commercial uses; and 1,290,628 gsf of community facility uses (including 1,080,212 gsf for medical offices, 184,046 gsf for education, and 26,411 gsf for houses of worship); as well as a net reduction of 405,096 gsf of industrial uses.

This chapter describes the existing transportation conditions in proximity to the Affected Area. Future conditions in the year 2033 with and without the Proposed Actions are described. The increase in travel demand resulting from the Proposed Actions is projected and added to the No-Action conditions to develop the 2033 With-Action conditions. Significant adverse impacts from project-generated trips are then identified and described. Chapter 21, "Mitigation Measures" addresses practicable measures to address identified impacts.



Source: New York City Department of City Planning, 2022;
Metropolitan Transit Authority (MTA), 2018 & 2019; STV Incorporated, 2022.

N

0 0.25 0.5 Mile

Figure 13-1

RWCDS PROJECTED DEVELOPMENT SITES

Table 13-1: 2033 RWCDS No-Action and With-Action Land Uses

Land Use	No-Action Condition		With-Action Condition		Net Increment	
Residential						
Residential	239	DU	7,713	DU	7,474	DU
Commercial						
Local Retail	336,343 (288,956	gsf zsf)	638,579 (542,792	gsf zsf)	302,236 (253,836	gsf zsf)
Office	361,715 (307,458	gsf zsf)	216,019 (183,616	gsf zsf)	-145,696 (-123,842	gsf zsf)
Life Sciences	0 (0	gsf zsf)	1,620,625 (1,060,717	gsf zsf)	1,620,625 (1,060,717	gsf zsf)
Total Commercial	*1,243,250* *(1,059,827*	*gsf* *zsf)*	*2,475,221* *(1,787,125*	*gsf* *zsf)*	*1,231,971* *(727,298*	*gsf* *zsf)*
Community Facility						
Medical Office	221,577 (192,609	gsf zsf)	1,301,789 (1,106,520	gsf zsf)	1,080,212 (913,911	gsf zsf)
Education	0 (0	gsf zsf)	184,046 (156,439	gsf zsf)	184,046 (156,439	gsf zsf)
House of Worship	8,200 (6,970	gsf zsf)	34,611 (29,420	gsf zsf)	26,411 (22,450	gsf zsf)
Total Community Facility	*229,777* *(199,579*	gsf zsf)	*1,520,446* *(1,292,379*	gsf zsf)	*1,290,628* *(1,092,800*	gsf zsf)
Industrial						
Light Industrial	51,112 (43,445	gsf zsf)	0 0	gsf zsf)	-51,112 (-43,445	gsf zsf)
Warehouse	260,352 (221,299	gsf zsf)	0 0	gsf zsf)	-260,352 (-221,299	gsf zsf)
Auto Repair	93,633 (79,588	gsf zsf)	0 0	gsf zsf)	-93,633 (-79,588	gsf zsf)
Total Industrial	*405,096* *(344,332*	*gsf* *zsf)*	*0* *0*	*gsf* *zsf)*	*-405,096* *(-344,332*	*gsf* *zsf)*

Source: DCP, 2023.

13.2. Principal Conclusions

TRAFFIC

Traffic conditions were evaluated for the weekday 7:30-8:30 AM, 1-2 PM, and 4:15-5:15 PM and Saturday 2-3 PM peak hours at 56 intersections and 22 freeway segments in the traffic study area where additional traffic resulting from the Proposed Actions would be most heavily concentrated. As summarized in Table 13-2 and Table 13-3, the traffic impact analysis indicates the potential for significant adverse impacts at 38 intersections during one or more analyzed peak hours. The identification of significant adverse traffic impacts at analyzed intersections is based on criteria presented in the *CEQR Technical Manual*. Significant adverse impacts were identified to 79 lane groups at 37 intersections during the weekday AM peak hour, 63 lane groups at 29 intersections in the weekday midday peak hour, 70 lane groups at 35 intersections in the weekday PM peak hour, and at 38 lane groups at 20 intersections during the Saturday midday peak hour.

Table 13-2: Number of Impacted Intersections and Lane Groups by Peak Hour

	Peak Hour			
	Weekday AM	**Weekday Midday**	**Weekday PM**	**Saturday Midday**
Impacted Lane Groups	79	63	70	38
Impacted Intersections	37	29	35	20

Source: STV Incorporated, 2023.

Significant adverse impacts were also identified at three freeway segments in the weekday PM peak hour and one freeway segment during the Saturday midday peak hour. Chapter 21, "Mitigation Measures," discusses potential measures to mitigate these significant adverse traffic impacts.

Table 13-3: Summary of Significantly Impacted Intersections

Signalized Intersection	Peak Hour			
	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
East Tremont Avenue at Boston Road/West Farms Road	X	X	X	X
East Tremont Avenue at Devoe Avenue	X	X		
East Tremont Avenue at Morris Park Avenue	X	X	X	
East Tremont Avenue at Beach Avenue	X			
East Tremont Avenue at White Plains Road	X	X	X	X
East Tremont Avenue at Unionport Road	X	X	X	X
East Tremont Avenue at Purdy Street	X	X	X	
East Tremont Avenue at Bronxdale Avenue	X	X	X	X
East Tremont Avenue at Castle Hill Avenue	X	X	X	X
East Tremont Avenue at Seddon Street	X	X	X	
East Tremont Avenue at Overing Street		X	X	
East Tremont Avenue at Silver Street	X	X	X	X
White Plains Road at Guerlain Street	X	X	X	X
Williamsbridge Road at Pelham Parkway South Service Road	X	X	X	
Williamsbridge Road at Morris Park Avenue	X	X	X	X
Eastchester Road at Williamsbridge Road	X	X	X	X
Eastchester Road at Pelham Parkway North Service Road	X	X	X	
Eastchester Road at Pelham Parkway North Mainline	X		X	
Eastchester Road at Pelham Parkway South Mainline	X		X	
Eastchester Road at Pelham Parkway South Service Road	X		X	
Eastchester Road at Stillwell Avenue	X	X	X	X
Eastchester Road at Morris Park Avenue	X	X	X	X
Eastchester Road at Sackett Avenue	X	X	X	X
Eastchester Road at Bassett Avenue	X	X	X	X
Eastchester Road at Waters Place	X	X	X	X
Eastchester Road at Blondell Avenue	X	X	X	
Eastchester Road at Jarrett Place	X	X	X	X
Stillwell Avenue at Pelham Parkway Mainline	X			
Waters Place at Marconi Street	X	X	X	
Waters Place at Fink Avenue/Hutchinson River Parkway Exit	X	X	X	X
Waters Place at Westchester Avenue	X		X	
Bronxdale Avenue at Poplar Street	X	X	X	
Williamsbridge Road and Poplar Street	X	X	X	X
Eastchester Road at McDonald Avenue	X	X	X	X
Eastchester Road at Loomis Street	X	X	X	X
Eastchester Road and Seminole Street	X		X	X
Stillwell Avenue at McDonald Street	X		X	
Bassett Avenue at Morris Park Avenue	X		X	
Total Impacted Intersections	**37**	**29**	**35**	**20**

Source: STV Incorporated, 2023.

TRANSIT

Subway

Subway Stations

The Proposed Actions would generate a net increment of approximately 2,964 and 2,679 new subway trips during the weekday AM and PM commuter peak hours. The analysis of subway station conditions focuses on a total of four New York City Transit (NYCT) subway stations in proximity to the Affected Area where incremental demand from the Proposed Actions would exceed the 200-trip *CEQR Technical Manual* analysis threshold in one or both peak hours. These include the East 180th Street and Pelham Parkway stations on the No. 2 and 5 lines, as well as the Westchester Square and Middletown Road stations on the No. 6 line.

The results of the analysis show that all analyzed stairs and fare arrays are projected to operate at an acceptable Level of Service (LOS) C or better in both the AM and PM peak hours. Therefore, incremental demand from the Proposed Actions is not expected to result in significant adverse subway station impacts based on *CEQR Technical Manual* criteria.

Subway 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 subway route. The Affected Area is served by three MTA NYCT subway routes, including the 2, 5, and 6 lines. The Proposed Actions are expected to generate 200 or more new subway trips on the southbound No. 2, No. 5, and No. 6 lines in the AM peak hour and on the northbound No. 2, No. 5, and No. 6 lines in the PM peak hour.

Incremental demand on the No. 2 line as a result of the Proposed Actions would increase ridership by an average of 4.7 southbound trips per car in the AM and 4.1 northbound trips in the PM. Incremental demand on the No. 5 line as a result of the Proposed Actions would increase ridership by an average of 3.6 southbound trips per car in the AM and 3.0 northbound trips in the PM. Incremental demand on the No. 6 line as a result of the Proposed Actions would increase ridership by an average of 4.2 southbound trips per car in the AM and 3.6 northbound trips in the PM. Although all three train lines in the AM peak hour and the No. 2 line in the PM peak hour are projected to operate over guideline in the peak direction, they would not be considered significantly adversely impacted based on *CEQR Technical Manual* impact criteria.

Bus

The Affected Area is served by a total of fourteen MTA NYCT bus routes—the local Bx4, Bx4A, Bx8, Bx12, Bx21, Bx22, Bx24, Bx31, Bx36, Bx39, Bx40, and Bx42, as well as the Select Bus Service (SBS) on the Bx12 and the express BxM10. The Proposed Actions would generate a total of approximately 3,148 and 2,626

incremental bus trips on these routes during the weekday AM and PM peak hours, respectively. A preliminary screening assessment concluded that new demand from the Proposed Actions would exceed the 50-trip *CEQR Technical Manual* analysis threshold in the AM and/or PM peak hour at the maximum load points along the Bx4A, Bx12, Bx12-SBS, Bx21, Bx31, Bx39, Bx40, Bx42 and BxM10 routes.

Based on projected levels of bus service in the No-Action condition, the Proposed Actions would result in a capacity shortfall on southbound Bx4A, north- and southbound on the Bx21 and Bx31, east- and westbound Bx40, eastbound Bx42, and southbound BxM10 in the AM peak hour. In the PM peak hour, there would be a capacity shortfall on northbound Bx4A, southbound Bx21, northbound Bx31, east- and westbound Bx40 and Bx42, and north- and southbound BxM10. Therefore, these six bus lines would be significantly adversely impacted based on *CEQR Technical Manual* criteria (refer to Table 13-4). As described in Chapter 21, "Mitigation Measures," the significant impacts to bus service could be mitigated by increasing the number of buses in each peak hour to meet the incremental demand. The general policy of the MTA is to provide additional bus service where demand warrants, taking into account financial and operational constraints.

Table 13-4: Summary of Significant Local Bus Impacts

Peak Hour	Route	Direction	Additional Peak Hour Buses Needed
AM	Bx4A	Southbound	2
	Bx21	Northbound	13
		Southbound	8
	Bx31	Northbound	4
		Southbound	7
	Bx40	Eastbound	4
		Westbound	6
	Bx42	Eastbound	3
	BxM10	Southbound	1
PM	Bx4A	Northbound	1
	Bx21	Southbound	10
	Bx31	Northbound	9
	Bx40	Eastbound	2
		Westbound	2
	Bx42	Eastbound	3
		Westbound	1
	BxM10	Northbound	2
		Southbound	1

PEDESTRIANS

The Proposed Actions would generate a net increment of approximately 6,301 walk-only trips in the weekday AM peak hour, 7,270 in the midday peak hour, 6,992 in the PM peak hour, and 7,968 in the Saturday midday peak hour. Persons en route to and from subway station entrances and bus stops would add approximately 7,713, 6,703, 6,753 and 6,891 additional pedestrian trips to Affected Area sidewalks and crosswalks during these same periods, respectively.

Peak hour pedestrian conditions were evaluated at 100 pedestrian elements where new trips generated by projected developments are expected to be most concentrated. These elements—28 sidewalks, 39 corner areas, and 33 crosswalks—are primarily located in the immediate vicinity of the major projected development sites and along corridors connecting the Affected Area to nearby subway station entrances. As shown in Table 13-5, "Summary of Significant Pedestrian Impacts", based on *CEQR Technical Manual* criteria, 14 sidewalks and 11 crosswalks would be significantly adversely impacted by the Proposed Actions in one or more of the analyzed peak hours, and there would be no significant impacts to any corner areas. Chapter 21, "Mitigation Measures," discusses potential measures to mitigate these significant adverse pedestrian impacts.

Table 13-5: Summary of Significant Pedestrian Impacts

Corridor/Intersection	Impacted Element	Peak Hour			
		AM	Midday	PM	Saturday
Westchester Avenue between Westchester Square and Lane Avenue	North Sidewalk	X	X	X	X
East Tremont Avenue between Unionport Road and Bronxdale Avenue	North Sidewalk	X	X	X	X
East Tremont Avenue between Unionport Road and Purdy Street	South Sidewalk	X	X	X	X
Bronxdale Avenue Between East Tremont Avenue and Van Nest Avenue	West Sidewalk	X	X	X	X
Eastchester Road between Blondell Avenue and Sackett Avenue	Northeast Sidewalk	X	X		X
Eastchester Road between Waters Place and Blondell Avenue	Southeast Sidewalk	X			
Waters Place between Eastchester Road and Marconi Street	North Sidewalk	X	X	X	
Eastchester Road between Bassett Avenue and Loomis Street	East Sidewalk	X	X	X	X
Eastchester Road between Morris Park Avenue and Wilkinson Avenue	East Sidewalk	X	X	X	X
Eastchester Road between Morris Park Avenue and Stillwell Avenue	West Sidewalk	X	X	X	X
Eastchester Road Between Stillwell Avenue and Pelham Parkway South	West Sidewalk	X	X	X	X
Stillwell Avenue between McDonald Street and Wilkinson Avenue	East Sidewalk	X	X	X	X
Eastchester Road between McDonald Street and Rhinelander Avenue	East Sidewalk	X	X	X	X
Morris Park Avenue Between East 180th Street and Adams Avenue	West Sidewalk	X	X	X	X
White Plains Road at East Tremont Avenue	South Crosswalk				X
Bronxdale Avenue at East Tremont Avenue	West Crosswalk	X	X	X	
Williamsbridge Road at Eastchester Road	West Crosswalk	X	X		
Eastchester Road at Waters Place	North Crosswalk	X	X	X	X
Eastchester Road at Waters Place	East Crosswalk	X	X	X	X
Eastchester Road at Morris Park Avenue	North Crosswalk	X	X	X	X
Eastchester Road at Morris Park Avenue	East Crosswalk			X	X
Eastchester Road at Morris Park Avenue	South Crosswalk			X	
Eastchester Road at Morris Park Avenue	West Crosswalk			X	X
Eastchester Road at Stillwell Avenue	North Crosswalk		X	X	X
Eastchester Road at Stillwell Avenue	South Crosswalk	X	X	X	X

Source: STV Incorporated, 2023.

Vehicular and Pedestrian Safety

The City's Vision Zero initiative seeks to eliminate all deaths from traffic crashes, regardless of whether on foot, bicycle, or inside a motor vehicle. In this effort, New York City Department of Transportation ("NYCDOT") and New York City Police Department ("NYPD") developed a set of five plans, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough's specific challenges to pedestrian safety. These plans pinpoint the conditions and characteristics of pedestrian fatalities and severe injuries; they also identify priority corridors, intersections, and areas that disproportionately account for pedestrian fatalities and severe injuries, prioritizing them for safety interventions. The plans outline a series of recommended actions comprised of engineering, enforcement, and education measures that intend to alter the physical and behavioral conditions on City streets that can lead to pedestrian fatality and injury. The Affected Area includes Eastchester Road at Waters Place, which has been identified as a NYCDOT Vision Zero Priority Intersection. East Tremont Avenue, Eastchester Road, and White Plains Road are Vision Zero Priority Corridors.

Crash data for the traffic and pedestrian study area intersections were obtained from the NYCDOT for the three-year reporting period between January 1, 2017, and December 31, 2019. During the three-year reporting period, a total of 2,884 crashes occurred, of which 182 were pedestrian-related crashes, and 32 were bicycle-related crashes. A high crash location is defined by the *CEQR Technical Manual* as a location identified along a Vision Zero corridor/intersection or with five or more pedestrian/bicyclist injury crashes in any consecutive 12 months of the most recent 3-year period for which data is available. Three intersections in the traffic study area would be considered high-crash intersections, the Eastchester Road intersections with Waters Place and with Williamsbridge Road, as well as the intersection of Waters Place and Fink Avenue. These intersections are listed in Table 13-6, "Summary of High Crash Locations 2017-2019."

Table 13-6: Summary of High Crash Locations 2017-2019

Intersection	Pedestrian Injury Crashes			Bicycle Injury Crashes			Total Crashes (Reportable + Non-Reportable)		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
Eastchester Rd / Waters Pl	2	3	6	0	0	1	25	26	19
Eastchester Rd / Williamsbridge Rd	1	4	2	0	0	1	11	14	23
Waters Place / Fink Avenue	1	2	6	1	1	0	31	28	36

Source: STV Incorporated, 2023.

PARKING

The parking analyses document changes in the parking supply and utilization within a ¼-mile and ½-mile of the Affected Area under both No-Action and With-Action conditions. Under the With-Action conditions, it is assumed that a total of 5,973 parking spaces would be provided on the Affected Area. The total anticipated project-generated weekday demand of approximately 5,830 vehicles during the day and 3,797 during the overnight would exceed on-site supply and excess demand would have to be accommodated in the parking study area surrounding the Affected Area. During the weekday midday period, this excess demand would result in a shortfall of 2,134 spaces within the ¼-mile radius of the Affected Area. During the overnight period, excess demand would result in a shortfall of 1,446 spaces in the study area. In addition, the total anticipated project-generated Saturday demand of approximately 4,352 vehicles during the day would exceed on-site supply and the excess demand would have to be accommodated in the parking study area surrounding the Affected Area. During the Saturday midday period, the excess demand would also result in a shortfall of 1,289 spaces in the study area. As a result, the Affected Area is expected to result in a significant parking shortfall per *CEQR Technical Manual* guidance. While the shortfall of parking spaces is considered significant, per the *CEQR Technical Manual*, a significant shortfall is not considered a significant adverse impact.

13.3. Preliminary Analysis Methodology

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

13.4. Level 1 Screening Assessment

A Level 1 trip generation screening assessment is conducted to estimate the numbers of person and vehicle trips by mode expected to be generated by the Proposed Project during the weekday AM, midday, and PM, and Saturday midday peak hours. These estimates are 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 also provided for the RWCDS.

TRANSPORTATION PLANNING FACTORS

The preliminary transportation planning factors proposed for use in forecasting travel demand for the Proposed Project (expressed as land uses) are summarized in Table 13-7, "Transportation Planning Factors". The trip generation rates, temporal distributions, modal splits, vehicle occupancies, and truck trip factors for each of the land uses were primarily based on those cited in the *CEQR Technical Manual*, 2015-2019 American Community Survey ("ACS") Census data, 2012-2016 Census Transportation Planning Products, or recent NYCDOT trip generation survey data. Also, factors developed for recent environmental reviews, including the *East New York Rezoning Final Environmental Impact Statement*

(FEIS)(2016), Jerome Avenue Rezoning FEIS (2017), and Brooklyn Navy Yard Environmental Assessment Statement (EAS)(2018) were utilized to obtain the trip generation rates, temporal distributions, modal splits, vehicle occupancies, and truck trip factors for certain land uses. Factors are shown for the weekday AM and PM peak hours (typical peak periods for commuter travel demand) and the weekday and Saturday midday (typical peak periods for retail demand). These transportation planning factors were developed in consultation with NYCDOT during preparation of the Transportation Planning Factors technical memorandum, which is provided in Appendix F.

Table 13-7: Transportation Planning Factors

Land Use	Residential	Local Retail	Office	Warehouse	Medical Office	Light Industrial	Life Science
Trip Generation	(1)	(1)	(1)	(2)	(1,8)	(5)	(13)
Weekday	8.180	329	18.0	2.36	74.6	14.7	6.98
Saturday	9.08	358	3.9	0.20	37.0	2.2	1.43
	per DU	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf
Temporal Distribution	(2)	(2)	(2)	(2)	(1)	(10)	(13)
AM	9.0%	5.0%	12.0%	10.0%	11.0%	13.0%	13.0%
MD	6.0%	8.0%	11.0%	9.0%	12.6%	10.0%	10.0%
PM	8.5%	11.0%	11.0%	11.0%	8.5%	14.0%	10.0%
Sat MD	8.0%	12.0%	14.0%	33.0%	17.0%	10.0%	11.0%
		(6)	(3)				(3)
Modal Splits	(3)	AM/MD/PM SAT	AM/PM/SAT MD	(7)	(9)	(7)	AM/PM/SAT MD
Auto	19.3%	11.0% 8.0%	37.0% 2.0%	62.7%	26.0%	62.7%	37.0% 2.0%
Taxi	1.8%	0.0% 0.0%	2.0% 1.0%	0.7%	10.0%	0.7%	2.0% 1.0%
Subway/Railroad	52.1%	4.0% 7.0%	21.5% 7.0%	11.4%	14.0%	11.4%	21.5% 7.0%
Bus	15.4%	3.0% 4.0%	21.5% 7.0%	14.4%	23.0%	14.4%	21.5% 7.0%
School Bus	0.0%	0.0% 0.0%	0.0% 0.0%	0.0%	0.0%	0.0%	0.0% 0.0%
Walk/Other	11.4%	82.0% 81.0%	18.0% 83.0%	10.8%	27.0%	10.8%	18.0% 83.0%
	(2)	(1)	(1)	(2)	(9)	(10)	(13)
In/Out Splits	In Out	In Out	In Out	In Out	In Out	In Out	In Out
AM	22% 78%	53% 47%	89% 11%	77% 23%	62% 38%	88% 12%	95% 5%
MD	50% 50%	50% 50%	48% 52%	53% 47%	47% 53%	50% 50%	50% 50%
PM	63% 37%	50% 50%	17% 83%	27% 73%	35% 65%	12% 88%	10% 90%
Sat MD	51% 49%	55% 45%	50% 50%	64% 36%	49% 51%	50% 50%	50% 50%
	(4,5)						
Vehicle Occupancy	AM/PM MD/Sat	(2)	(5,7)	(2)	(9)	(7,10)	(13)
Auto	1.12 1.57	2.10	1.08	1.08	1.60	1.08	1.08
Taxi	1.3 1.82	2.10	1.2	1.40	1.60	1.40	1.30
School Bus							
Truck Trip Generation	(1)	(1)	(1)	(2)	(5)	(10)	(13)
Weekday	0.06	0.35	0.32	0.91	0.29	0.52	0.32
Saturday	0.02	0.04	0.01	0.08	0.29	0.03	0.01
	per DU	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf	per 1,000 sf
Temporal Distribution	(1)	(1)	(1)	(2)	(5)	(10)	(13)
AM	12.0%	8.0%	10.0%	9.9%	3.0%	12.0%	10.0%
MD	9.0%	11.0%	11.0%	8.0%	11.0%	9.0%	11.0%
PM	2.0%	2.0%	2.0%	7.0%	1.0%	2.0%	2.0%
Saturday	9.0%	11.0%	11.0%	28.0%	0.0%	9.0%	11.0%
In/Out Splits	In Out	In Out	In Out	In Out	In Out	In Out	In Out
AM/MD/PM/Sat	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%

Table 13-7: Transportation Planning Factors (cont.)

Land Use	PS/IS School (Grade K-4 Student)	Parents (Pre-K - Grade 5)	PS/IS School Staff	Auto Repair	House of Worship	STEAM Center (student)	STEAM Center (staff)
Trip Generation	(1)	(1)	(1)	(5)	(5)	(14)	(14)
Weekday	2	4	2	19.42	19.18	2.00	2.00
Saturday	0	0	0	19.42	21.83	0.00	0.00
	per Student	per Parents	per Staff	per 1,000 sf	per 1,000 sf	per student	per staff
Temporal Distribution	(1)	(1)	(1)	(5)	(5)	(14)	(14)
AM	49.5%	49.5%	40.0%	13.2%	7.9%	25.0%	40.0%
MD	49.5%	49.5%	40.0%	11.0%	4.0%	50.0%	0.0%
PM	0.0%	0.0%	0.0%	14.2%	7.2%	25.0%	40.0%
Sat MD	0.0%	0.0%	0.0%	10.7%	15.8%	0.0%	0.0%
						(14)	
Modal Splits	(15)	(12)	(7)	(5)	(5)	AM/PM Midday	(14)
Auto	34.0%	0.0%	62.7%	85.0%	5.0%	15.0% 0.0%	31.0%
Taxi	0.0%	0.0%	0.7%	5.0%	1.0%	0.0% 0.0%	1.0%
Subway/Railroad	3.0%	0.0%	11.4%	1.0%	3.0%	40.0% 0.0%	46.0%
Bus	3.0%	15.0%	14.4%	1.0%	6.0%	20.0% 0.0%	15.0%
School Bus	8.0%	0.0%	0.0%	0.0%	0.0%	0.0% 100.0%	0.0%
Walk/Other	52.0%	85.0%	10.8%	8.0%	85.0%	25.0% 0.0%	7.0%
	(1)	(1)	(1)	(5)	(5)	(14)	(14)
In/Out Splits	In Out	In Out	In Out	In Out	In Out	In Out	In Out
AM	100% 0%	50% 50%	100% 0%	65% 35%	54% 46%	100% 0%	100% 0%
MD	0% 100%	50% 50%	0% 100%	50% 50%	50% 50%	50% 50%	50% 50%
PM	0% 0%	0% 0%	0% 0%	50% 50%	52% 48%	0% 100%	0% 100%
Sat MD	0% 0%	0% 0%	0% 0%	50% 50%	71% 29%	0% 100%	0% 100%
Vehicle Occupancy	(15)		(5)	(5)	(5)	(14)	(14)
Auto	1.30	N/A	1.08	1.30	1.65	1.75	1.10
Taxi	1.30	N/A	1.00	1.30	1.40	1.75	1.10
School Bus	35					20	
Truck Trip Generation	(5)			(5)	(5)	(14)	
Weekday	0.03	N/A	N/A	0.89	0.29	0.03	N/A
Saturday	0.03	N/A	N/A	0.89	0.29	0.00	N/A
	per Student	per Parents	per Staff	per 1,000 sf	per 1,000 sf	per student	per Parents
Temporal Distribution	(5)			(5)	(5)	(14)	
AM	9.6%	N/A	N/A	14.0%	9.6%	9.6%	N/A
MD	11.0%	N/A	N/A	9.0%	11.0%	11.0%	N/A
PM	1.0%	N/A	N/A	1.0%	1.0%	1.0%	N/A
Saturday	0.0%	N/A	N/A	0.0%	0.0%	0.0%	N/A
In/Out Splits	In Out	In Out	In Out	In Out	In Out	In Out	In Out
AM/MD/PM/Sat	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%	50.0% 50.0%

Table 13-7: Transportation Planning Factors (cont.)

Notes:

(1) Based on data from *City Environmental Quality Review (CEQR) Technical Manual,* 2021.
(2) Based on NYCDOT recent trip generation survey data and the latest *ITE Trip Generation Manual.*
(3) Based on NYCDOT recommended modal split from previously approved EIS in the Bronx.
(4) Based on American Community Survey journey-to-work 5-Year (2015-2019) data for Bronx Census Tracts 200, 204, 210.01, 216.01, 216.02, 218, 238, 240, 244, 256, 284, and 296.
(5) Based on data from the *East New York Rezoning Proposal FEIS,* 2016.
(6) Based on NYCDOT citywide survey data for local retail mode choice.
(7) Based on AASHTO CTPP reverse journey-to-work 5-Year (2012-2016) data for Bronx Census Tracts 200, 204, 210.01, 216.01, 216.02, 218, 238, 240, 244, 256, 284, and 296.
(8) For medical offices larger than 15,000 sf, the weekday trip generation should be determined using the equation: 66.626x+141.77(x=size of gsf in 1,000 sf).
(9) Based on NYCDOT's Survey for Medical Office.
(10) Based on data from the *Jerome Avenue Rezoning FEIS,* 2017.
(11) The number of students is established from the square footage of the school size to student ratio based on NYC School Construction Authority studies.
(12) The modal split of the school for parents is based on a proposed primary school at 160 Van Cortlandt Park South in the Bronx.
(13) Based on NYCDOT provided rates from survey of NYC research laboratory facility.
(14) Based on data from the *Brooklyn Navy Yard EAS,* 2018.
(15) Based on data provided by NYCDOT. Student auto and school bus trips are expected to make a complete in and out trip cycle in the peak hour.

Source: STV Incorporated, 2023.

TRAVEL DEMAND FORECAST

The net incremental change in person and vehicle trips expected to result from the Proposed Actions by the 2033 analysis year is derived based on the net change in land uses shown in Table 13-1 and the transportation planning factors listed in Table 13-7. Table 13-8, "RWCDS Travel Demand Forecast," shows an estimate of the net incremental change in peak hour person and vehicle trips, respectively, (compared to the No-Action conditions) that would occur in 2033 with implementation of the Proposed Actions. As listed in Table 13-8, in the RWCDS the Proposed Actions would be expected to generate a net increase of approximately 18,945 person trips in the weekday AM peak hour, 19,888 person trips in the weekday midday, 17,724 person trips in the weekday PM peak hour, and 18,759 person trips in the Saturday midday peak hour. These person trips can be translated into modal trip "types" for the entire study area as follows:

- Peak hour vehicle trips (including auto, truck, and taxi trips balanced to reflect that some taxis arrive or depart empty) would be expected to result in additional trips – approximately 4,327, 4,217, 3,177, and 2,811 vehicle trips ("in" and "out" trips, combined) in the weekday AM, midday, PM, and Saturday midday peak hours, respectively.
- Peak hour subway or railroad trips would increase by a net total of approximately 4,565, 3,633, 4,127, and 4,232 in the weekday AM, midday, PM, and Saturday midday peak hours, respectively.
- Peak hour bus trips would increase by a net total of approximately 3,148, 3,070, 2,626, and 2,659 in the weekday AM, midday, PM, and Saturday midday peak hours, respectively.
- Walk trips would increase by approximately 6,301, 7,270, 6,992, and 7,968 trips during the respective weekday AM, midday, PM, and Saturday midday peak hours.

The Affected Area is not currently served by a commuter railroad. However, the planned Metro-North service to the Affected Area will introduce two new stations within a convenient walking distance of the projected development sites.

Table 13-8: RWCDS Travel Demand Forecast

Land Use	Residential		Local Retail		Office		Warehouse		Medical Office		Light Industrial		Life Science	
Size/Units	7,474 DU		302 ksf		-146 ksf		-260 ksf		1,080 ksf		-51 ksf		1,621 ksf	
Peak Hour Trips:														
AM	5,502		2,486		-315		-61		7,990		-98		1,471	
MD	3,668		3,977		-288		-55		9,152		-75		1,131	
PM	5,196		5,469		-288		-68		6,174		-105		1,131	
Sat MD	5,429		6,492		-80		-17		6,795		-11		255	
Person Trips:														
AM	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	234	828	145	129	-104	-13	-30	-9	1,288	789	-54	-7	484	60
Taxi	22	77	0	0	-6	-1	0	0	495	304	-1	0	26	3
Subway/Railroad	631	2,236	53	47	-60	-7	-5	-2	694	425	-10	-1	281	35
Bus	186	661	40	35	-60	-7	-7	-2	1,139	698	-12	-2	281	35
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk/Other	138	489	1,080	958	-50	-6	-5	-2	1,338	820	-9	-1	236	29
Total	**1,210**	**4,292**	**1,318**	**1,168**	**-280**	**-35**	**-47**	**-14**	**4,954**	**3,036**	**-86**	**-12**	**1,309**	**162**
MD	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	354	354	219	219	-3	-3	-18	-16	1,118	1,261	-24	-24	205	213
Taxi	33	33	0	0	-1	-2	0	0	430	485	0	0	11	12
Subway/Railroad	956	956	80	80	-10	-11	-3	-3	602	679	-4	-4	119	124
Bus	282	282	60	60	-10	-11	-4	-4	989	1,116	-5	-5	119	124
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk/Other	209	209	1,631	1,631	-115	-125	-3	-3	1,161	1,310	-4	-4	100	104
Total	**1,834**	**1,834**	**1,989**	**1,989**	**-138**	**-150**	**-29**	**-26**	**4,301**	**4,851**	**-38**	**-38**	**554**	**577**
PM	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	632	371	301	301	-18	-89	-11	-31	562	1,043	-8	-58	96	322
Taxi	59	35	0	0	-1	-5	0	0	216	401	0	-1	5	17
Subway/Railroad	1,706	1,002	109	109	-11	-51	-2	-6	303	562	-1	-11	56	187
Bus	504	296	82	82	-11	-51	-3	-7	497	923	-2	-13	56	187
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk/Other	373	219	2,242	2,242	-9	-43	-2	-5	583	1,084	-1	-10	47	157
Total	**3,274**	**1,923**	**2,734**	**2,734**	**-49**	**-239**	**-18**	**-49**	**2,161**	**4,013**	**-13**	**-93**	**260**	**871**
Saturday	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	534	513	286	234	-15	-15	-7	-4	866	901	-4	-4	4	1
Taxi	50	48	0	0	-1	-1	0	0	333	347	0	0	2	1
Subway/Railroad	1,443	1,386	250	204	-9	-9	-1	-1	466	485	-1	-1	13	4
Bus	426	410	143	117	-9	-9	-2	-1	766	797	-1	-1	13	4
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk/Other	316	303	2,892	2,366	-7	-7	-1	-1	899	936	-1	-1	159	53
Total	**2,769**	**2,660**	**3,571**	**2,921**	**-40**	**-40**	**-11**	**-6**	**3,329**	**3,465**	**-6**	**-6**	**191**	**64**
Vehicle Trips:														
AM	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	209	740	69	61	-96	-12	-27	-8	805	493	-50	-7	448	55
Taxi	17	59	0	0	-5	-1	0	0	310	190	0	0	22	3
Taxi Balanced	76	76	0	0	-5	-5	0	0	499	499	0	0	25	25
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck	27	27	4	4	-2	-2	-12	-12	5	5	-2	-2	26	26
Total	**312**	**843**	**73**	**65**	**-104**	**-19**	**-40**	**-20**	**1,309**	**997**	**-52**	**-9**	**499**	**106**
MD	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	226	226	104	104	-3	-3	-17	-15	699	788	-22	-22	190	198
Taxi	18	18	0	0	-1	-1	0	0	269	303	0	0	9	10
Taxi Balanced	36	36	0	0	-2	-2	0	0	572	572	0	0	19	19
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck	20	20	6	6	-3	-3	-9	-9	17	17	-1	-1	29	29
Total	**282**	**282**	**110**	**110**	**-8**	**-8**	**-27**	**-25**	**1,288**	**1,377**	**-23**	**-23**	**237**	**245**
PM	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	564	331	143	143	-17	-82	-11	-29	351	652	-7	-54	89	298
Taxi	45	27	0	0	-1	-4	0	0	135	251	0	0	4	15
Taxi Balanced	72	72	0	0	-5	-5	0	0	386	386	-1	-1	19	19
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck	4	4	1	1	0	0	-8	-8	2	2	0	0	5	5
Total	**641**	**408**	**144**	**144**	**-22**	**-87**	**-19**	**-37**	**739**	**1,040**	**-8**	**-55**	**113**	**322**
Saturday	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	341	327	136	111	-14	-14	-6	-4	541	563	-3	-3	4	1
Taxi	27	26	0	0	-1	-1	0	0	208	217	0	0	2	1
Taxi Balanced	54	54	0	0	-1	-1	0	0	425	425	0	0	2	2
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck	7	7	1	1	0	0	-3	-3	0	0	0	0	1	1
Total	**401**	**388**	**137**	**112**	**-15**	**-15**	**-9**	**-7**	**966**	**988**	**-3**	**-3**	**7**	**4**

Table 13-8: RWCDS Travel Demand Forecast (cont.)

Land Use	PS/IS School (Pre-K - Grade 5)		Parents (Pre-K - Grade 5)		PS/IS School Staff		Auto Repair		House of Worship		STEAM Center (student)		STEAM Center (staff)		**Total**	
Size/Units	888 students		396 parents		89 staff		-94 ksf		26 ksf		824 students		31 staff			
Peak Hour Trips:																
AM	879		784		71		-240		40		412		25		18,945	
MD	879		784		71		-200		20		824		0		19,888	
PM	0		0		0		-258		36		412		25		17,724	
Sat MD	0		0		0		-195		91		0		0		18,759	
Person Trips:																
AM	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	299	0	0	0	45	0	-133	-71	1	1	62	0	8	0	2,245	1,707
Taxi	0	0	0	0	0	0	-8	-4	0	0	0	0	0	0	530	379
Subway/Railroad	26	0	20	20	8	0	-2	-1	1	1	165	0	11	0	1,813	2,752
Bus	26	0	20	20	10	0	-2	-1	1	1	82	0	4	0	1,710	1,438
School Bus	70	0	0	0	0	0	0	0	0	0	0	0	0	0	70	0
Walk/Other	457	0	352	352	8	0	-12	-7	18	16	103	0	2	0	3,653	2,648
Total	**879**	**0**	**392**	**392**	**71**	**0**	**-156**	**-84**	**22**	**18**	**412**	**0**	**25**	**0**	**10,021**	**8,924**
MD	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	0	299	0	0	0	45	-85	-85	1	1	0	0	0	0	1,767	2,263
Taxi	0	0	0	0	0	0	-5	-5	0	0	0	0	0	0	467	523
Subway/Railroad	0	26	20	20	0	8	-1	-1	0	0	0	0	0	0	1,759	1,874
Bus	0	26	20	20	0	10	-1	-1	1	1	0	0	0	0	1,451	1,619
School Bus	0	70	0	0	0	0	0	0	0	0	412	412	0	0	412	482
Walk/Other	0	457	352	352	0	8	-8	-8	9	9	0	0	0	0	3,331	3,939
Total	**0**	**879**	**392**	**392**	**0**	**71**	**-100**	**-100**	**10**	**10**	**412**	**412**	**0**	**0**	**9,187**	**10,701**
PM	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	0	0	0	0	0	0	-110	-110	1	1	0	62	0	8	1,444	1,821
Taxi	0	0	0	0	0	0	-6	-6	0	0	0	0	0	0	273	442
Subway/Railroad	0	0	0	0	0	0	-1	-1	1	1	0	165	0	11	2,159	1,968
Bus	0	0	0	0	0	0	-1	-1	1	1	0	82	0	4	1,124	1,502
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk/Other	0	0	0	0	0	0	-10	-10	16	15	0	103	0	2	3,239	3,753
Total	**0**	**0**	**0**	**0**	**0**	**0**	**-129**	**-129**	**19**	**18**	**0**	**412**	**0**	**25**	**8,239**	**9,485**
Saturday	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	0	0	0	0	0	0	-83	-83	3	1	0	0	0	0	1,585	1,546
Taxi	0	0	0	0	0	0	-5	-5	1	0	0	0	0	0	380	390
Subway/Railroad	0	0	0	0	0	0	-1	-1	2	1	0	0	0	0	2,162	2,070
Bus	0	0	0	0	0	0	-1	-1	4	2	0	0	0	0	1,340	1,318
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk/Other	0	0	0	0	0	0	-8	-8	55	22	0	0	0	0	4,304	3,664
Total	**0**	**0**	**0**	**0**	**0**	**0**	**-97**	**-97**	**65**	**26**	**0**	**0**	**0**	**0**	**9,771**	**8,988**
Vehicle Trips:																
AM	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	230	230	--	--	41	0	-102	-55	1	1	35	0	7	0	1,570	1,498
Taxi	0	0	--	--	0	0	-6	-3	0	0	0	0	0	0	338	248
Taxi Balanced	0	0	0	0	0	0	-9	-9	0	0	0	0	0	0	586	586
School Bus	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Truck	1	1	--	--	--	--	-6	-6	0	0	0	0	0	0	42	42
Total	**233**	**233**	**0**	**0**	**42**	**0**	**-117**	**-70**	**1**	**1**	**35**	**0**	**7**	**0**	**2,199**	**2,128**
MD	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	230	230	--	--	0	41	-65	-65	0	0	0	0	0	0	1,342	1,482
Taxi	0	0	--	--	0	0	-4	-4	0	0	0	0	0	0	291	326
Taxi Balanced	0	0	0	0	0	0	-8	-8	0	0	0	0	0	0	617	617
School Bus	2	2	0	0	0	0	0	0	0	0	21	21	0	0	23	23
Truck	1	1	--	--	--	--	-4	-4	0	0	0	0	0	0	57	57
Total	**233**	**233**	**0**	**0**	**0**	**42**	**-77**	**-77**	**1**	**1**	**21**	**21**	**0**	**0**	**2,038**	**2,178**
PM	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	0	0	--	--	0	0	-84	-84	1	1	0	35	0	7	1,029	1,219
Taxi	0	0	--	--	0	0	-5	-5	0	0	0	0	0	0	179	283
Taxi Balanced	0	0	0	0	0	0	-10	-10	0	0	0	0	0	0	462	462
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck	0	0	--	--	--	--	0	0	0	0	0	0	0	0	3	3
Total	**0**	**0**	**0**	**0**	**0**	**0**	**-95**	**-95**	**1**	**1**	**0**	**35**	**0**	**7**	**1,494**	**1,684**
Saturday	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**	**In**	**Out**
Auto	0	0	--	--	0	0	-64	-64	2	1	0	0	0	0	936	920
Taxi	0	0	--	--	0	0	-4	-4	0	0	0	0	0	0	233	239
Taxi Balanced	0	0	0	0	0	0	-7	-7	1	1	0	0	0	0	472	472
School Bus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Truck	0	0	--	--	--	--	0	0	0	0	0	0	0	0	5	5
Total	**0**	**0**	**0**	**0**	**0**	**0**	**-71**	**-71**	**3**	**1**	**0**	**0**	**0**	**0**	**1,414**	**1,397**

Source: STV Incorporated, 2023.

Table 13-9, "RWCDS Net Incremental Vehicle Trips by Projected Development Site," presents the net incremental change in peak hour vehicle trips (auto, taxi, and truck) that would be generated by each individual projected development site during the weekday AM, midday, PM, and Saturday midday peak hours. Overall, Site 24 would generate the greatest number of new vehicle trips, with up to 1,087 incremental vehicle trips per hour. Sites 9 and 22 would generate the next highest number of incremental trips, with up to 751 and 670 vehicle trips per hour, respectively. There would be net decrease in vehicle trips during one or more peak hours at approximately 17 sites, primarily due to the reduction in office, auto repair, warehouse, and light industrial uses on these sites in the RWCDS compared to the No-Action condition.

Table 13-9: RWCDS Net Incremental Vehicle Trips by Development Site

Site	Weekday Peak Hour			Saturday Peak Hour
	AM	MD	PM	
1	-9	-7	-5	-3
2	6	3	6	4
3	28	18	30	24
4	27	29	20	22
5	73	48	79	62
6	4	6	8	7
7	66	33	60	45
8	96	70	112	89
9	751	622	222	203
10	5	3	5	4
11	6	7	11	9
12	7	3	6	5
13	-3	-4	-3	-2
14	3	3	8	7
15	5	2	4	3
16	5	2	4	3
17	-30	-33	-9	-12
18	23	10	20	14
19	37	21	35	30
20	20	18	27	22
21	142	164	109	118
22	568	670	436	489
23	6	4	7	6
24	861	1,087	653	787
25	6	3	5	4
26	-1	1	-1	1
27	-68	-85	-52	-56

Table 13-9: RWCDS Net Incremental Vehicle Trips by Development Site (cont.)

Site	Weekday Peak Hour			Saturday Peak Hour
	AM	MD	PM	
28	15	7	13	10
29	295	208	166	-55
30	403	495	308	358
31	26	17	34	28
32	242	280	186	203
33	-25	-35	-18	-19
34	12	10	15	12
35	-48	-70	-22	-34
36	36	9	35	13
37	-23	-42	-16	-23
38	47	27	41	29
39	11	2	9	14
40	-3	-5	-4	2
41	17	20	25	24
42	21	2	19	5
43	0	0	2	2
44	-9	-7	-8	-1
45	-6	-4	0	11
46	33	21	35	27
47	14	12	11	7
48	-5	-3	-3	-1
49	-3	0	0	8
50	12	6	11	9
51	-5	-6	-6	-4
52	18	15	23	19
53	12	9	15	12
54	1	2	4	14
55	-9	-7	-6	-4
56	-7	-4	-4	-3
57	17	18	27	25
58	317	267	230	36
59	140	101	140	75
60	150	178	115	127

Source: STV Incorporated, 2023.

Table 13-10, "Summary of Net Incremental Trips Generated in the RWCDS," summarizes the number of additional trips that would be generated by the Proposed Actions during the weekday AM, midday, PM, and Saturday midday peak hours by various modes of travel. Because these numbers of peak hour trips would exceed the *CEQR Technical Manual* analysis thresholds for vehicular traffic, transit, and pedestrians, a Level 2 screening assessment is appropriate to identify specific locations where additional detailed analyses may be warranted.

Table 13-10: Summary of Net Incremental Trips Generated in the RWCDS

Mode/Description	Trip Type	Weekday AM	Weekday Midday	Weekday PM	Saturday Midday
Auto / Taxi / Truck	Vehicle	4,327	4,217	3,177	2,811
Subway / Railroad	Person	4,565	3,633	4,127	4,232
Local Bus	Person	3,148	3,070	2,626	2,659
Walk / Other	Person	6,301	7,270	6,992	7,968

Source: STV Incorporated, 2023.

13.5. Level 2 Screening Assessment

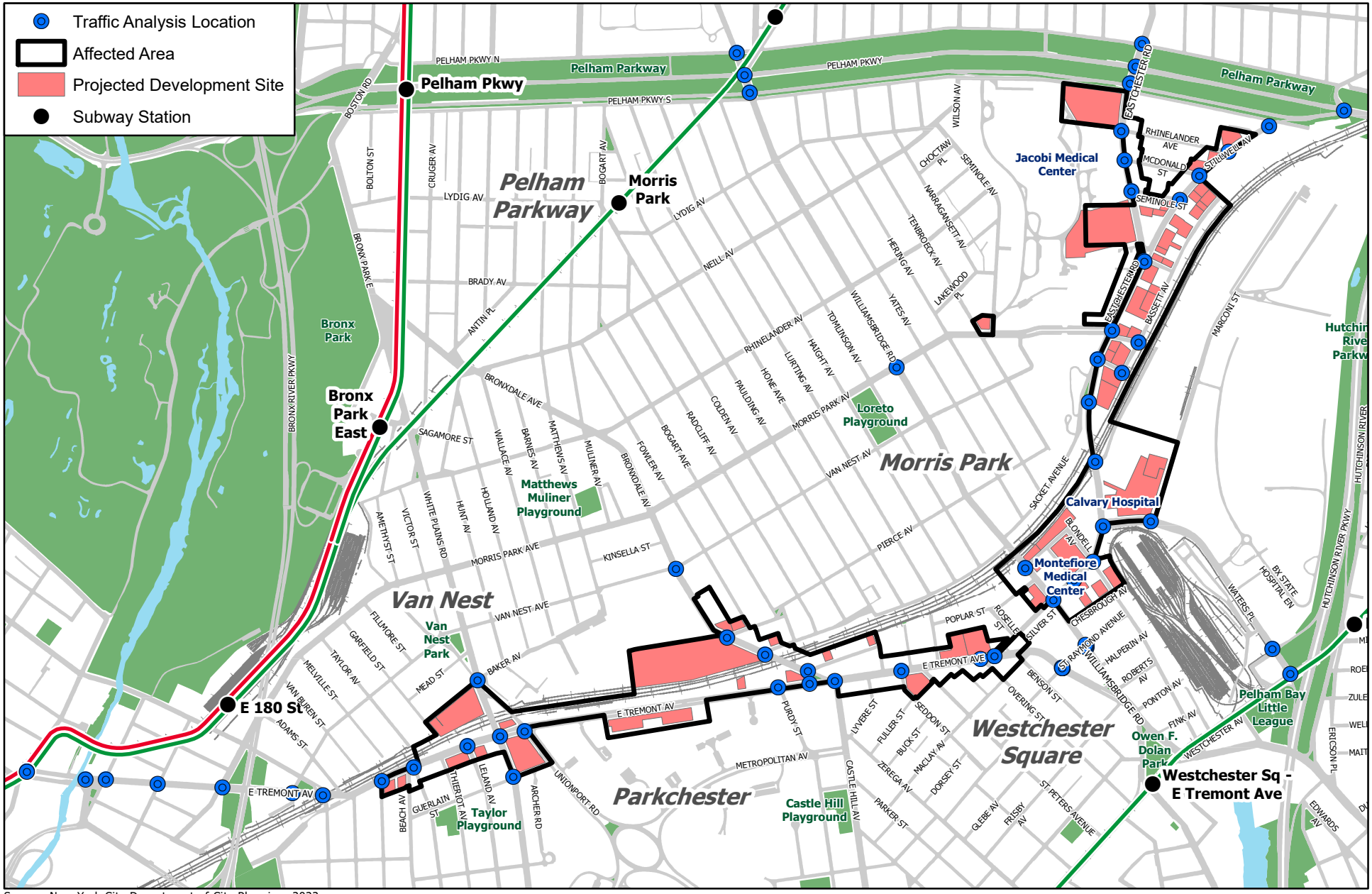
A Level 2 screening assessment involves the assignment of project-generated trips to the study area street network, pedestrian elements and transit facilities, and the identification of specific locations where the incremental increase in demand may potentially exceed *CEQR Technical Manual* analysis thresholds and therefore require a quantitative analysis.

VEHICULAR TRAFFIC

The Proposed Actions would be expected to generate a net increase of 18,945 person trips in the weekday AM peak hour, 19,888 person trips in the weekday midday, 17,724 person trips in the weekday PM peak hour, and 18,759 person trips in the Saturday midday peak hour. These traffic volumes would exceed the *CEQR Technical Manual* threshold of 50 vehicle trip ends during the peak hours for Level 1 screening, and therefore a Level 2 screening is performed to help identify intersections for detailed analysis.

The *CEQR Technical Manual* Level 2 screening threshold for detailed analysis is also 50 vehicle trip ends, but this threshold applies to individual intersections during the peak hours (rather than total trips generated). A preliminary assignment of peak hour traffic volumes is to identify the intersections that would potentially exceed the 50-trip threshold during these periods; these trips assignments are presented in the net incremental peak hour vehicle trip figures shown in Section 13.7 "Traffic" (see Figures 13-14 to 13-17). In consultation with DCP and NYCDOT, representative intersections most likely to be used by concentrations of action-generated vehicles traveling to and from the projected development sites are then selected for detailed analysis. Existing bottleneck locations and prevailing travel patterns in the study area are taken into consideration. Figure 13-2, "Traffic Analysis Locations," shows the locations of the 55 intersections selected for detailed analysis.

In addition, a detailed traffic analysis for the freeway and ramp junctions on the Hutchinson River Parkway is performed for the weekday AM, midday, PM, and Saturday midday peak hours. The highway study area consists of the mainline, weaving, and ramp juncture locations to/from Hutchinson River Parkway Interchanges 1B, 1C, and 1D. These locations were selected based on discussions with DCP and NYCDOT.



Source: New York City Department of City Planning, 2022;
Metropolitan Transit Authority (MTA), 2018 & 2019; STV Incorporated, 2022.

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0 0.25 0.5 Mile

Figure 13-2

TRAFFIC ANALYSIS LOCATIONS

TRANSIT

According to the general thresholds used by the MTA and specified in the *CEQR Technical Manual*, detailed transit analyses are generally not required if a proposed action is projected to result in fewer than 200 peak hour rail or bus transit riders. If a proposed action would result in 50 or more bus passengers being assigned to a single bus line (in one direction), or if it would result in an increase of 200 or more passengers at a single subway station or on a single subway line, a detailed bus or subway analysis would be warranted.

The Proposed Actions are expected to generate over 200 peak hour rail trips on a single line and would also result in greater than 50 bus passengers being assigned to a single bus line in one direction. Therefore, a detailed bus and subway analysis is warranted.

Subway

Subway Stations

Seven NYCT subway stations are located within, or in close proximity to, the traffic study area. These stations are presented on Figure 13-3, "NYCT Subway Lines in the Study Area," along with the subway routes serving each facility. The No. 2 line operating on the IRT White Plains Road Line serves three elevated stations within the study area, including Pelham Parkway, Bronx Park East, and East 180th Street. The No. 5 line operates on the IRT Dyre Avenue and IRT White Plains Road Lines, serving the elevated Morris Park station as well as the East 180th Street station at all times. During rush hour, some No. 5 trains remain on the IRT White Plains Road line and serve the Bronx Park East and Pelham Parkway stations instead of the Morris Park station on the IRT Dyre Avenue Line. The No. 6 line operates on the IRT Pelham Line and serves three elevated stations above Westchester Avenue, including Westchester Square-East Tremont Avenue, Middletown Road, and Buhre Road.

As listed in Table 13-11, "RWCDS Net Incremental Peak Hour Subway Trips by Station," the Proposed Actions would generate a net increment of approximately 4,565 and 4,127 subway or rail trips during the weekday AM and PM commuter peak hours, respectively. The planned Metro-North service to the Affected Area will introduce two new Metro-North stations within a convenient walking distance of the projected development sites and will attract approximately 35 percent of the transit rail trips. The remaining 65 percent would be assigned as subway trips for a net increment of 2,964 and 2,679 subway trips in the weekday AM and PM peak hours, respectively. The incremental subway trips from each projected development site were assigned to the 2, 5, or 6 subway lines based on the existing subway schedule and assigned to the closest subway station in its proximity. Table 13-11, "RWCDS Net Incremental Peak Hour Subway Trips by Station," lists the estimated net incremental subway trips generated by the Proposed Actions during the weekday AM and PM peak hours at each of the subway stations serving the Affected Area. The highest number of peak hour subway trips are expected to occur at the East 180th Street station on the White Plains Road No. 2 and 5 lines, which would experience

approximately 1,320 incremental trips (in and out combined) in the AM peak hour and 1,187 in the PM peak hour.

The analysis of subway station conditions focuses on a total of four subway stations at which incremental demand from the Proposed Actions would exceed the 200-trip *CEQR Technical Manual* analysis threshold in one or both peak hours. As listed in Table 13-11, these subway stations include:

- East 180th Street (No. 2 and 5 lines)
- Pelham Parkway (No. 2 and 5 lines)
- Westchester Square (No. 6 line)
- Middletown Road (No. 6 line)

For each of these facilities, key circulation elements (e.g., street stairs, platform stairs, and fare arrays) expected to be affected by the Proposed Actions are analyzed.

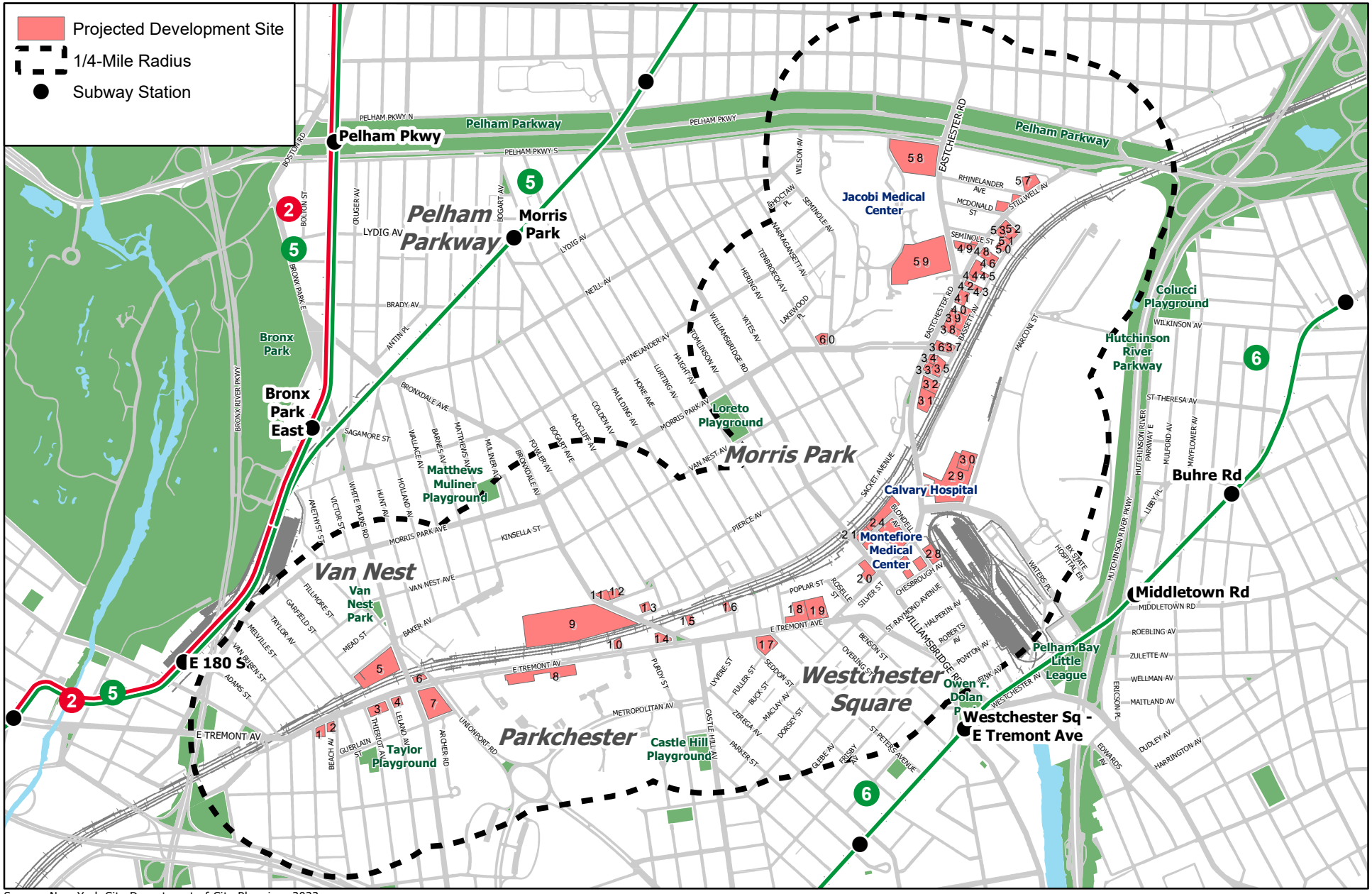
Subway Line Haul

As discussed above, the traffic study area is served by three NYCT subway routes, including the 2, 5, and 6 lines. As the Proposed Actions are expected to generate 200 or more new subway trips in one direction on one or more of these routes, an analysis of subway line haul conditions is included in the EIS. The analysis uses existing maximum load point subway service and ridership data provided by NYCT to assess existing, future No-Action, and future With-Action conditions at the peak load points of the respective subway lines during the weekday AM and PM peak hours.

Metro-North Stations

The Affected Area will be served by two new Metro-North stations in the Parkchester, Van Nest, and Morris Park areas. The Proposed Actions would generate a net increment of approximately 1,601 and 1,448 Metro-North rail trips during the weekday AM and PM commuter peak hours, respectively. The incremental rail trips from each projected development site were assigned to the designated station area, which results in 622 and 584 trips at the Parkchester/Van Nest station and 980 and 864 trips at the Morris Park station during the weekday AM and PM peak hours, respectively.

As incremental demand generated by the Proposed Actions would exceed the 200-trip *CEQR Technical Manua*l analysis threshold in both peak hours at the Parkchester/Van Nest and Morris Park stations, the analysis of Metro-North station conditions will focus on these two stations.



Source: New York City Department of City Planning, 2022;
Metropolitan Transit Authority (MTA), 2018 & 2019; STV Incorporated, 2022.

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Figure 13-3

NYCT SUBWAY LINES IN THE STUDY AREA

Table 13-11: RWCDS Net Incremental Peak Hour Subway Trips by Station

Project Summary	AM Peak Hour Trips			PM Peak Hour Trips		
	Into Project	Out of Project	Total	Into Project	Out of Project	Total
Peak Hour Project-Generated Trips:	10,021	8,924	18,945	8,239	9,485	17,724
Peak Hour Project-Generated Subway/Commuter Train Trips:	1,813	2,752	4,565	2,159	1,968	4,127
Peak Hour Project-Generated Subway Trips:	1,177	1,787	2,964	1,401	1,278	2,679
Peak Hour Project-Generated Commuter Train Trips:	636	965	1,601	757	690	1,448
Subway Station Summary						
East 180th Street (2,5)	454	866	1,320	671	516	1,187
Pelham Parkway (2,5)	140	151	291	128	157	285
Parkchester (6)	34	110	144	89	56	145
Westchester Square (6)	458	534	992	409	453	862
Middletown Road (6)	91	126	217	104	96	201
Total	1,177	1,787	2,964	1,401	1,278	2,679

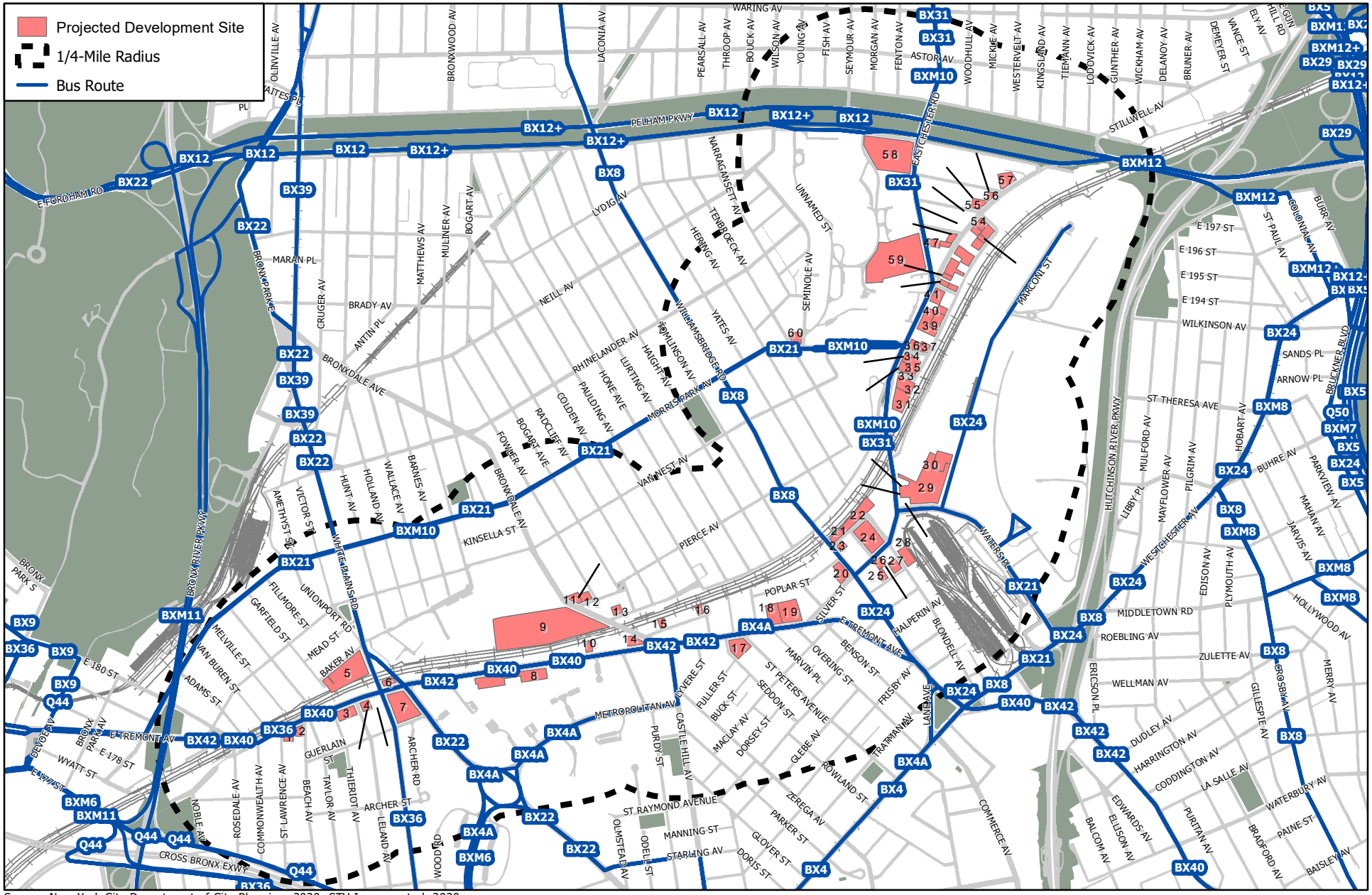
Source: STV Incorporated, 2023.

Bus

The Affected Area is served by the following twelve local NYCT bus routes, one SBS route, and one express bus route (see Figure 13-4, "NYCT Bus Routes in the Study Area"):

- Bx4 connects the Westchester Square 6 train station and The Hub in South Bronx. It runs along Westchester Avenue. It operates using articulated buses which have a guideline capacity of 85 passengers.
- Bx4A connects the Westchester Square 6 train station and Gladstone Square. Like the Bx4, the Bx4A also operates articulated buses, but travels along East Tremont Avenue in the Affected Area rather than Westchester Avenue.
- Bx8 provides service between Locust Point and Williamsbridge via Williamsbridge Road in the Affected Area. It operates using standard buses which have a guideline capacity of 54 passengers.
- Bx12-SBS runs along Pelham Parkway and provides service between Inwood and The Mall at Bay Plaza. As an SBS route, it features off-board fare payment and makes limited stops. It uses articulated buses with a guideline capacity of 85 passengers.
- Bx12 provides service between Webb Avenue in University Heights and Pelham Bay Park, with a seasonal extension to Orchard Beach in the summer months. It mirrors the route of the Bx12-SBS through the Affected Area. Overnight, the Bx12 follows the route pattern of the Bx12-SBS to Bay Plaza and Inwood since the SBS does not run between the hours of 10pm and 5am. Like the Bx12-SBS, the Bx12 also uses articulated buses.
- Bx21 runs between the Westchester Square 6 train station and Mott Haven. It travels along Waters Place, Eastchester Road, Morris Park Avenue, and East Tremont Avenue in the Affected Area. It operates with standard buses, which have a guideline capacity of 54 passengers.

- Bx22 provides service between Bedford Park and Castle Hill via White Plains Road in the Affected Area. It operates with articulated buses, which have a guideline capacity of 85 riders.
- Bx24 runs along Eastchester Road, Waters Place, and Marconi Street in the Affected Area to provide service between Hutchinson Metro Center and Country Club. It operates with standard buses, which have a guideline capacity of 54 passengers.
- Bx31 provides service between the Westchester Square 6 train station and Woodlawn. It operates on Williamsbridge and Eastchester roads in the Affected Area. It uses standard buses which have a guideline capacity of 54 passengers.
- Bx36 operates between Soundview and the George Washington Bridge. It provides service along East Tremont Avenue and White Plains Road in the Affected Area. It operates with articulated buses, which have a guideline capacity of 85 riders.
- Bx39 connects Wakefield and Clason Point. It operates along White Plains Road using articulated buses, which have a guideline capacity of 85 riders.
- Bx40 operates between Throgs Neck and River Park Towers in Morris Heights. It travels along East 180th Street and East Tremont Avenue in the Affected Area and uses articulated buses, which have a guideline capacity of 85 passengers.
- Bx42 also provides service between Throgs Neck and River Park Towers and mirrors the same route as the Bx40 in the Affected Area. Like the Bx40, the Bx42 also uses articulated buses.
- BxM10 is an express route that provides service between Williamsbridge in the Bronx and Midtown Manhattan. It operates on Eastchester Road and Morris Park Avenue within the Affected Area. As an express route, it uses over-the-road coach buses with a guideline capacity of 55 riders.



Source: New York City Department of City Planning, 2020; STV Incorporated, 2020.

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Figure 13-4

NYCT BUS ROUTES IN THE STUDY AREA

As presented in Table 13-10, projected development sites are expected to generate a net total of approximately 3,148 and 2,626 incremental bus trips during the weekday AM and PM peak hours, respectively. Additionally, it is expected that a portion of subway trips would originate as bus trips as all of the subway stations in the area are located beyond a ¼-mile radius from the projected development sites**.** As a result, an additional 2,406 and 2,218 incremental bus would be added as connections to subway stations for a total of 5,554 and 4,844 new bus trips during the weekday AM and PM peak hours, respectively as presented in Table 13-12, "RWCDS Net Incremental Peak Hour Bus Trips by Route and Direction."

Bus trip assignments were developed based on existing 2012-2016 AASHTO CTPP data to determine the destination tracts of bus trips originating in the Affected Area census tracts. Bus trips were assigned to bus lines that serve these areas. Incremental bus trips from each projected development site were assigned to a variety of bus lines as a result of multiple destinations from each census tract. The CTPP data for reverse-journey-to-work indicate that all inbound trips originate from Bronx census tracts. As a result, all inbound trips to non-residential uses were assigned to local Bronx buses. Table 13-12 presents the anticipated number of new riders expected on each bus route in the AM and PM peak hours. According to the general thresholds used by the MTA and specified in the *CEQR Technical Manual,* a detailed analysis of bus conditions is generally not required if a proposed action is projected to result in fewer than 50 peak hour trips being assigned to a single bus route (in one direction), as this level of new demand is considered unlikely to result in significant adverse impacts. As indicated in Table 13-12, several of these bus routes are expected to carry 50 or more new trips in one direction in at least one peak hour and will be analyzed in the EIS.

Table 13-12: RWCDS Net Incremental Peak Hour Bus Trips by Route and Direction

Route	Direction	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Alighting	Boarding	Total	Alighting	Boarding	Total
Bx4	NB	2	0	2	2	0	2
	SB	0	6	6	0	2	2
Bx4A	NB	**72**	0	72	**168**	0	168
	SB	0	**223**	223	0	**98**	98
Bx8	NB	38	0	38	15	0	15
	SB	0	23	23	0	32	32
BxM10	NB	0	0	0	**181**	0	181
	SB	0	**232**	232	0	0	0
Bx12	EB	**125**	39	164	**85**	**70**	155
	WB	**78**	**102**	180	34	**123**	157
Bx12-SBS	EB	**88**	42	130	**71**	**65**	136
	WB	**77**	**83**	160	32	**92**	124
Bx21	NB	**683**	**117**	800	**413**	**78**	491
	SB	**63**	**526**	590	**98**	**620**	718
Bx22	EB	16	35	51	30	24	54
	WB	11	25	36	19	14	33
Bx24	EB	0	22	22	0	30	30
	WB	32	0	32	16	0	16
Bx31	NB	**175**	**350**	525	**133**	**528**	661
	SB	**614**	**162**	776	**280**	**182**	462
Bx36	EB	6	14	20	10	5	15
	WB	0	1	1	0	1	1
Bx39	NB	0	**169**	169	0	**90**	90
	SB	**67**	0	67	**136**	0	136
Bx40	EB	**204**	2	206	**245**	1	246
	WB	24	**385**	409	**50**	**231**	281
Bx42	EB	**204**	2	206	**246**	1	247
	WB	31	**385**	416	**52**	**240**	292
Total		2609	2945	5554	2316	2527	4844

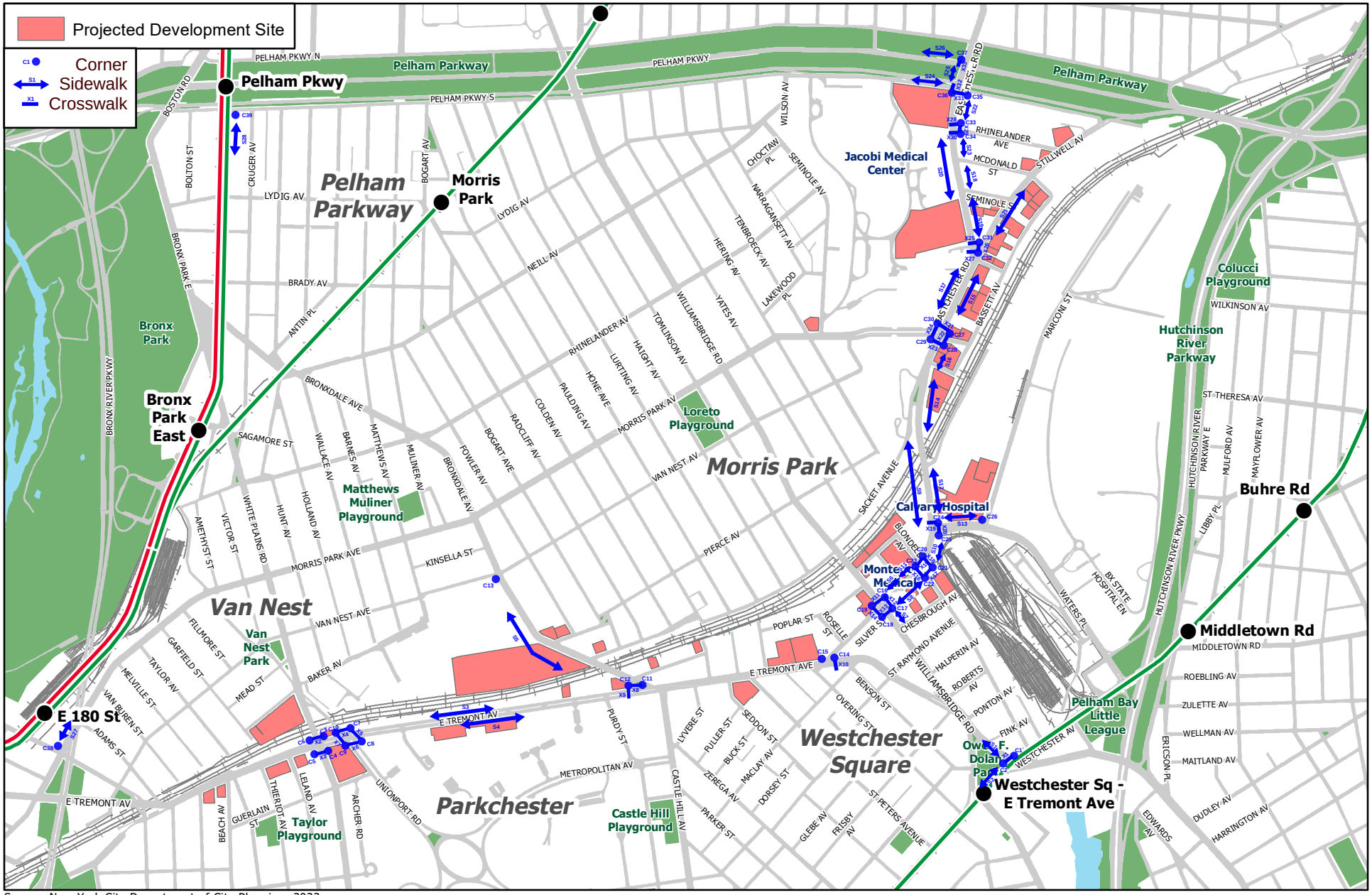
Note: Bold - denotes greater than 50 incremental trips per direction.

