

A. INTRODUCTION AND SUMMARY OF FINDINGS

This chapter examines the potential effects of the Proposed Project on the transportation system in the “Traffic Study Area” described below and in **Figure 11-1**, describing existing conditions within the Traffic Study Area and comparing future conditions in 2032 (the “Build year”) both without the Proposed Project (the “No Build” condition) and with the Proposed Project (the “Build” condition).

The time periods and study intersections analyzed were developed in coordination with the City of Yonkers and their consultants. Traffic conditions were evaluated at 38 intersections for the Weekday AM and PM peak hours. Traffic conditions for 21 of these intersections were also evaluated for the Saturday midday peak hour.

The analyses did not indicate project-related pedestrian safety, pedestrian, or transit impacts at the evaluated intersections. The analyses did indicate project-related traffic impacts at 18 of the 38 evaluated intersections. Measures to mitigate those impacts are proposed. **Table 11-1** lists the intersections and time/days where project-related impacts would occur and where mitigation measures are proposed to return to the future No Build condition.

A majority of the impacted intersections would operate at an overall level of service D or better with the proposed mitigations; however, while mitigated to the No Build condition, the following intersections would operate at an overall level of service E:

- Riverdale Avenue and Prospect Street
- Nepperhan Avenue and Ashburton Avenue

The Proposed Project would result in the removal of existing on- and off-street parking at both the Chicken Island and North Broadway Sites. The Proposed Project, with the proposed changes to the residential parking requirements, is expected provide sufficient off-street parking through a combination of valet parking, self-parking, and shared parking operations to accommodate the project-generated increase in parking demand.

**Table 11-1
Summary of Project-Related Traffic Impacts**

Intersection	Proposed Action					
	Weekday AM		Weekday PM		Saturday ¹	
	Traffic Impact	Mitigation Provided	Traffic Impact	Mitigation Provided	Traffic Impact	Mitigation Provided
Buena Vista / Prospect Street	SBLT	Yes	WBR NBTR SBLT	Yes	Not Impacted	N/A
Nepperhan Street / Warburton Avenue / Dock Street / Manor House Square	SBLTR	Yes	SBLTR	Yes	Not Impacted	N/A
Riverdale Avenue / Warburton Avenue / Main Street	Not Impacted	N/A	EBLTR	Yes	Not Impacted	N/A
Riverdale Avenue / Hudson Street	Not Impacted	N/A	EBLTR	Yes	Not Impacted	N/A
Riverdale Avenue / Prospect Street	WBL	Yes	EBLTR WBL WBT	Yes	Not Impacted	N/A
Broadway / Hudson Street	Not Impacted	N/A	EBLR	Yes	Not Impacted	N/A
South Broadway / Prospect Street / Nepperhan Avenue	EBTR WBL SBL	Yes	WBL NBTR SBL	Yes	EBTR	Yes
South Broadway / Vark Street / Park Hill Avenue	Not Impacted	N/A	NBLTR	Yes		
New Main Street / Nepperhan Avenue	Not Impacted	N/A	Not Impacted	N/A	WBL NBLTR	Yes
Waverly Street / Nepperhan Avenue	NBLR	Yes	NBLR	Yes	NBLR	Yes
Nepperhan Avenue / Ashburton Avenue	EBL	Yes	EBL	Yes		
Nepperhan Avenue / Elm Street	EBL	Yes	EBL NBTR	Yes	EBL	Yes
Walnut Street / Yonkers Avenue	Not Impacted	N/A	EBL	Yes		
Yonkers Avenue / Saw Mill Northbound Ramps	EBL	Yes	EBL WBT	Yes		
Yonkers Avenue / Midland Avenue (West)	SBL	Yes	Not Impacted	N/A		
Yonkers Avenue / Saw Mill Southbound Ramps	SBR	Yes	SBR	Yes		
Yonkers Avenue / Cross County Parkway On-Ramp / Midland Avenue (East)	SBTR	Yes	Not Impacted	N/A		
Hawthorne Avenue / Prospect Street	Not Impacted	N/A	WBL	Yes	Not Impacted	N/A
Locust Hill Avenue / Ashburton Avenue	Not Impacted	N/A	NBLR	No		

Notes: L = Left Turn, T = Through, R = Right Turn, EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound, N/A = Not Applicable.
 1. Shading indicates intersection was not evaluated during Saturday peak hour.

B. CAPACITY ANALYSIS

B.1. SIGNALIZED INTERSECTIONS

The operation of signalized intersections in the Traffic Study Area (see **Figure 11-1**) was analyzed by applying the Percentile Delay Methodology included in the Synchro 10 traffic signal software. The Percentile Delay Methodology calculates vehicle delays for five different percentile scenarios (10th, 30th, 50th, 70th, and 90th) and takes the volume weighted average of the scenarios as compared to the *Highway Capacity Manual 6th Edition* (HCM), which calculates delay for a single average scenario. The Percentile Delay Methodology was used in this analysis (versus HCM) because it includes a queue delay component to account for the effects of queues and blocking on short links and turning bays. The methodology evaluates signalized intersections for average delay per vehicle and Level of Service (LOS).

LOS is characterized for the entire intersection, each intersection approach, and/or each lane group. LOS is the only measure of effectiveness provided for the entire intersection operation. Total delay and volume-to-capacity (v/c) ratio are used to characterize LOS for a lane group. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

LOS A describes operation with a delay of 10 seconds per vehicle or less. This level is typically assigned progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

LOS B describes operation with delay between 10 and 20 seconds per vehicle. This level is typically assigned when the progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

LOS C describes operation with delay between 20 and 35 seconds per vehicle. This level is typically assigned when the volume-to-capacity ratio is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

LOS D describes operation with delay between 35 and 55 seconds per vehicle. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

LOS E describes operation with delay between 55 and 80 seconds per vehicle. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

LOS F describes operation with delay exceeding 80 seconds per vehicle or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

A lane group can incur a delay less than 80 seconds per vehicle when the volume-to-capacity ratio exceeds 1.0. This condition typically occurs when the cycle length is short,

the signal progression is favorable, or both. As a result, both the delay and volume-to-capacity ratio are considered when lane group LOS is established. A ratio of 1.0 or more indicates that an intersection is at capacity and experiences heavy congestion.

HCM’s standard delay criteria for the range of service levels at signalized intersections are shown in **Table 11-2**.

**Table 11-2
LOS Criteria for Signalized Intersections**

Total Delay Per Vehicle	Level-of-Service (LOS) ¹	
	v/c ratio ≤ 1.0	v/c ratio > 1.0
≤ 10.0 seconds	A	F
>10.0 and ≤ 20.0 seconds	B	F
>20.0 and ≤ 35.0 seconds	C	F
>35.0 and ≤ 55.0 seconds	D	F
>55.0 and ≤ 80.0 seconds	E	F
>80.0 seconds	F	F

Note: ¹ For approach-based and intersection-wide assessments, LOS is defined solely by delay.
Source: Transportation Research Board. *Highway Capacity Manual, 6th Edition*.

B.2. UNSIGNALIZED INTERSECTIONS

LOS for a two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections is determined by the computed or measured control delay using HCM methodology. LOS is determined for each minor-street movement (or shared movement), major-street left turns at TWSC intersections, and for all movements at AWSC intersections. LOS is not defined for the intersection as a whole for TWSC intersections. HCM’s standard LOS criteria for TWSC and AWSC unsignalized intersections are summarized in **Table 11-3**.

**Table 11-3
LOS Criteria for Unsignalized Intersections**

Control Delay Per Vehicle	Level-of-Service (LOS) ¹	
	v/c ratio ≤ 1.0	v/c ratio > 1.0
≤ 10.0 seconds	A	F
>10.0 and ≤ 15.0 seconds	B	F
>15.0 and ≤ 25.0 seconds	C	F
>25.0 and ≤ 35.0 seconds	D	F
>35.0 and ≤ 50.0 seconds	E	F
>50.0 seconds	F	F

Note: ¹ For TWSC intersections, the LOS criteria apply to each lane on a given approach and to each approach on the minor street (for TWSC intersections). LOS is not calculated for major-street approaches or for the intersection as a whole.
Source: Transportation Research Board. *Highway Capacity Manual, 6th Edition*.

The LOS criteria for unsignalized intersections are somewhat different from the criteria used for signalized intersections. At TWSC intersections, drivers on the stop-controlled approaches need to find a break in the traffic to cross a lane or make a turn. When drivers on the stop-controlled approach are waiting in a traffic queue, this results in additional delay incurred while waiting to enter the main roadway. AWSC intersections require drivers on all approaches to stop before proceeding into the intersection.

C. 2020 EXISTING CONDITIONS

To assess potential traffic impacts associated with the Proposed Project, key intersections in the Traffic Study Area that might be affected by Project generated trips were identified. As presented in **Figure 11-1**, 38 intersections were identified for analysis during the weekday AM and PM peak hours (locations denoted with an asterisk were also identified in coordination with the City for analysis during the Saturday peak hour):

1. Buena Vista Avenue and Main Street*
2. Buena Vista Avenue and Hudson Street*
3. Buena Vista Avenue and Prospect Street*
4. Prospect Street and Hawthorne Street*
5. Hawthorne Avenue/Market Place and Main Street*
6. Hawthorne Avenue and Hudson Street*
7. Warburton Avenue and Ashburton Avenue
8. Warburton Avenue and Wells Avenue*
9. Warburton Avenue and Nepperhan Street*
10. Riverdale Avenue and Main Street*
11. Riverdale Avenue and Hudson Street*
12. Riverdale Avenue and Prospect Street*
13. Riverdale Avenue and Vark Street
14. North Broadway and Ashburton Avenue
15. North Broadway and Manor House Way*
16. North Broadway/South Broadway and New Main St/Palisade Avenue*
17. South Broadway and Hudson Street*
18. South Broadway and Nepperhan Avenue/Prospect Street*
19. South Broadway and Vark Street/Park Hill Avenue
20. Locust Hill Avenue and Palisade Avenue*
21. Locust Hill Avenue and Ashburton Avenue
22. New Main Street and Nepperhan Avenue*
23. Palisade Avenue and Ashburton Avenue
24. Palisade Avenue and Lafayette Place
25. Palisade Avenue/School Street and Elm Street*
26. School Street and Nepperhan Avenue*
27. Waverly Street and Nepperhan Avenue*
28. Nepperhan Avenue and Ashburton Avenue
29. Nepperhan Avenue and Copcutt Lane
30. Nepperhan Avenue and Elm Street*
31. Yonkers Avenue and Walnut Street
32. Yonkers Avenue and Prescott Street
33. Yonkers Avenue and Ashburton Avenue
34. Yonkers Avenue and Saw Mill River Parkway Southbound Ramps
35. Yonkers Avenue and Saw Mill River Parkway Northbound Ramps
36. Yonkers Avenue and Wasylenko Lane
37. Yonkers Avenue and Midland Avenue (east)
38. Yonkers Avenue and Midland Avenue (west)

The global pandemic of Coronavirus disease 2019 (COVID-19) resulted in atypical levels and patterns of vehicular traffic. As such, traffic volume field measurements were lower than would

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otherwise be anticipated, and therefore, not representative of typical existing traffic conditions that serve as a baseline in estimating future traffic conditions.

In its recently released *Traffic Data Collection Guidance during COVID-19 Pandemic Memorandum*, NYSDOT recommends collecting turning movement count (TMC) and automatic traffic recorder (ATR) data during this time and adjusting the counts based a single factor of the collected ATR data and the historical ATR data. However, this approach does not account for changes in traffic patterns, including turning movement percentages at intersections, during the pandemic, and an adjustment of TMC using a single factor may not reflect historical or “normal” conditions.

To more accurately establish baseline traffic volumes to reflect pre-pandemic conditions, historical traffic volume data were sourced from the StreetLight Insight data platform. StreetLight Data is historical location-based service data aggregated over several months and may better reflect historical, or “normal,” traffic patterns including turning movement percentages. The StreetLight data were calibrated utilizing historical traffic data from the following sources:

- NYSDOT Traffic Data Viewer Annual Average Daily Traffic (AADT) and Average Daily Traffic (ADT)
- Westchester County Department of Public Works AADT and ADT
- Buena Vista Teutonia Development Traffic Study (2017) TMC and ATR
- City TMC and ATR for nearby projects collected within the past five years

Due to limited historical data for the Saturday peak hour, AKRF also collected TMCs on Saturday, November 14, 2020 at the following intersections to validate/calibrate the Saturday StreetLight data:

- Buena Vista Avenue and Main Street
- Buena Vista Avenue and Prospect Street
- North Broadway and Ashburton Avenue
- South Broadway and Nepperhan Avenue/Prospect Street
- Palisade Avenue/School Street and Elm Street

Traffic count data are provided in **Appendix L-1**.

Based on a review of the traffic count data, the peak hours for the Traffic Study Area were determined to be as follows:

- Weekday AM: 7:00–8:00 AM
- Weekday PM: 5:00–6:00 PM
- Saturday Midday: 1:00–2:00 PM

C.1. ROADWAY AND INTERSECTION CHARACTERISTICS

The following is a brief description of the major roadways and intersections within the Traffic Study Area.

C.1.a. Ashburton Avenue

Ashburton Avenue traverses the Traffic Study Area in an east-west direction between Alexander Street/Polychrome Street to the west and Yonkers Avenue to

the east and is maintained by the City. NYSDOT classifies Ashburton Avenue as a major collector roadway from Alexander Street to Warburton Avenue, a minor arterial roadway from Warburton Avenue to North Broadway, a principal arterial roadway from North Broadway to Palisade Avenue, and a minor arterial roadway from Palisade Avenue to Yonkers Avenue. Ashburton Avenue is also designated as NYS Route 9A (“Route 9A”) between North Broadway and Saw Mill River Road. Ashburton Avenue generally provides one moving lane in each direction with additional left and right turn lanes at several intersections along its length. Two-way traffic volumes along Ashburton Avenue range from approximately 225 to 1,240 vehicles per hour (vph) within the Traffic Study Area. The pavement along Ashburton Avenue ranges from approximately 34 to 53 feet in width and was observed to be in fair to good condition. There is an overpass clearance of 12’1” where Ashburton Avenue passes underneath the Metro-North Railroad (“MNR”) Hudson Line railroad tracks.

C.1.b. Buena Vista Avenue

Buena Vista Avenue is a local, City-maintained roadway that generally traverses the Traffic Study Area in a north-south direction. Buena Vista Avenue provides one moving lane in each direction with two-way traffic volumes that range from approximately 44 to 731 vph within the Traffic Study Area. The pavement of Buena Vista Avenue ranges from approximately 33 to 56 feet in width was observed to be in fair to good condition.

C.1.c. Elm Street

Elm Street traverses the Traffic Study Area in an east-west direction and is maintained by the City. NYSDOT classifies Elm Street as a principal arterial between Palisade Avenue/New School Street and Nepperhan Avenue and as a minor arterial east of Nepperhan Avenue. Between Palisade Avenue/New School Street and Nepperhan Avenue, Elm Street is a one-way eastbound street with one-way traffic volumes that range from approximately 264 to 368 vph. East of Nepperhan Avenue, Elm Street provides two-way traffic flow with one moving lane in each direction with two-way traffic volumes that range from approximately 335 to 847 vph within the Traffic Study Area. The pavement along Elm Street ranges from approximately 35 to 37 feet in width and was observed to be in good condition.

C.1.d. Hawthorne Avenue

Hawthorne Avenue is classified by NYSDOT as a major collector roadway and is maintained by the City. Hawthorne Avenue generally traverses the Traffic Study Area in a north-south direction. South of Prospect Street, Hawthorne Avenue is a one-way southbound street with one-way traffic volumes that range from approximately 69 to 171 vph within the Traffic Study Area. From Prospect Street to Hudson Street, Hawthorne Avenue is a one-way northbound street with one-way traffic volumes that range from approximately 112 to 189 vph. From Hudson Street to Main Street, Hawthorne Avenue provides two-way traffic flow with one moving lane in each direction and two-way traffic volumes that range from approximately 87 to 164 vph. The pavement along Hawthorne Avenue ranges from approximately 22 to 23 feet in width and was observed to be in fair to good condition.

C.1.e. Hudson Street

Hudson Street generally traverses the Traffic Study Area in an east-west direction between Buena Vista Avenue to the west and South Broadway to the east and is maintained by the City. NYSDOT classifies Hudson Street as a principal arterial roadway between Hawthorne Avenue and Riverdale Avenue. Between Buena Vista Avenue and Hawthorne Avenue, Hudson Street provides two-way traffic flow with one moving lane in each direction and two-way traffic volumes that range from approximately 81 to 193 vph. Between Hawthorne Avenue and Riverdale Avenue, Hudson Street is one-way eastbound with one-way traffic volumes that range from approximately 74 to 614 vph. The pavement along Hudson Street ranges from approximately 34 to 36 feet in width and was observed to be in fair to good condition.

C.1.f. Main Street

Main Street generally traverses the Traffic Study Area in an east-west direction between the Hudson River Waterfront to the west and Palisade Avenue to the east and is maintained by the City. NYSDOT classifies Main Street as a principal arterial. Between Buena Vista Avenue and Riverdale Avenue/Warburton Avenue, Main Street provides two-way traffic flow with one moving lane in each direction and two-way traffic volumes that range from approximately 97 to 545 vph. Between Riverdale Avenue and Palisade Avenue, Main Street is a one-way westbound street with one-way traffic volumes that range from approximately 206 to 447 vph. The pavement along Main Street ranges from approximately 12 to 45 feet in width and was observed to be in good condition. There is an overpass clearance of 10'10" where Main Street passes underneath the MNR Hudson Line railroad tracks.

C.1.g. New Main Street

New Main Street is classified by NYSDOT as a principal arterial roadway and is maintained by the City. New Main Street generally traverses the Traffic Study Area in a north-south direction. South of Nepperhan Avenue, New Main Street provides two-way traffic flow with one moving lane in each direction and two-way traffic volumes that range from approximately 681 to 726 vph within the Traffic Study Area. Between Nepperhan Avenue and Palisade Avenue, New Main Street is a one-way northbound street with one-way traffic volumes that range from approximately 338 to 509 vph. The pavement along New Main Street ranges from approximately 34 to 40 feet in width and was observed to be in good condition. The east side of New Main Street at its approach to Palisade Avenue is designated and signed as a taxi stand.

C.1.h. Nepperhan Avenue

Nepperhan Avenue generally traverses the Traffic Study Area in a north-south direction and is maintained by NYSDOT. NYSDOT classifies Nepperhan Avenue as a principal arterial roadway. Nepperhan Avenue generally provides two to three moving lanes in each direction with additional left and right turn lanes at several intersections along its length. Two-way traffic volumes along Nepperhan Avenue range from approximately 622 to 3,280 vph within the Traffic Study Area. The pavement along Nepperhan Avenue ranges from approximately 62 to 103 feet in width and was observed to be in good condition.

C.1.i. New School Street

New School Street is classified by NYSDOT as a principal arterial roadway and is maintained by the City. New School Street generally traverses the Traffic Study Area in a north-south direction. South of Nepperhan Avenue, New School Street is a one-way southbound street with one-way traffic volumes that range from approximately 33 to 77 vph within the Traffic Study Area. Between Nepperhan Avenue and Palisade Avenue/Elm Street, New School Street provides two-way traffic flow with one moving lane in each direction and two-way traffic volumes that range from approximately 290 to 532 vph. The pavement along New School Street ranges from approximately 18 to 48 feet in width and was observed to be in good condition.

C.1.j. Riverdale Avenue

Riverdale Avenue generally traverses the Traffic Study Area in a north-south direction and is maintained by NYSDOT. NYSDOT classifies Riverdale Avenue as a principal arterial roadway. Riverdale Avenue provides two moving lanes in each direction with left and right turn lanes at several intersections along its length. Two-way traffic volumes along Riverdale Avenue range from approximately 449 to 1,510 vph within the Traffic Study Area. The pavement along Riverdale Avenue ranges from approximately 77 to 82 feet in width and was observed to be in fair to good condition. Riverdale Avenue has a posted speed limit of 30 mph.

C.1.k. Route 9/Broadway

Broadway is classified by NYSDOT as a principal arterial roadway and is maintained by the City. Broadway is also designated as NYS Routes 9 and 9A (“Routes 9 and 9A”) south of Ashburton Avenue and as Route 9 north of Ashburton Avenue. Broadway traverses the Traffic Study Area in a north-south direction and is designated as South Broadway south of Main Street and as North Broadway north of Main Street. Between Vark Street and Hudson Street, South Broadway provides two-way traffic flow with one moving lane in each direction and two-way traffic volumes that range from approximately 384 to 1,094 vph. Between Hudson Street and Wells Avenue, South/North Broadway is a one-way northbound street with one-way traffic volumes that range from approximately 361 to 768 vph. Between Wells Avenue and Ashburton Avenue, North Broadway generally provides two-way traffic flow with one moving lane in each direction and two-way traffic volumes that range from approximately 611 to 711 vph. The pavement along Broadway ranges from approximately 20 to 66 feet in width and was observed to be in fair to good condition.

C.1.l. Palisade Avenue

Palisade Avenue generally traverses the Traffic Study Area in a north-south direction and is maintained by the City. NYSDOT classifies Palisade Avenue as a principal arterial roadway from New Main Street to Ashburton Avenue and a major collector roadway north of Ashburton Avenue. Between New Main Street and New School Street/Elm Street, Palisade Avenue is a one-way eastbound street with one-way traffic volumes that range from approximately 229 to 469 vph. Between New School Street/Elm Street and Ashburton Avenue, Palisade Avenue provides two-way traffic flow with one moving lane in each direction and two-

way traffic volumes that range from approximately 340 to 670 vph. North of Ashburton Avenue, Palisade Avenue is a one-way northbound street with one-way traffic volumes that range from approximately 218 to 364 vph within the Traffic Study Area. The pavement along Palisade Avenue ranges from approximately 25 to 39 feet in width and was observed to be in fair to good condition.

C.1.m. Prospect Street

Prospect Street is a local, City-maintained roadway that generally traverses the Traffic Study Area in an east-west direction. Prospect Street provides one to two moving lanes in each direction with left and right turn lanes at its intersections with Riverdale Avenue and South Broadway. Prospect Street has two-way traffic volumes that range from approximately 314 to 1,501 vph within the Traffic Study Area. The pavement of Prospect Avenue ranges from approximately 47 to 62 feet in width was observed to be in fair to good condition.

C.1.n. Yonkers Avenue

Yonkers Avenue generally traverses the Traffic Study Area in an east-west direction and is maintained by NYSDOT. NYSDOT classifies Yonkers Avenue as a principal arterial roadway. Yonkers Avenue provides two moving lanes in each direction with left and right turn lanes at several intersections along its length. Two-way traffic volumes along Yonkers Avenue range from approximately 1,771 to 3,581 vph within the Traffic Study Area. The pavement along Yonkers Avenue ranges from approximately 49 to 73 feet in width and was observed to be in good condition.

C.2. INTERSECTION LEVEL OF SERVICE CONDITIONS

Traffic volumes for the peak hours under current (2020) conditions (the “2020 Existing Condition”) are presented in **Figures 11-2a, 11-2b, and 11-3**. Traffic operating conditions at each Traffic Study Area intersection were analyzed using the Synchro 10 Percentile delay (for signalized intersections) and the HCM (for unsignalized intersections) methodology, (see **Appendix L-2** for Synchro 10 outputs for all Traffic Study Area intersections) to compute delays, v/c ratios, and LOS as described in Section B of this chapter.

As shown in **Table 11-4** at the end of this chapter, of the 189 Traffic Study Area intersection lane groups/approaches analyzed for the weekday AM and PM peak hours and 97 Traffic Study Area intersection lane groups/approaches analyzed for the Saturday peak hour, 86 percent (162 lane groups), 87 percent (164 lane groups), and 93 percent (90 lane groups) were determined to be operating at LOS D or better under the 2020 Existing Condition during the weekday AM, weekday PM, and Saturday peak hours, respectively. LOS D operations during peak hours are generally considered to be acceptable operating conditions for signalized and unsignalized intersections. The following 25 intersections and lane groups were operating at LOS E and/or F in the existing condition:

- Riverdale Avenue and Prospect Street
 - Northbound through/right turn movement – Weekday AM peak hour: LOS E
 - Southbound left turn movement – Weekday AM peak hour: LOS E, Weekday PM peak hour: LOS F, Saturday peak hour: LOS E

- Broadway and Hudson Street
 - Eastbound left turn/right turn movement – Weekday PM peak hour: LOS F
- South Broadway and Prospect Street/Nepperhan Avenue
 - Northbound through/right turn movement – Weekday PM peak hour: LOS E
 - Southbound left turn movement – Weekday PM peak hour: LOS F
- New Main Street and Nepperhan Avenue
 - Westbound left turn movement – Weekday PM peak hour: LOS F
 - Northbound left turn/through/right turn movement – Weekday AM peak hour: LOS E, Weekday PM peak hour: LOS F
- Waverly Street and Nepperhan Avenue
 - Northbound left turn/right turn movement – Weekday AM peak hour: LOS F, Weekday PM peak hour: LOS F
- Nepperhan Avenue and Ashburton Avenue
 - Eastbound left turn movement – Weekday AM peak hour: LOS E, Weekday PM peak hour: LOS F
 - Westbound left turn movement – Weekday AM peak hour: LOS E, Weekday PM peak hour: LOS E
 - Westbound through/right turn movement – Weekday AM peak hour: LOS E
 - Northbound left turn movement – Weekday AM peak hour: LOS E, Weekday PM peak hour: LOS E
 - Southbound left turn movement – Weekday AM peak hour: LOS F, Weekday PM peak hour: LOS F
- Nepperhan Avenue and Elm Street
 - Eastbound left turn movement – Weekday PM peak hour: LOS E
 - Westbound left turn/through/right turn movement – Weekday AM peak hour: LOS F
- Walnut Street and Yonkers Avenue
 - Northbound left turn/through/right turn movement – Weekday AM peak hour: LOS F
 - Southbound left turn/through/right turn movement – Weekday AM peak hour: LOS F
 - Intersection – Weekday AM peak hour: LOS F
- Prescott Street and Yonkers Avenue
 - Northbound left turn/through/right turn movement – Weekday AM peak hour: LOS E

- Ashburton Avenue and Yonkers Avenue
 - Northbound left turn/right turn movement – Weekday AM peak hour: LOS E, Weekday PM peak hour: LOS E
 - Southbound left turn movement – Weekday AM peak hour: LOS E, Weekday PM peak hour: LOS E
 - Southbound left turn/right turn movement – Weekday PM peak hour: LOS E
- Yonkers Avenue and Midland Avenue (West)
 - Southbound left turn movement – Weekday AM peak hour: LOS E
- Yonkers Avenue and Saw Mill River Parkway Southbound Ramps
 - Southbound right turn movement – Weekday PM peak hour: LOS E
- Yonkers Avenue and Midland Avenue (East)
 - Eastbound left turn movement – Weekday AM peak hour: LOS E

C.3. PARKING CONDITIONS

This section describes available on-street and off-street parking adjacent to the Project Sites.

C.3.a. Teutonia Site

Along Buena Vista Avenue, on-street parking is provided on the east side of the roadway only. At the corner of Buena Vista Avenue and Hudson Street, across the street from the Teutonia Site, is the City’s Buena Vista Parking Garage, which provides 598 public parking spaces.

C.3.b. Chicken Island Site

Metered on-street parking is provided along New Main Street, Palisade Avenue, James Street, and Henry Herz Street while free on-street parking is provided on the west side of New School Street. Nepperhan Avenue, Ann Street, and John Street do not provide on-street parking. The City’s Government Center Garage, located at the northwest corner of Nepperhan Avenue and New Main Street, provides 543 public parking spaces available to the public with access on both Nepperhan Avenue and New Main Street.

