



US Route 9W Corridor

Cumulative Traffic Assessment Update
Bethlehem, Albany County, New York

FINAL TECHNICAL REPORT

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Section 1: Overview and Background

1-1 Introduction

This study was prepared to update previous assessments by others of recent cumulative development within the US Route 9W corridor in the Town of Bethlehem to reflect current traffic conditions and the transportation improvements recommended in the *US Route 9W Transportation Planning Assessment Study* that was prepared in 2008 as part of the CDTC Linkage Study (i.e. Route 9W Corridor Study).

Pursuant to SEQR 6NYCRR 617.7, this assessment will inform the determination of significance decision of the Planning Board as Lead Agency relative to the cumulative impacts of traffic on the Route 9W Corridor associated with recent site plan and subdivision applications located in the boundary area of the Route 9W Corridor Study. Subdivision Regulations 103-24 E and Zoning Law 128-71 E (14) of the Bethlehem Town Code require the Planning Board to consider the transportation improvements of the Route 9W Corridor Study when reviewing land use applications. The applications include:

- Wemple Road Apartments (96 multi-family units) site plan application, located at the intersection of Wemple Road/Route 9W
- Reserve at Feura Bush Condominiums (48 multi-family units) PDD application, located along Feura Bush Road
- Brookside Meadows (58 single-family home units and 24 multi-family condominiums) conservation subdivision application, located along Clapper Road
- Hillman Subdivision (76 single family home units and 44 townhome units) conservation subdivision application, located along Clapper Road
- 7,750sqft. commercial expansion, at Glenmont Plaza at the intersection of Feura Bush Road/Route 9W

In total these developments when combined would result in 346 units and 7,750 sq. ft. of commercial space contributing to traffic along the US Route 9W corridor and the Feura Bush Road-Glenmont Road (NY Route 910A) corridor. Further the Route 9W Corridor Study provides a growth scenario that reflects the pace of growth comparable to what has taken place in Town during the last 20 years. The primary objectives of the assessment are:

- Update baseline traffic volumes and circulation patterns for a focus-area subset of study intersections (see Subsection 1-2: Study Area Description)
- Update baseline traffic operations analysis for this subset group of intersections
- Review current development patterns and trends in the study area (generally defined as the boundaries established in the Route 9W Corridor Study)
- Review and update the status of transportation improvement projects
- Review and update transportation improvement costs for the associated study area
- Review and update public/private cost shares

1-2 Study Area Description

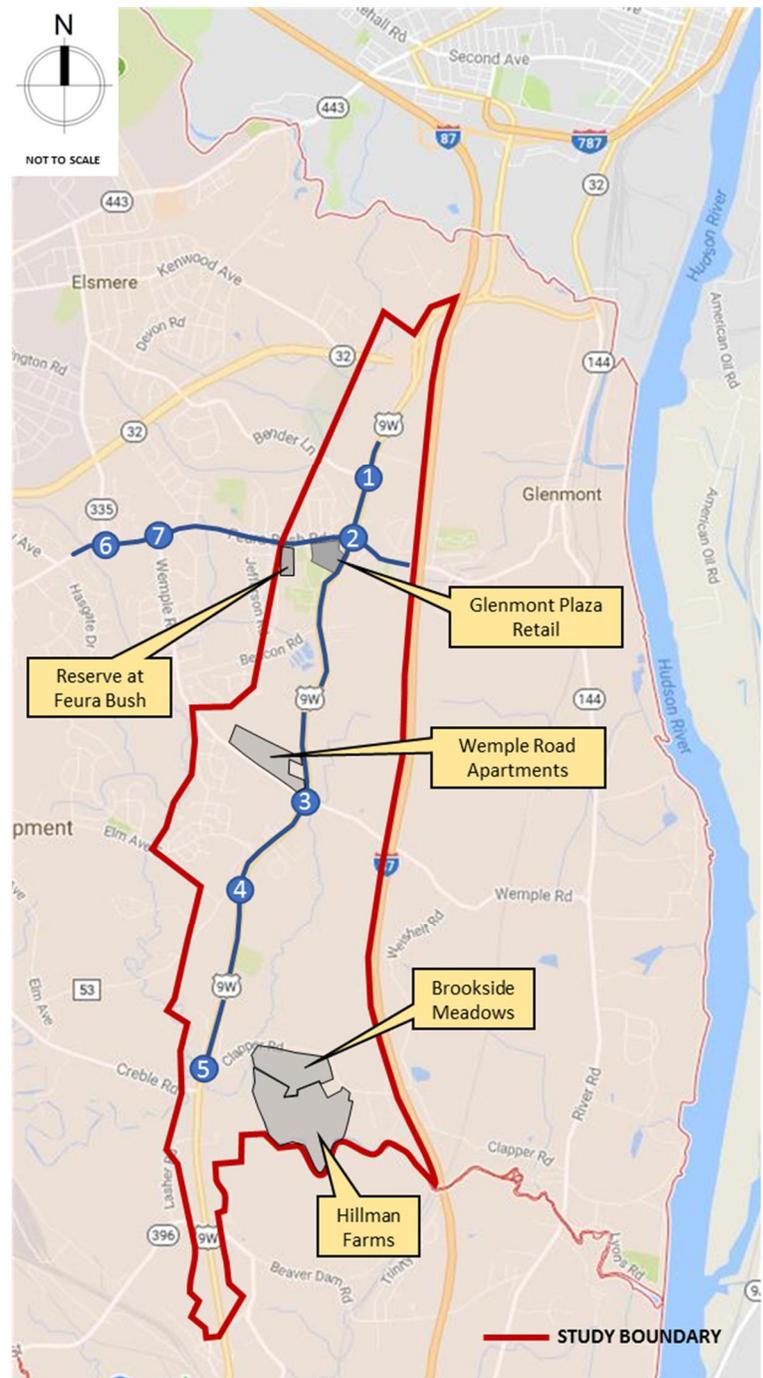
The study area for this assessment includes US Route 9W from Bender Lane to Clapper Road, and the segment of Feura Bush Road (NY Route 910A) from Elsmere Avenue (NY Route 335) to US 9W. The intersections studied for detailed capacity and operations analysis are as follows:

- 1 US Route 9W & Bender Lane
- 2 US Route 9W, Feura Bush Road & Glenmont Road
- 3 US Route 9W & Wemple Road
- 4 US Route 9W & Jericho Road
- 5 US Route 9W & Clapper Road
- 6 Elsmere Avenue & Feura Bush Road
- 7 Wemple Road & Feura Bush Road

The locations of these intersections within the study corridors are shown on Exhibit 1-1.

It is noted that the two signalized intersections of US Route 9W and the accesses to Bethlehem Town Center (north of Bender Lane) are not included in this study. This is because geometric improvements at these intersections to add turn lanes in or out of the Town Center are not anticipated unless there are future changes made by the owner to increase the retail footprint of the shopping center, or associated with site development on the east side of US Route 9W. The only "public-share" improvement at these locations would involve considerations to provide additional mainline capacity. Since this would be a corridor-level improvement, detailed LOS analysis of these two retail intersections are not needed to inform such a decision since they would not be critical locations for determining a future need for the added corridor capacity.

Exhibit 1-1: Study Area



Section 2: Study Approach

This study provides a technical update of traffic conditions in the corridors to examine the changes that have occurred pertaining to vehicle traffic flow and operations, and the status of land development compared to previous assumptions.

The study involved the compilation and review of available traffic data, land development data, previous studies (including the 2008 Route 9W Corridor Study and traffic impact studies completed for individual site development projects), and collection of new traffic volume data. This data was used to identify changes in daily traffic volumes and peak hour flow patterns.

Land development patterns were assessed by Town Planning staff to update the projection of growth in the corridor for the same 2026 planning horizon that was used in the 2008 study of the US 9W corridor. This assessment considered the development that has occurred in the Town since 2008, zoning/site development parameters, developer input, and environmental constraints.

Estimates of the vehicle trip generation of the updated development scenario were developed using the same methodologies and resources as were used for the 2008 study, but also considering updated trip rate data published by the Institute of Transportation Engineers (ITE). Projected traffic volumes were developed for the 2026 planning horizon based on parcel-level analysis of trip generation, and travel demand modelling support from CDTC.