Source: STV Incorporated, 2023

PEDESTRIANS

Per the *CEQR Technical Manual*, detailed pedestrian analyses are generally warranted if a proposed action is projected to result in 200 or more new peak hour pedestrians at any sidewalk, corner reservoir area, or crosswalk. As listed previously in Table 13-8, "Travel Demand Forecast," the proposed project is expected to generate approximately 6,301 walk-only trips in the weekday AM peak hour, 7,270 in the midday peak hour, 6,992 in the PM peak hour, and 7,968 in the Saturday midday peak hour. Persons en route to and from subway station entrances and bus stops would add approximately 7,713, 6,703, 6,753, and 6,891 additional pedestrian trips to Affected Area sidewalks and crosswalks during these same periods, respectively.

The analysis will focus on sidewalks, corner areas, and crosswalks where new pedestrian demand would be most concentrated and most likely to result in significant adverse impacts. It is expected that during the AM and PM peak periods, pedestrian trips attributable to the Proposed Actions would be concentrated on sidewalks and crosswalks adjacent to the development sites within the Affected Area and along routes to and from the bus stops and subway stations. During the midday period, pedestrian trips would be expected to be dispersed, as people travel throughout the area for lunch, shopping, or errands. As shown on Figure 13-5, "Pedestrian Analysis Locations," the analysis locations include a total of 28 sidewalks, 39 corner areas, and 33 crosswalks.



Source: New York City Department of City Planning, 2022;
Metropolitan Transit Authority (MTA), 2018 & 2019; STV Incorporated, 2022.

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Figure 13-5

PEDESTRIAN ANALYSIS LOCATIONS

Bronx Metro-North Rezoning

PARKING

Peak parking demand from commercial and retail uses typically occurs in the weekday midday period and declines during the afternoon and evening. In contrast, peak parking demand associated with residential uses typically occurs during the overnight period.

On- and off-street parking inventory and utilization surveys have been conducted for the weekday overnight period (between 10 PM and 5 AM when residential parking demand typically peaks), the weekday midday period (between 11 AM and 3 PM when parking in a business area is frequently at peak occupancy), and the Saturday midday 11 AM to 3 PM peak period to document the existing supply and demand for each period. The parking analyses document the parking supply and utilization within a quarter-mile radius (an acceptable walking distance) of the Affected Area, both with and without the Proposed Actions.

Parking demand generated by the residential component of the Proposed Actions is forecasted based on 2013-2017 five-year ACS data on average vehicles per household for Bronx Census Tracts encompassing the Affected Area. Parking demand generated from all other uses is derived from the forecasts of daily auto trips from these uses. The forecast of new parking supply with the Proposed Actions is based on the net change in parking spaces on projected development sites.

13.6. Transportation Analyses Methodologies

In order to assess the potential effects of the Proposed Actions, both the "future without the Proposed Actions" ("No-Action") and the "future with the Proposed Actions" ("With-Action"), conditions are analyzed for an analysis year of 2033 for all transportation analyses, described in this section. The No-Action conditions include background growth, additional transportation-system demand, and any changes expected by the year 2033. The increase in travel demand resulting from the Proposed Actions is then added to the No-Action conditions to develop the With-Action conditions. Methodologies for each of the transportation analyses prepared for the Proposed Project are described in the following sections.

TRAFFIC

Analysis Methodology

The traffic analysis examines conditions in the weekday AM, midday, PM, and Saturday midday peak hours when the increased travel demand attributable to the Proposed Actions is expected to be the greatest. The weekday peak hours selected for analysis are 7:30-8:30 AM, 1-2 PM, and 4:15-5:15 PM and the Saturday peak hour is 2-3 PM. These peak hours are selected based on existing traffic volumes in the study area as reflected in automatic traffic recorder ("ATR") and turning movement count ("TMC") data.

The intersection capacity analyses are based on the methodology presented in the *Highway Capacity Manual* ("HCM") and are conducted using Synchro 11 software. Traffic data required for these analyses include the hourly volumes on each approach, turning movements, the percentage of trucks and buses, and pedestrian volumes at crosswalks. Field inventories are also necessary to document the physical layout, street widths, lane markings, curbside parking regulations, traffic signal timings/phasings, and other relevant characteristics needed for the analysis.

The HCM methodology produces a volume-to-capacity (v/c) ratio for each signalized intersection approach. The v/c ratio represents the ratio of an approach's traffic volume to the approach's carrying capacity. A v/c ratio of less than 0.90 is generally considered indicative of non-congested conditions in dense urban areas; when higher than this value, the ratio reflects increasing congestion. At a v/c ratio between 0.95 and 1.0, near-capacity conditions are reached, and delays can become substantial. Ratios of greater than 1.0 indicate saturated conditions with queuing. The HCM methodology also expresses the quality of traffic flow in terms of LOS, which is based on the amount of delay that a driver experiences at an intersection. Levels of service range from A, representing minimal delay (10 seconds or less per vehicle), to F, which represents long delays (greater than 80 seconds per vehicle).

For unsignalized intersections, the HCM methodology generally assumes that traffic on major streets is not affected by traffic flows on minor streets. Left turns from a major street are assumed to be affected

by the opposing, or oncoming, traffic flow on that major street. Traffic on minor streets is affected by all conflicting movements. Similar to signalized intersections, the HCM methodology expresses the quality of traffic flow at unsignalized intersections in terms of LOS based on the amount of delay that a driver experiences. LOS definitions used to characterize traffic flows at unsignalized intersections differ somewhat from those used for signalized intersections, primarily because drivers anticipate different levels of performance from the two different kinds of intersections. For unsignalized intersections, LOS ranges from A, representing minimal delay (10 seconds or less per vehicle, as it is for signalized intersections), to F, which represents long delays (greater than 50 seconds per vehicle, compared to greater than 80 seconds per vehicle for signalized intersections).

The delay levels for signalized intersections are detailed below.

- LOS A describes operations with very low delay, i.e., up to 10 seconds per vehicle. This occurs when signal progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all.
- LOS B describes operations with delay in the range of 10 to 20 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. Again, most vehicles do not stop at the intersection.
- LOS C describes operations with delay in the range of 20 to 35 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. The number of vehicles stopping at an intersection is significant at this level, although many still pass through without stopping.
- LOS D describes operations with delay in the range of 35 to 55 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles that do not stop declines.
- LOS E describes operations with delay in the range of 55 to 80 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios.
- LOS F describes operations with delay in excess of 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios with cycle failures. Poor progression and long cycle lengths may also be contributing to such delays. Often, vehicles do not pass through the intersection in one signal cycle.

The LOS thresholds for unsignalized intersections differ slightly from those for signalized intersections. Delay levels for unsignalized intersections are detailed below.

- LOS A describes operations with very low delay, i.e., up to 10 seconds per vehicle. This generally occurs when little or no delay is experienced at the intersection.
- LOS B describes operations with delay in the range of 10 to 15 seconds per vehicle. This generally occurs when short traffic delays are experienced at the intersection.
- LOS C describes operations with delay in the range of 15 to 25 seconds per vehicle. This generally occurs when average traffic delays are experienced at the intersection.
- LOS D describes operations with delay in the range of 25 to 35 seconds per vehicle. At LOS D, the influence of congestion becomes more noticeable, and longer traffic delays are experienced.

- LOS E describes operations with delay in the range of 35 to 50 seconds per vehicle. At LOS E, there is obvious congestion, and very long traffic delays are experienced at the intersection.
- LOS F describes operations with delay greater than 50 seconds per vehicle. At LOS F, there is heavy congestion, and excessive traffic delays are experienced at the intersection.

For both signalized and unsignalized intersections, LOS A, B, and C are considered acceptable; LOS D reflects the existence of delays within a generally tolerable range; and LOS E and F are considered unacceptable.

Highway elements were also included for analysis using the HCS 2023 modeling software. HCS 2023 generates average measures of effectiveness (MOEs) for the facility overall and individual segments for the peak 15-minute interval. The busiest 15-minute interval is generally identified as the period during which the facility's average density is the highest, the speed is the lowest, and the time to traverse the analyzed facility is the longest as a result of the traffic flow profile created by the facility's mainline, ramps, and weaving sections' traffic demand. The analyses results are summarized by direction, at both the segment and facility levels in terms of the following MOEs:

- Volume-to-capacity ratio (v/c)
- Demand-to-capacity ratio (d/c)
- Density (passenger cars per mile per lane (pc/mi/ln))
- Space mean speed (miles per hour (mph))
- Level of service (LOS)

Freeway facility LOS is based on the weighted average density for all segments within the defined facility. Weighting is done based on segment length and the number of lanes in each segment. The HCM LOS criteria for both the facility as a whole and for individual segments is shown in Table 13-13, "Level of Service Criteria for Freeway Facilities and Segments."

Table 13-13: Level of Service Criteria for Freeway Facilities and Segments

LOS	Density (pc/mi/ln)
A	≤ 11
B	> 11- 18
C	> 18–26
D	> 26–35
E	> 35–45
F	> 45 or any component d/c ratio > 1.0

Source*: Highway Capacity Manual,* 2010.

Significant Impact Criteria

Intersections

The identification of significant adverse traffic impacts at analyzed intersections is based on criteria presented in the *CEQR Technical Manual*.

- If a lane group in the Build Condition is within LOS A, B, C, or D (average control delay less than or equal to 55.0 seconds/vehicle for signalized intersections and delay less than or equal to 35.0 seconds/vehicle for unsignalized intersections), the impact is not considered significant.
- For a lane group that would operate at LOS E in the Build Condition, a projected increase in delay of 5.0 or more seconds compared to the No Build condition is considered a significant impact.
- For a lane group that would operate at LOS F in the Build Condition, a projected increase in delay of 4.0 or more seconds compared to the No Build condition is considered a significant impact.

In addition to these requirements, for the minor street of an unsignalized intersection to experience a significant impact, at least 90 passenger car equivalents (PCEs) must be identified in the future Build condition.

Freeways

The determination of significant adverse traffic impacts for basic freeway segments is based on criteria presented in the *CEQR Technical Manual*.

- If the LOS under the No-Action condition is LOS D, an increase in projected density of 5 or more pc/mi/ln under the With-Action condition should be considered a significant impact.
- If the LOS under the No-Action condition is LOS E, an increase in projected density of 4 or more pc/mi/ln under the With-Action condition should be considered a significant impact.
- If the LOS under the No-Action condition is LOS F, an increase in projected density of 3 or more pc/mi/ln under the With-Action condition should be considered a significant impact.

Similarly, the determination of significant adverse traffic impacts for freeway weaving, merge, and diverge segments is based on criteria presented in the *CEQR Technical Manual*.

- If the LOS under the No-Action condition is LOS D, an increase in projected density of 4 or more pc/mi/ln under the With-Action condition should be considered a significant impact.
- If the LOS under the No-Action condition is LOS E, an increase in projected density of 3 or more pc/mi/ln under the With-Action condition should be considered a significant impact.
- If the LOS under the No-Action condition is LOS F, an increase in projected density of 2 or more pc/mi/ln under the With-Action condition should be considered a significant impact.

TRANSIT

Analysis Methodology

Subway Stations

Subway ridership data were collected at analysis subway stations in June 2023 to determine existing conditions at analyzed subway station elements. The methodology for assessing subway station pedestrian circulation elements (stairs, escalators, passageways) and fare control elements (turnstiles) compares existing and projected pedestrian volumes with the element's design capacity to yield a v/c ratio. All analyses examine pedestrian flow volumes during a peak 15-minute interval within the peak hours at each area subway station. (As noted previously, transit analyses typically focus on the weekday AM and PM commuter peak hours as it is during these periods that overall demand on the subway and bus system is usually highest.)

The capacity of a stairway or passageway is determined based on four factors: the NYCT guideline capacity, the effective width, and surging and counter-flow factors, if applicable, as per *CEQR Technical Manual* guidelines. NYCT guideline capacity is ten passengers per minute per foot width (pmf) for stairs and 15 pmf for passageways. The effective width of a stair or passageway is the actual width adjusted to reflect pedestrian avoidance of sidewalls and center handrails, if present. A surging factor is applied to existing pedestrian volumes to reflect conditions where pedestrian flows tend to be concentrated (or surged) during shorter periods within the 15-minute analysis interval. This factor, which is based on the size of the station and the proximity of the pedestrian element to the station platforms, can reduce the calculated capacity by up to 25 percent. Lastly, a friction (or counter-flow) factor reducing calculated capacity by 10 percent is applied where opposing pedestrian flows use the same stair or passageway. No friction factor is applied if the flow is all in one direction.

The capacity of a turnstile is determined based on only two factors: the NYCT guideline capacity for a 15-minute interval and a surging factor of up to 25 percent as per *CEQR Technical Manual* guidelines. Table 13-14, "Level of Service Criteria for Subway Station Elements," presents the *CEQR Technical Manual* level of service criteria for all subway station elements. Six levels of service are defined in Table 13-14 with

letters A through F. LOS A is representative of free flow conditions without pedestrian conflicts and LOS F depicts severe congestion and queuing.

Table 13-14: Level of Service Criteria for Subway Station Elements

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

Source: *2021 CEQR Technical Manual.*

Subway Line Haul

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

Metro-North Railroad Stations

The Affected Area is not currently served by Metro-North railroad. A qualitative assessment of the proposed Metro-North stations' pedestrian circulation elements was performed, comparing the projected pedestrian volumes with the proposed station's element design. The *Metro-North Railroad Station Standards and Guidelines* require the stairway pedestrian LOS to be no worse than LOS D (based on "Pedestrian Planning and Design" by J. Fruin, 1971). LOS D provide for an average pedestrian flow of 10-13 per minute, per foot width of stairway. The Metro-North station analysis focus on the weekday AM and PM commuter peak hours and assesses the increased passenger demand attributable to the Proposed Actions.

Bus

The operating conditions for bus service are measured in terms of the number of passengers carried per bus at the maximum load point for each route. This is determined by dividing the peak hour passenger count by the number of buses during that hour. The bus load levels are compared with MTA-NYCT loading guidelines of 54 passenger spaces for a 40-foot standard bus, 85 passenger spaces for a 60-foot articulated

bus, and 55 passenger spaces for a 45-foot over-the-road motorcoach. Based on existing ridership patterns, the peak hour for bus demand is 8-9 AM and 5-6 PM.

Significant Impact Criteria

Subway Stations

The *CEQR Technical Manual* identifies a significant impact for stairways and passageways in terms of the minimum width increment threshold ("WIT") based on the minimum amount of additional capacity that would be required to restore conditions to either their No-Action v/c ratio or to a v/c ratio of 1.00 (LOS C/D), whichever is greater. Stairways that are substantially degraded in LOS or which experience the formation of extensive queues are classified as significantly impacted. Significant adverse stairway or passageway impacts are typically considered to have occurred once the thresholds listed in Table 13-15, "Significant Impact Thresholds for Stairways and Passageways," are reached or exceeded.

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

Table 13-15: Significant Impact Thresholds for Stairways and Passageways

With-Action V/C Ratio	WIT for Significant Impact (inches)	
	Stairway	Passageway
1.00-1.09	8	13
1.10-1.19	7	11.5
1.20-1.29	6	10
1.30-1.39	5	8.5
1.40-1.49	4	6
1.50-1.59	3	4.5
$\geq$ 1.60	2	3

Source: *2021 CEQR Technical Manual.*

Subway Line Haul

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

Metro-North Railroad Stations

The significant impact criteria for Metro-North Railroad stations is not specified in the *CEQR Technical Manual.* For purposes of this analysis, a significant impact at the proposed Metro-North Railroad stations will follow the minimum WIT as detailed in the subway station stair analyses, based on the minimum amount of additional capacity that would be required to restore conditions to either the No-Action LOS or LOS D, whichever is greater. Significant adverse stairway or passageway impacts are typically considered to have occurred once the thresholds listed in Table 13-15, "Significant Impact Thresholds for Stairways and Passageways," are reached or exceeded.

Bus

According to the *CEQR Technical Manual* and MTA-NYCT guidelines, additional bus service along a route is recommended when load levels exceed maximum capacity at the route's maximum load point. A significant adverse impact is considered at the route's maximum load point where an increase in bus load levels would exceed the maximum capacity. MTA-NYCT's general policy is to provide additional bus service where demand warrants increased service, taking into account fiscal and operational constraints.

PEDESTRIANS

Analysis Methodology

Data on peak period pedestrian flow volumes were collected along analyzed sidewalks, corner areas, and crosswalks in the vicinity of the Affected Area in May and June 2023. Peak hours were determined by comparing rolling hourly averages, and the highest 15-minute volumes within the selected peak hours were used for analysis. Based on existing peak pedestrian volumes along major corridors in the study area, the peak hours selected for analysis include the weekday 8:00–9:00 a.m., 1:00–2:00 p.m. (midday), and 4:30–5:30 p.m., and Saturday 2:30–3:30 p.m. periods.

Peak 15-minute pedestrian flow conditions during the weekday AM, midday, PM, and Saturday peak hours are analyzed using 2000 Highway Capacity Manual methodology and procedures outlined in the *CEQR Technical Manual*. Using this methodology, the congestion level of pedestrian facilities is determined by considering pedestrian volume, measuring the sidewalk or crosswalk width, determining the available pedestrian capacity, and developing a ratio of volume flows to capacity conditions. The resulting ratio is then compared with LOS standards for pedestrian flow, which define a qualitative relationship at a certain pedestrian traffic concentration level. The evaluation of street crosswalks and corners is more complicated as these spaces cannot be treated as corridors due to the time incurred waiting for traffic lights. To effectively evaluate these facilities a "time-space" analysis methodology is employed which takes into consideration the traffic light cycle at intersections.

LOS standards are based on the average area available per pedestrian during the analysis period, typically expressed as a 15-minute peak period. LOS grades from A to F are assigned, with LOS A representative of free flow conditions without pedestrian conflicts and LOS F depicting significant capacity limitations and

inconvenience. Table 13-16, "Pedestrian Crosswalk/Corner Area and Sidewalk Levels of Service Descriptions," defines the LOS criteria for pedestrian crosswalk/corner area and sidewalk conditions, as based on Highway Capacity Manual methodology.

The analysis of sidewalk conditions includes a "platoon" factor in the calculation of pedestrian flow to estimate the dynamics of walking more accurately. "Platooning" is the tendency of pedestrians to move in bunched groups or "platoons" once they cross a street where cross traffic required them to wait. Platooned flow is more representative of pedestrian activities within New York City.

Table 13-16: Pedestrian Crosswalk/Corner Area and Sidewalk Levels of Service Descriptions

LOS	Crosswalk/Corner Condition	Crosswalk/Corner Area Criteria (sf/ped)	Sidewalk Criteria (sf/ped)
A	Unrestricted	> 60.1	> 530.1
B	Slightly Restricted	> 40.1 to 60	> 90.1 to 530
C	Restricted but fluid	> 24.1 to 40	> 40.1 to 90
D	Restricted, necessary to continuously alter walking stride and direction	> 15.1 to 24	> 23.1 to 40
E	Severely restricted	> 8.1 to 15	> 11.1 to 23
F	Forward progress only by shuffling, no reverse movement possible	≤ 8.1	≤ 11

Notes:
Based on average conditions for 15 minutes
sf/ped = square feet for area per pedestrian

Source: *2021 CEQR Technical Manual.*

Significant Impact Criteria

Sidewalks

As many of the analysis elements are not located within a Central Business District (CBD), the *CEQR Technical Manual* impact criteria for a non-central business district (non-CBD) location are used to identify significant adverse impacts due to the proposed rezoning. These criteria define a significant adverse sidewalk impact to have occurred under platoon conditions if the average pedestrian space under the No-Action condition is greater than or equal to 44.3 square feet/pedestrian (sf/ped), and the average pedestrian space under the With-Action condition is 40.0 sf/ped or less (LOS D or worse). If the average pedestrian space under the With-Action condition is greater than or equal to 40.1 sf/ped (LOS D or better), the impact should not be considered significant. If the No-Action pedestrian space is between 6.4 and 44.2 sf/ped, a reduction in pedestrian space under the With-Action condition should be considered significant based on Table 13-17, "Significant Impact Criteria for Sidewalks in a non-CBD Location," which shows a sliding scale that identifies what decrease in pedestrian space is considered a significant impact for a given pedestrian space value in the No-Action condition. If the reduction in pedestrian space is less than the value in Table 13-17, the impact is not considered significant. If the average pedestrian space under the No-Action condition is 6.3 sf/ped or less, then a reduction in pedestrian space greater than or equal to 0.3 sf/ped, under the With-Action condition, should be considered significant.

Table 13-17: Significant Impact Criteria for Sidewalks with Platooned Flow in a Non-CBD Location

No-Action Condition Pedestrian Flow (ft^2/ped)			With-Action Condition Pedestrian Flow Increment to be Considered a Significant Impact (ft^2/ped)
≥ 44.3			With-Action Condition ≤ 40.0
43.5	to	44.3	Reduction ≥ 4.3
42.5	to	43.4	Reduction ≥ 4.2
41.6	to	42.4	Reduction ≥ 4.1
40.6	to	41.5	Reduction ≥ 4.0
39.7	to	40.5	Reduction ≥ 3.9
38.7	to	39.6	Reduction ≥ 3.8
37.8	to	38.6	Reduction ≥ 3.7
36.8	to	37.7	Reduction ≥ 3.6
35.9	to	36.7	Reduction ≥ 3.5
34.9	to	35.8	Reduction ≥ 3.4
34.0	to	34.8	Reduction ≥ 3.3
33.0	to	33.9	Reduction ≥ 3.2
32.1	to	32.9	Reduction ≥ 3.1
31.1	to	32.0	Reduction ≥ 3.0
30.2	to	31.0	Reduction ≥ 2.9
29.2	to	30.1	Reduction ≥ 2.8
28.3	to	29.1	Reduction ≥ 2.7
27.3	to	28.2	Reduction ≥ 2.6
26.4	to	27.2	Reduction ≥ 2.5
25.4	to	26.3	Reduction ≥ 2.4
24.5	to	25.3	Reduction ≥ 2.3
23.5	to	24.4	Reduction ≥ 2.2
22.6	to	23.4	Reduction ≥ 2.1
21.6	to	22.5	Reduction ≥ 2.0
20.7	to	21.5	Reduction ≥ 1.9
19.7	to	20.6	Reduction ≥ 1.8
18.8	to	19.6	Reduction ≥ 1.7
17.8	to	18.7	Reduction ≥ 1.6
16.9	to	17.7	Reduction ≥ 1.5
15.9	to	16.8	Reduction ≥ 1.4
15.0	to	15.8	Reduction ≥ 1.3
14.0	to	14.9	Reduction ≥ 1.2
13.1	to	13.9	Reduction ≥ 1.1
12.1	to	13.0	Reduction ≥ 1.0
11.2	to	12.0	Reduction ≥ 0.9
10.2	to	11.1	Reduction ≥ 0.8
9.3	to	10.1	Reduction ≥ 0.7
8.3	to	9.2	Reduction ≥ 0.6
7.4	to	8.2	Reduction ≥ 0.5
6.4	to	7.3	Reduction ≥ 0.4
≤6.3			Reduction ≥ 0.3

Source: 2021 *CEQR Technical Manual.*

Corner Areas and Crosswalks

For non-CBD areas, *CEQR Technical Manual* criteria define a significant adverse corner area or crosswalk impact to have occurred if the average pedestrian space under the No-Action condition is greater than or equal to 26.6 sf/ped and, under the With-Action condition, the average pedestrian space decreases to 24.0 sf/ped or less (LOS D or worse). If the pedestrian space under the With-Action condition is greater than or equal to 24.1 sf/ped (LOS D or better), the impact should not be considered significant. If the average pedestrian space under the No-Action condition is between 5.9 and 26.5 sf/ped, a decrease in pedestrian space under the With-Action condition should be considered significant based on Table 13-18, "Significant Impact Criteria for Corners and Crosswalks in a non-CBD Location," which shows a sliding scale that identifies what decrease in pedestrian space is considered a significant impact for a given amount of pedestrian space in the No-Action condition. If the decrease in pedestrian space is less than the value in Table 13-18, the impact is not considered significant. If the average pedestrian space under the No-Action condition is less than 5.0 sf/ped or less, then a decrease in pedestrian space greater than or equal to 0.2 sf/ped should be considered significant.

Table 13-18: Significant Impact Criteria for Corners and Crosswalks in a non-CBD Location

No-Action Condition Pedestrian Space (ft^2/ped)			With-Action Condition Pedestrian Space Reduction to be Considered a Significant Impact (ft^2/ped)
≥ 26.6			With-Action Condition ≤ 24.0
25.8	to	26.5	Reduction ≥ 2.6
24.9	to	25.7	Reduction ≥ 2.5
24.0	to	24.8	Reduction ≥ 2.4
23.1	to	23.9	Reduction ≥ 2.3
22.2	to	23.0	Reduction ≥ 2.2
21.3	to	22.1	Reduction ≥ 2.1
20.4	to	21.2	Reduction ≥ 2.0
19.5	to	20.3	Reduction ≥ 1.9
18.6	to	19.4	Reduction ≥ 1.8
17.7	to	18.5	Reduction ≥ 1.7
16.8	to	17.6	Reduction ≥ 1.6
15.9	to	16.7	Reduction ≥ 1.5
15.0	to	15.8	Reduction ≥ 1.4
14.1	to	14.9	Reduction ≥ 1.3
13.2	to	14.0	Reduction ≥ 1.2
12.3	to	13.1	Reduction ≥ 1.1
11.4	to	12.2	Reduction ≥ 1.0
10.5	to	11.3	Reduction ≥ 0.9
9.6	to	10.4	Reduction ≥ 0.8
8.7	to	9.5	Reduction ≥ 0.7
7.8	to	8.6	Reduction ≥ 0.6
6.9	to	7.7	Reduction ≥ 0.5
6.0	to	6.8	Reduction ≥ 0.4
5.1	to	5.9	Reduction ≥ 0.3
≤ 5.0			Reduction ≥ 0.2

Source: 2021 *CEQR Technical Manual.*

VEHICULAR AND PEDESTRIAN SAFETY EVALUATION

Pursuant to *CEQR Technical Manual* guidelines, an evaluation of vehicular and pedestrian safety is needed for locations within the traffic and pedestrian study areas that have been identified as high crash locations. These are defined as a location identified along a Vision Zero corridor or intersection or one where there were five or more pedestrian/bicycle injury crashes in any consecutive twelve-month period of the most recent three-year period. For these locations, accident trends are identified to determine whether projected vehicular and pedestrian traffic could further impact safety, or whether existing unsafe conditions could adversely impact the flow of the projected new trips. The determination of potential significant safety impacts depends on the following: type of area where the Project Site is located, traffic volumes, accident types and severity, and other contributing factors. Where appropriate, measures to improve traffic and pedestrian safety should be identified and coordinated with NYCDOT.

PARKING

Analysis Methodology

The parking analysis identifies the supply of on- and off-street public parking near a proposed project and determines the extent to which the supply is utilized in existing conditions and in the future without and with a proposed action. The analysis considers anticipated changes in the study area's parking supply and demand and compares project-generated parking demand with future parking availability to determine if a parking shortfall is likely to result. The displacement of existing parking capacity attributable to the proposed action or project is also considered. Typically, the analysis encompasses the parking facilities – public parking lots and garages and on-street curb spaces – that vehicular traffic destined to the project site or area would likely utilize. According to the *CEQR Technical Manual*, a ¼-mile radius around a project site is generally assumed as the distance that someone driving to the site would be willing to walk. The parking analyses therefore document changes in the parking supply and utilization on the Project Site and within a ¼-mile radius of the site under both No-Action and With-Action conditions.

Significant Shortfall Criteria

Should a proposed action generate the need for more parking than it provides, a shortfall of spaces may be considered significant. The availability of off-street and on-street parking spaces within a convenient walking distance (about ¼-mile) as well as the availability of alternative modes of transportation are considered in making this determination. It is noted, however, that pursuant to the *CEQR TM,* a significant parking shortfall does not constitute a significant adverse impact.

Under *CEQR Technical Manual* guidance, different criteria for determining significance are applied based on whether or not the Affected Area is located in residential or commercial areas designated as Parking Zones 1 and 2 as shown in Map 16-2, "CEQR Parking Zones, May 2010," in the *CEQR Technical Manual*. As the Affected Area is not located within Parking Zone 1 or 2 as shown in Map 16-2, a project's parking

shortfall that exceeds the available on- and off-street parking spaces within a ¼-mile of the Affected Area may be considered significant. The *CEQR Technical Manual* notes that the lead agency should consider additional factors to determine whether such shortfall is significant, including: the availability and extent of transit in the area; the proximity of the project to such transit; any features of the project that are considered trip reduction or travel demand management (TDM) measures as set forth in Subsection 515 of the *CEQR Technical Manual*; travel modes of customers of area commercial businesses; and patterns of automobile usage by area residents.

13.7. Traffic

EXISTING CONDITIONS

Study Area Street Network

As previously shown on Figure 13-1, the Affected Area consists of an approximately 46-block area near the future Parkchester/Van Nest and Morris Park Metro-North stations in the Bronx. The Parkchester/Van Nest station area projected development sites are generally situated around East Tremont and Bronxdale avenues. The Morris Park station area projected development sites are generally situated around Eastchester Road and Stillwell Avenue.

Primary East-West Corridors

East Tremont Avenue is a principal arterial that runs east-west through the Bronx, traversing from Morris Heights to the west to Throgs Neck to the east. East Tremont Avenue provides connections to local minor streets as well as access to Bruckner Boulevard, Hutchinson River Parkway, and the Cross-Bronx Expressway. East Tremont Avenue generally provides two travel lanes and curbside parking in both directions through the Affected Area. A painted or raised median exists for the majority of the street. East Tremont Avenue is an NYCDOT-designated local truck route.

Bounding the study area to the north is the Bronx-Pelham Parkway, a principal arterial operating east-west between the Bronx River Parkway and Interstate 95, the New England Thruway. Bronx-Pelham Parkway typically provides three through lanes in each direction with a bus lane and two through lanes and on-street parking provided along the north and south service roads. The north and south Pelham Parkway service roads are NYCDOT-designated local truck routes. Commercial traffic and trucks are not permitted on the main roadway.

Morris Park Avenue is a minor arterial that connects most of the local north-south streets. It generally runs parallel to East Tremont Avenue from Eastchester Avenue to the east and reroutes southbound to connect to East Tremont Avenue west of the Bronx River Parkway. The majority of Morris Park Avenue

has one travel lane per direction and curbside parking on both sides of the road and is an NYCDOT-designated local truck route.

Primary North-South Corridors

Eastchester Road is a north-south principal arterial that runs through the Affected Area from Williamsbridge Road to the south to East Gun Hill Road to the north. Eastchester Road is generally 60 feet wide with two travel lanes in each direction and curbside parking on both sides. Eastchester Road is an NYCDOT-designated local truck route.

Stillwell Avenue is a minor arterial that runs from Eastchester Avenue in the Affected Area to the Hutchinson River Parkway. The roadway width in the study area is approximately 55 feet wide, with one travel lane in each direction and curbside parking (frequent double parking) on both sides.

East of the study area is the Hutchinson River Parkway, a major two-way northbound and southbound roadway classified as a Principal Arterial Expressway. The north and southbound roadways are separated by a landscaped median. It generally operates with three lanes in each direction. Commercial traffic and trucks are not permitted on the Hutchinson River Parkway.

Bus Routes

MTA-NYCT local bus routes operate along portions of the following study area corridors:

- East Tremont Avenue (Bx4A, Bx36, Bx40, Bx42)
- Eastchester Road (Bx21, Bx24, Bx31, BxM10)
- Morris Park Avenue (Bx21, BxM10)
- Pelham Parkway (Bx12, Bx12-SBS)
- Williamsbridge Road (Bx8, Bx31)
- White Plains Road (Bx39)
- Waters Place (Bx21, Bx24)
- Unionport Road (Bx22)

The bus routes are described in more detail below in Section 13.8, “Transit.”

Truck Routes

NYCDOT has established local and through truck routes to manage the flow of trucks and improve the quality of neighborhoods and defines a truck as “a vehicle which is designed for transportation of property, which has either of the following characteristics: two axles and six tires or three or more axles.” Through trucks are defined as having neither an origin nor a destination within the Borough of Brooklyn. Through truck routes nearest to the study area have been designated along the Cross-Bronx Expressway and Bruckner Expressway. Local truck routes are designated routes for trucks that are intended for the purpose of delivery, loading, or providing service within the Bronx. Generally, trucks must travel on local truck routes to reach the intersection nearest their destinations. Designated local truck routes in the study area include East Tremont Avenue, White Plains Road, Williamsbridge Road, Eastchester Road, and Morris Park Avenue.

Bicycle Lanes

Bike lanes are located along Morris Park Avenue from East 180th Street to Newport Avenue, ending approximately 750 feet east of Eastchester Road. Additionally, a protected off-street bicycle path is provided along Pelham Parkway close to the Affected Area. Potential future bicycle lanes are identified along Eastchester Road as well as Waters Place.

Traffic Conditions

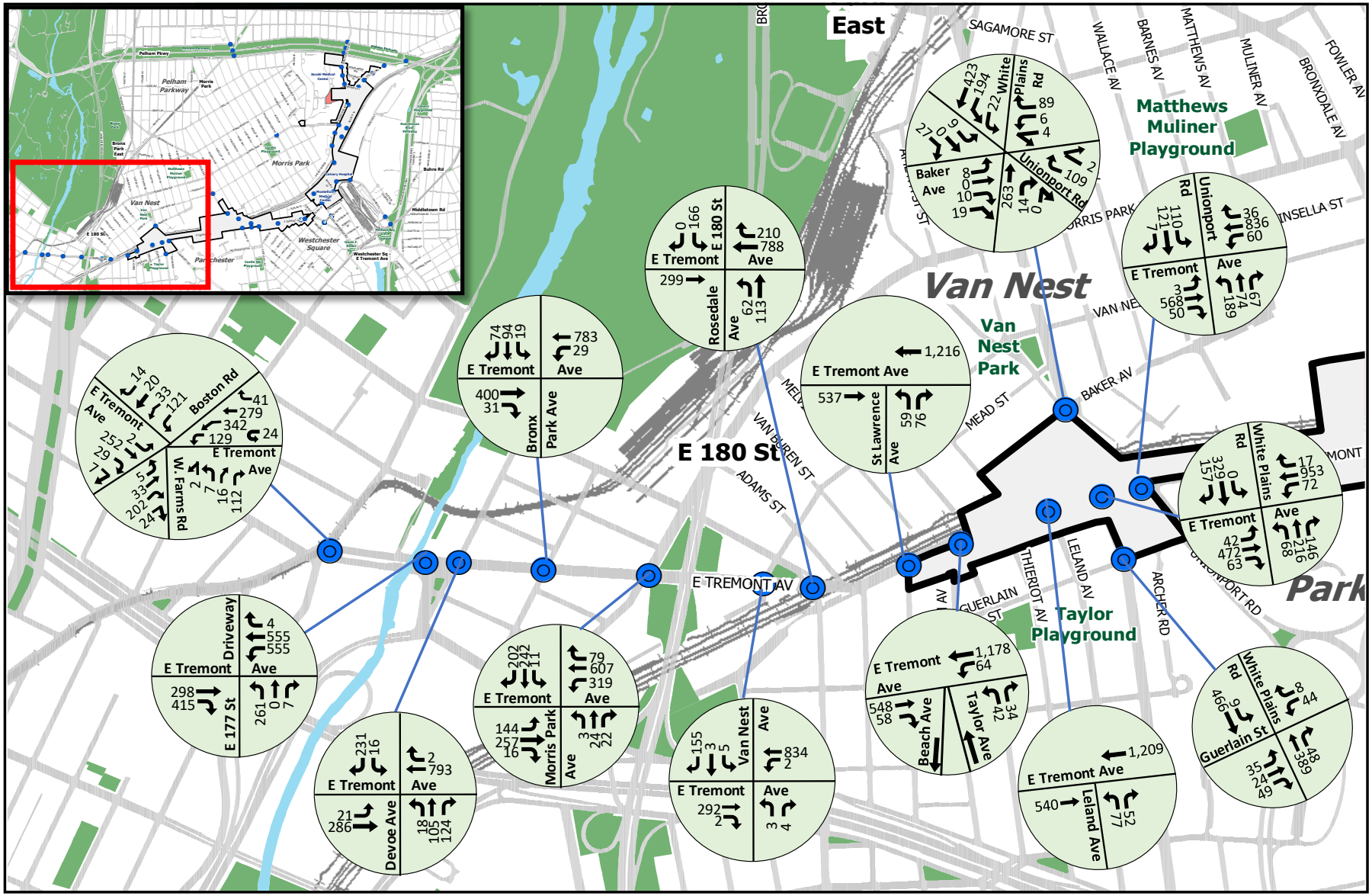
A traffic data collection program was performed in May 2023 to establish the Existing Conditions traffic network, which included automatic traffic recorder ("ATR") counts and intersection turning movement and classification counts. At this time, physical inventory data needed for operational analysis—e.g., the number of traffic lanes, lane widths, pavement markings, turn prohibitions, bus stops, and typical parking regulations—were also collected. Signal timing plans for signalized intersections within the study area were obtained from NYCDOT.

Figure 13-6, "Existing Traffic Volumes - Weekday AM Peak Hour," Figure 13-7, "Existing Traffic Volumes - Weekday Midday Peak Hour," Figure 13-8, "Existing Traffic Volumes - PM Peak Hour," and Figure 13-9, "Existing Traffic Volumes - Saturday Midday Peak Hour," show existing traffic volumes during each analysis peak hour.

Traffic volumes vary through the study area during the peak hours. The highest traffic volumes are carried on Pelham Parkway. The main road carries up to 1,750 westbound and 1,300 eastbound vehicles per hour (vph) during the AM peak hour. In the PM peak hour, it processes approximately 1,400 westbound and 1,050 eastbound vph. During the weekday and Saturday midday periods, approximately 1,250 westbound and 850 eastbound vph are processed. In general, the adjacent service roads carry an additional 150 to 400 vph in each direction during each peak hour, with higher volumes seen during the AM and PM hours.

East Tremont Avenue and Eastchester Road carry high volumes as well. East Tremont Avenue carries 1,200 westbound and 750 eastbound vph in the AM peak hour, between 400 and 700 vph per direction in the weekday and Saturday midday peak hours, and approximately 1,000 westbound and 800 eastbound vph in the PM peak hour. Eastchester Road carries between 550 and 1,100 vph during the AM and PM peak hours, with the higher volumes travelling southbound during the AM peak hour and northbound during the PM peak hour. In the weekday and Saturday midday peak hours, Eastchester Road processes between 400 and 700 vph.

Adjacent to the study area, the northbound Hutchinson River Parkway carries up to 4,600 vph, 3,300 vph, 4,800 vph, and 3,700 vph during the weekday AM, midday, PM, and Saturday midday peak hours, respectively. In the southbound direction, it processes up to 4,000 vph, 3,000 vph, 2,800 vph, and 3,700 vph during the same peak hours.



Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-6A

EXISTING TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR

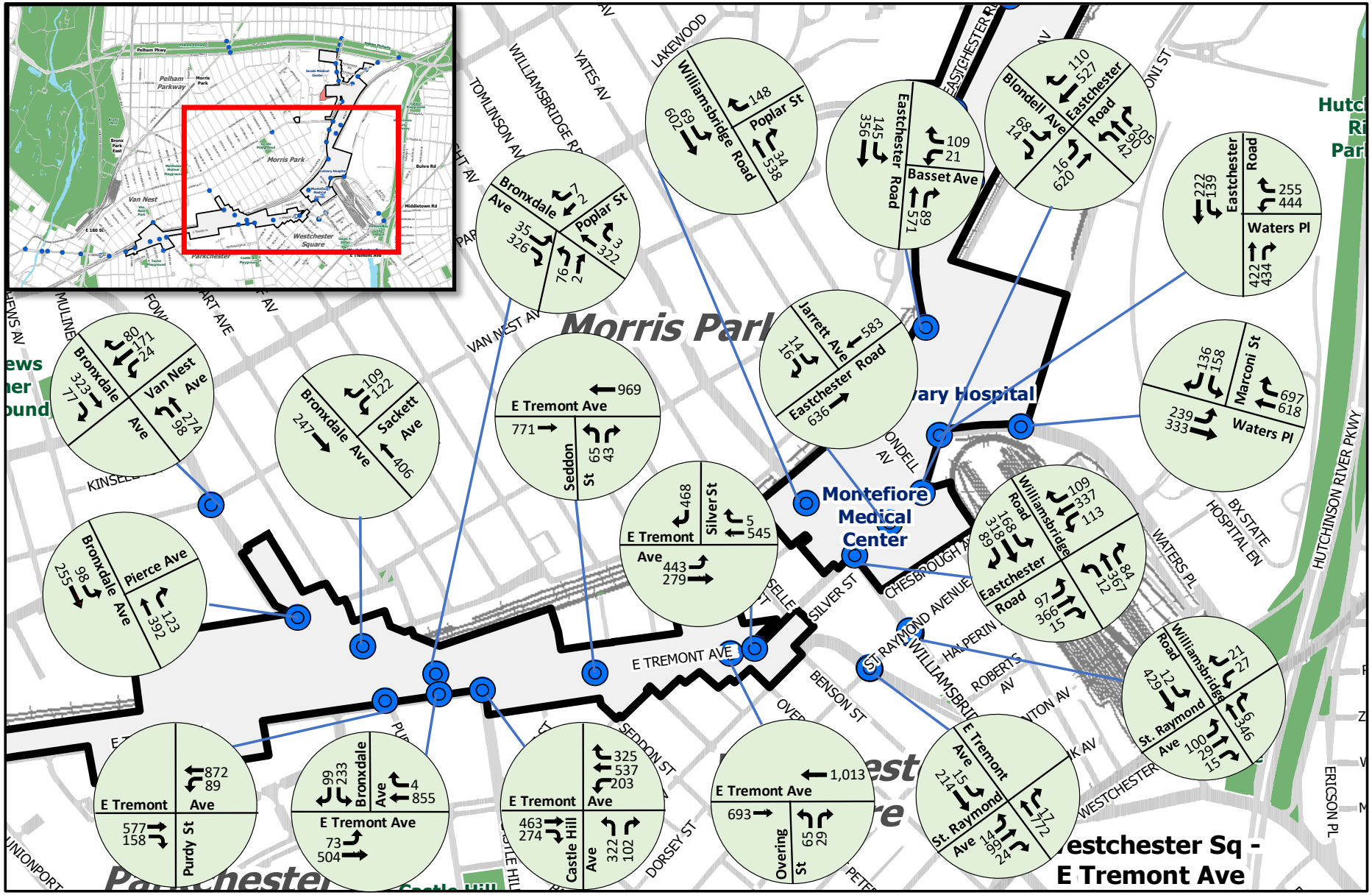
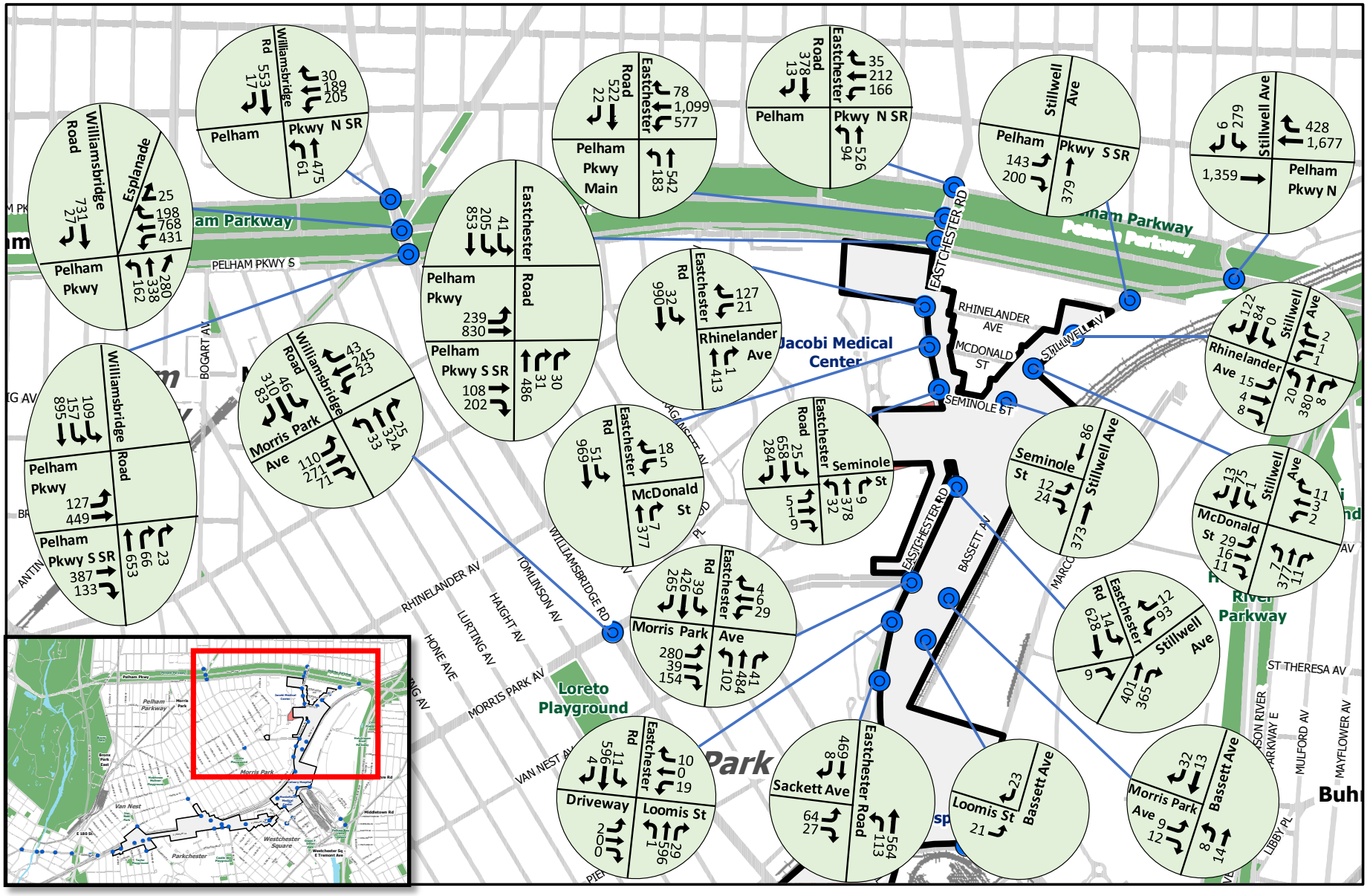


Figure 13-6B

EXISTING TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR



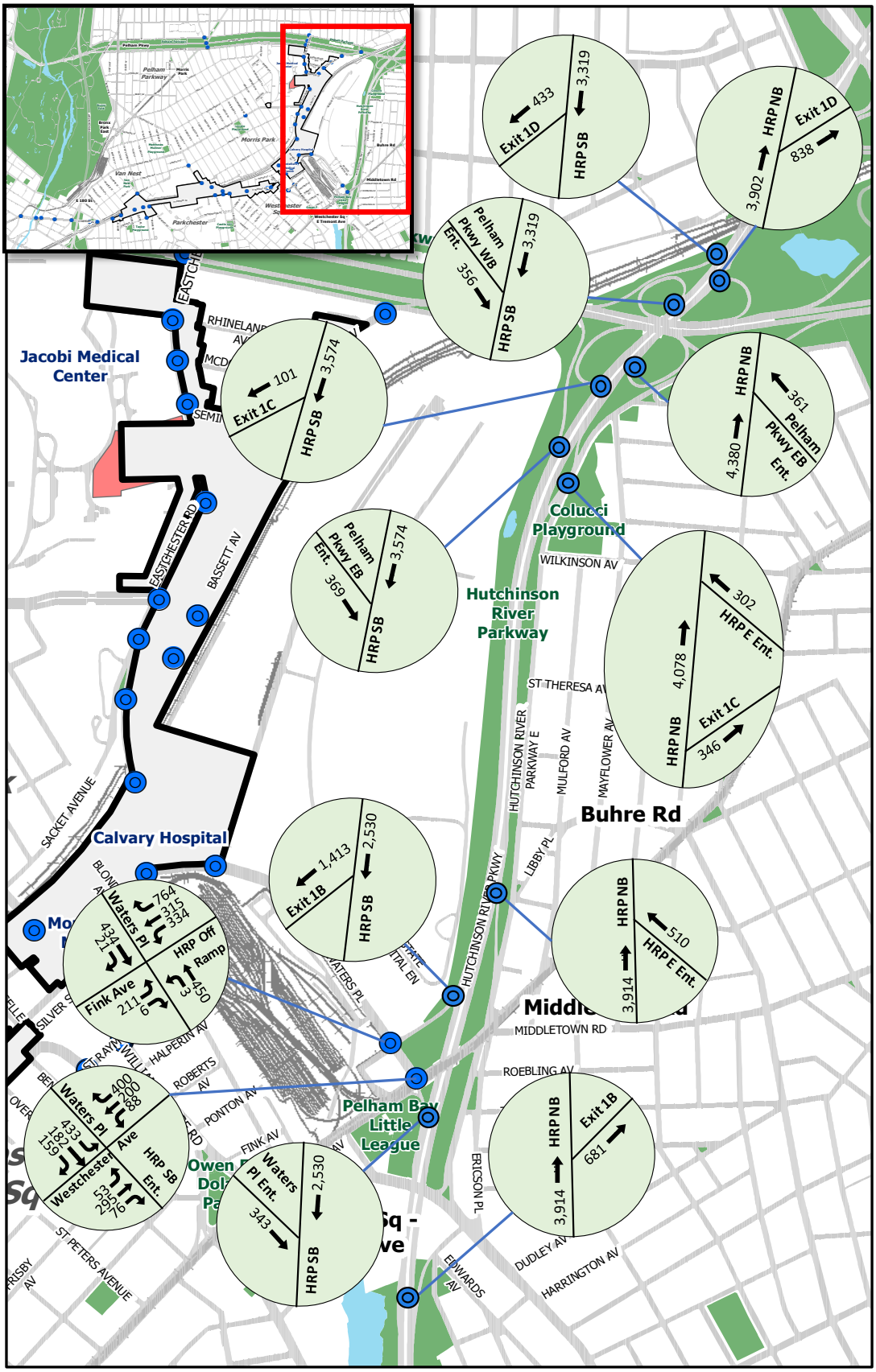
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-6C

EXISTING TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR



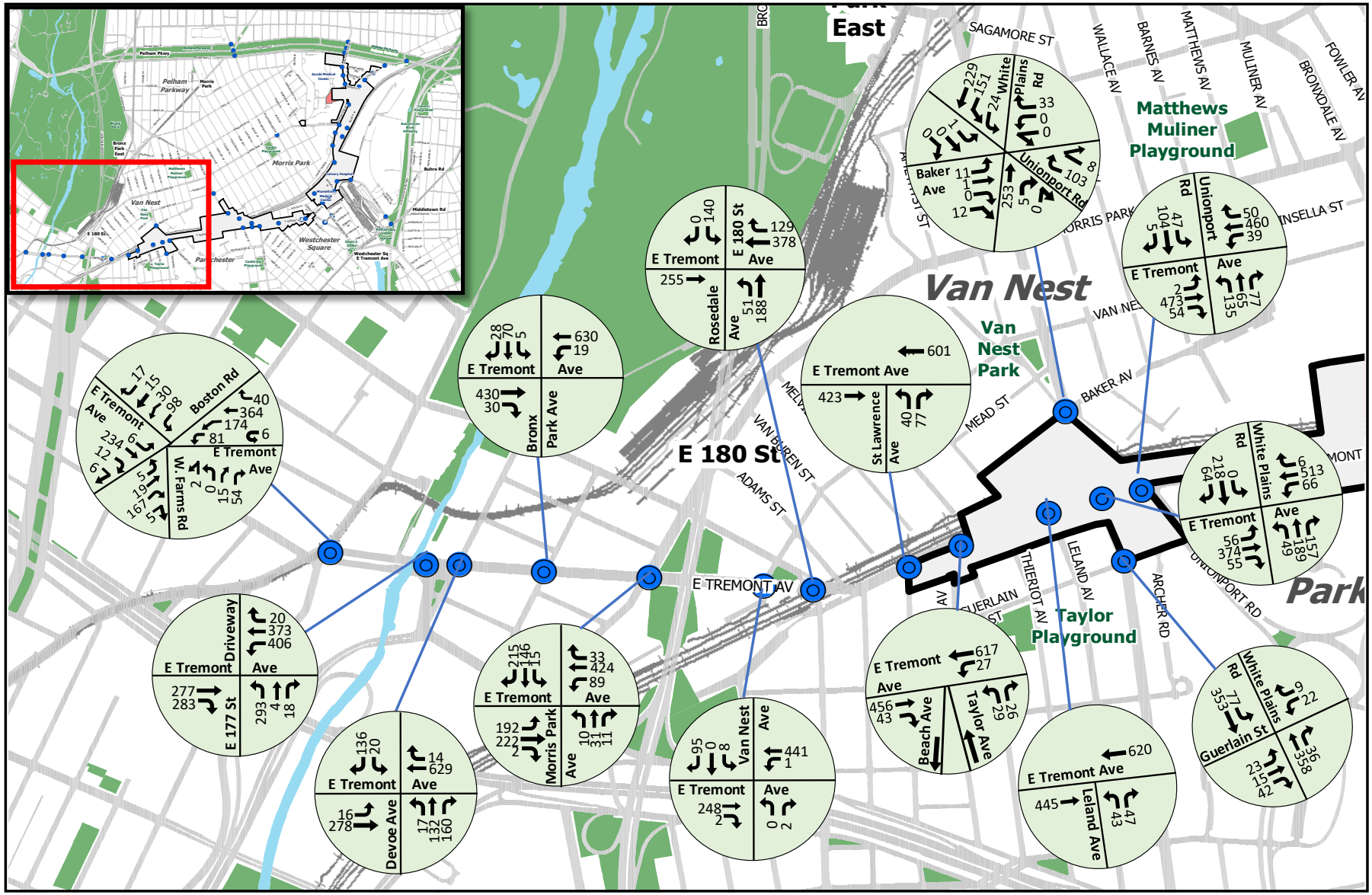
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-6D

EXISTING TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR



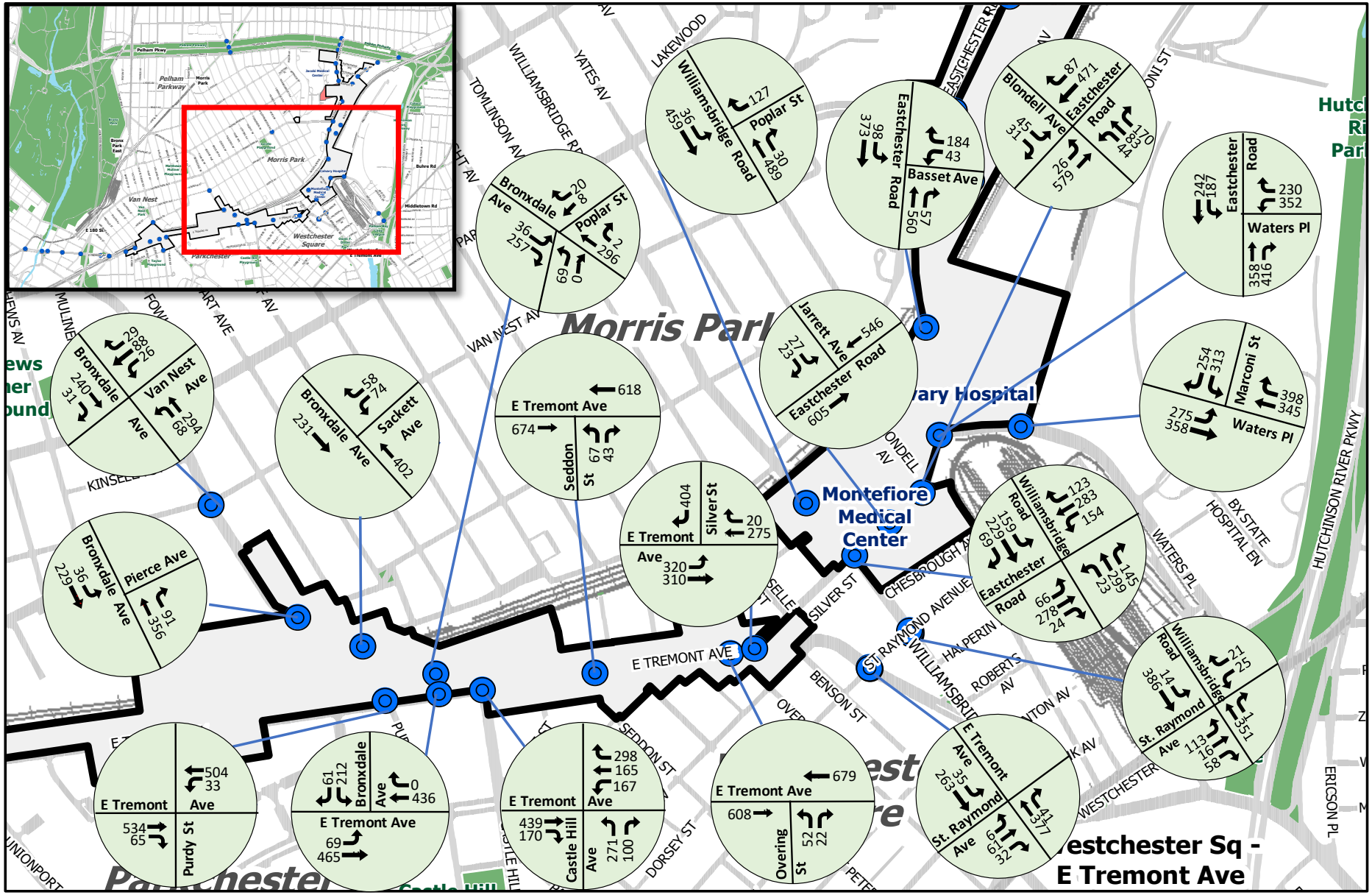
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-7A

EXISTING TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR



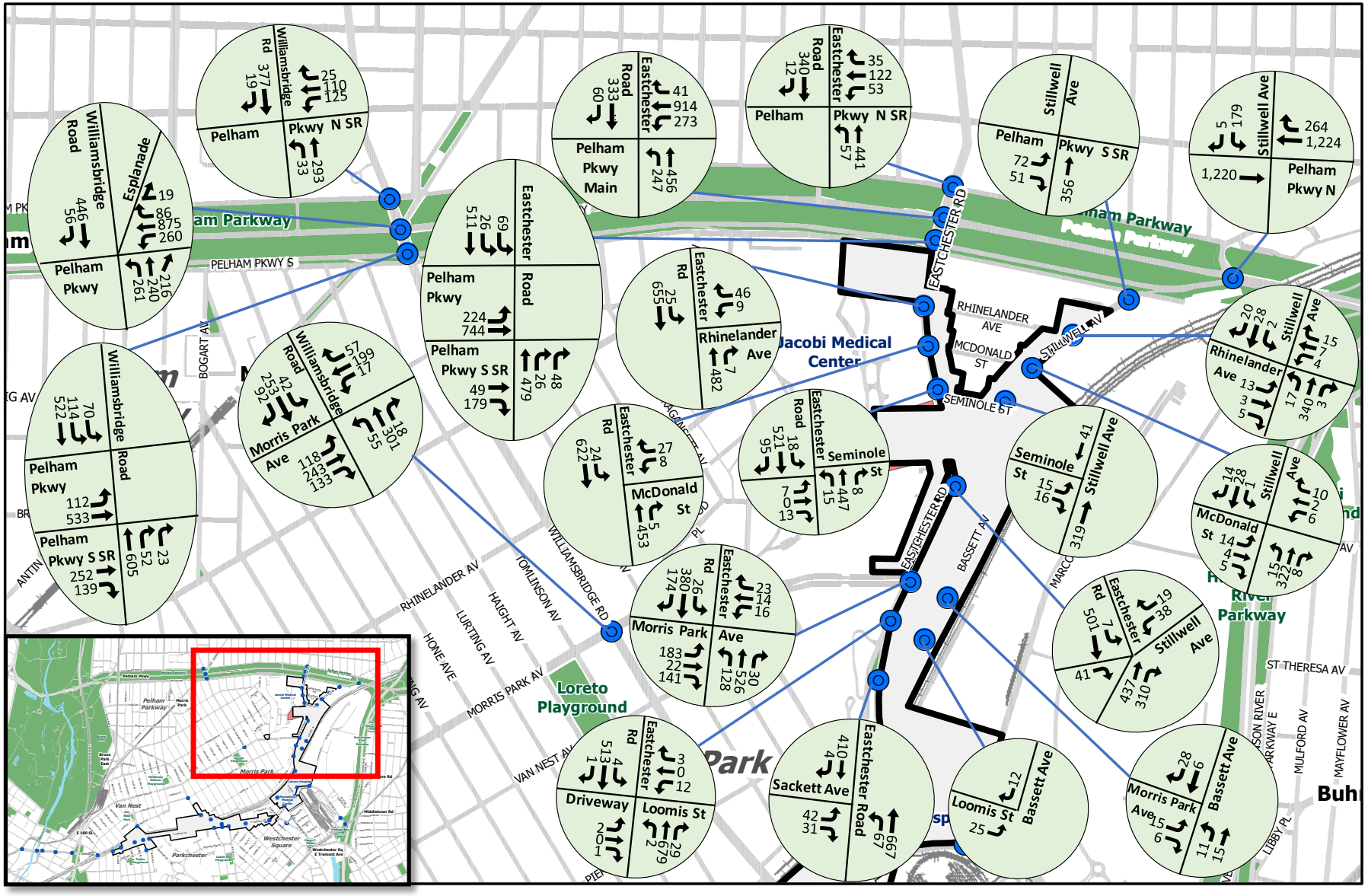
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-7B

EXISTING TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR



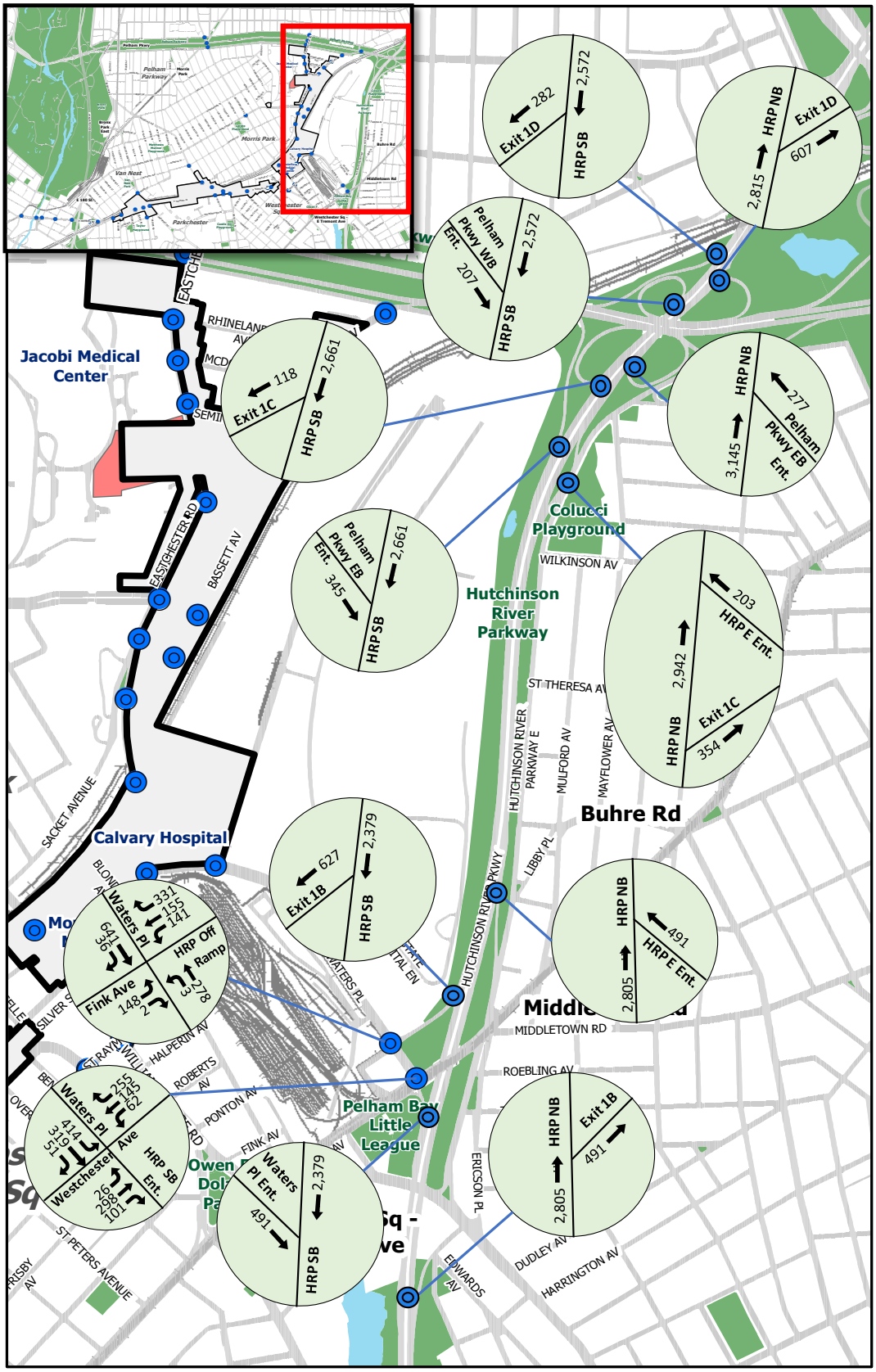
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-7C

EXISTING TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR



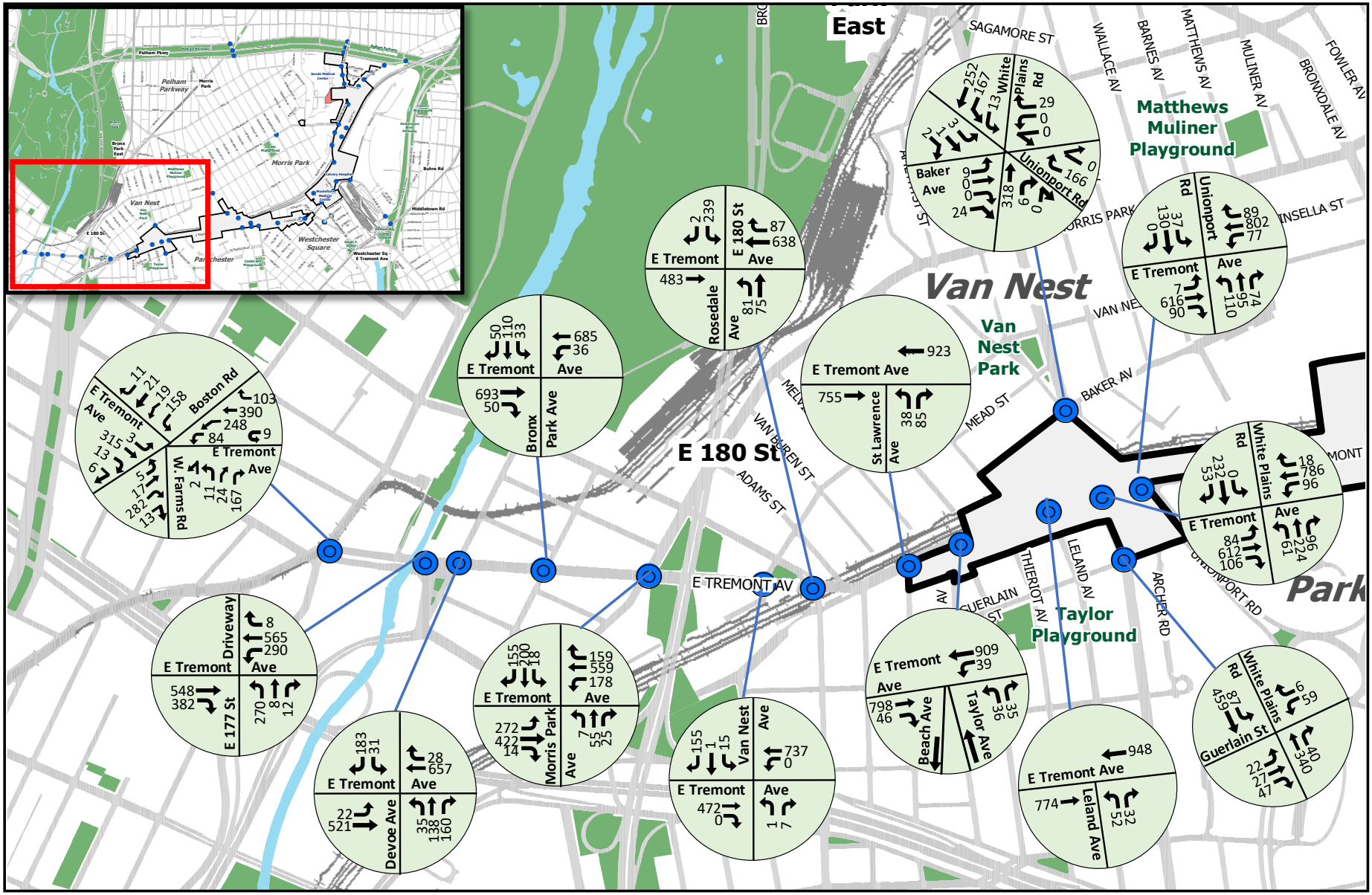
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-7D

EXISTING TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR



Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-8A

EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

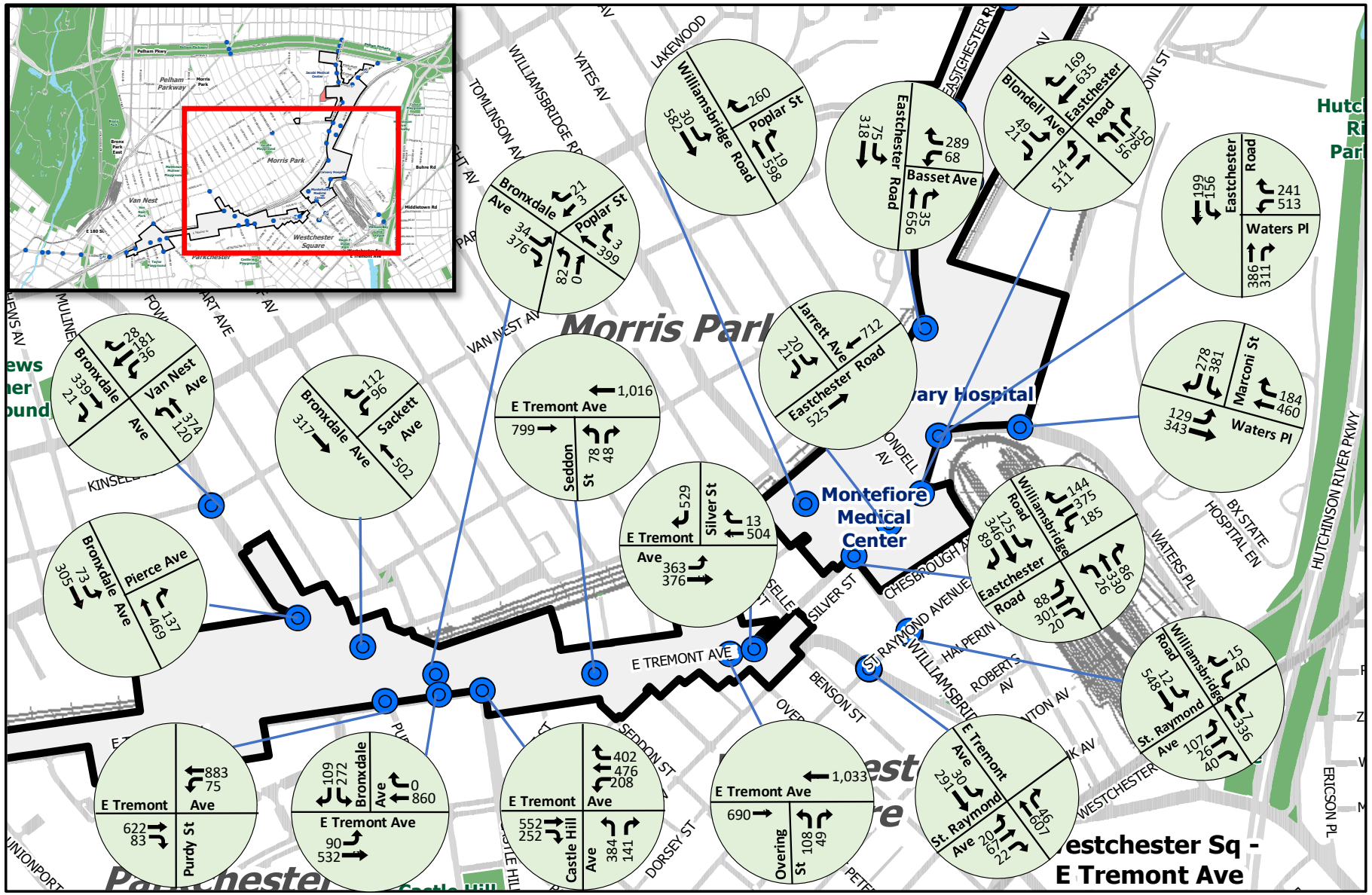
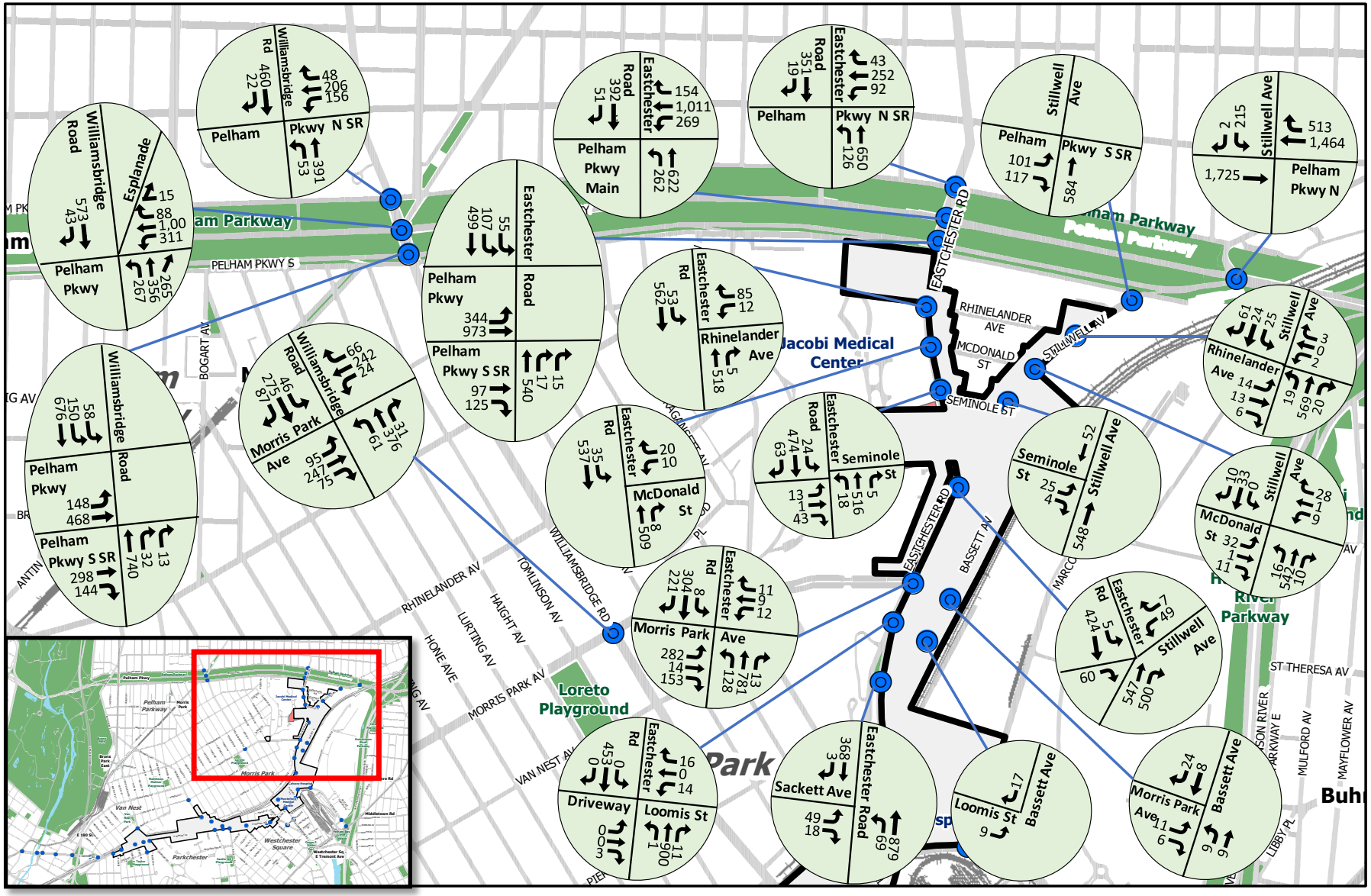