Within the Chicken Island Site, there are two privately owned surface parking lots. These lots are leased to the City of Yonkers:

- Engine Place Lot provides 77 surface lot parking spaces at the northeast corner of James Street and John Street with access on James Street. The Engine Place Lot is available for general public parking.
- Getty Square Lot provides 287 surface lot parking spaces at the northwest corner of New School Street and Nepperhan Avenue with access on Henry Herz Street. The Getty Square Lot is not available for general public parking.

C.3.c. North Broadway Site

On-street parking is provided along the west side of Locust Hill Avenue, Overlook Terrace, and Baldwin Place with metered on-street parking along North Broadway.

C.4. CITY OF YONKERS COMPLETE STREET POLICY

The City of Yonkers Complete Streets Policy (Section 103-129 of the Yonkers City Code) seeks to improve the City’s interconnected network of transportation facilities. This policy incorporates active transportation into the planning, design, and operation of future City streets projects. Active transportation (walking, bicycling, and public transportation) improves public health, reduces traffic congestion, enhances air quality, and supports local economic development. Complete streets are streets that are planned, designed, operated, and maintained to enable safe access for all users, and upon which pedestrians, bicyclists, transit users, persons with disabilities, and motorists of all ages and abilities are able to safely move along and across.

Per the Complete Streets Policy, the incorporation of bicycle, pedestrian and transit facilities shall be mandated in all street construction, reconstruction, rehabilitation, and pavement maintenance projects undertaken by or on behalf of the City, unless the City Engineer determines exceptional conditions exist to not implement Complete Street design elements.

C.5. PEDESTRIAN AND BICYCLE CONDITIONS

This section describes pedestrian and non-automobile infrastructure within two blocks of the Project Sites.

C.5.a. Teutonia Site

Buena Vista Avenue provides sidewalks on both sides of the roadway. At present, the sidewalk along the frontage of the Teutonia Site is blocked by fencing installed for the remediation project undertaken by the Site’s previous owner. Sidewalks are provided on both sides of Hudson Street, Prospect Street, and Hawthorne Avenue.

Along Prospect Street, crosswalks are provided on all approaches between Buena Vista Avenue and Riverdale Avenue except on the west leg of the Prospect Street/Hawthorne Avenue intersection. Along Hudson Street between Buena Vista Avenue and Riverdale Avenue, crosswalks are provided on the south intersection leg at Buena Vista Avenue, the north intersection leg at Hawthorne Avenue, and on each leg of the Riverdale Avenue intersection.

Within the two-block area of the Teutonia Site, there a mix of ADA and non-ADA compliant pedestrian ramps.

There are no bicycle facilities adjacent to the Teutonia Site.

C.5.b. Chicken Island Site

Adjacent to and within the Chicken Island Site, Nepperhan Avenue, New Main Street, New School Street, Palisade Avenue, Anne Street, John Street, James Street, and Henry Herz Street provide sidewalks on both sides of the roadway.

Pedestrian elements provided at intersections adjacent to the Chicken Island Site are summarized below:

- Nepperhan Avenue / New School Street – crosswalks are provided on all intersection approaches however ADA pedestrian curb ramps are not provided.
- Nepperhan Avenue / New Main Street – crosswalks are provided on all intersection approaches except for the west leg of the intersection. ADA-compliant pedestrian ramps are only provided on the northeast and northwest corners.
- Palisade Avenue / New Main Street / Getty Square – crosswalks are provided on all intersection approaches. Pedestrian ramps are present but are in poor condition and do not provide tactile dome warning strips.
- Palisade Avenue / Locust Hill Avenue / James Street – crosswalks are provided on the east and south legs of the intersections. Pedestrian ramps are present but are in poor condition and don't provide tactile dome warning strips.
- Palisade Avenue / New School Street / Elm Street -crosswalks are provided on all approaches except for the east leg of the intersection. ADA-compliant pedestrian curb ramps are provided on each corner of the intersection.
- John Street / New School Street – a crosswalk is provided on the southern leg of the intersection as well as pedestrian crossing warning signage. However, there are no ADA-compliant pedestrian ramps.

There are no bicycle facilities adjacent to the proposed Chicken Island Site.

C.5.c. North Broadway Site

Sidewalks are provided on both sides of North Broadway, Locust Hill Avenue, Overlook Terrace, and Baldwin Place. At the North Broadway/Manor House Square intersection there are faded crosswalks with some corners providing pedestrian ramps without tactile dome warning strips. At the Overlook Terrace and Baldwin Place intersections on Locust Hill Avenue, there are no crosswalks or ADA pedestrian ramps provided.

There are no bicycle facilities adjacent to the proposed North Broadway Site.

C.6. PUBLIC TRANSPORTATION

Extensive public bus and rail service is offered in the Traffic Study Area. The Westchester County Bee-Line Bus System operates the following bus routes within the Traffic Study Area: Routes 1, 1C, 1T, 1W, 1X, 2, 3, 4, 5, 6, 7, 8, 9, 25, 30, 32, and 78 (see **Figure 11-4**). These bus routes offer direct service to several Westchester County municipalities and the Bronx. These bus routes also provide direct connections to other regional bus and rail services including New York City bus and subway lines, Hudson Link (Rockland County) bus lines, and CTtransit (Connecticut) bus lines. **Table 11-5** summarizes the frequency of each bus line, the presence of bus stops within two blocks of the Project Sites, and passenger amenities.

The Metropolitan Transportation Authority operates the BxM3 bus route, which has stops along South Broadway at Vark Street/Park Hill Avenue, Prospect Street/Nepperhan

Avenue, and New Main Street, within the Traffic Study Area and provides express bus service between Yonkers and Midtown Manhattan.

**Table 11-5
Westchester County Bee Line Bus Service**

Bus Route	Headways during Peak Periods ¹	Bus Stops Located within Two Blocks of Project Sites			Amenities
		Teutonia	Chicken Island	North Broadway	
1, 1C, 1T, 1W, 1X	AM: 1 to 5 minutes PM: 5 to 10 minutes				
2	AM: 2 to 15 minutes PM: 10 to 16 minutes		X	X	Bus Shelters provided at Getty Square
3	AM: 15 minutes PM: 10 to 30 minutes		X	X	Bus Shelters provided at Getty Square
4	AM: 12 to 14 minutes PM: 10 to 15 minutes				
5	AM: 5 to 20 minutes PM: 15 to 30 minutes		X	X	Bus Shelters provided at Getty Square
6	AM: 2 to 18 minutes PM: 15 minutes	X		X	
7	AM: 2 to 15 minutes PM: 15 minutes	X	X	X	Bus Shelters provided at Getty Square
8	AM: 4 to 20 minutes PM: 15 to 20 minutes		X	X	
9	1 bus during AM 1 bus during PM	X	X		
25	AM: 20 minutes PM: 20 minutes	X		X	
30	AM: 8 to 18 minutes PM: 20 minutes			X	
32	AM: 30 to 50 minutes PM: 45 minutes	X	X	X	Bus Shelters provided at Getty Square
78	AM: 35 minutes PM: 35 minutes		X	X	Bus Shelters provided at Getty Square

Note: ¹ Peak periods defined as 7 AM–9 AM and 4 PM–6 PM

The Metropolitan Transportation Authority’s MNR offers commuter rail service to Yonkers via its Hudson Line with headways varying from 10 to 30 minutes during peak hours. The Yonkers MNR station is located at 5 Buena Vista Avenue at the western terminus of Dock Street, approximately 0.13 miles from the Teutonia Site. Amtrak intercity rail service is also provided at the Yonkers MNR station with Amtrak operating its Adirondack, Ethan Allen Express, Maple Leaf, and Empire Service routes with service to northern and western New York State, Montreal and Toronto, Canada.

D. CRASH HISTORY AND SAFETY ASSESSMENT

Crash data for all 38 Traffic Study Area intersections were obtained from NYSDOT for the three-year time period between February 1, 2017 and January 31, 2020 to determine crash trends that may be addressed with Complete Street designs. The data obtained quantify the total number of reportable crashes (involving fatality, injury, or more than \$1,000 in property damage), fatalities, and injuries during the three-year period, and a yearly breakdown of vehicular crashes with pedestrians and bicycles at each intersection.

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During the three-year period, 517 total crashes, three fatalities, 460 injuries, 86 pedestrian crashes, and seven bicyclist crashes occurred at Traffic Study Area intersections.

Table 11-6 lists total crashes by Traffic Study Area intersection during the three-year period, and a breakdown of pedestrian and bicycle crashes by year and location.

**Table 11-6
Crash Summary**

Intersection		Vehicular Crashes						Pedestrian and Bicycle Crashes						
		All Crashes by Year			All Crashes – 12-Month Rolling Maximum	Total Fatalities	Total Injuries	Pedestrian Crashes			Bicycle Crashes			Pedestrian and Bicycle Crashes – 12-Month Rolling Maximum ¹
North-South Roadway	East-West Roadway	2017–2018	2018–2019	2019–2020				2017–2018	2018–2019	2019–2020	2017–2018	2018–2019	2019–2020	
Buena Vista Avenue	Main Street	9	0	1	9	0	10	1	0	1	0	0	0	1
Buena Vista Avenue	Hudson Street	0	1	0	1	0	0	0	0	0	0	0	0	0
Buena Vista Avenue	Prospect Street	2	1	4	4	0	3	1	1	2	0	0	0	3
Hawthorne Avenue	Prospect Street	0	2	3	4	0	3	0	1	0	0	0	0	1
Hawthorne Avenue	Main Street	3	2	1	3	0	4	0	0	0	0	0	0	0
Hawthorne Avenue	Hudson Street	2	1	0	2	0	3	1	0	0	0	0	0	1
Warburton Avenue	Ashburton Avenue	1	4	2	5	0	4	0	0	0	0	0	0	0
Warburton Avenue	Wells Avenue	2	2	2	4	0	3	0	0	0	0	0	0	0
Warburton Avenue	Dock Street	1	1	2	2	0	2	1	0	1	0	0	0	1
Warburton Avenue / Riverdale Avenue	Main Street	2	5	3	5	0	5	1	1	1	0	1	0	3
Riverdale Avenue	Hudson Street	1	1	3	3	0	4	0	0	1	0	0	0	1
Riverdale Avenue	Prospect Street	12	18	25	25	0	43	2	2	5	0	3	0	6
Riverdale Avenue	Vark Street	7	2	5	7	0	13	0	1	1	1	0	0	2
North Broadway	Ashburton Avenue	7	4	7	7	0	18	3	0	1	0	0	0	3
North Broadway	Manor House Square	0	3	1	3	0	2	0	0	0	0	0	0	0
North Broadway	Main Street	0	1	3	3	0	6	0	0	1	0	0	0	1
South Broadway	Hudson Street	5	1	0	6	0	7	3	0	0	0	0	0	3
South Broadway	Nepperhan Avenue	8	8	2	11	0	15	3	2	0	0	0	0	3
South Broadway	Vark Street	0	1	1	1	0	0	0	0	0	0	0	0	0
Locust Hill Avenue	Palisade Avenue	3	8	5	9	0	11	1	3	2	0	0	0	4
Locust Hill Avenue	Ashburton Avenue	0	1	1	1	0	1	0	0	0	0	0	0	0
New Main Street	Nepperhan Avenue	10	4	9	11	0	21	1	1	1	0	0	0	2
Palisade Avenue	Ashburton Avenue	2	2	1	4	0	3	0	0	0	0	0	0	0
Palisade Avenue	Lafayette Place	2	2	2	3	0	3	0	0	0	0	0	0	0
Palisade Avenue / New School Street	Elm Street	5	8	4	9	0	16	3	3	0	0	0	0	4

Table 11-6 (cont'd)
Crash Summary

Intersection		Vehicular Crashes						Pedestrian and Bicycle Crashes						
North-South Roadway	East-West Roadway	All Crashes by Year			All Crashes – 12-Month Rolling Maximum	Total Fatalities	Total Injuries	Pedestrian Crashes			Bicycle Crashes			Pedestrian and Bicycle Crashes – 12-Month Rolling Maximum ¹
		2017–2018	2018–2019	2019–2020				2017–2018	2018–2019	2019–2020	2017–2018	2018–2019	2019–2020	
New School Street	Nepperhan Avenue	5	9	5	11	0	19	0	2	0	1	0	0	2
Waverly Street	Nepperhan Avenue	1	0	0	1	0	1	0	0	0	0	0	0	0
Nepperhan Avenue	Ashburton Avenue	10	9	10	13	1	29	3	2	2	0	0	0	3
Copcutt Lane	Nepperhan Avenue	1	0	1	1	0	1	0	0	0	1	0	0	1
Nepperhan Avenue	Elm Street	10	12	21	21	0	49	2	2	5	0	0	0	5
Walnut Street	Yonkers Avenue	10	17	17	18	0	43	0	4	3	0	0	0	4
Prescott Street	Yonkers Avenue	2	10	9	10	0	16	1	1	0	0	0	0	1
Ashburton Avenue	Yonkers Avenue	5	11	9	12	0	23	0	0	0	0	0	0	0
Saw Mill River Parkway SB Ramps	Yonkers Avenue	0	0	2	2	0	1	0	0	0	0	0	0	0
Saw Mill River Parkway NB Ramps	Yonkers Avenue	1	6	5	8	0	6	0	0	0	0	0	0	0
Fox Terrace / Wasylenko Lane	Yonkers Avenue	5	6	3	7	0	21	0	1	0	0	0	0	1
Yonkers Avenue	Midland Avenue (West)	4	8	6	9	0	11	0	0	0	0	0	0	0
Yonkers Avenue	Midland Avenue (East)	7	8	4	9	0	24	0	0	1	0	0	0	1
Oak Street	Yonkers Avenue	2	3	9	9	2	16	1	2	1	0	0	0	2

Note:
 Bold, gray shaded intersections are high crash locations, defined as having ten or more crashes in a 12-month period.
 Bold, blue striped intersections are high injury or fatality locations, defined as having 20 or more injuries during the three-year period or one or more crashes, excluding high crash locations.
¹ The 12-month rolling maximum is the maximum number of crashes occurring in any consecutive 12-month period in the three-year crash history period.
Source: Crash data from NYSDOT for February 2017 through January 2020

D.1. INTERSECTION CRASHES

As shown in **Table 11-6**, a rolling total of crash data identifies the following nine locations having ten or more crashes in a 12-month period:

- Riverdale Avenue and Prospect Street
- South Broadway and Nepperhan Avenue
- New Main Street and Nepperhan Avenue
- New School Street and Nepperhan Avenue
- Nepperhan Avenue and Ashburton Avenue

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- Nepperhan Avenue and Elm Street
- Walnut Street and Yonkers Avenue
- Prescott Street and Yonkers Avenue
- Ashburton Avenue and Yonkers Avenue

Additionally, the following three locations have are identified as high injury or fatality locations (excluding high crash locations):

- Fox Terrace / Wasylenko Lane and Yonkers Avenue
- Midland Avenue (East) and Yonkers Avenue
- Oak Street and Yonkers Avenue

The high crash, high injury, and fatality locations are discussed in detail in this section, including a summary of crash types, severity, and trends that could be addressed with safety improvement measures.

D.1.a. Riverdale Avenue and Prospect Street

As shown in **Table 11-6**, during the three-year period, 55 crashes occurred at the Riverdale Avenue and Prospect Street intersection, resulting in 43 injuries including three serious injuries.

As shown in **Table 11-7**, the predominant crash type at the intersection is a rear end collision with pedestrian crashes secondary. In addition, dark-road lighted conditions (20 percent of the total crashes) and wet road surface conditions (25 percent of total crashes) were common contributing environmental conditions. Sixty-nine percent of the crashes at the intersection were attributed to driver error.

**Table 11-7
Riverdale Avenue and Prospect Street Crash Types**

Crash Type	Number	Percentage
Rear End	12	22%
Right Turn	7	13%
Left Turn	8	15%
Sideswipe	1	2%
Right Angle	4	7%
Overtaking	8	15%
Fixed Object	0	0%
Head On	0	0%
Pedestrian	9	16%
Bicycle	3	5%
Other/Unknown	3	5%
Total	55	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.a.i Potential Safety Improvements

- Install yellow retroreflective signal backplates to improve signal visibility
- Add leading pedestrian intervals for pedestrian crossings

- Install lane line extensions through the intersection to delineate space for left turning vehicles
- Improve roadway lighting at the intersection

D.1.b. South Broadway and Nepperhan Avenue

As shown in **Table 11-6**, during the three-year period, 18 crashes occurred at the South Broadway and Nepperhan Avenue intersection, resulting in 15 injuries including two serious injuries.

As shown in **Table 11-8**, the predominant crash type at the intersection is a pedestrian collision with rear end and left turn crashes secondary. In addition, dark-road lighted conditions (17 percent of the total crashes) and wet road surface conditions (17 percent of total crashes) were common contributing environmental conditions. Fifty percent of the crashes at the intersection were attributed to driver error.

**Table 11-8
South Broadway and Nepperhan Avenue Crash Types**

Crash Type	Number	Percentage
Rear End	4	22%
Right Turn	0	0%
Left Turn	4	22%
Sideswipe	0	0%
Right Angle	0	0%
Overtaking	3	17%
Fixed Object	0	0%
Head On	0	0%
Pedestrian	5	28%
Bicycle	0	0%
Other/Unknown	2	11%
Total	18	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.b.i Potential Safety Improvements

- Add leading pedestrian intervals for pedestrian crossings
- Install left turn flashing yellow arrow signals for permitted left turns with supplemental traffic signs with text “Left Turn Yield on Flashing Yellow Arrow”
- Install lane line extensions through the intersection to delineate space for left turning vehicles
- Install yellow retroreflective signal backplates to improve signal visibility
- Improve roadway lighting at the intersection

D.1.c. New Main Street and Nepperhan Avenue

As shown in **Table 11-6**, during the three-year period, 23 crashes occurred at the New Main Street and Nepperhan Avenue intersection, resulting in 21 injuries including one serious injury.

As shown in **Table 11-9**, the predominant crash type at the intersection is a rear end collision with overtaking, fixed object, and pedestrian crashes secondary. In addition, dark-road lighted conditions (26 percent of the total crashes) and wet road surface conditions (35 percent of total crashes) were common contributing environmental conditions. Seventy percent of the crashes at the intersection were attributed to driver error.

Table 11-9
New Main Street and Nepperhan Avenue Crash Types

Crash Type	Number	Percentage
Rear End	7	30%
Right Turn	2	9%
Left Turn	2	9%
Sideswipe	0	0%
Right Angle	0	0%
Overtaking	3	13%
Fixed Object	3	13%
Head On	0	0%
Pedestrian	3	13%
Bicycle	0	0%
Other/Unknown	3	13%
Total	23	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.c.i Potential Safety Improvements

- Install yellow retroreflective signal backplates to improve signal visibility
- Add a crosswalk at the Nepperhan Avenue west leg
- Add leading pedestrian intervals for pedestrian crossings
- Improve roadway lighting at the intersection

D.1.d. Nepperhan Avenue New School Street

As shown in **Table 11-6**, during the three-year period, 19 crashes occurred at the Nepperhan Avenue and New School Street intersection, resulting in 19 injuries including one serious injury.

As shown in **Table 11-10**, the predominant crash type at the intersection is a rear end collision with right turn and pedestrian crashes secondary. In addition, dark-road lighted conditions (26 percent of the total crashes) were common contributing environmental conditions. Sixty-three percent of the crashes at the intersection were attributed to driver error.

**Table 11-10
Nepperhan Avenue and New School Street Crash Types**

Crash Type	Number	Percentage
Rear End	10	52%
Right Turn	2	11%
Left Turn	0	0%
Sideswipe	0	0%
Right Angle	0	0%
Overtaking	1	5%
Fixed Object	0	0%
Head On	0	0%
Pedestrian	2	11%
Bicycle	1	5%
Other/Unknown	3	16%
Total	19	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.d.i Potential Safety Improvements

- Install yellow retroreflective signal backplates to improve signal visibility
- Add leading pedestrian intervals for pedestrian crossings
- Improve roadway lighting at the intersection

D.1.e. Nepperhan Avenue and Ashburton Avenue

As shown in **Table 11-6**, during the three-year period, 29 crashes occurred at the Nepperhan Avenue and Ashburton Avenue intersection, resulting in one fatality and 29 injuries including two serious injuries.

As shown in **Table 11-11**, the predominant crash types at the intersection are rear end, left turn, and pedestrian collisions. In addition, dark-road lighted conditions (34 percent of the total crashes) and wet road surface conditions (21 percent of total crashes) were common contributing environmental conditions. Seventy-six percent of the crashes at the intersection were attributed to driver error.

**Table 11-11
Nepperhan Avenue and Ashburton Avenue Crash Types**

Crash Type	Number	Percentage
Rear End	7	25%
Right Turn	1	3%
Left Turn	7	25%
Sideswipe	1	3%
Right Angle	2	7%
Overtaking	1	3%
Fixed Object	1	3%
Head On	1	3%
Pedestrian	7	25%
Bicycle	0	0%
Other/Unknown	1	3%
Total	29	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.e.i Potential Safety Improvements

- Install yellow retroreflective signal backplates to improve signal visibility
- Install left turn flashing yellow arrow signals for permitted left turns with supplemental traffic signs with text “Left Turn Yield on Flashing Yellow Arrow”
- Install lane line extensions through the intersection to delineate space for left turning vehicles
- Add leading pedestrian intervals for pedestrian crossings
- Improve roadway lighting at the intersection

D.1.f. Nepperhan Avenue and Elm Street

As shown in **Table 11-6**, during the three-year period, 43 crashes occurred at the Nepperhan Avenue and Elm Street intersection, resulting in 49 injuries including five serious injuries.

As shown in **Table 11-12**, the predominant crash type at the intersection is a rear end collision with pedestrian and overtaking crashes secondary. In addition, dark-road lighted conditions (23 percent of the total crashes) and wet road surface conditions (35 percent of total crashes) were common contributing environmental conditions. Sixty-five percent of the crashes at the intersection were attributed to driver error.

**Table 11-12
Nepperhan Avenue and Elm Street Crash Types**

Crash Type	Number	Percentage
Rear End	18	42%
Right Turn	1	2%
Left Turn	2	5%
Sideswipe	2	5%
Right Angle	0	0%
Overtaking	8	18%
Fixed Object	1	2%
Head On	0	0%
Pedestrian	9	21%
Bicycle	0	0%
Other/Unknown	2	5%
Total	43	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.f.i Potential Safety Improvements

- Install yellow retroreflective signal backplates to improve signal visibility
- Add leading pedestrian intervals for pedestrian crossings
- Extend the Nepperhan Avenue south leg median to provide a pedestrian refuge space
- Improve roadway lighting at the intersection

D.1.g. Yonkers Avenue and Walnut Street

As shown in **Table 11-6**, during the three-year period, 44 crashes occurred at the Yonkers Avenue and Walnut Street intersection, resulting in 43 injuries including three serious injuries.

As shown in **Table 11-13**, the predominant crash type at the intersection is a rear end collision with left turn crashes secondary. In addition, dark-road lighted conditions (34 percent of the total crashes) and wet road surface conditions (25 percent of total crashes) were common contributing environmental conditions. Seventy-five percent of the crashes at the intersection were attributed to driver error.

**Table 11-13
Yonkers Avenue and Walnut Street Crash Types**

Crash Type	Number	Percentage
Rear End	13	30%
Right Turn	3	7%
Left Turn	10	23%
Sideswipe	1	2%
Right Angle	1	2%
Overtaking	7	16%
Fixed Object	0	0%
Head On	0	0%
Pedestrian	7	16%
Bicycle	0	0%
Other/Unknown	2	4%
Total	44	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.g.i Potential Safety Improvements

- Install yellow retroreflective signal backplates to improve signal visibility
- Install left turn flashing yellow arrow signals for permitted left turns with supplemental traffic signs with text “Left Turn Yield on Flashing Yellow Arrow”
- Install lane line extensions through the intersection to delineate space for left turning vehicles
- Improve roadway lighting at the intersection

D.1.h. Yonkers Avenue and Prescott Street

As shown in **Table 11-6**, during the three-year period, 21 crashes occurred at the Yonkers Avenue and Prescott Street intersection, resulting in 16 injuries.

As shown in **Table 11-14**, the predominant crash type at the intersection is a rear end collision with overtaking crashes secondary. In addition, dark-road lighted conditions (19 percent of the total crashes) and wet road surface conditions (14 percent of total crashes) were common contributing environmental conditions. Eighty-one percent of the crashes at the intersection were attributed to driver error.

**Table 11-14
Yonkers Avenue and Prescott Street Crash Types**

Crash Type	Number	Percentage
Rear End	6	28%
Right Turn	2	10%
Left Turn	2	10%
Sideswipe	2	10%
Right Angle	2	10%
Overtaking	5	23%
Fixed Object	0	0%
Head On	0	0%
Pedestrian	2	10%
Bicycle	0	0%
Other/Unknown	0	0%
Total	21	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.h.i Potential Safety Improvements

- Install yellow retroreflective signal backplates to improve signal visibility
- Move driveway at the northeast corner to Prescott Street and move westbound stop bar closer to the intersection
- Improve roadway lighting at the intersection

D.1.i. Yonkers Avenue and Ashburton Street

As shown in **Table 11-6**, during the three-year period, 25 crashes occurred at the Yonkers Avenue and Ashburton Street intersection, resulting in 23 injuries.

As shown in **Table 11-15**, the predominant crash type at the intersection is a rear end collision with left turn and overtaking crashes secondary. In addition, dark-road lighted conditions (52 percent of the total crashes) were common contributing environmental conditions. Seventy-six percent of the crashes at the intersection were attributed to driver error.

**Table 11-15
Yonkers Avenue and Ashburton Street Crash Types**

Crash Type	Number	Percentage
Rear End	14	56%
Right Turn	0	0%
Left Turn	4	16%
Sideswipe	0	0%
Right Angle	0	0%
Overtaking	3	12%
Fixed Object	0	0%
Head On	1	4%
Pedestrian	0	0%
Bicycle	0	0%
Other/Unknown	3	12%
Total	25	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.i.i Potential Safety Improvements

- Install yellow retroreflective signal backplates to improve signal visibility
- Add striping or hardscaping at the intersection to restrict eastbound left turn and northbound through movements
- Consolidate driveways at the 220 Yonkers Avenue property to provide one driveway past the eastbound stop bar
- Improve roadway lighting at the intersection

D.1.j. Yonkers Avenue and Fox Terrace/Wasylenko Lane

As shown in **Table 11-6**, during the three-year period, 14 crashes occurred at the Yonkers Avenue and Fox Terrace/Wasylenko Lane intersection, resulting in 21 injuries including two serious injuries.

As shown in **Table 11-16**, the predominant crash type at the intersection is a rear end collision with fixed object crashes secondary. In addition, dark-road lighted conditions (57 percent of the total crashes) and wet road surface conditions (36 percent of total crashes) were common contributing environmental conditions. Ninety-three percent of the crashes at the intersection were attributed to driver error.

**Table 11-16
Yonkers Avenue and Fox Terr/Wasylenko Ln Crash Types**

Crash Type	Number	Percentage
Rear End	8	57%
Right Turn	0	0%
Left Turn	0	0%
Sideswipe	1	7%
Right Angle	0	0%
Overtaking	1	7%
Fixed Object	2	15%
Head On	1	7%
Pedestrian	1	7%
Bicycle	0	0%
Other/Unknown	0	0%
Total	14	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.j.i Potential Safety Improvements

- Install yellow retroreflective signal backplates to improve signal visibility
- Improve roadway lighting at the intersection

D.1.k. Yonkers Avenue and Midland Avenue (East)

As shown in **Table 11-6**, during the three-year period, 19 crashes occurred at the Yonkers Avenue and Midland Avenue (East) intersection, resulting in 24 injuries including one serious injury.

As shown in **Table 11-17**, the predominant crash type at the intersection is a left collision with rear end crashes secondary. In addition, dark-road lighted conditions (32 percent of the total crashes) and wet road surface conditions (32 percent of total crashes) were common contributing environmental conditions. Sixty-three percent of the crashes at the intersection were attributed to driver error.