The traffic operations at the study intersections were evaluated for existing and future conditions using analytical models based on the applicable procedures of the Highway Capacity Manual, published by the Transportation Research Board. Mainline operations were evaluated based on regional planning-level capacity thresholds developed by CDTC. These analyses were used to identify the continued applicability of the improvement recommendations from these previous studies and/or to identify alternatives.

Planning-level cost estimates of the identified transportation improvements were developed to reflect current construction item costs, as well as to include costs for design, construction administration/inspection and right-of-way acquisition/easements.

Public/private cost shares were identified as a mechanism to fund the transportation improvements and to address the respective impacts of developments contributing to the need for these improvements. This approach followed CDTC's *Procedures for Public/Private Highway Financing in the Capital District*, which consider factors such as existing traffic volumes, new development volumes and reserve capacity of the transportation facilities.

Section 3: Existing Traffic Conditions

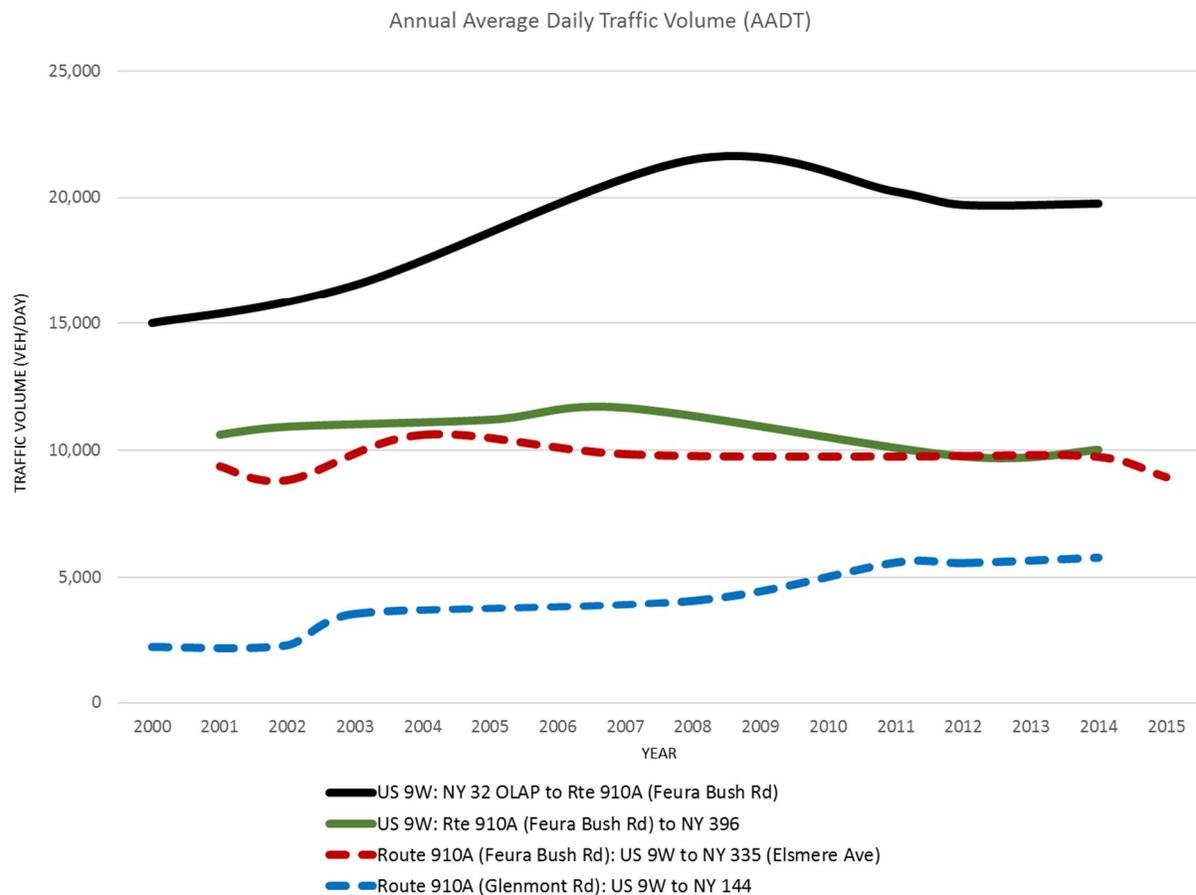
The existing traffic conditions were identified from compilation and review of available traffic data, collection of new traffic data, site visits to confirm physical characteristics of the transportation network, and capacity analysis of the key study area intersections and mainline segments.

3-1 Traffic Volumes

3-1.1 Daily Traffic Volumes

Traffic volume data was compiled from NYSDOT published reports to identify the long-term traffic volume trends of Annual Average Daily Traffic (AADT) on the US 9W and NY 910A corridors. This data was compiled for the period from 2000 to 2014 (the latest year of available data) and is shown in Exhibit 3-1.

Exhibit 3-1: AADT Volume Trends



Traffic volumes on US 9W north of Feura Bush Road increased over the period 2000 to 2008, primarily because of economic development that occurred in this part of the corridor (including Bethlehem Town Center in 2004). These volumes peaked in 2008 with an AADT of 21,500 vehicles per day. Traffic volumes have decreased modestly in the corridor since that time, with an AADT of 19,750 vehicles per day in 2014. The rate of increase of daily volume on this segment of the corridor (north of Feura Bush Road) over the period from 2000 to 2014 has been approximately 2 percent annually.

Traffic volumes on US Route 9W south of Feura Bush Road have not changed significantly over this same period from 2000 to the present. Volumes on this segment are also much lower than north of Feura Bush Road (AADT has varied between 10,000 vpd and 12,000 vpd since 2000).

Daily traffic volumes on Feura Bush Road between Elsmere Avenue and US Route 9W also have not changed significantly in the past 15 years, with AADT around 9,500 vehicles per day. The most recent data (2015) from NYSDOT shows volume below 9,000 vpd. Count data reported in the Traffic Study for the Reserve at Feura Bush PDD project identified a daily volume of 10,120 vpd, from a one-day (Wednesday) sample taken in May 2017. Although higher than the NYSDOT reported volume, this single-day data is consistent with the NYSDOT data (which represents averaged data from larger sample sizes to represent annual average conditions) and is not indicative of a change in the trend.

The daily traffic volume on Glenmont Road east of US Route 9W has more than doubled over the period from 2000 to 2014 (from 2,200 vpd to 5,800 vpd), with an average annual growth rate of 7%. The NYSDOT count station on Glenmont Road is located 60 feet west of Glenmont Court (between US 9W and the access to Town Squire Plaza). Because traffic volumes on NY 144 (outside the study area) have been relatively constant over this same period (7,000-7,500 vpd), the trend on Glenmont Road is attributed to local commercial activity in the area rather than because of route diversions or regional growth outside of the corridor. Although increasing, the Glenmont Road traffic volume is about 40% less than on Feura Bush Road.

3-1.2 Peak Hour Volumes

Weekday PM peak hour traffic volumes are generally the critical design period for roadways, and this period was the basis of analysis for the Route 9W Corridor Study completed in 2008. Weekday PM Peak Hour traffic volume data were compiled from various sources for this current assessment, including:

- Route 9W Corridor Study (CDTC Linkage Program): 2005 traffic data
- Wemple Corners Traffic Impact Study: 2011 traffic data
- CVS Pharmacy Traffic Impact Study: 2013 traffic data
- Newell Subdivision Traffic Impact Study: 2014 traffic data
- NYSDOT Traffic Volume Reports: 2014 traffic data

Additionally, intersection turning movement counts were collected at the study intersections listed below to identify current (2017) peak hour traffic volumes and turning patterns:

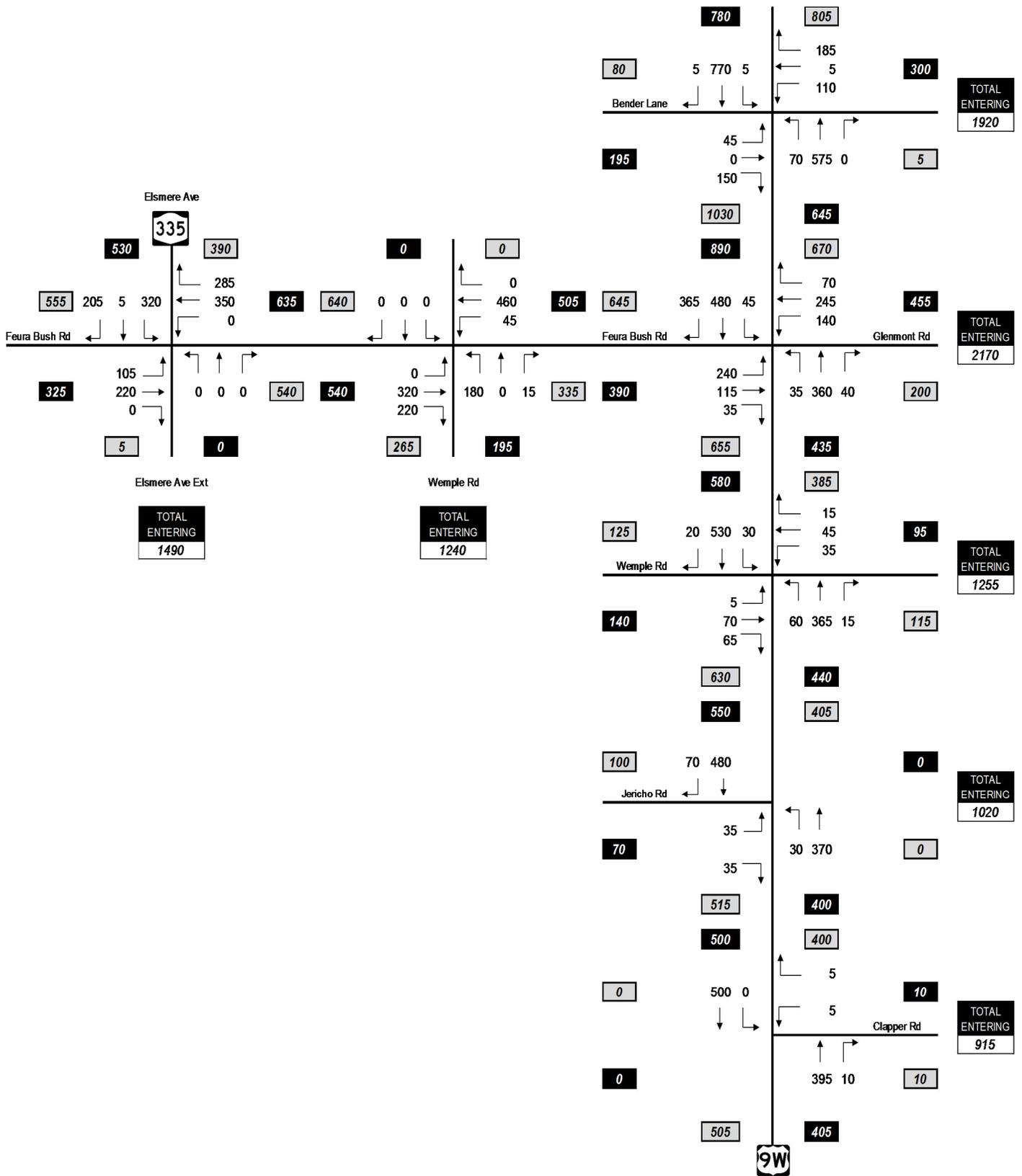
- US Route 9W and Bender Lane
- US Route 9W, Feura Bush Road and Glenmont Road
- US Route 9W and Wemple Road

- US Route 9W and Jericho Road
- US Route 9W and Clapper Road
- Elsmere Avenue and Feura Bush Road
- Wemple Road and Feura Bush Road

This data was collected on Wednesday May 24, 2017 from 4 pm to 6 pm. This data collection recorded volumes classified by passenger vehicles, medium-duty trucks and heavy trucks. Pedestrian crossing volumes and bicyclist volumes (both in-road and using the sidewalks/crosswalks) were also recorded concurrently with these vehicle counts.

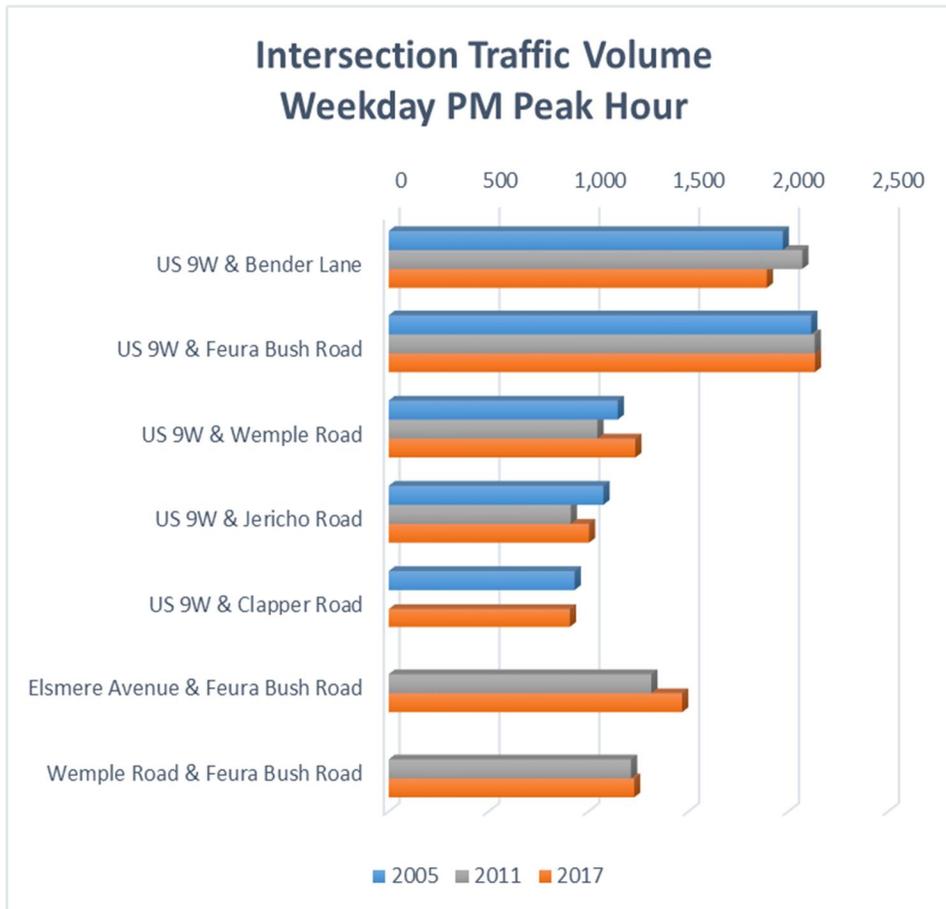
The traffic volumes were adjusted to account for seasonal variation, to represent volumes during the month of highest traffic volume (i.e. the Design Hour Volume) using monthly variation factors published by NYSDOT. The 2017 Existing PM Peak Design Hour Volumes are presented on Exhibit 3-2.

Exhibit 3-2: 2017 Existing PM Peak Design Hour Volumes



The 2017 volumes were compared to the volumes presented in the Route 9W Corridor Study (2005 data) and to the other compiled data. This review shows that peak hour traffic demand has not changed over this 12-year period. Exhibit 3-3 shows the peak hour intersection volumes at the key study intersections for years 2005, 2011 and 2017.

Exhibit 3-3: Peak Hour Traffic Volume Trend



The daily and peak hour volume trends suggest that growth in the Town and region is contributing to increased travel in the US 9W corridor, but that this change is not placing a corresponding increase on peak demand. Regional strategies for travel demand management and transportation system management are likely to be contributing to this trend. Flexible work schedules, work-from-home and changes in retail shopping trends (on-line shopping) are also likely to be contributing to this trend. From a transportation system management perspective, this is a positive trend because it reduces the need to invest in capacity that is only utilized for short periods of the day.