Figure 13-8B

EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR



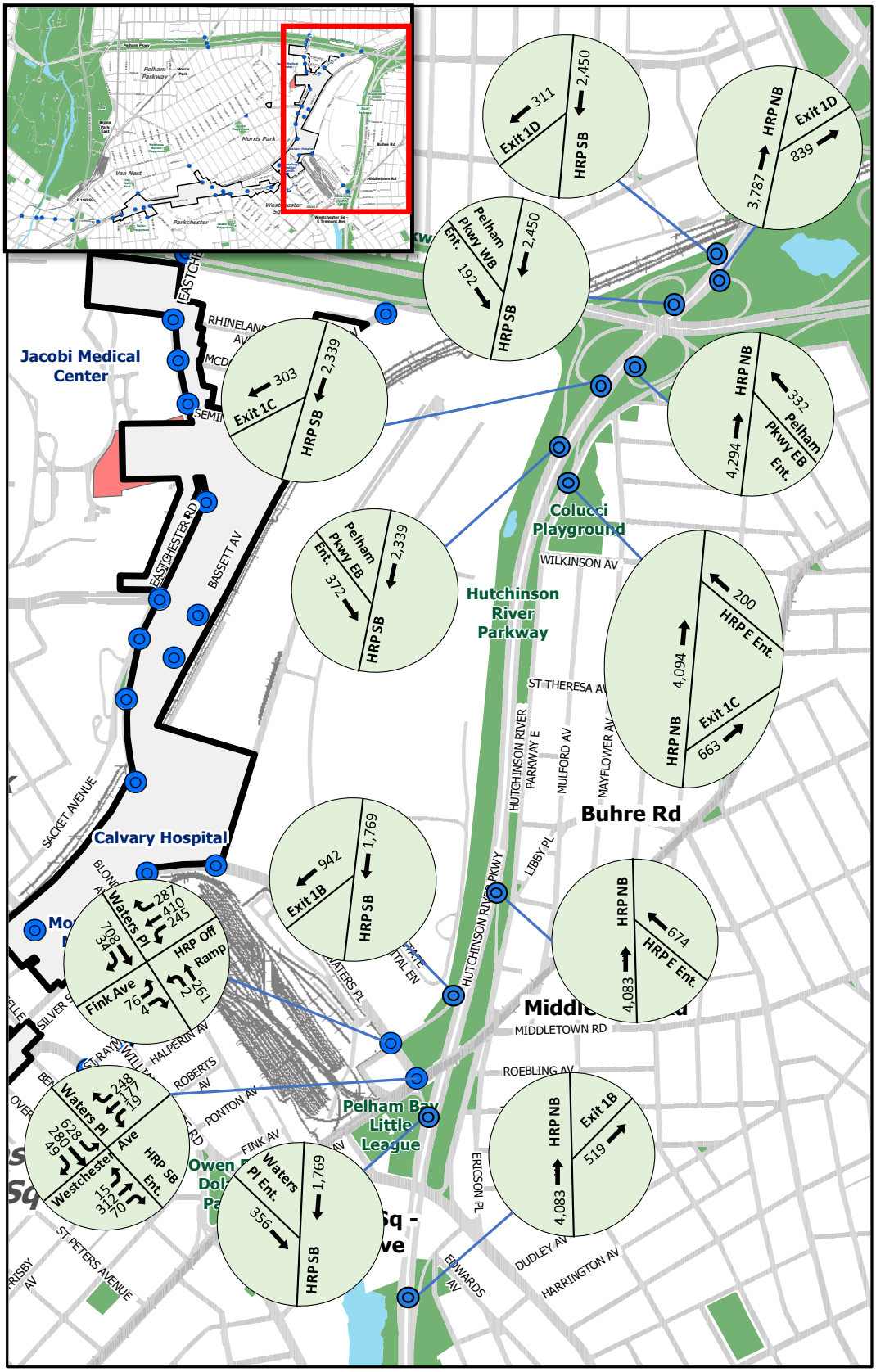
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-8C

EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR



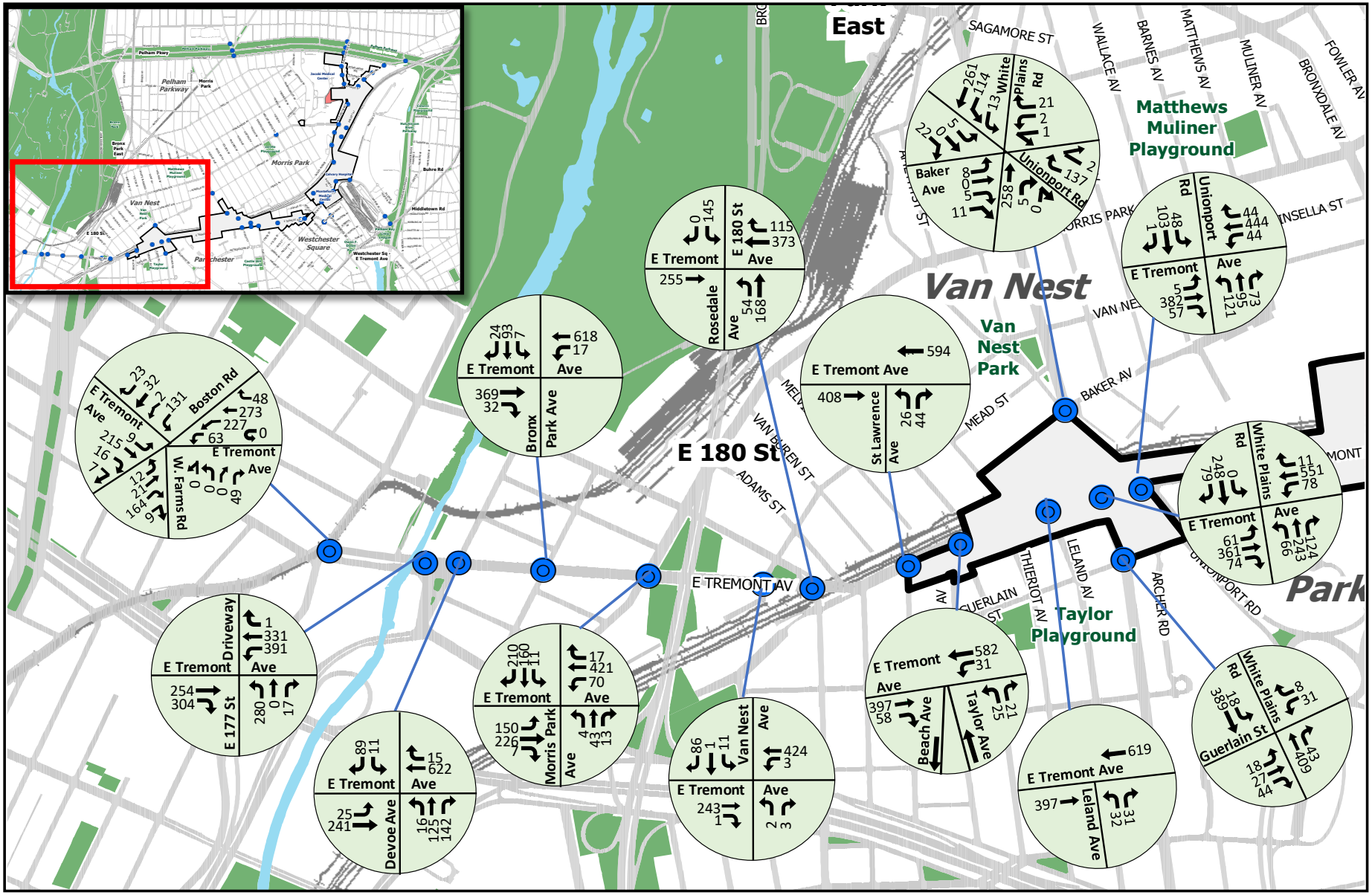
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-8D

EXISTING TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR



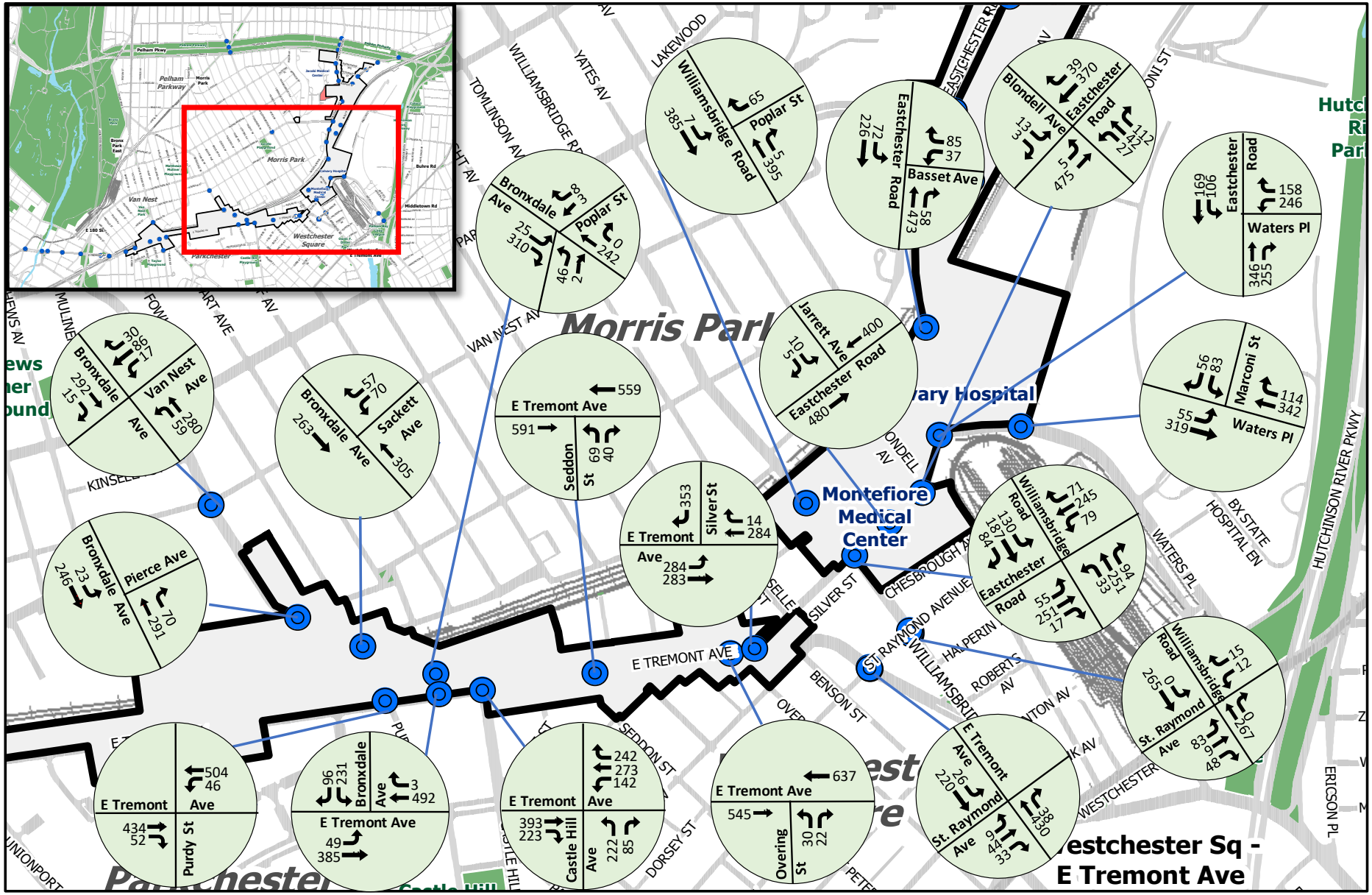
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-9A

EXISTING TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR



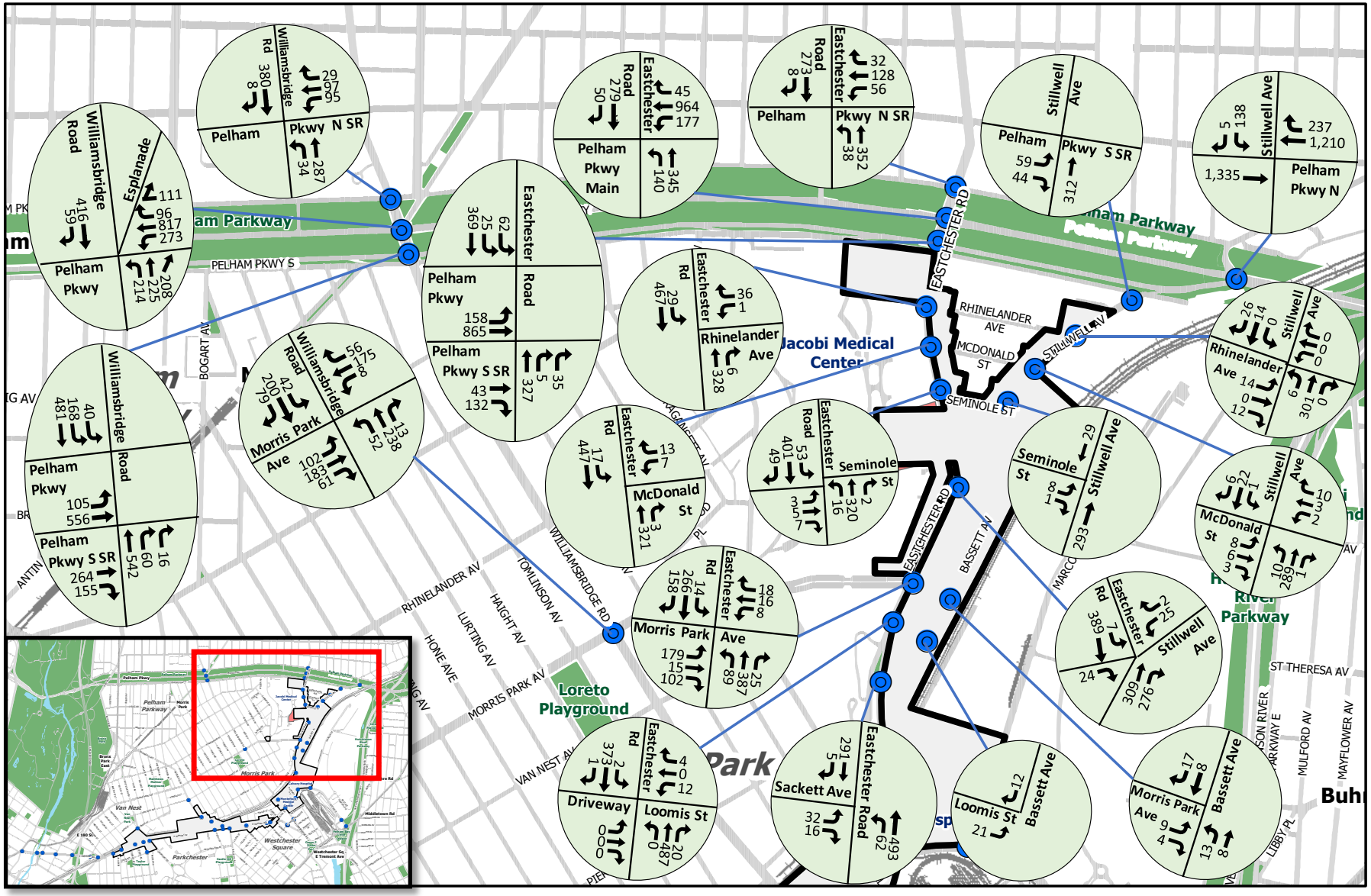
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-9B

EXISTING TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR



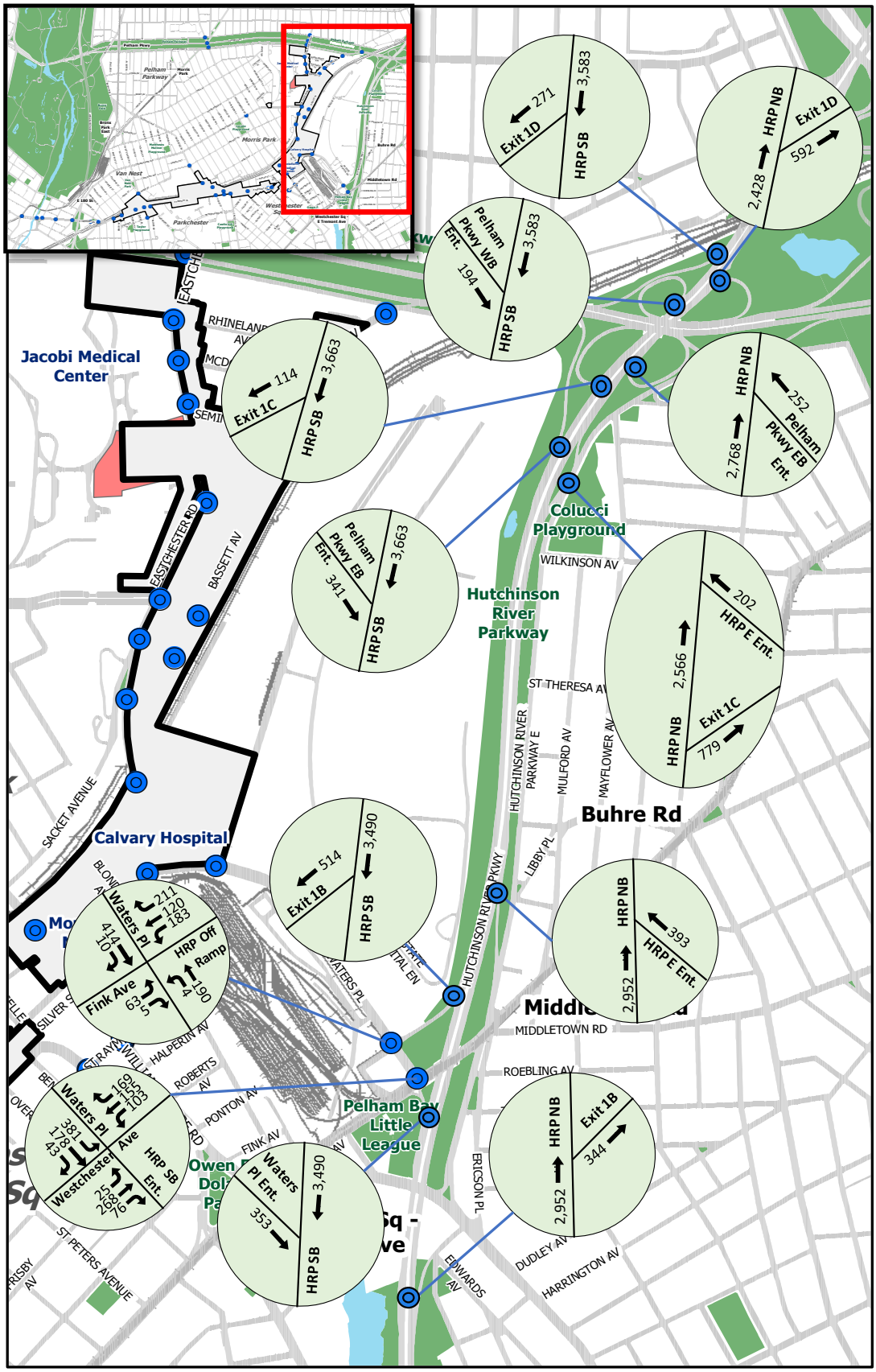
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-9C

EXISTING TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR



Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-9D

EXISTING TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR

Intersection Capacity Analysis

The v/c ratios, delays, and levels of service for those individual lane groups experiencing congestion in one or more peak hours in Existing Conditions are listed in Table 13-19, "Congested Lane Groups at Analyzed Intersections for Existing Conditions." A lane group is considered congested and is included in Table 13-19 if it operates at LOS E or F and/or with a v/c ratio of 0.90 or above. A v/c ratio of 1.00 or above reflects capacity conditions. As listed in Table 13-19, a total of 17 intersections currently have at least one congested lane group in one or more peak hours. East Tremont Avenue has the greatest number of congested locations (nine intersections), followed by Eastchester Road (five intersections). Seven intersections currently have one or more lane groups operating at capacity (v/c ratio > 1.0) in the weekday AM peak hour, one in the midday, three in the PM, and one in the Saturday midday peak hour. Overall, the data in Table 13-19 indicates that congestion at analyzed intersections is most evident during the weekday AM and PM commuter peak periods, and least evident during the weekday and Saturday midday periods. V/c ratios, delays, and levels of service for all lane groups at all analyzed intersections in all peak periods in existing conditions are provided in Appendix F.

Table 13-19: Congested Lane Groups at Analyzed Intersections for Existing Conditions

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			MD Peak Hour			PM Peak Hour			Saturday Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized														
East Tremont Avenue (N Leg) at Boston Road and West Farms Road														
Boston Road	NEB	LTR	1.05	112.6	F	1.07	128.4	F	1.08	119.8	F	1.02	111.4	F
	SWB	L	1.02	44.5	D									
West Farms Road	NB	LR	0.60	63.5	E	0.48	53.6	D	0.64	59.5	E			
		R	0.72	78.9	E				0.73	69.6	E			
East Tremont Avenue (S Leg) at Boston Road														
East Tremont Avenue	WB	L	0.96	58.5	E									
Boston Road	SWB	LTR	0.71	62.2	E				0.81	67.3	E	0.66	55.9	E
East Tremont Avenue at East 177th Street														
East Tremont Avenue	EB	R	0.97	61.6	E									
	WB	L	1.03	60.1	E									
East Tremont Avenue at Morris Park Avenue														
East Tremont Avenue	EB	L	0.99	134.8	F				0.99	105.2	F			
East Tremont Avenue at Rosedale Avenue and East 180th Street														
East 180th Street	SB	LR	0.75	66.9	E	0.89	91.5	F	0.97	96.8	F	0.80	66.6	E
East Tremont Avenue at White Plains Road														
White Plains Road	NB	TR	1.01	86.7	F				0.89	64.6	E			
East Tremont Avenue at Unionport Road														
Unionport Road	SB	LTR	0.82	57.2	E									
East Tremont Avenue at Bronxdale Avenue														
Bronxdale Avenue	SB	L	0.86	72.6	E				0.97	92.1	F			
East Tremont Avenue at Castle Hill Avenue														
Castle Hill Avenue	NB	R							0.63	55.2	E			
East Tremont Avenue at Silver Street														
Silver Street	SB	R	0.92	64.0	E				0.92	58.6	E			
Williamsbridge Road at Pelham Parkway S														
Pelham Parkway S	EB	LT				0.94	55.5	E	0.97	62.4	E			
Eastchester Road at Pelham Parkway N SR														
Eastchester Road	SB	TR	0.99	71.9	E				0.98	78.3	E			

Table 13-19: Congested Lane Groups at Analyzed Intersections for Existing Conditions (cont.)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour			MD Peak Hour			PM Peak Hour			Saturday Peak Hour		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized, continued														
Eastchester Road at Pelham Parkway N														
Pelham Parkway N	WB	L	0.97	56.6	E				0.83	60.7	E			
		T							1.05	86.6	F			
Eastchester Road at Rhinelander Avenue														
Rhinelander Avenue	WB	LR	0.47	56.2	E									
Eastchester Road at Morris Park Avenue														
Eastchester Road	NB	L				0.59	55.3	E						
	SB	LTR	1.04	84.0	F									
Eastchester Road at Waters Place														
Eastchester Road	NB	R	1.00	55.6	E									
Waters Place	WB	L	1.05	77.4	E				1.05	74.5	E			
Waters Place at Marconi Street														
Waters Place	EB	L	1.00	66.0	E									
Waters Place at Hutchinson River Parkway Off Ramp and Fink Avenue														
Hutchinson River Parkway Off Ramp	WB	R	1.04	68.0	E									

Notes:
- "Mvt." refers to the specific intersection approach lane(s) at how the lane(s) operate and/or specific pavement striping. TR is a combined through- right turn lane(s), R or L refers to exclusive right- or left-turn movement lane(s), at LTR is a mixed lane(s) that allows for all movement types.
- V/C is the volume-to-capacity ratio for the Mvt. listed in the first column. Values above 1.0 indicate an excess of demand over capacity.
- Level of service (LOS) for signalized intersections is based upon average control delay per vehicle (sec/veh) for each lane group listed in the Mvt. Column as noted in the 2000 HCM - TRB.
- The delay calculations for signalized intersections represent the average control delay experienced by all vehicles that arrive in the analysis period, including delays incurred beyond the analysis period when the lane group is saturated.
- denotes lane group analyzed, but not identified as congested during given analysis period
- denotes lane group not present in given analysis period due to differences in calibration between analysis periods.
- denotes lane group not present in given analysis period due to the lane group containing a defacto left- or right- turn in a different analysis period

Source: STV Incorporated, 2023.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

Future No-Action Traffic Growth

Between 2023 and 2033, traffic demand in the study area is expected to increase due to background growth, development that could occur pursuant to existing zoning (i.e., as-of-right-development), and development projects likely to occur within and in the vicinity of the study area in the No-Action condition. Development on projected development sites is expected to add a net total of approximately 180 dwelling units, 72,000 square feet (sf) of commercial uses, and 190,000 sf of community facility uses.

In addition to development on projected development sites, other developments listed in Table 2-4 in Chapter 2, "Land Use, Zoning, and Public Policy," were considered in order to forecast future traffic conditions without the Proposed Actions (the No-Action condition). Specifically, trips generated by the *Blondell Commons Rezoning EAS (2018), Bronx Psychiatric Center Land Use Improvement Project FEIS (2105), Lambert Houses Redevelopment Project FEIS (2016),* and the *MTA Metro-North Railroad Penn Station Access Project EA (2021)* have been added to the No-Action traffic networks. The No-Action traffic volumes also reflect annual background growth rates of 0.25 percent per year for the 2023 through 2028 period and 0.125 percent for the 2028 through 2033 period. These background growth rates, recommended in the *CEQR Technical Manual* for projects in the Bronx, are applied to account for smaller projects and as-of-right developments not reflected in Table 2-4, and general increases in travel demand not attributable to specific development projects.

Figure 13-10, "2033 No-Action Traffic Volumes - Weekday AM Peak Hour," Figure 13-11, "2033 No-Action Traffic Volumes - Weekday Midday Peak Hour," Figure 13-12, "2033 No-Action Traffic Volumes - Weekday PM Peak Hour," and Figure 13-13, "2033 No-Action Traffic Volumes - Saturday Midday Peak Hour," show total No-Action traffic volumes during weekday AM, midday, and PM, and Saturday midday peak hours.

Changes to Study Area Street Network

The 2023 through 2033 period will see the implementation of several physical and operational changes to the study area street system. These changes are the result of the study area development projects expected to be completed by 2033 as well as the NYCDOT initiatives listed below.

<u>NYCDOT East Bronx Bike Network Expansion</u>

There are numerous changes associated with DOT's East Bronx Bike Network Expansion. Two new bicycle lanes are planned for implementation, one on Eastchester Road and another on Waters Place. At the Eastchester Road intersections of Pelham Parkway and Morris Park Avenue, curb side parking is prohibited to provide travel lanes or a bus stop. At these locations, a shared bike lane was assumed to be installed within the curb lane. South of Loomis Street to Waters Place, the Eastchester Road bike lanes transition to a two-way, parking-protected bike path along the east curb. To accommodate the bike lanes, Eastchester Road would experience a road diet; the number of vehicle travel lanes will be reduced from two lanes in each direction to one northbound travel lane and two southbound travel lanes. The two-way, parking-protected bike path along the east curb would continue along Waters Place from Eastchester

Road to Westchester Avenue. Waters Place would experience a road diet to accommodate the bike lanes – the number of vehicle travel lanes will be reduced from two lanes in each direction to one travel lane in each direction and a center left-turn lane.

NYCDDC Reconstruction of East 177th Street and Devoe Avenue

New York City Department of Design and Construction (DDC)'s Reconstruction of East 177th Street and Devoe Avenue would eliminate the intersection of East 177th Street at East Tremont Avenue and would alter the geometry of East Tremont Avenue at Devoe Avenue and at Boston Road/West Farms Road. At East Tremont Avenue and Devoe Avenue, the south leg of the intersection would be converted from one-way northbound to two-ways; traffic that used existing southbound East 177th Street would be rerouted to use southbound Devoe Avenue. The eastbound right-turn onto Devoe Avenue would be channelized and stop-controlled, similar to the existing channelized eastbound right-turn at East 177th Street. At East Tremont Avenue and Boston Road, the intersection would be modified to provide better alignment between the east and west legs of East Tremont Avenue. These modifications include the removal of the U-turn bay on the east leg of East Tremont Avenue, the channelization of the westbound right-turn, and the removal of the signal heads and storage bay on southwest-bound Boston Road (in between the east and west legs of East Tremont Avenue.)

NYCDOT Signal Timing Modifications

The signal timings at the following intersections are planned to be revised by NYCDOT by the 2033 analysis year:

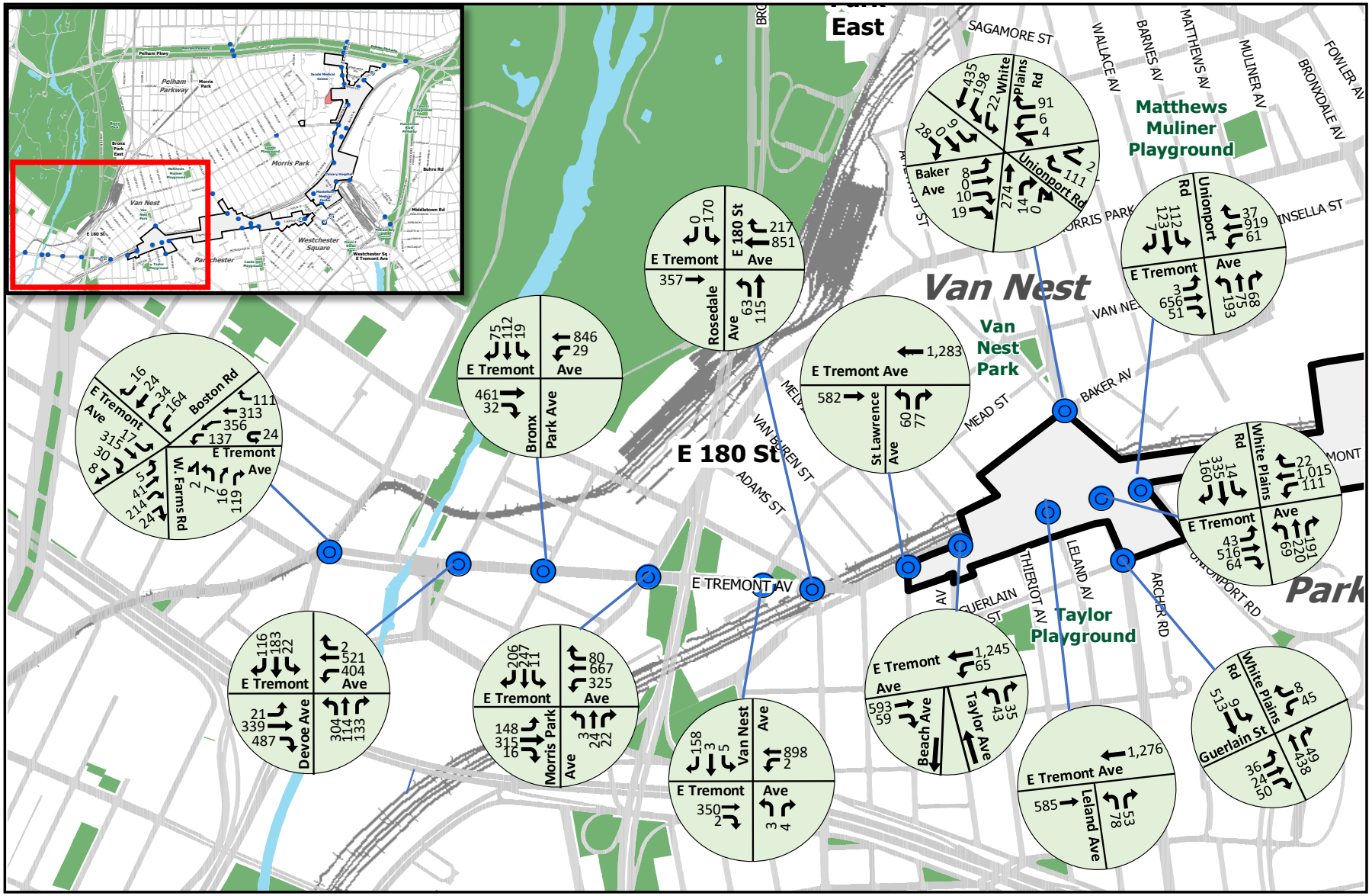
- Eastchester Road and Bassett Avenue
- Eastchester Road and Morris Park Avenue
- Eastchester Road and Pelham Parkway N
- Eastchester Road and Pelham Parkway N Service Road
- Pelham Parkway and Stillwell Avenue
- Waters Place and Marconi Street
- White Plains Road and Unionport Avenue

NYCDOT is also installing a new traffic signal at the existing unsignalized intersection of White Plains Road and Unionport Avenue. This traffic signal is assumed to be operational in the No- Action condition.

Mitigation Measures Associated with No-Action Condition Development Projects

No-Action Condition development projects in the study area include various mitigation measures, as identified through review of the EISs prepared for the development projects. Intersection mitigation measures identified in the respective environmental review documents for the *Bronx Psychiatric Center Land Use Improvement Project FEIS* and *Lambert Houses Redevelopment Project FEIS* project were incorporated in the No-Action Condition. Specifically, signal timing adjustments were made to the intersections of Pelham Parkway and Eastchester Road, Williamsbridge Road and Eastchester Road, Waters Place and Fink Avenue/Hutchinson River Parkway Off-Ramp, and Waters Place and Westchester Avenue/Hutchinson River Parkway On-Ramp. Proposed mitigation measures in the *Bronx Psychiatric Center Land Use Improvement Project FEIS* also include the removal of parking along the southbound

approach at the intersection of Williamsbridge Road and Eastchester Road to allow for separate left-turn, thru, and right-turn lanes.



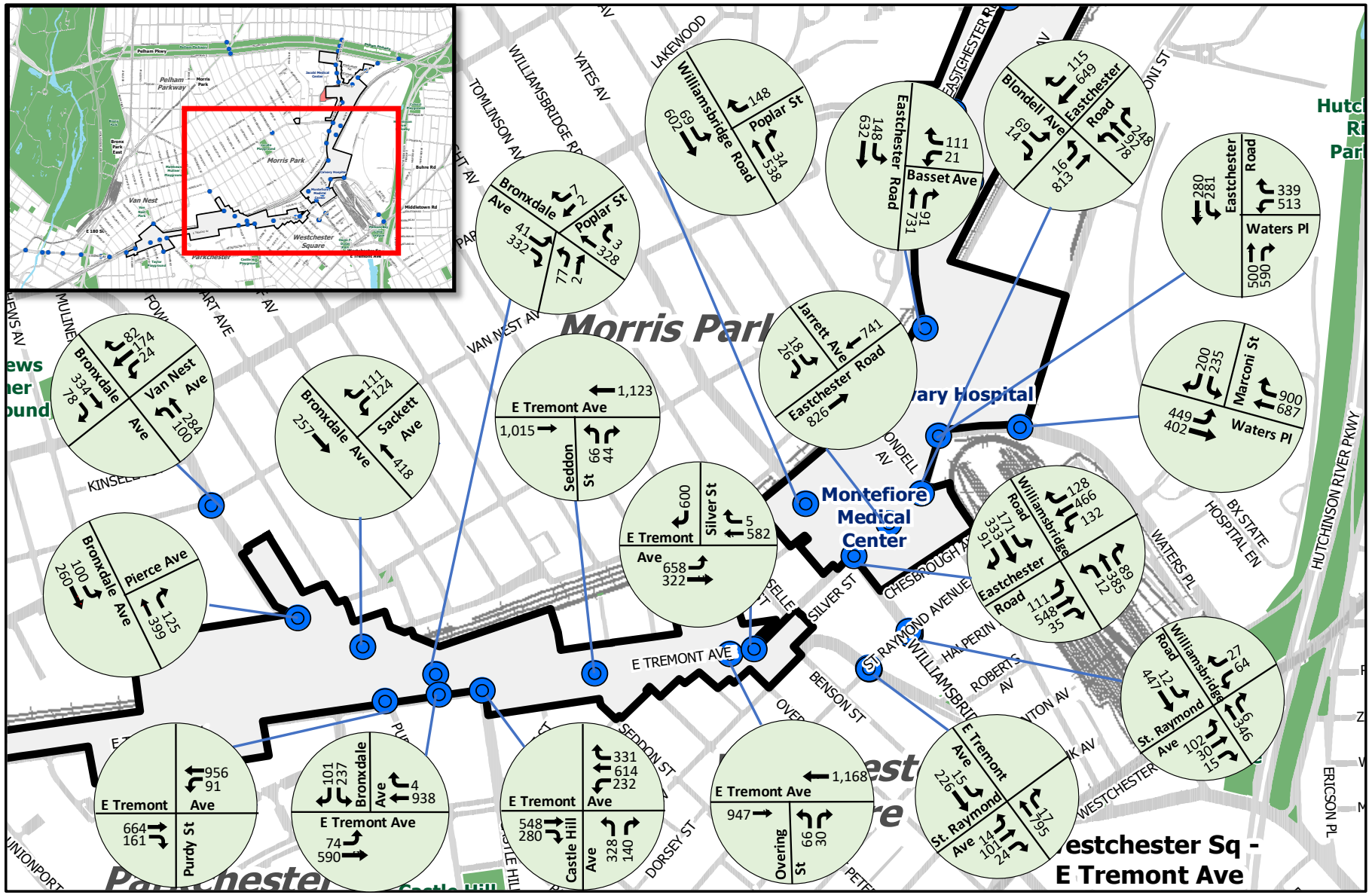
Source: Esri; STV Incorporated, 2023

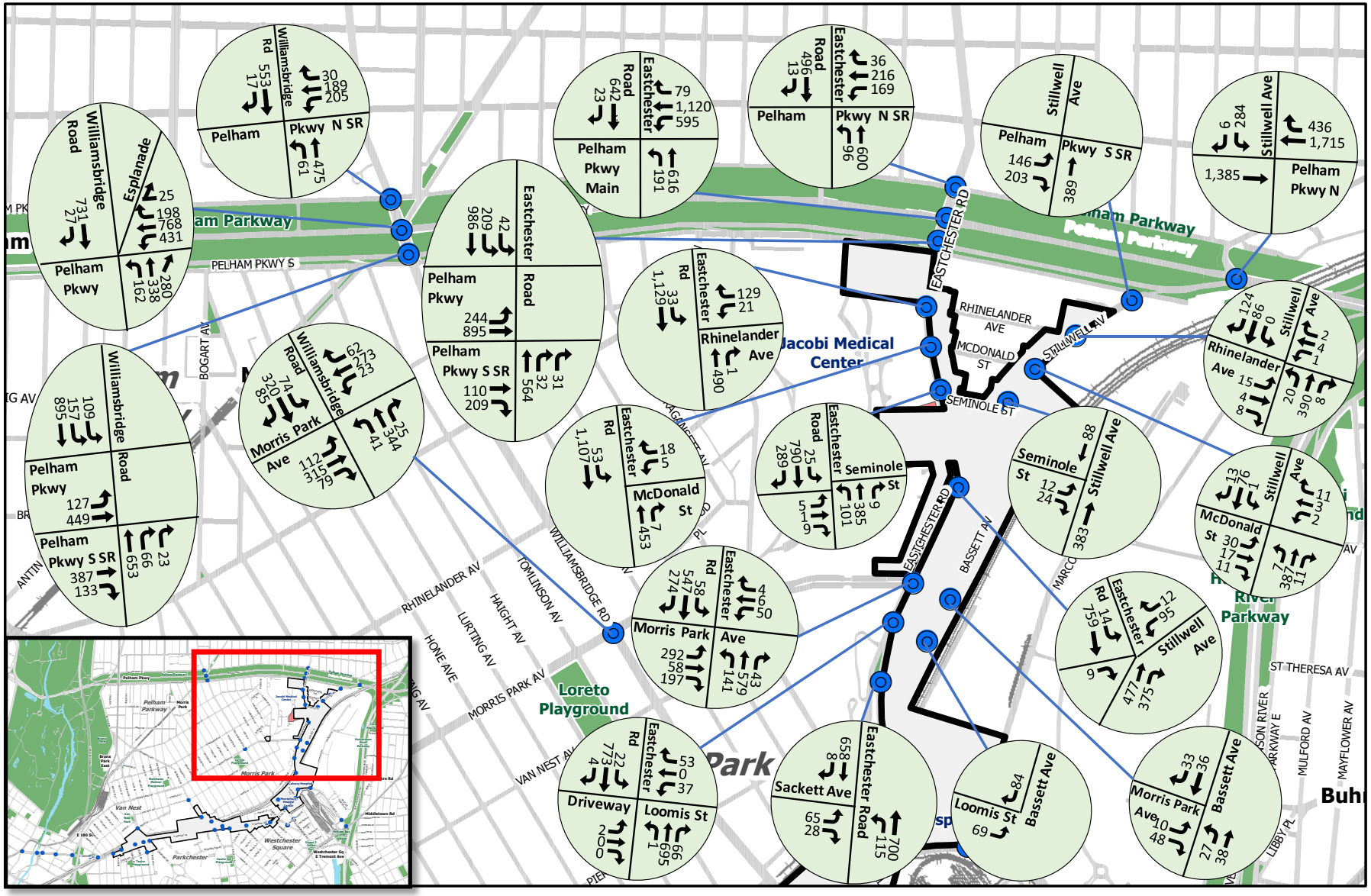
N

0 0.125 0.25 Mile

Figure 13-10A

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR


Source: Esri; STV Incorporated, 2023
N
0
0.125
0.25
Mile
Figure 13-10B
2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR
Bronx Metro-North Station Study



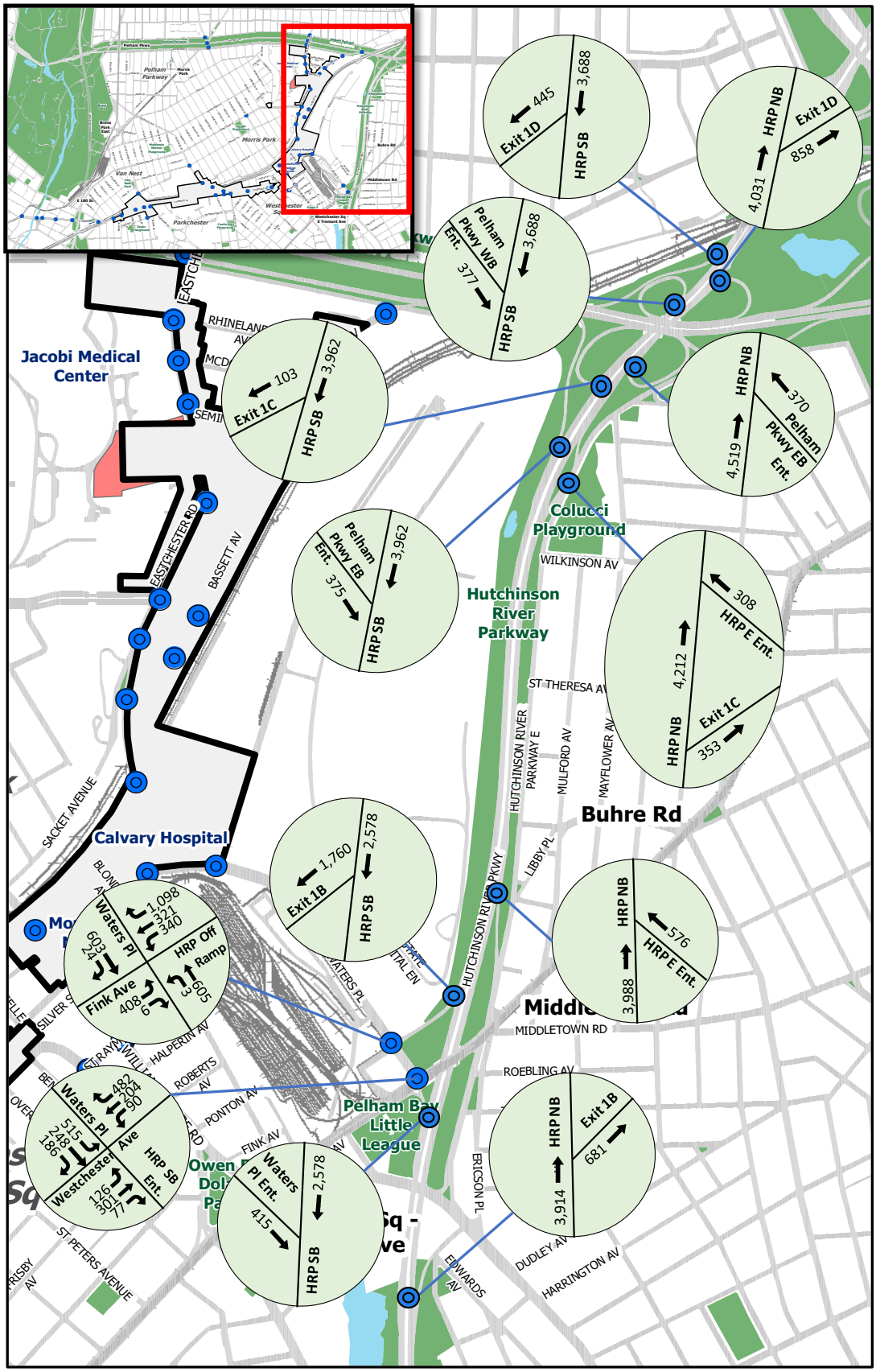
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-10C

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR



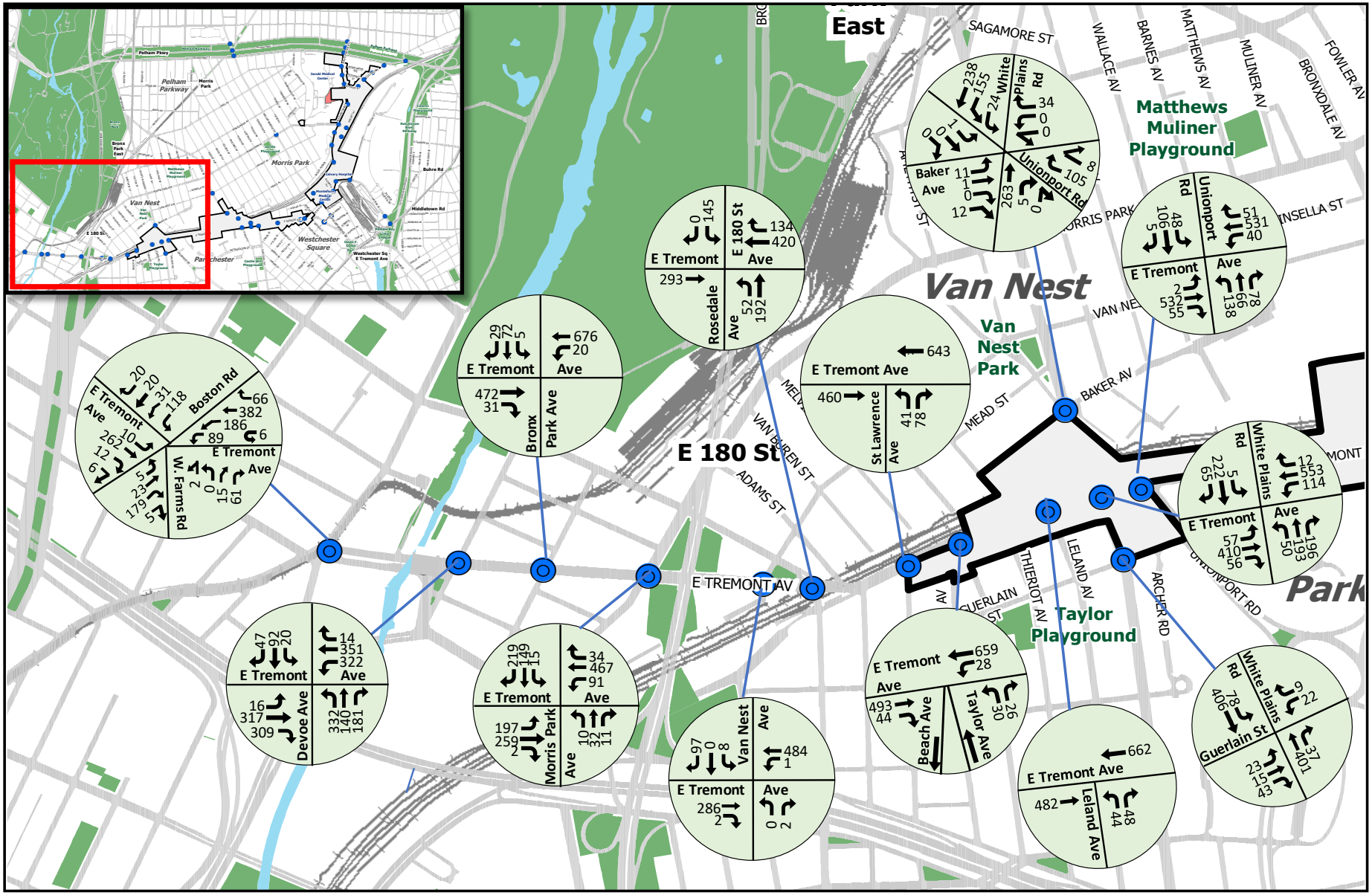
Source: Esri; STV Incorporated, 2023

Figure 13-10D

N

0 0.125 0.25 Mile

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR



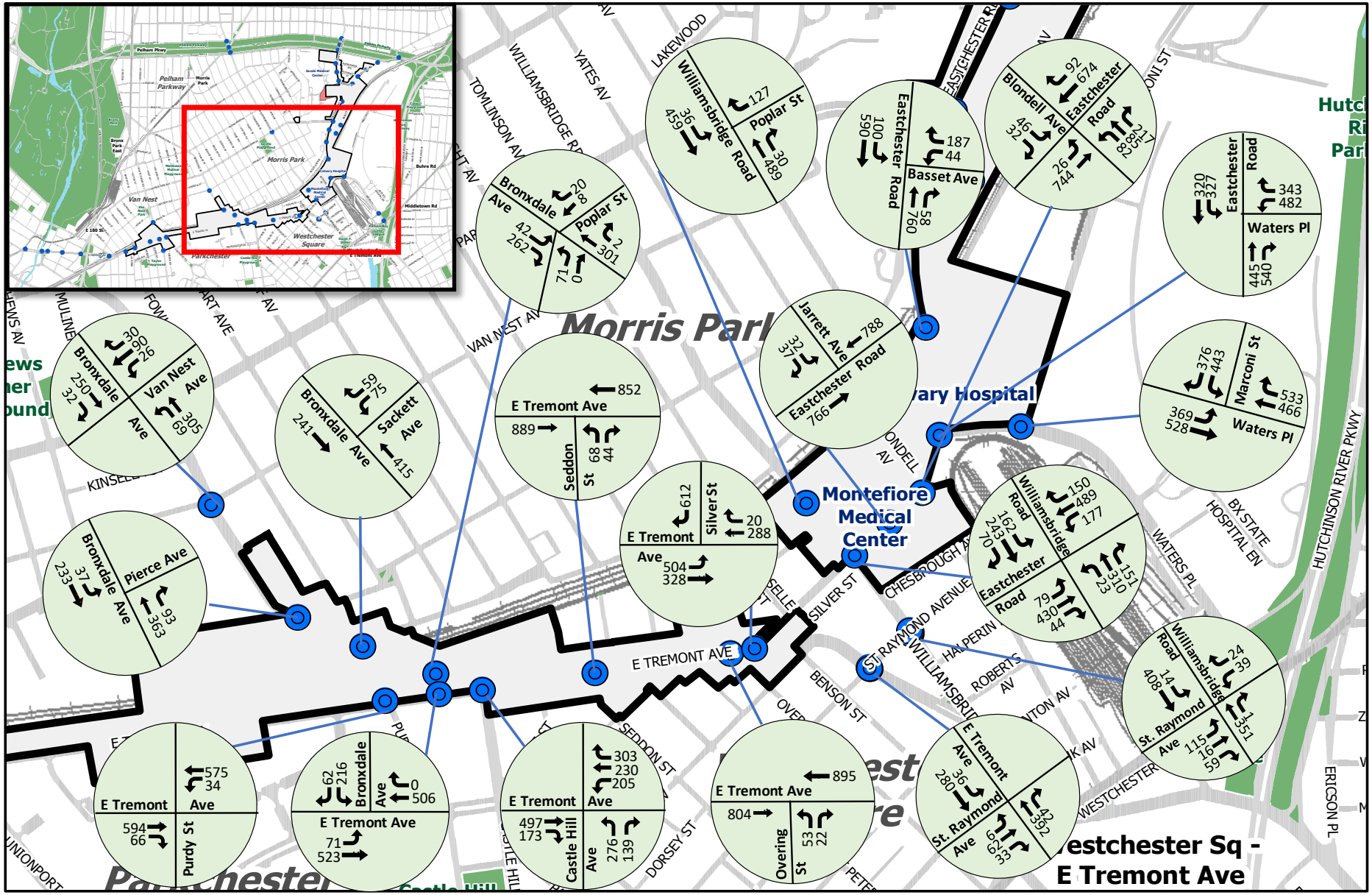
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-11A

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR



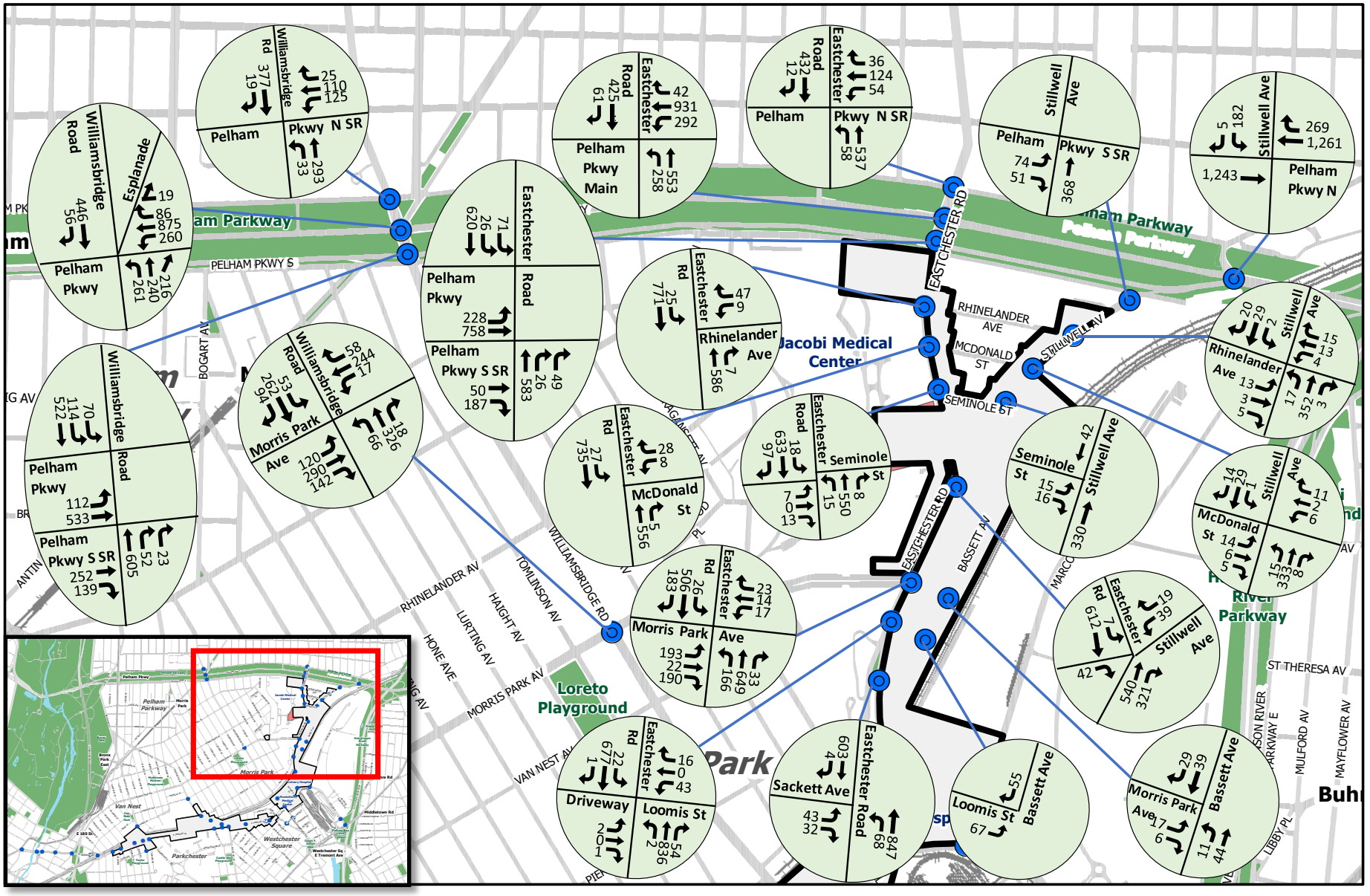
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-11B

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR



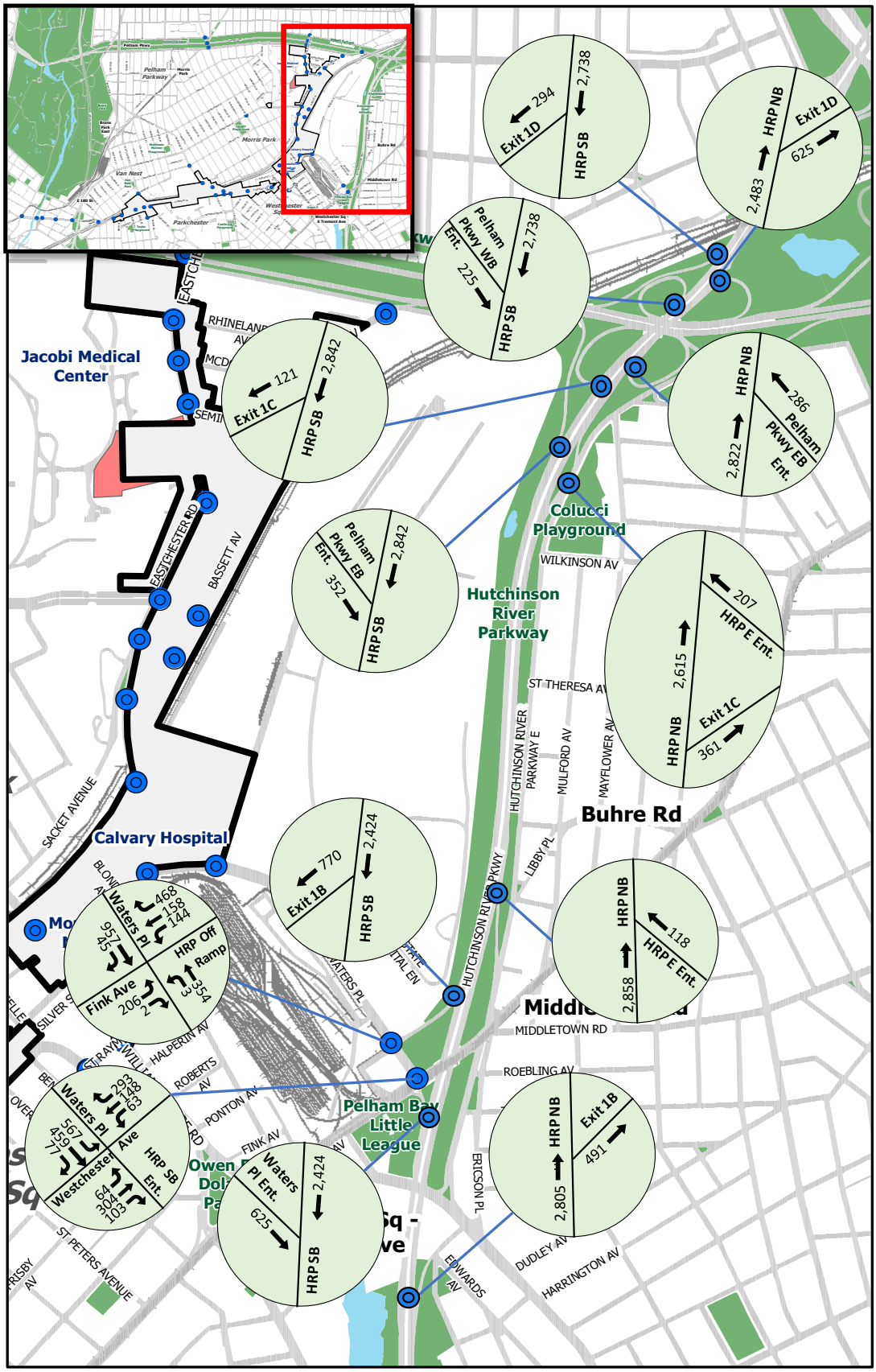
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-11C

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR



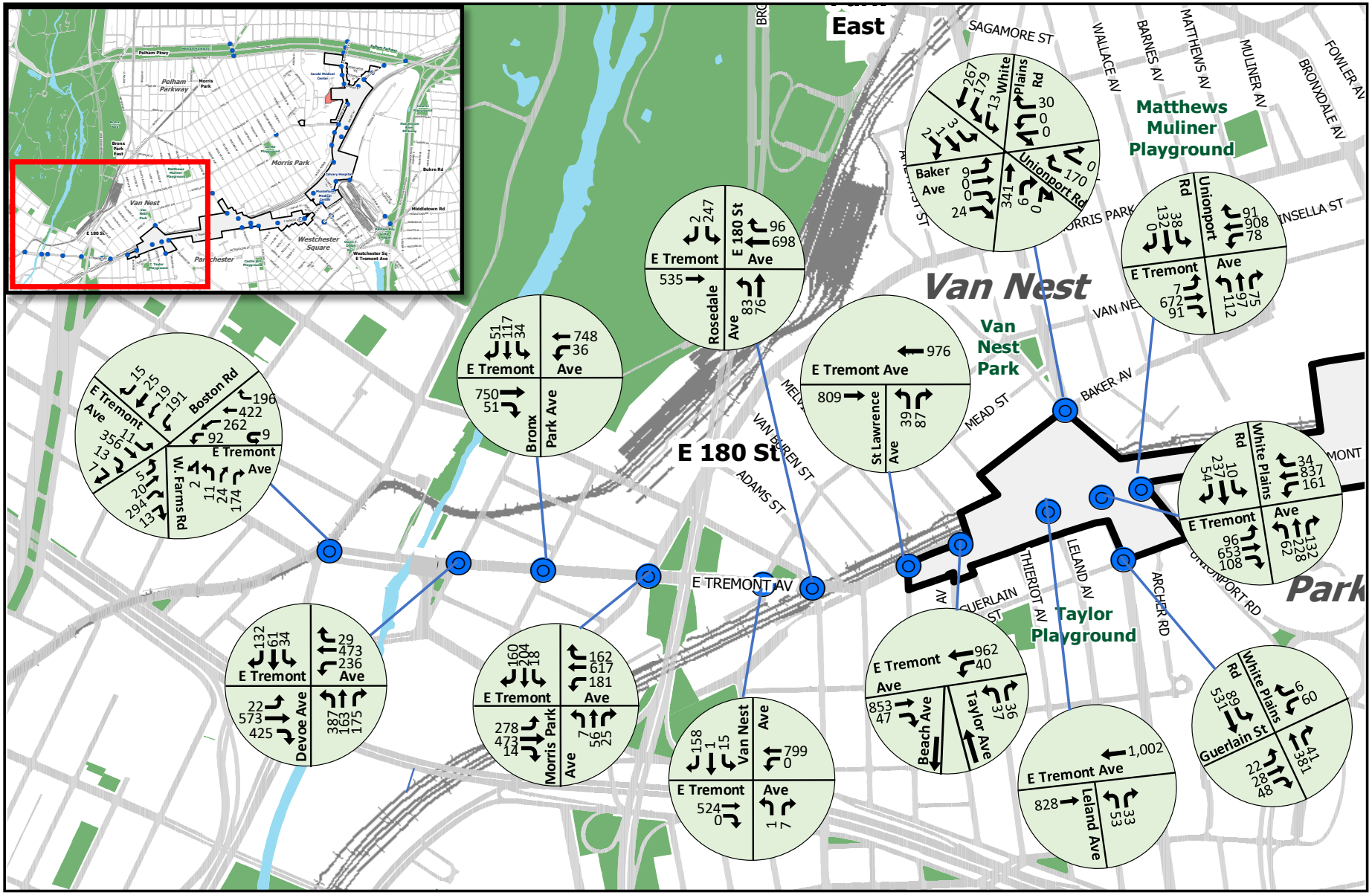
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-11D

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR



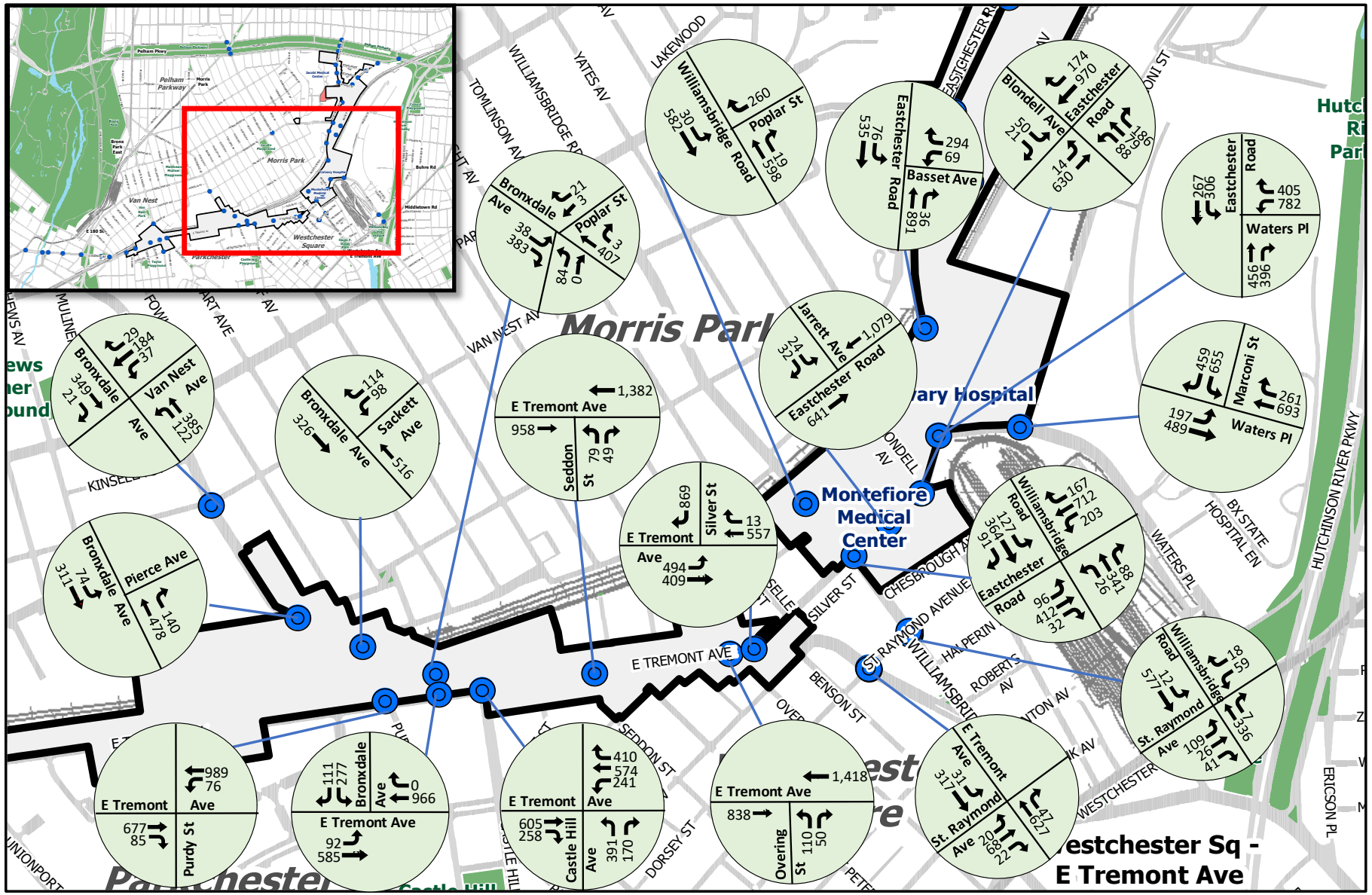
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-12A

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR



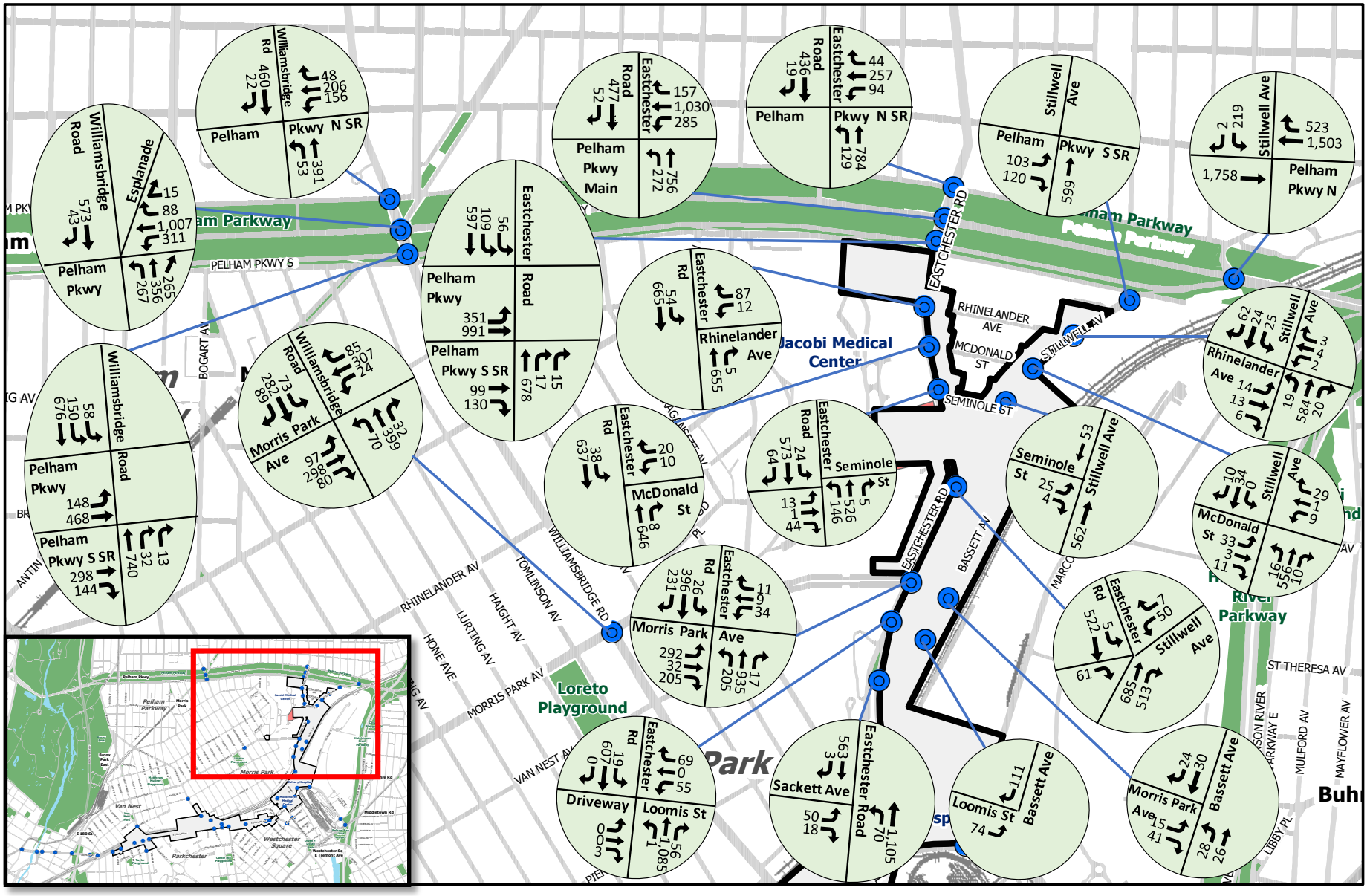
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-12B