Table 11-17
Yonkers Avenue and Midland Avenue (East) Crash Types

Crash Type	Number	Percentage
Rear End	5	26%
Right Turn	2	11%
Left Turn	7	37%
Sideswipe	0	0%
Right Angle	1	5%
Overtaking	0	0%
Fixed Object	2	11%
Head On	0	0%
Pedestrian	1	5%
Bicycle	0	0%
Other/Unknown	1	5%
Total	19	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.k.i Potential Safety Improvements

- Install lane line extensions through the intersection to delineate space for left turning vehicles
- Install left turn flashing yellow arrow signals for permitted left turns with supplemental traffic signs with text “Left Turn Yield on Flashing Yellow Arrow”
- Install yellow retroreflective signal backplates to improve signal visibility
- Improve roadway lighting at the intersection

D.1.l. Yonkers Avenue and Oak Street

As shown in **Table 11-6**, during the three-year period, 14 crashes occurred at the Yonkers Avenue and Oak Street intersection, resulting in two fatalities involving pedestrians crossing Yonkers Avenue and 16 injuries including one serious injury.

As shown in **Table 11-18**, the predominant crash types at the intersection are rear end and pedestrian collisions with overtaking crashes secondary. In addition, dark-road lighted conditions (14 percent of the total crashes) and wet road surface conditions (36 percent of total crashes) were common contributing environmental conditions. Fifty-seven percent of the crashes at the intersection were attributed to driver error.

Table 11-18
Yonkers Avenue and Oak Street Crash Types

Crash Type	Number	Percentage
Rear End	4	29%
Right Turn	0	0%
Left Turn	2	14%
Sideswipe	0	0%
Right Angle	0	0%
Overtaking	3	21%
Fixed Object	0	0%
Head On	0	0%
Pedestrian	4	29%
Bicycle	0	0%
Other/Unknown	1	7%
Total	14	-

Source: NYSDOT, February 1, 2017 through January 31, 2020 crash data.

D.1.1.i Potential Safety Improvements

- Install High-intensity Activated Crosswalk (HAWK) signal, also known as a pedestrian hybrid beacon, and curb extensions into the parking lane on both sides of Yonkers Avenue, to provide a protected pedestrian crossing
- Add a median barrier along a section Yonkers Avenue to discourage pedestrians from crossing midblock
- Add wayfinding signs to direct pedestrians to pedestrian bridge
- Improve roadway lighting at the intersection

E. NO BUILD CONDITION

The future without the Proposed Project, or “No Build” condition, is an interim scenario that establishes a future baseline condition that would be expected to occur in 2032 (the Build year) without the Proposed Project. No Build condition traffic volumes (“2032 No Build Volumes”) were ascertained using the following methodology:

- Increase the 2020 Existing Condition traffic volumes by 0.5 percent per year from 2020 (existing year) to 2032 for background growth, resulting in an overall compounded growth rate of 6.17 percent; and
- Manually add trips from pending developments (“No Build projects”) located in the vicinity of the Proposed Project Sites.

The No Build project list was developed in coordination with the City and is summarized in **Table 11-19**, identifying developments included in the background growth factor and developments with discrete trips added to the No Build condition traffic network. Discrete trips generated by these developments were pulled from published traffic studies prepared for the No Action projects and provided by the City of Yonkers.

**Table 11-19
No Build Projects**

Project Name	Units / Size	Type	Location	Manually add trips	Include in Background Rate ¹
Avalon Bay	606	Multifamily	79-91 Alexander Street	X	
Extell	1,395	Multifamily	Alexander Street	X	
Altman Lighting/ Rose	440	Multifamily	57 Alexander Street	X	
Ludlow (1)	214 3,125 sf	Multifamily Retail	70 Pier Street 50 Downing Street	X	
Ludlow (2)	178 10,770 sf	Multifamily Retail/Restaurant	150 Downing Street	X	
Alma Realty	128	Multifamily	70 Jackson Street		X
St. Joseph's Housing	80	Supportive and affordable housing	School Street		X
Hudson Regency	126	Multifamily	86 Buena Vista	X	
Westhab	113	Affordable	Locust Hill Avenue		X
Westhab II	63	Supportive and affordable housing	227 Elm Street		X
Lionsgate Studios	110,000 sf	Studio and Backlot (60k sf and 50k sf)	iPark		X
9-11 Riverdale	29	Multifamily	9-11 Riverdale Avenue		X
Conifer	146	Multifamily	Ravine Avenue and Gold	X	
320 Nepperhan	--	Self Storage	320 Nepperhan		X
Riverdale Self Storage	--	Self Storage	Riverdale Avenue		X
St. Denis School	--	Convert former parochial school to public school	McLean Avenue		X
Charter School for Educational Excellence	400	High School for 400 Students	Warburton and Lamartine		X
222 Lake Avenue	--	Unknown	222 Lake Avenue		X
44 Hudson Street	300	Multifamily	44 Hudson Street		X
Adira Rehab / St. John Hospital	--	Zone Change	Medical Office / Dialysis		X
Chicken Island Brewery		Brew pub; restaurant	57 Alexander Street		X
The Plant	Unknown	Unknown	Glenwood Power Plant		X
70 Ashburton Avenue	70	Multifamily	70 Ashburton Avenue		X
10 St. Casimir Avenue	68 beds	Men shelter/day prog			X

Note:
¹ Projects included in the background rate identified in coordination with the City of Yonkers.

Based on available information, there are no major roadway improvements scheduled through 2032 that would affect traffic patterns along the Traffic Study Area roadways.

E.1. INTERSECTION LEVEL OF SERVICE CONDITIONS

Traffic volumes for the No Build condition for the peak hours analyzed are shown in **Figures 11-5a, 11-5b, and 11-6. Table 11-20** (at the end of this chapter) compares 2020 Existing and 2032 No Build LOS Conditions for the Traffic Study Area intersections for the Weekday AM, Weekday PM, and Saturday peak hours. Synchro 10 outputs for the No Build condition are provided in **Appendix L-3**.

Under the No Build condition, the following notable changes in LOS would occur at the Traffic Study Area intersections:

- Buena Vista Avenue and Main Street
 - Southbound left turn/through/right turn movement – Weekday PM peak hour: deteriorate from LOS C to LOS E
- Buena Vista Avenue and Hudson Street
 - Southbound left turn/through movement – Weekday PM peak hour: deteriorate from LOS C to LOS F

- Buena Vista Avenue and Prospect Street
 - Southbound left turn/through movement – Weekday AM peak hour: deteriorate from LOS C to LOS F, Weekday PM peak hour: deteriorate from LOS D to LOS F
- Nepperhan Street and Warburton Avenue and Dock Street/Manor House Square
 - Southbound left turn/through/right turn movement – Weekday PM peak hour: deteriorate from LOS C to LOS E
- Riverdale Avenue and Prospect Street
 - Westbound left turn movement – Weekday AM peak hour: deteriorate from LOS C to LOS F, Weekday PM peak hour: deteriorate from LOS D to LOS F
 - Northbound left turn movement – Weekday PM peak hour: deteriorate from LOS D to LOS E
 - Northbound through/right turn movement – Weekday AM peak hour: deteriorate from LOS E to LOS F, Weekday PM peak hour: deteriorate from LOS D to LOS F
 - Southbound left turn movement – Weekday AM peak hour: deteriorate from LOS E to LOS F, Saturday peak hour: deteriorate from LOS E to LOS F
 - Intersection – Weekday AM peak hour: deteriorate from LOS D to LOS E, Weekday PM peak hour: deteriorate from LOS D to LOS E
- Riverdale Avenue and Vark Street
 - Eastbound left turn/through/right turn movement – Weekday PM peak hour: deteriorate from LOS D to LOS E
- Broadway and Hudson Street
 - Northbound through movement – Weekday PM peak hour: deteriorate from LOS D to LOS E
- South Broadway and Prospect Street/Nepperhan Avenue
 - Eastbound through/right turn movement – Weekday AM peak hour: deteriorate from LOS D to LOS F, Weekday PM peak hour: deteriorate from LOS D to LOS F
 - Westbound left turn movement – Weekday PM peak hour: deteriorate from LOS C to LOS F
 - Intersection – Weekday PM peak hour: deteriorate from LOS D to LOS E
- New Main Street and Nepperhan Avenue
 - Westbound left turn movement – Saturday peak hour: deteriorate from LOS D to LOS E
 - Northbound left turn/through/right turn movement – Weekday AM peak hour: deteriorate from LOS E to LOS F
- Nepperhan Avenue and Ashburton Avenue
 - Eastbound through movement – Weekday AM peak hour: deteriorate from LOS C to LOS E, Weekday PM peak hour: deteriorate from LOS C to LOS E
 - Westbound through/right turn movement – Weekday AM peak hour: deteriorate from LOS E to LOS F, Weekday PM peak hour: deteriorate from LOS D to LOS F

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- Intersection – Weekday AM peak hour: deteriorate from LOS D to LOS E, Weekday PM peak hour: deteriorate from LOS D to LOS F
- Nepperhan Avenue and Elm Street
 - Northbound through/right turn movement – Weekday PM peak hour: deteriorate from LOS D to LOS E
 - Intersection – Weekday AM peak hour: deteriorate from LOS D to LOS E
- Ashburton Avenue and Yonkers Avenue
 - Southbound left turn movement – Weekday AM peak hour: deteriorate from LOS E to LOS F, Weekday PM peak hour: deteriorate from LOS E to LOS F
 - Southbound left turn/right turn movement – Weekday AM peak hour: deteriorate from LOS D to LOS E, Weekday PM peak hour: deteriorate from LOS E to LOS F
- Yonkers Avenue and Midland Avenue (West)
 - Southbound left turn movement – Weekday AM peak hour: deteriorate from LOS E to LOS F, Weekday PM peak hour: deteriorate from LOS D to LOS F
- Yonkers Avenue and Saw Mill River Parkway Southbound Ramps
 - Southbound right turn movement – Weekday AM peak hour: deteriorate from LOS C to LOS E, Weekday PM peak hour: deteriorate from LOS E to LOS F
- Yonkers Avenue and Midland Avenue (East)
 - Southbound through/right turn movement – Weekday AM peak hour: deteriorate from LOS D to LOS E, Weekday PM peak hour: deteriorate from LOS D to LOS E
- Hawthorne Avenue and Prospect Street
 - Westbound left turn movement – Weekday PM peak hour: deteriorate from LOS C to LOS F

E.2. PARKING CONDITIONS

Off-street parking facilities are proposed for most of the No Build projects shown in **Table 11-19** and therefore, no significant changes to parking conditions within the Traffic Study Area are expected in the No Build condition.

E.3. PEDESTRIAN AND BICYCLE CONDITIONS

The future pedestrian and bicycle conditions would be similar to the existing conditions with the exception of the proposed Yonkers Greenway. The Yonkers Greenway would provide a 2.4-mile long north-south on-street and off-street greenway along South Broadway between the Yonkers MNR Station and the City border with the Bronx. Within the Downtown area, bicycle facilities that are being considered are bicycle lanes and a cycle track. The Greenway is being implemented by the City and Groundworks Hudson Valley and funded through a combination of grant money from NYSDOT, public funds from the City, and private donations.

E.4. PUBLIC TRANSPORTATION

No significant changes in public transportation conditions are expected under the No Build condition. While an increase in public transit ridership is expected with the No Build

projects, it is the policy of the transit agencies (MNR and Westchester County) to adjust their operating schedules to reflect demand as needed.

F. BUILD CONDITION

F.1. PROJECT DESCRIPTION

The Proposed Project would consist of multiple mixed-use buildings across three Project Sites within a half-mile (5- to 10-minute walk) of the Yonkers MNR Station. A description of the proposed development at each of the Project Sites is presented below.

F.1.a. Teutonia Project

The Teutonia Project would include approximately 906 multi-family residential units, approximately 10,000 gsf of street level retail, and approximately 956 parking spaces. The Teutonia Project would include two residential towers on top of a mixed-use podium. Approximately 956 parking spaces would be constructed in a combination of above- and below-grade structures. The parking garage would be accessed from two driveways along Buena Vista Avenue. The Teutonia Project's northern driveway would be signalized as part of the Buena Vista Avenue/Hudson Street intersection and coordinated with the traffic signal at Buena Vista Avenue and Main Street. The City would need access to the property for maintaining signal equipment (i.e., traffic lights, detectors, etc.).

F.1.b. Chicken Island Project

The Chicken Island Project would include approximately 2,000 multi-family residential units, approximately 70,000 gsf of street-level retail, 17,000 gsf of office space, and approximately 2,200 parking spaces. The Chicken Island Site is bounded by New Main Street, Palisade Avenue, New School Street, and Nepperhan Avenue. There are multiple garages accessed via New School Street or via internal roadways.

F.1.c. North Broadway Project

The North Broadway Project includes approximately 650 residential units, approximately 15,000 gsf of retail space, approximately 13,000 gsf of office space and approximately 676 parking spaces. The parking garage would be accessed from Overlook Terrace and would have approximately 676 parking spaces. The Build condition traffic analysis utilizes the previous, larger land use program for the North Broadway Project with 650 residential units, 17,000 gsf of retail space, and 21,000 gsf of office space, which results in a conservative trip generation estimate and traffic analysis results.

F.2. PROJECT TRIP GENERATION

Table 11-21 summarizes the land use program at each of the Project Sites.

To project the number of trips that would be generated by the Proposed Project, data from the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition* were examined and, where appropriate, adjusted to reflect the urban environment, mixed-use development, pedestrian and bicycle activity, and the proximity of the Project Sites to transit.

**Table 11-21
Development Program**

Project Site	Residential (units)	Retail (ksf)	Office (ksf)
Teutonia	906	10	0
Chicken Island	2,000	70	17
North Broadway ¹	650	17	21
TOTAL	3,556	102	38

Note: ¹ The previous, larger land use program is utilized for the North Broadway site, which results in a conservative trip generation estimate. The updated North Broadway Project includes 650 residential units, 15,000 gsf of retail space, and 13,000 gsf of office space.

Trip reductions to capture proximity to transit (25 percent reduction) and pedestrian/bicycle activity (five percent reduction) were developed using 2012–2016 5-year American Community Survey Census Data for residents and workers in the Traffic Study Area and in the City.

Trip reductions to capture internal trips between complimentary land uses were calculated for the North Broadway and Chicken Island Projects using the *ITE Trip Generation Handbook (3rd Edition)* and *National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Internal Trip Capture Estimation for Mixed-Use Developments* methodology. The trip reduction to capture internalized trips ranged from a three to six percent reduction during the Weekday AM peak hour and from 15 to 17 percent reduction during the Weekday PM and Saturday peak hours. A summary of the trip generation and reductions are shown in **Table 11-22**, at the end of this chapter. Back-up information for the trip generation estimates is presented in **Appendix L-4**.

The Proposed Project would result in 883, 1,199, and 1,178 total vehicle trips during the Weekday AM, Weekday PM, and Saturday peak hours, respectively.

F.3. PROJECT TRIP DISTRIBUTION AND ASSESSMENT

Figures 11-7, 11-8, and 11-9 present the assumed trip distribution percentages for the Chicken Island Site, Teutonia Site, and North Broadway Site, respectively. **Figures 11-10, 11-11, 11-12, and 11-13** present the trip assignments for each Project Site and a cumulative total of the three Project Sites. Trip assignments were based on trip assignments prepared for previous studies conducted in the area and existing travel patterns.

F.4. INTERSECTION LEVEL OF SERVICE CONDITIONS

Project generated vehicle trips were added to the No Build condition traffic volumes to estimate the Build condition traffic volumes. **Figures 11-14 and 11-15** show the Build condition traffic volumes for the Weekday AM, Weekday PM, and Saturday peak hours. **Table 11-23**, at the end of this chapter, compares the No Build condition and Build LOS conditions for the Traffic Study Area intersections. Synchro 10 outputs for the Build condition are provided in **Appendix L-5**.

Typically, for robust, downtown high-density urban environments, LOS D conditions are expected and represent an active downtown area where there is a lot of activity but vehicles aren't traveling at high speeds. For this analysis, traffic impacts are: (1) a change in LOS D or better to LOS E or F; (2) a change from LOS E to LOS F; or (3) an increase

of 10 percent or greater in traffic volumes for LOS F. The impact criteria are applied to the approach/lane group LOS for signalized intersections and approach/movement group LOS for unsignalized intersections.

Under the Build condition, absent additional improvements beyond those specified above (i.e., new streets within Chicken Island and signalization of Teutonia's northern driveway), the Proposed Project would result in impacts at the following locations, as shown in **Table 11-23**:

- Buena Vista Avenue and Prospect Street
 - Westbound right turn movement – Weekday PM peak hour
 - Northbound through/right turn movement – Weekday PM peak hour
 - Southbound left turn/through movement – Weekday AM peak hour, Weekday PM peak hour
- Nepperhan Street and Warburton Avenue and Dock Street/Manor House Square
 - Southbound left turn/through/right turn movement – Weekday AM peak hour, Weekday PM peak hour
 - Intersection – Weekday PM peak hour
- Riverdale Avenue/Warburton Avenue and Main Street
 - Eastbound left turn/through/right turn movement – Weekday PM peak hour
- Riverdale Avenue and Hudson Street
 - Eastbound left turn/through/right turn movement – Weekday PM peak hour
- Riverdale Avenue and Prospect Street
 - Eastbound left turn/through/right turn movement – Weekday PM peak hour
 - Westbound left turn movement – Weekday AM peak hour, Weekday PM peak hour
 - Westbound through movement – Weekday PM peak hour
 - Intersection – Weekday AM peak hour, Weekday PM peak hour
- Broadway and Hudson Street
 - Eastbound left turn/right turn movement – Weekday PM peak hour
- South Broadway and Prospect Street/Nepperhan Avenue
 - Eastbound through/right turn movement – Weekday AM peak hour, Saturday peak hour
 - Westbound left turn movement – Weekday AM peak hour, Weekday PM peak hour
 - Northbound through/right turn movement – Weekday PM peak hour
 - Southbound left turn movement – Weekday AM peak hour, Weekday PM peak hour
 - Intersection – Weekday PM peak hour
- South Broadway and Vark Street/Park Hill Avenue

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- Northbound left turn/through/right turn movement – Weekday PM peak hour
 - Intersection – Weekday PM peak hour
- New Main Street and Nepperhan Avenue
 - Westbound left turn movement – Saturday peak hour
 - Northbound left turn/through/right turn movement – Saturday peak hour
- Waverly Street and Nepperhan Avenue
 - Northbound left turn/right turn movement – Weekday AM peak hour, Weekday PM peak hour, Saturday peak hour
- Nepperhan Avenue and Ashburton Avenue
 - Eastbound left turn movement – Weekday AM peak hour, Weekday PM peak hour
- Nepperhan Avenue and Elm Street
 - Eastbound left turn movement – Weekday AM peak hour, Weekday PM peak hour, Saturday peak hour
 - Northbound through/right turn movement – Weekday PM peak hour
 - Intersection – Weekday PM peak hour
- Walnut Street and Yonkers Avenue
 - Eastbound left turn movement – Weekday PM peak hour
- Yonkers Avenue and Saw Mill Northbound Ramps
 - Eastbound left turn movement – Weekday AM peak hour, Weekday PM peak hour
 - Westbound through movement – Weekday PM peak hour
- Yonkers Avenue and Midland Avenue (West)
 - Southbound left turn movement – Weekday AM peak hour
- Yonkers Avenue and Saw Mill Southbound Ramps
 - Southbound right turn movement – Weekday AM peak hour, Weekday PM peak hour
- Yonkers Avenue and Cross County Parkway On-Ramp/Midland Avenue (East)
 - Southbound through/right turn movement – Weekday AM Peak hour
 - Intersection – Weekday AM Peak hour
- Hawthorne Avenue and Prospect Street
 - Westbound left turn movement – Weekday PM peak hour
- Locust Hill Avenue and Ashburton Avenue
 - Northbound left turn/right turn movement – Weekday PM peak hour

F.5. PARKING CONDITIONS

F.5.a. Proposed Amendments to Parking Requirements and Parking Supply

The Applicant proposes the following amendments to the parking requirements of the Zoning Ordinance:

- Amend the parking ratio for “apartments” to 1 per dwelling unit within 0.5 miles of a train station and 1 per dwelling unit plus 0.33 per bedroom beyond 0.5 mile (from one per unit within 0.25 mile of a train station and 1 per unit plus 0.33 per bedroom beyond 0.25 mile)

It is noted that the Teutonia and North Broadway Sites are within ¼ mile of the Yonkers Train Station and thus are currently subject to the 1 space per unit apartment parking requirement. The proposed Zoning Amendments would allow attended or valet parking to satisfy the minimum off-street parking requirements.

The Project’s proposed residential parking rates are similar to those applied in urban environments in Westchester County. **Table 11-24** compares the Project’s proposed parking requirements with those in the City of New Rochelle and the City of White Plains, both of which include developments within a ½-mile of a MNR train station.

**Table 11-24
Parking Requirement Comparison**

Land Use	Proposed Amended Rates	City of New Rochelle ¹	City of White Plains ¹
Residential	1 space/unit ²	1 space/unit	1 space/unit
Retail / Commercial	1 space per 300 sf	1 space per 400 sf	1.65 spaces per 500 sf
Office	1 space per 500 sf	1 space per 500 sf	1 space per 500 sf

Notes:
 sf = square feet
¹ Within the Central Parking Area. Allows payments in lieu of providing off-street parking
² Expanded from ¼-mile to ½-mile of train station

The proposed one parking space per dwelling unit is also supported by recent parking trends at similar developments located near train stations in downtown environments. A residential parking demand study was conducted in November 2021 which compared the number of residential units to the overnight parking demand and residential parking permits issues at four locations:

- Sawyer Place (Yonkers, NY)
- Hudson Park South (Yonkers, NY)
- Hudson Park North (Yonkers, NY)
- 360 Huguenot Street (New Rochelle, NY)

The study indicated that the existing parking demand to residential ratio is 0.94 parking spaces per dwelling unit, supporting the proposed one parking space per dwelling unit parking rate. **Appendix L-6** provides the detailed parking study which includes the surveyed locations and national trends.

Tables 11-25, 11-26, and 11-27 present the parking that would be required and provided within the proposed amended rates for each of the three Project Sites. As shown, the parking supply, provided with a combination of self-park and valet

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parking operations, would exceed the proposed requirement at each Project Site with the exception of Chicken Island, which would have a parking deficiency of approximately 87 parking spaces once fully built. This parking shortfall would be offset by allowing shared parking between complimentary land uses (i.e., a parked residential vehicle leaving during the morning will free a parking space for an incoming retail or office vehicle). The parking study provided in **Appendix L-6** provides a shared parking analysis for Chicken Island.

**Table 11-25
Chicken Island Site Parking Requirements**

Phase	Land Use	Size	Parking Spaces Required	Approx. Parking Supply Provided
Phase 1	Residential	650 units	650	
	Retail	39 ksf	130	
	Office	17ksf	34	
	Total		814	
				903
Phase 2	Residential	425 units	425	
	Retail	10 ksf	33	
	Office	0 ksf	0	
	Total		458	
				403
Phase 3	Residential	425 units	425	
	Retail	6 ksf	20	
	Office	0 ksf	0	
	Total		445	
				604
Phase 4	Residential	250 units	250	
	Retail	10 ksf	33	
	Office	0 ksf	0	
	Total		284	
				-
Phase 5	Residential	250 units	250	
	Retail	5 ksf	17	
	Office	0 ksf	0	
	Total		267	
				270
Total	Residential	2,000 units	2,000	
	Retail	70 ksf	233	
	Office	17 ksf	34	
	Total		2,267	
				2,180

**Table 11-26
Teutonia Site Parking Requirements**

Phase	Land Use	Size	Parking Spaces Required	Approx. Parking Supply Provided
Phase 1	Residential	510 units	510	
	Retail	5 ksf	17	
	Total		527	
				556
Phase 2	Residential	396 units	396	
	Retail	5 ksf	17	
	Total		413	
				400
Total	Residential	906 units	906	
	Retail	10 ksf	34	
	Total		940	
				956

Table 11-27
North Broadway Site Parking Requirements

Phase	Land Use	Size	Parking Spaces Required	Approx. Parking Supply Provided
Phase 1	Residential	300 units	300	
	Retail	15 ksf	50	
	Office	13 ksf	26	
	Total		376	
Phase 2	Residential	350 units	350	
	Retail	2 ksf	7	
	Office	8 ksf	16	
	Total		373	
Total	Residential	650 units	650	
	Retail	17 ksf	57	
	Office	21 ksf	42	
	Total		749	

F.5.b. Changes to Existing Parking Supply

While all three Project Sites would provide off-street parking, existing off-street and/or on street parking facilities would be affected by the Chicken Island Project and North Broadway Project.

F.5.b.i Chicken Island Site

The 18 on-street parking spaces on Henry Herz Street would be removed; however, on-street parking facilities would be provided on the internal roadways.

In addition, the two existing, privately owned off-street surface lots would be eliminated. This includes the 287-parking space Getty Square lot and the 77-parking space Engine Place lot. It should be noted that the 2020 City of Yonkers Parking Needs Assessment identifies the City's preferred method of accommodating this displaced parking as construction of a new parking structure on the Cacace Justice Center site and relocation of City staff parking from the Government Center garage to the new garage, which would allow for the displaced Chicken Island Site parking to be accommodated in the Government Center garage (see **Appendix H-4**).

F.5.b.ii North Broadway Site

On-street parking along Overlook Terrace would be removed to facilitate vehicle access to the North Broadway Project parking garage. On-street parking would be removed on Baldwin Place to facilitate loading dock operations.

F.6. PEDESTRIAN AND BICYCLE CONDITIONS

This section summarizes improvements to the pedestrian and bicycle environment included as part of the Proposed Project.

F.6.a. Teutonia Site

The Teutonia Project would provide a sidewalk along the project frontage, addressing the existing sidewalk gap that exists along Buena Vista Avenue between Hudson Street and Prospect Street.

In addition, with the signalization of the Buena Vista/Hudson Street/Teutonia Project northern driveway, this intersection would be upgraded to provide ADA-compliant pedestrian ramps and new crosswalks.

F.6.b. Chicken Island Site

The Chicken Island Project would provide sidewalks adjacent to the property frontages along Nepperhan Avenue, James Street, Palisade Avenue, and New School Street. Sidewalks would also be provided on both sides of the internal roadways (Centre Street and John Street). Crosswalks internal to the Site would be located at the Centre Street/John Street intersection.

The pedestrian curb ramps and crosswalks would be upgraded to provide ADA compliant pedestrian ramps, including tactile dome warning strips, and restriped crosswalks at the Nepperhan Avenue/New School Street, Palisade Avenue/James Street, Palisade Avenue/Centre Street, and John Street/New School Street intersections.

F.6.c. North Broadway Site

A new pedestrian stairway would be constructed to provide a direct pedestrian connection between North Broadway and Overlook Terrace/ Locust Hill. ADA access between North Broadway and Overlook Terrace would be provided via an elevator located within the North Broadway Site buildings adjacent to the stairway.

Sidewalks along Overlook Terrace would be reconstructed, and new ADA-compliant pedestrian ramps and crosswalks would be constructed at the Locust Hill Avenue/Overlook Terrace intersection.

Bike parking would be accommodated at each Project Site within buildings and/or parking garages.

F.7. PUBLIC TRANSPORTATION

F.7.a. MNR

It is anticipated that the Proposed Project would increase Metro-North Commuter Railroad ridership by 145 passengers during each of the weekday AM and weekday PM peak hours (see **Appendix L-7**). As such, significant adverse impacts to MNR service are not anticipated.

F.7.b. Westchester County Bee Line Buses

An increase in the Westchester County Bee Line bus ridership is expected with the Proposed Project. However, transit ridership would be distributed among several Traffic Study Area bus routes and therefore a dramatic increase in ridership at any one bus line is not anticipated. Therefore, a significant adverse impact to Bee Line bus service is not anticipated.