3-2 Truck Volumes

Vehicle classification counts reported by NYSDOT for the US 9W corridor indicate that trucks and buses comprise 5%-9% of daily traffic along US 9W. The percentage variation is primarily associated with changes in the volume levels of other traffic in the corridor segments rather than attributable to variation of truck volumes. The daily volume of trucks is consistent throughout the 9W corridor (about 1,000 trucks/buses per day, including school buses), but represents a higher proportion of total traffic south of Feura Bush Road because of the lower overall traffic volume in that segment of the corridor.

Trucks and buses constitute 2% of the daily volume on Feura Bush Road and 5% of the daily volume on Glenmont Road. It is noted that tractor trailer trucks are excluded on Feura Bush Road except for local deliveries.

These heavy vehicle percentages are consistent with comparable respective major and minor arterial roadways within the Capital Region as reported by NYSDOT. Heavy vehicles constitute a smaller proportion of the peak hour traffic demand in the study area, with an average of 3% on US 9W and 1% on NYS Route 910A (Feura Bush Road and Glenmont Road).

3-3 Pedestrian & Bicyclist Volumes

Pedestrian and bicyclist volumes were recorded in the corridor primarily to identify the patterns of interaction with motorized transportation and for use in determining their effect on traffic operations. The following table summarizes the pedestrian and bicycle volumes during the PM peak hour recorded in May 2017.

Table 3-1: Pedestrian & Bicyclist Volumes

On-Road Bikes

Intersection	NB	SB	EB	WB	Total
US 9W & Wemple Rd	1	1	2	1	5
US 9W & Feura Bush Rd	0	1	0	0	1
US 9W & Bender Ln	0	1	0	0	1
US 9W & Jericho Rd	0	1	0	0	1
US 9W & Clapper Rd	0	0	0	0	0
Elsmere Ave & Feura Bush Rd	0	0	2	1	3
Wemple Rd & Feura Bush Rd	2	0	0	1	3

Peds/Bikes Crossing at Crosswalks

Intersection	North Leg	South Leg	East Leg	West Leg	Total
US 9W & Wemple Rd	0	0	0	0	0
US 9W & Feura Bush Rd	0	5	5	0	10
US 9W & Bender Ln	2	0	2	0	4
US 9W & Jericho Rd	0	0	0	0	0
US 9W & Clapper Rd	0	0	0	0	0
Elsmere Ave & Feura Bush Rd	2	0	0	0	2
Wemple Rd & Feura Bush Rd	0	0	0	0	0

As shown in Table 3-1, existing levels of pedestrian and bicyclist volumes during the peak hour of vehicular traffic are low and do not have a significant impact on vehicular traffic operations. The data also shows that pedestrian crossings occur where marked crossings and pedestrian facilities are provided, in most cases, although two pedestrians were observed crossing the unmarked Farm Family driveway opposite Bender Lane.

Although pedestrian and bicyclist traffic is low, facilities to support and promote active transportation continues to be an important consideration for providing a balanced and sustainable transportation system in the corridor, consistent with the Town’s Comprehensive Plan and Complete Streets Policy.

3-4 Traffic Operations

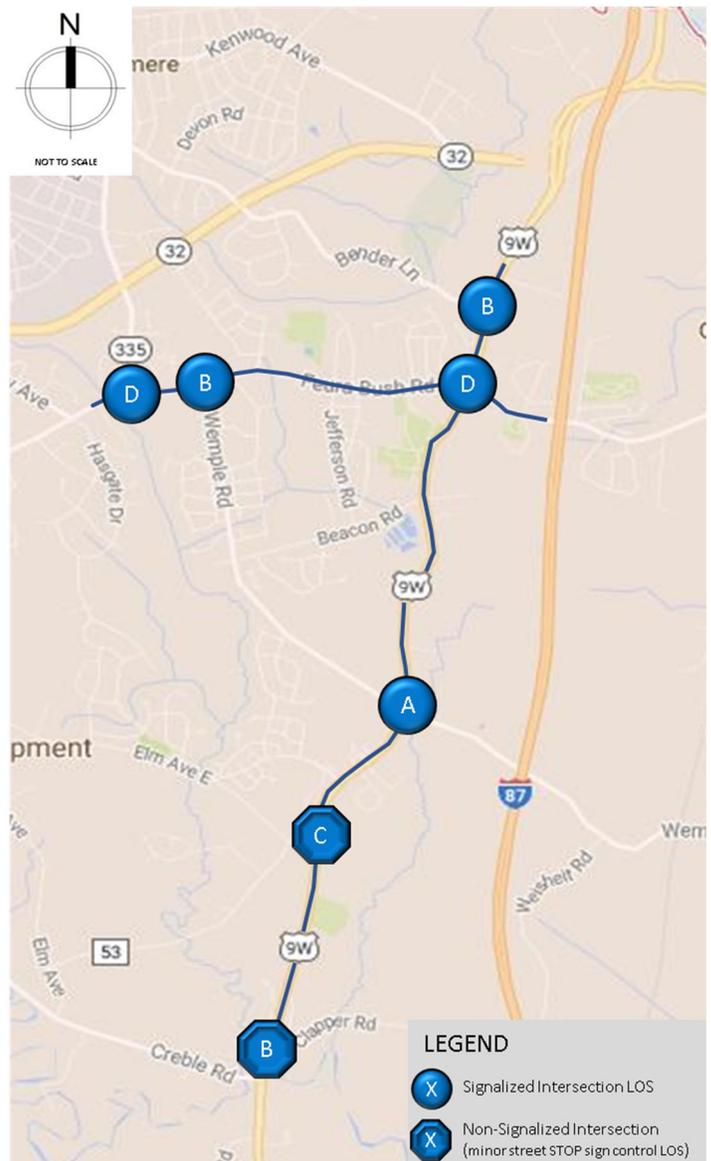
Vehicular traffic operations at the study intersections were analyzed using a Synchro model developed for the study based on the applicable procedures of the Highway Capacity Manual, published by the Transportation Research Board. Corridor segments were evaluated using applicable arterial service-volume thresholds from CDTC’s development of the regional transportation model.

INTERSECTIONS

For intersection operations, LOS (Level-of-Service) is a qualitative expression of mobility based on the amount of delay. LOS A represents very good conditions with little or no delay and LOS F generally represents very poor operations with high levels of delay. The results of the intersection analyses show that the overall operations of all the study area intersections are at LOS D or better during the peak hour, with most operating at LOS C or better. These operations are consistent with local and regional mobility objectives.

Although the overall intersection at Feura Bush Rd/US 9W is an acceptable LOS D, the northbound approach is LOS E, and the westbound approach is nearly LOS E. The skewed alignment of the intersection approaches also reduces the efficiency of operations at the intersection. A project to convert this intersection to a roundabout is programmed on CDTC’s Transportation Improvement Program (TIP # A587), with design scheduled to begin in 2018 and construction in

Exhibit 3-4: Intersection Level of Service – Existing PM Peak Hour Conditions



2020. This improvement was a recommended strategy from the 2008 study of the corridor.

The overall LOS of each intersection is presented on Exhibit 3-4, and a detailed summary of the operations for each approach is provided in Table 3-2.

Table 3-2: Intersection Level of Service Summary – Existing PM Peak Hour Conditions

Intersection	Street	Approach	2017 Existing	
			LOS	Delay (sec/veh)
SIGNALIZED INTERSECTIONS				
US 9W & Bender Lane	US 9W	NB	A	9.9
		SB	C	23.5
	Bender Lane	EB	B	16.3
	Commercial Dwy	WB	C	23.3
Overall Intersection			B	18.2
US 9W & NY 910A (Feura Bush Rd & Glenmont Rd)	US 9W	NB	E	58.3
		SB	C	24.2
	Feura Bush Rd	EB	B	17.1
	Glenmont Rd	WB	D	54.7
Overall Intersection			D	36.1
US 9W & Wemple Rd	US 9W	NB	A	8.5
		SB	A	9.1
	Wemple Rd	EB	B	14.3
		WB	B	15.6
Overall Intersection			A	10.0
Feura Bush Rd (NY 910A) & Elsmere Ave (NY 355)	Elsmere Ave Ext	NB	B	17.0
	Elsmere Ave (NY 335)	SB	D	49.4
	Feura Bush Rd	EB	C	29.5
		WB	C	28.2
Overall Intersection			D	36.0
Feura Bush Rd (NY 910A) & Wemple Rd	Wemple Rd	NB	B	10.2
	Feura Bush Rd	EB	B	16.0
		WB	B	19.3
	Overall Intersection			B
NON-SIGNALIZED INTERSECTIONS				
US 9W & Jericho Rd	US 9W	NB (L)	A	8.7
	Jericho Rd	EB	C	16.9
US 9W & Clapper Rd	US 9W	SB (L)	A	8.2
	Clapper Rd	WB	B	14.6