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR



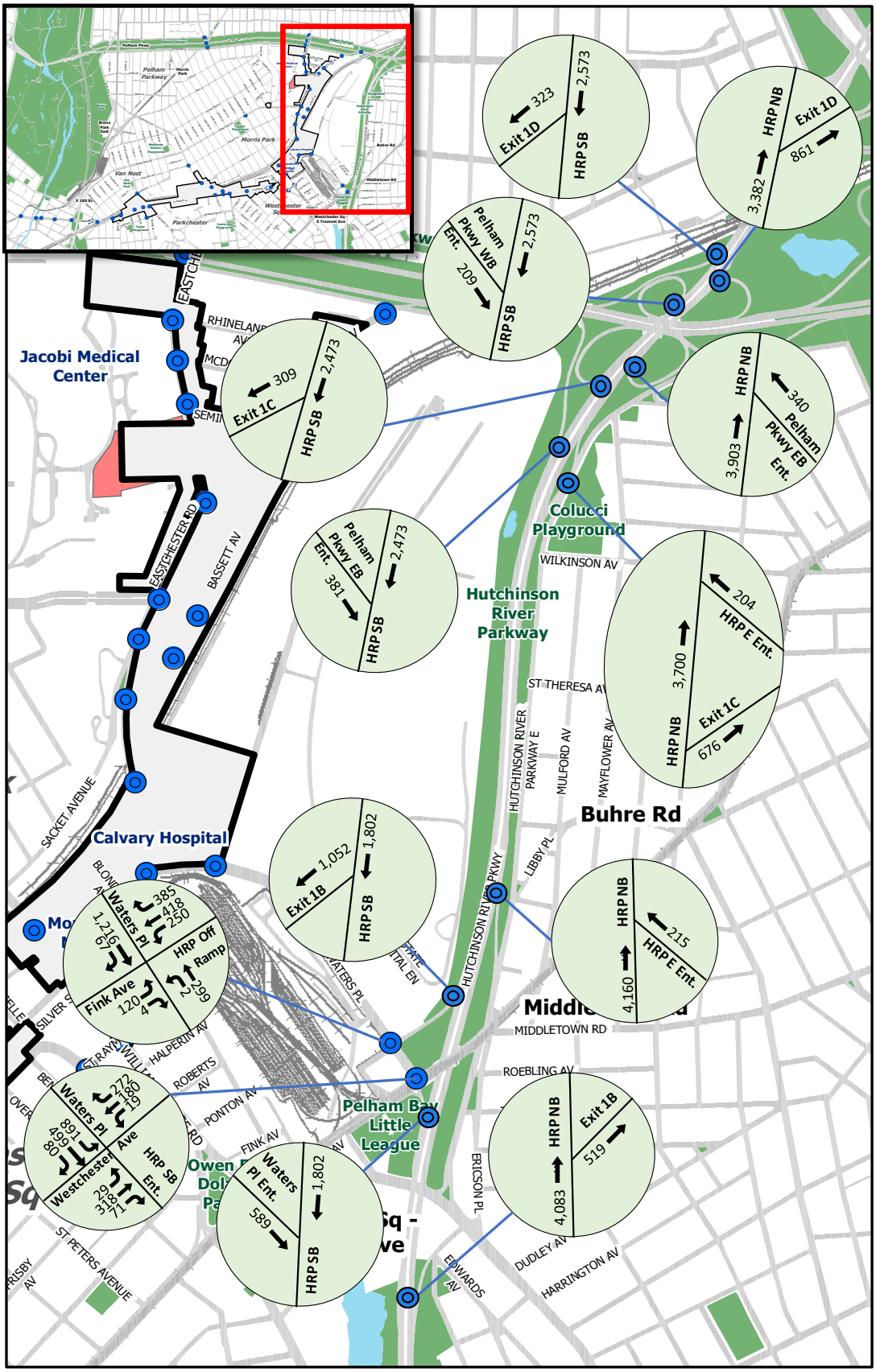
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-12C

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR



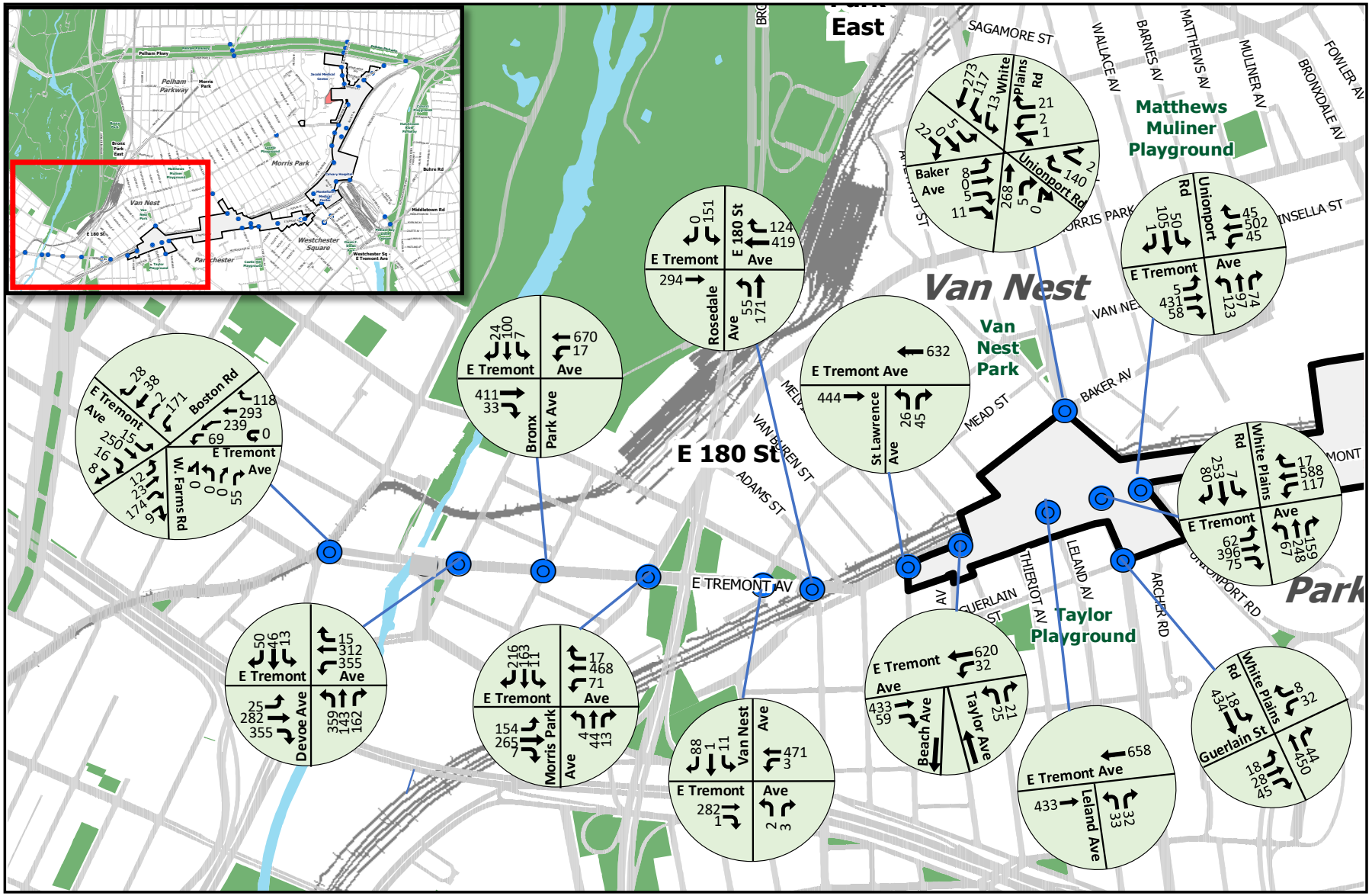
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-12D

2033 NO ACTION-TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR



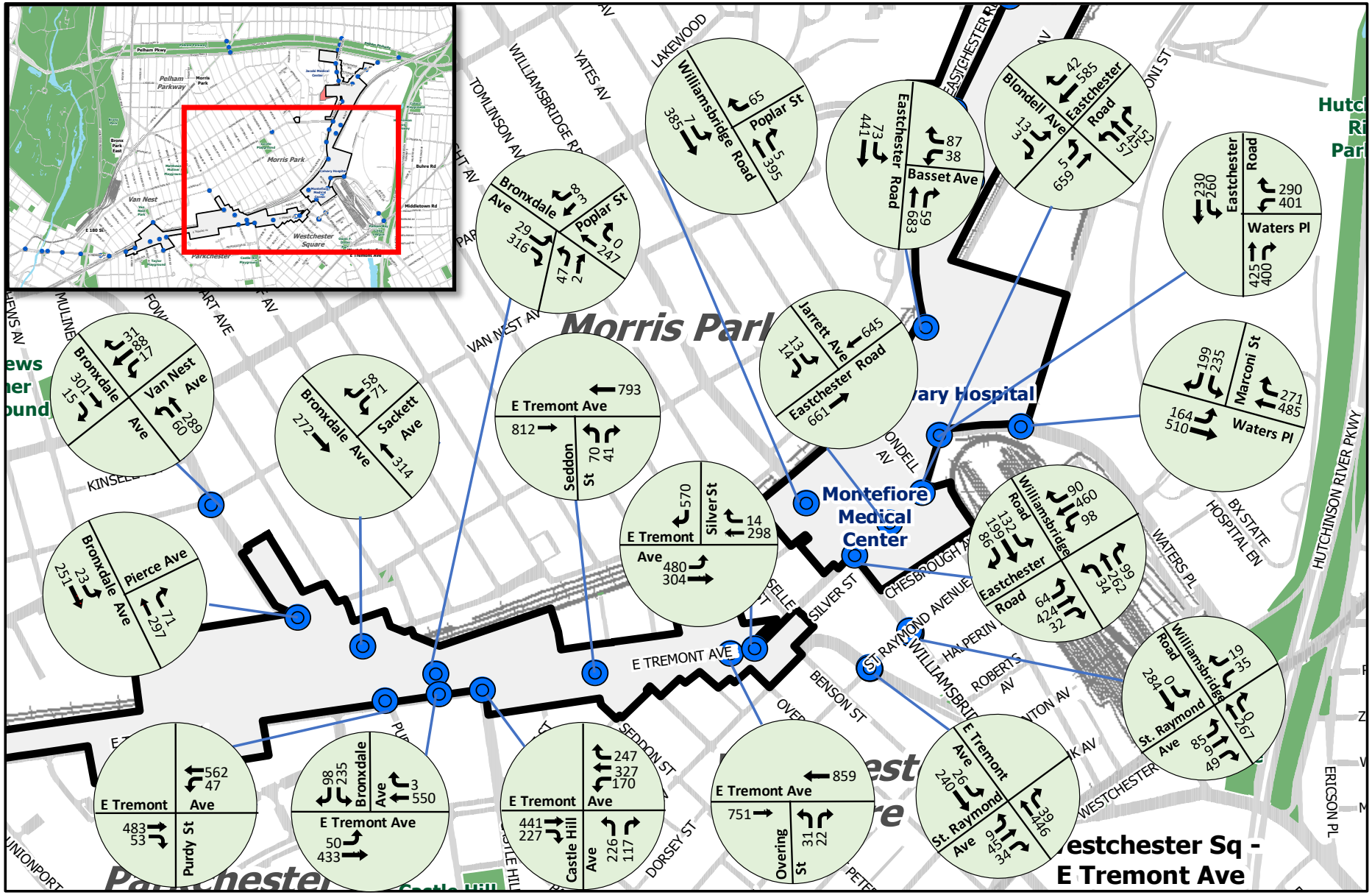
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-13A

2033 NO ACTION-TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR



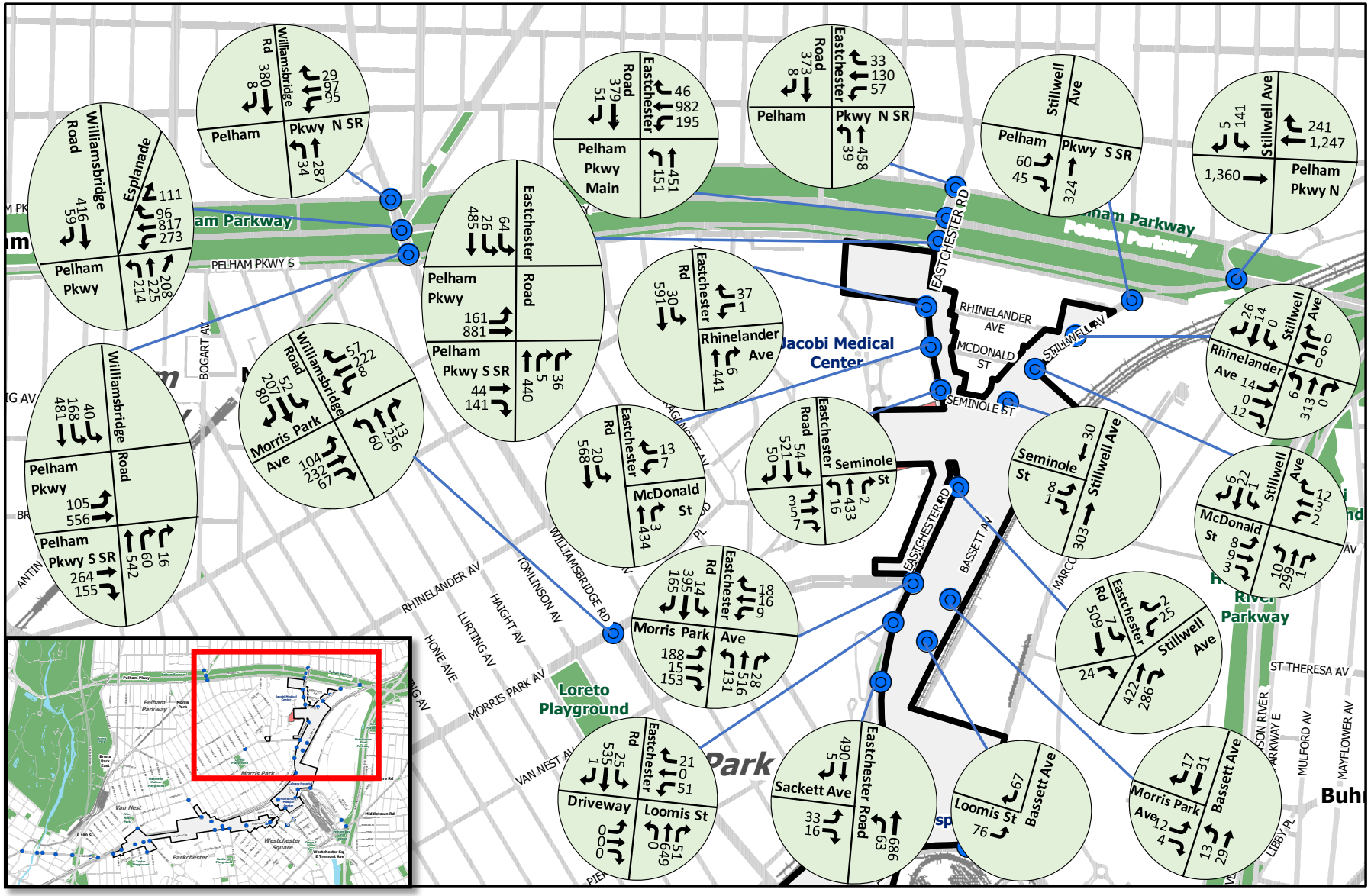
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-13B

2033 NO ACTION-TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR



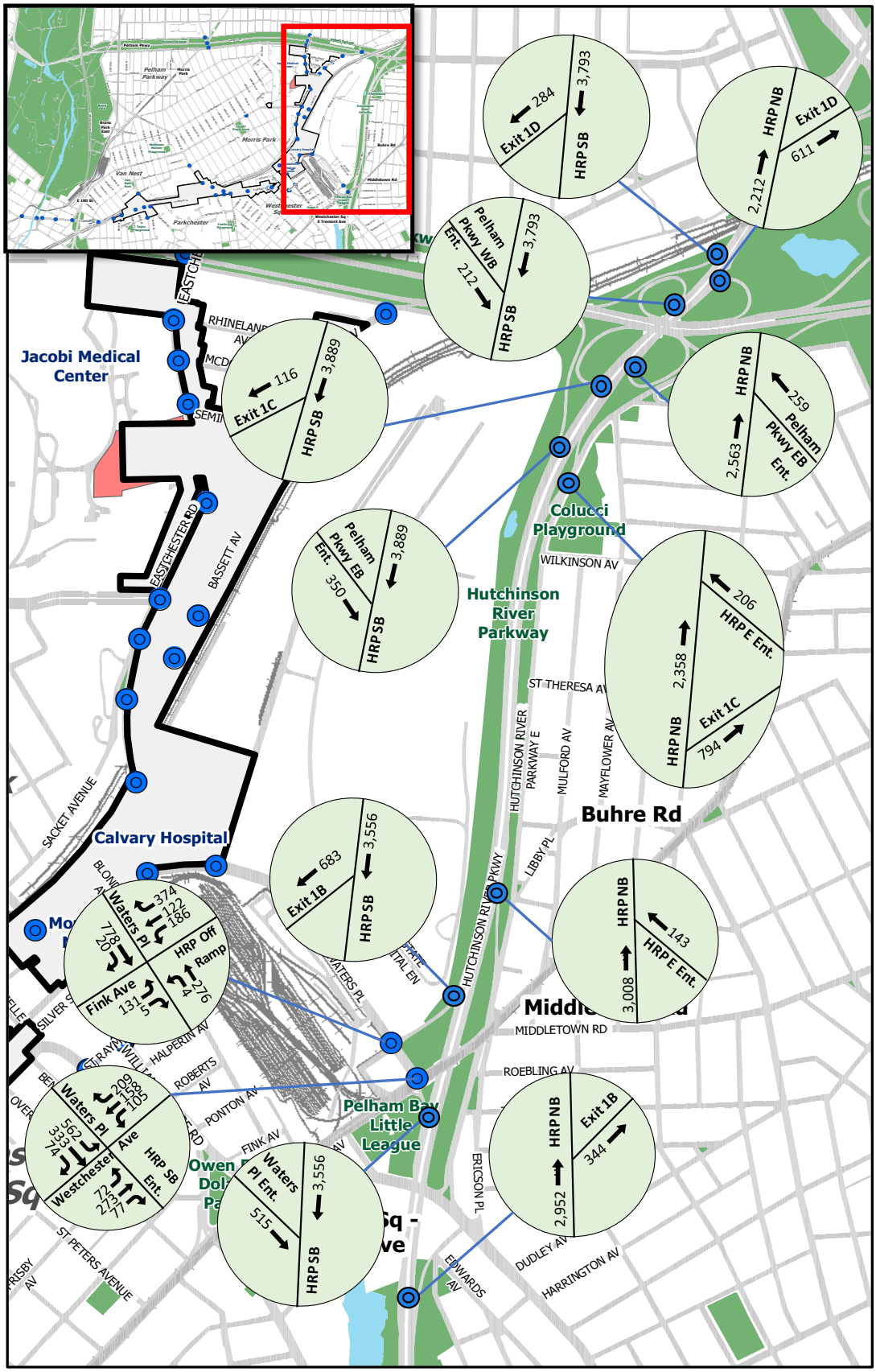
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-13C

2033 NO ACTION-TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR



Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-13D

2033 NO ACTION-TRAFFIC VOLUMES SATURDAY MIDDAY PEAK HOUR

Intersection Capacity Analysis

The v/c ratios, delays, and levels of service for those individual lane groups experiencing congestion in one or more peak hours in No-Action conditions are listed in Tables 13-20 through 13-23, "Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Weekday AM Peak Hour)," "Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Weekday Midday Peak Hour)," "Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Weekday PM Peak Hour)," and "Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Saturday Midday Peak Hour)," respectively. As listed in Tables 13-20 through 13-23, a total of 30 intersections - 28 signalized and two stop-controlled - will have at least one congested lane group in one or more peak hours in the No-Action condition, the same intersections with congested lane groups in the Existing condition. A total of 21 intersections would have one or more lane groups operating at or over capacity (v/c > 1.0) in the weekday AM peak hour, 15 in the midday, 21 in the PM and eight in the Saturday midday peak hour. This compares to seven, one, three, and one intersection operating at capacity during these same periods, respectively, in Existing conditions. V/c ratios, delays, and levels of service for all lane groups at all analyzed intersections in all peak periods in No-Action conditions are provided in Appendix F.

Table 13-20: Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Weekday AM Peak Hour)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour Existing			AM Peak Hour No-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
East Tremont Avenue at Boston Road and West Farms Road								
East Tremont Avenue	WB	L	0.96	58.5	E	1.63	200+	F
Boston Road	NEB	LTR	1.05	112.6	F	1.12	136.7	F
	SWB	LTR	0.71	62.2	E	2.00+	200+	F
West Farms Road	NB	LR	0.60	63.5	E	0.63	65.0	E
		R	0.72	78.9	E	0.75	82.0	F
East Tremont Avenue at Devoe Avenue								
East Tremont Avenue	EB	R				1.34	193.9	F
Devoe Avenue	NB	L				1.12	125.3	F
East Tremont Avenue at Morris Park Avenue								
East Tremont Avenue	EB	L	0.99	134.8	F	1.13	177.6	F
	WB	LTR	1.00	40.7	D	1.09	68.6	E
East Tremont Avenue at Rosedale Avenue and East 180th Street								
East 180th Street	SB	LR	0.75	66.9	E	0.77	68.8	E
East Tremont Avenue at White Plains Road								
White Plains Road	NB	L	0.58	50.4	D	0.66	59.8	E
		TR	1.01	86.7	F	1.20	151.0	F
	SB	T	0.72	45.1	D	1.06	91.5	F
East Tremont Avenue at Unionport Road								
Unionport Road	SB	LTR	0.82	57.2	E	0.88	64.4	E
East Tremont Avenue at Bronxdale Avenue								
Bronxdale Avenue	SB	L	0.86	72.6	E	0.87	74.4	E
East Tremont Avenue at Castle Hill Avenue								
Castle Hill Avenue	NB	R	0.49	49.8	D	0.67	58.2	E
East Tremont Avenue at Silver Street								
East Tremont Avenue	EB	L	0.68	22.4	C	1.04	63.1	E
Silver Street	SB	R	0.92	64.0	E	1.18	141.1	F
Williamsbridge Road at Pelham Parkway N								
Pelham Parkway N	WB	L	0.92	53.6	D	0.94	56.5	E
Williamsbridge Road at Pelham Parkway S								
Pelham Parkway S	EB	LT	0.93	54.8	D	1.02	72.4	E
Williamsbridge Road at Pelham Parkway S SR								
Williamsbridge Road	NB	TR	0.92	45.6	D	1.02	66.1	E
Eastchester Road and Silver Street at Williamsbridge Road								
Silver Street	NB	LTR	0.94	48.7	D	1.93	200+	F
Eastchester Road	SB	LTR	0.74	13.7	B	1.21	115.7	F
Eastchester Road at Pelham Parkway N SR								
Eastchester Road	SB	TR	0.99	71.9	E	1.29	177.0	F

Table 13-20: Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Weekday AM Peak Hour) (cont.)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour Existing			AM Peak Hour No-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized, continued								
Eastchester Road at Pelham Parkway N								
Pelham Parkway N	WB	L	0.97	56.6	E	1.00	63.8	E
Eastchester Road	SB	TR	0.62	16.6	B	1.40	199.3	F
Eastchester Road at Pelham Parkway S								
Eastchester Road	SB	LT	0.89	30.0	C	1.08	61.6	E
Eastchester Road at Pelham Parkway S SR								
Eastchester Road	SB	LT	0.68	2.0	A	1.64	200+	F
Eastchester Road at Stillwell Avenue								
Eastchester Road	NB	LT	0.27	11.4	B	1.29	167.9	F
Eastchester Road at Morris Park Avenue								
Eastchester Road	NB	L	0.48	51.6	D	0.91	97.6	F
	SB	LTR	1.04	84.0	F	1.85	200+	F
Morris Park Avenue	EB	L	0.57	44.3	D	1.80	200+	F
		R	0.41	38.4	D	0.75	55.2	E
Eastchester Road at Bassett Avenue								
Eastchester Road	NB	TR	0.50	15.7	B	1.30	159.4	F
Eastchester Road at Waters Place								
Eastchester Road	NB	R	0.73	21.6	C	1.52	200+	F
	SB	L	1.00	55.6	E	0.95	56.7	E
Waters Place	WB	L	1.05	77.4	E	1.27	153.6	F
Stillwell Avenue at Pelham Parkway								
Pelham Parkway	WB	TR	1.00	42.0	D	1.12	87.8	F
Waters Place at Marconi Street								
Waters Place	EB	L	1.00	66.0	E	1.68	200+	F
	WB	T	0.82	23.0	C	1.40	200+	F
		R	0.37	27.7	C	1.17	87.1	F
Waters Place at Hutchinson River Parkway Off Ramp and Fink Avenue								
Hutchinson River Parkway Off Ramp	WB	R	1.04	68.0	E	2.00+	200+	F
Fink Avenue	EB	LR	0.57	24.2	C	1.28	172.6	F
Waters Place at Westchester Avenue and Hutchinson River Parkway On Ramp								
Westchester Avenue	EB	L				1.62	200+	F
	WB	LTR	0.66	22.6	C	1.31	182.5	F
Unsignalized								
Eastchester Road at Loomis Street								
Loomis Street	EB	LTR	0.01	26.0	D	2.00+	200+	F
	WB	LTR	0.14	21.8	C	2.00+	200+	F

Notes: + denotes V/C ratio over 2.00 or delay over 200 s.
denotes lane group not present in Existing Conditions due to defacto left- or right- turn occurring in No-Action Conditions.
denotes lane group not present in Existing Conditions due to intersection reconfiguration as a result of No-Build Projects.

Source: STV Incorporated, 2023.

Table 13-21: Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Weekday Midday Peak Hour)

INTERSECTION & APPROACH		Mvt.	Midday Peak Hour Existing			Midday Peak Hour No-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
East Tremont Avenue at Boston Road and West Farms Road								
Boston Road	NEB	LTR	1.07	128.4	F	1.15	154.0	F
	SWB	LTR	0.61	54.5	D	2.00+	200+	F
West Farms Road	NB	LR	0.48	53.6	D	0.52	55.6	E
East Tremont Avenue at Devoe Avenue								
Devoe Avenue	NB	L				1.05	88.3	F
East Tremont Avenue at Rosedale Avenue and East 180th Street								
East 180th Street	SB	LR	0.89	91.5	F	0.92	97.3	F
East Tremont Avenue at Overing Street								
East Tremont Avenue	WB	T	0.86	44.4	D	1.14	102.3	F
East Tremont Avenue at Silver Street								
Silver Street	SB	R	0.87	43.5	D	1.32	177.3	F
Williamsbridge Road at Pelham Parkway S								
Pelham Parkway S	EB	LT	0.94	55.5	E	0.96	58.9	E
Williamsbridge Road at Morris Park Avenue								
Williamsbridge Road	NB	LTR	1.12	61.8	E	1.12	61.8	E
	SB	LTR	1.19	134.1	F	1.19	134.1	F
Eastchester Road and Silver Street at Williamsbridge Road								
Silver Street	NB	LTR	0.75	39.7	D	1.92	200+	F
Eastchester Road	SB	LTR	0.71	13.0	B	1.27	143.4	F
Eastchester Road at Pelham Parkway N SR								
Eastchester Road	SB	TR	0.84	46.1	D	1.05	88.5	F
Eastchester Road at Stillwell Avenue								
Eastchester Road	NB	LT	0.31	7.3	A	1.07	79.5	E
Eastchester Road at Morris Park Avenue								
Eastchester Road	NB	L	0.59	55.3	E	0.79	69.1	E
	SB	LTR	0.83	47.5	D	1.55	200+	F
Morris Park Avenue	EB	L	0.37	38.6	D	1.09	132.5	F

Table 13-21: Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Weekday Midday Peak Hour) (cont.)

INTERSECTION & APPROACH		Mvt.	Midday Peak Hour Existing			Midday Peak Hour No-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Eastchester Road at Sackett Avenue								
Eastchester Road	NB	T	0.58	10.6	B	1.15	80.8	F
Eastchester Road at Bassett Avenue								
Eastchester Road	NB	TR	0.46	16.0	B	1.27	148.7	F
Eastchester Road at Waters Place								
Eastchester Road	NB	R	0.66	19.1	B	1.22	130.0	F
	SB	L	0.38	12.4	B	1.20	137.4	F
Waters Place	WB	L	0.73	28.3	C	1.05	68.6	E
Waters Place at Marconi Street								
Waters Place	EB	L	0.71	24.7	C	2.00+	200+	F
Marconi Street	SB	L	0.65	30.4	C	1.09	100.2	F
		R	0.55	28.1	C	0.99	73.2	E
Waters Place at Hutchinson River Parkway Off Ramp and Fink Avenue								
Waters Place	SB	TR	0.54	15.0	B	1.59	200+	F
Unsignalized								
Eastchester Road at Loomis Street								
Loomis Street	EB	LTR	0.01	17.9	C	2.00+	200+	F
	WB	LTR	0.07	20.2	C	2.00+	200+	F

Notes: + denotes V/C ratio over 2.00 or delay over 200 s

denotes lane group not present in Existing Conditions due to defacto left- or right- turn occurring in No-Action Conditions.

denotes lane group not present in Existing Conditions due to intersection reconfiguration as a result of No-Build Projects.

Source: STV Incorporated, 2023.

Table 13-22: Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Weekday PM Peak Hour)

INTERSECTION & APPROACH		Mvt.	PM Peak Hour Existing			PM Peak Hour No-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
East Tremont Avenue at Boston Road and West Farms Road								
East Tremont Avenue	WB	L	0.87	47.0	D	1.09	102.2	F
Boston Road	NEB	LTR	1.08	119.8	F	1.12	135.0	F
	SWB	LTR	0.81	67.3	E	2.00+	200+	F
West Farms Road	NB	LR	0.64	59.5	E	0.66	61.4	E
		R	0.73	69.6	E	0.76	72.6	E
East Tremont Avenue at Devoe Avenue								
Devoe Avenue	NB	L				1.19	148.6	F
		TR	0.60	28.4	C	0.94	69.4	E
East Tremont Avenue at Morris Park Avenue								
East Tremont Avenue	EB	L	0.99	105.2	F	1.08	137.9	F
	WB	LTR	0.96	44.7	D	1.06	70.0	E
East Tremont Avenue at Rosedale Avenue and East 180th Street								
East 180th Street	SB	LR	0.97	96.8	F	1.01	105.0	F
East Tremont Avenue at White Plains Road								
White Plains Road	NB	TR	0.89	64.6	E	1.13	130.5	F
East Tremont Avenue at Unionport Road								
East Tremont Avenue	WB	LTR	0.99	36.0	D	1.14	87.2	F
East Tremont Avenue at Bronxdale Avenue								
Bronxdale Avenue	SB	L	0.97	92.1	F	0.99	96.0	F
East Tremont Avenue at Castle Hill Avenue								
East Tremont Avenue	WB	L	0.70	42.7	D	0.87	62.7	E
		T	0.81	35.5	D	1.09	96.5	F
Castle Hill Avenue	NB	R	0.63	55.2	E	0.76	64.0	E
East Tremont Avenue at Silver Street								
Silver Street	SB	R	0.92	58.6	E	1.52	200+	F
Williamsbridge Road at Pelham Parkway S								
Pelham Parkway S	EB	LT	0.97	62.4	E	0.99	66.6	E
Williamsbridge Road at Pelham Parkway S SR								
Williamsbridge Road	NB	TR	0.97	53.3	D	1.02	67.1	E
Williamsbridge Road at Morris Park Avenue								
Williamsbridge Road	NB	LTR	0.78	38.7	D	1.14	119.2	F
	SB	LTR	0.75	37.8	D	1.71	200+	F
Eastchester Road and Silver Street at Williamsbridge Road								
Silver Street	NB	LTR	0.78	38.7	D	2.00+	200+	F
Eastchester Road	SB	LTR	0.75	37.8	D	1.54	200+	F

Table 13-22: Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Weekday PM Peak Hour) (cont.)

INTERSECTION & APPROACH		Mvt.	PM Peak Hour Existing			PM Peak Hour No-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized, continued								
Eastchester Road at Pelham Parkway N SR								
Eastchester Road	SB	TR	0.98	78.3	E	1.20	151.6	F
Eastchester Road at Pelham Parkway N								
Pelham Parkway N	WB	L	0.83	60.7	E	0.88	66.6	E
		T	1.05	86.6	F	1.22	153.1	F
Eastchester Road	SB	T	0.68	28.8	C	1.16	96.9	F
Eastchester Road at Pelham Parkway S								
Pelham Parkway S	EB	LT	0.96	47.7	D	0.98	51.3	D
Eastchester Road at Pelham Parkway S SR								
Eastchester Road	SB	T	0.58	6.8	A	1.14	75.7	E
Eastchester Road at Stillwell Avenue								
Eastchester Road	NB	LT	0.36	12.2	B	1.80	200+	F
Eastchester Road at Morris Park Avenue								
Eastchester Road	NB	L	0.58	54.7	D	0.96	95.2	F
		TR	0.52	19.7	B	1.03	66.1	E
	SB	LTR	0.76	43.7	D	1.75	200+	F
Morris Park Avenue	EB	L	0.56	44.0	D	1.89	200+	F
Eastchester Road at Sackett Avenue								
Eastchester Road	NB	T	0.71	11.7	B	1.46	200+	F
Eastchester Road at Bassett Avenue								
Eastchester Road	NB	TR	0.55	16.8	B	1.54	200+	F
Bassett Avenue	WB	LR	0.70	34.1	C	0.94	60.8	E
Eastchester Road at Waters Place								
Waters Place	WB	L	1.05	74.5	E	1.67	200+	F
Waters Place at Marconi Street								
Waters Place	EB	L				1.43	200+	F
	WB	T	0.68	28.1	C	1.11	91.1	F
Marconi Street	SB	L	0.76	35.2	D	1.56	200+	F
		R	0.63	30.3	C	1.26	167.4	F
Waters Place at Hutchinson River Parkway Off Ramp and Fink Avenue								
Waters Place	SB	TR	0.57	11.4	B	2.00+	200+	F
Waters Place at Westchester Avenue and Hutchinson River Parkway On Ramp								
Waters Place	SB	L	0.89	37.1	D	1.26	134.1	F
Unsignalized								
Eastchester Road at Loomis Street								
Loomis Street	WB	LTR	0.13	19.2	C	2.00+	200+	F

Notes: + denotes V/C ratio over 2.00 or delay over 200 s
denotes lane group not present in Existing Conditions due to defacto left- or right- turn occurring in No-Action Conditions.
denotes lane group not present in Existing Conditions due to intersection reconfiguration as a result of No-Build Projects.

Source: STV Incorporated, 2023.

Table 13-23: Congested Lane Groups at Analyzed Intersections for No-Action Conditions (Saturday Midday Peak Hour)

INTERSECTION & APPROACH		Mvt.	Saturday Peak Hour Existing			Saturday Peak Hour No-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
East Tremont Avenue at Boston Road and West Farms Road								
Boston Road	NEB	LTR	1.02	111.4	F	1.06	121.7	F
	SWB	LTR	0.66	55.9	E	2.00+	200+	F
East Tremont Avenue at Devoe Avenue								
Devoe Avenue	NB	L				1.05	88.5	F
East Tremont Avenue at Rosedale Avenue and East 180th Street								
East 180th Street	SB	LR	0.80	66.6	E	0.83	70.5	E
East Tremont Avenue at Silver Street								
Silver Street	SB	R	0.67	30.7	C	1.09	86.6	F
Williamsbridge Road at Pelham Parkway S								
Pelham Parkway S	EB	LT	0.93	53.7	D	0.95	56.8	E
Eastchester Road and Silver Street at Williamsbridge Road								
Silver Street	NB	LTR	0.59	32.6	C	1.30	181.4	F
Eastchester Road at Morris Park Avenue								
Eastchester Road	NB	L	0.39	48.7	D	0.60	55.9	E
	SB	LTR	0.56	36.7	D	0.94	63.3	E
Morris Park Avenue	EB	L	0.33	37.2	D	0.97	94.6	F
Eastchester Road at Bassett Avenue								
Eastchester Road	NB	TR	0.40	12.5	B	1.19	111.7	F
Eastchester Road at Waters Place								
Eastchester Road	SB	L	0.35	10.6	B	1.04	85.2	F
Waters Place at Marconi Street								
Waters Place	EB	L				1.22	143.9	F
Waters Place at Hutchinson River Parkway Off Ramp and Fink Avenue								
Waters Place	SB	TR	0.37	18.3	B	1.40	200+	F
Unsignalized								
Eastchester Road at Loomis Street								
Loomis Street	WB	LTR	0.05	15.0	B	2.00+	200+	F

Notes: + denotes V/C ratio over 2.00 or delay over 200 s
denotes lane group not present in Existing Conditions due to defacto left- or right- turn occurring in No-Action Conditions.
denotes lane group not present in Existing Conditions due to intersection reconfiguration as a result of No-Build Projects.

Source: STV Incorporated, 2023.

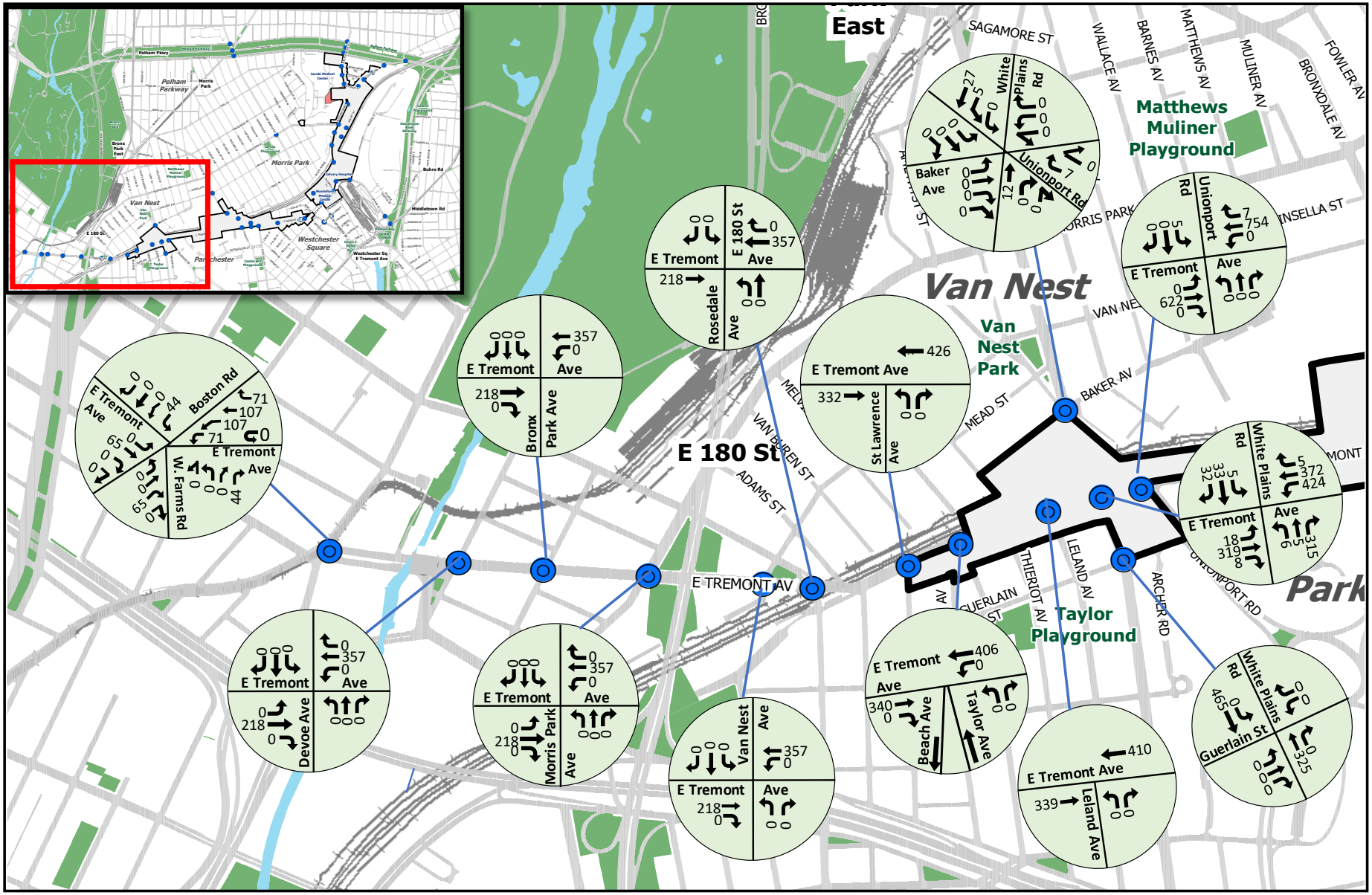
THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITIONS)

Project Traffic Growth

As shown in Table 13-10, based on projected development associated with the Proposed Actions, there would be a total of approximately 4,327, 4,217, 3,177, and 2,811 additional vehicle (auto, taxi, truck, and school bus) trips during the weekday AM, midday, and PM, and Saturday midday peak hours, respectively. Auto and taxi trips were first assigned to various portals on the periphery of the Affected Area based on the locations of each projected development site cluster and outlier site and the anticipated origins and destinations of vehicle trips associated with the different uses projected for each site (e.g., commercial, residential, etc.). The origins/destinations of residential and non-retail commercial trips used for the assignments are based on 2006-2010 US Census journey-to-work and reverse journey-to-work data, respectively. Retail trip origins/destinations are based on population density in proximity to the Affected Area. Auto and taxi trips were then assigned via the most direct routes between the portals and trip nodes located within each cluster or in proximity to an outlier development site. (Additional auto and taxi trip distribution data are provided in the *Bronx Metro-North Station Study Transportation Planning Factors and Travel Demand Forecast Technical Memorandum* included in Appendix F.)

Figure 13-14, "2033 With-Action Traffic Volume Increments – Weekday AM Peak Hour," Figure 13-15, "2033 With-Action Traffic Volume Increments – Weekday Midday Peak Hour," Figure 13-16, "2033 With-Action Traffic Volume Increments – Weekday PM Peak Hour," and Figure 13-17, "2033 With-Action Traffic Volume Increments – Saturday Midday Peak Hour" show the assignment of incremental vehicle trips (auto, taxi, truck, and school bus) generated during the weekday AM, midday, and PM, and Saturday midday peak hours in the Proposed Actions.

Figure 13-18, "2033 With-Action Traffic Volumes - Weekday AM Peak Hour," Figure 13-19, "2033 With-Action Traffic Volumes - Weekday Midday Peak Hour," Figure 13-20, "2033 With-Action Traffic Volumes - Weekday PM Peak Hour," and Figure 13-21, "2033 With-Action Traffic Volumes – Saturday Midday Peak Hour," show the total weekday AM, midday, and PM, and Saturday midday traffic volumes in the 2033 future with the Proposed Actions. The volumes shown are the combination of the net incremental traffic generated by the Proposed Actions and the No-Action volumes.



Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-14A

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
WEEKDAY AM PEAK HOUR

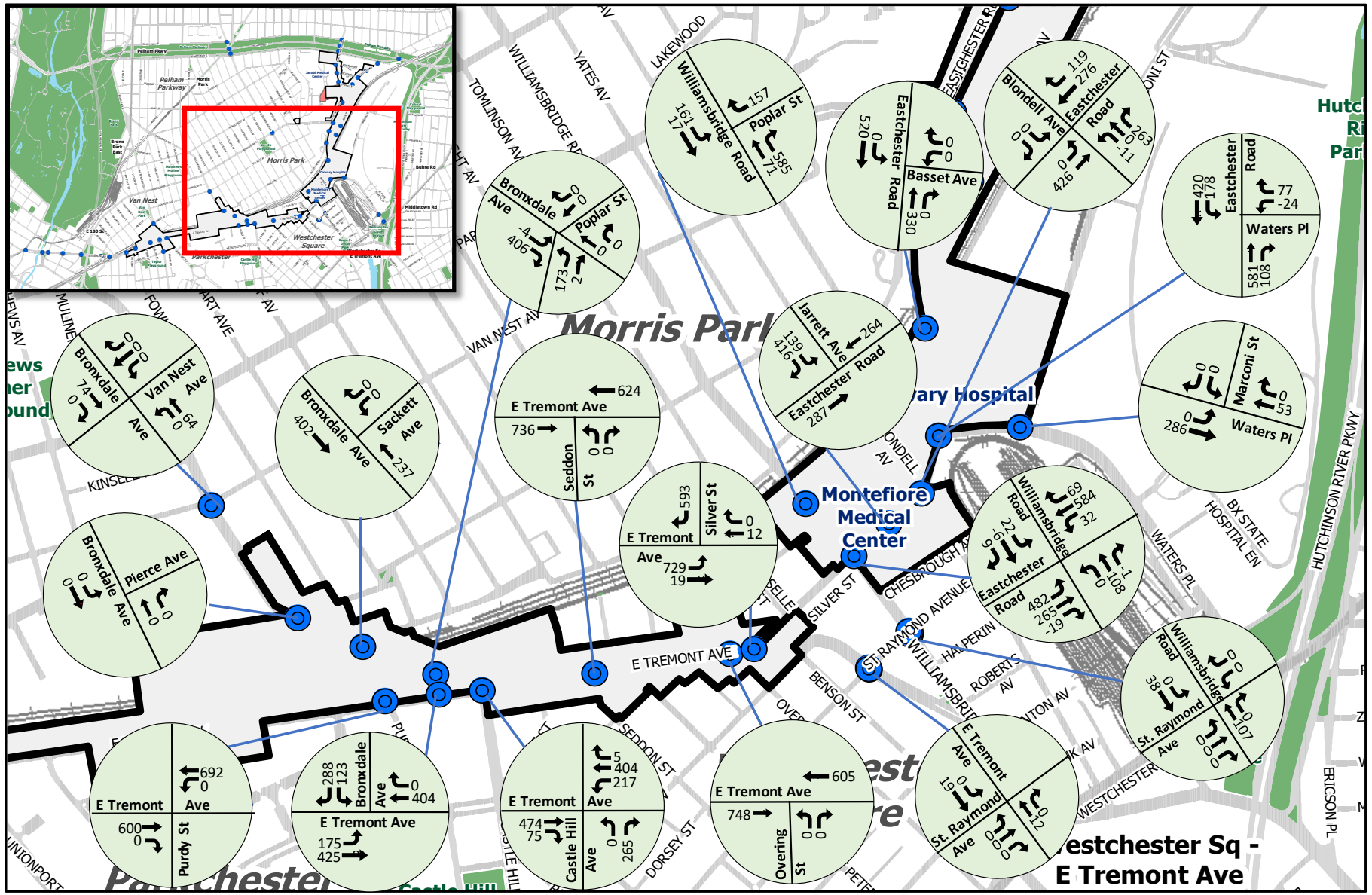
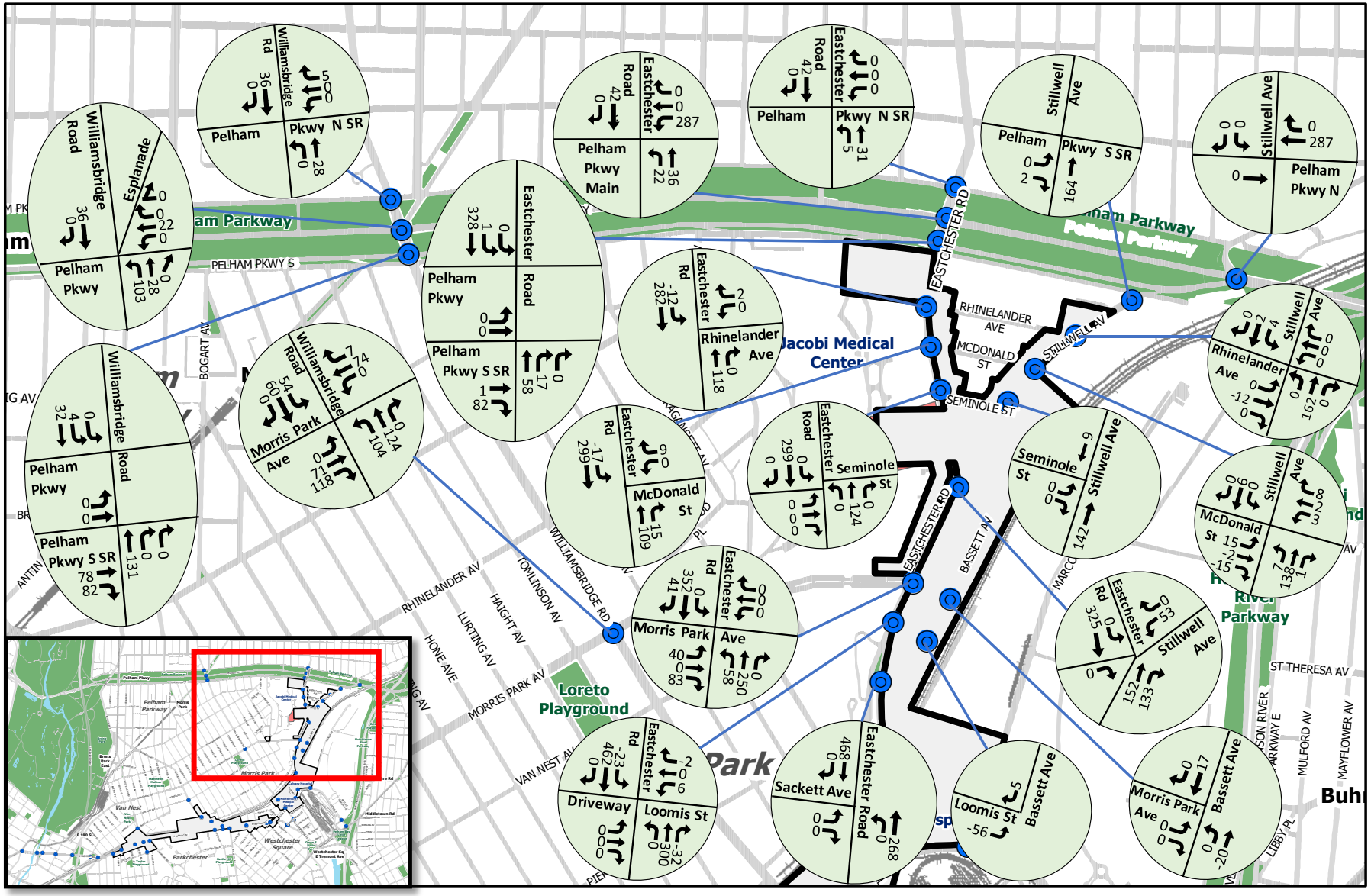


Figure 13-14B

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
WEEKDAY AM PEAK HOUR



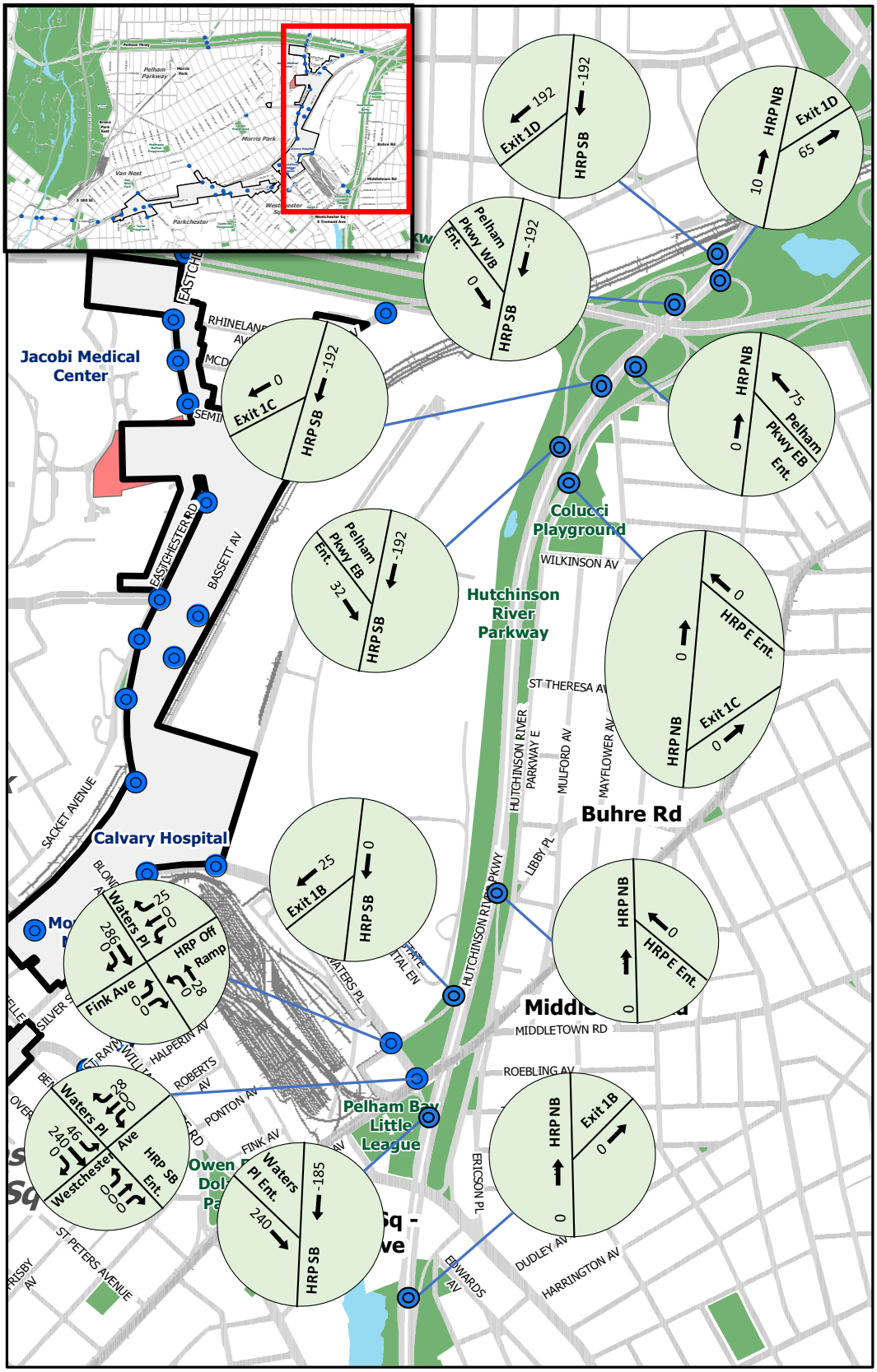
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-14C

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
WEEKDAY AM PEAK HOUR



Source: Esri; STV Incorporated, 2023

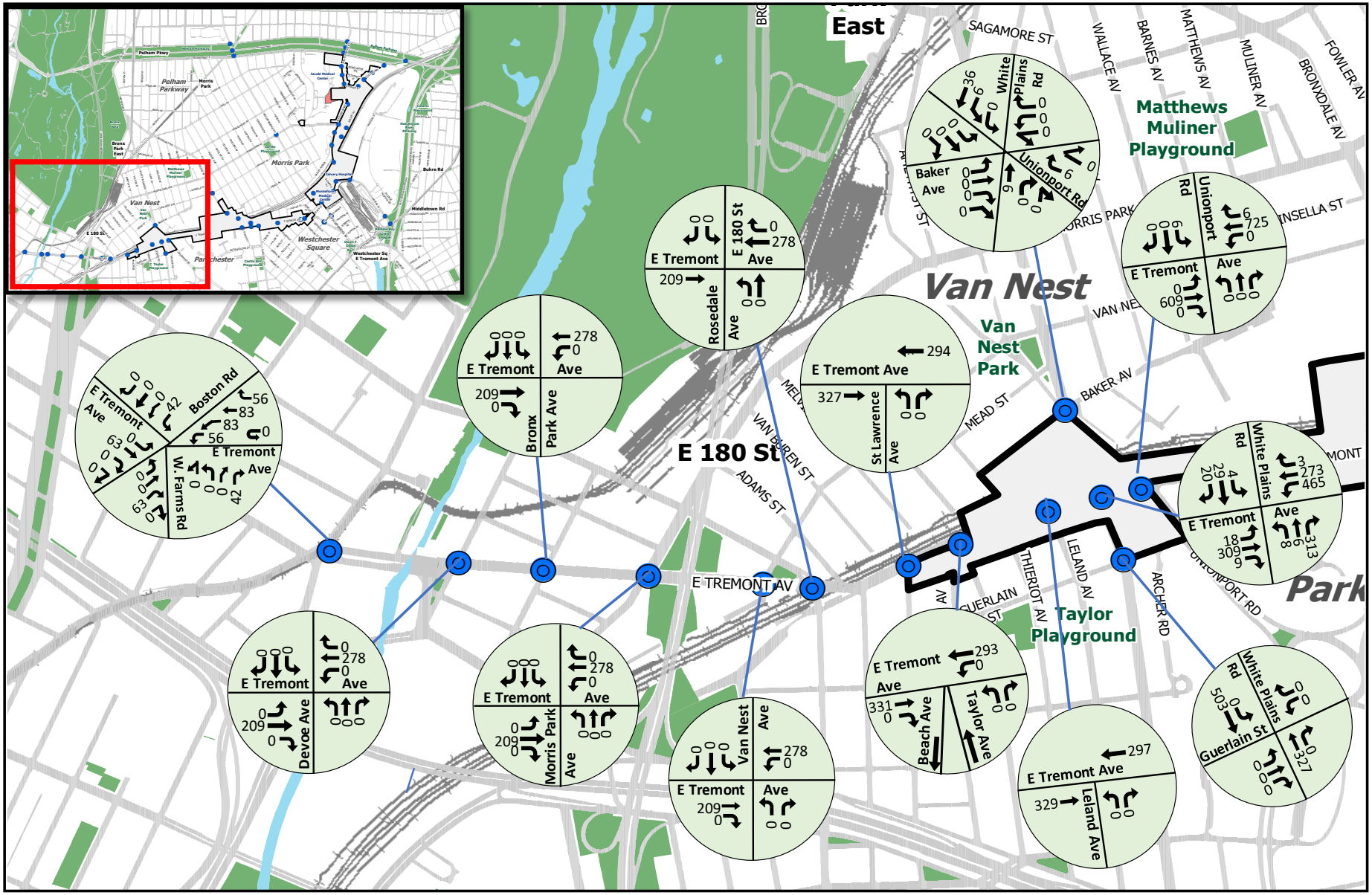
N

0 0.125 0.25 Mile

Figure 13-14D

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS

WEEKDAY AM PEAK HOUR



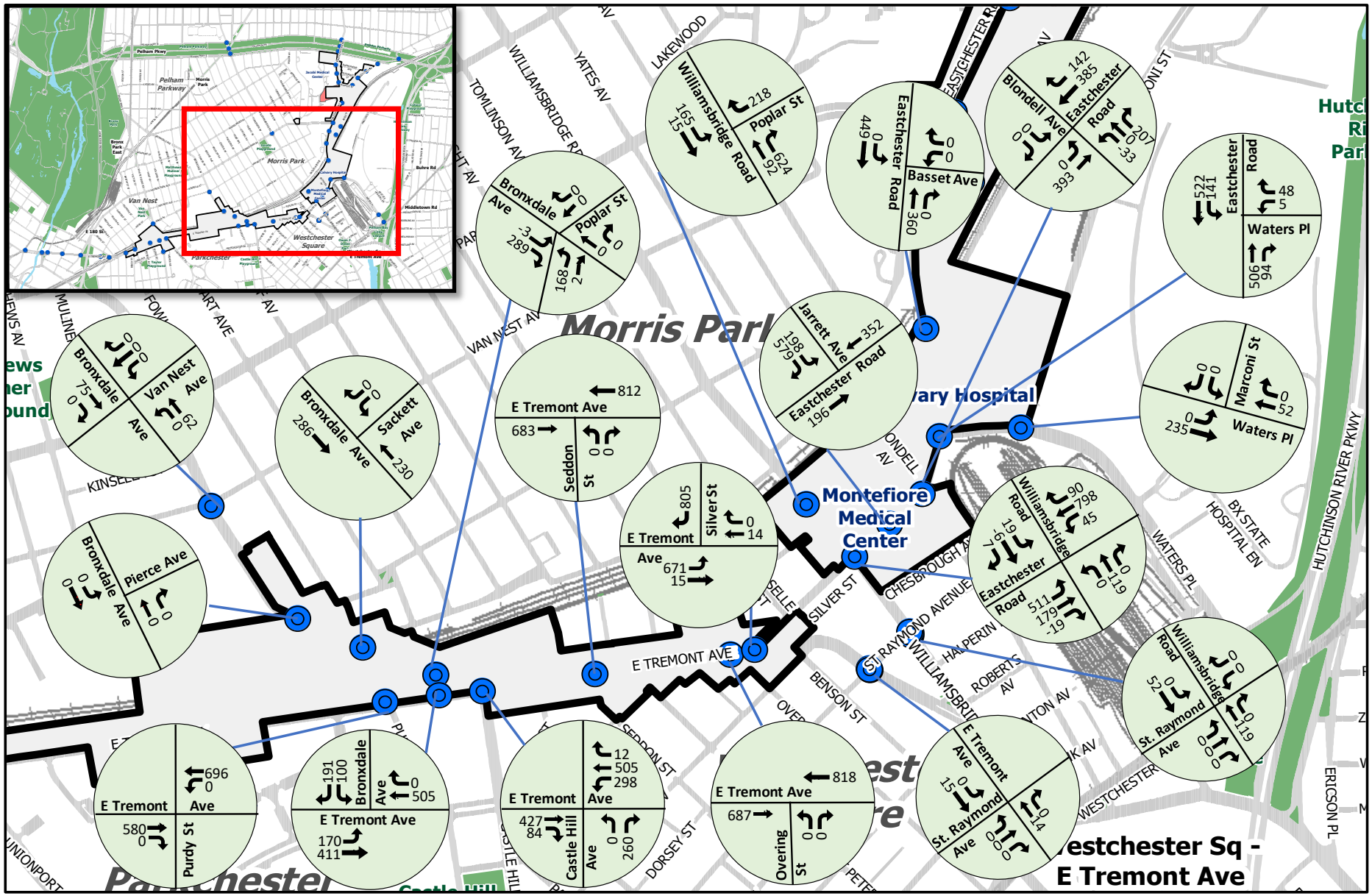
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-15A

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
WEEKDAY MIDDAY PEAK HOUR



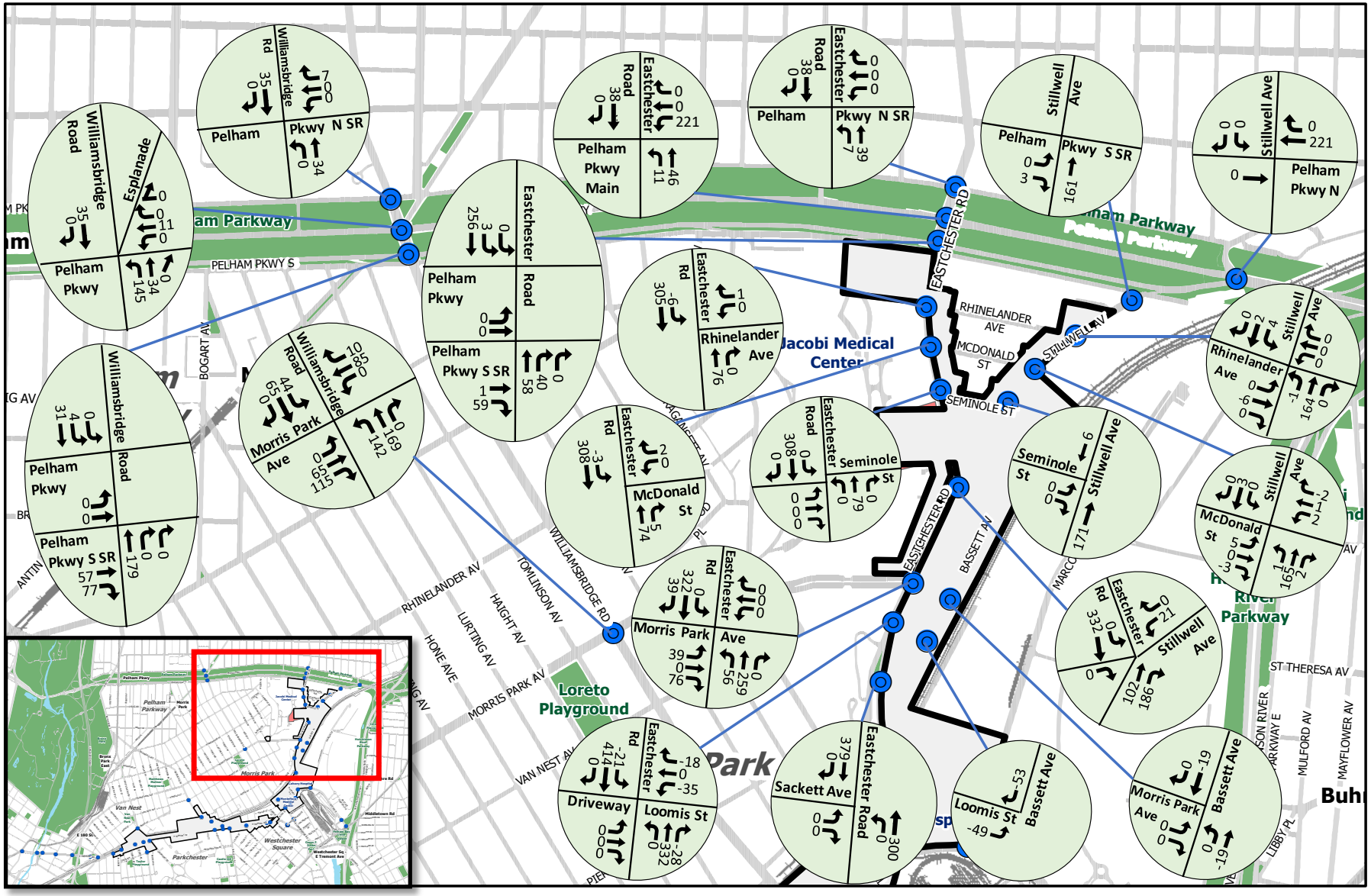
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-15B

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
WEEKDAY MIDDAY PEAK HOUR



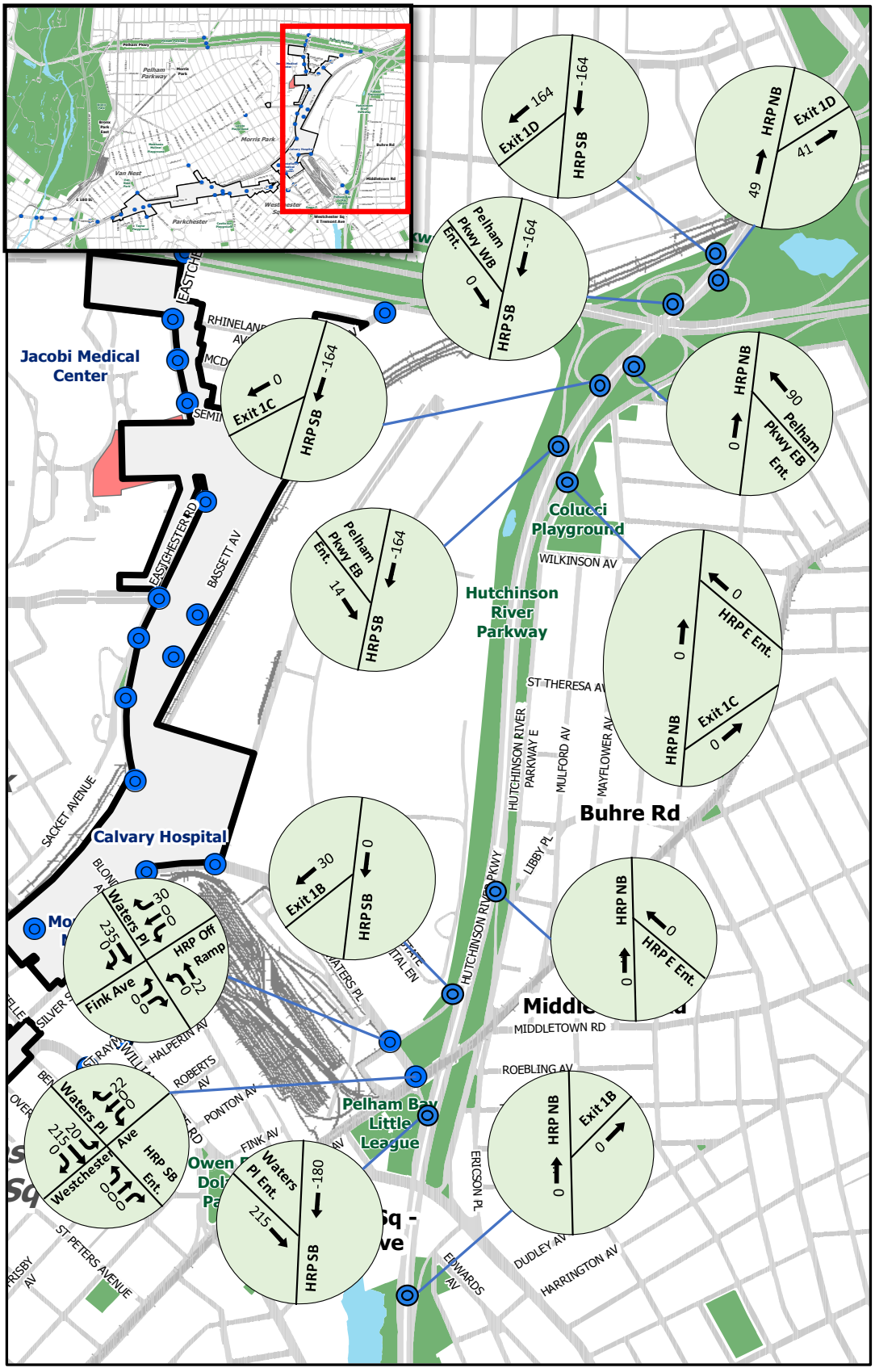
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-15C

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
WEEKDAY MIDDAY PEAK HOUR



Source: Esri; STV Incorporated, 2023

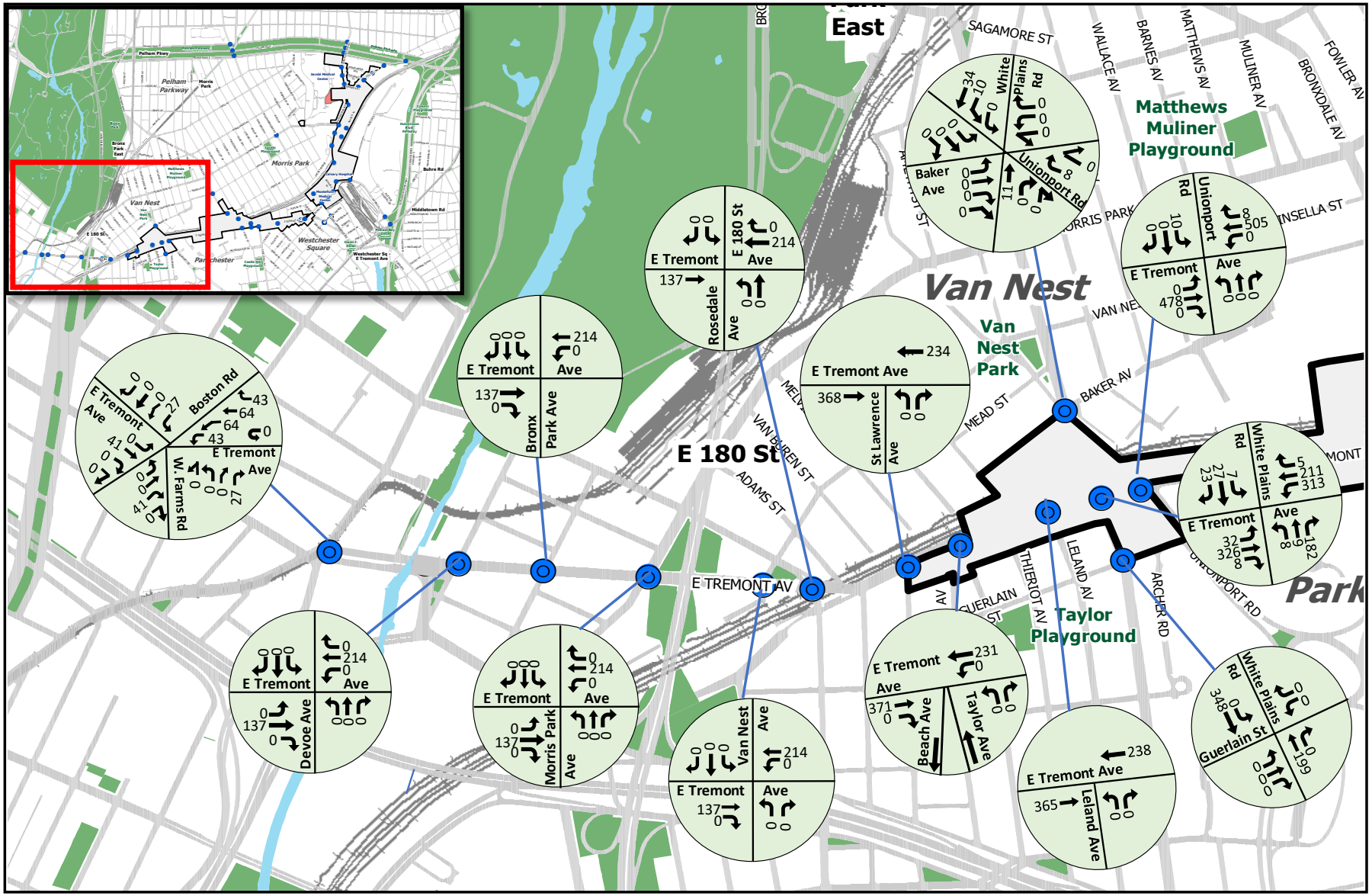
N

0 0.125 0.25 Mile

Figure 13-15D

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS

WEEKDAY MIDDAY PEAK HOUR



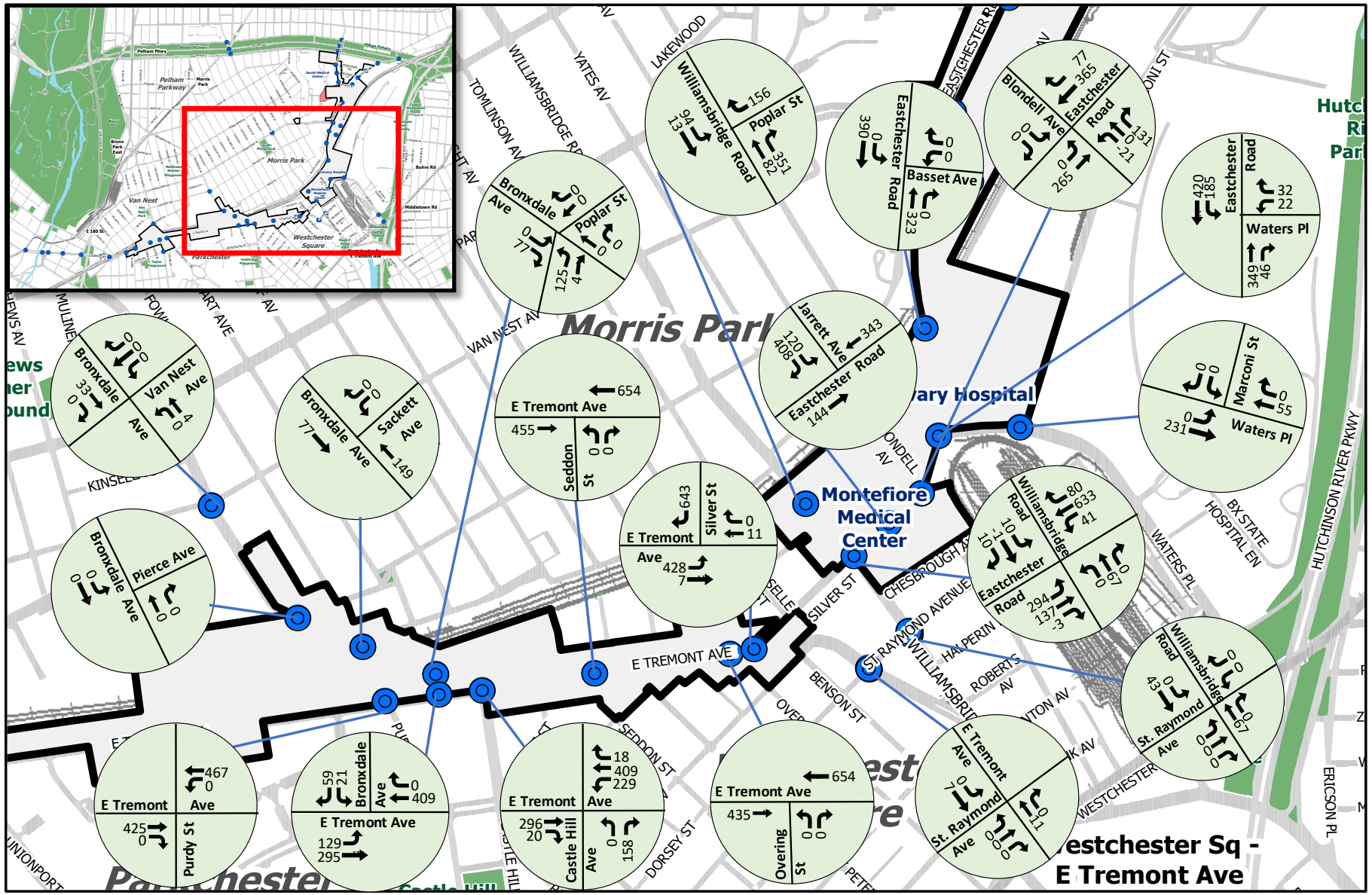
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-16A