F.7.c. Project Site Shuttle

While the Chicken Island Site is within walking distance (½ mile) of the Yonkers MNR Station, it is anticipated that a shuttle would be provided between the Chicken Island Site and the Station as an amenity to residents and visitors of the Chicken Island Site. It should be noted any trip reduction credits associated with this shuttle were not applied in the traffic analysis.

F.8. INTERNAL TRAFFIC CIRCULATION

F.8.a. Teutonia Site

Vehicular traffic would access the Teutonia Project via two driveways located on Buena Vista Avenue between Hudson Street and Prospect Street. The southern driveway would provide access to the at-grade and podium level parking levels and the northern driveway would provide access to the subsurface parking levels. The garage is anticipated to be self-parking but may include attended service based on the final garage configuration.

Two loading docks are provided in the at-grade parking level accessed via the proposed southern driveway.

F.8.b. Chicken Island Site

The Chicken Island Site would be accessed via New School Street, Ann Street, and Palisade Avenue. The Chicken Island Site would include two internal roadways: 1) Centre Street that would provide north-south circulation and both on-street parking and dedicated drop-off zones and 2) John Street that would provide east-west circulation. There would be one internal intersection at Centre Street and John Street.

Three parking garages would be provided on the Chicken Island Site:

- A garage accessed via John Street between Centre Street and New School Street is anticipated to be fully attended.
- In phase 2/3 of the Chicken Island Project, a garage accessed via New School Street between Nepperhan Avenue and John Street, anticipated to be a combination of self-parking and valet parking.
- In phase 5 of the Chicken Island Project, a garage accessed via John Street east of New School Street, anticipated to be fully automated.

A valet drop off-area would be provided at the Ann Street/James Street/Centre Street intersection.

There would be three loading docks provided at the Chicken Island Site:

- Palisade Avenue between Centre Street and New School Street
- New School Street between Nepperhan Avenue and the phase 2/3 garage driveway
- John Street between New School Street and the phase 5 garage driveway

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F.8.c. North Broadway Site

The North Broadway Site parking garage would be accessed via Overlook Terrace and would be fully attended. The loading dock would be located and accessed via Baldwin Place at Bell Place.

F.9. SIGHT DISTANCE

Sight distances at the proposed garage entrances and Project Site access points would be acceptable and meet the standards of the American Associations of State and Highway Transportations Officials as illustrated in **Appendix L-8**.

G. TRAFFIC MITIGATION

For the impacted Traffic Study Area intersections and lane groups identified in **Table 11-1**, mitigation measures, such as signal installation or retiming and roadway restriping, were examined as potential improvements the City of Yonkers can implement as a means to improve traffic operating conditions and mitigate the potential impacts of the Proposed Project to return to No Build condition without exceeding the impact criteria thresholds. It should be noted the City has previously determined that projects within the downtown zoning districts will pay a mitigation fee, based on the number of projected development trips, and the actual implementation of mitigation measures will be the responsibility of the City.

A discussion of the proposed mitigation measures is provided in this section.

G.1. MITIGATION MEASURES

Table 11-28 summarizes proposed mitigation measures that address the potential impacts of the Proposed Project. With the implementation of these mitigation measures, which are subject to review and approval by the City and/or NYSDOT, Project-related significant adverse traffic impacts would be fully mitigated with the following exceptions:

- Locust Hill Avenue and Ashburton Avenue
 - During the Weekday PM peak hour, the northbound approach would not warrant a signal. While currently not proposed as a mitigation, the northbound left-turn could be prohibited and vehicles would be rerouted to Palisade Avenue via Lafayette, which would allow left-turning vehicles to turn onto Ashburton at a signalized intersection.

**Table 11-28
Proposed Mitigation Measures**

Intersection	Weekday AM		Weekday PM		Saturday	
Buena Vista / Prospect Street	SBLT	Signalize intersection Add NBR 50-foot pocket Add SBL 150-foot pocket	WBR NBTR SBLT	Signalize intersection Add NBR 50-foot pocket Add SBL 150-foot pocket	SBLT	Signalize intersection Add NBR 50-foot pocket Add SBL 150-foot pocket
Nepperhan Street / Warburton Avenue / Dock Street / Manor House Square	SBLTR	Adjust cycle length to 90s Reduce Phase 3 by 2s Increase Phase 1 by 2s	SBLTR	Adjust cycle length to 90s Reduce Phase 3 by 2s Increase Phase 1 by 2s	Not Impacted	N/A
Riverdale Avenue / Warburton Avenue / Main Street	Not Impacted	N/A	EBLTR	Reduce Phase 2/5 by 2s Increase Phase 4 by 2s	Not Impacted	N/A
Riverdale Avenue / Hudson Street	Not Impacted	N/A	EBLTR	Reduce Phase 1/5 by 2s Increase Phase 3 by 2s	Not Impacted	N/A

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**Table 11-28 (cont'd)
Proposed Mitigation Measures**

Intersection	Weekday AM		Weekday PM		Saturday	
Riverdale Avenue / Prospect Street	WBL	Add NBR 250-foot pocket Relocate EB bus stop to far side Relocate WB bus stop to far side Add NBR overlap phase Reduce Phase 1/2 by 3s Reduce Phase 5 by 1s Reduce Phase 6 by 5s Reduce Phase 7 by 2s Increase Phase 3 by 6s Increase Phase 8 by 8s	EBLTR WBL WBT	Add NBR 250-foot pocket Relocate EB bus stop to far side Relocate WB bus stop to far side Add NBR overlap phase Reduce Phase 1/2 by 4s Reduce Phase 5 by 3s Reduce Phase 6 by 5s Reduce Phase 7 by 4s Increase Phase 3 by 8s Increase Phase 8 by 4s	Not Impacted	N/A
Broadway / Hudson Street	Not Impacted	N/A	EBLR	Add EBR 75-foot pocket Relocate EB bus stop to Broadway/Main	Not Impacted	N/A
South Broadway / Prospect Street / Nepperhan Avenue	EBTR WBL SBL	Add NBR 200-foot pocket Relocate NB bus stop to far side Reduce Phase 3 by 3s Reduce Phase 5 by 3s Increase Phase 1 by 1s Increase Phase 2 by 2s Increase Phase 6 by 6s Adjust signal offset to 16s	WBL NBTR SBL	Add NBR 200-foot pocket Relocate NB bus stop to far side Reduce Phase 1 by 1s Reduce Phase 3 by 2s Reduce Phase 5 by 3s Increase Phase 2 by 3s Increase Phase 6 by 5s Adjust signal offset to 18s	EBTR	Add NBR 200-foot pocket Relocate NB bus stop to far side Reduce Phase 2 by 5s Increase Phase 1 by 5s
South Broadway / Vark Street / Park Hill Avenue	Not Impacted	N/A	NBLTR	Add NBR 50-foot pocket		
New Main Street / Nepperhan Avenue	Not Impacted	N/A	Not Impacted	N/A	WBL NBLTR	Add NBR 200-foot pocket Add NBR overlap phase Reduce Phase 2/6 by 2s Increase Phase 1/5 by 2s
Waverly Street / Nepperhan Avenue	NBLR	Signalize intersection	NBLR	Signalize intersection	NBLR	Signalize intersection
Nepperhan Avenue / Ashburton Avenue	EBL	Allow EBL permitted turns Allow WBL permitted turns	EBL	Allow EBL permitted turns Allow WBL permitted turns		
Nepperhan Avenue / Elm Street	EBL	Add WBR 50-foot pocket Add WBR overlap phase Reduce Phase 1 by 4s Increase Phase 2 by 4s	EBL NBTR	Add WBR 50-foot pocket Add WBR overlap phase Reduce Phase 1 by 4s Increase Phase 2 by 4s	EBL	Add WBR 50-foot pocket Add WBR overlap phase Reduce Phase 1 by 4s Increase Phase 2 by 4s
Walnut Street / Yonkers Avenue	Not Impacted	N/A	EBL	Reduce Phase 2/6 by 3s Increase Phase 1/5 by 3s		
Yonkers Avenue / Saw Mill Northbound Ramps	EBL	Reduce Phase 2 by 4s Increase Phase 1 by 4s Adjust signal offset to 101s	EBL WBT	Reduce Phase 2 by 8s Reduce Phase 3 by 4s Increase Phase 1 by 12s Increase Phase 6 by 4s Adjust signal offset to 101s		
Yonkers Avenue / Midland Avenue (West)	SBL	Reduce Phase 2 by 3s Increase Phase 1 by 3s	Not Impacted	N/A		
Yonkers Avenue / Saw Mill Southbound Ramps	SBR	Signalize intersection	SBR	Signalize intersection		
Yonkers Avenue / Cross County Parkway On-Ramp / Midland Avenue (East)	SBTR	Reduce Phase 1 by 5s Increase Phase 2 by 5s	Not Impacted	N/A		
Hawthorne Avenue / Prospect Street	Not Impacted	N/A	WBL	Signalize intersection	Not Impacted	N/A
Locust Hill Avenue / Ashburton Avenue	Not Impacted	N/A	NBLR	Unmitigated		

Notes: L = Left Turn, T = Through, R = Right Turn, EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound, N/A = Not Applicable, s = seconds

G.2. LEVEL OF SERVICE CONDITIONS

Table 11-29, at the end of this chapter, presents a comparison of the No Build condition, Build condition, and Build condition with mitigation for the impacted locations. Synchro 10 outputs for the Build condition with mitigation condition are provided in Appendix L-9.

A majority of the impacted intersections would operate at an overall level of service D or better with the proposed mitigations; however, while mitigated to the No Build condition, the following intersections would operate at an overall level of service E:

- Riverdale Avenue and Prospect Street
- Nepperhan Avenue and Ashburton Avenue

H. TRAFFIC MITIGATION PHASING

In order to mitigate impacts of the Proposed Project prior to various phases of development being completed, the traffic mitigation measures listed in Table 11-28 would be implemented by phase based on the project-generated vehicle trips in each phase of the Teutonia, Chicken Island, and North Broadway Projects listed in Chapter 15, “Construction” (see Table 15-1).

Trip generation for the development of each Project Site was conducted for all five anticipated phases and added to the No Build traffic condition traffic volumes grown to the construction phase year to estimate the Construction Phases 1 through 5 traffic volumes. Synchro 10 outputs for Construction Phases 1 through 5 are provided in Appendix L-9.

Using the impact criteria identified above (see Section F.4), the traffic mitigation measures would be implemented during the phase in which the project-generated vehicle trips and analysis results would exceed the impact criteria. Because impacts at the same intersection movement would be triggered during different phases for each analyzed time period, the mitigation measures at an intersection would be implemented at the earliest phase in which the impact criteria are exceeded. The traffic mitigation measures and phasing are presented in Table 11-30.

**Table 11-30
Traffic Mitigation Phasing**

Intersection	Weekday AM	Weekday PM	Saturday	Implementation Phase
Buena Vista / Prospect Street	Signalize intersection Add NBR 50-foot pocket Add SBL 150-foot pocket	Signalize intersection Add NBR 50-foot pocket Add SBL 150-foot pocket	Signalize intersection Add NBR 50-foot pocket Add SBL 150-foot pocket	3
Nepperhan Street / Warburton Avenue / Dock Street / Manor House Square	Adjust cycle length to 90s Reduce Phase 3 by 2s Increase Phase 1 by 2s	Adjust cycle length to 90s Reduce Phase 3 by 2s Increase Phase 1 by 2s	N/A	2
Riverdale Avenue / Warburton Avenue / Main Street	N/A	Reduce Phase 2/5 by 2s Increase Phase 4 by 2s	N/A	4
Riverdale Avenue / Hudson Street	N/A	Reduce Phase 1/5 by 2s Increase Phase 3 by 2s	N/A	2
Riverdale Avenue / Prospect Street	Add NBR 250-foot pocket Relocate EB bus stop to far side Relocate WB bus stop to far side Add NBR overlap phase Reduce Phase 1/2 by 3s Reduce Phase 5 by 1s Reduce Phase 6 by 5s Reduce Phase 7 by 2s Increase Phase 3 by 6s Increase Phase 8 by 8s	Add NBR 250-foot pocket Relocate EB bus stop to far side Relocate WB bus stop to far side Add NBR overlap phase Reduce Phase 1/2 by 4s Reduce Phase 5 by 3s Reduce Phase 6 by 5s Reduce Phase 7 by 4s Increase Phase 3 by 8s Increase Phase 8 by 4s	N/A	3

**Table 11-30 (cont'd)
Traffic Mitigation Phasing**

Intersection	Weekday AM	Weekday PM	Saturday	Implementation Phase
Broadway / Hudson Street	N/A	Add EBR 75-foot pocket Relocate EB bus stop to Broadway/Main	N/A	2
South Broadway / Prospect Street / Nepperhan Avenue	Add NBR 200-foot pocket Relocate NB bus stop to far side Reduce Phase 3 by 3s Reduce Phase 5 by 3s Increase Phase 1 by 1s Increase Phase 2 by 2s Increase Phase 6 by 6s Adjust signal offset to 16s	Add NBR 200-foot pocket Relocate NB bus stop to far side Reduce Phase 1 by 1s Reduce Phase 3 by 2s Reduce Phase 5 by 3s Increase Phase 2 by 3s Increase Phase 6 by 5s Adjust signal offset to 18s	Add NBR 200-foot pocket Relocate NB bus stop to far side Reduce Phase 2 by 5s Increase Phase 1 by 5s	1
South Broadway / Vark Street / Park Hill Avenue	N/A	Add NBR 50-foot pocket		3
New Main Street / Nepperhan Avenue	N/A	N/A	Add NBR 200-foot pocket Add NBR overlap phase Reduce Phase 2/6 by 2s Increase Phase 1/5 by 2s	2
Waverly Street / Nepperhan Avenue	Signalize intersection	Signalize intersection	Signalize intersection	1
Nepperhan Avenue / Ashburton Avenue	Allow EBL permitted turns Allow WBL permitted turns	Allow EBL permitted turns Allow WBL permitted turns		2
Nepperhan Avenue / Elm Street	Add WBR 50-foot pocket Add WBR overlap phase Reduce Phase 1 by 4s Increase Phase 2 by 4s	Add WBR 50-foot pocket Add WBR overlap phase Reduce Phase 1 by 4s Increase Phase 2 by 4s	Add WBR 50-foot pocket Add WBR overlap phase Reduce Phase 1 by 4s Increase Phase 2 by 4s	1
Walnut Street / Yonkers Avenue	N/A	Reduce Phase 2/6 by 3s Increase Phase 1/5 by 3s		3
Yonkers Avenue / Saw Mill Northbound Ramps	Reduce Phase 2 by 4s Increase Phase 1 by 4s Adjust signal offset to 101s	Reduce Phase 2 by 8s Reduce Phase 3 by 4s Increase Phase 1 by 12s Increase Phase 6 by 4s Adjust signal offset to 101s		3
Yonkers Avenue / Midland Avenue (West)	Reduce Phase 2 by 3s Increase Phase 1 by 3s	N/A		3
Yonkers Avenue / Saw Mill Southbound Ramps	Signalize intersection	Signalize intersection		3
Yonkers Avenue / Cross County Parkway On-Ramp / Midland Avenue (East)	Reduce Phase 1 by 5s Increase Phase 2 by 5s	N/A		4
Hawthorne Avenue / Prospect Street	N/A	Signalize intersection	N/A	3

H.1. POST CONSTRUCTION MONITORING

The intersection analysis and associated mitigation measures are based on vehicle trip estimates anticipated to be generated by the Proposed Project. In order to ensure sufficient mitigation measures are identified and implemented by the City of Yonkers, post construction traffic monitoring will be conducted by the Applicant to determine the adequacy of the mitigation measures and to determine if the City should consider implementing additional strategies.

Following full occupancy of each construction phase, Weekday AM, Weekday PM, and Saturday peak period driveway counts will be collected at each of the Project Site

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driveways. Prior to data collection, a data collection protocol will be submitted to the City for approval.

Following each data collection period, a memorandum will be submitted to the City presenting a comparison of the driveway counts to the trip generation estimates presented in this study. If the driveway peak hour counts exceed the trip generation estimates, the City may request that the Applicant perform additional traffic analyses at the impacted study intersections to determine if additional improvements should be implemented by the City using the traffic mitigation funds previously remitted by the Applicant. Any future analysis will be coordinated and approved by the City and could include collecting intersection peak hour traffic turning movement counts and conducting peak hour intersection operations analyses to identify additional improvements.

Table 11-4
2020 Existing Conditions Level of Service Analysis

Approach		Weekday AM				Weekday PM				Saturday			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
1: Buena Vista Avenue & Main Street (Signalized)													
Main Street	Eastbound	LTR	0.30	13.8	B	LTR	0.57	18.3	B	LTR	0.16	12.3	B
	Westbound	LTR	0.33	14.7	B	LTR	0.55	18.8	B	LTR	0.21	12.9	B
Buena Vista Avenue	Northbound	LTR	0.58	20.5	C	LTR	0.44	18.0	B	LTR	0.29	15.3	B
	Southbound	LTR	0.45	17.5	B	LTR	0.76	27.2	C	LTR	0.13	12.3	B
		Intersection		17.2	B	Intersection		21.4	C	Intersection		13.6	B
2: Buena Vista Avenue & Hudson Street (Unsignalized)													
Hudson Street	Westbound	LR	0.09	9.2	A	LR	0.10	9.7	A	LR	0.09	8.2	A
Buena Vista Avenue	Northbound	TR	0.45	11.7	B	TR	0.34	10.5	B	TR	0.20	8.5	A
	Southbound	LT	0.54	12.8	B	LT	0.79	22.7	C	LT	0.19	8.4	A
3: Buena Vista Avenue & Prospect Street (Unsignalized)													
Prospect Street	Westbound	L	0.04	9.9	A	L	0.20	11.9	B	L	0.04	9.0	A
		R	0.36	11.6	B	R	0.24	10.8	B	R	0.14	8.3	A
Buena Vista Avenue	Northbound	TR	0.42	11.7	B	TR	0.35	11.3	B	TR	0.16	8.2	A
	Southbound	LT	0.60	16.4	C	LT	0.81	27.8	D	LT	0.26	9.3	A
4: Hawthorne Avenue & Main Street (Unsignalized)													
Main Street	Eastbound	TR	-	-	-	TR	-	-	-	TR	-	-	-
	Westbound	LT	0.02	7.6	A	LT	-	0.0	A	LT	0.03	7.5	A
Hawthorne Avenue	Northbound	LR	0.07	10.0	B	LR	0.19	13.9	B	LR	0.06	9.9	A
Market Place	Southbound	LR	0.02	9.8	A	LR	0.04	11.3	B	LR	0.02	9.8	A
5: Hawthorne Avenue & Hudson Street (Unsignalized)													
Hudson Street	Eastbound	LT	-	-	-	LT	-	-	-	LT	-	-	-
Hawthorne Avenue	Northbound	LTR	0.17	10.2	B	LTR	0.30	11.7	B	LTR	0.15	9.7	A
	Southbound	LR	0.07	9.7	A	LR	0.13	11.4	B	LR	0.05	9.1	A
6: Warburton Avenue & Ashburton Avenue (Signalized)													
Ashburton Avenue	Eastbound	LTR	0.20	15.3	B	LTR	0.25	21.7	C				
	Westbound	L	0.11	21.1	C	L	0.10	24.2	C				
		TR	0.23	16.5	B	TR	0.21	20.2	C				
Warburton Avenue	Northbound	LTR	0.71	38.9	D	LTR	0.80	40.8	D				
	Southbound	L	0.30	17.2	B	L	0.28	14.2	B				
		TR	0.30	17.3	B	TR	0.29	14.7	B				
		Intersection		23.9	C	Intersection		26.4	C	Intersection			
7: Warburton Avenue & Wells Avenue (Signalized)													
Wells Avenue	Eastbound	LTR	0.06	0.5	A	LTR	0.34	11.3	B	LTR	0.01	0.0	A
	Westbound	L	0.67	32.4	C	L	0.74	35.4	D	L	0.61	25.9	C
		TR	0.35	24.6	C	TR	0.16	21.8	C	TR	0.10	17.8	B
Warburton Avenue	Northbound	T	0.42	17.9	B	T	0.29	15.8	B	T	0.24	12.0	B
	Southbound	TR	0.53	19.4	B	TR	0.48	18.6	B	TR	0.27	11.7	B
		Intersection		23.1	C	Intersection		23.5	C	Intersection		17.5	B

Table 11-4 (cont'd)
2020 Existing Conditions Level of Service Analysis

Approach		Weekday AM				Weekday PM				Saturday			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
8: Nepperhan Street & Warburton Avenue & Dock Street/Manor House Square (Signalized)													
Nepperhan Street	Northeastbound	LR	0.20	8.2	A	LR	0.36	14.9	B	LR	0.06	0.3	A
Warburton Avenue	Northbound	L	0.32	18.8	B	L	0.53	25.8	C	L	0.13	14.5	B
		TR	0.73	24.3	C	TR	0.52	15.7	B	TR	0.37	14.0	B
	Southbound	LTR	0.78	26.9	C	LTR	0.81	32.7	C	LTR	0.63	21.2	C
		Intersection		24.4	C	Intersection		26.2	C	Intersection		18.2	B
9: Riverdale Avenue/Warburton Avenue & Main Street (Signalized)													
Main Street	Eastbound	LTR	0.36	12.2	B	LTR	0.81	40.3	D	LTR	0.29	9.8	A
	Westbound	L	0.25	28.3	C	L	0.74	45.8	D	L	0.64	38.3	D
		TR	0.34	18.1	B	TR	0.60	27.7	C	TR	0.33	19.5	B
Riverdale Avenue	Northbound	L	0.08	10.7	B	L	0.10	11.8	B	L	0.02	10.0	A
		T	0.24	11.1	B	T	0.12	10.5	B	T	0.10	10.1	B
Warburton Avenue	Southbound	TR	0.57	27.7	C	TR	0.66	30.6	C	TR	0.49	26.3	C
		Intersection		19.9	B	Intersection		30.7	C	Intersection		23.7	C
10: Riverdale Avenue & Hudson Street (Signalized)													
Hudson Street	Eastbound	LTR	0.54	36.6	D	LTR	0.83	52.7	D	LTR	0.46	42.8	D
Riverdale Avenue	Northbound	TR	0.41	19.1	B	TR	0.39	12.7	B	TR	0.23	5.8	A
	Southbound	L	0.27	10.1	B	L	0.49	18.8	B	L	0.28	5.5	A
		T	0.32	9.7	A	T	0.34	10.3	B	T	0.21	3.6	A
		Intersection		16.6	B	Intersection		19.9	B	Intersection		7.4	A
11: Riverdale Avenue & Prospect Street (Signalized)													
Prospect Street	Eastbound	LTR	0.36	29.2	C	LTR	0.48	31.9	C	LTR	0.14	27.2	C
	Westbound	L	0.88	31.1	C	L	0.90	35.7	D	L	0.34	5.1	A
		T	0.50	9.2	A	T	0.71	13.2	B	T	0.28	4.3	A
		R	0.22	1.2	A	R	0.18	0.7	A	R	0.16	0.5	A
Riverdale Avenue	Northbound	L	0.38	42.8	D	L	0.41	42.2	D	L	0.13	28.9	C
		TR	1.15dr	73.2	E	TR	0.91dr	49.3	D	TR	0.61	36.8	D
	Southbound	L	0.67	60.0	E	L	0.90	127.2	F	L	0.81	59.4	E
		T	0.45	33.0	C	T	0.46	33.1	C	T	0.26	30.1	C
	R	0.07	0.3	A	R	0.08	0.3	A	R	0.04	0.1	A	
		Intersection		39.8	D	Intersection		39.1	D	Intersection		27.3	C
12: Riverdale Avenue & Vark Street (Signalized)													
Vark Street	Eastbound	LTR	0.40	27.6	C	LTR	0.64	51.7	D				
	Westbound	LTR	0.15	18.7	B	LTR	0.48	40.6	D				
Riverdale Avenue	Northbound	L	0.12	22.5	C	L	0.09	11.7	B				
		TR	0.80	40.8	D	TR	0.42	19.1	B				
	Southbound	L	0.59	45.2	D	L	0.42	18.6	B				
		TR	0.64	27.8	C	TR	0.44	14.6	B				
		Intersection		33.3	C	Intersection		21.6	C				
13: North Broadway & Ashburton Avenue (Signalized)													
Ashburton Avenue	Eastbound	LTR	0.37	24.4	C	LTR	0.46	21.3	C				
	Westbound	LTR	0.49	15.9	B	LTR	0.52	14.5	B				
North Broadway	Northbound	LTR	0.68	39.2	D	LTR	0.69	39.3	D				
	Southbound	L	0.50	23.6	C	L	0.50	23.1	C				
		TR	0.37	20.0	B	TR	0.25	17.8	B				
		Intersection		24.9	C	Intersection		23.8	C				
14: North Broadway & Manor House Square (Unsignalized)													
Manor House Square	Eastbound	L	0.37	14.7	B	L	0.39	14.6	B	L	0.16	11.4	B
North Broadway	Northbound	T	-	-	-	T	-	-	-	T	-	-	-

Table 11-4 (cont'd)
2020 Existing Conditions Level of Service Analysis

Approach		Weekday AM				Weekday PM				Saturday			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
15a: North Broadway & Main Street (Getty Square West) (Signalized)													
Main Street	Westbound	TR	0.29	0.6	A	TR	0.49	2.1	A	TR	0.42	2.7	A
North Broadway	Northbound	LT	0.43	20.6	C	LT	0.47	22.0	C	LT	0.34	18.1	B
		Intersection		11.3	B	Intersection		10.6	B	Intersection		8.6	A
15b: Palisade Avenue & New Main Street (Getty Square East) (Signalized)													
New Main Street	Westbound	TR	0.53	25.0	C	TR	0.69	29.5	C	TR	0.54	25.2	C
Palisade Avenue	Northbound	LT	0.21	22.9	C	LT	0.61	30.7	C	LT	0.37	25.3	C
		Intersection		24.5	C	Intersection		30.0	C	Intersection		25.2	C
16: South Broadway/North Broadway & Hudson Street (Unsignalized)													
Hudson Street	Eastbound	LR	0.49	12.2	B	LR	0.98	54.7	F	LR	0.55	13.4	B
South Broadway	Northbound	T	0.39	11.1	B	T	0.82	30.6	D	T	0.43	11.8	B
17: South Broadway & Prospect Street/Nepperhan Avenue (Signalized)													
Prospect Street	Eastbound	L	0.16	19.5	B	L	0.18	22.0	C	L	0.17	17.4	B
		TR	0.79	36.4	D	TR	0.81	47.8	D	TR	0.60	23.6	C
Nepperhan Avenue	Westbound	L	0.65	16.0	B	L	0.81	32.6	C	L	0.15	5.9	A
		T	0.57	9.4	A	T	0.64	12.0	B	T	0.36	6.0	A
		R	0.15	1.5	A	R	0.34	1.7	A	R	0.10	0.3	A
South Broadway	Northbound	L	0.29	31.4	C	L	0.25	30.2	C	L	0.07	27.6	C
		TR	0.71	43.2	D	TR	0.88	57.1	E	TR	0.44	33.8	C
	Southbound	L	0.30	33.8	C	L	1.29	205.8	F	L	0.29	32.4	C
		TR	0.21	24.5	C	TR	0.25	19.3	B	TR	0.14	25.5	C
		Intersection		24.2	C	Intersection		41.1	D	Intersection		18.6	B
18: South Broadway & Vark Street/Park Hill Avenue (Signalized)													
Vark Street	Eastbound	LTR	0.69	40.7	D	LTR	0.69	42.0	D				
Park Hill Avenue	Westbound	LTR	0.71	43.2	D	LTR	0.69	44.3	D				
South Broadway	Northbound	LTR	0.63	26.4	C	LTR	0.88	41.6	D				
	Southbound	LTR	0.78	33.6	C	LTR	0.74	31.8	C				
		Intersection		34.9	C	Intersection		39.3	D				
19: James Street/Locust Hill Avenue & Palisade Avenue (Unsignalized)													
Locust Hill Avenue	Eastbound	LTR	0.32	9.2	A	LTR	0.60	13.3	B	LTR	0.35	9.4	A
Palisade Avenue	Northbound	TR	0.08	7.9	A	TR	0.10	8.5	A	TR	0.08	7.8	A
	Southbound	LT	0.15	8.6	A	LT	0.11	9.0	A	LT	0.10	8.3	A
20: New Main Street & Nepperhan Avenue (Signalized)													
Nepperhan Avenue	Eastbound	L	0.03	4.6	A	L	0.04	4.7	A	L	0.05	1.8	A
		TR	0.49	10.2	B	TR	0.69	13.4	B	TR	0.41	6.1	A
	Westbound	L	0.51	27.9	C	L	1.06	106.5	F	L	0.68	38.9	D
		T	0.59	9.1	A	T	0.60	12.0	B	T	0.32	8.5	A
New Main Street	Northbound	R	0.44	10.2	B	R	0.42	12.8	B	R	0.42	10.4	B
		LTR	1.00	77.7	E	LTR	1.04	88.2	F	LTR	0.80	48.0	D
		Intersection		22.4	C	Intersection		33.1	C	Intersection		18.7	B
21: Palisade Avenue & Ashburton Avenue (Signalized)													
Ashburton Avenue	Eastbound	L	0.17	4.8	A	L	0.11	4.1	A				
		T	0.42	16.7	B	T	0.52	17.7	B				
		R	0.14	4.4	A	R	0.15	4.8	A				
	Westbound	L	0.31	4.6	A	L	0.44	4.7	A				
TR		0.56	8.7	A	TR	0.48	6.8	A					
Palisade Avenue	Northbound	LT	0.67	43.4	D	LT	0.56	39.8	D				
		R	0.26	8.7	A	R	0.22	8.0	A				
		Intersection		15.3	B	Intersection		13.8	B				