MAINLINE

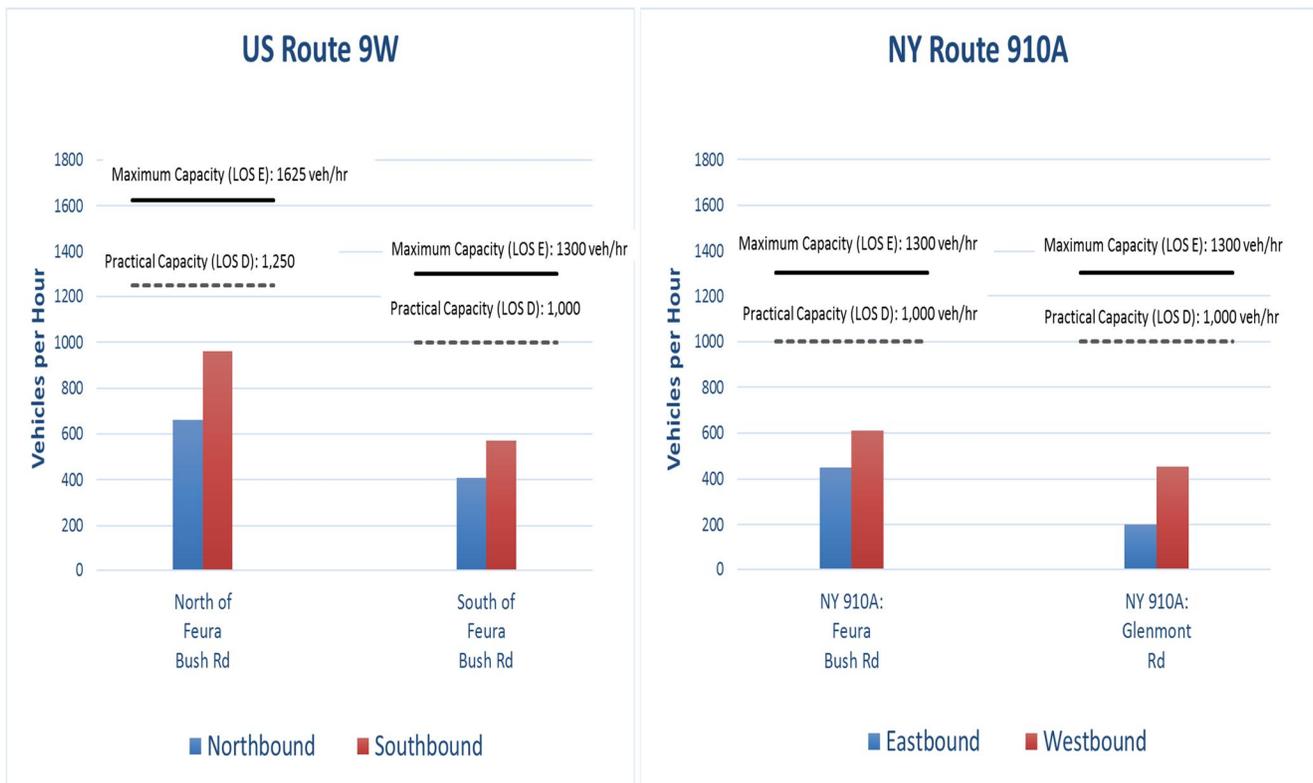
Mainline volumes were also evaluated to identify the general ability of the US 9W and the NY Route 910A corridors to carry existing and future traffic volumes. Segment volumes were compared to theoretical mid-block roadway service volume capacities to identify potential operational deficiencies that would be indicative of a need for corridor-level capacity enhancements as opposed to localized spot improvements at intersections. This analysis followed the same methodology as was used in the 2008 Corridor Study, for consistency.

The corridor analysis for US Route 9W separately considered the segment north of Feura Bush Road and south of Feura Bush Road as these two segments have different theoretical capacities because of their geometry and physical characteristics. The NY Route 910A analysis considered the segments east of US 9W (Glenmont Road) and west of US 9W (Feura Bush Road).

This evaluation shows that the US 9W segment north of Feura Bush Road operates at approximately 80% of its practical capacity and the US 9W segment south of Feura Bush Road operates at about 65% of its practical capacity, based on the peak directional volumes. The Feura Bush Road segment of NY Route 910 (Elsmere Avenue to US 9W) operates at about 65% of its practical capacity and Glenmont Road operates at about 45% of its practical capacity.

These comparisons, shown in Exhibit 3-5, indicate that the current configurations of these two roadways are sufficient to accommodate existing travel demand in the corridor.

Exhibit 3-5: Mainline Level of Service – Existing PM Peak Hour Conditions



The analysis of operations at the corridor and intersection levels show that US 9W and NY Route 910A generally have sufficient capacity to accommodate current transportation demand. The programmed improvements for a roundabout at the intersection of US 9W and Feura Bush Road will address existing and future congestion at this location. Facilities to support and promote active transportation will continue to be integral to the planning and programming of transportation investments to provide a balanced and sustainable multimodal transportation system in the study area.

Section 4: Future Conditions

The original 9W Corridor Study completed in 2008 evaluated the transportation needs of the corridor in the context of travel demands associated with a projection of development to the Year 2026 planning horizon. This development scenario was based on considerations of current (at the time) development applications and proposals, historic development trends, and estimations of potential development of vacant and underdeveloped parcels (considering zoning context and environmental constraints).

The objective of this current study provides an opportunity to re-assess those previous growth assumptions, in the context of what development has occurred in these intervening years and current development trends, and the attendant effect on future travel demand characteristics.

As discussed in Section 3, current traffic volumes during peak hours have remained essentially the same as had existed in 2005, even with development that has occurred in the Town. Because of this characteristic, and considering the comprehensive size and scope of the study area assessment of future development for this study, the existing traffic volumes were not separately adjusted by a generic background growth factor such as is usually the practice when evaluating individual development projects.

4-1 Development Considerations

The assessment of growth potential in the study area was developed by Town Planning staff for the period 2017-2026, considering historic trends, zoning/site development parameters, input from development community, and environmental constraints to refresh the growth assumptions from the previous corridor study. This process accounted for development that has been built since 2005, for which the traffic is consequently represented in the traffic counts collected in May 2017. This assessment also considered projects that have been approved by the Town but not yet constructed, and project proposals that were under review.

Projects that have been built between 2005 and 2017 and included in the original 9W Corridor study include the following:

- Cumberland Farms Travel Center
- Econolodge Expansion
- Bethlehem Town Center Retail Expansion
- Finke & Sons Equipment Sales and Service Facility

- Glenmont Abbey Village Apartments
- Glenmont Woods Single-family residential
- Milltown Plaza Single-family residential
- Carriage Hill Single-family residential
- Trobadour Single-family residential
- Park Place at Town Center Apartments

Projects that have Town approvals but had not been built at the time of the May 2017 data collection are as follows:

- Legends Conservation Subdivision (Glenmont Road): 105 single-family units
- Elm Avenue East (Elm Avenue East): 83 single-family units
- Carriage Hill (Jericho Road): 12 single-family units remaining to be constructed/occupied
- College Park: 11 single family units

Projects that have been approved and are currently under construction or built in the vicinity of the study area include:

- Newell Subdivision (Wemple Road): 50 single-family units
- Stonefield Subdivision (Corrit Drive/Bain Drive): 29 single-family units
- Bender Farms Subdivision (Bender Road): 26 single family units
- CVS, Glenmont: 13,225 sq. ft.
- Glenmont Plaza: 6,200 sq. ft.
- TACS Auto Body & Service: 11,000 sq. ft.

These projects included site specific traffic impact studies/assessments and as a result they contributed funds to future transportation improvements at intersections within the study area. Due to these prior contributions and the potential trip distributions reflecting the use of other intersections outside the study area some of these project trips were not included in traffic assessment.