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
WEEKDAY PM PEAK HOUR



Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-16B

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
WEEKDAY PM PEAK HOUR



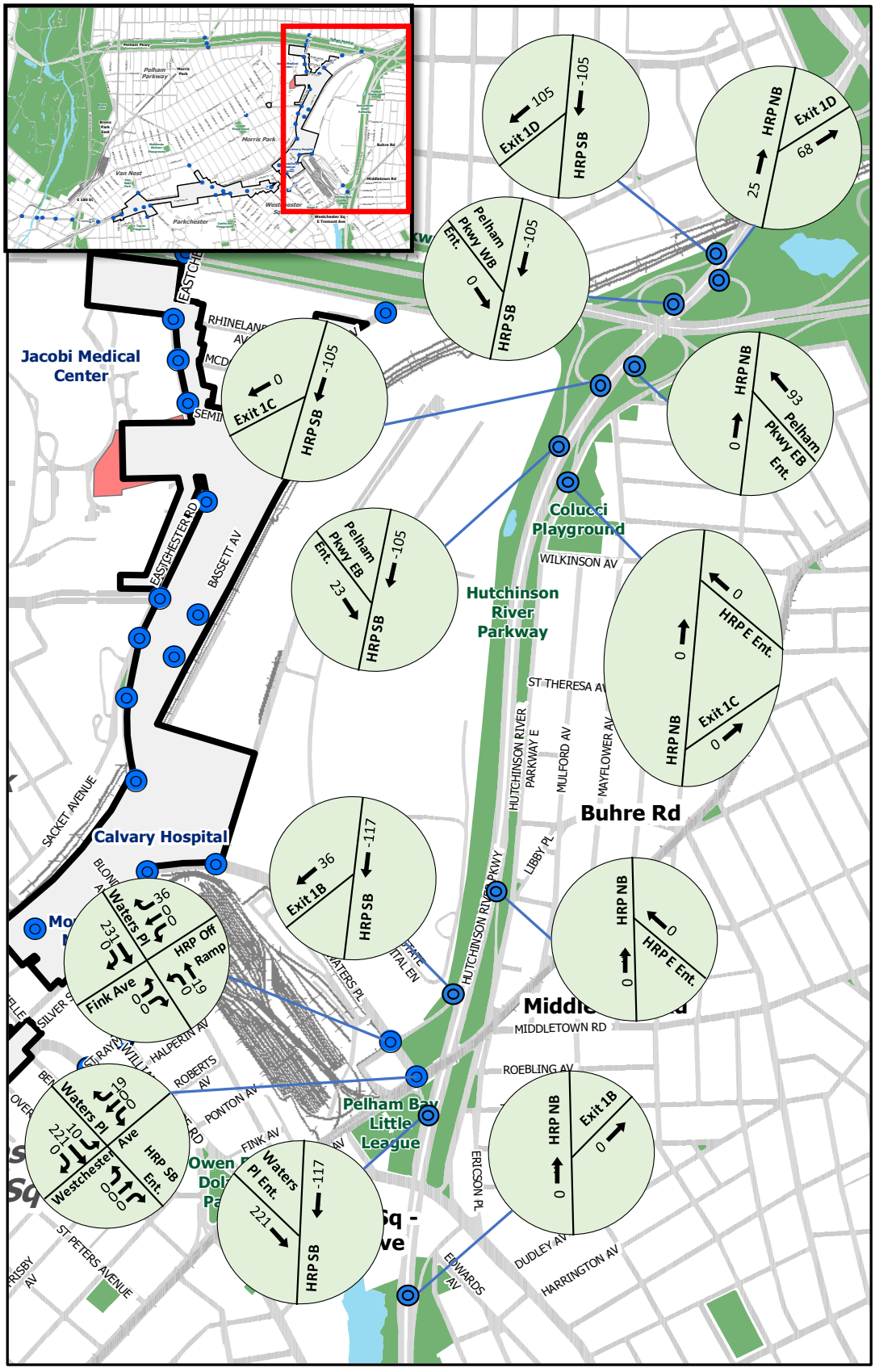
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-16C

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
WEEKDAY PM PEAK HOUR



Source: Esri; STV Incorporated, 2023

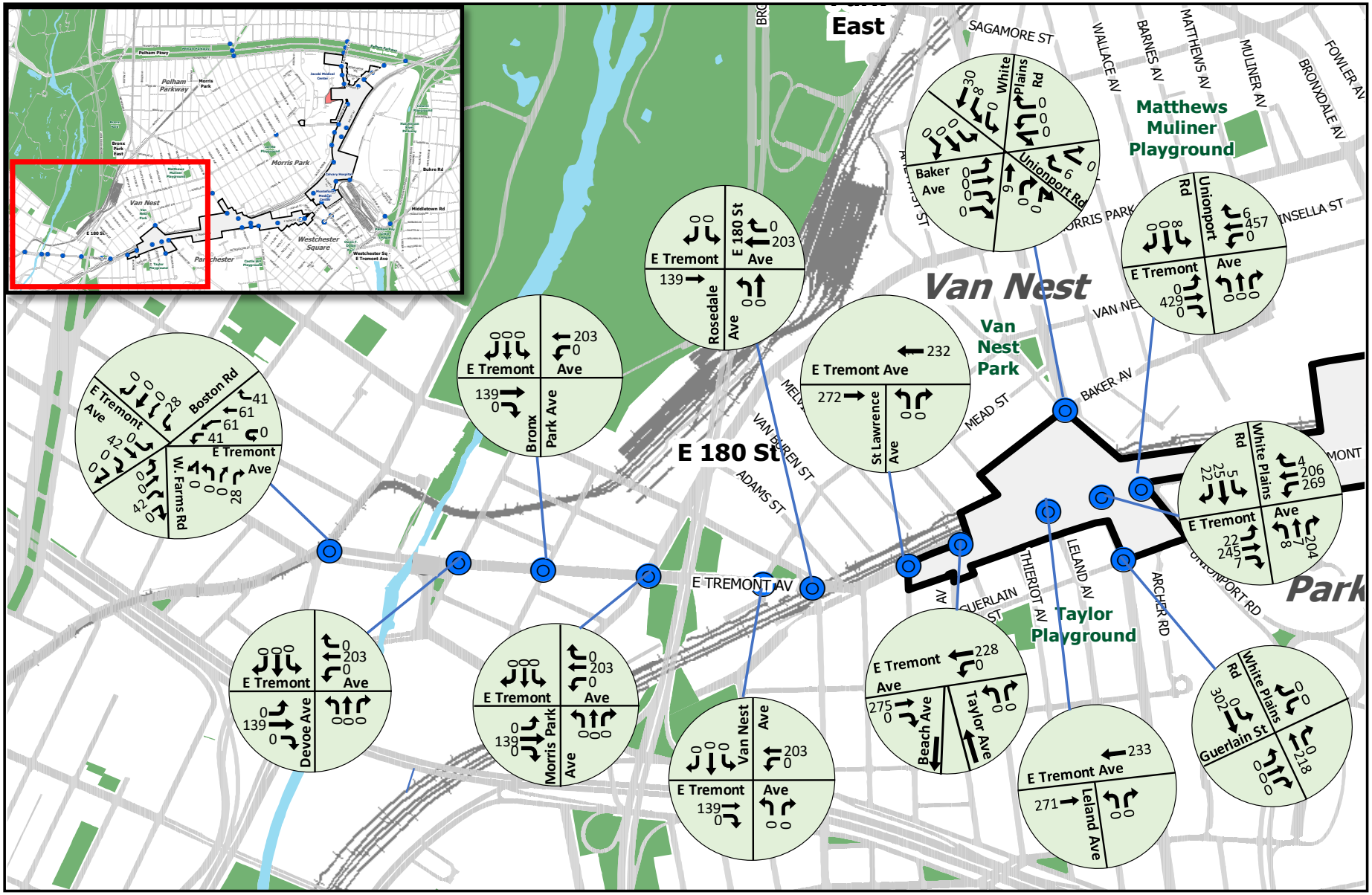
N

0 0.125 0.25 Mile

Figure 13-16D

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS

WEEKDAY PM PEAK HOUR



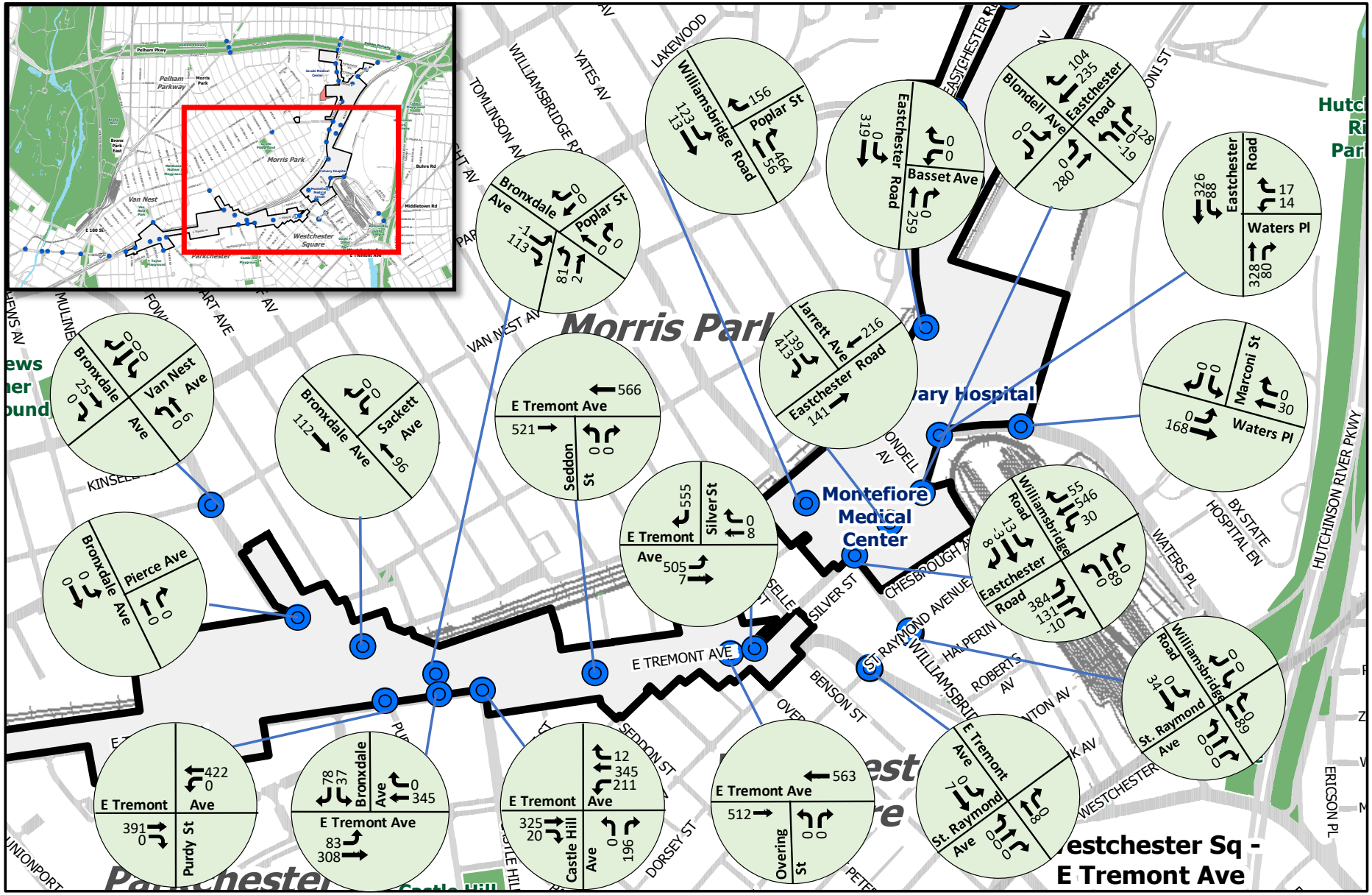
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-17A

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
SATURDAY MIDDAY PEAK HOUR



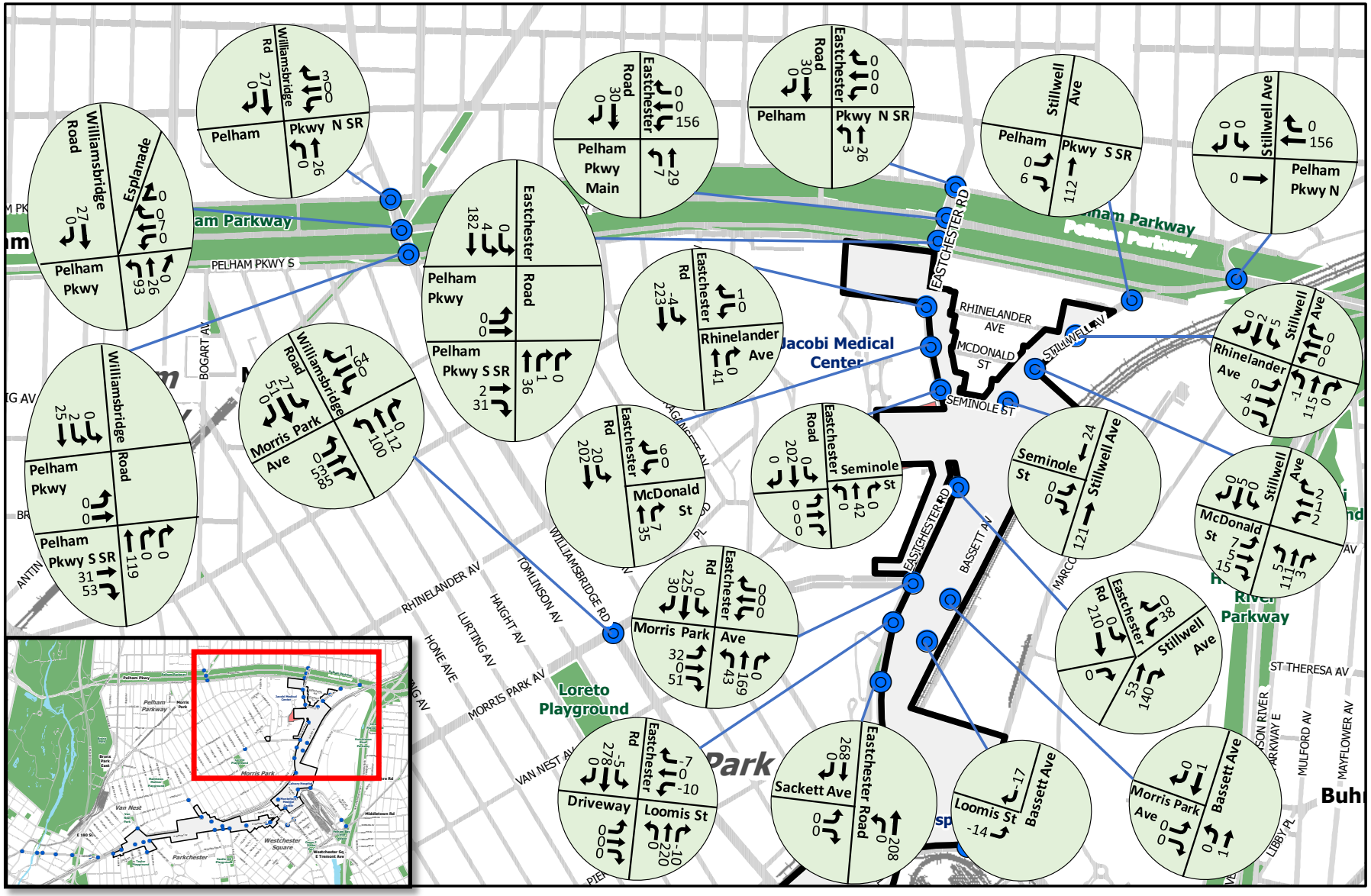
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-17B

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
SATURDAY MIDDAY PEAK HOUR



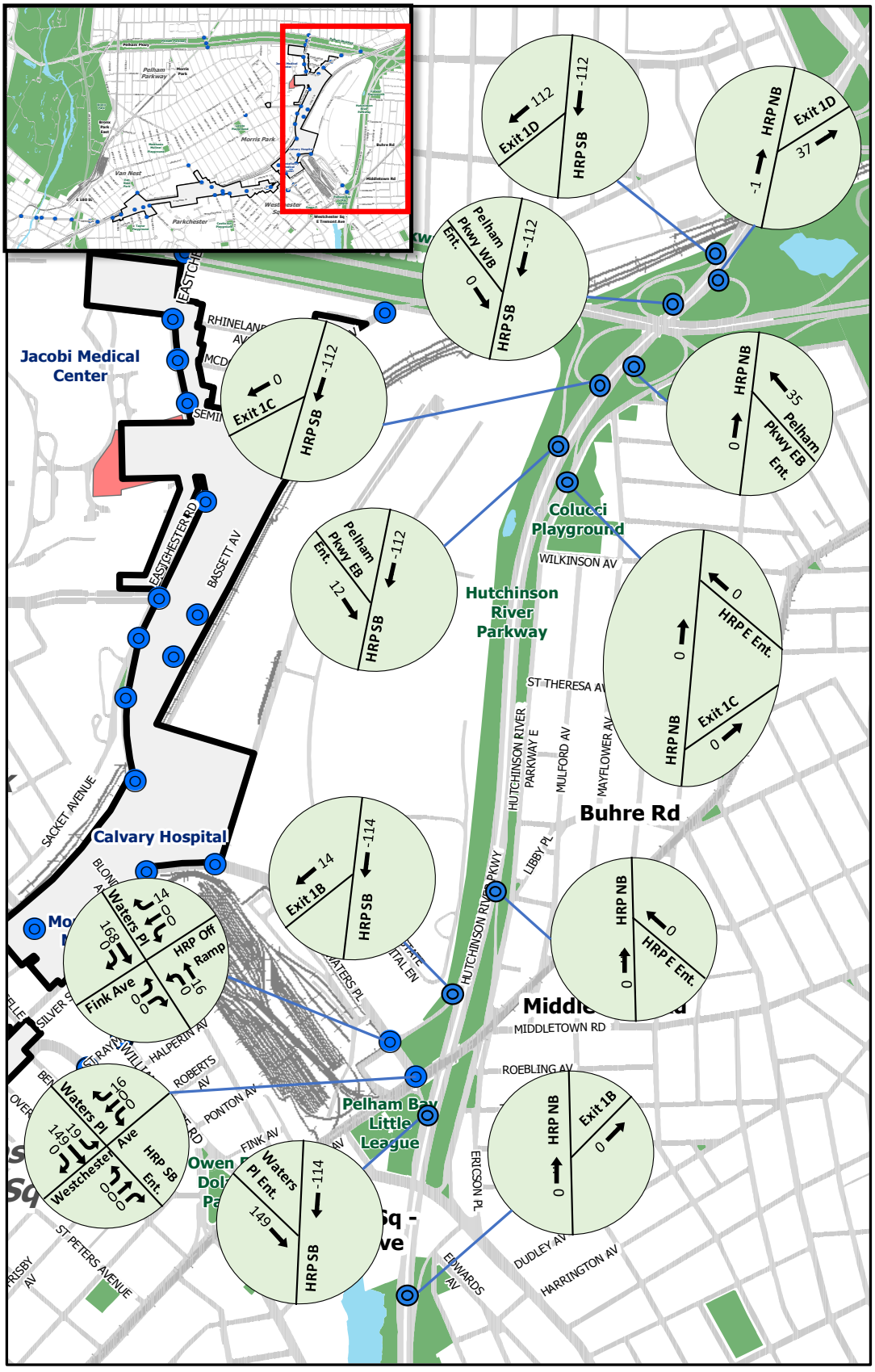
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-17C

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS
SATURDAY MIDDAY PEAK HOUR



Source: Esri; STV Incorporated, 2023

N

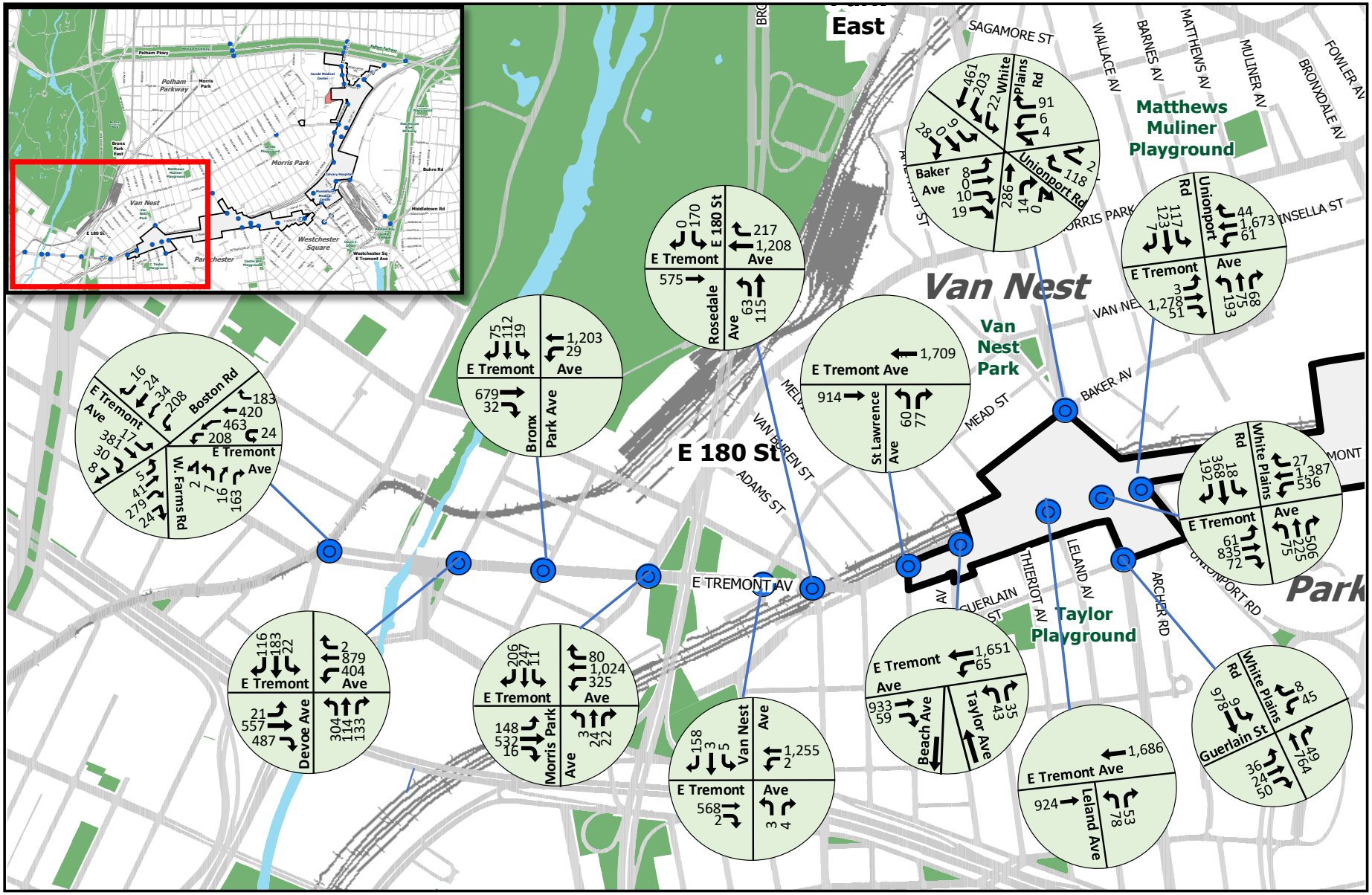
0 0.125 0.25 Mile

Figure 13-17D

2033 WITH-ACTION TRAFFIC VOLUME INCREMENTS

SATURDAY MIDDAY PEAK HOUR

Bronx Metro-North Station Study



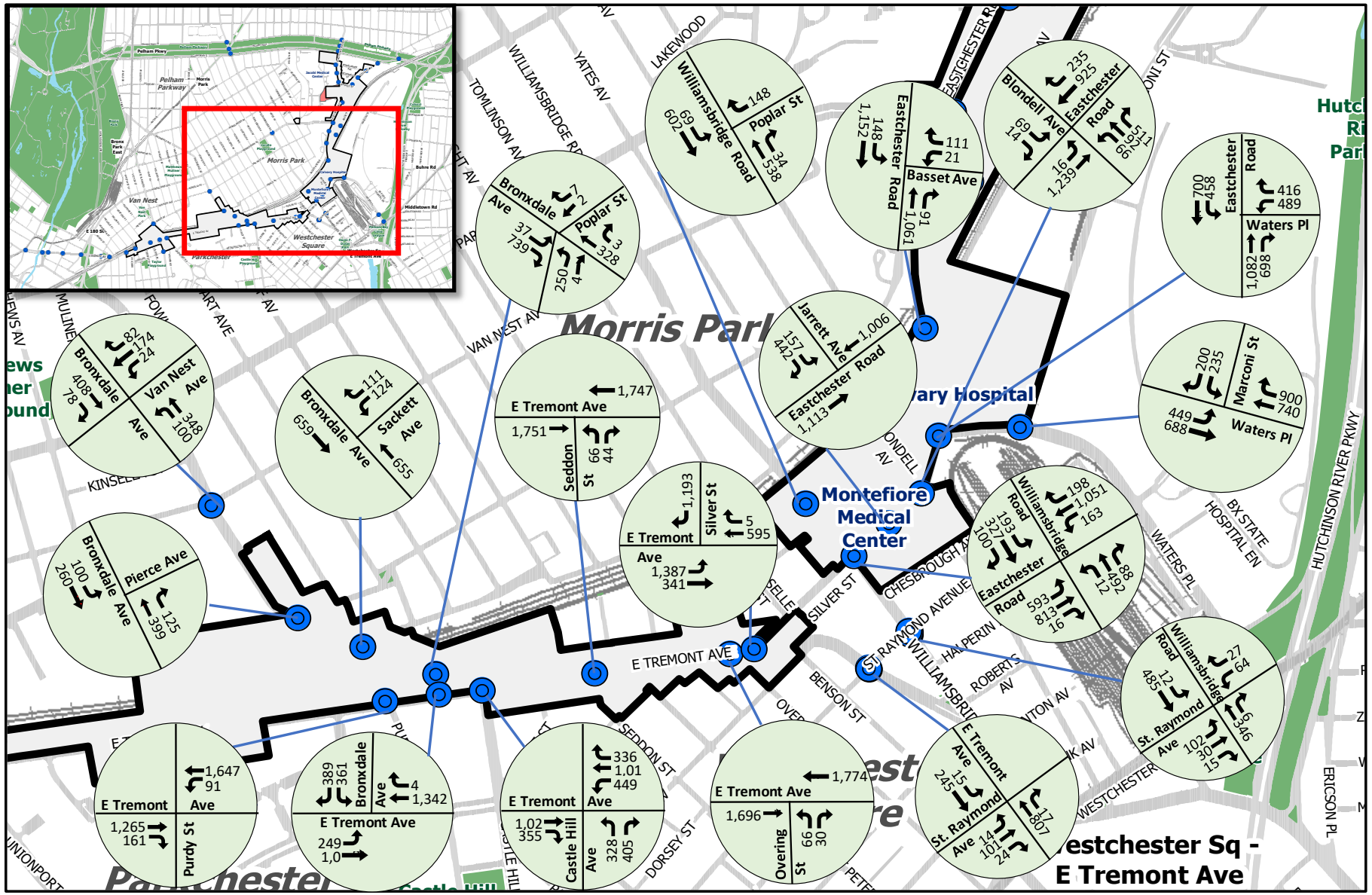
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-18A

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR



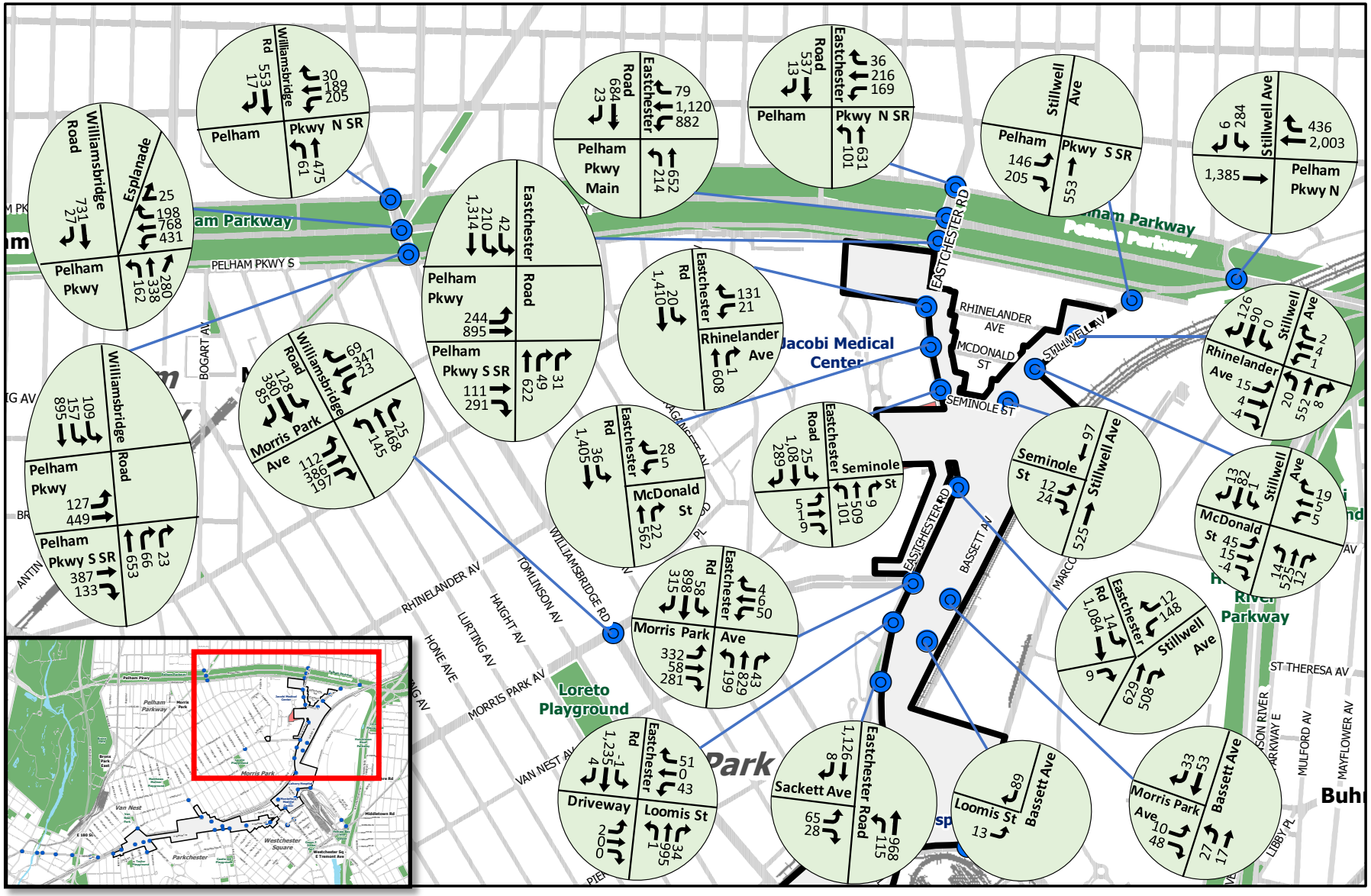
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-18B

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR



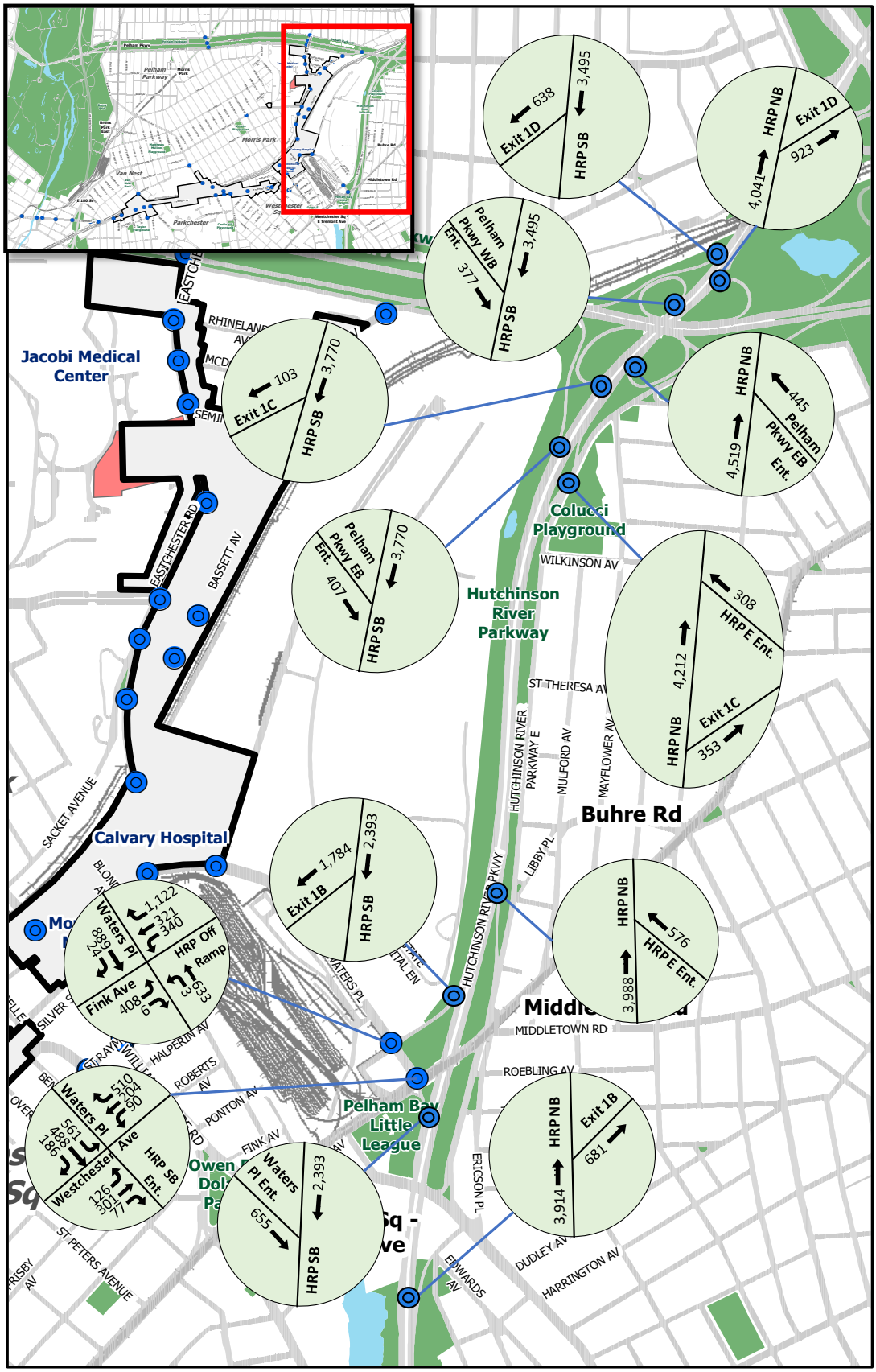
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-18C

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR



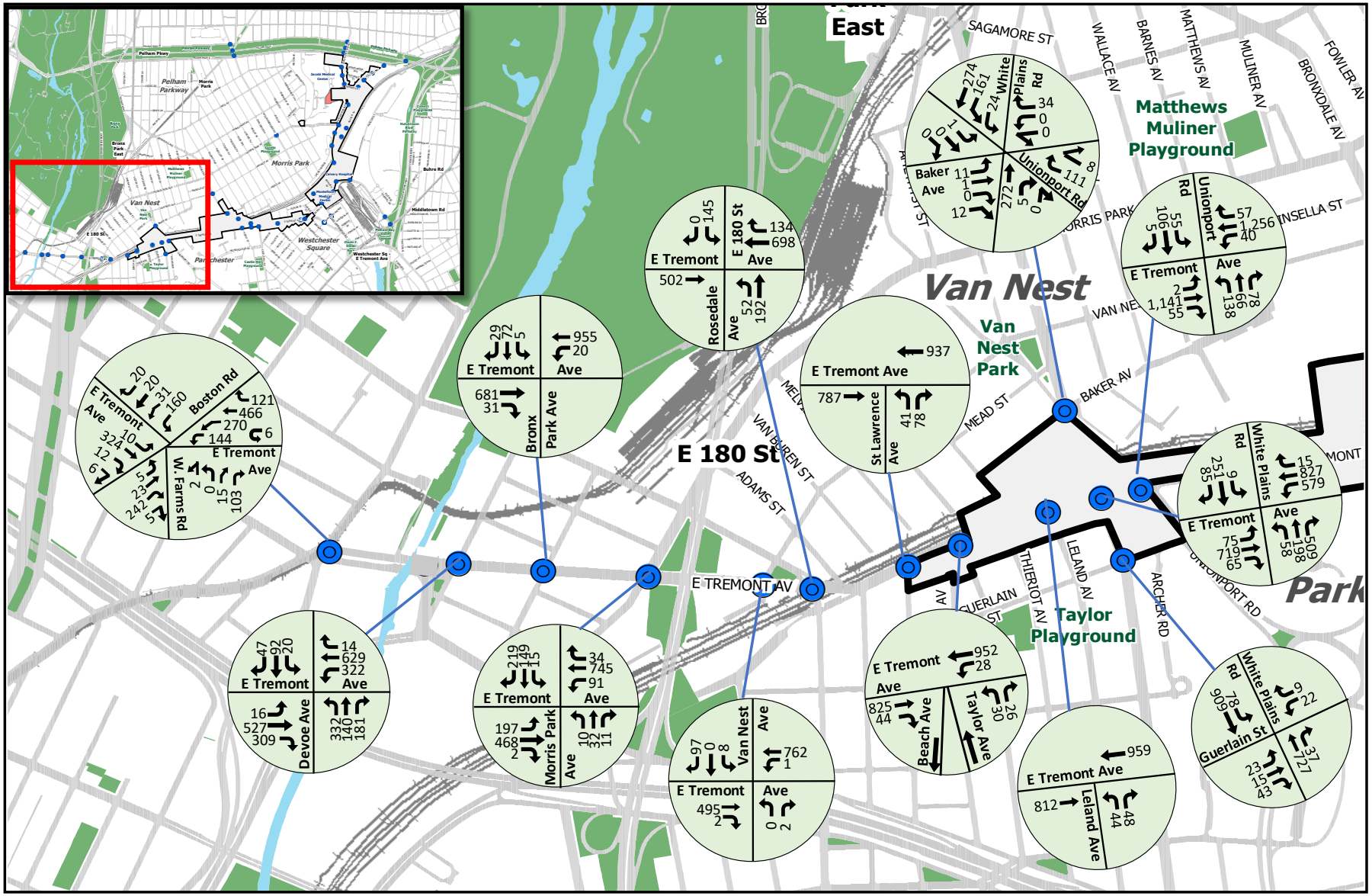
Source: Esri; STV Incorporated, 2023

Figure 13-18D

N

0 0.125 0.25 Mile

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY AM PEAK HOUR



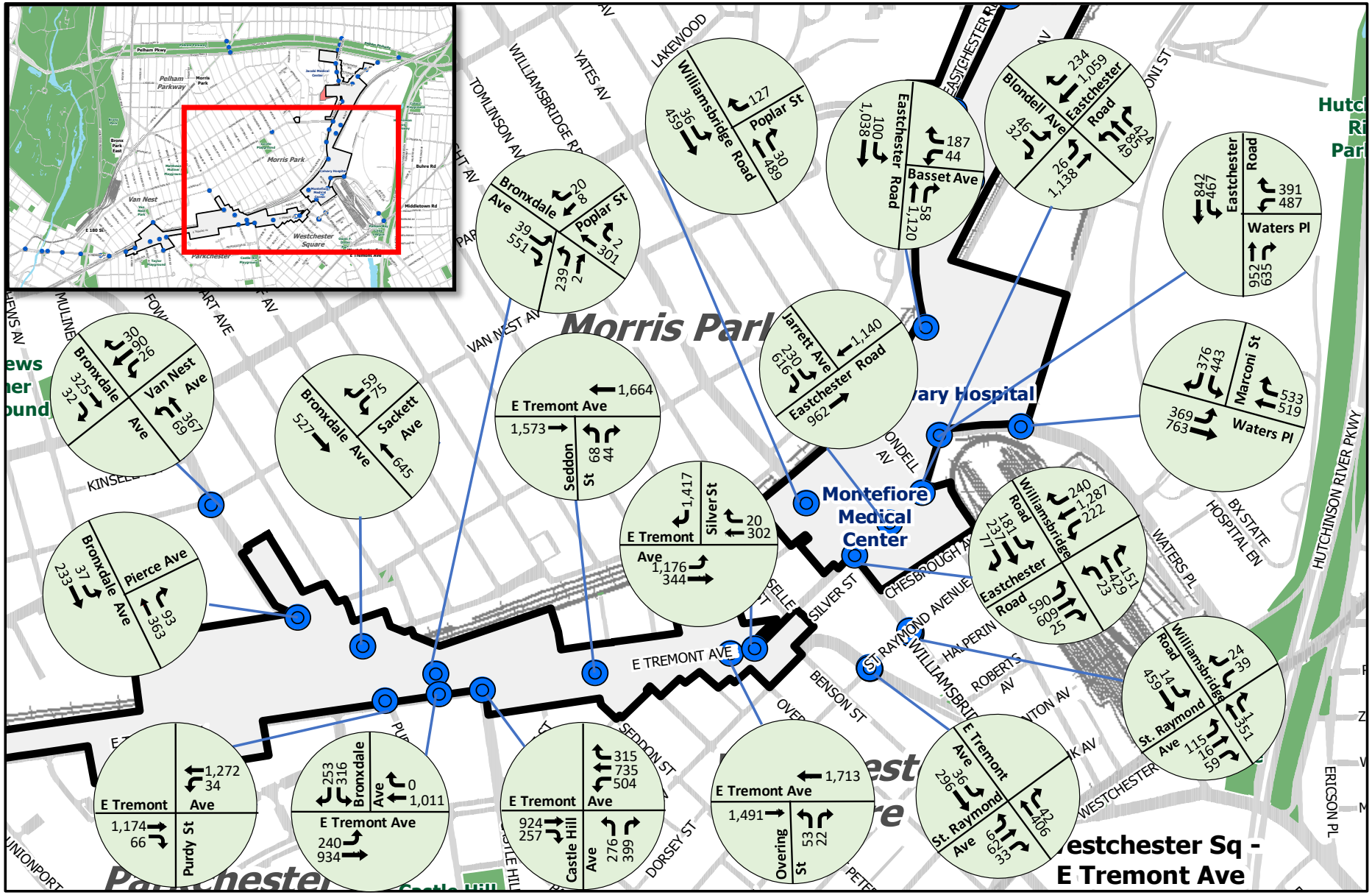
Source: Esri; STV Incorporated, 2023

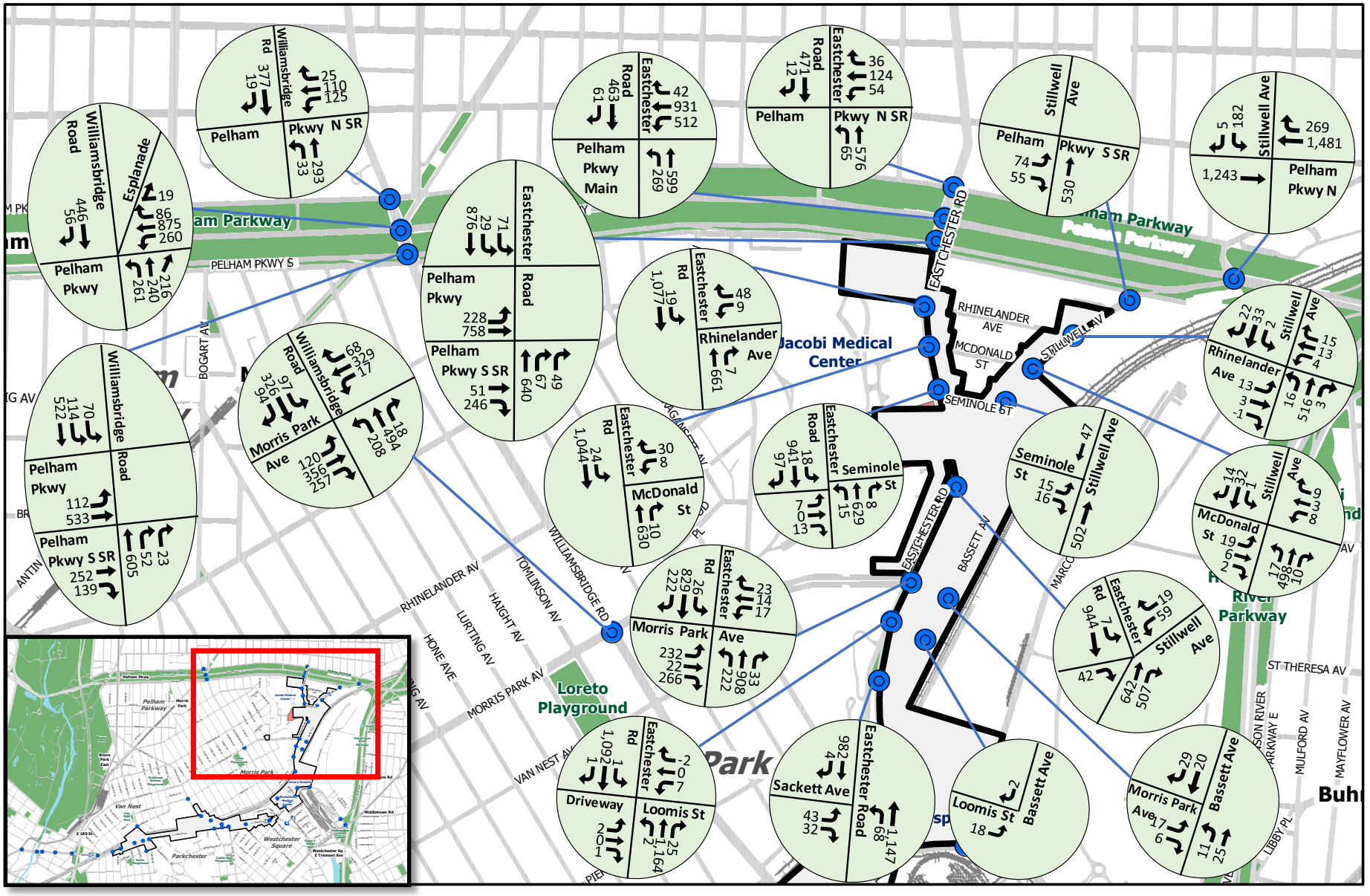
N

0 0.125 0.25 Mile

Figure 13-19A

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR


Morris Park
Montefiore Medical Center
E TREMONT AVE
Westchester Sq - E Tremont Ave
Parkchester
Williamsbridge Road
Eastchester Road
Bronxdale Ave
Van Nest Ave
Pierce Ave
Sackett Ave
Seddon St
Silver St
Jarrett Ave
Blondell Ave
Poplar St
Basset Ave
Waters Pl
Marconi St
Overing St
Castle Hill Ave
Purdy St
St. Raymond Ave
Eastchester Road
Tremont Ave
Bronxdale Ave
Williamsbridge Road
Eastchester Road
Tremont Ave
Bronxdale Ave
Tremont Ave
Bronxdale Ave
Tremont Ave
Tremont Ave
Bronxdale Ave
Tremont Ave
Bronxdale Ave
Tremont Ave
Williamsbridge Road
Eastchester Road
Tremont Ave
Williamsbridge Road
Eastchester Road
Tremont Ave
Williamsbridge Road
Eastchester Road



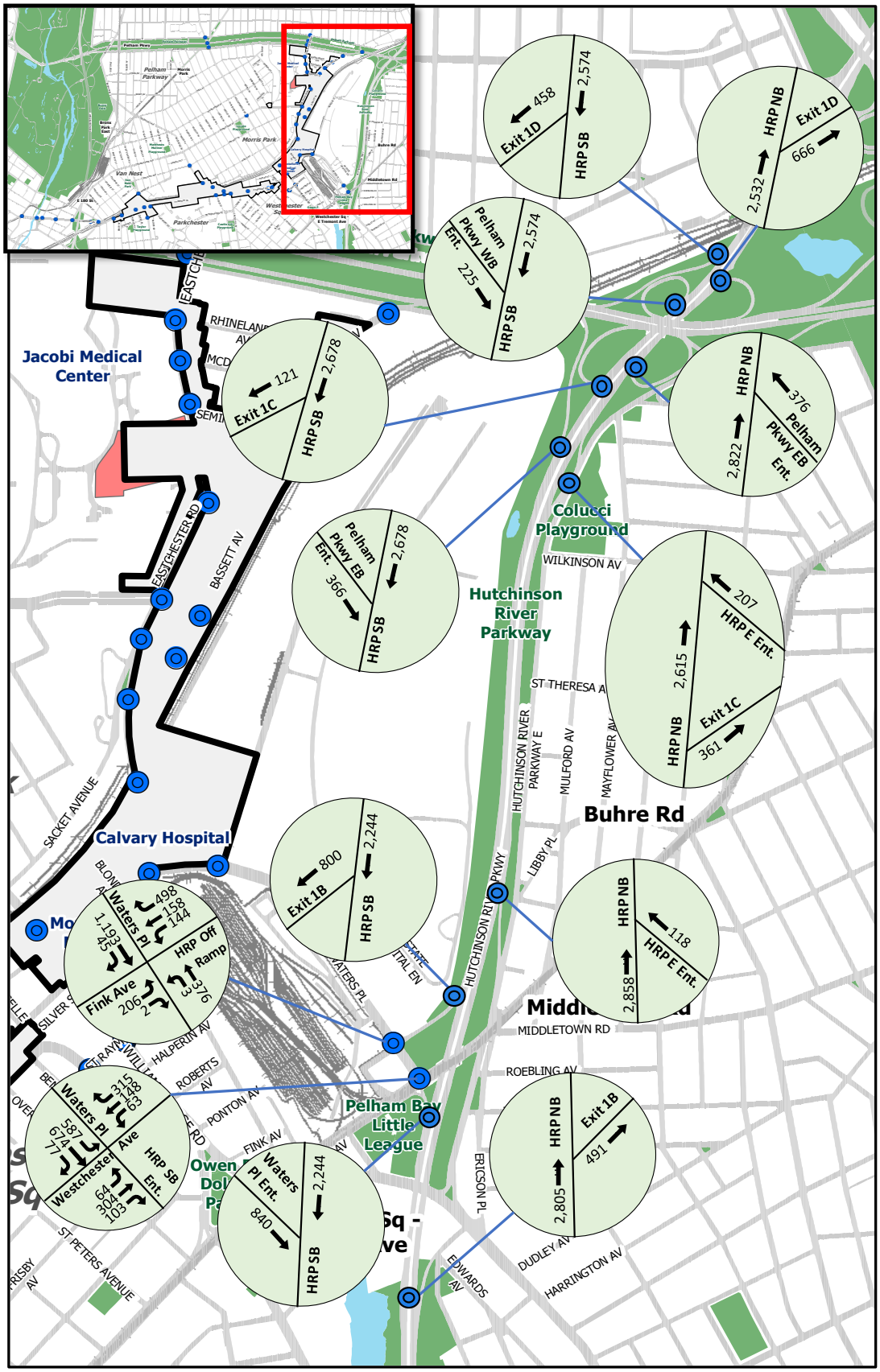
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-19C

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR



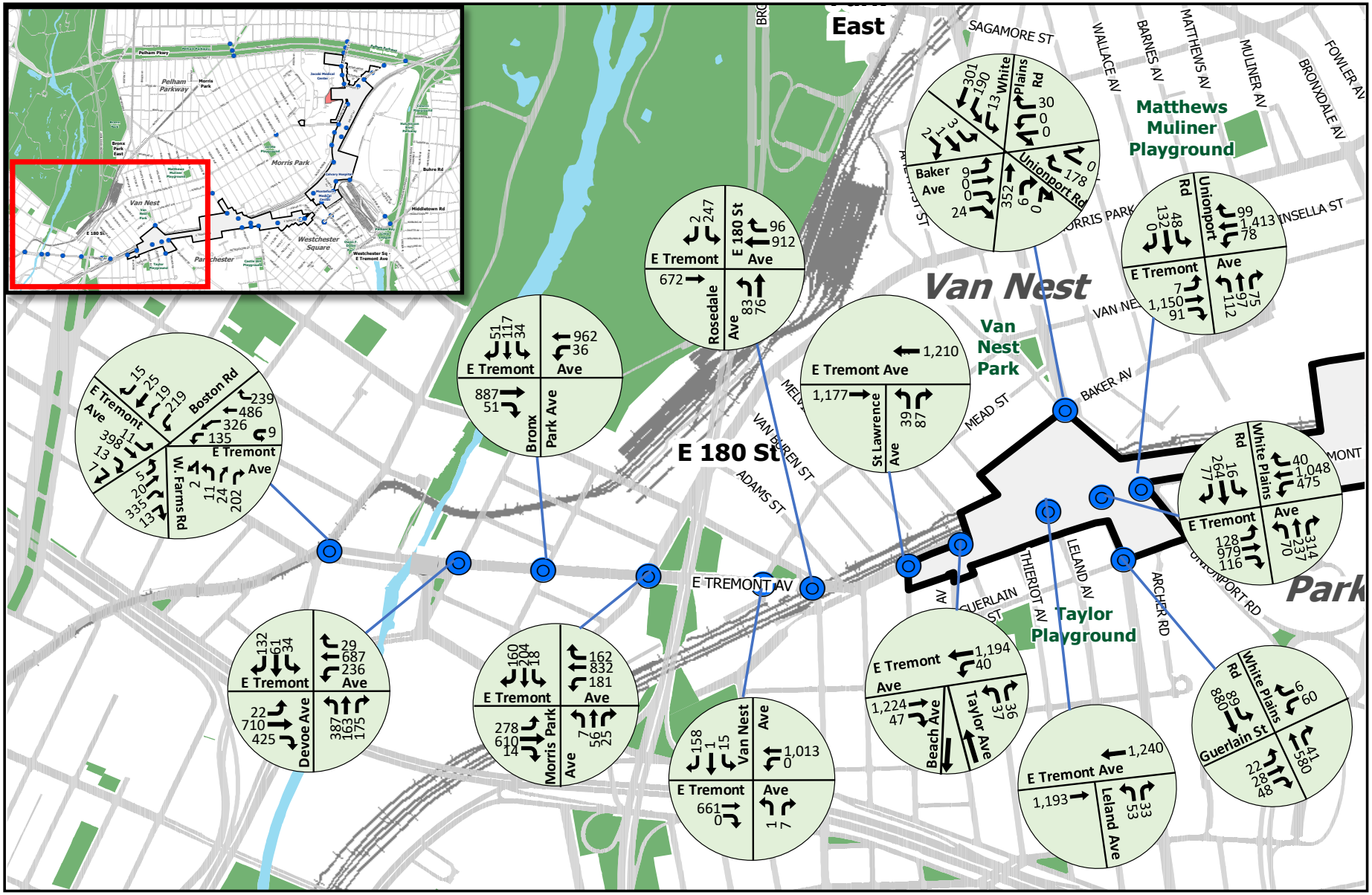
Source: Esri; STV Incorporated, 2023

Figure 13-19D

N

0 0.125 0.25 Mile

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY MIDDAY PEAK HOUR



Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-20A

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR

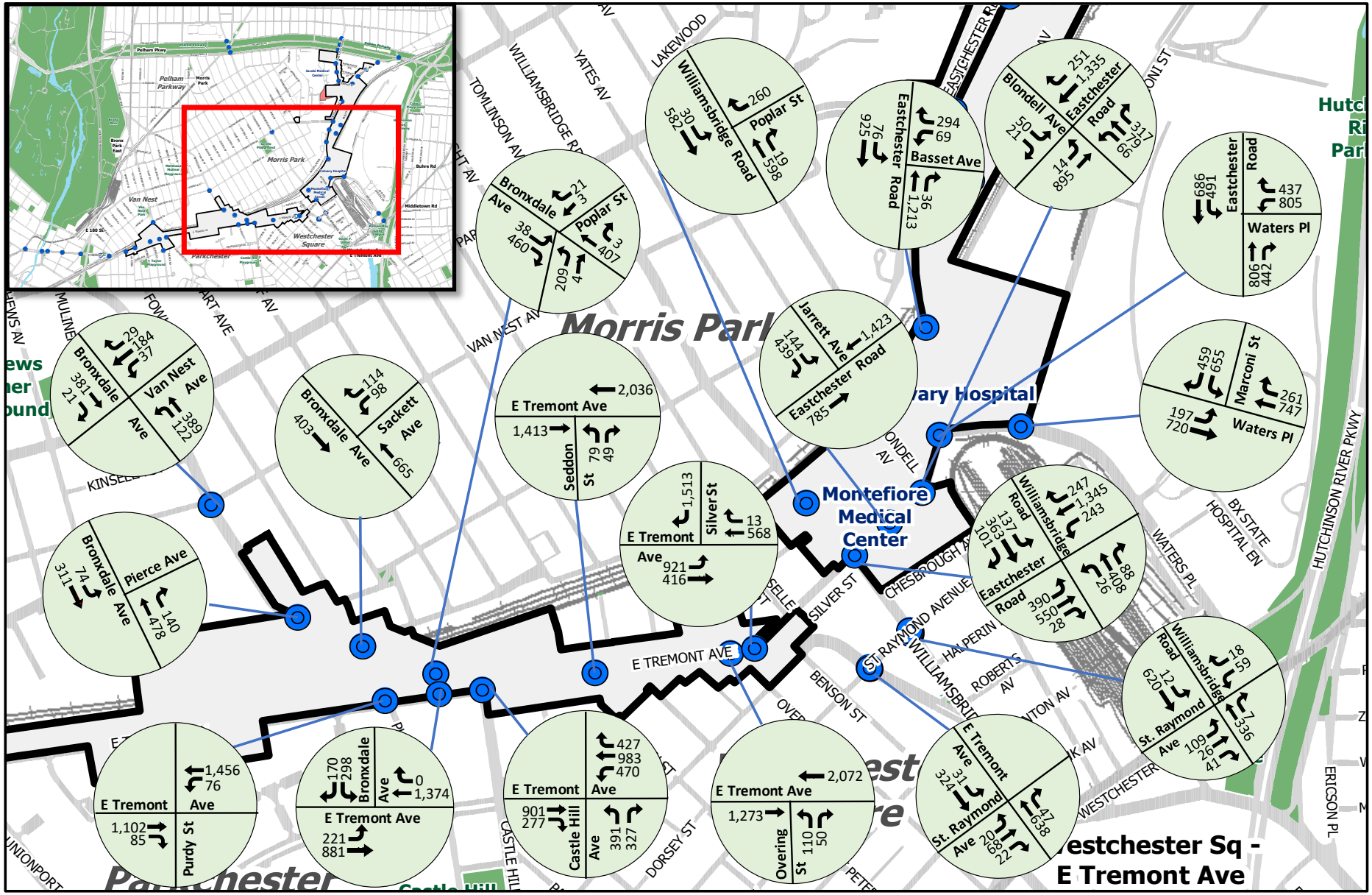
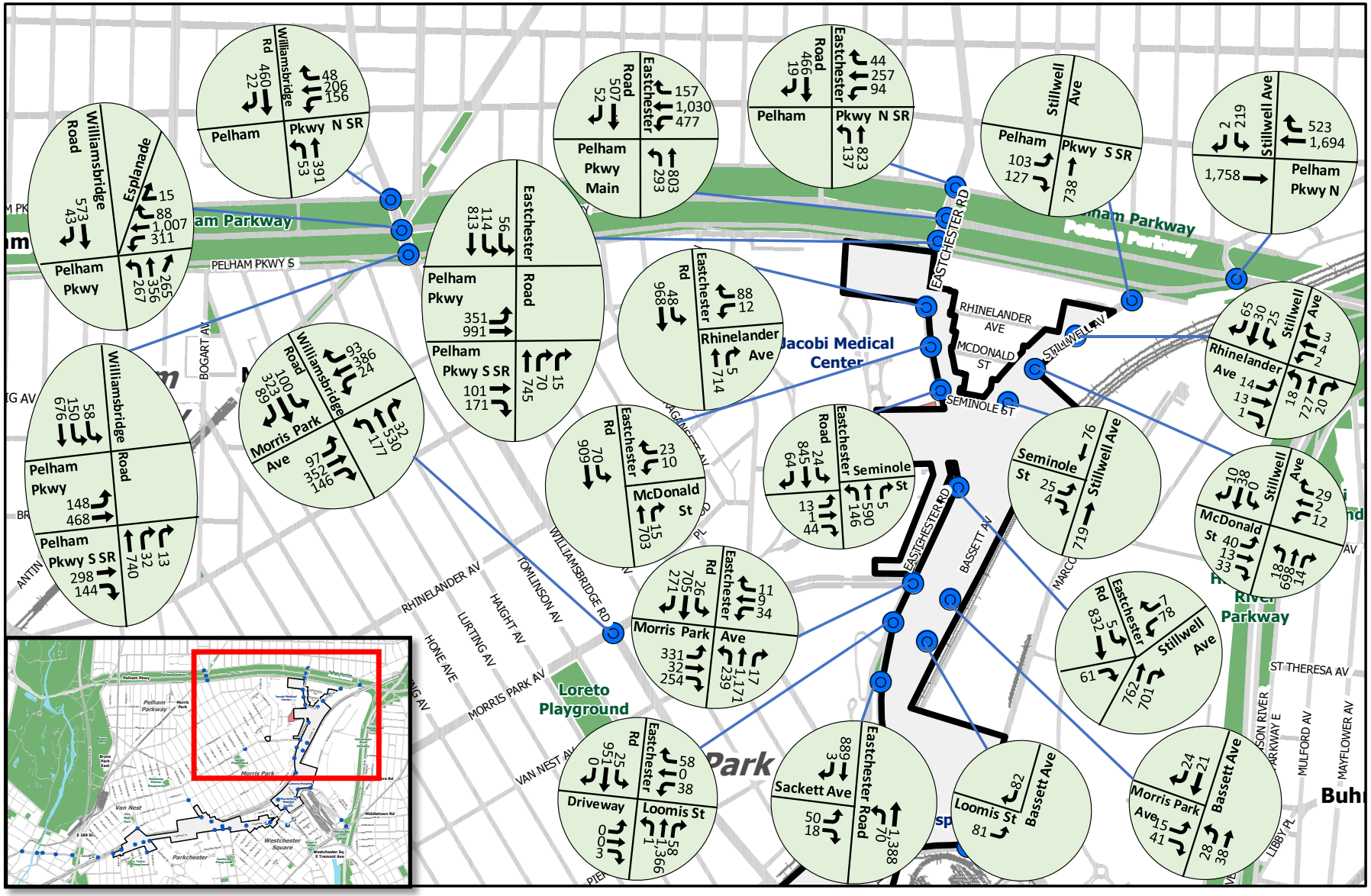


Figure 13-20B

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR



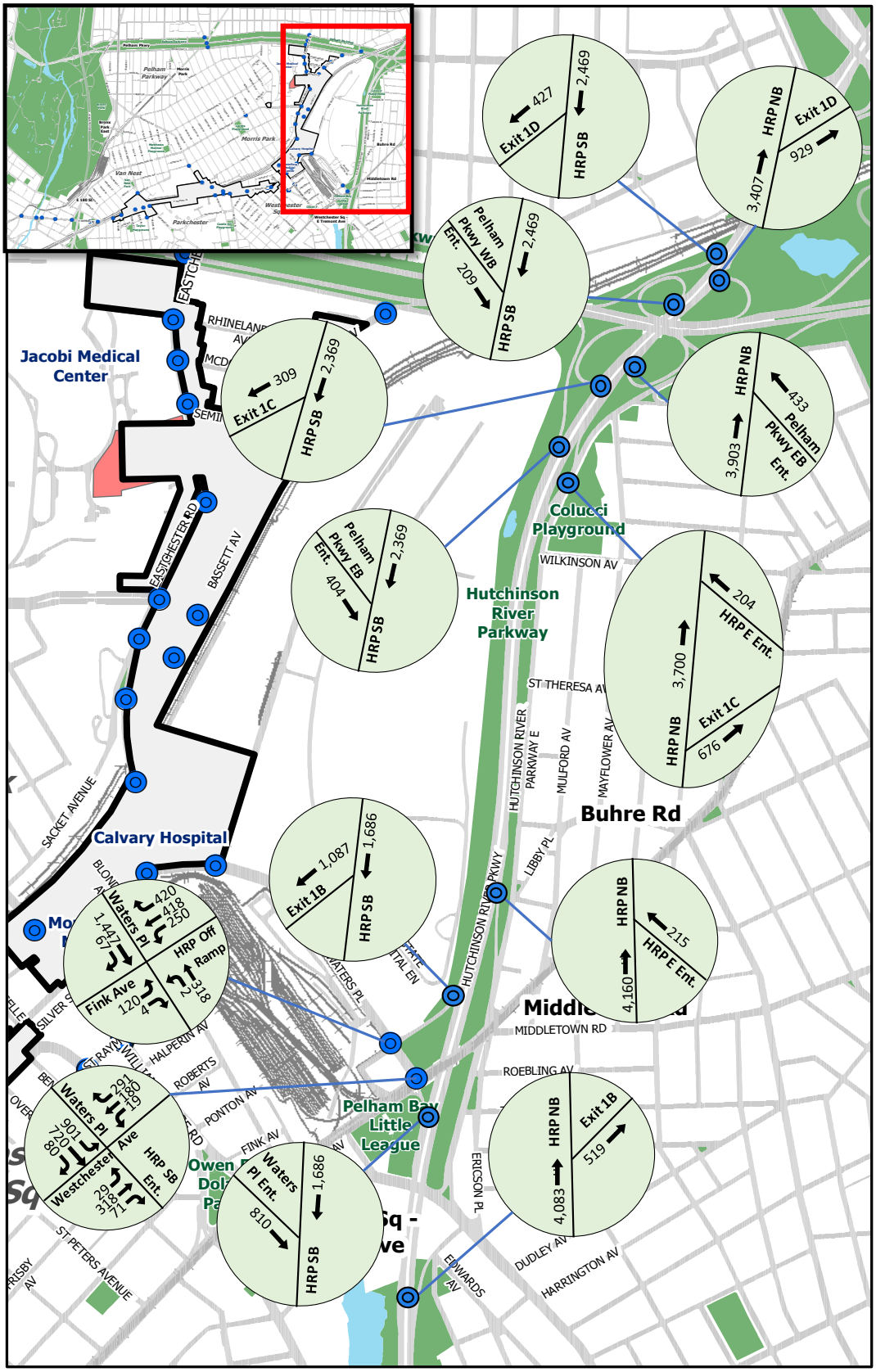
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-20C

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR



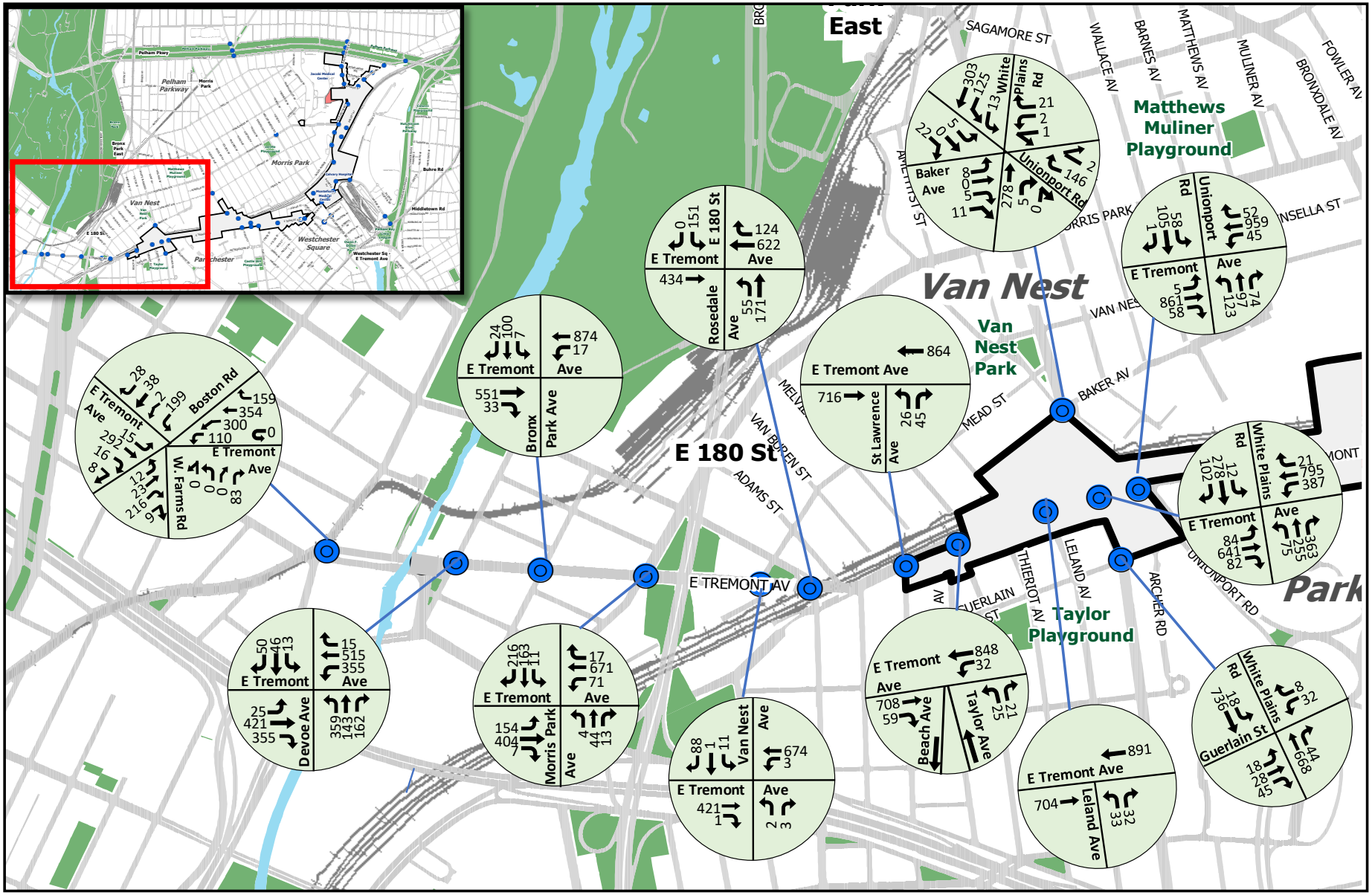
Source: Esri; STV Incorporated, 2023

Figure 13-20D

N

0 0.125 0.25 Mile

2033 WITH-ACTION TRAFFIC VOLUMES
WEEKDAY PM PEAK HOUR



Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-21A

2033 WITH-ACTION TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR

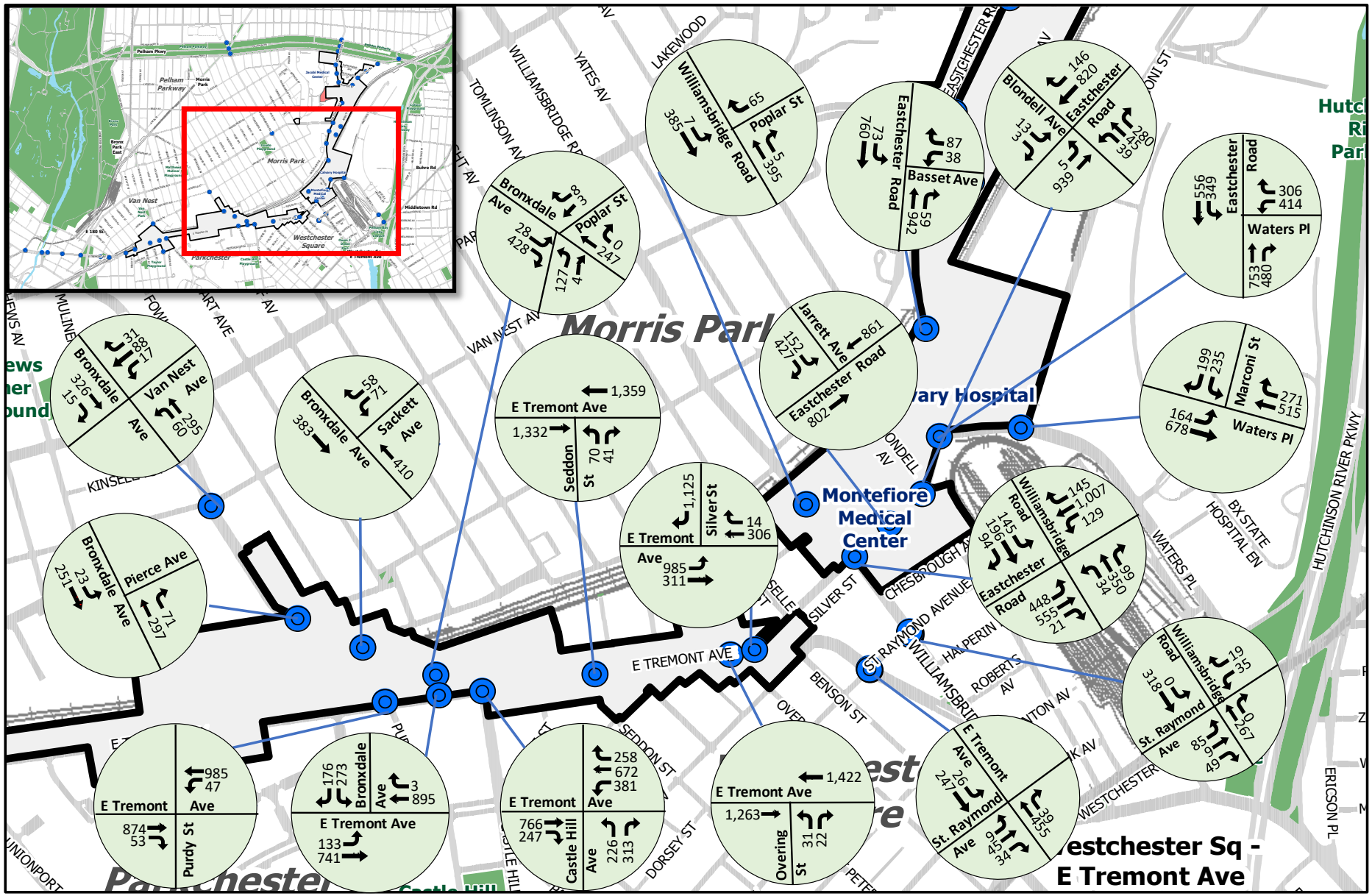
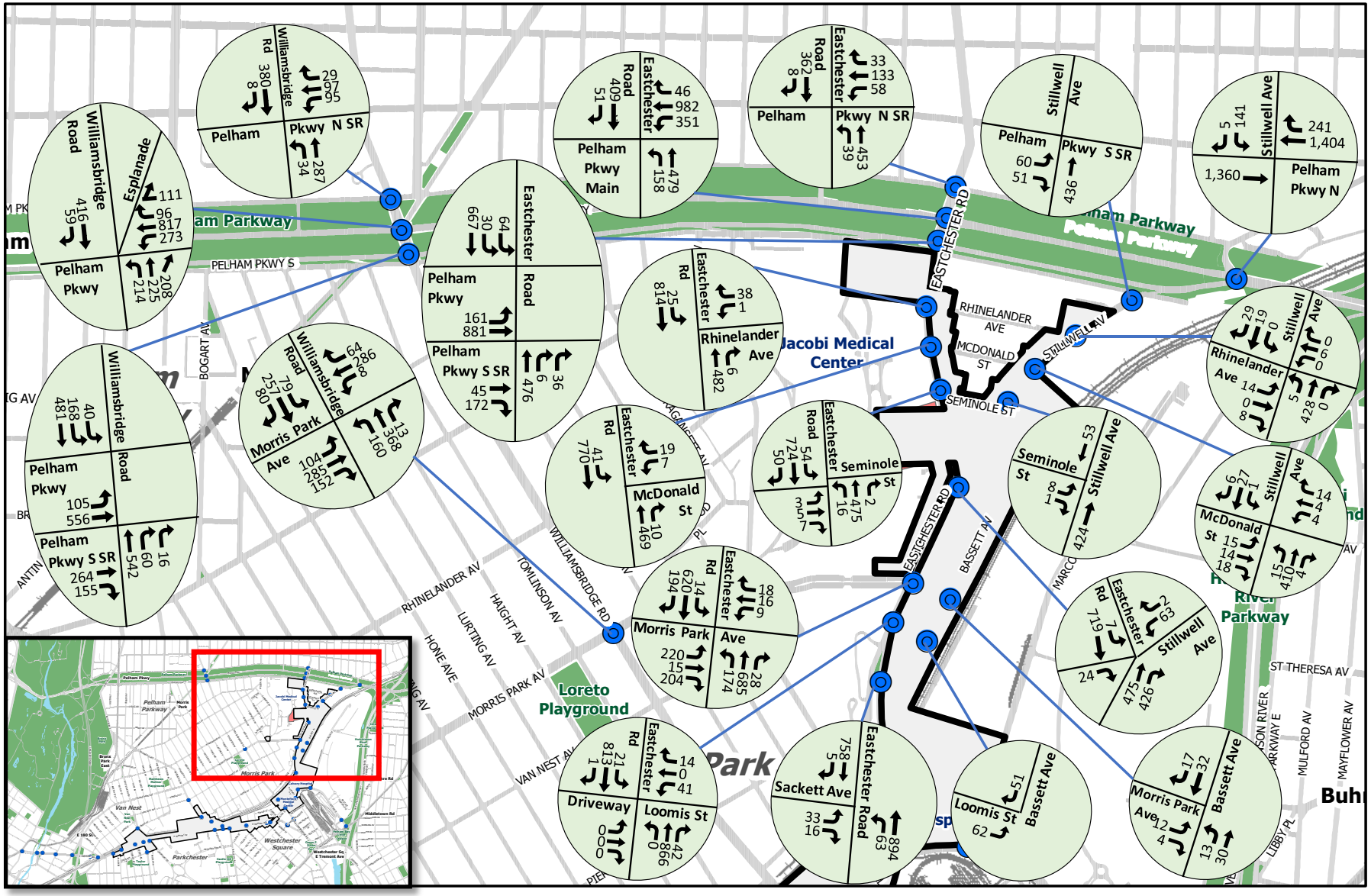


Figure 13-21B

2033 WITH-ACTION TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR



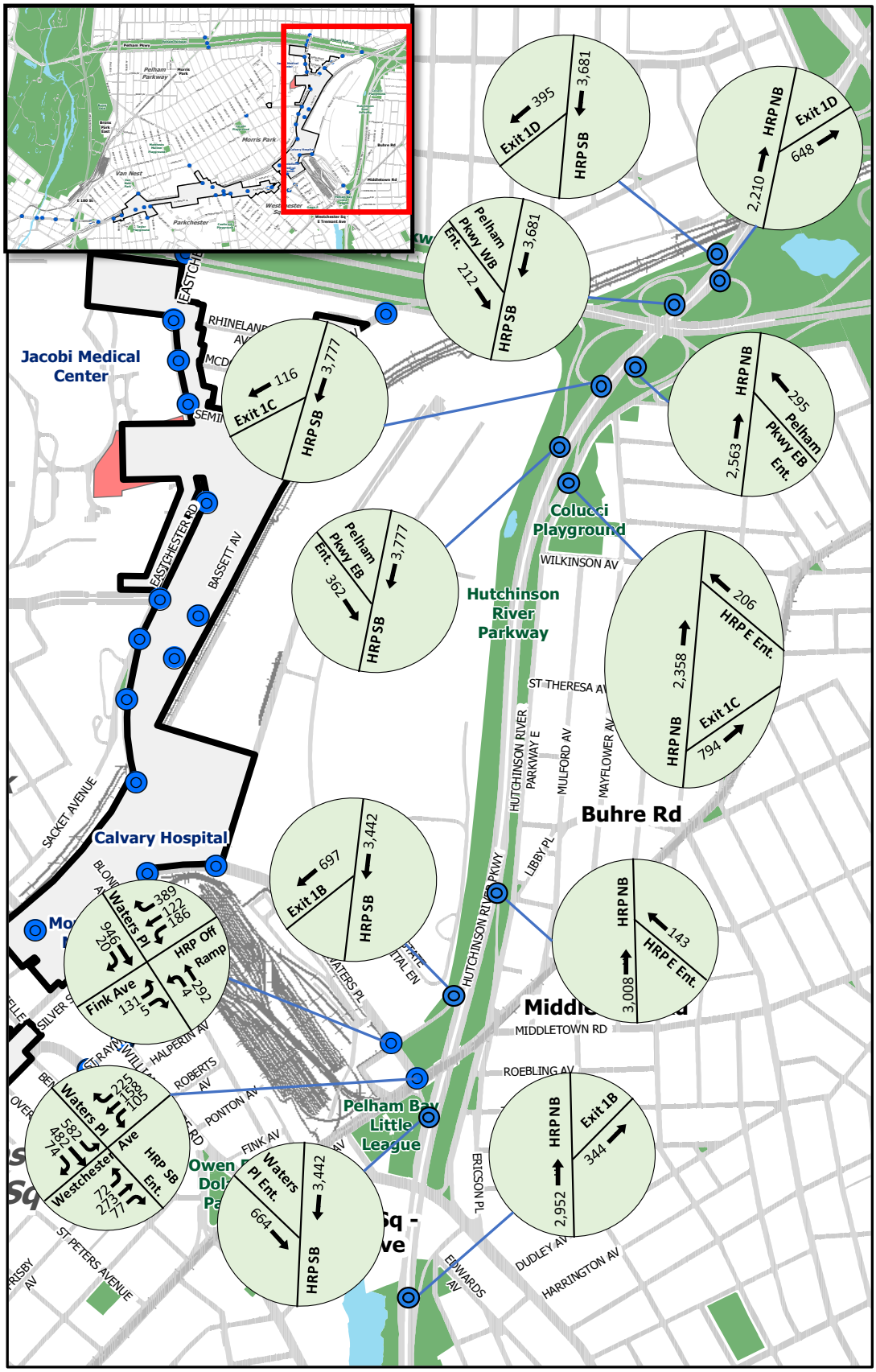
Source: Esri; STV Incorporated, 2023

N

0 0.125 0.25 Mile

Figure 13-21C

2033 WITH-ACTION TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR



Source: Esri; STV Incorporated, 2023

Figure 13-21D

N

0 0.125 0.25 Mile

2033 WITH-ACTION TRAFFIC VOLUMES
SATURDAY MIDDAY PEAK HOUR

Intersection Capacity Analysis

The v/c ratios, delays, and levels of service for those individual lane groups experiencing congestion in one or more peak hours in With-Action conditions are shown in Tables 13-24 through 13-27. Lane groups with significant adverse impacts are highlighted. As shown in Tables 13-24 through 13-27, a total of 43 intersections - 35 signalized and eight unsignalized - would have at least one congested lane group in one or more peak hours in the With-Action condition, compared to 30 intersections - 28 signalized and two unsignalized - in No-Action conditions.