Table 11-4 (cont'd)
2020 Existing Conditions Level of Service Analysis

Approach		Weekday AM				Weekday PM				Saturday			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
22: New School Street & Palisade Avenue (Signalized)													
Palisade Avenue	Eastbound	LTR	0.35	17.2	B	LTR	0.59	21.6	C	LTR	0.40	17.7	B
New School Street	Northbound	TR	0.34	12.5	B	TR	0.22	10.5	B	TR	0.18	8.2	A
Palisade Avenue	Southbound	LT	0.50	16.9	B	LT	0.49	16.0	B	LT	0.22	12.4	B
		Intersection		15.4	B	Intersection		17.0	B	Intersection		13.6	B
23: New School Street & Maple Street & Nepperhan Avenue (Signalized)													
Nepperhan Avenue	Eastbound	L	0.38	26.5	C	L	0.27	21.8	C	L	0.25	9.2	A
		TR	0.57	16.3	B	TR	0.74	12.9	B	TR	0.45	13.9	B
	Westbound	L	0.14	11.1	B	L	0.34	15.9	B	L	0.14	11.0	B
		T	0.74	30.9	C	T	0.75	31.0	C	T	0.52	26.1	C
New School Street	Southbound	R	0.29	3.9	A	R	0.20	4.2	A	R	0.17	4.5	A
		Intersection		24.9	C	Intersection		27.6	C	Intersection		11.0	B
		Intersection		23.1	C	Intersection		21.8	C	Intersection		18.6	B
24: Waverly Street & Nepperhan Avenue (Unsignalized)													
Nepperhan Avenue	Eastbound	TR	-	-	-	TR	-	-	-	TR	-	-	-
	Westbound	L	-	0.0	A	L	0.01	21.4	C	L	0.00	12.8	B
		T	-	-	-	-	T	-	-	-	T	-	-
Waverly Street	Northbound	LR	0.89	76.1	F	LR	1.17	181.0	F	LR	0.44	22.1	C
25: Nepperhan Avenue & Ashburton Avenue (Signalized)													
Ashburton Avenue	Eastbound	L	0.54	67.9	E	L	0.60	82.6	F				
		T	0.74	30.2	C	T	0.78	27.9	C				
		R	0.07	1.3	A	R	0.05	0.4	A				
	Westbound	L	0.54	57.9	E	L	0.75	73.1	E				
		TR	0.89	55.1	E	TR	0.87	51.2	D				
		L	0.57	59.6	E	L	0.51	55.9	E				
Nepperhan Avenue	Northbound	TR	0.62	31.4	C	TR	0.44	30.7	C				
		L	1.32	241.7	F	L	0.86	88.7	F				
	Southbound	T	0.32	29.5	C	T	0.33	29.8	C				
		R	0.14	4.2	A	R	0.13	3.8	A				
		Intersection		48.0	D	Intersection		41.7	D				
26: Nepperhan Avenue & Copcutt Lane (Signalized)													
Nepperhan Avenue	Eastbound	T	0.58	26.5	C	T	0.37	23.2	C				
	Westbound	T	0.35	23.1	C	T	0.39	23.2	C				
Copcutt Lane	Southbound	LR	0.32	27.5	C	LR	0.31	22.8	C				
		Intersection		25.3	C	Intersection		23.2	C				
27: Nepperhan Avenue & Elm Street (Signalized)													
Elm Street	Eastbound	L	0.72	47.0	D	L	0.82	57.4	E	L	0.59	35.8	D
		TR	0.28	27.9	C	TR	0.25	27.1	C	TR	0.14	19.4	B
	Westbound	LR	1.23	150.9	F	LR	0.54	24.3	C	LR	0.38	15.5	B
Nepperhan Avenue	Northbound	TR	0.75	32.5	C	TR	0.87	37.7	D	TR	0.60	29.5	C
	Southbound	L	0.39	17.0	B	L	0.41	18.1	B	L	0.17	12.2	B
		T	0.48	14.8	B	T	0.53	15.1	B	T	0.39	13.9	B
		Intersection		43.4	D	Intersection		28.3	C	Intersection		21.8	C

Table 11-4 (cont'd)
2020 Existing Conditions Level of Service Analysis

Approach		Weekday AM				Weekday PM				Saturday			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
28: Walnut Street & Yonkers Avenue (Signalized)													
Yonkers Avenue	Eastbound	L	0.31	11.2	B	L	0.67	23.3	C				
		TR	0.43	17.7	B	TR	0.71	24.5	C				
	Westbound	L	0.22	18.2	B	L	0.56	26.4	C				
		TR	0.55	34.9	C	TR	0.61	38.0	D				
Walnut Street	Northbound	LTR	1.15	123.6	F	LTR	0.45	30.4	C				
	Southbound	LTR	1.67	347.1	F	LTR	0.69	47.2	D				
		Intersection		86.8	F	Intersection		31.5	C				
29: Prescott Street & Yonkers Avenue (Signalized)													
Yonkers Avenue	Eastbound	L	0.04	13.6	B	L	0.23	9.4	A				
		TR	0.69	26.5	C	TR	0.78	17.5	B				
	Westbound	L	0.27	13.7	B	L	0.39	29.8	C				
		TR	0.48	7.0	A	TR	0.54	6.5	A				
Prescott Street	Northbound	LTR	0.81	55.9	E	LTR	0.24	35.8	D				
		Intersection		21.9	C	Intersection		13.7	B				
30: Driveway/Ashburton Avenue & Yonkers Avenue (Signalized)													
Yonkers Avenue	Eastbound	TR	0.74	8.5	A	TR	0.65	5.1	A				
	Westbound	T	0.61	26.3	C	T	0.69	27.6	C				
		R	0.36	0.6	A	R	0.34	0.5	A				
Driveway	Northbound	LR	0.19	56.1	E	LR	0.16	55.2	E				
Ashburton Avenue	Southbound	L	0.93	68.3	E	L	0.84	57.3	E				
		LR	0.78	38.3	D	LR	0.85	57.7	E				
		Intersection		22.3	C	Intersection		22.3	C				
31: Yonkers Avenue & Saw Mill NB Ramps (Signalized)													
Yonkers Avenue	Eastbound	L	0.69	28.1	C	L	0.52	24.7	C				
		T	0.51	5.1	A	T	0.50	5.6	A				
	Westbound	T	0.75	40.4	D	T	0.78	42.6	D				
		R	0.14	0.2	A	R	0.10	0.1	A				
Saw Mill Northbound Ramps	Southbound	L	0.28	45.7	D	L	0.24	45.0	D				
		R	0.46	22.9	C	R	0.47	23.7	C				
		Intersection		21.7	C	Intersection		23.0	C				
32: Yonkers Avenue & Fox Terrace & Wasylenko Lane (Signalized)													
Yonkers Avenue	Eastbound	LT	0.45	3.0	A	LT	0.43	1.6	A				
	Westbound	TR	0.43	6.8	A	TR	0.43	6.9	A				
Fox Terrace	Southbound	LR	0.00	0.0	A	LR	0.00	0.0	A				
Wasylenko Lane	Southwestbound	LR	0.02	42.0	D	LR	0.20	52.7	D				
		Intersection		4.9	A	Intersection		4.6	A				
33: Yonkers Avenue & Midland Avenue West (Signalized)													
Midland Avenue	Westbound	L	0.40	16.1	B	L	0.34	14.8	B				
		R	0.39	6.1	A	R	0.35	6.2	A				
Yonkers Avenue	Northbound	T	0.72	25.8	C	T	0.73	26.4	C				
		R	0.17	5.7	A	R	0.22	6.2	A				
	Southbound	L	0.91	66.2	E	L	0.80	49.9	D				
		T	0.56	17.5	B	T	0.56	17.0	B				
		Intersection		23.2	C	Intersection		21.3	C				

Table 11-4 (cont'd)
2020 Existing Conditions Level of Service Analysis

Approach		Weekday AM				Weekday PM				Saturday			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
34: Yonkers Avenue and Saw Mill River Parkway Southbound Ramps (Unsignalized)													
Yonkers Avenue	Eastbound	T	-	-	-	T	-	-	-				
		R	-	-	-	R	-	-	-				
	Westbound	T	-	-	-	T	-	-	-				
Saw Mill SB Off-Ramp	Southbound	R	0.50	24.7	C	R	0.74	40.3	E				
35: Yonkers Avenue and Cross County Parkway On-Ramp/Midland Avenue (East) (Signalized)													
Midland Avenue	Eastbound	L	0.90	63.4	E	L	0.62	40.7	D				
		TR	0.18	9.3	A	TR	0.16	11.7	B				
	Westbound	LTR	0.12	15.7	B	LTR	0.13	12.5	B				
Yonkers Avenue	Northbound	L	0.24	11.9	B	L	0.26	12.0	B				
		TR	0.42	13.3	B	TR	0.44	13.3	B				
	Southbound	L	0.07	18.8	B	L	0.20	18.7	B				
		TR	1.01	52.2	D	TR	0.96	39.9	D				
		Intersection			37.8	D	Intersection			28.2	C		
36: Hawthorne Avenue & Prospect Street (Unsignalized)													
Prospect Street	Eastbound	LTR	0.27	10.7	B	LTR	0.41	12.2	B	LTR	0.15	9.5	A
		L	0.26	14.9	B	L	0.52	24.0	C	L	0.13	11.2	B
		TR	0.40	11.3	B	TR	0.51	12.5	B	TR	0.25	9.9	A
37: Locust Hill Avenue & Ashburton Avenue (Unsignalized)													
Ashburton Avenue	Eastbound	TR	-	-	-	TR	-	-	-				
	Westbound	LT	0.05	8.6	A	LT	0.07	8.9	A				
Locust Hill Avenue	Northbound	LR	0.19	15.0	C	LR	0.16	17.8	C				
38: Palisade Avenue & Lafayette Place/Walsh Road (Signalized)													
Lafayette Place	Eastbound	LTR	0.10	7.3	A	LTR	0.06	7.0	A				
Walsh Road	Westbound	LTR	0.10	5.2	A	LTR	0.14	6.3	A				
Palisade Avenue	Northbound	TR	0.44	12.6	B	TR	0.42	12.0	B				
	Southbound	LT	0.44	13.2	B	LT	0.54	14.7	B				
		Intersection			11.8	B	Intersection			12.4	B		
50: Locust Hill Avenue & Overlook Terrace (Unsignalized)													
Overlook Terrace	Eastbound	LR	-	0.0	A	LR	-	0.0	A	LR	-	0.0	A
Locust Hill Avenue	Northbound	LT	-	0.0	A	LT	-	0.0	A	LT	-	0.0	A
	Southbound	TR	-	-	-	TR	-	-	-	TR	-	-	-
Notes:													
v/c = volume to capacity, LOS = Level of Service													
L = Left Turn, T = Through, R = Right Turn, dr = defacto right- turn lane													

Table 11-20
2020 Existing and 2032 No Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday												
	2020 Existing				2032 No Action				2020 Existing				2032 No Action				2020 Existing				2032 No Action								
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS					
1: Buena Vista Ave & Main St (Signalized)																													
Main St	EB	LTR	0.30	13.8	B	LTR	0.31	14.0	B	LTR	0.57	18.3	B	LTR	0.61	19.2	B	LTR	0.16	12.3	B	LTR	0.17	12.4	B				
	WB	LTR	0.33	14.7	B	LTR	0.36	15.1	B	LTR	0.55	18.8	B	LTR	0.59	19.8	B	LTR	0.21	12.9	B	LTR	0.23	13.1	B				
Buena Vista Ave	NB	LTR	0.58	20.5	C	LTR	0.73	26.3	C	LTR	0.44	18.0	B	LTR	0.86	38.0	D	LTR	0.29	15.3	B	LTR	0.63	22.0	C				
	SB	LTR	0.45	17.5	B	LTR	0.71	24.8	C	LTR	0.76	27.2	C	LTR	1.04	70.0	E	LTR	0.13	12.3	B	LTR	0.40	12.4	B				
Intersection		17.2		B	Intersection		22.0		C	Intersection		21.4		C	Intersection		41.6		D	Intersection		13.6		B	Intersection		17.6		B
2: Buena Vista Ave & Hudson St (Unsignalized)																													
Hudson St	WB	LR	0.09	9.2	A	LR	0.11	10.1	B	LR	0.10	9.7	A	LR	0.12	10.9	B	LR	0.09	8.2	A	LR	0.11	9.4	A				
Buena Vista Ave	NB	TR	0.45	11.7	B	TR	0.59	15.1	C	TR	0.34	10.5	B	TR	0.70	19.3	C	TR	0.20	8.5	A	TR	0.48	12.0	B				
	SB	LT	0.54	12.8	B	LT	0.81	24.6	C	LT	0.79	22.7	C	LT	1.08	77.5	F	LT	0.19	8.4	A	LT	0.45	11.3	B				
3: Buena Vista Ave & Prospect St (Unsignalized)																													
Prospect St	WB	L	0.04	9.9	A	L	0.27	13.4	B	L	0.20	11.9	B	L	0.38	16.1	C	L	0.04	9.0	A	L	0.20	11.6	B				
		R	0.36	11.6	B	R	0.54	16.7	C	R	0.24	10.8	B	R	0.61	19.5	C	R	0.14	8.3	A	R	0.41	12.6	B				
Buena Vista Ave	NB	TR	0.42	11.7	B	TR	0.65	19.6	C	TR	0.35	11.3	B	TR	0.86	31.4	D	TR	0.16	8.2	A	TR	0.42	12.4	B				
	SB	LT	0.60	16.4	C	LT	1.03	70.6	F	LT	0.81	27.8	D	LT	1.28	168.8	F	LT	0.26	9.3	A	LT	0.62	17.4	C				
4: Hawthorne Ave & Main St (Unsignalized)																													
Main St	EB	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-				
	WB	LT	0.02	7.6	A	LT	0.02	7.6	A	LT	-	0.0	A	LT	-	0.0	A	LT	0.03	7.5	A	LT	0.03	7.5	A				
Hawthorne Ave	NB	LR	0.07	10.0	B	LR	0.07	10.1	B	LR	0.19	13.9	B	LR	0.21	14.5	B	LR	0.06	9.9	A	LR	0.07	10.1	B				
Market Pl	SB	LR	0.02	9.8	A	LR	0.02	9.8	A	LR	0.04	11.3	B	LR	0.04	11.7	B	LR	0.02	9.8	A	LR	0.02	9.9	A				
5: Hawthorne Ave & Hudson St (Unsignalized)																													
Hudson St	EB	LT	-	-	-	LT	-	-	-	LT	-	-	-	LT	-	-	-	LT	-	-	-	LT	-	-	-				
Hawthorne Ave	NB	LTR	0.17	10.2	B	LTR	0.18	10.4	B	LTR	0.30	11.7	B	LTR	0.32	12.0	B	LTR	0.15	9.7	A	LTR	0.16	9.7	A				
	SB	LR	0.07	9.7	A	LR	0.08	9.8	A	LR	0.13	11.4	B	LR	0.15	11.7	B	LR	0.05	9.1	A	LR	0.06	9.2	A				
6: Warburton Ave & Ashburton Ave (Signalized)																													
Ashburton Ave	EB	LTR	0.20	15.3	B	LTR	0.59	28.4	C	LTR	0.25	21.7	C	LTR	0.66	35.3	D												
	WB	L	0.11	21.1	C	L	0.19	26.4	C	L	0.10	24.2	C	L	0.19	30.9	C												
Warburton Ave	NB	TR	0.23	16.5	B	TR	0.35	23.6	C	TR	0.21	20.2	C	TR	0.59	32.9	C												
	SB	L	0.30	17.2	B	L	0.32	16.2	B	L	0.28	14.2	B	L	0.30	13.1	B												
Intersection		23.9		C	Intersection		27.1		C	Intersection		26.4		C	Intersection		31.4		C										
7: Warburton Ave & Wells Ave (Signalized)																													
Wells Ave	EB	LTR	0.06	0.5	A	LTR	0.07	0.6	A	LTR	0.34	11.3	B	LTR	0.36	12.5	B	LTR	0.01	0.0	A	LTR	0.01	0.0	A				
	WB	L	0.67	32.4	C	L	0.71	34.2	C	L	0.74	35.4	D	L	0.78	38.4	D	L	0.61	25.9	C	L	0.64	27.1	C				
Warburton Ave	NB	TR	0.35	24.6	C	TR	0.37	25.0	C	TR	0.16	21.8	C	TR	0.17	22.1	C	TR	0.10	17.8	B	TR	0.11	17.8	B				
	SB	T	0.42	17.9	B	T	0.47	18.9	B	T	0.29	15.8	B	T	0.34	16.6	B	T	0.24	12.0	B	T	0.30	12.6	B				
Intersection		23.1		C	Intersection		24.2		C	Intersection		23.5		C	Intersection		24.9		C	Intersection		17.5		B	Intersection		17.9		B
8: Nepperhan St & Warburton Ave & Dock St/Manor House Sq (Signalized)																													
Nepperhan St	NEB	LR	0.20	8.2	A	LR	0.24	9.9	A	LR	0.36	14.9	B	LR	0.41	16.9	B	LR	0.06	0.3	A	LR	0.09	1.5	A				
Warburton Ave	NB	L	0.32	18.8	B	L	0.40	21.5	C	L	0.53	25.8	C	L	0.67	34.8	C	L	0.13	14.5	B	L	0.18	15.5	B				
	SB	TR	0.73	24.3	C	TR	0.81	28.5	C	TR	0.52	15.7	B	TR	0.59	18.1	B	TR	0.37	14.0	B	TR	0.43	15.2	B				
Intersection		24.4		C	Intersection		32.8		C	Intersection		26.2		C	Intersection		41.0		D	Intersection		18.2		B	Intersection		20.9		C

Table 11-20 (cont'd)
2020 Existing and 2032 No Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday								
	2020 Existing				2032 No Action				2020 Existing				2032 No Action				2020 Existing				2032 No Action				
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	
9: Riverdale Ave/Warburton Ave & Main St (Signalized)																									
Main St	EB	LTR	0.36	12.2	B	LTR	0.39	12.5	B	LTR	0.81	40.3	D	LTR	0.88	52.2	D	LTR	0.29	9.8	A	LTR	0.31	10.5	B
	WB	L	0.25	28.3	C	L	0.27	28.7	C	L	0.74	45.8	D	L	0.79	50.5	D	L	0.64	38.3	D	L	0.69	40.6	D
		TR	0.34	18.1	B	TR	0.36	19.1	B	TR	0.60	27.7	C	TR	0.64	29.1	C	TR	0.33	19.5	B	TR	0.35	20.2	C
Riverdale Ave	NB	L	0.08	10.7	B	L	0.09	11.1	B	L	0.10	11.8	B	L	0.11	12.5	B	L	0.02	10.0	A	L	0.03	10.2	B
		T	0.24	11.1	B	T	0.26	12.1	B	T	0.12	10.5	B	T	0.15	10.7	B	T	0.10	10.1	B	T	0.13	10.4	B
Warburton Ave	SB	TR	0.57	27.7	C	TR	0.63	29.2	C	TR	0.66	30.6	C	TR	0.74	33.4	C	TR	0.49	26.3	C	TR	0.57	28.1	C
		Intersection		19.9	B	Intersection		21.0	C	Intersection		30.7	C	Intersection		34.0	C	Intersection		23.7	C	Intersection		24.9	C
10: Riverdale Ave & Hudson St (Signalized)																									
Hudson St	EB	LTR	0.54	36.6	D	LTR	0.57	37.4	D	LTR	0.83	52.7	D	LTR	0.85	54.0	D	LTR	0.46	42.8	D	LTR	0.49	44.3	D
Riverdale Ave	NB	TR	0.41	19.1	B	TR	0.45	20.1	C	TR	0.39	12.7	B	TR	0.45	15.6	B	TR	0.23	5.8	A	TR	0.26	6.5	A
	SB	L	0.27	10.1	B	L	0.31	11.4	B	L	0.49	18.8	B	L	0.57	24.8	C	L	0.28	5.5	A	L	0.32	6.5	A
		T	0.32	9.7	A	T	0.36	10.3	B	T	0.34	10.3	B	T	0.38	11.4	B	T	0.21	3.6	A	T	0.24	3.9	A
		Intersection		16.6	B	Intersection		17.4	B	Intersection		19.9	B	Intersection		22.1	C	Intersection		7.4	A	Intersection		7.9	A
11: Riverdale Ave & Prospect St (Signalized)																									
Prospect St	EB	LTR	0.36	29.2	C	LTR	0.58	34.0	C	LTR	0.48	31.9	C	LTR	0.88	50.4	D	LTR	0.14	27.2	C	LTR	0.34	29.5	C
	WB	L	0.88	31.1	C	L	1.20	125.9	F	L	0.90	35.7	D	L	1.34	189.6	F	L	0.34	5.1	A	L	0.51	8.8	A
		T	0.50	9.2	A	T	0.66	11.0	B	T	0.71	13.2	B	T	0.93	28.4	C	T	0.28	4.3	A	T	0.49	6.9	A
R		0.22	1.2	A	R	0.24	1.4	A	R	0.18	0.7	A	R	0.21	0.9	A	R	0.16	0.5	A	R	0.18	0.5	A	
Riverdale Ave	NB	L	0.38	42.8	D	L	0.56	46.4	D	L	0.41	42.2	D	L	0.65	55.4	E	L	0.13	28.9	C	L	0.30	31.6	C
		TR	1.15dr	73.2	E	TR	1.27dr	104.3	F	TR	0.91dr	49.3	D	TR	0.99dr	85.7	F	TR	0.61	36.8	D	TR	0.89dr	39.7	D
	SB	L	0.67	60.0	E	L	0.82	146.0	F	L	0.90	127.2	F	L	1.00	157.6	F	L	0.81	59.4	E	L	0.92	123.8	F
T		0.45	33.0	C	T	0.50	33.9	C	T	0.46	33.1	C	T	0.51	34.0	C	T	0.26	30.1	C	T	0.31	30.8	C	
	R	0.07	0.3	A	R	0.08	0.3	A	R	0.08	0.3	A	R	0.09	0.3	A	R	0.04	0.1	A	R	0.05	0.2	A	
		Intersection		39.8	D	Intersection		65.1	E	Intersection		39.1	D	Intersection		71.9	E	Intersection		27.3	C	Intersection		35.1	D
12: Riverdale Ave & Vark St (Signalized)																									
Vark St	EB	LTR	0.40	27.6	C	LTR	0.43	28.6	C	LTR	0.64	51.7	D	LTR	0.70	55.9	E								
	WB	LTR	0.15	18.7	B	LTR	0.16	19.2	B	LTR	0.48	40.6	D	LTR	0.52	42.0	D								
Riverdale Ave	NB	L	0.12	22.5	C	L	0.13	22.7	C	L	0.09	11.7	B	L	0.11	12.4	B								
		TR	0.80	40.8	D	TR	0.91	49.6	D	TR	0.42	19.1	B	TR	0.50	20.5	C								
	SB	L	0.59	45.2	D	L	0.66	50.2	D	L	0.42	18.6	B	L	0.51	19.8	B								
TR		0.64	27.8	C	TR	0.72	29.7	C	TR	0.44	14.6	B	TR	0.52	14.0	B									
		Intersection		33.3	C	Intersection		37.9	D	Intersection		21.6	C	Intersection		22.0	C								
13: North Broadway & Ashburton Ave (Signalized)																									
Ashburton Ave	EB	LTR	0.37	24.4	C	LTR	0.71	24.9	C	LTR	0.46	21.3	C	LTR	0.80	28.1	C								
	WB	LTR	0.49	15.9	B	LTR	0.67	20.8	C	LTR	0.52	14.5	B	LTR	0.89	29.8	C								
North Broadway	NB	LTR	0.68	39.2	D	LTR	0.71	39.9	D	LTR	0.69	39.3	D	LTR	0.73	40.4	D								
		L	0.50	23.6	C	L	0.56	24.5	C	L	0.50	23.1	C	L	0.55	24.0	C								
	SB	TR	0.37	20.0	B	TR	0.41	19.8	B	TR	0.25	17.8	B	TR	0.33	17.2	B								
		Intersection		24.9	C	Intersection		26.1	C	Intersection		23.8	C	Intersection		29.3	C								
14: North Broadway & Manor House Square (Unsignalized)																									
Manor House Sq	EB	L	0.37	14.7	B	L	0.41	15.9	C	L	0.39	14.6	B	L	0.43	15.7	C	L	0.16	11.4	B	L	0.18	11.8	B
North Broadway	NB	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	

Table 11-20 (cont'd)
2020 Existing and 2032 No Action Conditions
Level of Service Analysis