Projects that were under review by the Town at the time of the May 2017 data collection are as follows:

- Hillman Farms (Clapper Road): 120 mixed single-family and Townhouse units
- Brookside Meadows (Clapper Road): 82 mixed single-family and condo units
- Reserve at Feura Bush (Feura Bush Road): 48 condo units
- Wemple Road Apartments (Wemple Road & US 9W intersection): 96 apartment units
- Glenmont Plaza Expansion (Feura Bush Road/Route 9W intersection): 7,750 sq. ft. commercial

The consideration of potential future development also accounts for former project proposals that have been abandoned or significantly modified since 2005. A notable example is the former Beacon Pointe Harbor project that had been proposed as a 2.5 million square feet mixed-use center (commercial, residential and entertainment) along the Hudson River near the City of Albany and which is now being considered for industrial/warehouse uses as part of a Port of Albany expansion. Another example is the Wemple's Corners Mixed-Use PDD that was formerly proposed at the intersection of US 9W and Wemple Road.

4-2 Future Travel Demand/Trip Generation

The development scenario considered in the original corridor study included more than 3.75 million square feet of commercial and industrial development and about 2,300 new residential units. It was estimated that this new development would generate almost 9,000 new vehicle and transit trips during the PM peak hour (see Table 4-1.).

Table 4-1: Development Travel Demand

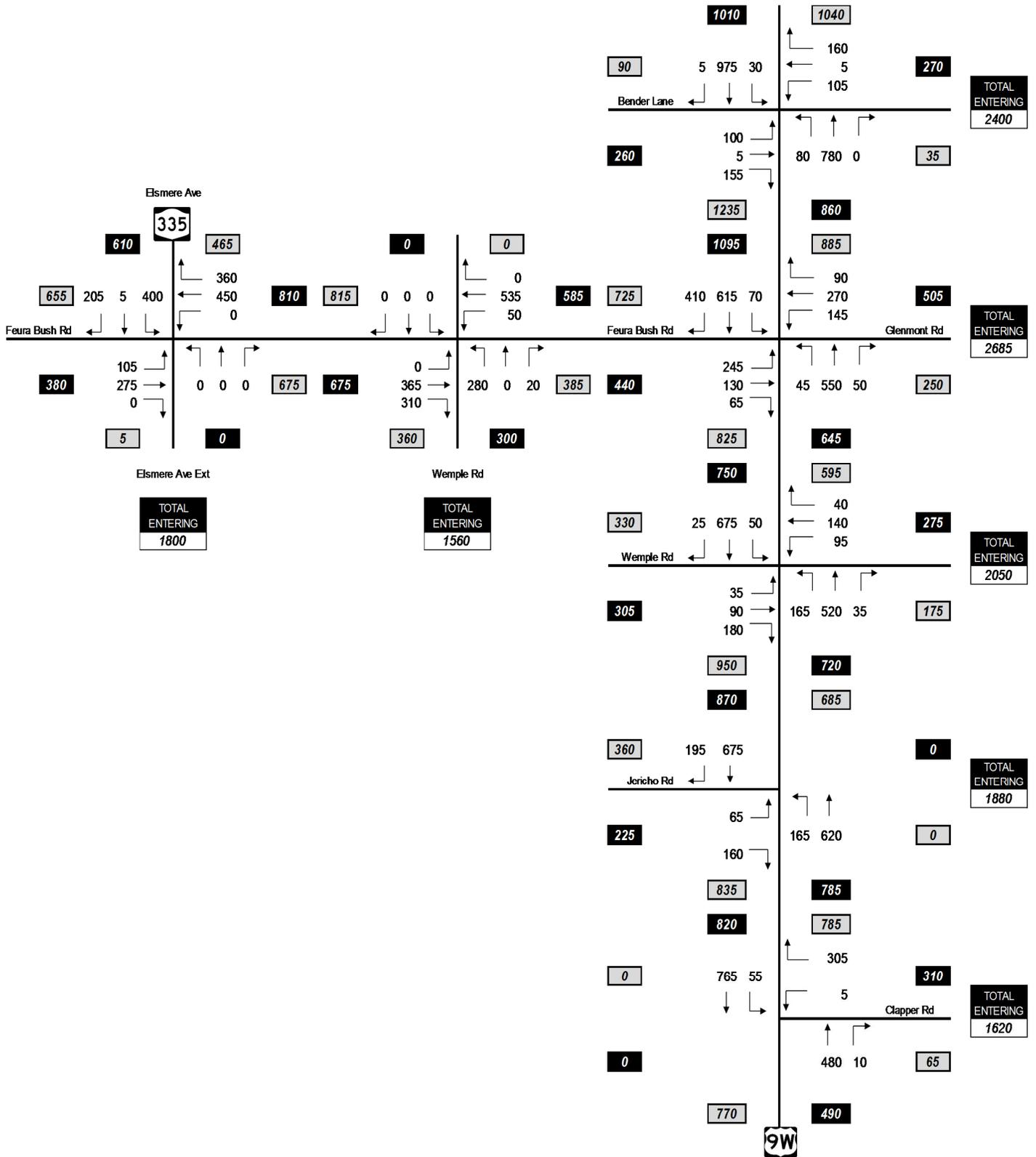
Development Type	Original 2026 Projection			Current 2026 Projection			Change		
	Bldg Area/ # of Units	Trips		Bldg Area/ # of Units	Trips		Bldg Area/ # of Units	Trips	
		Entering	Exiting		Entering	Exiting		Entering	Exiting
Residential	2,298	1,085	619	957	495	289	-1,341	-590	-330
Single Family	918	584	343	607	383	224	-311	-201	-119
Townhouse	78	26	15	44	15	8	-34	-11	-7
Apartment/Condo	1,302	475	261	216	88	46	-1,086	-387	-215
Senior/Assisted Living	0	0	0	90	9	11	90	9	11
Commercial	3,104,895	2,117	3,844	1,589,478	1,173	2,136	-1,515,417	-944	-1,708
Retail	667,556	1,015	1,097	376,221	536	573	-291,335	-479	-524
Office	2,372,082	527	2,289	1,193,123	478	1,403	-1,178,959	-49	-886
Service (gas, convenience, car wash, hotel)	65,257	575	458	20,134	159	160	-45,123	-416	-298
Industrial	452,000	69	196	1,081,687	78	255	629,687	9	59
Warehouse	350,000	55	114	895,687	54	133	545,687	-1	19
Manufacturing	102,000	14	82	79,000	8	40	-23,000	-6	-42
Industrial Park				107,000	16	82	107,000	16	82
Other	200,000	606	438	0	0	0	-200,000	-606	-438
Entertainment, Recreation, etc	200,000	606	438	0	0	0	-200,000	-606	-438
Total	3,756,895 2,298	3,877	5,097	2,671,165 957	1,746	2,680	-1,085,730 -1,341	-2,131	-2,417

The projection of new traffic generated by the current future growth scenario was developed using the same basic approach and methodology as employed for the original study, but considering updated trip generation data from the Institute of Transportation Engineers (9th edition of the ITE Trip Generation Manual) applied to the updated land use scenario. Under this current development scenario, it is estimated that the possible development through the 2026 planning horizon would be expected to generate 4,425 new vehicle and transit trips during the PM peak hour. This is less than half the number of trips that were considered by the original study. While the original and current trip generation projection states 9,000 and 4,425 trips respectively, all these trips would not travel through the study area intersections and so the assessment does not include the distribution of 4,425 trips through the study area intersections.

4-3 2026 Planning Horizon Volumes

Traffic volumes were estimated for the future 2026 planning horizon based on the updated land use and travel demand projections discussed in Section 4-2. CDTC staff provided travel demand modeling support using their Systemic Traffic Evaluation and Planning (STEP) model to simulate the changes in traffic flow patterns associated with the major element of the changed land use projection (i.e. the removal of the Beacon Pointe Harbor project). Other traffic assignment adjustments were made based on parcel-level comparisons of former and updated trip generation and land use projections. Exhibit 4-1 on the following page shows the projected future peak hour traffic flows for Year 2026.