Significant adverse impacts were identified at 79 lane groups at 37 intersections during the weekday AM peak hour, 63 lane groups at 29 intersections in the weekday midday peak hour, 70 lane groups at 35 intersections in the weekday PM peak hour, and at 38 lane groups at 20 intersections during the Saturday midday peak hour. V/c ratios, delays, and levels of service for all lane groups at all analyzed intersections in all peak periods in With-Action conditions are provided in Appendix F. Potential measures to mitigate the significant adverse traffic impacts identified in Tables 13-24 through 13-27 are discussed in Chapter 21, “Mitigation Measures.”

Table 13-24: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Weekday AM Peak Hour)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour No-Action			AM Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
East Tremont Avenue at Boston Road and West Farms Road								
East Tremont Avenue	WB	L	1.63	200+	F	2.00+	200+	F
Boston Road	NEB	LTR	1.12	136.7	F	1.39	200+	F
	SWB	LTR	2.00+	200+	F	2.00+	200+	F
West Farms Road	NB	LR	0.63	65.0	E	0.82	86.8	F
		R	0.75	82.0	F	0.99	130.2	F
East Tremont Avenue at Devoe Avenue								
East Tremont Avenue	EB	R	1.34	193.9	F	1.34	192.9	F
	WB	L	0.97	40.2	D	1.18	121.3	F
		TR	0.76	11.9	B	1.27	134.5	F
Devoe Avenue	NB	L	1.12	125.3	F	1.12	125.3	F
East Tremont Avenue at Morris Park Avenue								
East Tremont Avenue	EB	L	1.13	177.6	F	1.40	200+	F
	WB	LTR	1.09	68.6	E	1.61	200+	F
East Tremont Avenue at Rosedale Avenue and East 180th Street								
East 180th Street	SB	LR	0.77	68.8	E	0.77	68.8	E
East Tremont Avenue at Beach Avenue								
East Tremont Avenue	WB	LT	0.85	6.0	A	1.21	99.0	F
East Tremont Avenue at Leland Avenue								
East Tremont Avenue	WB	T	0.81	12.9	B	1.06	44.7	D
East Tremont Avenue at White Plains Road								
East Tremont Avenue	EB	L	0.54	45.7	D	1.36	200+	F
	WB	L	1.05	45.8	D	2.00+	200+	F
		TR	1.05	45.8	D	1.74	200+	F
White Plains Road	NB	L	0.66	59.8	E	0.90	105.3	F
		TR	1.20	151.0	F	2.00+	200+	F
	SB	T	1.06	91.5	F	2.00+	200+	F
East Tremont Avenue at Unionport Road								
East Tremont Avenue	EB	LTR	0.54	21.9	C	1.16	101.6	F
	WB	LTR	0.99	27.6	C	2.00+	200+	F
Unionport Road	SB	LTR	0.88	64.4	E	0.93	74.2	E
East Tremont Avenue at Purdy Street								
East Tremont Avenue	WB	LTR	0.91	22.6	C	1.85	200+	F
East Tremont Avenue at Bronxdale Avenue								
East Tremont Avenue	EB	LT	0.76	44.7	D	1.55	200+	F
Bronxdale Avenue	SB	L	0.87	74.4	E	1.54	200+	F
		R	0.38	45.7	D	2.00+	200+	F
East Tremont Avenue at Castle Hill Avenue								
East Tremont Avenue	EB	T	0.68	31.7	C	1.26	146.5	F
	WB	L	0.89	51.4	D	2.00+	200+	F
		TR	0.90	30.3	C	1.33	173.5	F
Castle Hill Avenue	NB	R	0.67	58.2	E	1.95	200+	F
East Tremont Avenue at Seddon Street								
East Tremont Avenue	EB	T	0.62	5.4	A	1.08	46.9	D
	WB	T	0.72	15.7	B	1.12	76.1	E
East Tremont Avenue at Silver Street								
East Tremont Avenue	EB	L	1.04	63.1	E	2.00+	200+	F
Silver Street	SB	R	1.18	141.1	F	2.00+	200+	F

Table 13-24: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Weekday AM Peak Hour) (cont.)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour No-Action			AM Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized, continued								
White Plains Road at Guerlain Street								
White Plains Road	NB	TR	0.81	26.9	C	1.33	181.1	F
	SB	T	0.73	21.4	C	1.39	200+	F
Williamsbridge Road at Pelham Parkway N								
Pelham Parkway N	WB	L	0.94	56.5	E	0.94	56.5	E
Williamsbridge Road at Pelham Parkway S								
Pelham Parkway S	EB	LT	1.02	72.4	E	1.02	72.4	E
Williamsbridge Road at Pelham Parkway S SR								
Williamsbridge Road	NB	TR	1.02	66.1	E	1.19	127.9	F
Williamsbridge Road at Morris Park Avenue								
Williamsbridge Road	NB	L				2.00+	200+	F
		TR	0.60	31.8	C	1.20	142.4	F
	SB	L				2.00+	200+	F
		TR	0.45	30.2	C	2.00+	200+	F
Morris Park Avenue	EB	TR	0.75	28.5	C	1.15	109.1	F
Eastchester Road and Silver Street at Williamsbridge Road								
Silver Street	NB	LTR	1.93	200+	F	2.00+	200+	F
Eastchester Road	SB	LTR	1.21	115.7	F	2.00+	200+	F
Eastchester Road at Pelham Parkway N SR								
Eastchester Road	SB	TR	1.29	177.0	F	1.39	200+	F
Eastchester Road at Pelham Parkway N								
Pelham Parkway N	WB	L	1.00	63.8	E	1.48	200+	F
Eastchester Road	SB	T	1.40	199.3	F	1.49	200+	F
Eastchester Road at Pelham Parkway S								
Eastchester Road	SB	LT	1.08	61.6	E	1.39	200+	F
Eastchester Road at Pelham Parkway S SR								
Pelham Parkway S SR	EB	TR	0.68	29.0	C	0.98	65.1	E
Eastchester Road	SB	LT	1.64	200+	F	2.00+	200+	F
Eastchester Road at Stillwell Avenue								
Eastchester Road	NB	LT	1.29	167.9	F	1.70	200+	F
		R	0.54	16.1	B	1.45	200+	F
Eastchester Road at Morris Park Avenue								
Eastchester Road	NB	L	0.91	97.6	F	1.28	200+	F
		TR	0.78	29.4	C	1.09	86.6	F
	SB	LTR	1.85	200+	F	2.00+	200+	F
Morris Park Avenue	EB	L	1.80	200+	F	2.00+	200+	F
		R	0.75	55.2	E	1.12	132.8	F
Eastchester Road at Sackett Avenue								
Eastchester Road	NB	L	0.80	11.5	B	1.79	200+	F
		T	1.01	22.9	C	1.40	193.6	F
	SB	TR	0.99	49.5	D	1.68	200+	F

Table 13-24: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Weekday AM Peak Hour) (cont.)

INTERSECTION & APPROACH		Mvt.	AM Peak Hour No-Action			AM Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized, continued								
Eastchester Road at Bassett Avenue								
Eastchester Road	NB	TR	1.30	159.4	F	1.86	200+	F
	SB	T	0.73	6.5	A	1.34	162.7	F
Eastchester Road at Waters Place								
Eastchester Road	NB	T	0.84	26.5	C	1.81	200+	F
		R	1.52	200+	F	2.00+	200+	F
	SB	L	0.95	56.7	E	1.95	200+	F
Waters Place	WB	L	1.27	153.6	F	1.77	200+	F
Eastchester Road at Blondell Avenue								
Blondell Avenue	WB	LTR	0.87	44.1	D	1.62	200+	F
Eastchester Road	NB	LT	0.70	10.7	B	1.13	76.0	E
Eastchester Road at Jarrett Place								
Jarrett Place	EB	LR	0.11	24.0	C	1.50	200+	F
Stillwell Avenue at Pelham Parkway								
Pelham Parkway	WB	TR	1.12	87.8	F	1.27	149.4	F
Waters Place at Marconi Street								
Waters Place	EB	L	1.68	200+	F	1.68	200+	F
	WB	T	1.40	200+	F	1.51	200+	F
		R	1.17	87.1	F	1.18	95.6	F
Waters Place at Hutchinson River Parkway Off Ramp and Fink Avenue								
Waters Place	SB	TR	0.93	30.9	C	1.36	185.1	F
Hutchinson River Parkway Off Ramp	WB	R	2.00+	200+	F	2.00+	200+	F
Fink Avenue	EB	LR	1.28	172.6	F	1.28	172.6	F
Waters Place at Westchester Ave / Hutchinson River Parkway On Ramp								
Westchester Avenue	EB	L	1.62	200+	F	1.80	200+	F
	WB	LTR	1.31	182.5	F	1.36	200+	F
Unsignalized								
Bronxdale Avenue at Poplar Street								
Bronxdale Avenue	NB	L	0.24	16.4	C	0.88	56.0	F
Williamsbridge Road at Poplar Street								
Williamsbridge Road	EB	LT	0.10	1.5	A	2.00+	200+	F
Poplar Street	SB	R	0.30	13.4	B	2.00+	200+	F
Eastchester Road at McDonald Street								
McDonald Street	WB	LR	0.07	14.7	B	0.39	59.4	F
Eastchester Road at Seminole Street								
Driveway	EB	LTR	0.14	37.3	E	0.71	200+	F
Eastchester Road at Loomis Street								
Loomis Street	EB	LTR	2.00+	200+	F	2.00+	200+	F
	WB	LTR	2.00+	200+	F	2.00+	200+	F
Stillwell Avenue at McDonald Street								
McDonald Street	EB	LTR	0.18	16.1	C	0.44	41.3	E
Bassett Avenue at Morris Park Avenue								
Morris Park Avenue	EB	LR	0.14	13.1	B	2.54	200+	F

Notes: + denotes V/C ratio over 2.00 or delay over 200 s
denotes a significant adverse impact based on *CEQR Technical Manual* criteria.
denotes lane group not present in No-Action Conditions due to defacto left- or right-turn lane occurring in With-Action Conditions

Source: STV Incorporated, 2023.

Table 13-25: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Weekday Midday Peak Hour)

INTERSECTION & APPROACH		Mvt.	Midday Peak Hour No-Action			Midday Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
East Tremont Avenue at Boston Road and West Farms Road								
East Tremont Avenue	WB	L	0.69	32.3	C	1.35	200+	F
Boston Road	NEB	LTR	1.15	154.0	F	1.50	200+	F
	SWB	LTR	2.00+	200+	F	2.00+	200+	F
West Farms Road	NB	LR	0.52	55.6	E	0.81	78.1	E
East Tremont Avenue at Devoe Avenue								
East Tremont Avenue	WB	TR	0.55	33.5	C	0.96	55.1	E
Devoe Avenue	NB	L	1.05	88.3	F	1.05	88.3	F
East Tremont Avenue at Morris Park Avenue								
East Tremont Avenue	EB	L				1.02	118.6	F
East Tremont Avenue at Rosedale Avenue and East 180th Street								
East 180th Street	SB	LR	0.92	97.3	F	0.92	97.3	F
East Tremont Avenue at White Plains Road								
East Tremont Avenue	EB	L	0.44	11.4	B	1.27	191.1	F
	WB	L				2.00+	200+	F
		TR	0.90	22.9	C	1.43	200+	F
White Plains Road	NB	TR	0.86	27.0	C	1.70	200+	F
East Tremont Avenue at Unionport Road								
East Tremont Avenue	EB	LTR	0.55	8.2	A	1.28	142.5	F
	WB	LTR	0.72	36.6	D	2.00+	200+	F
East Tremont Avenue at Purdy Street								
East Tremont Avenue	WB	LTR	0.52	13.0	B	1.26	140.2	F
East Tremont Avenue at Bronxdale Avenue								
East Tremont Avenue	EB	LT	0.68	11.7	B	1.68	200+	F
Bronxdale Avenue	SB	L	0.61	34.7	C	0.99	73.9	E
		R	0.18	25.5	C	1.03	90.1	F
East Tremont Avenue at Castle Hill Avenue								
East Tremont Avenue	EB	T	0.73	27.2	C	1.36	189.3	F
	WB	L	0.96	48.2	D	2.00+	200+	F
		TR	0.53	7.8	A	1.38	190.2	F
Castle Hill Avenue	NB	R	0.71	54.0	D	2.00+	200+	F
East Tremont Avenue at Seddon Street								
East Tremont Avenue	EB	T	0.65	17.2	B	1.14	89.1	F
	WB	T	0.68	24.9	C	1.33	177.5	F

Table 13-25: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Weekday Midday Peak Hour) (cont.)

INTERSECTION & APPROACH		Mvt.	Midday Peak Hour No-Action			Midday Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized, continued								
East Tremont Avenue at Overing Street								
East Tremont Avenue	WB	T	1.14	102.3	F	2.00+	200+	F
East Tremont Avenue at Silver Street								
East Tremont Avenue	EB	L	0.64	12.3	B	1.58	200+	F
Silver Street	SB	R	1.32	177.3	F	2.00+	200+	F
White Plains Road at Guerlain Street								
White Plains Road	NB	TR	0.67	19.6	B	1.17	109.5	F
	SB	T	0.61	13.1	B	1.36	185.9	F
Williamsbridge Road at Pelham Parkway S								
Pelham Parkway S	EB	LT	0.96	58.9	E	0.96	58.9	E
Williamsbridge Road at Pelham Parkway S SR								
Williamsbridge Road	NB	TR	0.93	47.0	D	1.16	114.0	F
Williamsbridge Road at Morris Park Avenue								
Williamsbridge Road	NB	L				2.00+	200+	F
		TR	1.12	61.8	E	1.22	148.8	F
	SB	L				1.64	200+	F
		TR	1.19	134.1	F	1.92	200+	F
Morris Park Avenue	EB	TR	0.75	28.6	C	1.16	113.5	F
Eastchester Road and Silver Street at Williamsbridge Road								
Silver Street	NB	LTR	1.92	200+	F	2.00+	200+	F
Eastchester Road	SB	LTR	1.27	143.4	F	2.00+	200+	F
Eastchester Road at Pelham Parkway N SR								
Eastchester Road	SB	TR	1.05	88.5	F	1.15	120.8	F
Eastchester Road at Stillwell Avenue								
Eastchester Road	NB	LT	1.07	79.5	E	1.27	157.6	F
		R	0.47	14.7	B	1.50	200+	F
Eastchester Road at Morris Park Avenue								
Eastchester Road	NB	L	0.79	69.1	E	1.05	120.7	F
		TR	0.72	26.5	C	0.99	55.6	E
	SB	LTR	1.55	200+	F	2.00+	200+	F
Morris Park Avenue	EB	L	1.09	132.5	F	1.90	200+	F
		R	0.68	49.2	D	1.10	126.7	F
Eastchester Road at Sackett Avenue								
Eastchester Road	NB	L	0.41	7.9	A	1.09	68.3	E
		T	1.15	80.8	F	1.56	200+	F
	SB	TR	0.89	32.0	C	1.44	200+	F
Eastchester Road at Bassett Avenue								
Eastchester Road	NB	TR	1.27	148.7	F	1.84	200+	F
	SB	T	0.75	9.4	A	1.32	155.4	F

Table 13-25: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Weekday Midday Peak Hour) (cont.)

INTERSECTION & APPROACH		Mvt.	Midday Peak Hour No-Action			Midday Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized, continued								
Eastchester Road at Waters Place								
Eastchester Road	NB	T	0.79	24.0	C	1.70	200+	F
		R	1.22	130.0	F	1.84	200+	F
	SB	L	1.20	137.4	F	2.00+	200+	F
		T	0.51	19.4	B	1.34	173.7	F
Waters Place	WB	L	1.05	68.6	E	1.48	200+	F
Eastchester Road at Blondell Avenue								
Blondell Avenue	WB	LTR	0.84	41.5	D	1.39	200+	F
Eastchester Road	NB	LT	0.66	10.0	A	1.25	129.6	F
	SB	TR	0.62	22.9	C	1.17	101.7	F
Eastchester Road at Jarrett Place								
Jarrett Place	EB	LR	0.17	24.7	C	2.00+	200+	F
Waters Place at Marconi Street								
Waters Place	EB	L	2.00+	200+	F	2.00+	200+	F
Marconi Street	SB	L	1.09	100.2	F	1.09	100.2	F
		R	0.99	73.2	E	1.02	81.9	F
Waters Place at Hutchinson River Parkway Off Ramp and Fink Avenue								
Waters Place	SB	TR	1.59	200+	F	1.96	200+	F
Unsignalized								
White Plains Road at Unionport Road (North Leg)								
Unionport Road	SEB	LR	0.03	33.10	D	0.03	37.2	E
Bronxdale Avenue at Poplar Street								
Bronxdale Avenue	NB	L	0.29	21.7	C	1.16	146.5	F
Williamsbridge Road at Poplar Street								
Williamsbridge Road	EB	LT	0.06	1.1	A	2.00+	200+	F
Poplar Street	SB	R	0.28	13.4	B	2.00+	200+	F
Eastchester Road at McDonald Street								
McDonald Street	WB	LR	0.10	15.2	C	0.49	78.5	F
Eastchester Road at Loomis Street								
Eastchester Road	SB	LT	0.18	5.1	A	0.33	200+	F
Loomis Street	EB	LTR	2.00+	200+	F	1.05	200+	F
	WB	LTR	2.00+	200+	F	2.00+	200+	F

Notes: + denotes V/C ratio over 2.00 or delay over 200 s
denotes a significant adverse impact based on *CEQR Technical Manual* criteria.
denotes lane group not present in No-Action Conditions due to defacto left- or right-turn lane occurring in With-Action Conditions.

Source: STV Incorporated, 2023.

Table 13-26: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Weekday PM Peak Hour)

INTERSECTION & APPROACH		Mvt.	PM Peak Hour No-Action			PM Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
East Tremont Avenue at Boston Road and West Farms Road								
East Tremont Avenue	WB	L	1.09	102.2	F	1.84	200+	F
		TR	0.89	47.1	D	1.13	102.4	F
Boston Road	NEB	LTR	1.12	135.0	F	1.26	187.8	F
	SWB	LTR	2.00+	200+	F	2.00+	200+	F
West Farms Road	NB	LR	0.66	61.4	E	0.75	68.5	E
		R	0.76	72.6	E	0.86	87.1	F
East Tremont Avenue at Devoe Avenue								
Devoe Avenue	NB	L	1.19	148.6	F	1.19	148.6	F
		TR	0.94	69.4	E	0.94	69.4	E
East Tremont Avenue at Morris Park Avenue								
East Tremont Avenue	EB	L	1.08	137.9	F	1.38	200+	F
	WB	LTR	1.06	70.0	E	1.41	200+	F
East Tremont Avenue at Rosedale Avenue and East 180th Street								
East 180th Street	SB	LR	1.01	105.0	F	1.01	105.0	F
East Tremont Avenue at White Plains Road								
East Tremont Avenue	EB	L	0.74	32.4	C	2.00+	200+	F
	WB	L				2.00+	200+	F
		TR	1.02	25.5	C	1.20	103.1	F
White Plains Road	NB	L	0.49	46.6	D	0.70	66.6	E
		TR	1.13	130.5	F	2.00+	200+	F
	SB	T	0.72	42.5	D	1.82	200+	F
East Tremont Avenue at Unionport Road								
East Tremont Avenue	WB	LTR	1.14	87.2	F	2.00+	200+	F
East Tremont Avenue at Purdy Street								
East Tremont Avenue	WB	LTR	0.83	14.1	B	1.41	198.3	F
East Tremont Avenue at Bronxdale Avenue								
East Tremont Avenue	EB	LT	0.81	42.2	D	1.29	172.1	F
Bronxdale Avenue	SB	L	0.99	96.0	F	1.09	126.5	F
		R	0.39	46.1	D	0.91	90.6	F
East Tremont Avenue at Castle Hill Avenue								
East Tremont Avenue	EB	T	0.69	25.0	C	1.02	40.9	D
	WB	L	0.87	62.7	E	2.00+	200+	F
		TR	1.09	96.5	F	1.62	200+	F
Castle Hill Avenue	NB	R	0.76	64.0	E	1.47	200+	F
East Tremont Avenue at Seddon Street								
East Tremont Avenue	WB	T	0.80	22.4	C	1.18	110.3	F
East Tremont Avenue at Overing Street								
Overing Street	NB	LR	0.56	51.6	D	0.66	57.6	E
East Tremont Avenue at Silver Street								
East Tremont Avenue	EB	L	0.70	24.7	C	1.33	175.8	F
Silver Street	SB	R	1.52	200+	F	2.00+	200+	F

Table 13-26: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Weekday PM Peak Hour) (cont.)

INTERSECTION & APPROACH		Mvt.	PM Peak Hour No-Action			PM Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized, continued								
White Plains Road at Guerlain Street								
White Plains Road	SB	T	0.74	21.8	C	1.23	136.0	F
Williamsbridge Road at Pelham Parkway S								
Pelham Parkway S	EB	LT	0.99	66.6	E	0.99	66.6	E
Williamsbridge Road at Pelham Parkway S SR								
Williamsbridge Road	NB	TR	1.02	67.1	E	1.20	130.4	F
Williamsbridge Road at Morris Park Avenue								
Williamsbridge Road	NB	L				2.00+	200+	F
		TR	1.14	119.2	F	1.27	170.4	F
	SB	L				1.44	200+	F
		TR	1.71	200+	F	2.00+	200+	F
Eastchester Road and Silver Street at Williamsbridge Road								
Silver Street	NB	LTR	2.00+	200+	F	2.00+	200+	F
Eastchester Road	SB	LTR	1.54	200+	F	2.00+	200+	F
Eastchester Road at Pelham Parkway N SR								
Eastchester Road	SB	TR	1.20	151.6	F	1.28	185.3	F
Eastchester Road at Pelham Parkway N								
Pelham Parkway N	WB	L	0.88	66.6	E	1.47	200+	F
		T	1.22	153.1	F	1.22	153.1	F
Eastchester Road	SB	T	1.16	96.9	F	1.24	130.3	F
Eastchester Road at Pelham Parkway S								
Eastchester Road	SB	LT	0.91	9.4	A	1.21	106.6	F
Eastchester Road at Pelham Parkway S SR								
Eastchester Road	NB	TR	0.44	24.4	C	1.06	67.1	E
	SB	LT	1.14	75.7	E	1.60	200+	F
Eastchester Road at Stillwell Avenue								
Eastchester Road	NB	LT	1.80	200+	F	2.00	200+	F
		R	0.74	22.2	C	2.00+	200+	F
Eastchester Road at Morris Park Avenue								
Eastchester Road	NB	L	0.96	95.2	F	1.12	140.7	F
		TR	1.03	66.1	E	1.29	167.6	F
	SB	LTR	1.75	200+	F	2.00+	200+	F
Morris Park Avenue	EB	L	1.89	200+	F	2.00+	200+	F
		R	0.71	52.2	D	0.98	91.4	F
Eastchester Road at Sackett Avenue								
Eastchester Road	NB	L	0.39	7.4	A	1.13	84.6	F
		T	1.46	200+	F	1.84	200+	F
	SB	TR	0.88	31.4	C	1.39	200+	F
Eastchester Road at Bassett Avenue								
Eastchester Road	NB	TR	1.54	200+	F	2.00+	200+	F
		T	0.70	7.9	A	1.22	108.7	F
Bassett Avenue	WB	LR	0.94	60.8	E	0.94	60.8	E

Table 13-26: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Weekday PM Peak Hour) (cont.)

INTERSECTION & APPROACH		Mvt.	PM Peak Hour No-Action			PM Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized, continued								
Eastchester Road at Waters Place								
Eastchester Road	NB	T	0.90	37.0	D	1.60	200+	F
		R	0.99	55.0	D	1.37	194.6	F
	SB	L	0.90	44.2	D	1.94	200+	F
Waters Place	WB	L	1.67	200+	F	2.00+	200+	F
Eastchester Road at Blondell Avenue								
Blondell Avenue	WB	LR	0.79	37.3	D	1.09	96.1	F
Eastchester Road	SB	TR	0.88	28.9	C	1.32	170.9	F
Eastchester Road at Jarrett Place								
Jarrett Place	EB	LR	0.14	24.3	C	1.51	200+	F
Waters Place at Marconi Street								
Waters Place	EB	L	1.43	200+	F	1.43	200+	F
	WB	T	1.11	91.1	F	1.20	123.9	F
Marconi Street	SB	L	1.56	200+	F	1.56	200+	F
		R	1.26	167.4	F	1.26	165.0	F
Waters Place at Hutchinson River Parkway Off Ramp / Fink Ave								
Waters Place	SB	TR	2.00+	200+	F	2.00+	200+	F
Waters Place at Westchester Ave / Hutchinson River Parkway On Ramp								
Waters Place	SB	L	1.26	134.1	F	1.27	139.7	F
		TR	0.82	15.0	B	1.12	68.9	E
Unsignalized								
Bronxdale Avenue at Poplar Street								
Bronxdale Avenue	NB	L	0.31	20.0	C	0.82	52.3	F
Williamsbridge Road at Poplar Street								
Williamsbridge Road	EB	LT	0.05	0.7	A	1.82	200+	F
Poplar Street	SB	R	0.54	18.1	C	2.00+	200+	F
Eastchester Road at McDonald Street								
McDonald Street	WB	LR	0.11	17.1	C	0.91	200+	F
Eastchester Road at Loomis Street								
Eastchester Road	SB	LT	0.34	19.2	C	2.00+	200+	F
Loomis Street	EB	LTR	0.01	10.6	B	0.35	200+	F
	WB	LTR	2.00+	200+	F	2.00+	200+	F
Stillwell Avenue at McDonald Street								
McDonald Street	EB	LTR	0.20	20.3	C	0.67	68.3	F
Bassett Avenue at Morris Park Avenue								
Morris Park Avenue	EB	LR	0.14	13.5	B	2.00+	200+	F

Notes: + denotes V/C ratio over 2.00 or delay over 200 s
denotes a significant adverse impact based on *CEQR Technical Manual* criteria.
denotes lane group not present in No-Action Conditions due to defacto left- or right-turn lane occurring in With-Action Conditions.

Source: STV Incorporated, 2023.

Table 13-27: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Saturday Midday Peak Hour)

INTERSECTION & APPROACH		Mvt.	Saturday Peak Hour No-Action			Saturday Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized								
East Tremont Avenue at Boston Road and West Farms Road								
East Tremont Avenue	WB	L	0.79	38.6	D	1.19	137.0	F
Boston Road	NEB	LTR	1.06	121.7	F	1.26	193.8	F
	SWB	LTR	2.00+	200+	F	2.00+	200+	F
East Tremont Avenue at Devoe Avenue								
Devoe Avenue	NB	L	1.05	88.5	F	1.05	88.5	F
East Tremont Avenue at Rosedale Avenue and East 180th Street								
East 180th Street	SB	LR	0.83	70.5	E	0.83	70.5	E
East Tremont Avenue at White Plains Road								
East Tremont Avenue	EB	L	0.51	18.2	B	1.35	200+	F
	WB	L				2.00+	200+	F
		TR	0.87	20.1	C	1.30	153.1	F
White Plains Road	NB	TR	0.90	29.8	C	1.60	200+	F
East Tremont Avenue at Unionport Road								
East Tremont Avenue	WB	LTR	0.63	32.8	C	1.29	173.1	F
East Tremont Avenue at Bronxdale Avenue								
East Tremont Avenue	EB	LT	0.49	7.8	A	1.21	130.8	F
East Tremont Avenue at Castle Hill Avenue								
East Tremont Avenue	EB	T	0.70	22.8	C	1.22	130.5	F
	WB	L	0.77	33.2	C	2.00+	200+	F
		TR	0.65	14.2	B	1.14	84.3	F
Castle Hill Avenue	NB	R	0.64	48.8	D	1.72	200+	F
East Tremont Avenue at Seddon Street								
East Tremont Avenue	EB	T	0.63	16.5	B	1.03	42.0	D
	WB	T	0.58	8.8	A	1.00	29.8	C
East Tremont Avenue at Silver Street								
East Tremont Avenue	EB	L	0.63	12.1	B	1.37	182.2	F
Silver Street	SB	R	1.09	86.6	F	2.00+	200+	F
White Plains Road at Guerlain Street								
White Plains Road	NB	TR	0.71	20.8	C	1.02	57.6	E
Williamsbridge Road at Pelham Parkway S								
Pelham Parkway S	EB	LT	0.95	56.8	E	0.95	56.8	E
Williamsbridge Road at Morris Park Avenue								
Williamsbridge Road	NB	L				2.00+	200+	F
	SB	LTR	0.95	54.5	D	1.60	200+	F
Eastchester Road and Silver Street at Williamsbridge Road								
Silver Street	NB	LTR	1.30	181.4	F	2.00+	200+	F
Eastchester Road	SB	LTR	0.94	28.8	C	1.79	200+	F

Table 13-27: Congested Lane Groups at Analyzed Intersections for With-Action Conditions (Saturday Midday Peak Hour) (cont.)

INTERSECTION & APPROACH		Mvt.	Saturday Peak Hour No-Action			Saturday Peak Hour With-Action		
			V/C	Control Delay	LOS	V/C	Control Delay	LOS
Signalized, continued								
Eastchester Road at Stillwell Avenue								
Eastchester Road	NB	R	0.38	13.2	B	1.29	169.9	F
Eastchester Road at Morris Park Avenue								
Eastchester Road	NB	L	0.60	55.9	E	0.79	69.2	E
	SB	LTR	0.94	63.3	E	1.43	200+	F
Morris Park Avenue	EB	L	0.97	94.6	F	2.00+	200+	F
		R	0.56	44.0	D	0.90	74.5	E
Eastchester Road at Sackett Avenue								
Eastchester Road	NB	T	0.97	15.1	B	1.26	131.7	F
	SB	TR	0.66	18.8	B	1.01	56.1	E
Eastchester Road at Bassett Avenue								
Eastchester Road	NB	TR	1.19	111.7	F	1.61	200+	F
Eastchester Road at Waters Place								
Eastchester Road	NB	T	0.81	27.7	C	1.43	200+	F
		R	0.98	51.8	D	1.47	200+	F
	SB	L	1.04	85.2	F	2.00+	200+	F
Waters Place	WB	L	0.86	39.8	D	1.17	120.0	F
Eastchester Road at Jarrett Place								
Jarrett Place	EB	LR	0.06	23.4	C	1.41	200+	F
Waters Place at Marconi Street								
Waters Place	EB	L	1.22	143.9	F	1.22	142.6	F
Waters Place at Hutchinson River Parkway Off Ramp and Fink Avenue								
Waters Place	SB	TR	1.40	200+	F	1.70	200+	F
Unsignalized								
Williamsbridge Road at Poplar Street								
Williamsbridge Road	EB	LT	0.01	0.3	A	2.00+	200+	F
Poplar Street	SB	R	0.11	10.4	B	2.00+	200+	F
Eastchester Road at McDonald Street								
McDonald Street	WB	LR	0.06	14.1	B	0.33	61.2	F
Eastchester Road at Seminole Street								
Driveway	EB	LTR	0.21	23.5	C	0.62	102.7	F
Eastchester Road at Loomis Street								
Eastchester Road	SB	LT	0.17	4.4	A	2.00+	200+	F
Loomis Street	WB	LTR	2.00+	200+	F	2.00+	200+	F

Notes: + denotes V/C ratio over 2.00 or delay over 200 s
denotes a significant adverse impact based on *CEQR Technical Manual* criteria.
denotes lane group not present in No-Action Conditions due to defacto left- or right-turn lane occurring in With-Action Conditions.

Source: STV Incorporated, 2023.

Highway Analysis

A detailed traffic analysis for the Hutchinson River Parkway freeway and ramp junctions at Waters Place and at Pelham Parkway were performed for the weekday AM, midday, PM, and Saturday midday peak hours. The highway study area includes the north and southbound segments of the Hutchinson River Parkway from south of Waters Place to north of the Pelham Parkway interchange. The existing conditions HCS 2023 analyses were based on 2023 ATR data for the Hutchinson River Parkway adjusted in coordination with NYCDOT.

Northbound Hutchinson River Parkway traffic volumes between Waters Place and Pelham Parkway range from a low of 3,000 vehicles during the weekday and Saturday midday peak hours to 4,750 vehicles during the weekday AM and PM peak hours. Within this highway segment, southbound Hutchinson River Parkway traffic volumes range from a low of 2,350 vehicles during the weekday and Saturday midday peak hours to approximately 4,000 vehicles during the AM peak hour. Peak hour traffic volumes on the Pelham Parkway on and off ramps generally range between 300 and 900 vehicles, with the higher volumes occurring at the northbound off ramp during both the weekday AM and PM peak hours. At the northbound Waters Place ramps, peak hour volumes generally range between 350 and 700 vehicles, while the southbound Waters Place ramps range from 400 to over 1,400 vehicles, with the greatest volumes processed at the off-ramps during the AM peak hour.

Table 13-28, “Highway Traffic Operations,” lists the levels of service that characterize existing, No-Action, and With-Action conditions during the weekday AM and PM peak hours. The analyses showed that the merging, diverging, weaving, and basic freeway segments generally operate and would continue to operate at LOS D or E conditions during the weekday AM and PM peak hours, and at LOS C or D conditions during the weekday and Saturday midday peak hours. One exception is the southbound diverge, basic, and merge segments to the Waters Place exit, which currently operate at LOS F during the weekday PM peak hour and would deteriorate within LOS F during the No-Action and With-Action scenarios resulting in significant adverse impacts. Another exception is the southbound weaving segment to Pelham Parkway westbound during the Saturday midday peak hour, which operates at LOS E in the Existing and No-Action scenarios and would worsen to LOS F in the With-Action scenario resulting in a significant adverse impact. Potential measures to mitigate the significant adverse traffic impacts to freeway operations are discussed in Chapter 21, “Mitigation Measures.”

Table 13-28: Highway Traffic Operations

Highway Direction	Location	Freeway Segment Type	Existing Condition			No-Action			With-Action		
			Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS	Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS	Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS
			AM Peak Hour								
Northbound	NB Hutchinson River Pkwy south of E Tremont Av	Basic	50.0	35.6	E	50.0	36.3	E	44.9	40.4	E
	Exit to E Tremont Av	Diverge	47.8	37.2	D	47.7	38.0	D	44.2	41.0	D
	NB Hutchinson River Pkwy	Basic	49.9	30.3	D	49.9	30.9	D	44.9	34.4	D
	Entrance from Hutchinson River Pkwy E	Merge	46.2	37.1	D	46.0	38.5	D	42.3	41.8	D
	NB Hutchinson River Pkwy	Overlap	46.2	37.1	E	46.0	38.5	E	42.3	41.8	E
	Exit to Pelham Pkwy EB	Diverge	48.1	35.6	D	48.0	36.9	D	44.1	39.9	D
	NB Hutchinson River Pkwy	Basic	49.4	31.6	D	49.4	32.7	D	44.7	36.3	E
	Entrance from Hutchinson River Pkwy E	Merge	46.0	36.9	C	45.8	38.3	D	41.9	41.8	D
	Entrance from Pelham Pkwy EB	Merge	44.9	40.9	E	44.9	42.3	E	43.0	44.7	E
	Exit to Pelham Pkwy WB	Diverge	47.3	38.6	D	47.3	40.0	D	43.9	43.7	D
	NB Hutchinson River Pkwy	Basic	49.4	30.2	D	49.4	31.2	D	44.7	34.9	D
Southbound	SB Hutchinson River Pkwy north of Pelham Pkwy	Basic	44.4	30.3	D	44.4	33.4	D	44.4	33.4	D
	Entrance from Stillwell Ave/Exit to Pelham Pkwy WB	Weaving	34.8	38.7	E	34.0	43.6	F	32.7	45.3	F
	Entrance from Pelham Pkwy WB	Merge	42.1	31.0	C	41.9	34.5	C	41.6	32.8	C
	Exit to Pelham Pkwy EB	Diverge	43.1	29.6	C	43.0	32.8	C	42.9	31.2	C
	SB Hutchinson River Pkwy	Basic	43.8	28.9	D	43.8	32.0	D	43.7	30.4	D
	Entrance from Pelham Pkwy EB	Merge	42.9	33.0	C	42.8	36.3	D	42.9	34.9	D
	SB Hutchinson River Pkwy	Basic	44.1	31.8	D	44.1	35.0	E	44.1	33.7	D
	Exit to Waters Pl	Diverge	44.2	32.0	D	44.1	35.3	D	44.1	34.0	D
	SB Hutchinson River Pkwy	Basic	44.4	20.5	C	44.4	20.8	C	44.4	19.3	C
	Entrance from Waters Pl	Merge	63.1	16.3	B	63.0	17.0	B	62.7	17.4	C
	SB Hutchinson River Pkwy	Basic	44.4	23.2	C	44.4	24.2	C	44.4	24.6	C

Table 13-28: Highway Traffic Operations (cont.)

Highway Direction	Location	Freeway Segment Type	Existing Condition			No-Action			With-Action		
			Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS	Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS	Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS
			Midday Peak Hour								
Northbound	NB Hutchinson River Pkwy south of E Tremont Av	Basic	50.0	26.0	C	44.9	29.5	D	44.9	29.5	D
	Exit to E Tremont Av	Diverge	48.4	26.9	C	44.9	29.5	C	44.9	29.5	C
	NB Hutchinson River Pkwy	Basic	50.0	22.1	C	44.9	25.1	C	44.9	25.1	C
	Entrance from Hutchinson River Pkwy E	Merge	47.1	27.6	C	43.1	27.3	C	43.1	27.3	C
	NB Hutchinson River Pkwy	Overlap	47.1	27.6	D	43.1	27.3	D	43.1	27.3	D
	Exit to Pelham Pkwy EB	Diverge	48.5	26.8	C	44.4	26.1	C	44.4	26.1	C
	NB Hutchinson River Pkwy	Basic	49.6	23.2	C	44.7	23.0	C	44.7	23.0	C
	Entrance from Hutchinson River Pkwy E	Merge	47.0	26.4	C	43.2	25.8	B	43.2	25.8	B
	Entrance from Pelham Pkwy EB	Merge	47.1	28.7	D	43.9	27.9	D	43.8	28.8	D
	Exit to Pelham Pkwy WB	Diverge	48.2	28.0	C	44.4	27.3	C	44.3	28.1	C
	NB Hutchinson River Pkwy	Basic	49.6	22.2	C	44.8	21.8	C	44.8	22.2	C
Southbound	SB Hutchinson River Pkwy north of Pelham Pkwy	Basic	44.4	25.2	C	50.0	23.7	C	44.4	26.7	D
	Exit to Pelham Pkwy WB	Weaving	36.8	30.4	D	42.0	28.1	D	35.0	33.9	D
	Entrance from Pelham Pkwy WB	Merge	42.6	25.4	C	47.2	24.4	C	42.2	25.5	C
	Exit to Pelham Pkwy EB	Diverge	43.4	24.3	C	48.4	23.8	C	43.2	24.5	C
	SB Hutchinson River Pkwy	Basic	44.0	23.5	C	49.3	22.3	C	43.8	23.6	C
	Entrance from Pelham Pkwy EB	Merge	42.9	27.4	C	47.2	26.3	C	43.0	27.7	C
	SB Hutchinson River Pkwy	Basic	44.1	26.5	D	49.4	25.0	C	44.1	26.8	D
	Exit to Waters Pl	Diverge	44.3	26.4	C	48.1	26.0	C	44.3	26.8	C
	SB Hutchinson River Pkwy	Basic	44.4	21.0	C	49.7	19.0	C	44.4	19.8	C
	Entrance from Waters Pl	Merge	62.7	17.9	C	47.4	24.8	C	62.3	19.4	C
	SB Hutchinson River Pkwy	Basic	44.4	25.3	C	49.3	23.9	C	44.4	27.2	D

Table 13-28: Highway Traffic Operations (cont.)

Highway Direction	Location	Freeway Segment Type	Existing Condition			No-Action			With-Action		
			Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS	Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS	Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS
			PM Peak Hour								
Northbound	NB Hutchinson River Pkwy south of E Tremont Av	Basic	50.0	35.2	E	44.9	39.9	E	44.9	39.9	E
	Exit to E Tremont Av	Diverge	47.9	36.7	D	44.3	40.5	D	44.3	40.5	D
	NB Hutchinson River Pkwy	Basic	49.9	31.2	D	44.9	35.4	E	44.9	35.4	E
	Entrance from Hutchinson River Pkwy E	Merge	46.1	39.4	D	42.5	39.4	D	42.5	39.4	D
	NB Hutchinson River Pkwy	Overlap	46.1	39.4	E	42.5	39.4	E	42.5	39.4	E
	Exit to Pelham Pkwy EB	Diverge	47.7	38.1	D	44.2	37.6	D	44.2	37.6	D
	NB Hutchinson River Pkwy	Basic	49.3	31.3	D	44.7	31.5	D	44.7	31.5	D
	Entrance from Hutchinson River Pkwy E	Merge	46.1	35.6	C	42.5	35.1	C	42.5	35.1	C
	Entrance from Pelham Pkwy EB	Merge	44.9	39.4	E	43.3	37.5	E	43.1	38.5	E
	Exit to Pelham Pkwy WB	Diverge	47.3	37.1	D	44.0	36.4	D	43.9	37.2	D
	NB Hutchinson River Pkwy	Basic	49.4	28.9	D	44.7	28.8	D	44.7	29.0	D
Southbound	SB Hutchinson River Pkwy north of Pelham Pkwy	Basic	50.0	19.5	C	50.0	20.4	C	44.4	23.0	C
	Exit to Pelham Pkwy WB	Weaving	42.9	22.7	C	42.5	24.0	C	36.3	28.1	D
	Entrance from Pelham Pkwy WB	Merge	47.7	19.5	C	47.6	20.6	C	42.5	21.8	C
	Exit to Pelham Pkwy EB	Diverge	48.5	19.2	B	48.5	20.2	C	43.3	21.1	B
	SB Hutchinson River Pkwy	Basic	49.3	16.5	B	49.3	17.4	B	43.9	18.8	C
	Entrance from Pelham Pkwy EB	Merge	47.7	20.0	B	47.6	21.1	B	43.4	22.5	B
	SB Hutchinson River Pkwy	Basic	49.5	19.1	C	49.5	20.1	C	44.2	21.5	F
	Exit to Waters Pl	Diverge	47.5	19.0	F	47.2	18.2	F	15.6	51.4	F
	SB Hutchinson River Pkwy	Basic	6.8	66.5	F	4.0	92.3	F	3.0	99.5	F
	Entrance from Waters Pl	Merge	3.2	128.0	F	3.0	136.8	F	3.0	138.4	F
	SB Hutchinson River Pkwy	Basic	16.3	25.1	F	16.3	25.1	F	15.5	26.4	F

Table 13-28: Highway Traffic Operations (cont.)

Highway Direction	Location	Freeway Segment Type	Existing Condition			No-Action			With-Action		
			Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS	Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS	Average Speed (mph)	Density (pc/mi/ln)	Density Based LOS
			Saturday Peak Hour								
Northbound	NB Hutchinson River Pkwy south of E Tremont Av	Basic	50.0	23.2	C	42.5	27.8	D	42.5	27.8	D
	Exit to E Tremont Av	Diverge	48.6	23.8	C	44.3	26.2	C	44.3	26.2	C
	NB Hutchinson River Pkwy	Basic	50.0	20.8	C	44.9	23.5	C	44.9	23.5	C
	Entrance from Hutchinson River Pkwy E	Merge	47.4	24.8	C	43.4	25.5	C	43.4	25.5	C
	NB Hutchinson River Pkwy	Overlap	47.4	24.8	C	43.4	25.5	C	43.4	25.5	C
	Exit to Pelham Pkwy EB	Diverge	47.9	24.6	C	44.5	24.7	C	44.5	24.7	C
	NB Hutchinson River Pkwy	Basic	49.4	18.0	B	44.8	18.4	C	44.8	18.4	C
	Entrance from Hutchinson River Pkwy E	Merge	47.6	20.4	B	43.6	20.7	B	43.6	20.7	B
	Entrance from Pelham Pkwy EB	Merge	47.6	22.3	C	44.0	22.5	C	44.0	22.8	C
	Exit to Pelham Pkwy WB	Diverge	48.2	22.0	C	44.4	22.1	C	44.4	22.4	C
	NB Hutchinson River Pkwy	Basic	49.6	17.1	B	44.8	17.3	B	44.8	17.3	B
Southbound	SB Hutchinson River Pkwy north of Pelham Pkwy	Basic	44.4	31.8	D	50.0	29.6	D	44.4	33.3	D
	Exit to Pelham Pkwy WB	Weaving	35.6	39.7	E	40.7	36.4	E	34.4	43.0	E
	Entrance from Pelham Pkwy WB	Merge	42.3	32.7	C	46.5	31.3	C	42.0	33.4	C
	Exit to Pelham Pkwy EB	Diverge	43.2	31.1	C	48.0	30.0	C	43.1	31.8	C
	SB Hutchinson River Pkwy	Basic	43.9	30.2	D	49.1	28.2	D	43.8	30.9	D
	Entrance from Pelham Pkwy EB	Merge	42.2	34.8	C	46.6	33.0	C	42.3	35.5	C
	SB Hutchinson River Pkwy	Basic	44.0	33.1	D	49.3	30.8	D	44.0	33.9	D
	Exit to Waters Pl	Diverge	44.3	33.1	D	48.0	32.1	D	44.3	33.9	D
	SB Hutchinson River Pkwy	Basic	44.4	28.8	D	49.7	25.8	C	44.4	28.2	D
	Entrance from Waters Pl	Merge	62.1	22.7	C	46.7	31.6	C	61.6	24.2	C
	SB Hutchinson River Pkwy	Basic	44.4	31.7	D	49.1	29.6	D	44.4	33.6	D

Source: STV Incorporated, 2023.

13.8. Transit

EXISTING CONDITIONS

Subway Service

Subway Stations

As discussed previously in Section 13.5, "Level 2 Screening Assessment," project-generated trips at four subway stations are expected to exceed the 200-trip *CEQR Technical Manual* analysis threshold in the weekday AM and/or PM peak hours. As listed in Table 13-11, "RWCDS Net Incremental Peak Hour Subway Trips by Station," the stations selected for analysis are the East 180th Street and Pelham Parkway stations on the White Plains Road No. 2 and 5 lines as well as the Westchester Square and Middletown Road stations on the Pelham No. 6 line. In proximity to the Affected Area, all stations are located on elevated structures.

East 180th Street (2) (5)

The East 180th Street station is served by the 2 and 5 trains (at all times) on the White Plains Road line. As shown in Figure 13-22," East 180th Street (2/5) Subway Station Diagram," access from the street into the station's street/mezzanine level is provided by three doors, S1A, S1B, and S1C on the west side of Morris Park Avenue, as well as by stair M1 accessible from the north side of East 180th Street. A fare array consisting of four two-way turnstiles and two emergency gates is located on the street/mezzanine level. The station has four stairs to the platform level; P1/P3 and P5/P7 lead to the southbound track while P2/P4 and P6/P8 connect to the northbound track. As listed in Table 13-29, "Existing Conditions Stairs Analysis at East 180th Street (2/5) Subway Station" and Table 13-33, "Existing Conditions Fare Array Analysis at All Analyzed Subway Stations", all stair and fare array elements operate at an uncongested LOS A or B in both the AM and PM peak hours.

Pelham Parkway (2) (5)

The Pelham Parkway station is served by the 2 train (at all times) and the 5 train (during peak hours only) on the White Plains Road line. As shown on Figure 13-23, "Pelham Parkway (2/5) Subway Station Diagram," access from street level up to an intermediate south mezzanine level is provided by one stair on the west side of White Plains Road south of Pelham Parkway South (north-facing stair S1) and one stair and one escalator on the east side of White Plains Road south of Pelham Parkway South (north-facing stair S2 and ESC 122). A fare array consisting of three two-way turnstiles, one High Entry/Exit Turnstile (HEET), and one emergency gate is located on the south mezzanine level. From the mezzanine, stair P1/P3 as well as escalator ESC 123 provide access to the southbound track, while stair P2/P4 leads to the northbound track. Access from street level to an intermediate north mezzanine level is provided by one stair on the

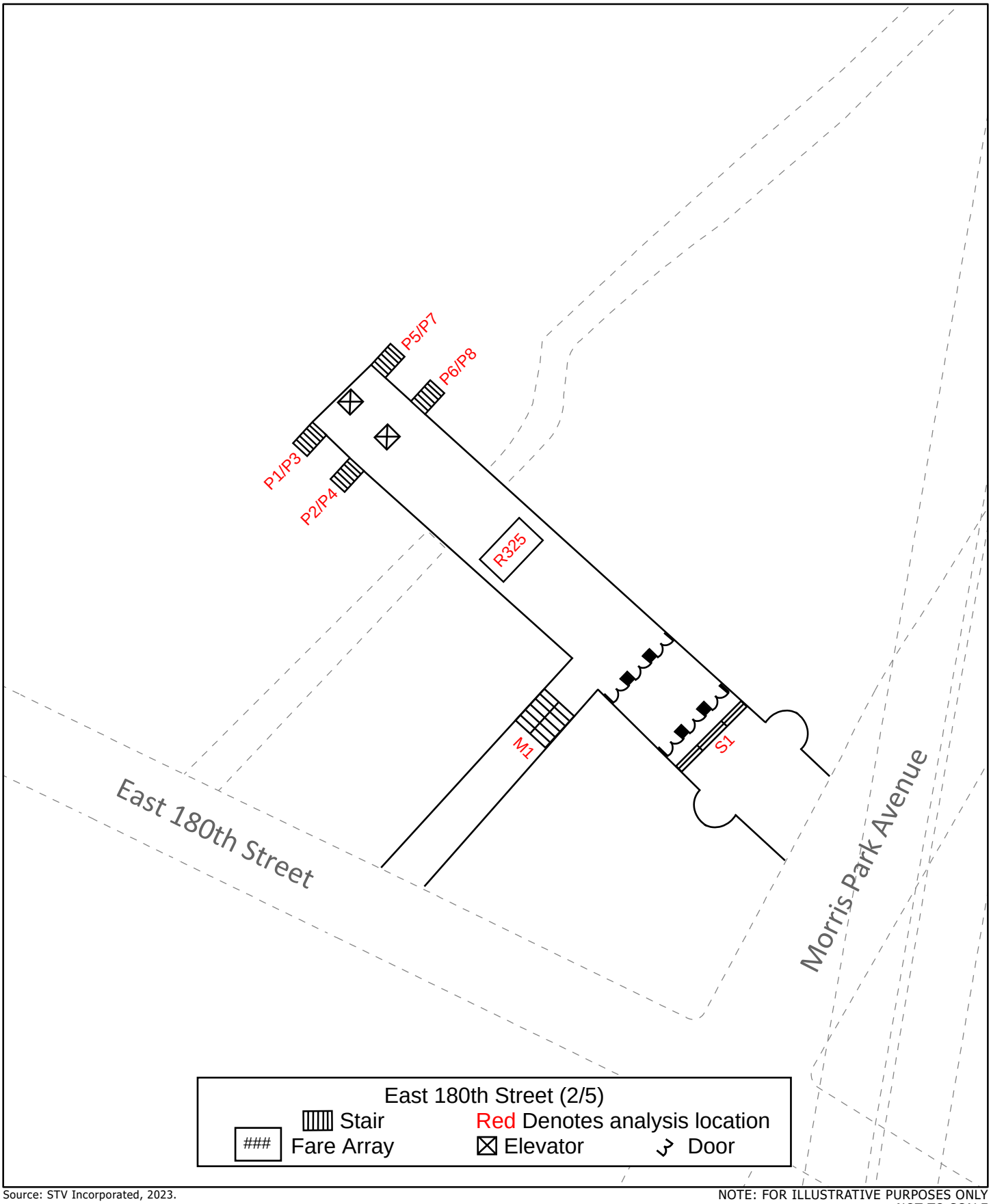
west side of White Plains Road north of Pelham Parkway North (south-facing stair S3) and one stair on the east side of White Plains Road north of Pelham Parkway North (south-facing stair S4). A fare array consisting of two High Entry/Exit Turnstiles (HEETs), two High Exit turnstiles (HEXs), and two emergency gates is located on the north mezzanine level. From this mezzanine, stair P5/P7 provides access to the southbound track and stair P6/P8 to the northbound track. As listed in Table 13-30 and 13-33, all stair and fare array elements operate at an uncongested LOS A in both the AM and PM peak hours.

Westchester Square (6)

The Westchester Square station is served by the 6 train (at all times) on the Pelham Line. As shown in Figure 13-24, "Westchester Square (6) Subway Station Diagram," access from street level up to an intermediate mezzanine level is provided by four stairs on the north side of Westchester Avenue (south-facing stairs S1A, S1B, S1C, and S1D). A fare array consisting of three two-way turnstiles and an emergency gate is located on the mezzanine level. From the mezzanine level, stairs P1/P3 and P5/P7 lead to the southbound track while P2/P4 and P6/P8 connect to the northbound track. Due to construction at this station during the time of the study, stairs P2/P4 and P5/P7 were closed and as such were not evaluated for existing conditions. As listed in Tables 13-31 and 13-33, all stair and fare array elements operate at an uncongested LOS A in both the AM and PM peak hours.

Middletown Road (6)

The Middletown Road station is served by the 6 train (at all times) on the Pelham Line. As shown in Figure 13-25, "Middletown Road (6) Subway Station Diagram," access from street level up to an intermediate mezzanine level is provided by one north-facing stair on north side of Westchester Avenue (stair S1) and one south-facing stair on both the east side of Westchester Avenue (stair S2), both north of Middletown Road. A fare array consisting of three two-way turnstiles and an emergency gate is located on the mezzanine level. From the mezzanine level, stairs P1/P3 and P5/P7 lead to the southbound track while P2/P4 and P6/P8 connect to the northbound track. As listed in Tables 13-32 and 13-33, all stair and fare array elements operate at an uncongested LOS A in both the AM and PM peak hours.



Source: STV Incorporated, 2023.

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY
NOT TO SCALE

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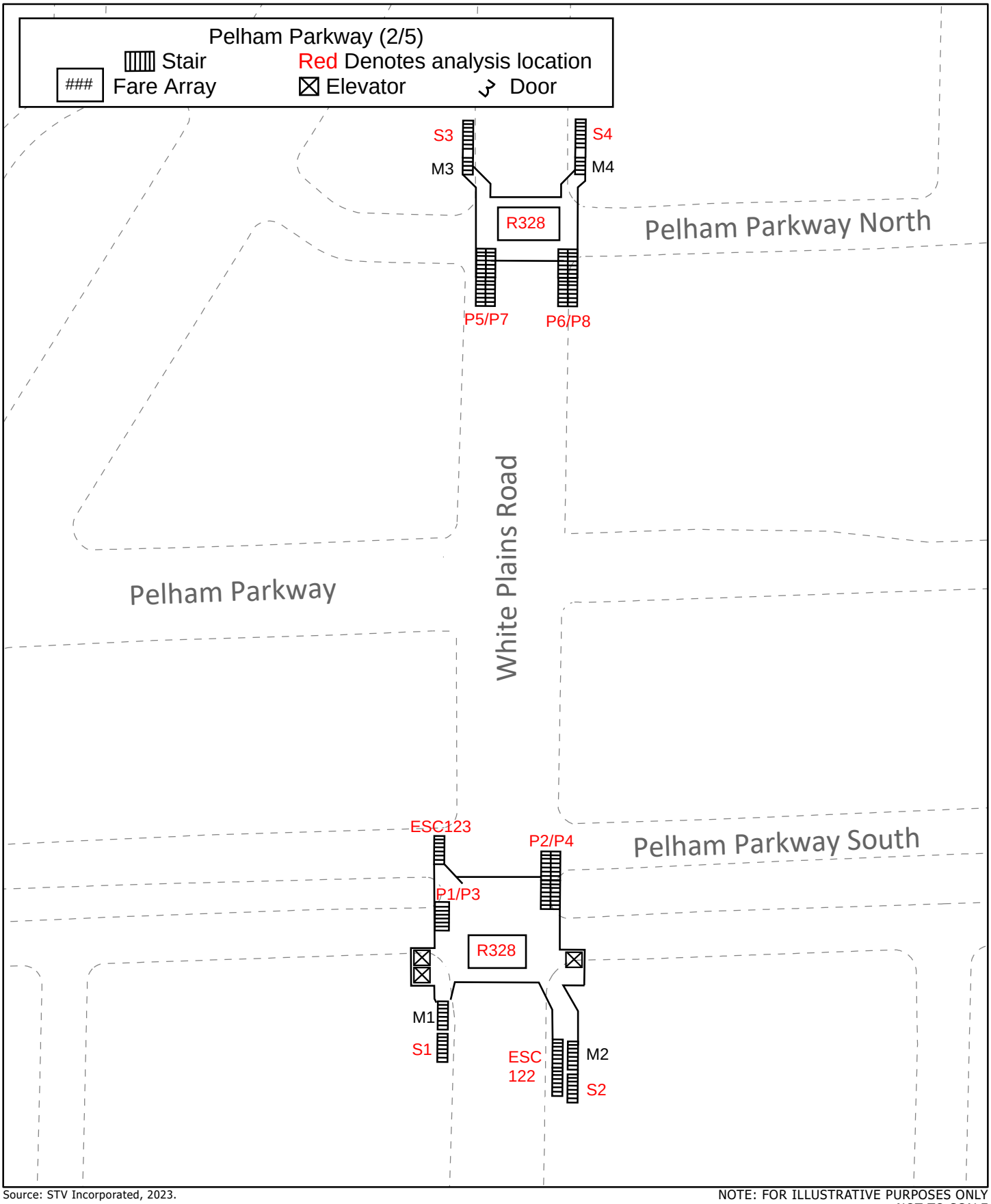
Figure 13-22

EAST 180TH STREET (2/5)
SUBWAY STATION DIAGRAM



Source: STV Incorporated, 2023.

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY
NOT TO SCALE

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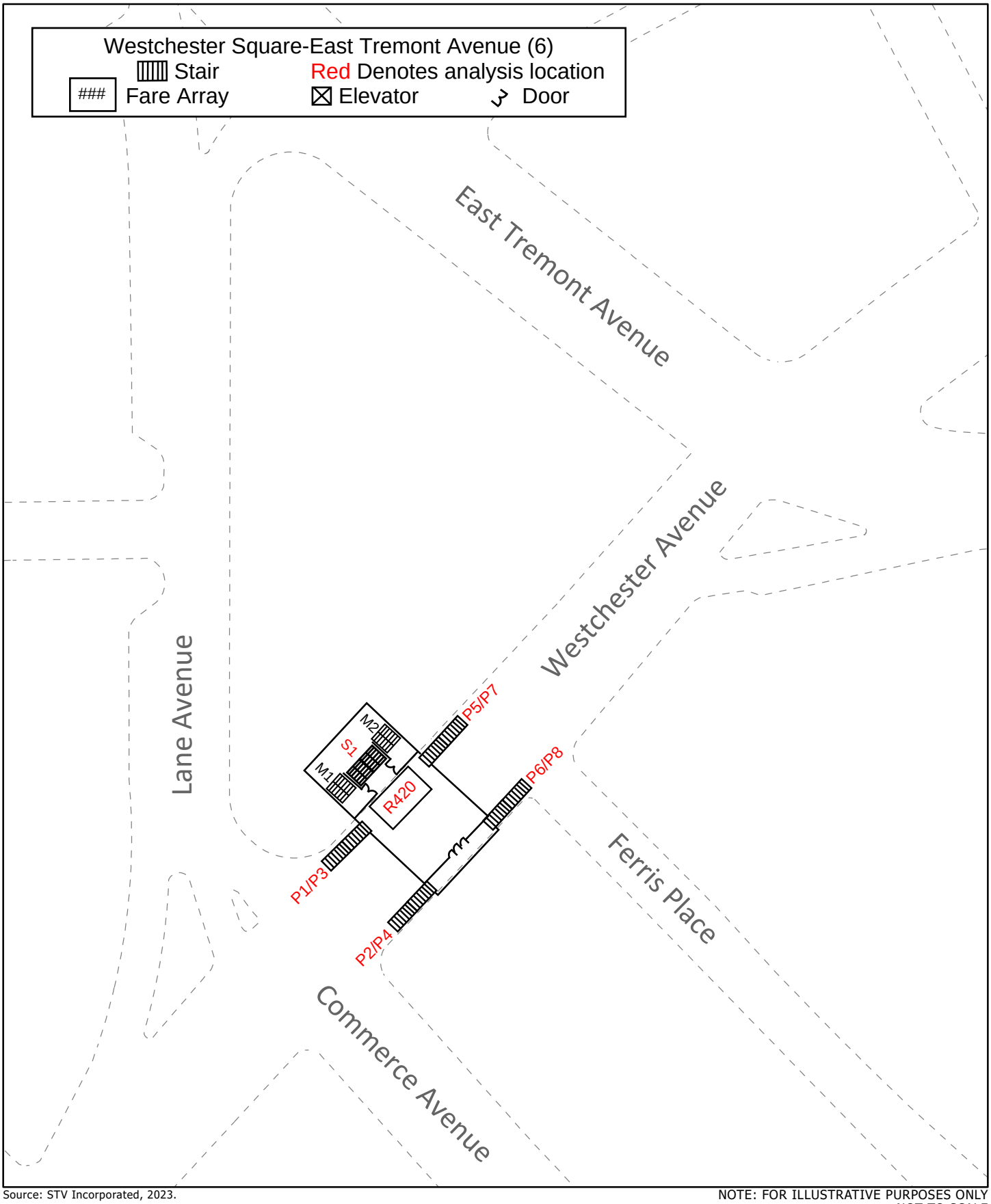
Figure 13-23

PELHAM PARKWAY (2/5)
SUBWAY STATION DIAGRAM



Source: STV Incorporated, 2023.

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY
NOT TO SCALE

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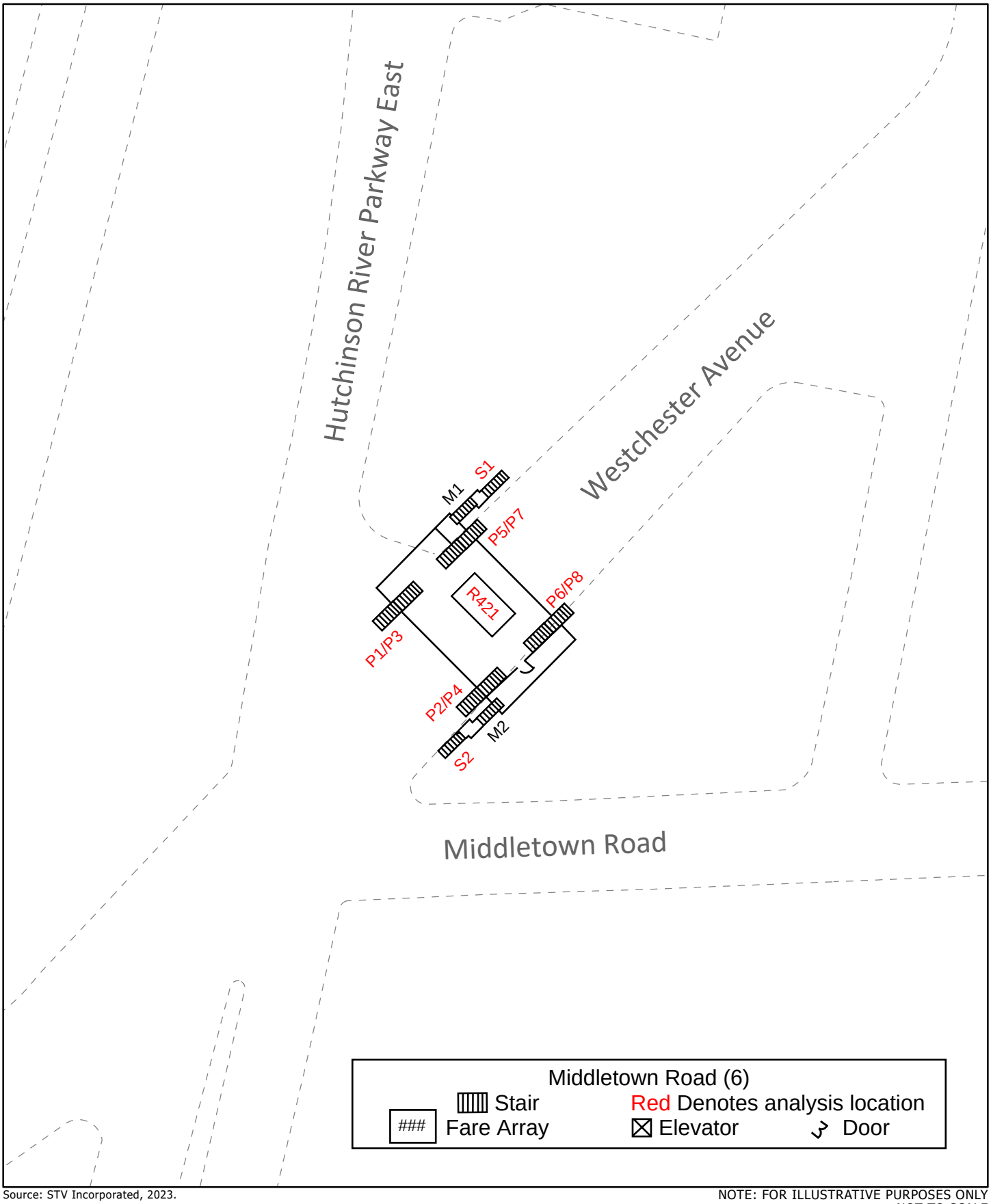
Figure 13-24

WESTCHESTER SQUARE(6)
SUBWAY STATION DIAGRAM



Source: STV Incorporated, 2023.