Approach		Weekday AM								Weekday PM								Saturday							
		2020 Existing				2032 No Action				2020 Existing				2032 No Action				2020 Existing				2032 No Action			
		Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS
15a: North Broadway & Main St (Getty Square West) (Signalized)																									
Main St	WB	TR	0.29	0.6	A	TR	0.31	0.6	A	TR	0.49	2.1	A	TR	0.52	2.1	A	TR	0.42	2.7	A	TR	0.45	2.8	A
North Broadway	NB	LT	0.43	20.6	C	LT	0.46	21.5	C	LT	0.47	22.0	C	LT	0.51	23.0	C	LT	0.34	18.1	B	LT	0.37	19.0	B
		Intersection		11.3	B	Intersection		11.9	B	Intersection		10.6	B	Intersection		11.1	B	Intersection		8.6	A	Intersection		9.1	A
15b: Palisade Ave & New Main St (Getty Square East) (Signalized)																									
New Main St	WB	TR	0.53	25.0	C	TR	0.56	25.7	C	TR	0.69	29.5	C	TR	0.74	31.2	C	TR	0.54	25.2	C	TR	0.58	26.0	C
Palisade Ave	NB	LT	0.21	22.9	C	LT	0.22	23.2	C	LT	0.61	30.7	C	LT	0.65	31.9	C	LT	0.37	25.3	C	LT	0.40	25.7	C
		Intersection		24.5	C	Intersection		25.2	C	Intersection		30.0	C	Intersection		31.5	C	Intersection		25.2	C	Intersection		25.9	C
16: South Broadway/North Broadway & Hudson St (Unsignalized)																									
Hudson St	EB	LR	0.49	12.2	B	LR	0.54	13.3	B	LR	0.98	54.7	F	LR	1.08	85.5	F	LR	0.55	13.4	B	LR	0.61	15.1	C
South Broadway	NB	T	0.39	11.1	B	T	0.43	11.8	B	T	0.82	30.6	D	T	0.91	38.2	E	T	0.43	11.8	B	T	0.48	12.8	B
17: South Broadway & Prospect St/Nepperhan Ave (Signalized)																									
Prospect St	EB	L	0.16	19.5	B	L	0.20	23.0	C	L	0.18	22.0	C	L	0.21	26.0	C	L	0.17	17.4	B	L	0.22	20.6	C
		TR	0.79	36.4	D	TR	0.93	82.3	F	TR	0.81	47.8	D	TR	0.97	89.9	F	TR	0.60	23.6	C	TR	0.76	38.2	D
Nepperhan Ave	WB	L	0.65	16.0	B	L	0.82	30.8	C	L	0.81	32.6	C	L	1.04	80.1	F	L	0.15	5.9	A	L	0.19	6.9	A
		T	0.57	9.4	A	T	0.68	11.8	B	T	0.64	12.0	B	T	0.78	15.5	B	T	0.36	6.0	A	T	0.49	6.9	A
		R	0.15	1.5	A	R	0.16	1.6	A	R	0.34	1.7	A	R	0.35	1.7	A	R	0.10	0.3	A	R	0.11	0.5	A
South Broadway	NB	L	0.29	31.4	C	L	0.34	32.3	C	L	0.25	30.2	C	L	0.34	32.2	C	L	0.07	27.6	C	L	0.13	28.7	C
		TR	0.71	43.2	D	TR	0.76	45.8	D	TR	0.88	57.1	E	TR	0.94	66.8	E	TR	0.44	33.8	C	TR	0.48	34.6	C
		L	0.30	33.8	C	L	0.35	35.6	D	L	1.29	205.8	F	L	1.60	335.2	F	L	0.29	32.4	C	L	0.33	33.3	C
		Intersection		24.2	C	Intersection		41.4	D	Intersection		41.1	D	Intersection		66.3	E	Intersection		18.6	B	Intersection		24.5	C
18: South Broadway & Vark St/Park Hill Ave (Signalized)																									
Vark St	EB	LTR	0.69	40.7	D	LTR	0.74	44.0	D	LTR	0.69	42.0	D	LTR	0.75	45.8	D								
Park Hill Ave	WB	LTR	0.71	43.2	D	LTR	0.76	47.4	D	LTR	0.69	44.3	D	LTR	0.75	48.5	D								
South Broadway	NB	LTR	0.63	26.4	C	LTR	0.67	27.8	C	LTR	0.88	41.6	D	LTR	0.95	53.2	D								
	SB	LTR	0.78	33.6	C	LTR	0.84	38.4	D	LTR	0.74	31.8	C	LTR	0.81	36.0	D								
		Intersection		34.9	C	Intersection		38.3	D	Intersection		39.3	D	Intersection		46.0	D								
19: James St/Locust Hill Ave & Palisade Ave (Unsignalized)																									
Locust Hill Ave	EB	LTR	0.32	9.2	A	LTR	0.34	9.5	A	LTR	0.60	13.3	B	LTR	0.64	14.5	B	LTR	0.35	9.4	A	LTR	0.38	9.7	A
Palisade Ave	NB	TR	0.08	7.9	A	TR	0.09	8.0	A	TR	0.10	8.5	A	TR	0.11	8.7	A	TR	0.08	7.8	A	TR	0.08	7.9	A
	SB	LT	0.15	8.6	A	LT	0.16	8.7	A	LT	0.11	9.0	A	LT	0.12	9.1	A	LT	0.10	8.3	A	LT	0.10	8.4	A
20: New Main St & Nepperhan Ave (Signalized)																									
Nepperhan Ave	EB	L	0.03	4.6	A	L	0.04	6.6	A	L	0.04	4.7	A	L	0.05	6.2	A	L	0.05	1.8	A	L	0.06	4.5	A
		TR	0.49	10.2	B	TR	0.58	13.0	B	TR	0.69	13.4	B	TR	0.82	15.9	B	TR	0.41	6.1	A	TR	0.52	8.4	A
	WB	L	0.51	27.9	C	L	0.61	38.6	D	L	1.06	106.5	F	L	1.18	142.5	F	L	0.68	38.9	D	L	0.84	59.1	E
		T	0.59	9.1	A	T	0.68	11.8	B	T	0.60	12.0	B	T	0.71	15.3	B	T	0.32	8.5	A	T	0.42	8.6	A
New Main St	NB	R	0.44	10.2	B	R	0.47	12.9	B	R	0.42	12.8	B	R	0.44	15.7	B	R	0.42	10.4	B	R	0.45	10.3	B
		LTR	1.00	77.7	E	LTR	1.06	93.3	F	LTR	1.04	88.2	F	LTR	1.11	108.0	F	LTR	0.80	48.0	D	LTR	0.85	51.9	D
		Intersection		22.4	C	Intersection		26.8	C	Intersection		33.1	C	Intersection		39.8	D	Intersection		18.7	B	Intersection		21.3	C

Table 11-20 (cont'd)
2020 Existing and 2032 No Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday												
	2020 Existing				2032 No Action				2020 Existing				2032 No Action				2020 Existing				2032 No Action								
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS					
21: Palisade Ave & Ashburton Ave (Signalized)																													
Ashburton Ave	EB	L	0.17	4.8	A	L	0.21	6.8	A	L	0.11	4.1	A	L	0.16	6.8	A												
		T	0.42	16.7	B	T	0.67	21.4	C	T	0.52	17.7	B	T	0.75	24.5	C												
	WB	R	0.14	4.4	A	R	0.15	6.0	A	R	0.15	4.8	A	R	0.16	7.2	A												
		LT	0.67	43.4	D	LT	0.70	44.9	D	LT	0.56	39.8	D	LT	0.59	40.5	D												
Palisade Ave	NB	R	0.26	8.7	A	R	0.28	9.6	A	R	0.22	8.0	A	R	0.23	7.8	A												
		Intersection		15.3	B	Intersection		17.5	B	Intersection		13.8	B	Intersection		18.5	B												
22: New School St & Palisade Ave (Signalized)																													
Palisade Ave	EB	LTR	0.35	17.2	B	LTR	0.37	17.5	B	LTR	0.59	21.6	C	LTR	0.62	22.5	C	LTR	0.40	17.7	B	LTR	0.43	18.1	B				
New School St	NB	TR	0.34	12.5	B	TR	0.37	12.8	B	TR	0.22	10.5	B	TR	0.24	10.8	B	TR	0.18	8.2	A	TR	0.19	8.4	A				
Palisade Ave	SB	LT	0.50	16.9	B	LT	0.56	18.5	B	LT	0.49	16.0	B	LT	0.52	16.6	B	LT	0.22	12.4	B	LT	0.23	12.5	B				
Intersection		15.4		B	Intersection		16.1		B	Intersection		17.0		B	Intersection		17.7		B	Intersection		13.6		B	Intersection		13.9		B
23: New School St & Maple St & Nepperhan Ave (Signalized)																													
Nepperhan Ave	EB	L	0.38	26.5	C	L	0.40	28.4	C	L	0.27	21.8	C	L	0.28	22.8	C	L	0.25	9.2	A	L	0.30	18.1	B				
		TR	0.57	16.3	B	TR	0.66	18.0	B	TR	0.74	12.9	B	TR	0.87	18.0	B	TR	0.45	13.9	B	TR	0.55	13.6	B				
	WB	L	0.14	11.1	B	L	0.16	11.4	B	L	0.34	15.9	B	L	0.36	16.6	B	L	0.14	11.0	B	L	0.18	11.4	B				
		T	0.74	30.9	C	T	0.84	34.5	C	T	0.75	31.0	C	T	0.86	35.4	D	T	0.52	26.1	C	T	0.63	28.2	C				
New School St	SB	R	0.29	3.9	A	R	0.31	4.8	A	R	0.20	4.2	A	R	0.22	5.3	A	R	0.17	4.5	A	R	0.18	4.4	A				
		LTR	0.24	24.9	C	LTR	0.25	25.3	C	LTR	0.52	27.6	C	LTR	0.55	28.7	C	LTR	0.22	11.0	B	LTR	0.23	11.0	B				
Intersection		23.1		C	Intersection		25.6		C	Intersection		21.8		C	Intersection		25.8		C	Intersection		18.6		B	Intersection		19.9		B
24: Waverly St & Nepperhan Ave (Unsignalized)																													
Nepperhan Ave	EB	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-				
	WB	L	-	0.0	A	L	-	0.0	A	L	0.01	21.4	C	L	0.01	27.2	D	L	0.00	12.8	B	L	0.00	14.9	B				
Waverly St	NB	LR	0.89	76.1	F	LR	1.21	185.4	F	LR	1.17	181.0	F	LR	1.78	450.2	F	LR	0.44	22.1	C	LR	0.60	34.6	D				
25: Nepperhan Ave & Ashburton Ave (Signalized)																													
Ashburton Ave	EB	L	0.54	67.9	E	L	0.66	77.3	E	L	0.60	82.6	F	L	0.71	85.2	F												
		T	0.74	30.2	C	T	1.01	63.8	E	T	0.78	27.9	C	T	1.06	73.3	E												
	WB	R	0.07	1.3	A	R	0.07	0.8	A	R	0.05	0.4	A	R	0.05	0.2	A												
		LT	0.54	57.9	E	LT	0.56	59.2	E	LT	0.75	73.1	E	LT	0.79	77.6	E												
Nepperhan Ave	NB	TR	0.89	55.1	E	TR	1.04	86.4	F	TR	0.87	51.2	D	TR	1.26	164.3	F												
		L	0.57	59.6	E	L	0.60	61.4	E	L	0.51	55.9	E	L	0.53	56.8	E												
	SB	TR	0.62	31.4	C	TR	0.67	32.6	C	TR	0.44	30.7	C	TR	0.48	31.6	C												
		L	1.32	241.7	F	L	1.73	410.1	F	L	0.86	88.7	F	L	0.93	101.8	F												
Intersection		48.0		D	Intersection		69.4		E	Intersection		41.7		D	Intersection		81.2		F										
26: Nepperhan Ave & Copcutt Ln (Signalized)																													
Nepperhan Ave	EB	T	0.58	26.5	C	T	0.62	27.4	C	T	0.37	23.2	C	T	0.40	23.6	C												
	WB	T	0.35	23.1	C	T	0.38	23.4	C	T	0.39	23.2	C	T	0.42	23.6	C												
Copcutt Ln	SB	LR	0.32	27.5	C	LR	0.34	27.7	C	LR	0.31	22.8	C	LR	0.32	23.6	C												
Intersection		25.3		C	Intersection		25.9		C	Intersection		23.2		C	Intersection		23.6		C										

Table 11-20 (cont'd)
2020 Existing and 2032 No Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday									
	2020 Existing				2032 No Action				2020 Existing				2032 No Action				2020 Existing				2032 No Action					
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS		
27: Nepperhan Ave & Elm St (Signalized)																										
Elm St	EB	L	0.72	47.0	D	L	0.75	50.2	D	L	0.82	57.4	E	L	0.87	63.5	E	L	0.59	35.8	D	L	0.64	40.7	D	
		TR	0.28	27.9	C	TR	0.30	29.0	C	TR	0.25	27.1	C	TR	0.27	27.7	C	TR	0.14	19.4	B	TR	0.15	21.7	C	
	WB	LR	1.23	150.9	F	LR	1.41	227.2	F	LR	0.54	24.3	C	LR	0.67	31.0	C	LR	0.38	15.5	B	LR	0.49	21.1	C	
Nepperhan Ave	NB	TR	0.75	32.5	C	TR	0.83	35.2	D	TR	0.87	37.7	D	TR	1.02	59.2	E	TR	0.60	29.5	C	TR	0.70	31.0	C	
		SB	L	0.39	17.0	B	L	0.42	18.6	B	L	0.41	18.1	B	L	0.43	19.5	B	L	0.17	12.2	B	L	0.20	12.2	B
			T	0.48	14.8	B	T	0.53	15.3	B	T	0.53	15.1	B	T	0.60	16.2	B	T	0.39	13.9	B	T	0.45	14.3	B
	Intersection		43.4	D	Intersection		55.3	E	Intersection		28.3	C	Intersection		38.8	D	Intersection		21.8	C	Intersection		23.4	C		
28: Walnut St & Yonkers Ave (Signalized)																										
Yonkers Ave	EB	L	0.31	11.2	B	L	0.40	13.3	B	L	0.67	23.3	C	L	0.81	42.4	D									
		TR	0.43	17.7	B	TR	0.50	18.9	B	TR	0.71	24.5	C	TR	0.83	29.3	C									
	WB	L	0.22	18.2	B	L	0.28	18.0	B	L	0.56	26.4	C	L	0.68	34.4	C									
		TR	0.55	34.9	C	TR	0.65	38.5	D	TR	0.61	38.0	D	TR	0.70	40.5	D									
Walnut St	NB	LTR	1.15	123.6	F	LTR	1.33	196.7	F	LTR	0.45	30.4	C	LTR	0.61	37.4	D									
		SB	LTR	1.67	347.1	F	LTR	1.84	421.6	F	LTR	0.69	47.2	D	LTR	0.75	51.5	D								
	Intersection		86.8	F	Intersection		108.7	F	Intersection		31.5	C	Intersection		36.4	D										
29: Prescott St & Yonkers Ave (Signalized)																										
Yonkers Ave	EB	L	0.04	13.6	B	L	0.04	13.0	B	L	0.23	9.4	A	L	0.28	9.2	A									
		TR	0.69	26.5	C	TR	0.77	27.6	C	TR	0.78	17.5	B	TR	0.89	20.2	C									
	WB	L	0.27	13.7	B	L	0.31	22.7	C	L	0.39	29.8	C	L	0.44	39.3	D									
		TR	0.48	7.0	A	TR	0.55	6.4	A	TR	0.54	6.5	A	TR	0.60	5.8	A									
Prescott St	NB	LTR	0.81	55.9	E	LTR	0.86	60.8	E	LTR	0.24	35.8	D	LTR	0.26	36.1	D									
	Intersection		21.9	C	Intersection		22.7	C	Intersection		13.7	B	Intersection		15.0	B										
30: Driveway/Ashburton Ave & Yonkers Ave (Signalized)																										
Yonkers Ave	EB	TR	0.74	8.5	A	TR	0.82	10.1	B	TR	0.65	5.1	A	TR	0.76	8.0	A									
		T	0.61	26.3	C	T	0.70	27.9	C	T	0.69	27.6	C	T	0.79	30.3	C									
	WB	R	0.36	0.6	A	R	0.41	0.6	A	R	0.34	0.5	A	R	0.47	1.0	A									
Driveway	NB	LR	0.19	56.1	E	LR	0.20	56.6	E	LR	0.16	55.2	E	LR	0.17	55.7	E									
Ashburton Ave	SB	L	0.93	68.3	E	L	1.12	116.8	F	L	0.84	57.3	E	L	1.00	82.6	F									
		LR	0.78	38.3	D	LR	0.97	64.1	E	LR	0.85	57.7	E	LR	0.99	81.4	F									
	Intersection		22.3	C	Intersection		32.2	C	Intersection		22.3	C	Intersection		28.8	C										
31: Yonkers Ave & Saw Mill NB Ramps (Signalized)																										
Yonkers Ave	EB	L	0.69	28.1	C	L	0.91	43.4	D	L	0.52	24.7	C	L	0.73	34.3	C									
		T	0.51	5.1	A	T	0.57	5.6	A	T	0.50	5.6	A	T	0.56	5.9	A									
	WB	T	0.75	40.4	D	T	0.82	42.2	D	T	0.78	42.6	D	T	0.88	45.8	D									
		R	0.14	0.2	A	R	0.15	0.2	A	R	0.10	0.1	A	R	0.11	0.1	A									
Saw Mill NB Ramps	SB	L	0.28	45.7	D	L	0.30	46.2	D	L	0.24	45.0	D	L	0.26	45.3	D									
		R	0.46	22.9	C	R	0.56	26.5	C	R	0.47	23.7	C	R	0.63	29.4	C									
	Intersection		21.7	C	Intersection		24.6	C	Intersection		23.0	C	Intersection		25.9	C										
32: Yonkers Ave & Fox Terrace & Wasylenko Ln (Signalized)																										
Yonkers Ave	EB	LT	0.45	3.0	A	LT	0.50	3.5	A	LT	0.43	1.6	A	LT	0.48	1.7	A									
	WB	TR	0.43	6.8	A	TR	0.47	7.4	A	TR	0.43	6.9	A	TR	0.48	7.9	A									
Fox Terrace	SB	LR	0.00	0.0	A	LR	0.00	0.0	A	LR	0.00	0.0	A	LR	0.00	0.0	A									
Wasylenko Ln	SWB	LR	0.02	42.0	D	LR	0.02	42.0	D	LR	0.20	52.7	D	LR	0.22	52.9	D									
		Intersection		4.9	A	Intersection		5.4	A	Intersection		4.6	A	Intersection		5.1	A									

Table 11-20 (cont'd)
2020 Existing and 2032 No Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday								
	2020 Existing				2032 No Action				2020 Existing				2032 No Action				2020 Existing				2032 No Action				
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	
33: Yonkers Ave & Midland Ave West (Signalized)																									
Midland Ave	WB	L	0.40	16.1	B	L	0.43	15.9	B	L	0.34	14.8	B	L	0.37	14.3	B								
		R	0.39	6.1	A	R	0.42	6.1	A	R	0.35	6.2	A	R	0.40	6.1	A								
Yonkers Ave	NB	T	0.72	25.8	C	T	0.78	27.3	C	T	0.73	26.4	C	T	0.80	28.4	C								
		R	0.17	5.7	A	R	0.18	6.0	A	R	0.22	6.2	A	R	0.24	6.4	A								
	SB	L	0.91	66.2	E	L	1.15	134.0	F	L	0.80	49.9	D	L	1.05	103.8	F								
		T	0.56	17.5	B	T	0.62	18.0	B	T	0.56	17.0	B	T	0.62	16.0	B								
		Intersection		23.2	C	Intersection		30.9	C	Intersection		21.3	C	Intersection		26.5	C								
34: Yonkers Ave and Saw Mill River Parkway Southbound Ramps (Unsignalized)																									
Yonkers Ave	EB	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-								
		R	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-								
	WB	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-								
Saw Mill SB Off-Ramp	SB	R	0.50	24.7	C	R	0.75	44.2	E	R	0.74	40.3	E	R	1.25	176.1	F								
35: Yonkers Ave and Cross County Parkway On-Ramp/Midland Ave (East) (Signalized)																									
Midland Ave	EB	L	0.90	63.4	E	L	0.95	72.9	E	L	0.62	40.7	D	L	0.67	42.8	D								
		TR	0.18	9.3	A	TR	0.19	9.3	A	TR	0.16	11.7	B	TR	0.16	11.5	B								
	WB	LTR	0.12	15.7	B	LTR	0.12	15.4	B	LTR	0.13	12.5	B	LTR	0.14	12.2	B								
Yonkers Ave	NB	L	0.24	11.9	B	L	0.25	12.2	B	L	0.26	12.0	B	L	0.28	12.7	B								
		TR	0.42	13.3	B	TR	0.45	13.8	B	TR	0.44	13.3	B	TR	0.49	14.0	B								
	SB	L	0.07	18.8	B	L	0.08	17.8	B	L	0.20	18.7	B	L	0.23	19.1	B								
		TR	1.01	52.2	D	TR	1.09	78.0	E	TR	0.96	39.9	D	TR	1.05	62.1	E								
		Intersection		37.8	D	Intersection		51.4	D	Intersection		28.2	C	Intersection		38.8	D								
36: Hawthorne Ave & Prospect St (Unsignalized)																									
Prospect St	EB	LTR	0.27	10.7	B	LTR	0.41	12.1	B	LTR	0.41	12.2	B	LTR	0.66	16.8	C	LTR	0.15	9.5	A	LTR	0.25	10.5	B
		L	0.26	14.9	B	L	0.42	23.6	C	L	0.52	24.0	C	L	1.14	159.1	F	L	0.13	11.2	B	L	0.24	15.7	C
		TR	0.40	11.3	B	TR	0.59	14.2	B	TR	0.51	12.5	B	TR	0.77	19.9	C	TR	0.25	9.9	A	TR	0.51	12.8	B
37: Locust Hill Ave & Ashburton Ave (Unsignalized)																									
Ashburton Ave	EB	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-								
		WB	LT	0.05	8.6	A	LT	0.06	9.3	A	LT	0.07	8.9	A	LT	0.09	9.6	A							
Locust Hill Ave	NB	LR	0.19	15.0	C	LR	0.29	20.7	C	LR	0.16	17.8	C	LR	0.28	29.1	D								
38: Palisade Ave & Lafayette Pl/Walsh Rd (Signalized)																									
Lafayette Pl	EB	LTR	0.10	7.3	A	LTR	0.10	7.4	A	LTR	0.06	7.0	A	LTR	0.06	6.9	A								
Walsh Rd	WB	LTR	0.10	5.2	A	LTR	0.10	5.4	A	LTR	0.14	6.3	A	LTR	0.15	6.5	A								
Palisade Ave	NB	TR	0.44	12.6	B	TR	0.47	13.0	B	TR	0.42	12.0	B	TR	0.44	12.4	B								
		SB	LT	0.44	13.2	B	LT	0.47	13.6	B	LT	0.54	14.7	B	LT	0.58	15.4	B							
		Intersection		11.8	B	Intersection		12.2	B	Intersection		12.4	B	Intersection		12.9	B								
50: Locust Hill Avenue & Overlook Terrace (Unsignalized)																									
Overlook Terr	EB	LR	-	0.0	A	LR	-	0.0	A	LR	-	0.0	A	LR	-	0.0	A	LR	-	0.0	A	LR	-	0.0	A
Locust Hill Ave	NB	LT	-	0.0	A	LT	-	0.0	A	LT	-	0.0	A	LT	-	0.0	A	LT	-	0.0	A	LT	-	0.0	A
		SB	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-

Notes:
 EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound, NEB = Northeastbound, SWB = Southwestbound
 v/c = volume to capacity, LOS = Level of Service
 L = Left Turn, T = Through, R = Right Turn, dr = defacto right- turn lane
 = LOS E, = LOS F

**Table 11-1022
Yonkers AMS Development Site Trip Generation Summary**

Building Component	Development Size ¹		ITE Data ²							Trip Generation												
			ITE Land Use		Independent Variable	Peak Hour	ITE Trip Rate	Total Trips	% In	% Out	Total Trips		Internal Trips ⁶		Transit Trips		Ped & Bike Trips		Final Adjusted Trips ³		Total External Trips	
			#	Name							In	Out	In	Out	In	Out	In	Out	In	Out		
Chicken Island Site																						
Residential ⁴	2000	Units	222	Multi-Family Housing (High-Rise)	Dwelling Units	AM	0.32	633	0.21	0.79	133	500	3	6	33	125	7	25	90	344	434	
						PM	0.36	715	0.62	0.38	443	272	57	29	111	68	22	14	253	161	414	
						Sat	0.36	720	0.55	0.45	396	324	58	27	99	81	20	16	219	200	419	
Retail	70	Ksf	820	Shopping Center	1,000 SF Gross Floor Area	AM	0.94	66	0.62	0.38	41	25	7	4	10	6	2	1	22	14	36	
						PM	5.96	417	0.48	0.52	200	217	34	60	50	54	10	11	106	92	198	
						Sat	6.67	467	0.52	0.48	243	224	25	59	61	56	12	11	145	98	243	
Office ⁵	17	Ksf	710	General Office Building	1,000 SF Gross Floor Area	AM	2.47	42	0.86	0.14	36	6	2	2	9	2	2	0	23	2	25	
						PM	4.94	84	0.18	0.82	15	69	13	15	2	17	0	3	0	34	34	
						Sat	0.53	9	0.54	0.46	5	4	4	1	1	1	0	0	0	2	2	
											AM Trips	210	531	12	12	52	133	11	26	135	360	495
											PM Trips	658	558	104	104	163	139	32	28	359	287	646
											Saturday Trips	644	552	87	87	161	138	32	27	364	300	664
Teutonia Site																						
Residential ⁴	906	Units	222	Multi-Family Housing (High-Rise)	Dwelling Units	AM	0.32	294	0.21	0.79	62	232	-	-	16	58	3	12	43	162	205	
						PM	0.37	333	0.62	0.38	206	127	-	-	52	32	10	6	144	89	233	
						Sat	0.36	326	0.55	0.45	179	147	-	-	45	37	9	7	125	103	228	
Retail	10	Ksf	820	Shopping Center	1,000 SF Gross Floor Area	AM	0.94	9	0.62	0.38	6	3	-	-	2	1	0	0	4	2	6	
						PM	9.90	99	0.48	0.52	48	51	-	-	12	13	2	3	34	35	69	
						Sat	10.00	100	0.52	0.48	52	48	-	-	13	12	3	2	36	34	70	
											AM Trips	68	235	-	-	18	59	3	12	47	164	211
											PM Trips	254	178	-	-	64	45	12	9	178	124	302
											Saturday Trips	231	195	-	-	58	49	12	9	161	137	298
North Broadway Site⁷																						
Residential ⁴	650	Units	222	Multi-Family Housing (High-Rise)	Dwelling Units	AM	0.33	214	0.21	0.79	45	169	1	3	11	42	2	8	31	116	147	
						PM	0.37	243	0.62	0.38	151	92	21	11	38	23	8	5	84	53	137	
						Sat	0.36	234	0.55	0.45	129	105	19	11	32	26	6	5	72	63	135	
Retail	17	Ksf	820	Shopping Center	1,000 SF Gross Floor Area	AM	0.94	16	0.62	0.38	10	6	4	3	3	2	1	0	2	1	3	
						PM	8.59	146	0.48	0.52	70	76	13	22	18	19	4	4	35	31	66	
						Sat	9.00	153	0.52	0.48	80	73	9	20	20	18	4	4	47	31	78	
Office ⁵	21	Ksf	710	General Office Building	1,000 SF Gross Floor Area	AM	2.19	46	0.86	0.14	40	6	3	2	10	2	2	0	25	2	27	
						PM	4.19	88	0.18	0.82	16	72	6	7	4	18	1	4	5	43	48	
						Sat	0.53	11	0.54	0.46	6	5	4	1	2	1	0	0	0	3	3	
											AM Trips	95	181	8	8	24	46	5	8	58	119	177
											PM Trips	237	240	40	40	60	60	13	13	124	127	251
											Saturday Trips	215	183	32	32	54	45	10	9	119	97	216
											Total AM Trips	373	947	20	20	94	238	19	46	240	643	883
											Total PM Trips	1,149	976	144	144	287	244	57	50	661	538	1,199
											Total Saturday Trips	1,090	930	119	119	273	232	54	45	644	534	1,178

Notes: Ksf = 1,000 square feet

¹ Development sizes and uses are preliminary and are subject to change.

² Rates shown are roadway peak hour rates from the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition*

³ Final Adjusted Trips are calculated by subtracting internal, transit, and pedestrian and bicycle trips from the Total Trips

⁴ Generator peak hour rates were utilized for the Residential land use, all peak hours per direction from NYSDOT.

⁵ Generator peak hour rates were utilized for the Office PM peak hour due to more conservative estimate compared to the roadway peak hour rate.

⁶ Saturday internal trips were calculated using PM peak hour internalization factors, based on similar travel patterns and connectivity for the two peak hours.

⁷ The previous, larger land use program is utilized for the North Broadway site, which results in a conservative trip generation estimate. The updated North Broadway Project includes 650 residential units, 15,000 gsf of retail space, and 13,000 gsf of office space.