Exhibit 4-1: Projected Future (2026) PM Peak Hour Volumes



4-4 Future Traffic Operations

INTERSECTIONS

The analysis of the future traffic operations for the 2026 planning horizon show that LOS E-F conditions will occur on one or more intersection approaches at the following intersections, without improvements:

- US 9W & Feura Bush Road/Glenmont Road
- US 9 W & Wemple Road
- US 9W & Jericho Road
- Feura Bush Road & Elsmere Avenue

The overall LOS of each intersection is presented on Exhibit 4-2, and a detailed summary of the operations for each approach is provided in Table 4-2. Note that the overall LOS for the intersections noted above range from LOS D to LOS F. This is because the calculation of overall intersection performance reflects a weighted average of total delay of all approaches.

Although the overall intersection LOS at the intersection of US 9W and Bender Lane is LOS C, the southbound traffic volume will be functionally at capacity (v/c ratio of 0.99), which indicates that improvements should be considered for this intersection as well.

The analysis of the intersection of US 9W and Feura Bush Road/Glenmont Road reflects current traffic signal control and geometry and does not reflect the roundabout improvement that is programmed for construction in 2020. This improvement is expected to address the mobility objectives for this location for its applicable design life. The analysis presented for this intersection in this study is to provide context for evaluating public/private share considerations for the local match of this federally-funded project (see Section 6: Funding Considerations).

Exhibit 4-2: Intersection Level of Service – Future (2026) PM Peak Hour without Improvements

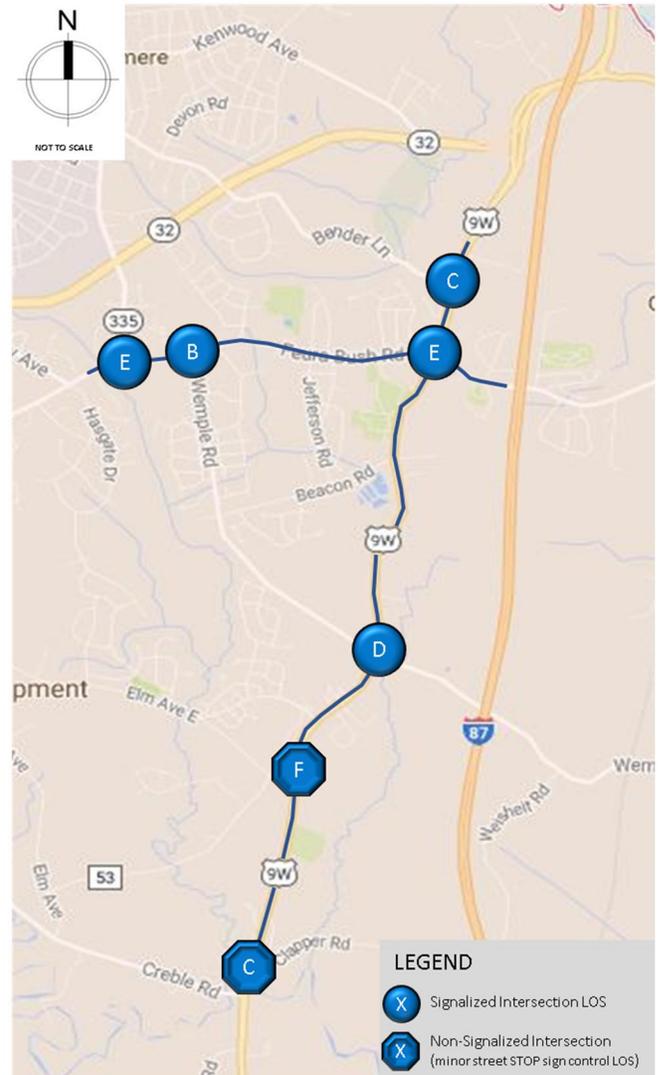


Table 4-2: Intersection Level of Service Summary – Future (2026) PM Peak Hour Conditions

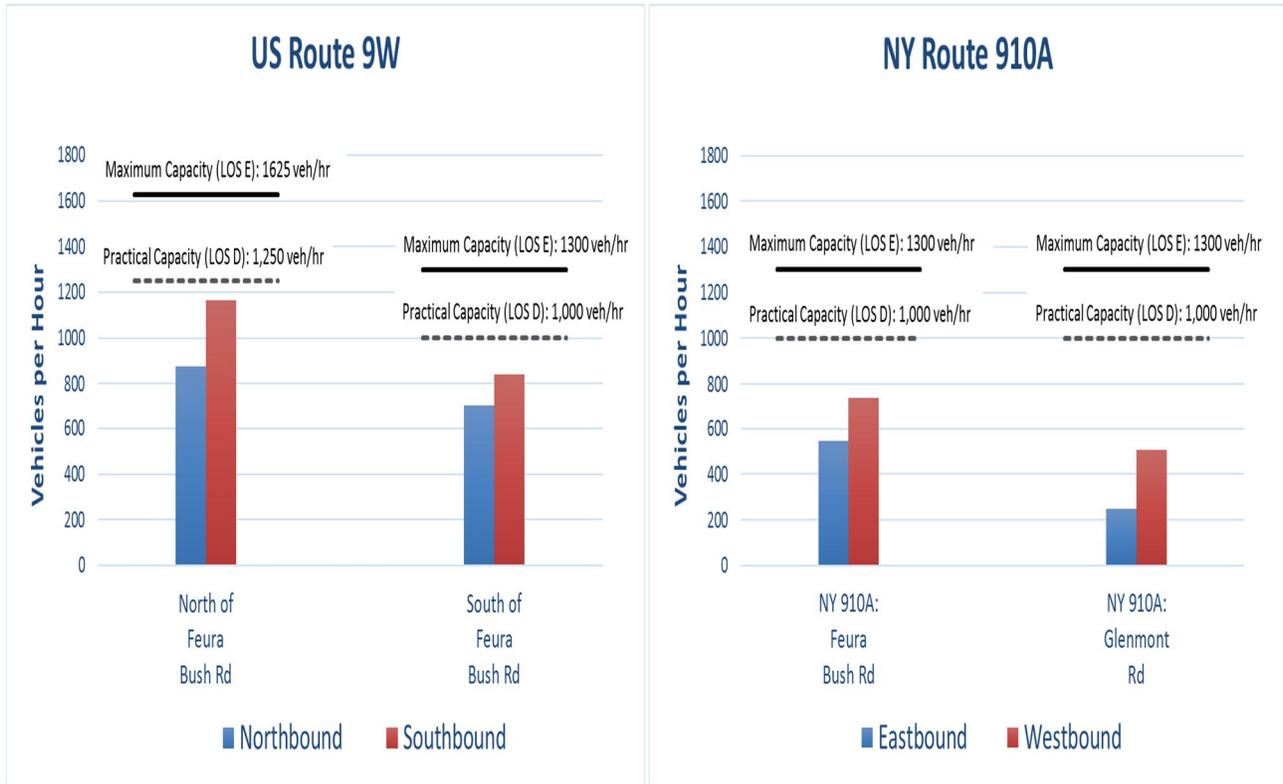
Level of Service (LOS) Summary - PM Peak Hour