NOTE: FOR ILLUSTRATIVE PURPOSES ONLY
NOT TO SCALE

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Figure 13-25

MIDDLETOWN ROAD (6)
SUBWAY STATION DIAGRAM

Table 13-29: Existing Conditions Stairs Analysis at East 180th Street (2 / 5) Subway Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R325	S1	46.60	45.10	217	77	1.00	0.80	0.90	0.05	A
		M1	14.25	13.00	124	42	1.00	0.80	0.90	0.10	A
		P1/P3	5.33	4.33	187	28	1.00	0.75	0.90	0.38	A
		P2/P4	5.33	4.33	22	27	1.00	0.75	0.90	0.10	A
		P5/P7	5.33	4.33	142	46	1.00	0.75	0.90	0.35	A
		P6/P8	5.33	4.33	49	62	1.00	0.75	0.90	0.23	A
PM	R325	S1	46.60	45.10	70	173	1.00	0.80	0.90	0.05	A
		M1	14.25	13.00	35	101	1.00	0.75	0.90	0.10	A
		P1/P3	5.33	4.33	92	21	1.00	0.75	0.90	0.21	A
		P2/P4	5.33	4.33	17	168	1.00	0.75	0.90	0.41	A
		P5/P7	5.33	4.33	86	23	1.00	0.75	0.90	0.20	A
		P6/P8	5.33	4.33	31	224	1.00	0.75	0.90	0.56	B

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

Source: STV Incorporated, 2023.

Table 13-30: Existing Conditions Stairs Analysis at Pelham Parkway (2 / 5) Subway Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R328S	S1	5.50	4.50	25	47	1.00	0.80	0.90	0.14	A
		S2	5.66	4.66	134	44	1.00	0.80	0.90	0.30	A
		ESC 122	3.75	2.75	4	0	1.00	0.80	1.00	0.01	A
		P1/P3	5.83	4.83	43	59	1.00	0.75	0.90	0.19	A
		P2/P4	8.00	6.75	24	35	1.00	0.75	0.90	0.08	A
		ESC123	4.50	3.50	91	0	1.00	0.75	1.00	0.17	A
	R328N	S3	5.66	4.66	60	45	1.00	0.80	0.90	0.18	A
		S4	5.75	4.75	72	34	1.00	0.80	0.90	0.18	A
		P5A/P7	9.50	8.25	128	44	1.00	0.75	0.90	0.17	A
		P6/P8	8.50	7.25	6	36	1.00	0.75	0.90	0.05	A
PM	R328S	S1	5.50	4.50	48	61	1.00	0.80	0.90	0.21	A
		S2	5.66	4.66	75	127	1.00	0.80	0.90	0.37	A
		ESC 122	3.75	2.75	2	0	1.00	0.80	1.00	0.01	A
		P1/P3	5.83	4.83	34	38	1.00	0.75	0.90	0.13	A
		P2/P4	8.00	6.75	55	146	1.00	0.75	0.90	0.27	A
		ESC123	4.50	3.50	40	0	1.00	0.75	1.00	0.08	A
	R328N	S3	5.66	4.66	28	61	1.00	0.80	0.90	0.17	A
		S4	5.75	4.75	19	72	1.00	0.80	0.90	0.17	A
		P5/P7	9.50	8.25	37	26	1.00	0.75	0.90	0.06	A
		P6/P8	8.50	7.25	15	115	1.00	0.75	0.90	0.17	A

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

Source: STV Incorporated, 2023.

Table 13-31: Existing Conditions Stairs Analysis at Westchester Square (6) Subway Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R420	S1	22.00	20.25	175	143	1.00	0.80	0.90	0.13	A
		P1/P3	6.00	5.00	170	13	1.00	0.75	0.90	0.28	A
		P2/P41	6.00	5.00	0	0	1.00	0.75	--	--	--
		P5/P71	6.00	5.00	0	0	1.00	0.75	--	--	--
		P6/P8	6.00	5.00	5	130	1.00	0.75	1.00	0.24	A
PM	R420	S1	22.00	20.25	138	182	1.00	0.80	0.90	0.13	A
		P1/P3	6.00	5.00	130	13	1.00	0.75	0.90	0.22	A
		P2/P41	6.00	5.00	0	0	1.00	0.75	--	--	--
		P5/P71	6.00	5.00	0	0	1.00	0.75	--	--	--
		P6/P8	6.00	5.00	8	169	1.00	0.75	1.00	0.31	A
Note: Methodology based on *CEQR Technical Manual* guidelines.											

Source: STV Incorporated, 2023.

Table 13-32: Existing Conditions Stairs Analysis at Middletown Road (6) Subway Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R421	S1	5.16	4.16	14	8	1.00	0.80	0.90	0.04	A
		S2	5.33	4.33	79	23	1.00	0.80	0.90	0.19	A
		P1/P3	5.50	4.50	61	1	1.00	0.75	1.00	0.09	A
		P2/P4	6.00	5.00	0	16	1.00	0.75	1.00	0.03	A
		P5/P7	5.50	4.50	31	2	1.00	0.75	0.90	0.06	A
		P6/P8	6.00	5.00	2	14	1.00	0.75	0.90	0.03	A
PM	R421	S1	5.16	4.16	11	9	1.00	0.80	0.90	0.04	A
		S2	5.33	4.33	23	53	1.00	0.80	0.90	0.15	A
		P1/P3	5.50	4.50	20	2	1.00	0.75	0.90	0.04	A
		P2/P4	6.00	5.00	1	27	1.00	0.75	1.00	0.05	A
		P5/P7	5.50	4.50	10	1	1.00	0.75	0.90	0.02	A
		P6/P8	6.00	5.00	3	40	1.00	0.75	0.90	0.08	A
Note: Methodology based on *CEQR Technical Manual* guidelines.											

Source: STV Incorporated, 2023.

Table 13-33: Existing Conditions Fare Array Analysis at All Analyzed Subway Stations

Peak Hour	Station	Fare Array ID	Control Element	Quantity	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Entries	Exits	Entries	Exits			
AM	East 180th Street (2/5)	R325	Two-Way Turnstile	4	341	119	1.00	0.80	0.90	0.29	A
	Pelham Parkway (2/5)	R328S	Two-Way Turnstile	3	163	91	1.00	0.80	0.90	0.21	A
			High Entry/Exit Turnstile	1							
		R328N	High Entry/Exit Turnstile	2	132	79	1.00	0.80	0.90	0.34	A
			High Exit Turnstile	2							
	Middletown Road (6)	R421	Two-Way Turnstile	3	93	32	1.00	0.80	0.90	0.11	A
	Westchester Square (6)	R420	Two-Way Turnstile	3	175	143	1.00	0.80	0.90	0.26	A
PM	East 180th Street (2/5)	R325	Two-Way Turnstile	4	105	274	1.00	0.80	0.90	0.22	A
	Pelham Parkway (2/5)	R328S	Two-Way Turnstile	3	125	188	1.00	0.80	0.90	0.23	A
			High Entry/Exit Turnstile	1							
		R328N	High Entry/Exit Turnstile	2	48	133	1.00	0.80	0.90	0.19	A
			High Exit Turnstile	2							
	Middletown Road (6)	R421	Two-Way Turnstile	3	33	62	1.00	0.80	0.90	0.07	A
	Westchester Square (6)	R420	Two-Way Turnstile	3	138	182	1.00	0.80	0.90	0.25	A

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

Source: STV Incorporated, 2023.

Subway Line Haul

Line haul is the volume of transit riders passing a defined point on a given transit route. For the No. 2, 5, and 6 lines, the line haul is measured at the actual maximum load point leaving the station (the point where the trains carry the greatest number of passengers during the peak hour), which is typically the Upper East Side of Manhattan. The peak direction of travel on the No. 2, 5, and 6 lines is southbound (Manhattan-bound) in the AM peak hour and northbound (Bronx-bound) in the PM peak hour.

Table 13-34, "Existing Subway Line Haul Analysis," lists existing line haul conditions in the peak direction at the maximum load points for the No. 2, 5, and 6 lines during the AM and PM peak hours. As identified in Table 13-34, the No. 2 line currently operates over capacity in the peak direction in both peak hours. The 2 train carries an estimated 14,250 passengers (1.05 v/c ratio) in the peak southbound direction during the AM peak hour and 12,900 passengers (1.05 v/c ratio) in the peak northbound direction during the PM peak hour. The No. 5 line operates at capacity with an estimated 13,475 passengers (1.00 v/c ratio) in the peak southbound direction during the AM peak hour and below capacity in the southbound peak direction during the PM peak hour with around 10,975 passengers (0.86 v/c ratio). The No. 6 line operates

below capacity in the peak direction during both peak hours. The southbound AM peak hour 6 train carries 19,300 passengers with a v/c ratio of 0.95, and the northbound PM peak hour 6 train carries 15,925 passengers with a v/c ratio of 0.86.

Table 13-34: Existing Subway Line Haul Analysis

Peak Hour	Line	Dir	Maximum Load Point (Leaving Station)	Average Trains Per Hour[1]	Average Cars Per Hour[1]	Average Passengers Per Hour[1]	Average Passengers Per Car[1]	Guideline Passengers Per Car[2]	V/C Ratio[3]
AM	2	SB	72 St	12.3	123	14,248	116	110	1.05
	5	SB	86 St	12.3	123	13,478	110	110	1.00
	6	SB	3 Av - 138 St	18.5	185	19,305	104	110	0.95
PM	2	NB	Times Square - 42 St	11.2	112	12,906	115	110	1.05
	5	NB	59 St	11.6	116	10,974	95	110	0.86
	6	NB	59 St	16.8	168	15,924	95	110	0.86

Notes:
(1) Based on 2019 ridership and train throughput data from NYCT.
(2) Guideline capacities are based on NYCT rush hour and off-peak loading guidelines, which vary by car type, line, and location based on frequency and type of service.
(3) Volume to guideline capacity ratio.

Source: NYCT, 2019; STV Incorporated, 2023.

Bus Service

As listed in Table 13-12, seven of the twelve local bus routes as well as the Bx12-SBS and the BxM10 express bus are expected to experience 50 or more new trips in one direction through their maximum load points, and as such, per *CEQR Technical Manual* guidelines, further analysis is warranted. Table 13-35, "Existing Local Bus Analysis," details existing operating conditions and capacity for these bus routes. None of the analyzed routes experienced a shortfall in capacity under existing conditions.

Table 13-35: Existing Local Bus Analysis

Peak Hour [1]	Route	Direction	Maximum Load Point	Peak Hour Passengers [2]	Peak Hour Buses [2]	Average Passengers Per Bus	Available Capacity [3]
Weekday AM	Bx4A	NB	Metropolitan Av/Parkchester Rd	92	4	23	248
		SB	Metropolitan Av/Unionport Rd	102	3	34	153
	Bx12	EB	E Fordham Rd/3 Av	253	7	36	342
		WB	E Fordham Rd/Bathgate Av	229	6	38	281
	Bx12-SBS	EB	E Fordham Rd/Valentine Av	791	18	44	739
		WB	E Fordham Rd/Webster Av	818	15	55	457
	Bx21	NB	Morris Pk Av/White Plains Rd	252	9	28	234
		SB	3 Av/E 158 St	302	9	34	184
	Bx31	NB	E 233 St/Gunther Av	140	6	23	184
		SB	Eastchester Rd/Pelham Pkwy S	165	9	18	321
	Bx39	NB	White Plains Rd/Watson Av	430	10	43	420
		SB	White Plains Rd/E Tremont Av	296	8	37	384
	Bx40	EB	E 180 St/Daly Av	211	4	53	129
		WB	Webster Av/E 180 St	210	5	42	215
	Bx42	EB	E 180 St/Boston Rd	224	5	45	201
		WB	Webster Av/E 180 St	180	5	36	245
	BxM10	NB	Morris Pk Av/Bronxdale Av	42	2	21	68
		SB	2 Av/E 121 St	108	6	18	222
Weekday PM	Bx4A	NB	Metropolitan Av/Parkchester Rd	174	4	44	166
		SB	Westchester Av/White Plains Rd	123	6	20	387
	Bx12	EB	E Fordham Rd/3 Av	321	7	46	274
		WB	E Fordham Rd/Webster Av	243	6	41	267
	Bx12-SBS	EB	E Fordham Rd/Southern Bl	565	11	51	370
		WB	E Fordham Rd/Webster Av	680	12	57	340
	Bx21	NB	3 Av/E 153 St	259	7	37	119
		SB	Morris Pk Av/Barnes Av	194	9	22	292
	Bx31	NB	Eastchester Rd/Pelham Pkwy S	155	6	26	169
		SB	E 233 St/Bussing Av	140	8	18	292
	Bx39	NB	White Plains Rd/Pelham Pkwy	278	6	46	232
		SB	White Plains Rd/Westchester Av	244	6	41	266
	Bx40	EB	E Tremont Av/Westchester Av	183	4	46	157
		WB	E 180 St/Boston Rd	161	4	40	179
	Bx42	EB	E Tremont Av/Westchester Av	202	4	51	138
		WB	E 180 St/Morris Park Av	139	4	35	201
	BxM10	NB	3 Av/E 120 St	127	5	25	148
		SB	Morris Pk Av/E 180 St	34	2	17	76

Notes:
(1) Weekday peak hours: 8-9 AM, 5-6 PM
(2) Based on most recent available data from NYCT (March 2023)
(3) Available capacity based on NYCT loading guideline of 54 passengers per standard bus, 85 passengers per articulated bus, and 55 passengers per over-the-road coach bus

Source: STV Incorporated, 2023.

Metro-North Commuter Rail Service

Currently, there are no Metro-North stations serving the Affected Area.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

Between 2023 and 2033, it is expected that subway and bus demands in the vicinity of the Affected Area would increase due to long-term background growth as well as development that could occur pursuant to existing zoning. In order to forecast future transit conditions without the Proposed Actions (the No-Action condition), development on projected development sites and developments listed in Table 2-4 in Chapter 2, "Land Use, Zoning, and Public Policy," were considered. The Future No-Action subway and bus volumes reflect annual background growth rates of 0.25 percent per year for the 2023 through 2028 period and 0.125 percent for the 2028 through 2033 period. These background growth rates, recommended in the *CEQR Technical Manual* for projects in the Bronx, are applied to account for smaller projects and as-of-right developments not reflected in Table 2-4 and general increases in travel demand not attributable to specific development projects.

Subway Service

Subway Stations

In No-Action conditions, demand at all analyzed subway stations is expected to increase as a result of new development and/or background growth. NYCT has indicated that there are currently no plans for modifications to pedestrian circulation elements at any of the analyzed subway stations.

Tables 13-36 through 13-39 list the results of the analysis of No-Action AM and PM peak hour stair conditions at each of the four analyzed subway stations, and table 13-40 lists the results of the analysis of No-Action AM and PM peak hour fare array conditions at all subway stations. As listed in Tables 13-36 through 13-40, all analyzed stairs and fare arrays at these stations would continue to operate at an acceptable LOS B or better in both peak hours.

Table 13-36: No-Action Stair Analysis at East 180th Street (2/5) Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R325	S1	46.60	45.10	238	87	1.00	0.80	0.90	0.06	A
		M1	14.25	13.00	148	54	1.00	0.80	0.90	0.12	A
		P1/P3	5.33	4.33	200	33	1.00	0.75	0.90	0.42	A
		P2/P4	5.33	4.33	23	32	1.00	0.75	0.90	0.11	A
		P5/P7	5.33	4.33	152	54	1.00	0.75	0.90	0.38	A
		P6/P8	5.33	4.33	53	73	1.00	0.75	0.90	0.26	A
PM	R325	S1	46.60	45.10	101	200	1.00	0.80	0.90	0.06	A
		M1	14.25	13.00	75	139	1.00	0.75	0.90	0.15	A
		P1/P3	5.33	4.33	113	23	1.00	0.75	0.90	0.25	A
		P2/P4	5.33	4.33	21	182	1.00	0.75	0.90	0.45	B
		P5/P7	5.33	4.33	106	25	1.00	0.75	0.90	0.24	A
		P6/P8	5.33	4.33	38	244	1.00	0.75	0.90	0.62	B

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

Source: STV Incorporated, 2023.

Table 13-37: No-Action Stair Analysis at Pelham Parkway (2/5) Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R328S	S1	5.50	4.50	25	48	1.00	0.80	0.90	0.14	A
		S2	5.66	4.66	137	45	1.00	0.80	0.90	0.31	A
		ESC 122	3.75	2.75	4	0	1.00	0.80	1.00	0.01	A
		P1/P3	5.83	4.83	44	61	1.00	0.75	0.90	0.19	A
		P2/P4	8.00	6.75	25	35	1.00	0.75	0.90	0.08	A
		ESC123	4.50	3.50	93	0	1.00	0.75	1.00	0.18	A
	R328N	S3	5.66	4.66	61	46	1.00	0.80	0.90	0.19	A
		S4	5.75	4.75	74	34	1.00	0.80	0.90	0.18	A
		P5A/P7	9.50	8.25	131	45	1.00	0.75	0.90	0.17	A
		P6/P8	8.50	7.25	6	36	1.00	0.75	0.90	0.06	A
PM	R328S	S1	5.50	4.50	49	62	1.00	0.80	0.90	0.21	A
		S2	5.66	4.66	77	130	1.00	0.80	0.90	0.38	A
		ESC 122	3.75	2.75	2	0	1.00	0.80	1.00	0.01	A
		P1/P3	5.83	4.83	34	39	1.00	0.75	0.90	0.13	A
		P2/P4	8.00	6.75	56	149	1.00	0.75	0.90	0.28	A
		ESC123	4.50	3.50	41	0	1.00	0.75	1.00	0.08	A
	R328N	S3	5.66	4.66	29	62	1.00	0.80	0.90	0.17	A
		S4	5.75	4.75	20	74	1.00	0.75	0.90	0.18	A
		P5/P7	9.50	8.25	38	26	1.00	0.75	0.90	0.07	A
		P6/P8	8.50	7.25	15	117	1.00	0.75	0.90	0.18	A

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

Source: STV Incorporated, 2023.

Table 13-38: No-Action Stair Analysis Westchester Square (6) Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R420	S1	22.00	20.25	207	184	1.00	0.80	0.90	0.16	A
		P1/P3	6.00	5.00	91	7	1.00	0.75	0.90	0.15	A
		P2/P4	6.00	5.00	3	72	1.00	0.75	1.00	0.13	A
		P5/P7	6.00	5.00	91	7	1.00	0.75	0.90	0.15	A
		P6/P8	6.00	5.00	3	72	1.00	0.75	1.00	0.13	A
PM	R420	S1	22.00	20.25	176	209	1.00	0.80	0.90	0.16	A
		P1/P3	6.00	5.00	71	7	1.00	0.75	0.90	0.12	A
		P2/P4	6.00	5.00	4	90	1.00	0.75	1.00	0.17	A
		P5/P7	6.00	5.00	71	7	1.00	0.75	0.90	0.12	A
		P6/P8	6.00	5.00	4	90	1.00	0.75	1.00	0.17	A

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

Source: STV Incorporated, 2023.

Table 13-39: No-Action Stair Analysis Westchester Square (6) Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R421	S1	5.16	4.16	15	8	1.00	0.80	0.90	0.04	A
		S2	5.33	4.33	81	24	1.00	0.80	0.90	0.19	A
		P1/P3	5.50	4.50	62	1	1.00	0.75	1.00	0.09	A
		P2/P4	6.00	5.00	0	16	1.00	0.75	1.00	0.03	A
		P5/P7	5.50	4.50	32	2	1.00	0.75	0.90	0.06	A
		P6/P8	6.00	5.00	2	14	1.00	0.75	0.90	0.03	A
PM	R421	S1	5.16	4.16	11	9	1.00	0.80	0.90	0.04	A
		S2	5.33	4.33	23	54	1.00	0.80	0.90	0.15	A
		P1/P3	5.50	4.50	20	2	1.00	0.75	0.90	0.04	A
		P2/P4	6.00	5.00	1	27	1.00	0.75	1.00	0.05	A
		P5/P7	5.50	4.50	10	1	1.00	0.75	0.90	0.02	A
		P6/P8	6.00	5.00	3	40	1.00	0.75	0.90	0.08	A

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

Source: STV Incorporated, 2023.

Table 13-40: No-Action Fare Array Analysis at All Analyzed Subway Stations

Peak Hour	Station	Fare Array ID	Control Element	Quantity	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Entries	Exits	Entries	Exits			
AM	East 180th Street (2/5)	R325	Two-Way Turnstile	4	386	141	1.00	0.80	0.90	0.33	A
	Pelham Parkway (2/5)	R328S	Two-Way Turnstile	3	166	93	1.00	0.80	0.90	0.21	A
			High Entry/Exit Turnstile	1							
		R328N	High Entry/Exit Turnstile	2	135	80	1.00	0.80	0.90	0.34	A
			High Exit Turnstile	2							
	Middletown Road (6)	R421	Two-Way Turnstile	3	95	32	1.00	0.80	0.90	0.11	A
	Westchester Square (6)	R420	Two-Way Turnstile	3	207	184	1.00	0.80	0.90	0.32	A
PM	East 180th Street (2/5)	R325	Two-Way Turnstile	4	176	339	1.00	0.80	0.90	0.30	A
	Pelham Parkway (2/5)	R328S	Two-Way Turnstile	3	128	192	1.00	0.80	0.90	0.24	A
			High Entry/Exit Turnstile	1							
		R328N	High Entry/Exit Turnstile	2	48	135	1.00	0.80	0.90	0.19	A
			High Exit Turnstile	2							
	Middletown Road (6)	R421	Two-Way Turnstile	3	34	63	1.00	0.80	0.90	0.08	A
	Westchester Square (6)	R420	Two-Way Turnstile	3	176	209	1.00	0.80	0.90	0.31	A

Source: STV Incorporated, 2023.

Subway Line Haul

Table 13-41 lists the anticipated line haul conditions at the maximum load point of the Pelham No. 6 line and the White Plains Road No. 2 and 5 lines serving the Affected Area in the 2033 No-Action condition. The data in Table 13-40 reflect both background growth for the 2023 through 2033 period and the addition of demand from new development within the Affected Area and its proximity. As listed in Table 13-40, the No. 2 line would continue to operate over capacity in the peak direction in the AM peak hour, carrying 14,763 passengers per hour (1.09 v/c ratio) and begin operating over capacity in PM peak hour as well with 13,324 passengers (1.08 v/c ratio). The No. 5 line would also begin operating over capacity in the peak direction in the AM peak hour, with 13,831 passengers and a v/c ratio of 1.02. In the peak direction No. 5 trains in the PM peak hour, and No. 6 trains would remain below capacity during both the AM and PM peak hours.

Table 13-41: No-Action Subway Line Haul Analysis

Peak Hour	Line	Dir	Maximum Load Point (Leaving Station)	Average Trains Per Hour[1]	Average Cars Per Hour[1]	Average Passengers Per Hour[1]	Average Passengers Per Car[1]	Guideline Passengers Per Car[2]	V/C Ratio[3]
AM	2	SB	72 St	12.3	123	14,763	120	110	1.09
	5	SB	86 St	12.3	123	13,831	112	110	1.02
	6	SB	3 Av - 138 St	18.5	185	19,805	107	110	0.97
PM	2	NB	Times Square - 42 St	11.2	112	13,324	119	110	1.08
	5	NB	59 St	11.6	116	11,267	97	110	0.88
	6	NB	59 St	16.8	168	16,340	97	110	0.88

Notes:
(1) Based on 2019 ridership/train throughput data from NYCT and background ridership growth.
(2) Guideline capacities are based on NYCT rush hour and off-peak loading guidelines, which vary by car type, line, and location based on frequency and type of service.
(3) Volume to guideline capacity ratio.

Source: STV Incorporated, 2023.

Bus Service

Demand on the local bus services operating in the vicinity of the Affected Area is expected to increase during the 2023 through 2033 period as a result of background growth as well as demand from new development. As listed in Table 13-42, existing levels of bus service would not be sufficient to provide adequate supply to meet the projected demand in the 2033 No-Action condition on the Bx42 in both directions during the AM peak hour and in the eastbound direction during the PM peak hour, as well as on the Bx21 and BxM10 in the northbound direction during the AM peak hour and on the Bx31 in the northbound direction during the PM peak hour.

As a general policy, the MTA (NYCT and MTA Bus) provides additional bus service where demand warrants, taking into account financial and operational constraints. Based on ongoing passenger monitoring programs, comprehensive service plans would be generated to respond to specific, known needs with capital and/or operational improvements where fiscally and operationally practicable. The MTA's capital program is developed on a five-year cycle; through this program, expansion of bus services would be provided as needs are determined. It is therefore anticipated that in the No-Action condition, MTA Bus would increase service frequency on Bx21, Bx31, Bx42, and BxM10 routes to address the capacity shortfall in the AM and PM peak hours.

Table 13-42: No-Action Bus Analysis

Peak Hour [1]	Route	Direction	Maximum Load Point	Peak Hour Passengers	No Build Conditions with Current Service Levels			No Build Conditions with Potential Service Adjustments		
					Peak Hour Buses [2]	Average Passengers Per Bus	Available Capacity [3]	Peak Hour Buses	Average Passengers Per Bus	Available Capacity [3]
Weekday AM	Bx4A	NB	Metropolitan Av/Parkchester Rd	115	4	29	225	4	29	225
		SB	Metropolitan Av/Unionport Rd	125	3	42	130	3	42	130
	Bx12	EB	E Fordham Rd/3 Av	290	7	41	305	7	41	305
		WB	E Fordham Rd/Bathgate Av	257	6	43	253	6	43	253
	Bx12-SBS	EB	E Fordham Rd/Valentine Av	868	18	48	662	18	48	662
		WB	E Fordham Rd/Webster Av	882	15	59	393	15	59	393
	Bx21	NB	Morris Pk Av/White Plains Rd	520	9	58	-34	10	52	20
		SB	3 Av/E 158 St	416	9	46	70	9	46	70
	Bx31	NB	E 233 St/Gunther Av	163	6	27	161	6	27	161
		SB	Eastchester Rd/Pelham Pkwy S	270	9	30	216	9	30	216
	Bx39	NB	White Plains Rd/Watson Av	468	10	47	382	10	47	382
		SB	White Plains Rd/E Tremont Av	369	8	46	311	8	46	311
	Bx40	EB	E 180 St/Daly Av	265	4	66	75	4	66	75
		WB	Webster Av/E 180 St	285	5	57	140	5	57	140
	Bx42	EB	E 180 St/Boston Rd	470	5	94	-45	6	78	40
		WB	Webster Av/E 180 St	472	5	94	-47	6	79	38
	BxM10	NB	Morris Pk Av/Bronxdale Av	114	2	57	-4	3	38	51
		SB	2 Av/E 121 St	145	6	24	185	6	24	185
Weekday PM	Bx4A	NB	Metropolitan Av/Parkchester Rd	199	4	50	141	4	50	141
		SB	Westchester Av/White Plains Rd	147	6	25	363	6	25	363
	Bx12	EB	E Fordham Rd/3 Av	370	7	53	225	7	53	225
		WB	E Fordham Rd/Webster Av	274	6	46	236	6	46	236
	Bx12-SBS	EB	E Fordham Rd/Southern Bl	617	11	56	318	11	56	318
		WB	E Fordham Rd/Webster Av	745	12	62	275	12	62	275
	Bx21	NB	3 Av/E 153 St	362	7	52	16	7	52	16
		SB	Morris Pk Av/Barnes Av	410	9	46	76	9	46	76
	Bx31	NB	Eastchester Rd/Pelham Pkwy S	382	6	64	-58	8	48	50
		SB	E 233 St/Bussing Av	212	8	27	220	8	27	220
	Bx39	NB	White Plains Rd/Pelham Pkwy	328	6	55	182	6	55	182
		SB	White Plains Rd/Westchester Av	294	6	49	216	6	49	216
	Bx40	EB	E Tremont Av/Westchester Av	245	4	61	95	4	61	95
		WB	E 180 St/Boston Rd	244	4	61	96	4	61	96
	Bx42	EB	E Tremont Av/Westchester Av	439	4	110	-99	6	73	71
		WB	E 180 St/Morris Park Av	350	4	88	-10	7	50	245
	BxM10	NB	3 Av/E 120 St	179	5	36	96	5	36	96
		SB	Morris Pk Av/E 180 St	106	2	53	4	2	53	4

Notes:
(1) Weekday peak hours: 8-9 AM, 5-6 PM
(2) Based on most recent available data from NYCT (March 2023)
(3) Available capacity based on NYCT loading guideline of 54 passengers per standard bus, 85 passengers per articulated bus, and 55 passengers per over-the-road coach bus

Source: STV Incorporated, 2023.

Metro-North Commuter Rail Service

The Affected Area will be served by two new Metro-North stations with the completion of MTA's *Penn Station Access Project*. The project will create an extension of Metro-North Railroad's New Haven Line to reach Penn Station. This will create four new accessible stations, improve existing tracks and bridges, and will cut travel times from the Bronx to Manhattan by as much as 50 minutes.

An Environmental Assessment (EA) of the *Penn Station Access Project* was completed in 2021. The EA developed the projected AM and PM peak hour ridership for the proposed new Bronx stations and Penn Station New York. The ridership forecasts were based on the Regional Transit Forecasting Model and the forecasted on and offs for the AM peak hour at the Parkchester/Van Nest and Morris Park stations are shown in Table 13-43. Peak hour ridership is in the PM peak hour is assumed to have similar net increments as the AM peak hour but in the reverse direction.

Table 13-43: No-Action Metro-North Station AM Peak Hour Ridership

Station	Inbound Volumes			Outbound Volumes			Total		
	Ons	Offs	Total	Ons	Offs	Total	Ons	Offs	Total
Parkchester/Van Nest	90	70	**160**	360	10	**370**	450	80	**530**
Morris Park	60	230	**290**	260	70	**330**	320	300	**620**

Source: STV Incorporated, 2023.

The Parkchester/Van Nest Station would be located on the north side of East Tremont Avenue and east of Unionport Road. Conceptual level site plans indicate one station entrance on the north sidewalk of East Tremont Avenue and a second entrance on the east sidewalk of Unionport Road. The Morris Park station is to be located immediately west of Morris Park Avenue and Bassett Avenue. There will be two station entrances with overpass connections to a center platform, with an entrance on both the east and west side of the track corridor. It is assumed that all station elements are sized appropriately to accommodate the projected ridership at an acceptable level of service, as the stations are constructed to meet this ridership.

As indicated in the *Penn Station Access Project* EA, the rail operations of the Metro-North New Haven Line would increase by up to 12 trains in each peak period. The New Haven Line, Amtrak's Hell Gate Line, and rail operations at Penn Station New York may be modified to remediate any increases in delay minutes, as is typical in timetable development.

THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

Subway Service

Subway Stations

As listed in Table 13-11, the Proposed Actions are expected to generate a net increment of approximately 2,964 and 2,679 subway trips during the weekday AM and PM commuter peak hours, respectively. Trips from each site are assigned to the individual stations serving the Affected Area based on proximity to projected development sites. The highest number of peak hour subway trips are expected to occur at the East 180th Street station on the White Plains Road No. 2 and 5 lines, which would experience approximately 1,320 incremental trips (in and out combined) in the AM peak hour and 1,187 in the PM peak hour.

Tables 13-44 through 13-47 list conditions at stairs at each of the four analyzed subway stations and Table 13-48 lists conditions at fare arrays at the analyzed subway stations on the No. 2, 5, and 6 lines in the future with the Proposed Actions. As listed in Tables 13-44 through 13-48, all analyzed stairs and fare arrays are projected to operate at an acceptable LOS C or better in both the AM and PM peak hours and would therefore not be significantly adversely impacted by the Proposed Actions based on *CEQR Technical Manual* criteria.

Table 13-44: With-Action Stair Analysis at East 180th Street (2/5) Subway Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R325	S1	46.60	45.60	434	166	1.00	0.80	0.90	0.10	A
		M1	14.25	13.00	223	117	1.00	0.80	0.90	0.21	A
		P1/P3	5.33	4.33	327	80	1.00	0.75	0.90	0.74	C
		P2/P4	5.33	4.33	38	77	1.00	0.75	0.90	0.24	A
		P5/P7	5.33	4.33	248	130	1.00	0.75	0.90	0.72	C
		P6/P8	5.33	4.33	86	176	1.00	0.75	0.90	0.55	B
PM	R325	S1	46.60	45.60	201	351	1.00	0.80	0.90	0.10	A
		M1	14.25	13.00	134	200	1.00	0.75	0.90	0.23	A
		P1/P3	5.33	4.33	223	36	1.00	0.75	0.90	0.46	B
		P2/P4	5.33	4.33	42	286	1.00	0.75	0.90	0.72	C
		P5/P7	5.33	4.33	209	40	1.00	0.75	0.90	0.45	A
		P6/P8	5.33	4.33	74	383	1.00	0.75	0.90	1.00	C

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

Source: STV Incorporated, 2023.

Table 13-45: With-Action Stair Analysis at Pelham Parkway (2/5) Subway Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R328S	S1	5.50	4.50	28	54	1.00	0.80	0.90	0.16	A
		S2	5.66	4.66	149	51	1.00	0.80	0.90	0.34	A
		ESC 122	3.75	2.75	5	0	1.00	0.80	1.00	0.01	A
		P1/P3	5.83	4.83	48	68	1.00	0.75	0.90	0.21	A
		P2/P4	8.00	6.75	27	40	1.00	0.75	0.90	0.09	A
		ESC123	4.50	3.50	102	0	1.00	0.75	1.00	0.19	A
	R328N	S3	5.66	4.66	67	52	1.00	0.80	0.90	0.21	A
		S4	5.75	4.75	80	39	1.00	0.80	0.90	0.20	A
		P5A/P7	9.50	8.25	143	50	1.00	0.75	0.90	0.19	A
		P6/P8	8.50	7.25	7	41	1.00	0.75	0.90	0.06	A
PM	R328S	S1	5.50	4.50	54	68	1.00	0.80	0.90	0.23	A
		S2	5.66	4.66	84	141	1.00	0.80	0.90	0.41	A
		ESC 122	3.75	2.75	2	0	1.00	0.80	1.00	0.01	A
		P1/P3	5.83	4.83	38	42	1.00	0.75	0.90	0.14	A
		P2/P4	8.00	6.75	62	162	1.00	0.75	0.90	0.31	A
		ESC123	4.50	3.50	45	0	1.00	0.75	1.00	0.09	A
	R328N	S3	5.66	4.66	32	67	1.00	0.80	0.90	0.18	A
		S4	5.75	4.75	22	80	1.00	0.75	0.90	0.20	A
		P5/P7	9.50	8.25	41	28	1.00	0.75	0.90	0.07	A
		P6/P8	8.50	7.25	17	127	1.00	0.75	0.90	0.19	A

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

Source: STV Incorporated, 2023.

Table 13-46: With-Action Stair Analysis at Westchester Square (6) Subway Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R420	S1	22.00	20.25	356	307	1.00	0.80	0.90	0.27	A
		P1/P3	6.00	5.00	163	12	1.00	0.75	0.90	0.27	A
		P2/P4	6.00	5.00	5	128	1.00	0.75	1.00	0.23	A
		P5/P7	6.00	5.00	163	12	1.00	0.75	0.90	0.27	A
		P6/P8	6.00	5.00	5	128	1.00	0.75	1.00	0.23	A
PM	R420	S1	22.00	20.25	300	322	1.00	0.80	0.90	0.26	A
		P1/P3	6.00	5.00	130	11	1.00	0.75	0.90	0.21	A
		P2/P4	6.00	5.00	8	142	1.00	0.75	0.90	0.29	A
		P5/P7	6.00	5.00	130	11	1.00	0.75	0.90	0.21	A
		P6/P8	6.00	5.00	8	142	1.00	0.75	0.90	0.29	A

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

Source: STV Incorporated, 2023.

Table 13-47: With-Action Stair Analysis at Middletown Road (6) Subway Station

Peak Hour	Fare Control Area	Stair	Total Width (feet)	Effective Width (feet)	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Up	Down	Up	Down			
AM	R421	S1	5.16	4.16	35	14	1.00	0.80	0.90	0.09	A
		S2	5.33	4.33	94	30	1.00	0.80	0.90	0.22	A
		P1/P3	5.50	4.50	85	1	1.00	0.75	1.00	0.13	A
		P2/P4	6.00	5.00	0	22	1.00	0.75	1.00	0.04	A
		P5/P7	5.50	4.50	43	3	1.00	0.75	0.90	0.08	A
		P6/P8	6.00	5.00	2	19	1.00	0.75	0.90	0.04	A
PM	R421	S1	5.16	4.16	21	27	1.00	0.80	0.90	0.10	A
		S2	5.33	4.33	32	65	1.00	0.80	0.90	0.19	A
		P1/P3	5.50	4.50	31	2	1.00	0.75	0.90	0.06	A
		P2/P4	6.00	5.00	1	40	1.00	0.75	1.00	0.07	A
		P5/P7	5.50	4.50	16	2	1.00	0.75	0.90	0.03	A
		P6/P8	6.00	5.00	4	59	1.00	0.75	0.90	0.12	A

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

Source: STV Incorporated, 2023.

Table 13-48: With-Action Fare Array Analysis at All Analyzed Subway Stations

Peak Hour	Station	Fare Array ID	Control Element	Quantity	15-Min Peak Volume		Surging Factor		Friction Factor	V/C Ratio	LOS
					Entries	Exits	Entries	Exits			
AM	East 180th Street (2/5)	R325	Two-Way Turnstile	4	657	283	1.00	0.80	0.90	0.59	B
	Pelham Parkway (2/5)	R328S	Two-Way Turnstile	3	163	91	1.00	0.80	0.90	0.21	A
			High Entry/Exit Turnstile	1							
		R328N	High Entry/Exit Turnstile	2	132	79	1.00	0.80	0.90	0.34	A
			High Exit Turnstile	2							
	Middletown Road (6)	R421	Two-Way Turnstile	3	130	44	1.00	0.80	0.90	0.15	A
	Westchester Square (6)	R420	Two-Way Turnstile	3	356	307	1.00	0.80	0.90	0.53	B
PM	East 180th Street (2/5)	R325	Two-Way Turnstile	4	335	551	1.00	0.80	0.90	0.52	B
	Pelham Parkway (2/5)	R328S	Two-Way Turnstile	3	141	209	1.00	0.80	0.90	0.26	A
			High Entry/Exit Turnstile	1							
		R328N	High Entry/Exit Turnstile	2	48	147	1.00	0.80	0.90	0.20	A
			High Exit Turnstile	2							
	Middletown Road (6)	R421	Two-Way Turnstile	3	53	92	1.00	0.80	0.90	0.11	A
	Westchester Square (6)	R420	Two-Way Turnstile	3	300	322	1.00	0.80	0.90	0.50	B

Source: STV Incorporated, 2023.

Subway Line Haul

Table 13-49 lists line haul conditions on the No. 2 line serving the Affected Area in the future with the Proposed Actions. The No. 2 line trains are projected to continue to operate over guideline capacity in the AM and PM peak hours, with v/c ratios of 1.13 and 1.12 respectively. The No. 5 line remains over capacity in the AM peak hour with a v/c ratio of 1.05 and under capacity in the PM peak hour with a v/c ratio of 0.90. The No. 6 line begins operating over capacity during the AM peak hour with a v/c ratio of 1.01 but continues to operate under capacity in the PM peak hour with a v/c ratio of 0.92.

All lines are expected to experience fewer than five incremental trips per car in each direction in each peak hour as a result of the Proposed Actions, therefore significant adverse impacts to subway line haul conditions are not anticipated based on *CEQR Technical Manual* criteria.

Table 13-49: With-Action Subway Line Haul Analysis

Peak Hour	Line	Dir	Maximum Load Point (Leaving Station)	Average Trains Per Hour[1]	Average Cars Per Hour[1]	Average Passengers Per Hour[1]	Average Passengers Per Car[1]	Guideline Passengers Per Car[2]	V/C Ratio[3]
AM	2	SB	72 St	12.3	123	15,268	124	110	1.13
	5	SB	86 St	12.3	123	14,201	115	110	1.05
	6	SB	3 Av - 138 St	18.5	185	20,476	111	110	1.01
PM	2	NB	Times Square - 42 St	11.2	112	13,713	122	110	1.11
	5	NB	59 St	11.6	116	11,435	99	110	0.90
	6	NB	59 St	16.8	168	16,841	100	110	0.91

Notes:
(1) Based on 2018 ridership/train throughput data from NYCT, background ridership growth, and With-Action increment.
(2) Guideline capacities are based on NYCT rush hour and off-peak loading guidelines, which vary by car type, line, and location based on frequency and type of service.
(3) Volume to guideline capacity ratio.

Source: STV Incorporated, 2023.

Bus Service

As listed in Table 13-12, the projected development sites are expected to generate a net total of approximately 5,554 and 4,844 incremental trips on the local bus services operating in proximity of the Affected Area during the weekday AM and PM peak hours, respectively. As listed in Table 13-49, there is expected to be an increase on the Bx4A route of 71 northbound trips and 223 southbound trips in the AM peak period. On the Bx21, demand is expected to increase by 683 northbound trips and 525 southbound trips in the AM peak period and by 592 northbound trips and 520 southbound trips in the PM. Demand on the Bx31 increases by 384 northbound trips and 613 southbound trips in the AM peak hour and by 520 northbound trips and 263 southbound trips in the PM peak hour. On the Bx40, an additional 200 northbound trips and 386 southbound trips in the AM and 245 northbound trips and 231 southbound trips in the PM are expected. On the Bx42, an increase in demand is expected of 203 northbound trips and 384 southbound trips in the AM as well as 238 northbound trips and 181 southbound trips in the PM. Demand on the BxM10 is expected to increase by 231 southbound trips in the AM and 181 northbound trips in the PM.

As listed in Table 13-50, based on projected levels of bus service in the No-Action condition, the Proposed Actions would result in the following capacity shortfalls:

- Northbound Bx4A would experience a shortfall of 28 passengers in the PM peak hour.
- Southbound Bx4A would experience a shortfall of 93 passengers in the AM peak hour.
- Northbound Bx21 would experience a shortfall of 663 passengers in the AM peak hour.
- Southbound Bx21 would experience a shortfall of 399 passengers in the AM peak hour and 516 passengers in the PM peak hour.
- Northbound Bx31 would experience a shortfall of 184 passengers in the AM peak hour and 470 passengers in the PM peak hour.
- Southbound Bx31 would experience a shortfall of 376 passengers in the AM peak hour.
- Eastbound Bx40 would experience a shortfall of 305 passengers in the AM peak hour and 105 passengers in the PM peak hour.
- Westbound Bx40 would experience a shortfall of 507 passengers in the AM peak hour and 116 passengers in the PM peak hour.
- Eastbound Bx42 would experience a shortfall of 175 passengers in both the AM and PM peak hours.
- Westbound Bx42 would be at capacity with a shortfall of zero passengers in the PM peak hour.
- Northbound BxM10 would experience a shortfall of 85 passengers in the PM peak hour.
- Southbound BxM10 would experience a shortfall of 46 passengers in the AM peak hour and seven passengers in the PM peak hour.

Table 13-50: With-Action Bus Analysis

Peak Hour [1]	Route	Direction	Existing Maximum Load Point	Peak Hour Buses	No Build Available Capacity at Maximum Load Point	New Maximum Load Point	No Build Available Capacity at New Maximum Load Point	Project Increment at Maximum Load Point	Build Available Capacity [2]
Weekday AM	Bx4A	NB	Metropolitan Av/Parkchester Rd	4	225	Metropolitan Av/Parkchester Rd	225	71	155
		SB	Metropolitan Av/Unionport Rd	3	130	Metropolitan Av/Unionport Rd	130	223	-93
	Bx12	EB	E Fordham Rd/3 Av	7	305	Pelham Pkwy/White Plains Rd	325	123	202
		WB	E Fordham Rd/Bathgate Av	6	253	Pelham Pkwy/Bronxwood Av	325	99	226
	Bx12-SBS	EB	E Fordham Rd/Valentine Av	18	662	E Fordham Rd/Valentine Av	662	15	647
		WB	E Fordham Rd/Webster Av	15	393	Pelham Pkwy/Eastchester Rd	818	0	818
	Bx21	NB	Morris Pk Av/White Plains Rd	9	20	Morris Pk Av/White Plains Rd	20	683	-663
		SB	3 Av/E 158 St	9	70	Morris Pk Av/White Plains Rd	126	525	-399
	Bx31	NB	E 233 St/Gunther Av	6	161	Eastchester Rd/Seminole St	200	384	-184
		SB	Eastchester Rd/Pelham Pkwy S	9	216	Eastchester Rd/Astor Av	237	613	-376
	Bx39	NB	White Plains Rd/Watson Av	10	382	White Plains Rd/Morris Pk Av	103	95	8
		SB	White Plains Rd/E Tremont Av	8	311	White Plains Rd/E Tremont Av	311	73	238
	Bx40	EB	E 180 St/Daly Av	4	75	E 180 St/Morris Park Av	-105	200	-305
		WB	Webster Av/E 180 St	5	140	E Tremont Av/St Lawrence Av	-121	386	-507
	Bx42	EB	E 180 St/Boston Rd	5	28	E Tremont Av/Unionport Rd	28	203	-175
		WB	Webster Av/E 180 St	5	79	E Tremont Av/St Lawrence Av	418	384	34
	BxM10	NB	Morris Pk Av/Bronxdale Av	2	51	Morris Pk Av/Bronxdale Av	51	0	51
		SB	2 Av/E 121 St	6	185	2 Av/E 121 St	185	231	-46
Weekday PM	Bx4A	NB	Metropolitan Av/Parkchester Rd	4	141	Metropolitan Av/Parkchester Rd	141	168	-28
		SB	Westchester Av/White Plains Rd	6	363	Metropolitan Av/Wood Av	373	98	275
	Bx12	EB	E Fordham Rd/3 Av	7	225	E Fordham Rd/3 Av	347	17	330
		WB	E Fordham Rd/Webster Av	6	236	Pelham Pkwy/Bronxwood Av	265	123	142
	Bx12-SBS	EB	E Fordham Rd/Southern Bl	11	318	E Fordham Rd/Southern Bl	318	7	311
		WB	E Fordham Rd/Webster Av	12	275	Pelham Pkwy/White Plains Rd	367	103	264
	Bx21	NB	3 Av/E 153 St	7	16	Morris Pk Av/Taylor Av	259	229	30
		SB	Morris Pk Av/Barnes Av	9	76	Morris Pk Av/Barnes Av	76	592	-516
	Bx31	NB	Eastchester Rd/Pelham Pkwy S	6	50	Eastchester Rd/Pelham Pkwy S	50	520	-470
		SB	E 233 St/Bussing Av	8	220	Eastchester Rd/Astor Av	264	263	1
	Bx39	NB	White Plains Rd/Pelham Pkwy	6	182	White Plains Rd/Pelham Pkwy	182	47	135
		SB	White Plains Rd/Westchester Av	6	216	White Plains Rd/Morris Pk Av	218	76	142
	Bx40	EB	E Tremont Av/Westchester Av	4	95	E Tremont Av/Commonwealth Av	139	245	-105
		WB	E 180 St/Boston Rd	4	96	E Tremont Av/St Lawrence Av	115	231	-116
	Bx42	EB	E Tremont Av/Westchester Av	4	37	E Tremont Av/Commonwealth Av	71	247	-175
		WB	E 180 St/Morris Park Av	4	225	E Tremont Av/St Lawrence Av	238	238	0
	BxM10	NB	3 Av/E 120 St	5	96	3 Av/E 120 St	96	181	-85
		SB	Morris Pk Av/E 180 St	2	4	Morris Pk Av/E 180 St	4	11	-7

Notes:
(1) Weekday peak hours: 8-9 AM, 5-6 PM
(2) Based on most recent available data from NYCT (March 2023)
(3) Available capacity based on NYCT loading guideline of 54 passengers per standard bus, 85 passengers per articulated bus, and 55 passengers per over-the-road coach bus

Source: STV Incorporated, 2023.

Therefore, the Bx4A, Bx21, Bx31, Bx40, Bx42, and BxM10 services would be significantly adversely impacted in one or more peak hours based on *CEQR Technical Manual* criteria. As discussed in Chapter 21, "Mitigation Measures," the significant impacts to bus service could be mitigated by increasing bus service to southbound Bx4A, north- and southbound Bx21, Bx31, and BxM10, east- and westbound Bx40 and Bx42 during the AM peak hour, and to northbound Bx4A and Bx31, southbound Bx21, east- and westbound Bx40 and Bx 42, and north- and southbound BxM10 in the PM peak period.

Metro-North Commuter Rail Service

The Affected Area will be served by two new Metro-North stations in the Parkchester, Van Nest, and Morris Park areas. Census data from the representative neighborhood of Woodlawn indicates that 35 percent of transit rail riders will use these new stations. The Proposed Actions would generate a net increment of approximately 1,601 and 1,448 Metro-North rail trips during the weekday AM and PM commuter peak hours, respectively. The incremental rail trips from each projected development site were assigned to the designated station area, which resulted in 622 and 584 trips at the Parkchester/Van Nest station and 980 and 864 trips at the Morris Park station during the weekday AM and PM peak hours, respectively. The AM incremental peak hour trips have been assigned to the station and direction as modeled in the *Penn Station Access Project EA.* The PM peak hour is assumed to have similar splits in the reverse direction.

Table 13-51 lists the projected AM peak hour ridership in the With-Action condition. Conceptual level site plans indicate multiple entrances and stairs to access station platforms. The With-Action volumes with the Proposed Actions would not be expected to reach the capacity of the proposed station elements and no significant impact is expected. Additionally, any expected increase to rail operations that would result in an increase in delay would be remediated with modifications to the timetable, as typical for Metro-North and Amtrak.

Table 13-51: With-Action Metro-North Station AM Peak Hour Ridership

Station	Inbound Volumes			Outbound Volumes			Total		
	Ons	Offs	Total	Ons	Offs	Total	Ons	Offs	Total
Parkchester/Van Nest	185	200	**384**	739	29	**767**	924	228	**1,152**
Morris Park	126	604	**730**	544	184	**728**	670	788	**1,458**

Source: STV Incorporated, 2023.

13.9. Pedestrians

EXISTING CONDITIONS

The Affected Area is generally characterized by relatively light to moderate pedestrian flows during peak periods, with the greatest demand typically found along corridors providing access to area subway stations and bus routes and along retail corridors. As discussed previously in Section 13.5, "Level 2 Screening Assessment," the analysis of pedestrian conditions focuses on representative pedestrian elements where new trips generated by projected developments are expected to be most concentrated. These elements—sidewalks, corner areas and crosswalks—are primarily located in proximity to projected development sites and along corridors connecting the sites to area transit services. As shown in Figure 13-5, "Pedestrian Analysis Locations," they include a total of 28 sidewalks, 39 corner areas and 33 crosswalks primarily located along East Tremont Avenue and Eastchester Road.

Sidewalks

Data from pedestrian counts conducted in May and June 2023 indicate that the highest pedestrian flows at analyzed sidewalks within the study area are generally found along corridors providing access to subway station entrances, including Westchester Avenue, Morris Park Avenue, and White Plains Road. Analyzed sidewalks typically range from 9 to 20 feet in width. Features typically present along study area sidewalks that can reduce the effective width available for pedestrian flow include street furniture such as sign posts, traffic signal and lamp posts, fire hydrants and tree pits, as well as larger installations such as subway stairs.

Table 13-52, "Existing Sidewalk Conditions," shows the existing peak hour pedestrian volumes, average pedestrian space in sf/ped and platoon-adjusted LOS at analyzed sidewalks. As shown in Table 13-52, all analyzed sidewalks currently operate at an acceptable LOS C or better in all peak hours with the exceptions of the north sidewalk along Westchester Avenue between Westchester Square and Lane Avenue which would operate at LOS D in the weekday AM, midday, and PM peak hours.

Table 13-52: Existing Sidewalk Conditions

No.	Location	Effective Width (ft)	Peak Hour Volumes				Average Pedestrian Space (ft^2/ped)				Platoon-Adjusted Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
S1	West SW along Westchester Sq btw Lane Ave and Westchester Ave	7.5	504	324	451	178	153.6	203.3	165.8	375.3	B	B	B	B
S2	North SW along Westchester Ave btw Westchester Sq and Lane Ave	2.0	602	498	633	237	29.0	35.4	27.5	73.8	D	D	D	C
S3	North SW along E Tremont Ave btw Unionport Rd and Poplar St	2.0	54	44	49	17	299.1	350.9	373.3	740.7	B	B	B	A
S4	South SW along E Tremont Ave btw Unionport Rd and Purdy St	2.5	48	45	98	47	389.7	415.7	157.4	410.7	B	B	B	B
S5	West SW along Bronxdale Ave btw E Tremont Ave and Van Nest Ave	3.0	76	41	109	61	286.0	634.5	222.2	467.3	B	A	B	B
S6	North sidewalk along Eastchester Rd btw Williamsbridge Rd and Jarrett Pl	12.5	72	118	113	26	1,051.8	906.1	946.2	3,712.5	A	A	A	A
S7	East SW along of Williamsbridge Rd btw Eastchester Rd and Chesbrough Ave	11.5	61	80	89	44	1,433.4	1,417.4	1,028.5	2,266.6	A	A	A	A
S8	South SW along Eastchester Rd btw Williamsbridge Rd and Blondell Ave	10.5	45	51	39	28	1,746.3	2,079.0	2,590.7	2,851.2	A	A	A	A
S9	Northeast SW along Eastchester Rd btw Blondell Ave and Sackett Ave	4.0	97	110	87	29	372.2	328.2	458.7	1,081.5	B	B	B	A
S10	Southeast SW along Eastchester Rd btw Waters Pl and Blondell Ave	3.0	44	95	52	65	469.7	318.8	493.4	526.3	B	B	B	B
S11	North SW along Eastchester Rd btw Jarrett Pl and Blondell Ave	10.0	84	118	76	24	1,060.7	875.9	1,094.2	3,316.5	A	A	A	A
S12	East SW along Eastchester Rd btw Waters Pl and Bassett Ave	6.5	69	62	61	40	839.3	1,071.1	924.1	1,081.1	A	A	A	A
S13	North SW along Waters Place btw Eastchester Rd and Marconi St	3.5	33	97	66	46	516.5	334.3	453.5	696.0	B	B	B	A
S14	East SW along Eastchester Rd btw Bassett Ave and Loomis St	4.5	70	73	58	56	633.8	637.1	746.6	582.3	A	A	A	A
S15	East SW along Eastchester Rd btw Morris Park Ave and Wilkinson Ave	2.0	113	110	105	65	170.1	153.2	151.4	259.4	B	B	B	B
S16	East SW along Eastchester Rd btw Loomis St and Morris Park Ave	14.0	82	82	72	36	1,724.0	1,805.2	1,801.8	2,956.8	A	A	A	A
S17	West SW along Eastchester Rd btw Morris Park Ave and Stillwell Ave	4.0	85	39	86	38	475.1	743.2	397.8	912.9	B	A	B	A
S18	East SW along Eastchester Rd btw Seminole St and McDonald St	7.0	44	44	58	36	1,228.5	1,379.7	1,089.7	1,732.5	A	A	A	A
S19	East SW along Eastchester Rd btw Stillwell Ave and Seminole St	6.5	60	53	62	28	1,016.7	1,209.3	1,021.3	1,765.0	A	A	A	A
S20	West SW along Eastchester Rd btw Stillwell Ave and Pelham Parkway S	3.0	91	36	85	26	305.4	742.5	343.7	1,274.8	B	A	B	A
S21	East SW along Stillwell Ave btw McDonald St and Wilkinson Ave	2.0	11	10	10	7	1,188.0	1,496.9	1,496.9	1,493.5	A	A	A	A
S22	East SW along Eastchester Rd btw Rhinelander Ave and Pelham Parkway S	3.5	73	91	99	74	387.2	370.0	306.5	545.0	B	B	B	A
S23	East SW along Eastchester Rd btw McDonald St and Rhinelander Ave	2.0	63	59	69	43	271.4	330.1	258.1	397.8	B	B	B	B
S24	Island along Pelham Parkway S btw Eastchester Rd and Jacobi Medical Center Access Point	3.5	149	79	116	55	164.5	347.3	265.1	544.3	B	B	B	A
S25	West SW along Eastchester Rd btw Pelham Parkway S and Bronx and Pelham Parkway	4.0	81	75	135	48	422.3	519.5	288.5	792.0	B	B	B	A
S26	North SW along Bronx and Pelham Parkway btw Seymour Ave and Eastchester Rd	8.0	69	53	137	47	991.7	1,488.3	485.5	1,577.2	A	A	B	A
S27	West SW along Morris Park Ave btw E 180th St and Adams St	3.5	388	342	474	198	96.1	90.8	70.6	178.3	B	B	C	B
S28	East sidewalk along White Plains Road btw Pelham Parkway S and Lydig Ave	4.5	624	758	1,098	811	81.9	60.9	45.6	64.1	C	C	C	C

Source: PHA, 2023.

Crosswalks

Most study area intersections are signalized and include pedestrian signals. The majority of crosswalks in the area feature high visibility striping and analyzed crosswalks generally range from 11 to 23.5 feet in width. Table 13-53, "Existing Crosswalk Conditions," shows the peak hour volumes, average pedestrian space (in sf/ped), and levels of service at analyzed crosswalks. As shown in Table 13-53, all analyzed crosswalks currently operate at an uncongested LOS A in all peak hours.

Table 13-53: Existing Crosswalk Conditions

Intersection	Crosswalk		Peak Hour Volumes				Average Pedestrian Space (ft²/ped)				Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Westchester Sq & Westchester Ave	X1	North	250	189	250	98	217.2	248.6	234.1	379.0	A	A	A	A
White Plains Rd & E Tremont Ave	X2	North	26	17	26	13	1,647.9	992.5	1,413.4	1,313.1	A	A	A	A
White Plains Rd & E Tremont Ave	X3	South	100	54	90	54	373.1	400.7	495.4	335.0	A	A	A	A
Unionport Rd & E Tremont Ave	X4	North	29	18	30	8	1,393.2	1,303.6	1,234.8	4,554.7	A	A	A	A
Unionport Rd & E Tremont Ave	X5	East	73	73	76	54	402.0	453.7	366.3	475.2	A	A	A	A
Unionport Rd & E Tremont Ave	X6	South	74	75	109	54	850.2	531.6	522.8	760.1	A	A	A	A
Unionport Rd & E Tremont Ave	X7	West	26	21	41	16	534.5	517.4	378.4	594.1	A	A	A	A
Bronxdale Ave & E Tremont Ave	X8	North	23	15	27	20	1,136.1	1,671.6	746.1	1,219.8	A	A	A	A
Bronxdale Ave & E Tremont Ave	X9	West	17	12	44	12	507.3	1,198.8	248.0	1,150.5	A	A	A	A
Silver St & E Tremont Ave	X10	East	37	14	29	11	388.3	1,060.1	358.3	1,047.6	A	A	A	A
Williamsbridge Rd & Eastchester Rd	X11	West	63	86	89	21	410.8	322.2	335.0	1,489.9	A	A	A	A
Williamsbridge Rd & Eastchester Rd	X12	North	41	71	71	24	849.7	504.6	367.4	1,127.1	A	A	A	A
Williamsbridge Rd & Eastchester Rd	X13	East	86	70	66	31	350.9	459.5	451.9	751.3	A	A	A	A
Williamsbridge Rd & Eastchester Rd	X14	South	106	110	123	53	345.1	337.0	304.2	538.8	A	A	A	A
Blondell Ave & Eastchester Rd	X15	North	70	97	77	19	561.2	417.1	467.7	1,746.4	A	A	A	A
Blondell Ave & Eastchester Rd	X16	East	13	13	10	1	1,477.3	1,774.0	2,957.9	8,876.3	A	A	A	A
Blondell Ave & Eastchester Rd	X17	South	64	68	57	38	389.6	500.1	553.9	872.1	A	A	A	A
Blondell Ave & Eastchester Rd	X18	West	11	22	21	4	1,338.2	772.3	704.6	2,949.9	A	A	A	A
Eastchester Rd & Waters Pl	X19	North	39	59	57	13	196.6	260.6	113.3	918.3	A	A	A	A
Eastchester Rd & Waters Pl	X20	East	77	72	59	45	122.3	171.2	209.3	337.1	A	A	A	A
Eastchester Rd & Morris Park Ave	X21	North	48	43	46	18	362.2	411.5	410.6	888.9	A	A	A	A
Eastchester Rd & Morris Park Ave	X22	East	89	93	88	50	434.9	430.7	429.4	660.4	A	A	A	A
Eastchester Rd & Morris Park Ave	X23	South	63	46	36	20	248.7	347.4	426.8	837.4	A	A	A	A
Eastchester Rd & Morris Park Ave	X24	West	89	56	98	30	258.1	461.4	244.7	819.1	A	A	A	A
Eastchester Rd & Stillwell Ave	X25	North	20	17	18	10	568.9	657.6	574.7	1,010.1	A	A	A	A
Eastchester Rd & Stillwell Ave	X26	East	37	35	47	24	817.3	927.3	647.8	944.0	A	A	A	A
Eastchester Rd & Stillwell Ave	X27	South	3	5	10	4	1,850.4	1,266.0	736.3	1,964.4	A	A	A	A
Eastchester Rd & Rhinelander Ave	X28	North	24	20	42	9	409.4	518.4	383.3	1,774.0	A	A	A	A
Eastchester Rd & Rhinelander Ave	X29	East	61	64	68	31	758.6	922.2	635.5	1,304.5	A	A	A	A
Eastchester Rd & Rhinelander Ave	X30	South	16	16	30	6	603.5	538.3	893.5	3,607.8	A	A	A	A
Eastchester Rd & Pelham Pkwy S	X31	South	153	92	129	47	82.5	221.1	221.0	665.2	A	A	A	A
Eastchester Rd & Pelham Pkwy S	X32	West	233	102	198	69	148.1	349.2	197.6	623.6	A	A	A	A
Eastchester Rd & Bronx and Pelham Pkwy	X33	West	86	66	136	44	202.1	222.9	92.7	382.6	A	A	A	A

Source: PHA, 2023.

Corner Areas

Table 13-54, "Existing Corner Conditions," shows the peak hour volumes, average pedestrian space (in sf/ped) and levels of service at analyzed corner areas. As shown in Table 13-54, all of the analyzed corner areas currently operate at an uncongested LOS A in the weekday AM, midday, PM, and Saturday peak hours.

Table 13-54: Existing Corner Conditions

Intersection	Corner		Average Pedestrian Space (ft^2/ped)				Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT
E Tremont Ave & Westchester Ave	C1	NE	524.9	557.2	605.8	969.2	A	A	A	A
E Tremont Ave & Westchester Ave	C2	NW	226.3	244.3	259.2	587.0	A	A	A	A
White Plains Rd & E Tremont Ave	C3	NE	2,220.6	2,422.5	1,844.5	2,325.9	A	A	A	A
White Plains Rd & E Tremont Ave	C4	SE	715.0	948.9	664.2	901.2	A	A	A	A
White Plains Rd & E Tremont Ave	C5	SW	855.0	1,515.8	1,010.5	1,093.6	A	A	A	A
White Plains Rd & E Tremont Ave	C6	NW	2,046.0	2,056.4	2,286.1	2,118.9	A	A	A	A
Unionport Rd & E Tremont Ave	C7	NE	1,025.4	1,227.5	819.6	1,269.4	A	A	A	A
Unionport Rd & E Tremont Ave	C8	SE	1,096.4	1,098.4	678.5	1,275.9	A	A	A	A
Unionport Rd & E Tremont Ave	C9	SW	656.0	759.2	463.4	1,007.1	A	A	A	A
Unionport Rd & E Tremont Ave	C10	NW	2,288.0	2,710.3	1,765.3	3,845.6	A	A	A	A
Bronxdale Ave & E Tremont Ave	C11	NE	1,795.5	2,348.1	1,464.7	2,137.2	A	A	A	A
Bronxdale Ave & E Tremont Ave	C12	NW	1,578.9	2,936.9	1,118.6	2,140.6	A	A	A	A
Bronxdale Ave & Van Nest Ave	C13	SW	404.2	2,449.2	1,031.0	3,407.9	A	A	A	A
Silver St & E Tremont Ave	C14	NE	1,315.0	1,530.9	1,245.4	1,970.0	A	A	A	A
Silver St & E Tremont Ave	C15	NW	2,525.3	2,284.6	2,199.0	2,207.5	A	A	A	A
Eastchester Rd & Williamsbridge Rd	C16	NW	1,835.7	1,272.5	1,087.5	3,575.2	A	A	A	A
Eastchester Rd & Williamsbridge Rd	C17	NE	1,774.5	1,815.0	1,451.1	3,013.6	A	A	A	A
Eastchester Rd & Williamsbridge Rd	C18	SE	630.4	738.2	653.4	1,090.8	A	A	A	A
Eastchester Rd & Williamsbridge Rd	C19	SW	684.7	655.4	649.1	1,477.5	A	A	A	A
Blondell Ave & Eastchester Rd	C20	NE	1,499.8	1,595.4	1,792.1	6,547.1	A	A	A	A
Blondell Ave & Eastchester Rd	C21	SE	1,345.4	1,393.6	1,783.9	2,635.3	A	A	A	A
Blondell Ave & Eastchester Rd	C22	SW	1,584.3	1,756.7	1,894.8	3,296.0	A	A	A	A
Blondell Ave & Eastchester Rd	C23	NW	1,888.6	1,367.7	1,583.3	6,369.3	A	A	A	A
Eastchester Rd & Waters Pl	C24	NE	1,176.5	915.0	871.8	1,875.6	A	A	A	A
Eastchester Rd & Waters Pl	C25	SE	666.6	843.6	1,173.2	1,892.7	A	A	A	A
Marconi St & Waters Pl	C26	NW	369.4	276.8	609.1	1,406.5	A	A	A	A
Eastchester Rd & Morris Park Ave	C27	NE	1,510.8	1,567.0	1,563.9	2,442.8	A	A	A	A
Eastchester Rd & Morris Park Ave	C28	SE	949.3	1,028.4	1,027.3	1,750.9	A	A	A	A
Eastchester Rd & Morris Park Ave	C29	SW	599.7	806.9	705.3	1,673.8	A	A	A	A
Eastchester Rd & Morris Park Ave	C30	NW	571.6	830.8	561.1	1,603.1	A	A	A	A
Eastchester Rd & Stillwell Ave	C31	NE	2,243.2	2,499.3	1,958.6	2,495.5	A	A	A	A
Eastchester Rd & Stillwell Ave	C32	SE	3,789.1	2,793.5	2,785.0	4,075.7	A	A	A	A
Eastchester Rd & Rhinelander Ave	C33	NE	1,204.6	1,213.8	781.2	1,620.6	A	A	A	A
Eastchester Rd & Rhinelander Ave	C34	SE	452.9	518.0	389.9	1,082.7	A	A	A	A
Eastchester Rd & Pelham Pkwy S	C35	SE	242.3	766.0	383.1	1,209.9	A	A	A	A
Eastchester Rd & Pelham Pkwy S	C36	SW	94.1	232.6	153.2	450.1	A	A	A	A
Eastchester Rd & Bronx and Pelham Pkwy	C37	NW	1,044.3	1,684.6	788.4	2,655.7	A	A	A	A
Morris Park Ave & E 180 St	C38	NW	273.1	276.7	204.3	437.1	A	A	A	A
White Plains Rd & Pelham Pkwy S	C39	SE	255.9	200.5	138.2	194.4	A	A	A	A

Source: PHA, 2023.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

Pedestrian volumes at analyzed sidewalks, crosswalks, and corners are projected to increase during the 2023 through 2023 period. In determining future No-Action pedestrian volumes, development on projected development sites pursuant to the No-Action RWCDS was considered, as was demand from other No-Action development projects (see Table 2-4 in Chapter 2, "Land Use, Zoning, and Public Policy") and the *MTA Metro-North Railroad Penn Station Access Project EA (2021)*. Conditions on analyzed sidewalks, crosswalks, and corner areas in the No-Action condition are discussed below.

Sidewalks

Table 13-55, "No-Action Sidewalk Conditions," shows the No-Action peak hour pedestrian volumes, average pedestrian space, and platoon-adjusted levels of service at analyzed sidewalks. As shown in Table 13-55, all analyzed sidewalks are projected to operate at an acceptable LOS C or better in all peak hours with the exception of three sidewalks – the north sidewalk along Westchester Avenue between Westchester Square and Lane Avenue which would operate at LOS E in the weekday AM, midday, and PM peak hours, and LOS D in the Saturday peak hour; the east sidewalk along Eastchester Road between Morris Park Avenue and Wilkinson Avenue which would operate at LOS D in the weekday PM peak hour; and the east sidewalk along Stillwell Avenue between McDonald Street and Wilkinson Avenue which would operate at LOS D in the Saturday peak hour.

Table 13-55: No-Action Sidewalk Conditions

No.	Location	Effective Width (ft)	Peak Hour Volumes				Average Pedestrian Space (ft^2/ped)				Platoon-Adjusted Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
S1	West SW along Westchester Sq btw Lane Ave and Westchester Ave	7.5	606	421	550	276	127.7	156.4	135.9	242.0	B	B	B	B
S2	North SW along Westchester Ave btw Westchester Sq and Lane Ave	2.0	1,115	926	1,182	644	14.3	17.9	13.3	26.2	E	E	E	D
S3	North SW along E Tremont Ave btw Unionport Rd and Bronxdale Ave	2.0	135	79	141	64	119.4	195.3	129.5	196.6	B	B	B	B
S4	South SW along E Tremont Ave btw Unionport Rd and Purdy St	2.5	94	110	181	141	198.9	169.9	85.0	136.7	B	B	C	B
S5	West SW along Bronxdale Ave btw E Tremont Ave and Van Nest Ave	3.0	82	47	120	73	265.0	553.5	201.8	390.5	B	A	B	B
S6	North sidewalk along Eastchester Rd btw Williamsbridge Rd and Jarrett Pl	12.5	73	120	115	26	1,037.4	891.0	929.7	3,712.5	A	A	A	A
S7	East SW along of Williamsbridge Rd btw Eastchester Rd and Chesbrough Ave	11.5	122	132	130	86	716.7	859.0	704.1	1,159.7	A	A	A	A
S8	South SW along Eastchester Rd btw Williamsbridge Rd and Blondell Ave	10.5	58	84	61	57	1,354.9	1,262.2	1,656.4	1,400.6	A	A	A	A
S9	Northeast SW along Eastchester Rd btw Blondell Ave and Sackett Ave	4.0	171	205	178	125	211.1	176.0	224.1	250.8	B	B	B	B
S10	Southeast SW along Eastchester Rd btw Waters Pl and Blondell Ave	3.0	153	233	174	205	134.9	129.8	147.3	166.7	B	B	B	B
S11	North SW along Eastchester Rd btw Jarrett Pl and Blondell Ave	10.0	86	120	78	24	1,036.0	861.3	1,066.1	3,316.5	A	A	A	A
S12	East SW along Eastchester Rd btw Waters Pl and Bassett Ave	6.5	232	298	310	289	249.5	222.7	181.7	149.4	B	B	B	B

Table 13-55: No-Action Sidewalk Conditions (cont.)

No.	Location	Effective Width (ft)	Peak Hour Volumes				Average Pedestrian Space (ft^2/ped)				Platoon-Adjusted Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
S13	North SW along Waters Place btw Eastchester Rd and Marconi St	3.5	141	223	232	135	120.7	145.2	128.8	237.0	B	B	B	B
S14	East SW along Eastchester Rd btw Bassett Ave and Loomis St	4.5	417	518	563	583	106.1	89.4	76.5	55.4	B	C	C	C
S15	East SW along Eastchester Rd btw Morris Park Ave and Wilkinson Ave	2.0	449	385	510	404	42.1	43.1	30.2	41.0	C	C	D	C
S16	East SW along Eastchester Rd btw Loomis St and Morris Park Ave	14.0	289	317	357	334	489.1	466.9	363.3	318.6	B	B	B	B
S17	West SW along Eastchester Rd btw Morris Park Ave and Stillwell Ave	4.0	352	292	364	335	114.5	99.0	93.7	103.3	B	B	B	B
S18	East SW along Eastchester Rd btw Seminole St and McDonald St	7.0	83	79	82	69	651.2	768.4	770.7	903.9	A	A	A	A
S19	East SW along Eastchester Rd btw Stillwell Ave and Seminole St	6.5	128	130	134	116	476.5	493.0	472.5	426.0	B	B	B	B
S20	West SW along Eastchester Rd btw Stillwell Ave and Pelham Parkway S	3.0	163	135	202	159	170.4	197.8	144.5	208.3	B	B	B	B
S21	East SW along Stillwell Ave btw McDonald St and Wilkinson Ave	2.0	198	229	285	286	65.5	64.9	51.9	35.7	C	C	C	D
S22	East SW along Eastchester Rd btw Rhinelander Ave and Pelham Parkway S	3.5	85	110	117	89	332.5	306.1	259.3	453.1	B	B	B	B
S23	East SW along Eastchester Rd btw McDonald St and Rhinelander Ave	2.0	110	109	106	87	155.3	178.6	167.9	196.5	B	B	B	B
S24	Island along Pelham Parkway S btw Eastchester Rd and Jacobi Medical Center Access Point	3.5	160	90	128	66	153.1	304.8	240.3	453.5	B	B	B	B
S25	West SW along Eastchester Rd btw Pelham Parkway S and Bronx and Pelham Parkway	4.0	118	113	161	80	289.8	344.7	241.9	475.1	B	B	B	B
S26	North SW along Bronx and Pelham Parkway btw Seymour Ave and Eastchester Rd	8.0	106	91	163	79	645.5	866.8	408.1	938.3	A	A	B	A
S27	West SW along Morris Park Ave btw E 180th St and Adams St	3.5	583	543	683	445	63.7	56.9	48.7	79.0	C	C	C	C
S28	East sidewalk along White Plains Road btw Pelham Parkway S and Lydig Ave	4.5	635	772	1,119	826	80.4	59.7	44.7	62.9	C	C	C	C

Source: PHA, 2023.