= Fitted curve rates were used for land uses and peak hours where at least 20 data points are available and R² ≥ 0.75. =

Table 11-1123
2032 No Action and 2032 With Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday												
	2032 No Action				2032 With Action				2032 No Action				2032 With Action				2032 No Action				2032 With Action								
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS					
1: Buena Vista Ave & Main St (Signalized)																													
Main St	EB	LTR	0.31	14.0	B	LTR	0.36	18.7	B	LTR	0.61	19.2	B	LTR	0.70	27.7	C	LTR	0.17	12.4	B	LTR	0.20	16.4	B				
	WB	LTR	0.36	15.1	B	LTR	0.43	20.7	C	LTR	0.59	19.8	B	LTR	0.76	35.5	D	LTR	0.23	13.1	B	LTR	0.30	18.1	B				
Buena Vista Ave	NB	LTR	0.73	26.3	C	LTR	0.65	12.3	B	LTR	0.86	38.0	D	LTR	0.74	15.6	B	LTR	0.63	22.0	C	LTR	0.56	10.2	B				
	SB	LTR	0.71	24.8	C	LTR	0.62	19.5	B	LTR	1.04	70.0	E	LTR	0.90	47.6	D	LTR	0.40	12.4	B	LTR	0.36	16.4	B				
Intersection		22.0		C	Intersection		17.1		B	Intersection		41.6		D	Intersection		33.1		C	Intersection		17.6		B	Intersection		13.5		B
2: Buena Vista Ave & Hudson St (No Action Unsignalized – With Action Signalized)																													
Hudson St	EB					LTR	0.32	31.3	C					LTR	0.25	30.6	C					LTR	0.27	31.1	C				
	WB	LR	0.11	10.1	B	C	0.37	27.3	C	LR	0.12	10.9	B	LTR	0.42	32.8	C	LR	0.11	9.4	A	LTR	0.44	33.9	C				
Buena Vista Ave	NB	TR	0.59	15.1	C	B	0.43	10.6	B	TR	0.70	19.3	C	LTR	0.52	12.5	B	TR	0.48	12.0	B	LTR	0.39	10.7	B				
	SB	LT	0.81	24.6	C	LTR	0.49	9.1	A	LT	1.08	77.5	F	LTR	0.73	14.8	B	LT	0.45	11.3	B	LTR	0.28	7.0	A				
Intersection					Intersection		11.8		B	Intersection		15.6		B	Intersection					Intersection		12.7		B					
3: Buena Vista Ave & Prospect St (Unsignalized)																													
Prospect St	WB	L	0.27	13.4	B	L	0.28	13.9	B	L	0.38	16.1	C	L	0.40	16.9	C	L	0.20	11.6	B	L	0.22	12.4	B				
		R	0.54	16.7	C	R	0.62	19.1	C	R	0.61	19.5	C	R	0.89	35.9	E	R	0.41	12.6	B	R	0.62	19.0	C				
Buena Vista Ave	NB	TR	0.65	19.6	C	TR	0.71	21.6	C	TR	0.86	31.4	D	TR	1.02	51.0	F	TR	0.42	12.4	B	TR	0.53	15.8	C				
	SB	LT	1.03	70.6	F	LT	1.25	155.0	F	LT	1.28	168.8	F	LT	1.54	282.8	F	LT	0.62	17.4	C	LT	0.83	32.3	D				
4: Hawthorne Ave & Main St (Signalized)																													
Main St	EB	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-				
	WB	LT	0.02	7.6	A	LT	0.02	7.6	A	LT	-	0.0	A	LT	-	0.0	A	LT	0.03	7.5	A	LT	0.03	7.5	A				
Hawthorne Ave	NB	LR	0.07	10.1	B	LR	0.07	10.2	B	LR	0.21	14.5	B	LR	0.22	15.0	C	LR	0.07	10.1	B	LR	0.07	10.2	B				
Market Pl	SB	LR	0.02	9.8	A	LR	0.02	9.9	B	LR	0.04	11.7	B	LR	0.04	11.9	B	LR	0.02	9.9	A	LR	0.02	10.1	B				
5: Hawthorne Ave & Hudson St (Unsignalized)																													
Hudson St	EB	LT	-	-	-	LT	-	-	-	LT	-	-	-	LT	-	-	-	LT	-	-	-	LT	-	-	-				
Hawthorne Ave	NB	LTR	0.18	10.4	B	LTR	0.20	11.1	B	LTR	0.32	12.0	B	LTR	0.39	13.4	B	LTR	0.16	9.7	A	LTR	0.21	10.5	B				
	SB	LR	0.08	9.8	A	LR	0.09	10.1	B	LR	0.15	11.7	B	LR	0.15	12.2	B	LR	0.06	9.2	A	LR	0.06	9.3	A				
6: Warburton Ave & Ashburton Ave (Signalized)																													
Ashburton Ave	EB	LTR	0.59	28.4	C	LTR	0.60	29.2	C	LTR	0.66	35.3	D	LTR	0.67	35.9	D												
	WB	L	0.19	26.4	C	L	0.20	26.6	C	L	0.19	30.9	C	L	0.23	31.4	C												
Warburton Ave		TR	0.35	23.6	C	TR	0.36	23.8	C	TR	0.59	32.9	C	TR	0.60	32.7	C												
	NB	LTR	0.76	40.3	D	LTR	0.77	40.6	D	LTR	0.85	43.6	D	LTR	0.86	44.6	D												
	SB	L	0.32	16.2	B	L	0.33	15.9	B	L	0.30	13.1	B	L	0.31	13.1	B												
Intersection		27.1		C	Intersection		27.3		C	Intersection		31.4		C	Intersection		31.7		C	Intersection									
7: Warburton Ave & Wells Ave (Signalized)																													
Wells Ave	EB	LTR	0.07	0.6	A	LTR	0.07	0.6	A	LTR	0.36	12.5	B	LTR	0.36	12.6	B	LTR	0.01	0.0	A	LTR	0.01	0.0	A				
	WB	L	0.71	34.2	C	L	0.72	34.5	C	L	0.78	38.4	D	L	0.81	40.8	D	L	0.64	27.1	C	L	0.67	28.4	C				
Warburton Ave		TR	0.37	25.0	C	TR	0.37	24.9	C	TR	0.17	22.1	C	TR	0.17	22.2	C	TR	0.11	17.8	B	TR	0.11	17.8	B				
	NB	T	0.47	18.9	B	T	0.48	19.3	B	T	0.34	16.6	B	T	0.36	16.8	B	T	0.30	12.6	B	T	0.31	12.8	B				
	SB	TR	0.60	21.0	C	TR	0.61	21.4	C	TR	0.54	20.0	B	TR	0.57	20.7	C	TR	0.33	12.5	B	TR	0.35	12.8	B				
Intersection		24.2		C	Intersection		24.5		C	Intersection		24.9		C	Intersection		26.0		C	Intersection		17.9		B	Intersection		18.5		B

Table 11-23 (cont'd)
2032 No Action and 2032 With Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday												
	2032 No Action				2032 With Action				2032 No Action				2032 With Action				2032 No Action				2032 With Action								
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS					
8: Nepperhan St & Warburton Ave & Dock St/Manor House Sq (Signalized)																													
Nepperhan St	NEB	LR	0.24	9.9	A	LR	0.26	11.2	B	LR	0.41	16.9	B	LR	0.43	17.6	B	LR	0.09	1.5	A	LR	0.13	3.0	A				
Warburton Ave	NB	L	0.40	21.5	C	L	0.41	21.9	C	L	0.67	34.8	C	L	0.71	39.1	D	L	0.18	15.5	B	L	0.20	15.8	B				
		TR	0.81	28.5	C	TR	0.83	30.2	C	TR	0.59	18.1	B	TR	0.61	18.8	B	TR	0.43	15.2	B	TR	0.45	15.6	B				
	SB	LTR	0.86	39.6	D	LTR	0.93	69.4	E	LTR	0.90	56.5	E	LTR	1.01	86.7	F	LTR	0.71	25.2	C	LTR	0.75	28.7	C				
Intersection		32.8		C	Intersection		49.0		D	Intersection		41.0		D	Intersection		58.7		E	Intersection		20.9		C	Intersection		23.3		C
9: Riverdale Ave/Warburton Ave & Main St (Signalized)																													
Main St	EB	LTR	0.39	12.5	B	LTR	0.43	16.0	B	LTR	0.88	52.2	D	LTR	0.92	58.4	E	LTR	0.31	10.5	B	LTR	0.32	11.2	B				
		L	0.27	28.7	C	L	0.27	28.8	C	L	0.79	50.5	D	L	0.79	50.1	D	L	0.69	40.6	D	L	0.69	41.0	D				
	WB	TR	0.36	19.1	B	TR	0.38	19.0	B	TR	0.64	29.1	C	TR	0.65	29.2	C	TR	0.35	20.2	C	TR	0.36	19.9	B				
Riverdale Ave	NB	L	0.09	11.1	B	L	0.09	11.1	B	L	0.11	12.5	B	L	0.12	12.8	B	L	0.03	10.2	B	L	0.03	10.3	B				
		T	0.26	12.1	B	T	0.26	12.1	B	T	0.15	10.7	B	T	0.15	10.8	B	T	0.13	10.4	B	T	0.13	10.5	B				
Warburton Ave	SB	TR	0.63	29.2	C	TR	0.64	29.4	C	TR	0.74	33.4	C	TR	0.78	34.9	C	TR	0.57	28.1	C	TR	0.60	28.6	C				
Intersection		21.0		C	Intersection		21.4		C	Intersection		34.0		C	Intersection		35.5		D	Intersection		24.9		C	Intersection		25.2		C
10: Riverdale Ave & Hudson St (Signalized)																													
Hudson St	EB	LTR	0.57	37.4	D	LTR	0.71	43.9	D	LTR	0.85	54.0	D	LTR	0.88	57.2	E	LTR	0.49	44.3	D	LTR	0.62	50.1	D				
Riverdale Ave	NB	TR	0.45	20.1	C	TR	0.47	21.3	C	TR	0.45	15.6	B	TR	0.49	18.1	B	TR	0.26	6.5	A	TR	0.30	7.5	A				
		L	0.31	11.4	B	L	0.33	13.0	B	L	0.57	24.8	C	L	0.63	27.6	C	L	0.32	6.5	A	L	0.37	9.0	A				
	SB	T	0.36	10.3	B	T	0.37	11.2	B	T	0.38	11.4	B	T	0.40	12.3	B	T	0.24	3.9	A	T	0.26	5.5	A				
Intersection		17.4		B	Intersection		20.1		C	Intersection		22.1		C	Intersection		24.8		C	Intersection		7.9		A	Intersection		11.2		B
11: Riverdale Ave & Prospect St (Signalized)																													
Prospect St	EB	LTR	0.58	34.0	C	LTR	0.70	37.8	D	LTR	0.88	50.4	D	LTR	0.97	64.0	E	LTR	0.34	29.6	C	LTR	0.42	31.0	C				
		L	1.20	125.9	F	L	1.51	260.5	F	L	1.34	189.6	F	L	B	313.8	F	L	0.51	8.8	A	L	0.68	13.7	B				
	WB	T	0.66	11.0	B	T	0.70	11.3	B	T	0.93	28.4	C	T	1.08	71.3	E	T	0.49	6.9	A	T	0.63	8.6	A				
		R	0.24	1.4	A	R	0.24	1.3	A	R	0.21	0.9	A	R	0.21	0.8	A	R	0.18	0.5	A	R	0.18	0.5	A				
Riverdale Ave	NB	L	0.56	46.4	D	L	0.57	46.3	D	L	0.65	55.4	E	L	0.67	57.0	E	L	0.30	31.6	C	L	0.31	31.8	C				
		TR	1.27dr	104.3	F	TR	1.31dr	109.0	F	TR	0.99dr	85.7	F	TR	1.09dr	110.7	F	TR	0.89dr	39.7	D	TR	0.98dr	43.0	D				
	SB	L	0.82	146.0	F	L	0.84	173.9	F	L	1.00	157.6	F	L	1.05	169.2	F	L	0.92	123.8	F	L	0.94	128.4	F				
		T	0.50	33.9	C	T	0.50	33.9	C	T	0.51	34.0	C	T	0.51	34.0	C	T	0.31	30.8	C	T	0.31	30.8	C				
R	0.08	0.3	A	R	0.08	0.3	A	R	0.09	0.3	A	R	0.09	0.3	A	R	0.05	0.2	A	R	0.05	0.2	A						
Intersection		65.1		E	Intersection		87.7		F	Intersection		71.9		E	Intersection		104.5		F	Intersection		35.1		D	Intersection		35.7		D
12: Riverdale Ave & Vark St (Signalized)																													
Vark St	EB	LTR	0.43	28.6	C	LTR	0.43	28.6	C	LTR	0.70	55.9	E	LTR	0.70	55.9	E												
	WB	LTR	0.16	19.2	B	LTR	0.16	19.2	B	LTR	0.52	42.0	D	LTR	0.52	42.0	D												
Riverdale Ave	NB	L	0.13	22.7	C	L	0.13	22.7	C	L	0.11	12.4	B	L	0.12	12.8	B												
		TR	0.91	49.6	D	TR	0.93	53.0	D	TR	0.50	20.5	C	TR	0.54	21.2	C												
	SB	L	0.66	50.2	D	L	0.66	46.3	D	L	0.51	19.8	B	L	0.54	19.8	B												
		TR	0.72	29.7	C	TR	0.78	31.1	C	TR	0.52	14.0	B	TR	0.56	14.2	B												
Intersection		37.9		D	Intersection		39.5		D	Intersection		22.0		C	Intersection		22.1		C										

Table 11-23 (cont'd)
2032 No Action and 2032 With Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday									
	2032 No Action				2032 With Action				2032 No Action				2032 With Action				2032 No Action				2032 With Action					
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS		
13: North Broadway & Ashburton Ave (Signalized)																										
Ashburton Ave	EB	LTR	0.71	24.9	C	LTR	0.72	25.3	C	LTR	0.80	28.1	C	LTR	0.82	29.9	C									
	WB	LTR	0.67	20.8	C	LTR	0.72	22.7	C	LTR	0.89	29.8	C	LTR	0.97	42.7	D									
North Broadway	NB	LTR	0.71	39.9	D	LTR	0.74	41.2	D	LTR	0.73	40.4	D	LTR	0.75	41.1	D									
	SB	L	0.56	24.5	C	L	0.61	26.4	C	L	0.55	24.0	C	L	0.65	27.8	C									
		TR	0.41	19.8	B	TR	0.42	19.8	B	TR	0.33	17.2	B	TR	0.34	17.2	B									
		Intersection		26.1	C	Intersection		27.1	C	Intersection		29.3	C	Intersection		34.2	C									
14: North Broadway & Manor House Square (Unsignalized)																										
Manor House Sq	EB	L	0.41	15.9	C	L	0.44	16.4	C	L	0.43	15.7	C	L	0.45	16.1	C	L	0.18	11.8	B	L	0.19	12.0	B	
North Broadway	NB	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-	
15a: North Broadway & Main St (Getty Square West) (Signalized)																										
Main St	WB	TR	0.31	0.6	A	TR	0.33	0.6	A	TR	0.52	2.1	A	TR	0.54	1.7	A	TR	0.45	2.8	A	TR	0.46	2.6	A	
North Broadway	NB	LT	0.46	21.5	C	LT	0.46	21.5	C	LT	0.51	23.0	C	LT	0.51	23.0	C	LT	0.37	19.0	B	LT	0.37	19.0	B	
		Intersection		11.9	B	Intersection		11.6	B	Intersection		11.1	B	Intersection		10.8	B	Intersection		9.1	A	Intersection		8.9	A	
15b: Palisade Ave & New Main St (Getty Square East) (Signalized)																										
New Main St	WB	TR	0.56	25.7	C	TR	0.63	27.5	C	TR	0.74	31.2	C	TR	0.85	38.2	D	TR	0.58	26.0	C	TR	0.69	29.4	C	
Palisade Ave	NB	LT	0.22	23.2	C	LT	0.28	24.1	C	LT	0.65	31.9	C	LT	0.75	36.1	D	LT	0.40	25.7	C	LT	0.49	27.5	C	
		Intersection		25.2	C	Intersection		26.6	C	Intersection		31.5	C	Intersection		37.3	D	Intersection		25.9	C	Intersection		28.7	C	
16: South Broadway/North Broadway & Hudson St (Unsignalized)																										
Hudson St	EB	LR	0.54	13.3	B	LR	0.65	16.1	C	LR	1.08	85.5	F	LR	1.21	135.8	F	LR	0.61	15.1	C	LR	0.73	20.0	C	
South Broadway	NB	T	0.43	11.8	B	T	0.46	12.7	B	T	0.91	38.2	E	T	1.00	48.6	E	T	0.48	12.8	B	T	0.55	14.6	B	
17: South Broadway & Prospect St/Nepperhan Ave (Signalized)																										
Prospect St	EB	L	0.20	23.0	C	L	0.20	25.3	C	L	0.21	26.0	C	L	0.21	26.3	C	L	0.22	20.6	C	L	0.24	20.8	C	
		TR	0.93	82.3	F	TR	1.00	89.6	F	TR	0.97	89.9	F	TR	1.05	87.8	F	TR	0.76	38.2	D	TR	0.83	65.5	E	
Nepperhan Ave	WB	L	0.82	30.8	C	L	1.08	84.8	F	L	1.04	80.1	F	L	1.21	138.6	F	L	0.19	6.9	A	L	0.35	10.8	B	
		T	0.68	11.8	B	T	0.74	12.6	B	T	0.78	15.5	B	T	0.89	24.8	C	T	0.49	6.9	A	T	0.60	8.5	A	
		R	0.16	1.6	A	R	0.16	1.3	A	R	0.35	1.7	A	R	0.36	1.6	A	R	0.11	0.5	A	R	0.11	0.9	A	
South Broadway	NB	L	0.34	32.3	C	L	0.35	32.4	C	L	0.34	32.2	C	L	0.38	33.1	C	L	0.13	28.7	C	L	0.16	29.0	C	
		TR	0.76	45.8	D	TR	0.83	51.7	D	TR	0.94	66.8	E	TR	1.11	110.5	F	TR	0.48	34.6	C	TR	0.64	39.5	D	
	SB	L	0.35	35.6	D	L	0.69	57.0	E	L	1.60	335.2	F	L	3.37	1117.7	F	L	0.33	33.3	C	L	0.57	43.9	D	
		Intersection		24.7	C	Intersection		24.6	C	Intersection		20.2	C	Intersection		20.2	C	Intersection		0.18	24.3	C	Intersection		24.1	C
		Intersection		41.4	D	Intersection		51.4	D	Intersection		66.3	E	Intersection		121.5	F	Intersection		24.5	C	Intersection		36.0	D	
18: South Broadway & Vark St/Park Hill Ave (Signalized)																										
Vark St	EB	LTR	0.74	44.0	D	LTR	0.75	45.6	D	LTR	0.75	45.8	D	LTR	0.75	46.2	D									
Park Hill Ave	WB	LTR	0.76	47.4	D	LTR	0.78	49.3	D	LTR	0.75	48.5	D	LTR	0.75	49.0	D									
South Broadway	NB	LTR	0.67	27.8	C	LTR	0.71	29.2	C	LTR	0.95	53.2	D	LTR	1.08	87.5	F									
	SB	LTR	0.84	38.4	D	LTR	0.94	50.1	D	LTR	0.81	36.0	D	LTR	0.91	47.3	D									
		Intersection		38.3	D	Intersection		43.5	D	Intersection		46.0	D	Intersection		62.5	E									
19: James St/Locust Hill Ave & Palisade Ave (Unsignalized)																										
Locust Hill Ave	EB	LTR	0.34	9.5	A	LTR	0.47	11.7	B	LTR	0.64	14.5	B	LTR	0.90	33.4	D	LTR	0.38	9.7	A	LTR	0.59	13.9	B	
Palisade Ave	NB	TR	0.09	8.0	A	TR	0.11	8.6	A	TR	0.11	8.7	A	TR	0.14	9.8	A	TR	0.08	7.9	A	TR	0.11	8.7	A	
	SB	LT	0.16	8.7	A	LT	0.32	10.5	B	LT	0.12	9.1	A	LT	0.33	11.9	B	LT	0.10	8.4	A	LT	0.25	10.1	B	

Table 11-23 (cont'd)
2032 No Action and 2032 With Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday												
	2032 No Action				2032 With Action				2032 No Action				2032 With Action				2032 No Action				2032 With Action								
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS					
20: New Main St & Nepperhan Ave (Signalized)																													
Nepperhan Ave	EB	L	0.04	6.6	A	L	0.09	6.6	A	L	0.05	6.2	A	L	0.19	9.6	A	L	0.06	4.5	A	L	0.18	6.3	A				
		TR	0.58	13.0	B	TR	0.64	14.7	B	TR	0.82	15.9	B	TR	0.89	19.2	B	TR	0.52	8.4	A	TR	0.59	11.6	B				
	WB	L	0.61	38.6	D	L	0.72	47.0	D	L	1.18	142.5	F	L	1.25	161.7	F	L	0.84	59.1	E	L	0.98	80.6	F				
		T	0.68	11.8	B	T	0.76	16.2	B	T	0.71	15.3	B	T	0.82	21.7	C	T	0.42	8.6	A	T	0.52	11.7	B				
New Main St	NB	LTR	1.06	93.3	F	LTR	1.08	99.2	F	LTR	1.11	108.0	F	LTR	1.16	127.5	F	LTR	0.85	51.9	D	LTR	0.90	57.9	E				
Intersection		26.8		C	Intersection		29.8		C	Intersection		39.8		D	Intersection		46.1		D	Intersection		21.3		C	Intersection		25.6		C
21: Palisade Ave & Ashburton Ave (Signalized)																													
Ashburton Ave	EB	L	0.21	6.8	A	L	0.22	7.1	A	L	0.16	6.8	A	L	0.17	7.1	A												
		T	0.67	21.4	C	T	0.69	22.4	C	T	0.75	24.5	C	T	0.77	26.3	C												
		R	0.15	6.0	A	R	0.15	6.3	A	R	0.16	7.2	A	R	0.18	7.6	A												
	WB	L	0.41	6.5	A	L	0.45	8.2	A	L	0.59	17.6	B	L	0.67	22.6	C												
TR		0.68	10.3	B	TR	0.70	10.8	B	TR	0.77	10.2	B	TR	0.81	12.4	B													
Palisade Ave	NB	LT	0.70	44.9	D	LT	0.73	46.2	D	LT	0.59	40.5	D	LT	0.62	41.5	D												
		R	0.28	9.6	A	R	0.30	10.3	B	R	0.23	7.8	A	R	0.25	7.5	A												
Intersection		17.5		B	Intersection		18.5		B	Intersection		18.5		B	Intersection		20.4		C										
22: New School St & Palisade Ave (Signalized)																													
Palisade Ave	EB	LTR	0.37	17.5	B	LTR	0.55	20.3	C	LTR	0.62	22.5	C	LTR	0.81	30.5	C	LTR	0.43	18.1	B	LTR	0.59	21.0	C				
New School St	NB	TR	0.37	12.8	B	TR	0.51	13.9	B	TR	0.24	10.8	B	TR	0.36	10.7	B	TR	0.19	8.4	A	TR	0.30	7.7	A				
Palisade Ave	SB	LT	0.56	18.5	B	LT	0.76	29.2	C	LT	0.52	16.6	B	LT	0.60	18.5	B	LT	0.23	12.5	B	LT	0.29	13.3	B				
Intersection		16.1		B	Intersection		20.3		C	Intersection		17.7		B	Intersection		21.5		C	Intersection		13.9		B	Intersection		14.9		B
23: New School St & Maple St & Nepperhan Ave (Signalized)																													
Nepperhan Ave	EB	L	0.40	28.4	C	L	0.48	34.0	C	L	0.28	22.8	C	L	0.50	35.7	D	L	0.30	18.1	B	L	0.52	38.5	D				
		TR	0.66	18.0	B	TR	0.71	18.3	B	TR	0.87	18.0	B	TR	0.91	21.1	C	TR	0.55	13.6	B	TR	0.59	13.9	B				
	WB	L	0.16	11.4	B	L	0.17	11.8	B	L	0.36	16.6	B	L	0.37	17.3	B	L	0.18	11.4	B	L	0.18	11.6	B				
		T	0.84	34.5	C	T	0.87	35.9	D	T	0.86	35.4	D	T	0.94	43.1	D	T	0.63	28.2	C	T	0.70	29.8	C				
New School St	SB	R	0.31	4.8	A	R	0.39	5.2	A	R	0.22	5.3	A	R	0.44	6.4	A	R	0.18	4.4	A	R	0.41	3.9	A				
		LTR	0.25	25.3	C	LTR	0.68	35.3	D	LTR	0.55	28.7	C	LTR	0.89	48.6	D	LTR	0.23	11.0	B	LTR	0.58	28.6	C				
Intersection		25.6		C	Intersection		27.2		C	Intersection		25.8		C	Intersection		32.2		C	Intersection		19.9		B	Intersection		22.0		C
24: Waverly St & Nepperhan Ave (Unsignalized)																													
Nepperhan Ave	EB	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-				
	WB	L	-	0.0	A	L	-	0.0	A	L	0.01	27.1	D	L	0.01	30.9	D	L	0.00	14.9	B	L	0.00	16.7	C				
		T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-				
Waverly St	NB	LR	1.21	185.4	F	LR	1.71	403.4	F	LR	1.78	450.2	F	LR	3.47	1235.8	F	LR	0.60	34.6	D	LR	1.09	143.9	F				

Table 11-23 (cont'd)
2032 No Action and 2032 With Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday								
	2032 No Action				2032 With Action				2032 No Action				2032 With Action				2032 No Action				2032 With Action				
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	
25: Nepperhan Ave & Ashburton Ave (Signalized)																									
Ashburton Ave	EB	L	0.66	77.3	E	L	0.79	89.0	F	L	0.71	85.2	F	L	0.83	96.0	F								
		T	1.01	63.8	E	T	1.02	64.6	E	T	1.06	73.3	E	T	1.06	74.7	E								
	WB	R	0.07	0.8	A	R	0.07	0.7	A	R	0.05	0.2	A	R	0.05	0.2	A								
		L	0.56	59.2	E	L	0.56	59.2	E	L	0.79	77.6	E	L	0.79	77.6	E								
Nepperhan Ave	NB	TR	1.04	86.4	F	TR	1.07	94.4	F	TR	1.26	164.3	F	TR	1.31	183.3	F								
		L	0.60	61.4	E	L	0.60	61.4	E	L	0.53	56.8	E	L	0.53	56.8	E								
	SB	TR	0.67	32.6	C	TR	0.71	34.0	C	TR	0.48	31.6	C	TR	0.52	32.4	C								
		L	1.73	410.1	F	L	1.73	410.1	F	L	0.93	101.8	F	L	0.93	101.8	F								
		T	0.36	30.5	C	T	0.37	30.6	C	T	0.36	30.4	C	T	0.39	30.8	C								
		R	0.16	4.2	A	R	0.18	4.0	A	R	0.16	4.0	A	R	0.21	4.2	A								
Intersection		69.4	E	Intersection		70.9	E	Intersection		81.2	F	Intersection		85.1	F										
26: Nepperhan Ave & Copcutt Ln (Signalized)																									
Nepperhan Ave	EB	T	0.62	27.4	C	T	0.66	28.4	C	T	0.40	23.6	C	T	0.44	24.0	C								
	WB	T	0.38	23.4	C	T	0.39	23.5	C	T	0.42	23.6	C	T	0.44	24.0	C								
Copcutt Ln	SB	LR	0.34	27.7	C	LR	0.34	27.7	C	LR	0.32	23.6	C	LR	0.32	23.6	C								
Intersection		25.9	C	Intersection		26.6	C	Intersection		23.6	C	Intersection		24.0	C										
27: Nepperhan Ave & Elm St (Signalized)																									
Elm St	EB	L	0.75	50.2	D	L	1.33	200.1	F	L	0.87	63.5	E	L	1.37	215.8	F	L	0.64	40.7	D	L	1.11	119.7	F
		TR	0.30	29.0	C	TR	0.32	29.4	C	TR	0.27	27.7	C	TR	0.28	28.2	C	TR	0.15	21.7	C	TR	0.17	23.2	C
Nepperhan Ave	WB	LR	1.41	227.2	F	LR	1.48	255.5	F	LR	0.67	31.0	C	LR	0.77	37.9	D	LR	0.49	21.1	C	LR	0.57	25.4	C
		TR	0.83	35.2	D	TR	0.91	40.1	D	TR	1.02	59.2	E	TR	1.09	83.9	F	TR	0.70	31.0	C	TR	0.75	32.5	C
	SB	L	0.42	18.6	B	L	0.42	19.1	B	L	0.43	19.5	B	L	0.43	19.6	B	L	0.20	12.2	B	L	0.22	12.3	B
		T	0.53	15.3	B	T	0.56	15.8	B	T	0.60	16.2	B	T	0.70	18.5	B	T	0.45	14.3	B	T	0.55	15.7	B
Intersection		55.3	E	Intersection		73.2	E	Intersection		38.8	D	Intersection		62.8	E	Intersection		23.4	C	Intersection		33.1	C		
28: Walnut St & Yonkers Ave (Signalized)																									
Yonkers Ave	EB	L	0.40	13.3	B	L	0.44	14.9	B	L	0.81	42.4	D	L	0.94	76.1	E								
		TR	0.50	18.9	B	TR	0.65	21.8	C	TR	0.83	29.3	C	TR	0.96	41.5	D								
	WB	L	0.28	18.0	B	L	0.37	18.0	B	L	0.68	34.4	C	L	0.68	30.8	C								
		TR	0.65	38.5	D	TR	0.70	38.5	D	TR	0.70	40.5	D	TR	0.85	43.4	D								
Walnut St	NB	LTR	1.33	196.7	F	LTR	1.33	196.7	F	LTR	0.61	37.4	D	LTR	0.61	37.4	D								
	SB	LTR	1.84	421.6	F	LTR	1.84	421.6	F	LTR	0.75	51.5	D	LTR	0.75	51.5	D								
Intersection		108.7	F	Intersection		101.3	F	Intersection		36.4	D	Intersection		43.9	D										
29: Prescott St & Yonkers Ave (Signalized)																									
Yonkers Ave	EB	L	0.04	13.0	B	L	0.05	10.6	B	L	0.28	9.2	A	L	0.45	13.4	B								
		TR	0.77	27.6	C	TR	0.95	34.2	C	TR	0.89	20.2	C	TR	1.04	44.0	D								
	WB	L	0.31	22.7	C	L	0.33	30.6	C	L	0.44	39.3	D	L	0.44	35.3	D								
		TR	0.55	6.4	A	TR	0.59	6.3	A	TR	0.60	5.8	A	TR	0.72	6.2	A								
Prescott St	NB	LTR	0.86	60.8	E	LTR	0.86	60.8	E	LTR	0.26	36.1	D	LTR	0.26	36.1	D								
Intersection		22.7	C	Intersection		25.8	C	Intersection		15.0	B	Intersection		25.7	C										

Table 11-23 (cont'd)
2032 No Action and 2032 With Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday											
	2032 No Action				2032 With Action				2032 No Action				2032 With Action				2032 No Action				2032 With Action							
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS				
30: Driveway/Ashburton Ave & Yonkers Ave (Signalized)																												
Yonkers Ave	EB	TR	0.82	10.1	B	TR	0.97	19.1	B	TR	0.76	8.0	A	TR	0.89	12.9	B											
	WB	T	0.70	27.9	C	T	0.81	31.1	C	T	0.79	30.3	C	T	1.01	52.3	D											
Driveway	NB	LR	0.20	56.6	E	LR	0.20	56.6	E	LR	0.17	55.7	E	LR	0.17	55.7	E											
Ashburton Ave	SB	L	1.12	116.8	F	L	1.12	116.8	F	L	1.00	82.6	F	L	1.00	82.6	F											
		LR	0.97	64.1	E	LR	0.97	64.1	E	LR	0.99	81.4	F	LR	0.99	81.4	F											
	Intersection				32.2	C	Intersection				35.1	D	Intersection				28.8	C	Intersection				37.2	D				
31: Yonkers Ave & Saw Mill NB Ramps (Signalized)																												
Yonkers Ave	EB	L	0.91	43.4	D	L	1.20	126.6	F	L	0.73	34.3	C	L	0.97	55.5	E											
	WB	T	0.57	5.6	A	T	0.59	5.0	A	T	0.56	5.9	A	T	0.58	5.2	A											
Saw Mill NB Ramps	SB	L	0.30	46.2	D	L	0.30	46.2	D	L	0.26	45.3	D	L	0.26	45.3	D											
		R	0.56	26.5	C	R	0.60	28.0	C	R	0.63	29.4	C	R	0.74	34.4	C											
	Intersection				24.6	C	Intersection				36.3	D	Intersection				25.9	C	Intersection				33.4	C				
32: Yonkers Ave & Fox Terrace & Wasylenko Ln (Signalized)																												
Yonkers Ave	EB	LT	0.50	3.5	A	LT	0.52	3.5	A	LT	0.48	1.7	A	LT	0.50	1.6	A											
	WB	TR	0.47	7.4	A	TR	0.48	7.5	A	TR	0.48	7.9	A	TR	0.50	8.3	A											
Fox Terrace	SB	LR	0.00	0.0	A	LR	0.00	0.0	A	LR	0.00	0.0	A	LR	0.00	0.0	A											
Wasylenko Ln	SWB	LR	0.02	42.0	D	LR	0.02	42.0	D	LR	0.22	52.9	D	LR	0.22	52.9	D											
	Intersection				5.4	A	Intersection				5.5	A	Intersection				5.1	A	Intersection				5.3	A				
33: Yonkers Ave & Midland Ave West (Signalized)																												
Midland Ave	WB	L	0.43	15.9	B	L	0.43	15.8	B	L	0.37	14.3	B	L	0.38	13.9	B											
		R	0.42	6.1	A	R	0.43	6.2	A	R	0.40	6.1	A	R	0.42	6.1	A											
Yonkers Ave	NB	T	0.78	27.3	C	T	0.79	27.6	C	T	0.80	28.4	C	T	0.83	29.6	C											
	SB	L	1.15	134.0	F	L	1.28	181.7	F	L	1.05	103.8	F	L	1.17	141.2	F											
		T	0.62	18.0	B	T	0.63	19.1	B	T	0.62	16.0	B	T	0.63	16.2	B											
	Intersection				30.9	C	Intersection				37.2	D	Intersection				26.5	C	Intersection				30.9	C				
34: Yonkers Ave and Saw Mill River Parkway Southbound Ramps (Unsignalized)																												
Yonkers Ave	EB	T	-	-	-	T	-	-	-	T	-	-	-	T	-	-	-											
	WB	R	-	-	-	R	-	-	-	R	-	-	-	R	-	-	-											
Saw Mill SB Off-Ramp	SB	R	0.75	44.2	E	R	0.94	76.4	F	R	1.25	176.1	F	R	1.93	464.7	F											
35: Yonkers Ave and Cross County Parkway On-Ramp/Midland Ave (East) (Signalized)																												
Midland Ave	EB	L	0.95	72.9	E	L	0.96	75.6	E	L	0.67	42.8	D	L	0.70	44.6	D											
	WB	TR	0.19	9.3	A	TR	0.19	9.3	A	TR	0.16	11.5	B	TR	0.16	11.5	B											
Yonkers Ave	NB	L	0.25	12.2	B	L	0.25	12.2	B	L	0.28	12.7	B	L	0.28	12.7	B											
	SB	L	0.08	17.8	B	L	0.08	16.6	B	L	0.23	19.1	B	L	0.24	18.0	B											
		TR	1.09	78.0	E	TR	1.12	88.5	F	TR	1.05	62.1	E	TR	1.08	70.6	E											
	Intersection				51.4	D	Intersection				57.0	E	Intersection				38.8	D	Intersection				43.1	D				

Table 11-23 (cont'd)
2032 No Action and 2032 With Action Conditions
Level of Service Analysis

Approach	Weekday AM								Weekday PM								Saturday								
	2032 No Action				2032 With Action				2032 No Action				2032 With Action				2032 No Action				2032 With Action				
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	
36: Hawthorne Ave & Prospect St (Unsignalized)																									
Prospect St	EB	LTR	0.41	12.1	B	LTR	0.47	12.8	B	LTR	0.66	16.8	C	LTR	0.82	24.2	C	LTR	0.25	10.5	B	LTR	0.30	11.0	B
	WB	L	0.42	23.6	C	L	0.53	33.1	D	L	1.14	159.1	F	L	1.50	313.3	F	L	0.24	15.7	C	L	0.28	18.2	C
TR		0.59	14.2	B	TR	0.63	15.0	C	TR	0.77	19.9	C	TR	0.92	34.6	D	TR	0.51	12.8	B	TR	0.65	15.8	C	
37: Locust Hill Ave & Ashburton Ave (Unsignalized)																									
Ashburton Ave	EB	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-								
	WB	LT	0.06	9.3	A	LT	0.07	9.4	A	LT	0.09	9.6	A	LT	0.11	9.8	A								
Locust Hill Ave	NB	LR	0.29	20.7	C	LR	0.45	27.4	D	LR	0.28	29.1	D	LR	0.53	45.7	E								
38: Palisade Ave & Lafayette Pl/Walsh Rd (Signalized)																									
Lafayette Pl	EB	LTR	0.10	7.4	A	LTR	0.10	7.4	A	LTR	0.06	6.9	A	LTR	0.06	6.9	A								
Walsh Rd	WB	LTR	0.10	5.4	A	LTR	0.10	5.4	A	LTR	0.15	6.5	A	LTR	0.15	6.5	A								
Palisade Ave	NB	TR	0.47	13.0	B	TR	0.51	13.6	B	TR	0.44	12.4	B	TR	0.47	12.9	B								
	SB	LT	0.47	13.6	B	LT	0.50	14.0	B	LT	0.58	15.4	B	LT	0.64	16.8	B								
	Intersection		12.2	B	Intersection		12.6	B	Intersection		12.9	B	Intersection		13.9	B									
50: Locust Hill Avenue & Overlook Terrace (Unsignalized)																									
Overlook Terr	EB	LR	-	0.0	A	LR	0.15	10.1	B	LR	-	0.0	A	LR	0.17	10.3	B	LR	-	0.0	A	LR	0.13	9.9	A
Locust Hill Ave	NB	LT	-	0.0	A	LT	0.04	7.6	A	LT	-	0.0	A	LT	0.07	7.6	A	LT	-	0.0	A	LT	0.07	7.6	A
	SB	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-	TR	-	-	-
59: Buena Vista Avenue & Teutonia Hall South Driveway (Unsignalized)																									
South Driveway	EB					LR	0.26	15.8	C					LR	0.29	20.8	C					LR	0.19	13.4	B
Buena Vista Avenue	NB					LT	0.03	8.6	A					LT	0.12	9.6	A					LT	0.09	8.4	A
	SB					TR	-	-	-					TR	-	-	-					TR	-	-	-
130: Centre Street & Palisade Avenue (Unsignalized)																									
Palisade Avenue	EB					TR	-	-	-					TR	-	-	-					TR	-	-	-
Centre Street	NB					R	0.01	10.5	B					R	0.01	12.2	B					R	0.01	10.7	B
Notes: EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound, NEB = Northeastbound, SWB = Southwestbound v/c = volume to capacity, LOS = Level of Service L = Left Turn, T = Through, R = Right Turn, dr = defacto right- turn lane Yellow = LOS E, Orange = LOS F Red bold text = Impact																									

Table 11-29
2032 No Action, 2032 With Action, and 2032 Mitigation Conditions
Level of Service Analysis

Approach	Weekday AM												Weekday PM												Saturday																				
	2032 No Action				2032 With Action				2032 Mitigation				2032 No Action				2032 With Action				2032 Mitigation				2032 No Action				2032 With Action				2032 Mitigation												
	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS	Lane Group	v/c Ratio	Delay (sec)	LOS									
3: Buena Vista Ave & Prospect St (No Action and With Action Unsignalized – Mitigation Signalized)																																													
Prospect St	WB	L	0.27	13.4	B	L	0.28	13.9	B	L	0.40	28.5	C	L	0.38	16.1	C	L	0.40	16.9	C	L	0.56	37.1	D																				
		R	0.54	16.7	C	R	0.62	19.1	C	R	0.60	9.1	A	R	0.61	19.5	C	R	0.70	10.5	B																								
Buena Vista Ave	NB	TR	0.65	19.6	C	TR	0.71	21.6	C	T	0.53	27.7	C	TR	0.86	31.4	D	TR	1.02	51.0	F	T	0.63	33.6	C																				
										R	0.42	7.5	A									R	0.61	14.0	B																				
	SB	LT	1.03	70.6	F	LT	1.25	155.0	F	L	0.87	23.1	C	LT	1.28	168.8	F	LT	1.54	282.8	F	L	0.88	23.9	C																				
										T	0.22	5.0	A									T	0.16	4.8	A																				
8: Nepperhan St & Warburton Ave & Dock St/Manor House Sq (Signalized)																																													
Nepperhan St	NEB	LR	0.24	9.9	A	LR	0.26	11.2	B	LR	0.42	16.7	B	LR	0.41	16.9	B	LR	0.43	17.6	B	LR	0.83	53.3	D																				
Warburton Ave	NB	L	0.40	21.5	C	L	0.41	21.9	C	L	0.29	13.6	B	L	0.67	34.8	C	L	0.71	39.1	D	L	0.48	18.1	B																				
		TR	0.81	28.5	C	TR	0.83	30.2	C	TR	0.69	18.3	B	TR	0.59	18.1	B	TR	0.61	18.8	B	TR	0.49	11.4	B																				
	SB	LTR	0.86	39.6	D	LTR	0.93	69.4	E	LTR	0.77	27.0	C	LTR	0.90	56.5	E	LTR	1.01	86.7	F	LTR	0.82	36.9	D																				
9: Riverdale Ave/Warburton Ave & Main St (Signalized)																																													
Main St	WB													LTR	0.88	52.2	D	LTR	0.92	58.4	E	LTR	0.89	51.2	D																				
										L	0.79	50.5	D	L	0.79	50.1	D	L	0.76	46.2	D																								
Riverdale Ave	NB													TR	0.64	29.1	C	TR	0.65	29.2	C	TR	0.63	27.4	C																				
										L	0.11	12.5	B	L	0.12	12.8	B	L	0.12	13.8	B																								
Warburton Ave	SB													T	0.15	10.7	B	T	0.15	10.8	B	T	0.15	11.5	B																				
										TR	0.74	33.4	C	TR	0.78	34.9	C	TR	0.76	33.5	C																								
10: Riverdale Avenue & Hudson Street (Signalized)																																													
Hudson St	EB													LTR	0.85	54.0	D	LTR	0.88	57.2	E	LTR	0.86	53.8	D																				
Riverdale Ave	SB													TR	0.45	15.6	B	TR	0.49	18.1	B	TR	0.50	18.5	B																				
										L	0.57	24.8	C	L	0.63	27.6	C	L	0.63	28.3	C																								
11: Riverdale Ave & Prospect St (Signalized)																																													
Prospect St	WB	LTR	0.58	34.0	C	LTR	0.70	37.8	D	LTR	0.73	40.3	D	LTR	0.88	50.4	D	LTR	0.97	64.0	E	LTR	0.89	48.8	D																				
		L	1.20	125.9	F	L	1.51	260.5	F	L	1.15	104.8	F	L	1.34	189.6	F	L	1.63	313.8	F	L	1.20	128.3	F																				
		T	0.66	11.0	B	T	0.70	11.3	B	T	0.62	8.5	A	T	0.93	28.4	C	T	1.08	71.3	E	T	0.93	22.4	C																				
Riverdale Ave	NB	R	0.24	1.4	A	R	0.24	1.3	A	R	0.22	1.4	A	R	0.21	0.9	A	R	0.21	0.8	A	R	0.19	1.1	A																				
		L	0.56	46.4	D	L	0.57	46.3	D	L	0.60	51.7	D	L	0.65	55.4	E	L	0.67	57.0	E	L	0.76	64.0	E																				
	TR	1.27dr	104.3	F	TR	1.31dr	109.0	F	T	0.48	47.6	D	TR	0.99dr	85.7	F	TR	1.09dr	110.7	F	T	0.44	41.4	D																					
									R	0.77	43.9	D									R	0.65	48.0	D																					
	SB	L	0.82	146.0	F	L	0.84	173.9	F	L	0.70	131.7	F	L	1.00	157.6	F	L	1.05	169.2	F	L	1.02	168.3	F																				
T		0.50	33.9	C	T	0.50	33.9	C	T	0.55	37.1	D	T	0.51	34.0	C	T	0.51	34.0	C	T	0.58	38.4	D																					
Intersection Summary																																													
		Intersection	65.1	E	Intersection	87.7	F	Intersection	48.1	D	Intersection	71.9	E	Intersection	104.5	F	Intersection	56.6	E																										

Table 11-29 (cont'd)
2032 No Action, 2032 With Action, and 2032 Mitigation Conditions
Level of Service Analysis

Approach	Weekday AM												Weekday PM												Saturday																								
	2032 No Action				2032 With Action				2032 Mitigation				2032 No Action				2032 With Action				2032 Mitigation				2032 No Action				2032 With Action				2032 Mitigation																
	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS									
25: Nepperhan Ave & Ashburton Ave (Signalized)																																																	
Ashburton Ave	EB	L	0.66	77.3	E	L	0.79	89.0	F	L	0.58	35.2	D	L	0.71	85.2	F	L	0.83	96.0	F	L	0.61	41.9	D																								
		T	1.01	63.8	E	T	1.02	64.6	E	T	1.00	58.4	E	T	1.06	73.3	E	T	1.06	74.7	E	T	1.04	67.0	E																								
	WB	R	0.07	0.8	A	R	0.07	0.7	A	R	0.07	0.7	A	R	0.05	0.2	A	R	0.05	0.2	A	R	0.05	0.2	A																								
		L	0.56	59.2	E	L	0.56	59.2	E	L	0.38	21.5	C	L	0.79	77.6	E	L	0.79	77.6	E	L	0.58	28.7	C																								
Nepperhan Ave	NB	TR	1.04	86.4	F	TR	1.07	94.4	F	TR	1.05	87.1	F	TR	1.26	164.3	F	TR	1.31	183.3	F	TR	1.28	170.5	F																								
		L	0.60	61.4	E	L	0.60	61.4	E	L	0.60	61.4	E	L	0.53	56.8	E	L	0.53	56.8	E	L	0.53	56.8	E																								
	SB	TR	0.67	32.6	C	TR	0.71	34.0	C	TR	0.71	34.0	C	TR	0.48	31.6	C	TR	0.52	32.4	C	TR	0.52	32.4	C																								
		L	1.73	410.1	F	L	1.73	410.1	F	L	1.73	410.1	F	L	0.93	101.8	F	L	0.93	101.8	F	L	0.93	101.8	F																								
		T	0.36	30.5	C	T	0.37	30.6	C	T	0.37	30.6	C	T	0.36	30.4	C	T	0.39	30.8	C	T	0.39	30.8	C																								
		R	0.16	4.2	A	R	0.18	4.0	A	R	0.18	4.0	A	R	0.16	4.0	A	R	0.21	4.2	A	R	0.22	4.2	A																								
		Intersection	69.4	E	Intersection	70.9	E	Intersection	65.0	E	Intersection	81.2	F	Intersection	85.1	F	Intersection	75.6	E																														
27: Nepperhan Ave & Elm St (Signalized)																																																	
Elm St	EB	L	0.75	50.2	D	L	1.33	200.1	F	L	0.69	32.7	C	L	0.87	63.5	E	L	1.37	215.8	F	L	0.95	68.8	E	L	0.64	40.7	D	L	1.11	119.7	F	L	0.75	42.3	D												
		TR	0.30	29.0	C	TR	0.32	29.4	C	TR	0.24	20.3	C	TR	0.27	27.7	C	TR	0.28	28.2	C	TR	0.28	28.3	C	TR	0.15	21.7	C	TR	0.17	23.2	C	TR	0.16	22.0	C												
	WB	LTR	1.41	227.2	F	LTR	1.48	255.5	F	L	1.00	73.4	E	LTR	0.67	31.0	C	LTR	0.77	37.9	D	L	0.77	50.0	D	LTR	0.49	21.1	C	LTR	0.57	25.4	C	L	0.55	34.5	C												
		R	0.17	9.7	A	R	0.17	9.7	A									R	0.09	10.4	B					R	0.05	4.8	A																				
Nepperhan Ave	NB	TR	0.83	35.2	D	TR	0.91	40.1	D	TR	0.94	38.7	D	TR	1.02	59.2	E	TR	1.09	83.9	F	TR	0.96	47.7	D	TR	0.70	31.0	C	TR	0.75	32.5	C	TR	0.80	16.9	B												
		L	0.42	18.6	B	L	0.42	19.1	B	L	0.61	27.0	C	L	0.43	19.5	B	L	0.43	19.6	B	L	0.62	28.1	C	L	0.20	12.2	B	L	0.22	12.3	B	L	0.17	14.0	B												
	SB	T	0.53	15.3	B	T	0.56	15.8	B	T	0.70	20.4	C	T	0.60	16.2	B	T	0.70	18.5	B	T	0.70	14.7	B	T	0.45	14.3	B	T	0.55	15.7	B	T	0.55	17.5	B												
Intersection		55.3	E	Intersection	73.2	E	Intersection	31.9	C	Intersection	38.8	D	Intersection	62.8	E	Intersection	35.0	D	Intersection	23.4	C	Intersection	33.1	C	Intersection	20.2	C																						
28: Walnut St & Yonkers Ave (Signalized)																																																	
Yonkers Ave	EB																																																
		TR	0.83	29.3	C	TR	0.96	41.5	D	TR	0.98	31.7	C					TR	0.83	48.2	D																												
	WB	L	0.68	34.4	C	L	0.68	30.8	C	L	0.63	25.5	C					L	0.63	25.5	C																												
		TR	0.70	40.5	D	TR	0.85	43.4	D	TR	0.88	39.0	D					TR	0.88	39.0	D																												
Walnut St	NB	LTR	0.61	37.4	D	LTR	0.61	37.4	D	LTR	0.61	37.4	D					LTR	0.61	37.4	D																												
		SB	LTR	0.75	51.5	D	LTR	0.75	51.5	D	LTR	0.75	51.5	D					LTR	0.75	51.5	D																											
			Intersection	36.4	D	Intersection	43.9	D	Intersection	36.7	D					Intersection	36.7	D																															
31: Yonkers Ave & Saw Mill NB Ramps (Signalized)																																																	
Yonkers Ave	EB	L	0.91	43.4	D	L	1.20	126.6	F	L	0.85	51.6	D	L	0.73	34.3	C	L	0.97	55.5	E	L	0.86	47.4	D																								
		T	0.57	5.6	A	T	0.59	5.0	A	T	0.57	6.2	A	T	0.56	5.9	A	T	0.58	5.2	A	T	0.58	7.8	A																								
	WB	T	0.82	42.2	D	T	0.84	42.7	D	T	0.99	54.5	D	T	0.88	45.8	D	T	0.92	58.6	E	T	1.00	50.0	D																								
		R	0.15	0.2	A	R	0.15	0.2	A	R	0.15	0.2	A	R	0.11	0.1	A	R	0.11	0.1	A	R	0.11	0.1	A																								
Saw Mill NB Ramps	SB	L	0.30	46.2	D	L	0.30	46.2	D	L	0.42	53.4	D	L	0.26	45.3	D	L	0.26	45.3	D	L	0.27	45.5	D																								
		R	0.56	26.5	C	R	0.60	28.0	C	R	0.52	21.5	C	R	0.63	29.4	C	R	0.74	34.4	C	R	0.66	29.1	C																								
		Intersection	24.6	C	Intersection	36.3	D	Intersection	29.9	C	Intersection	25.9	C	Intersection	33.4	C	Intersection	29.8	C																														
33: Yonkers Avenue & Midland Ave (West) (Signalized)																																																	
Midland Ave	WB	L	0.43	15.9	B	L	0.43	15.8	B	L	0.43	15.8	B																																				
		R	0.42	6.1	A	R	0.43	6.2	A	R	0.43	6.2	A																																				
Yonkers Ave	NB	T	0.78	27.3	C	T	0.79	27.6	C	T	0.84	32.4	C																																				
		R	0.18	6.0	A	R	0.18	6.1	A	R	0.19	7.6	A																																				
	SB	L	1.15	134.0	F	L	1.28	181.7	F	L	1.15	127.8	F																																				
T		0.62	18.0	B	T	0.63	19.1	B	T	0.63	18.1	B																																					
		Intersection	30.9	C	Intersection	37.2	D	Intersection	32.6	C																																							

Table 11-29 (cont'd)
2032 No Action, 2032 With Action, and 2032 Mitigation Conditions
Level of Service Analysis

Approach	Weekday AM												Weekday PM												Saturday																																							
	2032 No Action				2032 With Action				2032 Mitigation				2032 No Action				2032 With Action				2032 Mitigation				2032 No Action				2032 With Action				2032 Mitigation																															
	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS	Lane Group	v/c	Delay (sec)	LOS																								
34: Yonkers Ave and Saw Mill River Parkway Southbound Ramps (No Action and With Action Unsignalized – Mitigation Signalized)																																																																
Yonkers Ave	EB	T	-	-	-	T	-	-	-	T	0.61	0.3	A	T	-	-	-	T	-	-	-	T	0.57	0.3	A																																							
		R	-	-	-	R	-	-	-	R	0.36	0.1	A	R	-	-	-	R	-	-	-	R	0.30	0.2	A																																							
	WB	T	-	-	-	T	-	-	-	T	0.71	6.9	A	T	-	-	-	T	-	-	-	T	0.93	62.0	E																																							
Saw Mill SB Off-Ramp	SB	R	0.75	44.2	E	R	0.94	76.4	F	R	0.81	54.8	D	R	1.25	176.1	F	R	1.93	464.7	F	R	0.96	79.5	E																																							
		Intersection												5.9	A	Intersection												32.5	C																																			
35: Yonkers Ave and Cross County Parkway On-Ramp/Midland Ave (East) (Signalized)																																																																
Midland Ave	EB	L	0.95	72.9	E	L	0.96	75.6	E	L	0.96	75.6	E																																																			
		TR	0.19	9.3	A	TR	0.19	9.3	A	TR	0.19	9.3	A																																																			
Yonkers Ave	WB	LTR	0.12	15.4	B	LTR	0.12	15.4	B	LTR	0.12	15.4	B																																																			
		TR	0.45	13.8	B	TR	0.46	13.9	B	TR	0.46	13.9	B																																																			
	NB	L	0.25	12.2	B	L	0.25	12.2	B	L	0.34	15.0	B																																																			
		TR	0.45	13.8	B	TR	0.46	13.9	B	TR	0.46	13.9	B																																																			
SB	L	0.08	17.8	B	L	0.08	16.6	B	L	0.07	13.3	B																																																				
	TR	1.09	78.0	E	TR	1.12	88.5	F	TR	1.01	44.7	D																																																				
Intersection												51.4	D	Intersection												57.0	E	Intersection												36.1	D																							
36: Hawthorne Ave & Prospect St (No Action and With Action Unsignalized – Mitigation Signalized)																																																																
Prospect St	EB												LTR	0.66	16.8	C	LTR	0.82	24.2	C	LTR	0.28	2.7	A																																								
														L	1.14	159.1	F	L	1.50	313.3	F	L	0.35	5.4	A																																							
	WB												TR	0.77	19.9	C	TR	0.92	34.6	D	TR	0.47	4.3	A																																								
Intersection												3.7	A																																																			

Notes:
 EB = Eastbound, WB = Westbound, NB = Northbound, SB = Southbound, NEB = Northeastbound, SWB = Southwestbound
 v/c = volume to capacity, LOS = Level of Service
 L = Left Turn, T = Through, R = Right Turn, dr = defacto right- turn lane
 = LOS E, = LOS F
Red bold text = Significant Impact