Crosswalks

Table 13-56 "No-Action Crosswalk Conditions," shows the peak hour volumes, average pedestrian space, and levels of service at analyzed crosswalks in the No-Action condition. As shown in Table 13-56, all analyzed crosswalks are expected to operate at an acceptable LOS B or better in all peak hours in the No-Action condition.

Table 13-56: No-Action Crosswalk Conditions

Intersection	Crosswalk		Peak Hour Volumes				Average Pedestrian Space (ft²/ped)				Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Westchester Sq & Westchester Ave	X1	North	674	537	719	422	76.9	84.8	76.0	85.5	A	A	A	A
White Plains Rd & E Tremont Ave	X2	North	100	91	151	135	424.3	184.5	239.1	120.5	A	A	A	A
White Plains Rd & E Tremont Ave	X3	South	231	165	289	236	156.8	122.6	149.7	72.3	A	A	A	A
Unionport Rd & E Tremont Ave	X4	North	192	83	227	128	127.2	282.1	157.9	281.1	A	A	A	A
Unionport Rd & E Tremont Ave	X5	East	268	130	310	149	104.6	253.3	86.0	170.7	A	A	A	A
Unionport Rd & E Tremont Ave	X6	South	220	184	323	222	278.0	214.4	167.5	182.9	A	A	A	A
Unionport Rd & E Tremont Ave	X7	West	196	138	285	217	70.1	77.0	55.2	48.8	A	A	B	B
Bronxdale Ave & E Tremont Ave	X8	North	97	38	101	47	251.5	526.4	167.5	417.7	A	A	A	A
Bronxdale Ave & E Tremont Ave	X9	West	21	18	53	21	408.5	825.1	202.5	629.0	A	A	A	A
Silver St & E Tremont Ave	X10	East	52	29	39	22	266.3	505.8	266.6	519.4	A	A	A	A
Williamsbridge Rd & Eastchester Rd	X11	West	78	102	101	31	324.1	264.1	289.4	1,002.9	A	A	A	A
Williamsbridge Rd & Eastchester Rd	X12	North	76	114	98	52	452.7	312.7	264.7	514.4	A	A	A	A
Williamsbridge Rd & Eastchester Rd	X13	East	119	104	87	53	245.7	299.9	335.3	425.4	A	A	A	A
Williamsbridge Rd & Eastchester Rd	X14	South	115	119	130	59	317.3	311.0	287.3	482.4	A	A	A	A
Blondell Ave & Eastchester Rd	X15	North	87	116	91	31	435.1	334.4	383.1	1,029.5	A	A	A	A
Blondell Ave & Eastchester Rd	X16	East	20	21	15	7	987.1	1,063.7	1,867.5	1,795.9	A	A	A	A
Blondell Ave & Eastchester Rd	X17	South	127	142	109	94	185.1	228.5	280.8	342.2	A	A	A	A
Blondell Ave & Eastchester Rd	X18	West	26	39	33	16	557.1	431.3	444.8	733.6	A	A	A	A
Eastchester Rd & Waters Pl	X19	North	53	80	74	24	121.3	162.7	56.3	395.4	A	A	B	A
Eastchester Rd & Waters Pl	X20	East	162	188	169	169	40.5	47.3	57.2	66.6	B	B	B	A
Eastchester Rd & Morris Park Ave	X21	North	320	247	366	229	51.7	69.4	48.7	66.3	B	A	B	A
Eastchester Rd & Morris Park Ave	X22	East	438	490	533	531	92.5	74.0	62.5	57.2	A	A	A	B
Eastchester Rd & Morris Park Ave	X23	South	295	225	279	241	52.7	65.3	49.9	66.1	B	A	B	A
Eastchester Rd & Morris Park Ave	X24	West	239	268	341	310	105.8	89.0	63.8	72.9	A	A	A	A
Eastchester Rd & Stillwell Ave	X25	North	94	120	132	137	120.5	92.3	76.8	66.2	A	A	A	A
Eastchester Rd & Stillwell Ave	X26	East	105	73	106	62	262.2	406.1	262.8	341.1	A	A	A	A
Eastchester Rd & Stillwell Ave	X27	South	15	21	27	23	319.8	251.6	285.8	272.7	A	A	A	A
Eastchester Rd & Rhinelander Ave	X28	North	56	47	57	32	185.4	218.9	266.5	603.6	A	A	A	A
Eastchester Rd & Rhinelander Ave	X29	East	104	110	99	67	450.3	533.8	435.1	613.1	A	A	A	A
Eastchester Rd & Rhinelander Ave	X30	South	16	16	30	6	603.5	538.3	893.5	3,607.8	A	A	A	A
Eastchester Rd & Pelham Pkwy S	X31	South	166	111	147	60	75.9	183.9	188.2	514.8	A	A	A	A
Eastchester Rd & Pelham Pkwy S	X32	West	280	151	235	110	122.9	234.9	166.0	390.8	A	A	A	A
Eastchester Rd & Bronx and Pelham Pkwy	X33	West	100	104	162	76	122.9	117.8	88.6	242.1	A	A	A	A

Source: PHA, 2023.

Corner Areas

Table 13-57 "No-Action Corner Conditions," shows the peak hour volumes, average pedestrian space, and levels of service at analyzed corner areas in the No-Action condition. As shown in Table 13-57 all analyzed corner areas are expected to continue to operate at an uncongested LOS A in all peak hours.

Table 13-57: No-Action Corner Conditions

Intersection	Corner		Average Pedestrian Space (ft^2/ped)				Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT
E Tremont Ave & Westchester Ave	C1	NE	252.5	266.9	258.2	353.1	A	A	A	A
E Tremont Ave & Westchester Ave	C2	NW	126.8	135.0	138.8	218.0	A	A	A	A
White Plains Rd & E Tremont Ave	C3	NE	771.1	546.6	411.1	325.9	A	A	A	A
White Plains Rd & E Tremont Ave	C4	SE	293.0	304.3	204.4	184.8	A	A	A	A
White Plains Rd & E Tremont Ave	C5	SW	436.4	562.6	378.7	318.0	A	A	A	A
White Plains Rd & E Tremont Ave	C6	NW	892.2	726.7	558.8	450.6	A	A	A	A
Unionport Rd & E Tremont Ave	C7	NE	187.4	515.9	164.6	383.7	A	A	A	A
Unionport Rd & E Tremont Ave	C8	SE	325.8	534.6	194.6	409.2	A	A	A	A
Unionport Rd & E Tremont Ave	C9	SW	194.5	250.7	134.4	180.4	A	A	A	A
Unionport Rd & E Tremont Ave	C10	NW	234.8	483.6	204.9	343.8	A	A	A	A
Bronxdale Ave & E Tremont Ave	C11	NE	634.0	1,319.4	471.3	1,143.4	A	A	A	A
Bronxdale Ave & E Tremont Ave	C12	NW	916.0	1,921.1	622.7	1,382.1	A	A	A	A
Bronxdale Ave & Van Nest Ave	C13	SW	410.9	2,386.3	1,003.1	2,896.2	A	A	A	A
Silver St & E Tremont Ave	C14	NE	1,007.2	1,134.5	1,047.4	1,439.4	A	A	A	A
Silver St & E Tremont Ave	C15	NW	2,396.1	2,153.0	2,143.4	2,162.3	A	A	A	A
Eastchester Rd & Williamsbridge Rd	C16	NW	1,256.7	941.1	865.2	1,994.0	A	A	A	A
Eastchester Rd & Williamsbridge Rd	C17	NE	1,089.7	1,026.9	1,005.8	1,470.5	A	A	A	A
Eastchester Rd & Williamsbridge Rd	C18	SE	518.0	594.0	571.9	834.3	A	A	A	A
Eastchester Rd & Williamsbridge Rd	C19	SW	604.6	574.3	588.8	1,234.9	A	A	A	A
Blondell Ave & Eastchester Rd	C20	NE	1,049.6	1,125.2	1,336.3	2,390.8	A	A	A	A
Blondell Ave & Eastchester Rd	C21	SE	653.2	722.3	936.9	1,041.1	A	A	A	A
Blondell Ave & Eastchester Rd	C22	SW	770.7	760.7	871.5	953.4	A	A	A	A
Blondell Ave & Eastchester Rd	C23	NW	1,448.5	1,107.1	1,309.4	3,157.5	A	A	A	A
Eastchester Rd & Waters Pl	C24	NE	548.8	454.9	365.4	635.2	A	A	A	A
Eastchester Rd & Waters Pl	C25	SE	364.1	407.3	484.0	517.9	A	A	A	A
Marconi St & Waters Pl	C26	NW	351.1	261.8	564.6	1,204.0	A	A	A	A
Eastchester Rd & Morris Park Ave	C27	NE	254.8	289.1	212.3	242.7	A	A	A	A
Eastchester Rd & Morris Park Ave	C28	SE	195.0	194.6	155.8	158.6	A	A	A	A
Eastchester Rd & Morris Park Ave	C29	SW	177.6	183.7	140.2	166.7	A	A	A	A
Eastchester Rd & Morris Park Ave	C30	NW	151.7	174.3	128.8	151.3	A	A	A	A
Eastchester Rd & Stillwell Ave	C31	NE	645.4	665.2	519.1	481.0	A	A	A	A
Eastchester Rd & Stillwell Ave	C32	SE	1,148.9	1,215.5	1,178.8	1,231.9	A	A	A	A
Eastchester Rd & Rhinelander Ave	C33	NE	726.0	746.6	583.0	912.1	A	A	A	A
Eastchester Rd & Rhinelander Ave	C34	SE	306.9	350.6	312.1	598.4	A	A	A	A
Eastchester Rd & Pelham Pkwy S	C35	SE	228.3	673.7	345.4	1,045.6	A	A	A	A
Eastchester Rd & Pelham Pkwy S	C36	SW	82.6	176.4	129.7	321.5	A	A	A	A
Eastchester Rd & Bronx and Pelham Pkwy	C37	NW	826.6	1,167.0	687.7	1,723.4	A	A	A	A
Morris Park Ave & E 180 St	C38	NW	186.5	190.7	146.1	234.8	A	A	A	A
White Plains Rd & Pelham Pkwy S	C39	SE	250.6	196.4	135.3	190.2	A	A	A	A

Source: PHA, 2023.

THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

Incremental pedestrian demand generated by the Proposed Actions by 2033 would include trips made solely by walking, as well as pedestrian trips en route to and from subway station entrances and bus stops. Pedestrian trips generated by the Proposed Actions are expected to be most concentrated in proximity to projected development sites and along corridors connecting these sites to area transit services.

As shown in Table 13-8, "RWCDS Travel Demand Forecast," the Proposed Actions are expected to generate a net total of approximately 6,301 walk-only trips in the weekday AM peak hour, 7,270 in the midday peak hour, 6,992 in the PM peak hour and 7,968 in the Saturday peak hour. Persons en route to and from subway station entrances and bus stops would add approximately 7,713, 6,703, 6,753 and 6,891 additional pedestrian trips to Affected Area sidewalks and crosswalks during these same periods, respectively. These pedestrian volumes were added to the projected No-Action volumes to generate the With-Action pedestrian volumes for analysis.

Anticipated conditions and significant adverse impacts at analyzed sidewalks, crosswalks, and corner areas in the With-Action condition are shown in Tables 13-58 through 13-60. As discussed below, 14 sidewalks out of the 28 analyzed and 11 crosswalks out of the 39 analyzed would be impacted in one or more peak hours, and there would be no impacts to any analyzed corner areas. Potential mitigation for these sidewalk and crosswalk impacts are discussed in Chapter 21, "Mitigation Measures."

Sidewalks

Table 13-58, "With-Action Sidewalk Conditions," shows the incremental change in peak hour pedestrian volumes attributable to the Proposed Actions and the total With-Action pedestrian volumes, average pedestrian space, and platoon-adjusted levels of service at analyzed sidewalks. In addition, Table 13-58 identifies the sidewalks that are expected to be significantly adversely impacted in one or more peak hours based on the *CEQR Technical Manual* criteria shown in Table 13-17, "Significant Impact Criteria for Sidewalks with Platooned Flow in a non-CBD Location." As shown in Table 13-58, there would be significant adverse impacts at 14 of the 28 analyzed sidewalks in one or more peak hours. These would include:

- The north sidewalk on Westchester Avenue between Westchester Square and Lane Avenue during all analyzed peak hours;
- The north sidewalk on East Tremont Avenue between Unionport Road and Bronxdale Avenue during all analyzed peak hours;
- The south sidewalk on East Tremont Avenue between Unionport Road and Purdy Street during all analyzed peak hours;
- The west sidewalk on Bronxdale Avenue between East Tremont Avenue and Van Nest Avenue during all analyzed peak hours;
- The northeast sidewalk on Eastchester Road between Blondell Avenue and Sackett Avenue in the weekday AM, weekday midday, and Saturday peak hours;

- The southeast sidewalk on Eastchester Road between Waters Place and Blondell Avenue in the weekday AM peak hour;
- The north sidewalk on Waters Place between Eastchester Road and Marconi Street in the weekday AM, midday, and PM peak hours;
- The east sidewalk on Eastchester Road between Bassett Avenue and Loomis Street during all analyzed peak hours;
- The east sidewalk on Eastchester Road between Morris Park Avenue and Wilkinson Avenue during all analyzed peak hours;
- The west sidewalk on Eastchester Road between Morris Park Avenue and Stillwell Avenue during all analyzed peak hours;
- The west sidewalk on Eastchester Road between Stillwell Avenue and Pelham Parkway South during all analyzed peak hours;
- The east sidewalk on Stillwell Avenue between McDonald Street and Wilkinson Avenue during all analyzed peak hours;
- The east sidewalk on Eastchester Road between McDonald Street and Rhinelander Avenue during all analyzed peak hours;
- The west sidewalk on Morris Park Avenue between East 180th Street and Adams Street during all analyzed peak hours.

Table 13-58: With-Action Sidewalk Conditions

No.	Location	Effective Width (ft)	Project Increment				Peak Hour Volumes				Average Pedestrian Space (ft²/ped)				Platoon-Adjusted Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
S1	West SW along Westchester Sq btw Lane Ave and Westchester Ave	7.5	678	553	508	574	1,284	974	1,058	850	59.9	67.2	70.3	78.2	C	C	C	C
S2	North SW along Westchester Ave btw Westchester Sq and Lane Ave	2.0	964	869	821	855	2,079	1,795	2,003	1,499	5.2	7.0	5.6	9.1	F *	F *	F *	F *
S3	North SW along E Tremont Ave btw Unionport Rd and Bronxdale Ave	2.0	1,096	873	853	1,004	1,231	952	994	1,068	10.8	14.3	16.7	9.2	F *	E *	E *	F *
S4	South SW along E Tremont Ave btw Unionport Rd and Purdy St	2.5	496	528	659	785	590	638	840	926	30.7	28.3	16.7	19.4	D *	D *	E *	E *
S5	West SW along Bronxdale Ave btw E Tremont Ave and Van Nest Ave	3.0	1,775	1,478	1,092	1,220	1,857	1,525	1,212	1,293	9.1	15.3	18.5	20.7	F *	E *	E *	E *
S6	North sidewalk along Eastchester Rd btw Williamsbridge Rd and Jarrett Pl	12.5	895	938	521	609	968	1,058	636	635	77.8	100.8	167.9	151.8	C	B	B	B
S7	East SW along of Williamsbridge Rd btw Eastchester Rd and Chesbrough Ave	11.5	747	899	683	689	869	1,031	813	775	100.3	109.7	112.3	128.4	B	B	B	B
S8	South SW along Eastchester Rd btw Williamsbridge Rd and Blondell Ave	10.5	250	234	215	192	308	318	276	249	255.0	333.3	366.0	320.5	B	B	B	B
S9	Northeast SW along Eastchester Rd btw Blondell Ave and Sackett Ave	4.0	1,110	1,233	783	884	1,281	1,438	961	1,009	27.1	23.9	40.8	30.1	D *	D *	C	D *
S10	Southeast SW along Eastchester Rd btw Waters Pl and Blondell Ave	3.0	509	455	315	279	662	688	489	484	30.2	43.3	51.9	70.3	D *	C	C	C
S11	North SW along Eastchester Rd btw Jarrett Pl and Blondell Ave	10.0	789	848	480	564	875	968	558	588	101.5	106.5	148.8	135.1	B	B	B	B
S12	East SW along Eastchester Rd btw Waters Pl and Bassett Ave	6.5	973	1,186	912	758	1,205	1,484	1,222	1,047	47.4	44.1	45.5	40.6	C	C	C	C
S13	North SW along Waters Place btw Eastchester Rd and Marconi St	3.5	823	870	523	559	964	1,093	755	694	16.0	28.6	38.9	45.5	E *	D *	D *	C
S14	East SW along Eastchester Rd btw Bassett Ave and Loomis St	4.5	1,214	1,321	1,077	1,115	1,631	1,839	1,640	1,698	26.1	24.1	25.2	17.6	D *	D *	D *	E *
S15	East SW along Eastchester Rd btw Morris Park Ave and Wilkinson Ave	2.0	968	1,134	1,406	1,612	1,417	1,519	1,916	2,016	11.3	8.4	4.6	4.7	E *	F *	F *	F *
S16	East SW along Eastchester Rd btw Loomis St and Morris Park Ave	14.0	574	650	682	730	863	967	1,039	1,064	163.6	152.9	124.6	99.7	B	B	B	B

Table 13-58: With-Action Sidewalk Conditions (cont.)

No.	Location	Effective Width (ft)	Project Increment				Peak Hour Volumes				Average Pedestrian Space (ft^2/ped				Platoon-Adjusted Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
S17	West SW along Eastchester Rd btw Morris Park Ave and Stillwell Ave	4.0	973	746	1,052	899	1,325	1,038	1,416	1,234	29.5	26.8	22.9	27.0	D *	D *	E *	D *
S18	East SW along Eastchester Rd btw Seminole St and McDonald St	7.0	465	434	485	503	548	513	567	572	98.3	118.1	111.2	108.8	B	B	B	B
S19	East SW along Eastchester Rd btw Stillwell Ave and Seminole St	6.5	434	393	422	418	562	523	556	534	108.3	122.3	113.6	77.6	B	B	B	C
S20	West SW along Eastchester Rd btw Stillwell Ave and Pelham Parkway S	3.0	860	651	1,084	903	1,023	786	1,286	1,062	26.0	33.1	21.4	30.2	D *	D *	E *	D *
S21	East SW along Stillwell Ave btw McDonald St and Wilkinson Ave	2.0	648	811	1,103	1,286	846	1,040	1,388	1,572	13.5	12.3	7.9	2.1	E *	E *	F *	F *
S22	East SW along Eastchester Rd btw Rhinelander Ave and Pelham Parkway S	3.5	219	332	439	388	304	442	556	477	92.7	75.8	54.0	84.2	B	C	C	C
S23	East SW along Eastchester Rd btw McDonald St and Rhinelander Ave	2.0	462	504	537	542	572	613	643	629	28.9	30.8	26.6	26.1	D *	D *	D *	D *
S24	Island along Pelham Parkway S btw Eastchester Rd and Jacobi Medical Center Access Point	3.5	166	159	158	115	326	249	286	181	74.8	109.9	107.3	165.2	C	B	B	B
S25	West SW along Eastchester Rd btw Pelham Parkway S and Bronx and Pelham Parkway	4.0	312	289	341	320	430	402	502	400	79.2	96.6	77.2	94.7	C	B	C	B
S26	North SW along Bronx and Pelham Parkway btw Seymour Ave and Eastchester Rd	8.0	205	162	163	129	311	253	326	208	219.9	311.7	203.9	356.3	B	B	B	B
S27	West SW along Morris Park Ave btw E 180th St and Adams St	3.5	1,301	1,028	1,172	1,250	1,884	1,571	1,855	1,695	18.3	18.3	16.5	19.4	E *	E *	E *	E *
S28	East sidewalk along White Plains Road btw Pelham Parkway S and Lydig Ave	4.5	138	100	124	124	773	872	1,243	950	65.9	52.8	40.1	54.6	C	C	C	C

Note: * denotes a significant adverse impact based on *CEQR Technical Manual* criteria.

Source: PHA, 2023.

Crosswalks

Table 13-59, "With-Action Crosswalk Conditions," shows the incremental change in peak hour pedestrian volumes attributable to the Proposed Actions and the total With-Action pedestrian volumes, average pedestrian space, and levels of service at analyzed crosswalks. As shown in Table 13-59, based on the *CEQR Technical Manual* criteria shown in Table 13-18, "Significant Impact Criteria for Corners and Crosswalks in a non-CBD Location," there would be significant adverse impacts at 11 of the 39 analyzed crosswalks in one or more peak hours as result of the Proposed Actions. These would include:

- The south crosswalk on White Plains Road at East Tremont Avenue in the Saturday peak hour;
- The west crosswalk on Bronxdale Avenue at East Tremont Avenue in the weekday AM and PM peak hours;
- The west crosswalk on Williamsbridge Road at Eastchester Road in the weekday AM and midday peak hours;
- The north crosswalk on Eastchester Road at Waters Place during all analyzed peak hours;
- The east crosswalk on Eastchester Road at Waters Place during all analyzed peak hours;
- The north crosswalk on Eastchester Road at Morris Park Avenue during all analyzed peak hours;
- The east crosswalk on Eastchester Road at Morris Park Avenue in the weekday PM and Saturday peak hours;
- The south crosswalk on Eastchester Road at Morris Park Avenue in the weekday PM peak hour;
- The west crosswalk on Eastchester Road at Morris Park Avenue in the weekday PM and Saturday peak hours;
- The north crosswalk on Eastchester Road at Stillwell Avenue in the weekday midday, weekday PM, and Saturday peak hours; and
- The south crosswalk on Eastchester Road at Stillwell Avenue during all analyzed peak hours.

Table 13-59: With-Action Crosswalk Condition

Intersection	Crosswalk		Project Increment				Peak Hour Volumes				Average Pedestrian Space (ft²/ped)				Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Westchester Sq & Westchester Ave	X1	North	288	316	313	281	962	853	1,032	703	52.2	51.6	52.2	49.9	B	B	B	B
White Plains Rd & E Tremont Ave	X2	North	260	268	347	403	360	359	498	538	113.6	44.4	68.8	28.1	A	B	A	C
White Plains Rd & E Tremont Ave	X3	South	269	250	310	348	500	415	599	584	56.2	29.1	60.1	21.6	B	C	A	D *
Unionport Rd & E Tremont Ave	X4	North	330	279	342	406	522	362	569	534	41.4	61.8	62.6	64.4	B	A	A	A
Unionport Rd & E Tremont Ave	X5	East	207	198	265	312	475	328	575	461	57.9	97.4	45.8	52.2	B	A	B	B
Unionport Rd & E Tremont Ave	X6	South	297	302	372	428	517	486	695	650	117.9	79.7	78.1	61.0	A	A	A	A
Unionport Rd & E Tremont Ave	X7	West	160	128	160	189	356	266	445	406	37.8	39.5	34.0	24.8	C	C	C	C
Bronxdale Ave & E Tremont Ave	X8	North	354	334	270	320	451	372	371	367	38.2	38.1	35.8	44.8	C	C	C	B
Bronxdale Ave & E Tremont Ave	X9	West	305	275	380	389	326	293	433	410	10.9	42.7	18.1	25.2	E *	B	D *	C
Silver St & E Tremont Ave	X10	East	248	250	200	249	300	279	239	271	43.3	51.2	42.4	40.6	B	B	B	B
Williamsbridge Rd & Eastchester Rd	X11	West	598	623	386	460	676	725	487	491	22.2	21.1	43.6	44.9	D *	D *	B	B
Williamsbridge Rd & Eastchester Rd	X12	North	929	1,083	767	857	1,005	1,197	865	909	31.6	27.5	27.5	26.7	C	C	C	C
Williamsbridge Rd & Eastchester Rd	X13	East	357	345	213	271	476	449	300	324	58.1	66.3	93.7	65.8	B	A	A	A
Williamsbridge Rd & Eastchester Rd	X14	South	367	373	269	348	482	492	399	407	72.3	72.3	91.2	66.5	A	A	A	A
Blondell Ave & Eastchester Rd	X15	North	739	780	453	522	826	896	544	553	33.4	33.4	54.4	48.5	C	C	B	B
Blondell Ave & Eastchester Rd	X16	East	212	207	120	132	232	228	135	139	87.1	92.9	192.2	95.3	A	A	A	A
Blondell Ave & Eastchester Rd	X17	South	311	294	252	236	438	436	361	330	52.2	73.9	83.1	96.2	B	A	A	A
Blondell Ave & Eastchester Rd	X18	West	334	366	268	307	360	405	301	323	33.4	32.6	42.3	30.5	C	C	B	C
Eastchester Rd & Waters Pl	X19	North	678	778	479	447	731	858	553	471	6.2	13.1	6.1	17.7	F *	E *	F *	D *
Eastchester Rd & Waters Pl	X20	East	484	421	281	244	646	609	450	413	5.4	9.5	14.7	22.0	F *	E *	E *	D *
Eastchester Rd & Morris Park Ave	X21	North	618	487	724	800	938	734	1,090	1,029	15.4	21.1	14.5	12.7	D *	D *	E *	E *
Eastchester Rd & Morris Park Ave	X22	East	594	664	814	876	1,032	1,154	1,347	1,407	36.4	28.7	21.9	18.6	C	C	D *	D *
Eastchester Rd & Morris Park Ave	X23	South	130	204	275	289	425	429	554	530	31.8	30.7	22.7	27.1	C	C	D *	C
Eastchester Rd & Morris Park Ave	X24	West	616	568	621	633	855	836	962	943	27.1	25.9	20.3	21.6	C	C	D *	D *
Eastchester Rd & Stillwell Ave	X25	North	287	328	385	403	381	448	517	540	28.6	23.5	18.5	15.4	C	D *	D *	D *
Eastchester Rd & Stillwell Ave	X26	East	435	443	505	548	540	516	611	610	49.1	49.9	37.5	29.3	B	B	C	C
Eastchester Rd & Stillwell Ave	X27	South	227	247	395	406	242	268	422	429	18.3	18.3	18.8	13.3	D *	D *	D *	E *
Eastchester Rd & Rhinelander Ave	X28	North	225	190	212	221	281	237	269	253	35.8	41.9	53.7	62.7	C	B	B	A
Eastchester Rd & Rhinelander Ave	X29	East	414	475	537	604	518	585	636	671	84.6	97.3	63.6	55.9	A	A	A	B
Eastchester Rd & Rhinelander Ave	X30	South	172	179	200	168	188	195	230	174	50.5	42.7	114.7	120.5	B	B	A	A
Eastchester Rd & Pelham Pkwy S	X31	South	187	258	317	271	353	369	464	331	33.2	51.8	54.5	88.6	C	B	B	A
Eastchester Rd & Pelham Pkwy S	X32	West	494	470	532	471	774	621	767	581	43.6	54.7	48.7	71.5	B	B	B	A
Eastchester Rd & Bronx and Pelham Pkwy	X33	West	296	227	244	223	396	331	406	299	36.8	34.6	39.7	57.2	C	C	C	B

Note: * denotes a significant adverse impact based on *CEQR Technical Manual* criteria.

Source: PHA, 2023.

Corner Areas

Table 13-60, "With-Action Corner Conditions," shows the total With-Action pedestrian volumes, average pedestrian space, and levels of service at analyzed corner areas. As shown in Table 13-5, based on the *CEQR Technical Manual* criteria shown in Table 13-18, "Significant Impact Criteria for Corners and Crosswalks in a non-CBD Location," all analyzed corner areas are expected to operate at an uncongested LOS C or better in all peak hours. Therefore, there would be no significant adverse impacts to any analyzed corner area in any peak hour as a result of the Proposed Actions.

Table 13-60: With-Action Corner Conditions

Intersection	Corner		Average Pedestrian Space (ft^2/ped)				Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT
Westchester Sq & Westchester Ave	C1	NE	186.7	180.4	188.8	227.0	A	A	A	A
Westchester Sq & Westchester Ave	C2	NW	69.5	67.5	82.0	94.5	A	A	A	A
White Plains Rd & E Tremont Ave	C3	NE	293.5	196.9	163.6	118.0	A	A	A	A
White Plains Rd & E Tremont Ave	C4	SE	131.2	130.0	101.4	77.4	A	A	A	A
White Plains Rd & E Tremont Ave	C5	SW	179.2	209.5	161.7	116.9	A	A	A	A
White Plains Rd & E Tremont Ave	C6	NW	253.2	207.9	140.2	112.7	A	A	A	A
Unionport Rd & E Tremont Ave	C7	NE	75.1	135.3	68.5	98.7	A	A	A	A
Unionport Rd & E Tremont Ave	C8	SE	129.8	160.8	79.8	101.1	A	A	A	A
Unionport Rd & E Tremont Ave	C9	SW	87.4	105.0	65.7	65.9	A	A	A	A
Unionport Rd & E Tremont Ave	C10	NW	84.2	160.2	102.8	128.1	A	A	A	A
Bronxdale Ave & E Tremont Ave	C11	NE	92.3	126.3	111.2	146.0	A	A	A	A
Bronxdale Ave & E Tremont Ave	C12	NW	73.1	105.5	80.4	96.3	A	A	A	A
Bronxdale Ave & Van Nest Ave	C13	SW	123.9	211.3	314.5	324.2	A	A	A	A
Silver St & E Tremont Ave	C14	NE	167.0	172.1	188.5	143.2	A	A	A	A
Silver St & E Tremont Ave	C15	NW	525.0	492.4	532.1	389.5	A	A	A	A
Williamsbridge Rd & Eastchester Rd	C16	NW	108.7	96.4	109.7	110.6	A	A	A	A
Williamsbridge Rd & Eastchester Rd	C17	NE	128.1	120.0	137.5	127.9	A	A	A	A
Williamsbridge Rd & Eastchester Rd	C18	SE	125.1	138.5	186.8	128.9	A	A	A	A
Williamsbridge Rd & Eastchester Rd	C19	SW	96.2	97.9	152.1	129.2	A	A	A	A
Blondell Ave & Eastchester Rd	C20	NE	114.3	119.8	185.8	126.7	A	A	A	A
Blondell Ave & Eastchester Rd	C21	SE	118.3	159.5	235.5	203.6	A	A	A	A
Blondell Ave & Eastchester Rd	C22	SW	132.3	152.8	158.0	131.2	A	A	A	A
Blondell Ave & Eastchester Rd	C23	NW	165.2	148.3	211.2	159.7	A	A	A	A
Eastchester Rd & Waters Pl	C24	NE	71.4	76.1	87.3	104.9	A	A	A	A
Eastchester Rd & Waters Pl	C25	SE	52.5	84.6	116.9	56.9	B	A	A	B
Marconi St & Waters Pl	C26	NW	77.9	69.0	228.3	828.9	A	A	A	A
Eastchester Rd & Morris Park Ave	C27	NE	94.6	102.8	71.7	63.7	A	A	A	A
Eastchester Rd & Morris Park Ave	C28	SE	87.3	78.0	57.4	50.2	A	A	B	B
Eastchester Rd & Morris Park Ave	C29	SW	60.6	60.0	41.8	46.7	A	B	B	B
Eastchester Rd & Morris Park Ave	C30	NW	39.9	45.9	32.5	28.3	C	B	C	C
Eastchester Rd & Stillwell Ave	C31	NE	139.5	128.9	103.6	74.5	A	A	A	A
Eastchester Rd & Stillwell Ave	C32	SE	140.7	125.6	127.3	78.4	A	A	A	A
Eastchester Rd & Rhinelander Ave	C33	NE	151.5	165.3	121.0	112.7	A	A	A	A
Eastchester Rd & Rhinelander Ave	C34	SE	41.1	45.5	40.4	37.0	B	B	B	C
Eastchester Rd & Pelham Pkwy S	C35	SE	92.7	143.2	88.0	111.9	A	A	A	A

Table 13-60: With-Action Corner Conditions (cont.)

Intersection	Corner		Average Pedestrian Space (ft²/ped)				Level of Service			
			AM	MD	PM	SAT	AM	MD	PM	SAT
Eastchester Rd & Pelham Pkwy S	C36	SW	30.3	39.1	28.0	48.2	C	C	C	B
Eastchester Rd & Bronx and Pelham Pkwy	C37	NW	335.3	406.4	311.6	492.6	A	A	A	A
Morris Park Ave & E 180 St	C38	NW	55.1	58.1	45.8	58.4	B	B	B	B
White Plains Rd & Pelham Pkwy S	C39	SE	216.6	177.0	124.0	170.1	A	A	A	A

Source: PHA, 2023.

13.10. Vehicular and Pedestrian Safety Evaluation

NYCDOT INITIATIVES

Vision Zero Bronx Pedestrian Safety Action Plan

The City's Vision Zero initiative seeks to eliminate all deaths from traffic crashes, regardless of whether on foot, bicycle, or inside a motor vehicle. In an effort to drive these fatalities down, NYCDOT and NYPD developed a set of five plans, each of which analyzes the unique conditions of one New York City borough and recommends actions to address the borough's specific challenges to pedestrian safety. These plans pinpoint the conditions and characteristics of pedestrian fatalities and severe injuries; they also identify priority corridors, intersections, and areas that disproportionately account for pedestrian fatalities and severe injuries, prioritizing them for safety interventions. The plans outline a series of recommended actions comprised of engineering, enforcement, and education measures that intend to alter the physical and behavioral conditions on City streets that lead to pedestrian fatality and injury. Within the study area, Eastchester Road at Waters Place is identified as a Vision Zero Priority Intersection. East Tremont Avenue, Eastchester Road, and White Plains Road are Vision Zero Priority Corridors.

As part of the Vision Zero Initiative, several measures have been implemented within the traffic study area, including:

- Leading Pedestrian Interval ("LPI") – provides pedestrians with the opportunity to enter the crosswalk at an intersection at least seven seconds before vehicles are given a green indication. Several intersections along East Tremont Avenue, Williamsbridge Road, and Eastchester Road include LPIs.

- Barnes Dance crossing ("BD") – provides pedestrians with an exclusive interval in which all vehicular traffic is stopped to allow pedestrians to cross in all directions. East Tremont Avenue at Castle Hill Avenue provides a BD crossing.

- Turn Traffic Calming – a program to reduce left- and right-turn speeds and enforce safe turning behavior through the use of turn calming treatments. The intersection of Eastchester Road at Waters Place has a basic hardened centerline with bollards to calm left-turn movements. Similar measures have also been installed at the intersections of Williamsbridge Road at Eastchester Road and Williamsbridge Road at Pelham Parkway North.

Pedestrian Mobility Plan

NYCDOT has developed a Pedestrian Mobility Plan to inform street and sidewalk design to enhance existing safety/accessibility guidelines and to encourage more walking trips, which benefits the City by reducing the demand for vehicles. The plan uses anticipated pedestrian volumes to designate five types of streets in NYC (Baseline, Community Connector, Neighborhood Corridor, Regional Corridor, and Global Corridor).

Within the Affected Area, the entirety of Williamsbridge Road and White Plains Road, most blocks on Morris Park Avenue, East Tremont Avenue west of Castle Hill Avenue, and Eastchester Road south of Stillwell Avenue are considered Neighborhood Corridors, which are streets that have small groups of people passing each other and consistent pedestrian destinations, such as neighborhood business districts or large schools or parks. The design guidelines recommend that the sidewalks along Neighborhood Corridors be a minimum 15 feet wide to provide a 12-foot-wide walk lane and a three-foot-wide furnishing zone for street trees, lighting, bicycle parking, etc.

East Tremont Avenue east of Castle Hill Avenue, Eastchester Road north of Stillwell Avenue, and some blocks on Morris Park Avenue are designated as Community Connectors, which are streets that have individuals passing one another or small groups and are typically residential streets that connect to nearby destinations such as small parks or schools. The design guidelines recommend that the sidewalks along Community Connectors be a minimum 10 feet wide to provide an eight-foot-wide travel lane and two-foot-wide furnishing zone.

Study Area High Crash Locations

A high crash location is defined by the *CEQR Technical Manual* as a location identified along a Vision Zero corridor/intersection or with five or more pedestrian/bicyclist injury crashes in any consecutive 12 months of the most recent 3-year period for which data is available.

Crash data for intersections within the study area as well as intersections within 0.25 miles from the traffic and pedestrian study areas were obtained from NYCDOT for the three-year period between January 1, 2017 and December 31, 2019. The data quantify the total number of crashes involving injuries to pedestrians or bicyclists. During the three-year reporting period, a total of 3,289 crashes occurred, of which 206 were pedestrian-related crashes, and 37 were bicycle-related crashes. Table 13-61, “Summary of Motor Vehicle Accident Data 2017-2019,” provides details of accident characteristics by intersection during the 2017 through 2019 period, as well as a breakdown of pedestrian and bicycle crashes by year and location.

According to CEQR criteria, the following intersections would be considered high crash locations:

- Eastchester Road at Waters Place
- Eastchester Road at Williamsbridge Road
- Waters Place at Fink Avenue

The following intersections have had one or more fatal crashes in the 2017-2019 three-year period:

- East Tremont Avenue at St. Peters Avenue
- East Tremont Avenue at St. Raymond Avenue
- Pelham Parkway Mainline at Eastchester Road
- Morris Park Avenue at Van Buren Street
- Waters Place at Marconi Street

Additional locations with a high number of crashes (more than 60 during the three-year period) include:

- East Tremont Avenue at Boston Road and West Farms Road
- East Tremont Avenue at Devoe Avenue
- East Tremont Avenue at White Plains Road
- Pelham Parkway South at Seymour Avenue
- Pelham Parkway South at Williamsbridge Road
- Pelham Parkway South at Eastchester Road
- Eastchester Road at Sackett Avenue
- Eastchester Road at Bassett Avenue
- Waters Place at Westchester Avenue

The above listed intersections are discussed below. Where applicable, a discussion of potential measures to enhance pedestrian and driver safety at intersections is provided.

Eastchester Road at Waters Place

Seventy total crashes occurred at this intersection from 2017 to 2019. Eleven were pedestrian related and one was bicycle related. High visibility crosswalks and pedestrian signals with countdown clocks are located on all approaches. Of these twelve crashes, eight of them involved conflicts between pedestrians/cyclists and turning vehicles. Measures to increase pedestrian safety at this location could include the addition of an LPI phase for pedestrians crossing Eastchester Road and the installation of signs warning turning vehicles to yield to pedestrians in the crosswalk.

Eastchester Road and Williamsbridge Road

Out of 48 crashes in the 2017-2019 three-year period at this intersection, seven were pedestrian related and one was bicycle related. Six of the pedestrian-related crashes involved conflicts between turning vehicles and pedestrians within the crosswalk. Pedestrian safety at this intersection could be increased by installing an LPI phase for pedestrians crossing Williamsbridge Road and the installation of signs warning turning vehicles to yield to pedestrians in the crosswalk.

Waters Place at Fink Avenue

Ninety-five crashes were experienced at this intersection in the three-year period, eight of which were pedestrian-related and two of which were bicycle-related. Half of the pedestrian- and bicycle-related crashes involved conflicts between left-turning cars. Additionally, an off-ramp from the Hutchinson River Parkway is located at this intersection, which contributes to drivers speeding excessively as they exit the highway. Measures to enhance safety at this location could include the installation of an LPI phase for pedestrians crossing Waters Place, as well as the installation of a speed camera for vehicles exiting the highway.

East Tremont Avenue at St. Peters Avenue

One fatal crash occurred at this intersection in 2017, where a vehicle collided with a pedestrian standing in the center of the road. This intersection is unsignalized and there are no crosswalks for pedestrians to cross East Tremont Avenue.

East Tremont Avenue at St. Raymond Avenue

A fatal crash occurred in 2017 when a vehicle exiting a parking lot collided with a pedestrian on the sidewalk. This intersection has a high number of crashes with 52 occurring in the three-year study period. Of these crashes, thirteen involved vehicles entering, exiting, or inside of the parking lot.

Pelham Parkway Mainline at Eastchester Road

Two fatal crashes have occurred at this intersection. The first was in 2017, when one vehicle rear-ended another and resulted in a fatality of one of the motor vehicle occupants. The second fatal crash, which occurred in 2018, happened when one vehicle side swiped another and then struck a pedestrian in the crosswalk, who was killed. Since Pelham Parkway Mainline is a four-lane roadway, side swipes are common with thirteen out of forty crashes in the three-year period being side swipes.

Morris Park Avenue at Van Buren Street

A 2018 fatal crash at this intersection involved a motorcyclist who lost control of their motorcycle with no apparent cause. They were ejected onto the pavement, causing fatal injuries. Overall, this intersection is not a high-crash intersection with just sixteen crashes from 2017 to 2019, none of which involved pedestrians and one that involved a bicycle.

Waters Place at Marconi Street

A pedestrian was fatally struck near this intersection in 2018 when they were crossing outside of the crosswalk. Three additional crashes involved injured pedestrians who were crossing outside of the crosswalk or crossing against the signal. North and west crosswalks are provided at this intersection with high visibility markings.

East Tremont Avenue at Boston Road and West Farms Road

This intersection has a high number of crashes, as 97 have occurred from 2017 to 2019. It is a five-legged intersection located underneath an elevated subway structure, causing it to be dark and have obstructed sightlines due to the presence of columns. Additionally, several lane pavement markings and crosswalk

stripings are faded, which may cause confusion for drivers. Safety improvement measures could include increased lighting and repainting of faded pavement markings.

East Tremont Avenue at Devoe Avenue

Sixty-five crashes occurred at this intersection during the three-year study period, of which only one involved a pedestrian. There does not seem to be a prevailing reason behind the high number of crashes at this location; however, geometric characteristics may play a role as the intersection corners are not at 90-degree right angles. Also, the intersection of East Tremont Avenue at East 177th Street is located less than 100 feet to the west of this intersection.

East Tremont Avenue at White Plains Road

During the three-year study period, there were 72 crashes at this intersection. Three were pedestrian related, all struck while crossing with right-of-way within the crosswalk. The crosswalks are striped with high-visibility markings and countdown clocks are located on each approach. No prevailing trends were identified as the primary cause of recorded crashes.

Pelham Parkway South at Seymour Avenue

Between 2017 and 2019, this intersection experienced 68 crashes. Sixteen of these are related to vehicles entering, exiting, or inside of the Jacobi Hospital parking lot that is approximately 250 feet east of the intersection. The parking lot driveway exit onto Pelham Parkway South is stop-controlled.

Pelham Parkway South at Williamsbridge Road

Sixty-six crashes occurred at this intersection between 2017 and 2019. Pelham Parkway South and South Service Road each consist of three lanes, and many crashes appeared to occur when drivers changed lanes or made turns from improper lanes.

Pelham Parkway South at Eastchester Road

Out of seventy-four crashes from 2017 to 2019 at this location, none resulted in pedestrian or bicyclist injuries. No prevailing trends were identified as the primary cause of recorded crashes. Pedestrian medians separate the south service road from the mainline, which promote safety.

Eastchester Road at Sackett Avenue

At this intersection, 88 crashes occurred in the three-year period from 2017 to 2019, with nine of those being pedestrian related. Four of the pedestrian-related crashes involved drivers colliding with pedestrians while parking their vehicle or exiting the parking lot on the east leg of the intersection, and an additional three involved pedestrians either crossing against the signal or not crossing within the crosswalk, and an additional four. All crosswalks are striped with high-visibility markings, and the north and south crosswalks have countdown clocks installed.

Eastchester Road and Bassett Avenue

This intersection experienced 75 crashes in the most recent three-year period. Three pedestrian related crashes occurred, two of which occurred when cars exiting the Stop ‘N Shop parking lot struck pedestrians on the sidewalk. Eight additional crashes occurred when cars exiting this parking lot were struck by traffic

on Eastchester Road. This parking lot driveway is uncontrolled; placing a stop sign for cars exiting the driveway may increase safety at this location.

Waters Place at Westchester Avenue

At this intersection, 74 crashes occurred between 2017 and 2019. It is located underneath elevated subway tracks, causing it to be dark and have obstructed sightlines due to the presence of columns. Additionally, the southbound and eastbound right turn movements are channelized and stop-controlled rather than signalized. Improvements to enhance driver safety at this location could include improved lighting underneath the subway structure and signalizing the two channelized right-turn movements.

Table 13-61: Summary of Motor Vehicle Crash Data 2017-2019

Intersection		Total Crashes			Injuries												Fatalities		
					Motor Vehicle			Pedestrian			Bicycle			Total					
		2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
East Tremont Avenue	Boston Road	36	40	21	5	4	3	4	1	0	0	1	0	9	6	3	0	0	0
	East 177th Street	6	10	14	2	3	1	0	0	0	0	0	0	2	3	1	0	0	0
	Devoe Avenue	23	23	19	4	4	6	0	1	0	0	0	0	4	5	6	0	0	0
	Bronx Park Avenue	15	7	12	2	1	1	1	0	1	0	0	0	3	1	2	0	0	0
	Morris Park Avenue	18	17	16	0	4	0	1	1	1	0	0	0	1	5	1	0	0	0
	Van Nest Avenue	4	3	13	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0
	Rosedale Avenue	2	6	3	0	1	0	0	1	1	0	0	0	0	2	1	0	0	0
	Commonwealth Avenue	8	4	7	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0
	St. Lawrence Avenue	7	5	3	3	0	0	1	1	0	0	0	0	4	1	0	0	0	0
	Beach Avenue	1	9	11	0	1	1	0	1	1	0	0	0	0	2	2	0	0	0
	Taylor Avenue	7	5	8	1	2	3	0	0	0	0	0	0	1	2	3	0	0	0
	Thieriot Avenue	9	9	8	1	0	1	0	1	0	0	1	0	1	2	1	0	0	0
	Leland Avenue	7	6	3	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	White Plains Road	21	30	21	4	8	6	2	1	0	0	0	0	6	9	6	0	0	0
	Unionport Road	21	12	9	5	2	4	1	3	0	0	0	0	6	5	4	0	0	0
	Dogwood Drive	4	8	10	0	2	1	0	0	0	0	0	0	0	2	1	0	0	0
	Elm Drive	4	10	8	1	2	2	0	0	0	0	0	0	1	2	2	0	0	0
	Purdy Street	10	10	5	1	1	1	0	1	0	1	0	0	2	2	1	0	0	0
	Bronxdale Avenue	7	10	8	0	2	1	0	0	0	0	0	0	0	2	1	0	0	0
	Castle Hill Avenue	13	18	15	2	3	3	1	0	1	0	0	0	3	3	4	0	0	0
	Lyvere Street	7	7	2	1	0	0	1	0	2	0	0	0	2	0	2	0	0	0
	Seddon Street	8	3	4	2	1	0	1	0	1	0	0	0	3	1	1	0	0	0
	St. Peters Avenue	4	2	4	1	0	0	1	2	0	0	0	0	1	2	0	1	0	0
	Lurting Avenue	3	3	3	1	1	1	1	0	0	0	0	0	2	1	1	0	0	0
	Silver Street	6	8	5	3	1	2	0	0	1	1	0	0	4	1	3	0	0	0
	St. Raymond Avenue	23	20	9	1	1	2	4	1	0	0	0	0	4	2	2	1	0	0
	Williamsbridge Road	5	10	5	0	0	0	1	1	1	0	0	0	1	1	1	0	0	0
	Frisby Avenue	7	7	2	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0
Pelham Parkway N	Seymour Avenue	5	5	4	2	1	1	0	0	0	0	0	0	2	1	1	0	0	0
	Eastchester Road	15	15	14	1	2	1	1	1	1	0	1	1	2	4	3	0	0	0
	Williamsbridge Road	17	13	19	1	2	4	0	2	1	0	0	0	0	0	0	0	0	0
	Stillwell Avenue	9	8	5	2	1	2	0	0	0	0	0	0	2	1	2	0	0	0
Pelham Parkway S	Wilson Avenue	5	4	2	3	1	1	0	2	1	0	0	0	3	3	2	0	0	0
	Seymour Avenue	34	16	18	4	3	3	0	1	1	0	0	1	4	4	5	0	0	0
	Williamsbridge Road	18	23	25	4	4	3	0	1	1	0	0	0	4	5	4	0	0	0
	Eastchester Road	18	32	24	3	12	4	0	0	0	0	0	0	3	12	4	0	0	0
	Stillwell Avenue	10	18	18	1	4	6	0	0	2	0	0	0	1	4	8	0	0	0
Pelham Parkway Main	Eastchester Road	17	13	10	5	5	3	0	1	2	0	0	0	4	5	5	1	1	0
	Stillwell Avenue	4	10	9	1	0	2	0	1	1	0	0	0	1	1	3	0	0	0

Table 13-61: Summary of Motor Vehicle Crash Data 2017-2019 (cont.)

Intersection		Total Crashes			Injuries												Fatalities		
					Motor Vehicle			Pedestrian			Bicycle			Total					
		2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Morris Park Avenue	East 180th Street	23	12	12	5	3	2	1	1	0	1	0	0	7	4	2	0	0	0
	Adams Street	11	4	7	1	1	0	2	0	1	0	0	2	3	1	3	0	0	0
	Van Buren Street	4	6	6	1	1	1	0	0	0	0	1	0	1	1	1	0	1	0
	Unionport Road	6	3	5	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0
	Amethyst Street	9	13	9	0	1	3	3	1	0	0	0	0	3	2	3	0	0	0
	Victor Street	6	4	9	3	1	1	0	0	0	0	0	0	3	1	1	0	0	0
	White Plains Road	9	19	13	1	4	2	2	2	1	0	2	1	3	8	4	0	0	0
	Hunt Avenue	1	7	7	0	2	1	0	0	0	0	0	0	0	2	1	0	0	0
	Holland Avenue	8	6	8	2	1	0	1	1	0	0	1	0	3	3	0	0	0	0
	Wallace Avenue	3	4	6	1	2	1	0	0	0	0	0	0	1	2	1	0	0	0
	Bronxdale Avenue	9	9	6	3	3	1	1	1	0	0	1	0	4	5	1	0	0	0
	Fowler Avenue	7	6	8	0	2	1	0	0	1	0	0	0	0	2	2	0	0	0
	Bogart Avenue	6	4	4	2	0	0	0	0	0	1	0	0	3	0	0	0	0	0
	Radcliff Avenue	8	5	5	1	2	0	4	0	0	0	0	0	5	2	0	0	0	0
	Colden Avenue	6	2	5	1	0	0	0	0	1	0	0	0	1	0	1	0	0	0
	Williamsbridge Road	15	10	9	3	5	3	0	0	0	0	0	0	3	5	3	0	0	0
	Eastchester Road	28	20	11	6	4	3	1	0	0	0	0	0	7	4	3	0	0	0
	Lebanon Street	12	3	7	1	1	0	1	0	2	0	0	1	2	1	3	0	0	0
Van Nest Avenue	East 180th Street	6	6	5	0	1	1	2	1	1	0	0	0	2	2	2	0	0	0
	Adams Street	7	5	3	4	1	0	0	0	0	1	0	0	5	1	0	0	0	0
	Fillmore Street	2	2	4	1	0	2	0	0	0	0	0	0	1	0	2	0	0	0
	Taylor Avenue	3	5	7	1	0	0	0	0	2	0	0	0	1	0	2	0	0	0
	Bronxdale Avenue	10	11	8	2	0	1	1	0	0	0	0	0	3	0	1	0	0	0
	White Plains Road	11	11	8	2	1	2	0	2	1	0	0	1	2	3	4	0	0	0
	Colden Avenue	6	4	3	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0
	Williamsbridge Road	6	9	6	0	3	1	3	0	0	0	0	0	3	3	1	0	0	0
Rhinelander Avenue	Williamsbridge Road	8	19	10	4	2	0	0	3	1	0	0	0	4	5	1	0	0	0
	Eastchester Road	14	19	17	0	1	4	0	0	2	0	0	0	0	1	6	0	0	0
Guerlain Street	Thieriot Avenue	5	3	4	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0
	Leland Avenue	7	7	9	2	3	3	0	1	0	0	0	0	2	4	3	0	0	0
	White Plains Road	8	12	16	0	2	3	1	0	1	0	1	0	1	3	4	0	0	0
Archer Street	Taylor Avenue	5	5	3	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0
	Leland Avenue	3	12	8	1	2	2	0	1	0	0	0	1	1	3	3	0	0	0
	White Plains Road	12	15	11	2	1	2	0	2	1	0	0	0	2	3	3	0	0	0
Pierce Avenue	Bronxdale Avenue	12	17	15	1	3	2	2	2	2	0	0	0	3	5	4	0	0	0
	Hone Avenue	2	8	4	1	2	0	0	1	0	0	0	0	1	3	0	0	0	0
	Williamsbridge Road	7	4	7	0	0	3	2	0	0	0	0	0	2	0	3	0	0	0

Table 13-61: Summary of Motor Vehicle Crash Data 2017-2019 (cont.)

Intersection		Total Crashes			Injuries												Fatalities		
					Motor Vehicle			Pedestrian			Bicycle			Total					
		2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Sackett Avenue	Williamsbridge Road	9	11	13	1	3	2	0	0	0	1	0	0	2	3	2	0	0	0
	Eastchester Road	29	32	27	2	6	3	4	2	3	0	0	0	6	8	6	0	0	0
Waters Place	Eastchester Road	25	26	19	2	3	3	2	3	6	0	0	1	4	6	10	0	0	0
	Westchester Ave	25	31	18	7	4	3	0	0	2	0	0	0	0	0	0	0	0	0
	Fink Ave	31	28	36	8	5	9	1	2	6	1	1	0	0	0	0	0	0	0
	Marconi Street	11	11	8	2	1	2	3	2	0	0	0	0	5	2	2	0	1	0
Mansion Street	Noble Avenue	11	4	6	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0
	Rosedale Avenue	4	7	5	1	0	0	0	0	0	0	1	0	1	1	0	0	0	0
Metropolitan Oval	Unionport Road	18	18	18	0	0	1	0	1	1	0	0	0	0	1	2	0	0	0
Metropolitan Avenue	Metropolitan Oval	13	11	2	0	2	0	1	1	0	0	0	0	1	3	0	0	0	0
	Hawthorne Drive	1	1	5	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
	Parkchester Road	2	7	3	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0
	Castle Hill Avenue	7	5	4	1	0	2	0	0	0	0	0	0	1	0	2	0	0	0
Overing Street	Glebe Avenue	6	4	4	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
	Frisby Avenue	6	7	3	2	1	0	1	0	0	0	1	0	3	2	0	0	0	0
Eastchester Road	Williamsbridge Road	11	14	23	1	2	6	1	4	2	0	0	1	2	6	9	0	0	0
	Jarrett Place	3	11	8	0	1	2	0	0	0	0	0	0	0	1	2	0	0	0
	Blondell Avenue	15	7	10	2	0	0	0	0	1	0	0	0	2	0	1	0	0	0
	Bassett Avenue	27	18	30	0	3	3	2	1	0	0	0	0	2	4	3	0	0	0
	Loomis Street	5	10	3	0	4	0	0	0	0	0	0	0	0	4	0	0	0	0
	Stillwell Avenue	4	3	1	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0
	Wilkinson Avenue	12	10	5	3	1	0	0	1	0	0	0	0	3	2	0	0	0	0
	Seminole Street	8	6	9	2	1	2	0	0	0	0	0	0	2	1	2	0	0	0
Williamsbridge Road	Poplar Street	9	5	8	1	0	1	0	1	0	2	0	0	3	1	1	0	0	0
	St. Raymond Avenue	6	8	4	1	0	0	2	2	0	0	0	1	3	2	1	0	0	0
	Halperin Avenue	7	4	3	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0
	Neill Avenue	10	19	15	0	7	2	0	1	1	0	0	0	0	8	3	0	0	0
	Lydig Avenue	16	21	21	1	6	3	0	3	1	1	0	0	2	9	4	0	0	0
	Roberts Avenue	3	3	4	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Castle Hill Avenue	Zerega Avenue	8	6	4	2	1	2	0	0	1	1	0	0	3	1	3	0	0	0
	Parker Street	7	1	7	1	0	2	1	0	0	0	0	1	2	0	3	0	0	0
Wood Road	West Avenue	3	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
St. Peters Avenue	Frisby Avenue	2	7	5	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0
Devoe Avenue	Wyatt Street	3	10	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Westchester Ave	Waters Ave	5	4	11	0	0	5	1	0	0	0	1	1	0	0	0	0	0	0
Bronx River Avenue	Rosedale Avenue	3	3	3	0	1	0	0	1	1	0	0	0	0	2	1	0	0	0

Notes:

Due to the high number of intersections in the study area, this table only includes intersections that had 5 or more crashes in the period from 2017 to 2019.

Cells shaded in grey indicate high-crash locations.

Source: STV Incorporated, 2023.

13.11. Parking

EXISTING CONDITIONS

Off-Street Parking

Off-street public parking facilities were inventoried during May 2023 and a total of 15 public parking lots and garages were identified within ¼-mile of projected development sites. Figure 13-26, " Locations of Existing Off-Street Public Parking Lots ," shows the locations of these off-street public parking facilities and Table 13-62, "Existing Off-Street Public Parking Facilities in the Study Area," provides a summary of their names, addresses, license numbers, capacities, and estimated utilization during the weekday midday and overnight and Saturday midday periods.

Field observations and interviews with facilities' attendants or managers were used to determine the utilization levels of each parking facility during the midday and overnight periods on a typical weekday as well as during the midday on a typical Saturday. It is worth noting that several parking facilities were not included as they are accessory to shopping center, hospitals, and other commercial and institutional uses, like Montefiore. As shown in Table 13-62, "Existing Off-Street Public Parking Facilities in the Study Area", the 15 parking lots and garages within the study area have a combined licensed capacity of 3,630 spaces during the weekday and Saturday. During the weekday midday period, approximately 51 percent of spaces within the overall parking study area are utilized, leaving a residual supply of approximately 1,786 available parking spaces. During the weekday overnight period, approximately 43 percent of spaces are utilized, leaving a residual supply of approximately 2,077 available parking spaces. During the Saturday midday period, approximately 65 percent of spaces within the overall parking study area are utilized, leaving a residual supply of approximately 1,283 available parking spaces.


Pelham Pkwy
Morris Park
Bronx Park East
E 180 St
West Farms Sq - E Tremont Av
Zerega Av
Westchester Sq - E Tremont Av
Middletown Rd
Buhre Av
Pelham Bay Park
PELHAM PKWY N
PELHAM PARKWAY GREENWAY
PELHAM PKWY S
CONNECTOR
BOSTON RD
BRONX PARK E
BRONX RIVER PKWY
CROSS BRONX EXPY
HUTCHINSON RIVER PKWY
BRUCKNER EXPY
BRUCKNER BLVD
MORRIS PARK AVE
METROPOLITAN AVE
SACKET AVE
POPLAR ST
WATERBURY AVE
Source: New York City Dept. of City Planning, 2022;
Metropolitan Transportation Authority (MTA), 2018-2019; STV Incorporated, 2022.
N
0
0.25
0.5
Mile
Legend
Parking Facilities
Project Development Sites
Quarter Mile Radius
Open Space
FIGURE 13-26
LOCATIONS OF EXISTING OFF-STREET PUBLIC PARKING LOTS
Bronx Metro-North Station Study

Table 13-62: Existing Off-Street Public Parking Facilities in the Study Area

Map ID	Name	Address	License #	License Capacity	Weekday Midday		Weekday Overnight		Saturday Midday	
					Utilization	Available	Utilization	Available	Utilization	Available
1	JJ&I Parking Corp.	1820 E. Tremont Avenue	2102417	57	95%	3	60%	23	75%	14
2	JJ&I Parking Corp.	1830 E. Tremont Avenue	2098372	16	100%	0	50%	8	80%	3
3	E&D Parking	1855 E. Tremont Avenue	2011316	400	90%	40	85%	60	90%	40
4	SP Plus Corporation	1900 Archer Road	2075359	751	35%	488	65%	263	50%	376
5	SP Plus Corporation	2040 E. Tremont Avenue	2075355	703	30%	492	50%	352	40%	422
6	Quik Park, QP Hosp LLC	1601 Seddon Street	2019528	150	30%	105	8%	138	20%	120
7	QP Hosp LLC	1527 Blondell Avenue	2011637	30	90%	3	10%	27	65%	11
8	QP Hosp LLC - Surface Lot	1601 Poplar Street	2011637	30	100%	0	15%	26	25%	23
9	QP Hosp LLC	1550 Blondell Avenue	2001774	188	90%	19	25%	141	95%	9
10	QP Hosp LLC	1695 Eastchester Road	2001646	107	65%	37	5%	102	95%	5
11	Quik Park Hosp LLC	1975 Eastchester Road	2028853	691	24%	525	10%	622	95%	35
12	Parkchester Tremont Parking Corp	2155 E. Tremont Avenue	0959012	150	100%	0	70%	45	100%	0
13	1872 E. Tremont Parking Corp.	1872 E. Tremont Avenue	2105562	100	90%	10	60%	40	10%	90
14	QP HOSP LLC	1811 Eastchester Road	2001769	225	74%	59	10%	203	45%	124
15	1578 WILLIAMSBRIDGE ROAD LLC	1578 Williamsbridge Road	2091122	32	85%	5	15%	27	65%	11
Total				3630	51%	1,786	43%	2,077	65%	1,283

Source: PHA, 2023.

On-Street Parking

On-street public parking within a ¼-mile radius of the projected development sites is generally governed by street cleaning regulations. As shown in Table 13-63, "Existing Parking Utilization in the Study Area Summary," based on data collected during field surveys conducted in May 2023, on-street parking within the parking study area is approximately 93 percent utilized during the weekday midday period, approximately 87 percent utilized during the weekday overnight period, and approximately 95 percent utilized during the Saturday midday period. Approximately 613, 420 and 1,123 on-street parking spaces are currently available within the study area during each of these periods, respectively.

Table 13-63: Existing Parking Utilization in the Study Area Summary

Existing Study Area Public Parking	Supply	Demand/Utilized Spaces*	Available Spaces	Utilization Rate
Weekday Midday				
Off-Street Parking	3,630	1,844	1,786	51%
On-Street Parking	8,512	7,899	613	93%
Overall Public Parking	12,142	9,743	2,399	80%
Weekday Overnight				
Off-Street Parking	3,630	1,553	2,077	43%
On-Street Parking	8,653	8,233	420	95%
Overall Public Parking	12,283	9,786	2,497	80%
Saturday Midday				
Off-Street Parking	3,630	2,347	1,283	65%
On-Street Parking	8,693	7,570	1,123	87%
Overall Public Parking	12,323	9,917	2,406	80%

Source: PHA, 2023.

Overall Parking Supply and Utilization

Parking demand from office, retail, and community facility uses typically peaks in the midday period and declines during the late afternoon and evening. By contrast, parking demand from residential uses peaks overnight. As the Proposed Actions will facilitate the development of residential, commercial, and community facility uses, the detailed parking analysis presented in this section was conducted only for the weekday midday, weekday overnight, and Saturday midday peak periods. Together with the on-street and off-street parking supply and utilization, the overall weekday midday utilization is approximately 80 percent with 2,399 parking spaces available; the overall weekday overnight utilization is approximately 80 percent with 2,497 parking spaces available; and the overall Saturday midday utilization is approximately 80 percent with 2,406 parking spaces available.

THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

By 2033, it is expected that parking demand in the vicinity of projected development sites will increase due to long-term background growth as well as development that could occur pursuant to existing zoning. The forecast of parking demand generated by residential development on projected development sites in the No-Action condition is based on 2014–2019 five-year ACS auto ownership data. Parking demands from other uses were derived from the forecasts of daily auto trips from these uses.

Many projected development sites would experience new residential, commercial, and community facility development under the No-Action condition. As accessory spaces on these projected development sites would not be sufficient to accommodate all of the midday and overnight parking demand generated by the No-Action development, some of the incremental No-Action demand is expected to utilize off-street public parking facilities or park on-street.

The forecast of future No-Action parking conditions also considers the potential for new demand from the developments not located on projected development sites that are listed in Table 2-4, “Development

Projects in the Future Without the Proposed Actions" in Chapter 2, "Land Use, Zoning, and Public Policy." ACS auto ownership data and auto trip forecasts were used to forecast the parking demands from these developments except where site-specific data were available from secondary sources, such as previous environmental studies. In addition, the forecast of future No-Action parking conditions incorporates annual background growth rates of 0.25 percent per year for the 2023 through 2028 period and 0.125 percent per year for the 2028 through 2033 period. These background growth rates, recommended in the *CEQR Technical* Manual for projects in the Bronx, are applied to account for smaller projects and as-of-right developments not reflected in Table 2-4, and general increases in parking demand not attributable to specific development projects.

As shown in Table 13-64, "No-Action Parking Capacity, Demand and Utilization," based on the increased demand under the No-Action condition, weekday midday parking demand within the overall parking study area is expected to total 84 percent of capacity with a surplus of 1,927 parking spaces. Weekday overnight utilization is expected to increase to 84 percent of capacity with a surplus of 1,980 parking spaces. Saturday midday utilization is expected to increase to 85 percent of capacity with a surplus of 1,879 parking spaces.

Table 13-64: No-Action Parking Capacity, Demand, and Utilization

No-Action Study Area Parking	Weekday Midday	Weekday Overnight	Saturday Midday
Background Demand Growth*	184	185	188
Soft Sites Excess Demand & Parking Elimination**	295	358	358
Excess Project Incremental No-Action Demand	19	0	7
No-Action Demand Total	**10,241**	**10,329**	**10,470**
Capacity Eliminated Projected Dev. Site †	-30	-30	-30
Additional Capacity for Construction Closures	56	56	56
No-Action Capacity Total	**12,168**	**12,309**	**12,349**
No-Action Surplus/Deficit	**1,927**	**1,980**	**1,879**
No-Action Utilization %	**84%**	**84%**	**85%**

Notes:
*Reflects annual background growth rates of 0.25 percent per year for the 2023 through 2028 period and 0.125 percent for the 2028 through 2033 period.
** Considers No-Action Soft Site parking demand and parking displacement
† Elimination of a public parking facility at Site 21

Source: PHA, 2023.

THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITIONS)

With the Proposed Actions, it is assumed that 33 of the 60 projected development sites would provide accessory parking. Table 13-65, "Total Weekday Hourly Parking Accumulation for the Proposed Actions" and Table 13-66, "Total Saturday Hourly Parking Accumulation for the Proposed Actions" show the forecast of the parking demand for each land use under the With-Action condition of the Proposed Actions on a weekday and Saturday, respectively. The forecast of parking demand generated by the Proposed

Actions' residential component is based on 2015–2019 five-year ACS data on average vehicles per household for Bronx Census Tracts 200, 204, 210.01, 216.01, 216.02, 218, 238, 240, 244, 256, 284, and 296 which encompass the Affected Area. Parking demands from all other uses are derived from the forecasts of daily auto trips from these uses.

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 hour, whereas residential parking demand would peak during the overnight period. Overall, development associated with the Proposed Actions would generate a peak net parking demand of approximately 5,830 spaces during the day on a typical weekday and 3,797 spaces during the overnight on a typical weekday. In addition, development associated with the Proposed Actions would generate a peak net parking demand of approximately 4,352 spaces during the day on a typical Saturday. With the Proposed Actions, it is assumed that up to 5,973 accessory parking spaces would be provided on projected development sites compared to an estimated 2,208 accessory spaces in the No-Action condition.

Table 13-65: Total Weekday Hourly Parking Accumulation for the Proposed Actions

Time	Local Retail	Office/Life Sciences	Residential	Auto Repair*	Light Industrial	Warehouse**	Medical Office	House of Worship*	STEAM Center	School	Total Demand
12-1 AM	0	3	3,750	0	0	0	0	0	0	0	3,753
1-2	0	3	3,775	0	0	0	0	0	0	0	3,778
2-3	0	2	3,793	0	0	0	0	0	0	0	3,795
3-4	0	0	3,797	0	0	0	0	0	0	0	3,797
4-5	0	10	3,785	0	0	0	0	0	0	0	3,795
5-6	0	27	3,724	0	0	0	0	0	0	0	3,751
6-7	0	96	3,583	0	0	0	42	0	0	0	3,721
7-8	9	341	3,294	0	0	0	225	0	2	10	3,881
8-9	14	978	2,745	0	0	0	722	0	9	49	4,517
9-10	27	1,985	2,515	0	0	0	1,093	0	9	49	5,678
10-11	36	2,130	2,407	0	0	0	1,198	1	9	49	5,830
11-12	36	2,130	2,376	0	0	0	1,082	2	9	49	5,684
12-1 PM	41	2,112	2,376	0	0	0	959	2	9	49	5,548
1-2	41	2,121	2,399	0	0	0	1,049	2	9	49	5,670
2-3	52	2,139	2,412	0	0	0	1,043	2	2	10	5,660
3-4	61	2,106	2,479	0	0	0	916	2	0	0	5,564
4-5	55	1,884	2,537	0	0	0	616	2	0	0	5,094
5-6	55	1,075	2,699	0	0	0	321	2	0	0	4,152
6-7	55	513	2,898	0	0	0	148	2	0	0	3,616
7-8	35	250	3,045	0	0	0	55	2	0	0	3,387
8-9	25	146	3,224	0	0	0	22	1	0	0	3,418
9-10	7	85	3,408	0	0	0	11	0	0	0	3,511
10-11	4	29	3,561	0	0	0	0	0	0	0	3,594
11-12	0	0	3,681	0	0	0	0	0	0	0	3,681

Notes: Parking accumulation pattern based on data provided by NYCDOT unless otherwise noted.
* Based on data from the Inwood Rezoning DEIS (2018).
** Based on data from East New York FEIS (2016).

Source: PHA, 2023.

Table 13-66: Total Saturday Hourly Parking Accumulation for the Proposed Actions

Time	Local Retail	Office/Life Sciences	Residential	Auto Repair*	Light Industrial	Warehouse**	Medical Office	House of Worship*	STEAM Center	School	Total Demand
12-1 AM	2	4	3,737	0	0	0	0	0	0	0	3,743
1-2	2	5	3,782	0	0	0	0	0	0	0	3,789
2-3	2	1	3,837	0	0	0	0	0	0	0	3,840
3-4	2	2	3,858	0	0	0	0	0	0	0	3,862
4-5	2	14	3,877	0	0	0	0	0	0	0	3,893
5-6	2	25	3,867	0	0	0	0	0	0	0	3,894
6-7	2	54	3,854	0	0	0	18	0	0	0	3,928
7-8	4	83	3,779	0	0	0	95	0	0	0	3,961
8-9	15	162	3,654	0	0	0	427	1	0	0	4,259
9-10	30	207	3,511	0	0	0	593	3	0	0	4,344
10-11	32	218	3,402	0	0	0	696	4	0	0	4,352
11-12	36	241	3,320	0	0	0	595	1	0	0	4,193
12-1 PM	32	227	3,250	0	0	0	522	2	0	0	4,033
1-2	33	209	3,231	0	0	0	504	1	0	0	3,978
2-3	33	182	3,244	0	0	0	392	1	0	0	3,852
3-4	33	134	3,250	0	0	0	268	0	0	0	3,685
4-5	35	98	3,309	0	0	0	190	0	0	0	3,632
5-6	36	56	3,382	0	0	0	92	0	0	0	3,566
6-7	28	42	3,443	0	0	0	35	0	0	0	3,548
7-8	25	35	3,485	0	0	0	14	0	0	0	3,559
8-9	18	26	3,543	0	0	0	8	0	0	0	3,595
9-10	12	23	3,612	0	0	0	0	0	0	0	3,647
10-11	4	18	3,654	0	0	0	0	0	0	0	3,676
11-12	0	2	3,681	0	0	0	0	0	0	0	3,683

Notes: Parking accumulation pattern based on data provided by NYCDOT unless otherwise noted.
* Based on data from the Inwood Rezoning DEIS (2018).
** Based on data from East New York FEIS (2016).

Source: PHA, 2023.

As shown in Table 13-67, "With-Action Parking Capacity, Demand, and Utilization", after accounting for capacities displaced from projected development sites, public parking in the overall study area would have deficits of approximately 2,134 spaces in the weekday midday period, 1,446 spaces during the weekday overnight period, and 1,289 spaces during the Saturday midday period. These deficits would reflect project demand not otherwise accommodated in accessory or off-street public parking facilities as well as demand displaced from an existing parking facility on a projected development site. Per the *CEQR Technical Manual* guidelines, this deficit in the ¼-mile study area is considered a significant shortfall. However, a significant shortfall is not considered a significant adverse impact.

Table 13-67: With-Action Parking Capacity, Demand, and Utilization

With-Action Study Area Parking	Weekday Midday	Weekday Overnight	Saturday Midday
Project Displaced Demand to Public Parking*	30	30	30
Excess Demand to Public Parking**	2,607	1,972	1,714
No-Action Demand Total	10,241	10,329	10,470
With-Action Demand Total	**12,878**	**12,331**	**12,214**
Capacity Eliminated Projected Dev. Site †	-1,424	-1,424	-1,424
No-Action Capacity Total	12,168	12,309	12,349
With-Action Capacity Total	**10,744**	**10,885**	**10,925**
With-Action Surplus/Deficit	**-2,134**	**-1,446**	**-1,289**

Notes:
* Elimination of an employee parking lot on Site 28
** Excess incremental parking demand generated from proposed project sites not accommodated by accessory parking
† Elimination of public parking facilities at Sites 8, 24, and 59

Source: PHA, 2023.

As the study areas are located outside of CEQR Parking Zones 1 and 2 (within which a parking shortfall from a Proposed Action would not be considered significant), the inability of the Proposed Actions and the surrounding area to accommodate future parking demands in the weekday midday, weekday overnight, and Saturday midday periods could potentially be considered significant. Much of the shortfall is highest during the midday peak hours when commercial, retail, and community facility uses that would be developed under the Proposed Actions would typically peak. However, it is important to consider that the Proposed Actions would provide a substantial amount of on-site parking, sufficient to accommodate the majority of its total parking demand generated in the overnight period.

In addition, under *CEQR Technical Manual* guidance, one of the factors to be considered in determining significance of a parking shortfall is the availability of alternative modes of transportation. The Affected Area is served by five subway stations (East 180th Street (2, 5), Pelham Parkway (2,5), Parkchester (6), Westchester Square (6), and Middletown Road (6) stations) as well as 13 NYCT bus services (Bx4, Bx4A, Bx8, Bx12, Bx12-SBS, Bx21, Bx22, Bx24, Bx31, Bx39, Bx40, Bx42, and BxM10). In addition, it is important to note that the Affected Area will be served by two new Metro-North stations – the Parkchester/Van Nest and Morris Park stations, which will provide access to Manhattan's west side, southern Connecticut, and Westchester County. Therefore, the Affected Area is well served by alternate modes.

Despite the area's access to alternative modes of transportation, the fact that a significant portion of the Proposed Actions' demand would be accommodated on-site, and that some drivers destined for the Affected Area would potentially have to travel a greater distance (e.g., between ¼ and ½ mile) to find available parking, the shortfall in parking under the Proposed Actions would be considered a significant shortfall, particularly during the weekday and Saturday midday periods. It is noted, however, that pursuant to the CEQR TM, a significant parking shortfall does not constitute a significant adverse impact.

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Revision Record

Revision	Draft / Final Date	Revision Notes
Rev 00		
Rev 01		
Rev 02		
Rev 03		