Intersection	Street	Approach	2017 Existing		2026 Build		2026 Build with Improvements	
			LOS	Delay (sec./veh)	LOS	Delay (sec./veh)	LOS	Delay (sec./veh)
SIGNALIZED INTERSECTIONS								
US 9W & Bender Lane	US 9W	NB	A	9.9	B	18.8	B	12.6
		SB	C	23.5	D	44.5	D	26.9
	Bender Lane	EB	B	16.3	C	26.2	B	13.4
	Commercial Dwy	WB	C	23.3	C	24.2	B	11.1
Overall Intersection			B	18.2	C	31.0	C	17.8
US 9W & NY 910A (Feura Bush Rd & Glenmont Rd)	US 9W	NB	E	58.3	F	87.7	B	10.4
		SB	C	24.2	C	25.1	B	12.4
	Feura Bush Rd	EB	B	17.1	D	46.8	C	20.5
	Glenmont Rd	WB	D	54.7	F	152.6	C	20.0
Overall Intersection			D	36.1	E	67.7	B	14.7
US 9W & Wemple Rd	US 9W	NB	A	8.5	E	70.7	C	21.5
		SB	A	9.1	B	18.6	C	31.5
	Wemple Rd	EB	B	14.3	C	31.1	C	24.8
		WB	B	15.6	E	75.3	D	52.9
Overall Intersection			A	10.0	D	46.4	C	29.9
Feura Bush Rd (NY 910A) & Elsmere Ave (NY 355)	Elsmere Ave Ext Elsmere Ave (NY 335)	NB	B	17.0	B	17.5	B	10.8
		SB	D	49.4	F	97.0	D	39.4
	Feura Bush Rd	EB	C	29.5	D	48.4	C	20.4
		WB	C	28.2	D	54.4	C	26.9
Overall Intersection			D	36.0	E	67.4	C	29.7
Feura Bush Rd (NY 910A) & Wemple Rd	Wemple Rd	NB	B	10.2	C	23.7	n/a	
		EB	B	16.0	B	14.2		
	Feura Bush Rd	WB	B	19.3	B	16.1		
		Overall Intersection	B	16.4	B	16.7		
US 9W & Jericho Rd	US 9W	NB	n/a				B	12.6
		SB	n/a				A	9.8
	Jericho Rd	EB	n/a				B	14.3
	Overall Intersection			n/a				B
NON-SIGNALIZED INTERSECTIONS								
US 9W & Jericho Rd	US 9W	NB (L)	A	8.7	B	11.2	see above	
	Jericho Rd	EB	C	16.9	F	204.9		
US 9W & Clapper Rd	US 9W	SB (L)	A	8.2	A	8.6	n/a	
	Clapper Rd	WB	B	14.6	C	21.5		

MAINLINE

The analyses of mainline (corridor-level) operations are shown in Exhibit 4-3. These analyses show that US 9W and NY Route 910A mainlines generally have sufficient capacity to accommodate the future transportation demand associated with the potential development. This does not mean that there won't be noticeable changes to traffic operations compared to existing conditions, such as longer queues at intersections and larger platoons (groups) of vehicles moving along the roadway. However, these changes will not affect mobility to the extent that corridor-level changes (such as adding mainline travel lanes) would be needed to provide additional capacity within the 2026 planning period.

Exhibit 4-3: Mainline Level of Service – Future (2026) PM Peak Hour Conditions



The section of US 9W north of Feura Bush Road should continue to be monitored however, as this segment of the study area will be approaching the threshold of LOS D-E operations if development occurs as considered in this study. This section of the corridor was identified in the original study as being a candidate for future roadway widening to address the projected future traffic demand. NYS DOT’s traffic monitoring program would be an effective tool for the Town to use to continue to evaluate this future need.

Section 5: Transportation Improvements

One of the focuses of this study is to identify capacity/traffic control improvements to address mobility issues for the updated development scenario. The original study also identified recommendations for broader actions and guiding principles to support mobility but also to enhance the corridor for multimodal accommodations and to enhance the quality of the corridor. These actions and guiding principles (access management, pedestrian/bicycle facilities, Complete Streets, etc.) continue to be applicable to the study area and are not addressed in this current technical study.

5-1 Recommended Improvements

The following geometric and/or traffic control improvements have been identified to address the identified future mobility/congestion issues for the 2026 planning horizon.

- US 9W & Bender Lane: convert the existing signalized intersection to a roundabout.
- US 9W & Feura Bush Road/Glenmont Road: the currently programmed design/construction of a roundabout will address existing and future congestion at this location.
- US 9W and Wemple Road: construct a separate left-turn lane for northbound and southbound approaches on US 9W and replace the traffic signal equipment to reflect the new geometry and signal phasing.
- US 9W and Jericho Road: install a traffic signal (when signal warrant criteria are satisfied).
- Feura Bush Road and Elsmere Avenue: the following two potential options have been identified for this intersection.

Option 1: Construct an eastbound left-turn lane and a westbound right-turn lane on Feura Bush Road, and replace the traffic signal equipment to reflect this new geometry; or

Option 2: Construct a southbound right-turn lane on Elsmere Avenue and replace the traffic signal equipment to reflect this new geometry.

Either of these options will provide acceptable levels of service for the Feura Bush Road/Elsmere Avenue intersection, and a preferred option should be determined during a future preliminary design phase when these improvements are progressed to design.

Furthermore, the Town has identified other larger-scale transportation strategies for mobility, such as the North-South Collector, that may also address traffic operations at this intersection.

5-2 Comparison to Previous Corridor Study Recommendations

The Route 9W Corridor Study prepared in 2008 identified the following transportation capacity improvements to address vehicle traffic congestion at the 2026 planning horizon with the more aggressive development scenario considered at that time:

- US 9W from NY Route 32 (Delmar By-Pass) to Feura Bush Road/Glenmont Road: widen US 9W to construct one or two additional travel lanes along with a raised median.
- Construct roundabouts or other capacity enhancements (turn lanes and/or traffic signal improvements) at the following intersections:
 - US 9W and Bethlehem Town Center North Driveway
 - US 9W and Bender Lane
 - US 9W and Feura Bush Road/Glenmont Road
 - US 9W and Wemple Road
 - US 9W and Jericho Road
 - US 9W and Creble Road
- Consider constructing a parallel collector road east of US 9W connecting Wemple Road and Clapper Road, with Jericho Road extension to this collector road.

The US 9W corridor widening between NY Route 32 and Feura Bush Road/Glenmont Road is not considered to be a critical transportation need for the 2026 planning horizon based on the current projections of the growth potential within the corridor. However, a possible future implementation of this improvement beyond 2026 should continue to be considered as part of site development reviews and long-range infrastructure planning.

The 2008 study identified that roundabouts are the preferred strategy for providing capacity enhancement at intersections because they are generally safer than signalized intersections and have lower delays. While providing roundabouts at these intersections should continue to be a consideration for these locations, roundabouts would produce greater capacity than is needed to address the impacts of the projected cumulative development potential and at higher construction cost. This would potentially represent a greater public share in funding of the improvements, as discussed in Section 6.

The concept for providing a parallel collector road between Wemple Road and Clapper Road, with a connection to US 9W opposite Jericho Road should continue to be considered as development in this area is proposed. This secondary roadway network would help to preserve capacity and arterial functionality of US 9W by managing access and providing a secondary network for local trips. As indicated in the 2008 Corridor Study, this infrastructure would be implemented as an element of site plan development for the parcels in this part of the corridor and would be a developer responsibility and cost.

Access management strategies identified in the 2008 study and facilities to support and promote active transportation will also continue to be integral to the planning and programming of transportation investments to provide a balanced and sustainable multimodal transportation system in the study area.

5-3 Transportation Improvement Costs

Cost estimates for the transportation improvements identified in Section 5-1 were developed to reflect current construction item costs. These cost estimates include considerations for design, permitting, construction administration/inspection and right-of-way acquisition/easements. The construction cost estimates were based on planning-level estimates of quantities of major design features to the extent possible, applicable NYSDOT unit bid prices, and professional engineering judgement, with contingencies for other miscellaneous construction elements. Design, permitting and construction administration/inspection costs were based on a percentage of the construction cost, consistent with applicable guidelines for federal-aid projects. Right-of-way costs were estimated based on assumed order-of-magnitude quantities and right-of-way costs from other local projects. The improvement cost for the roundabout at US 9W and Feura Bush Road/Glenmont Road represents the local Town share of the federally-funded project.

The improvement costs shown in Table 5-1 are presented based on Year 2017 costs escalated to a Year 2026 cost basis. As shown, the total estimated cost of transportation improvements to address the identified future traffic mobility/congestion issues for the updated assessment of growth potential for the 2026 planning horizon is approximately \$5.86 million (2026 cost basis).

Table 5-1: Estimated Improvement Costs

Location	Improvement(s)	Estimated Cost		
			2017 Cost Basis	2026 Cost Basis
US 9W & Bender Lane	Roundabout	Construction	\$ 1,645,000	\$ 2,055,000
		Right-of-Way	\$ 300,000	\$ 375,000
		Design	\$ 165,000	\$ 205,000
		Construction Admin/Inspection	\$ 150,000	\$ 185,000
		Total Estimated Cost	\$ 2,260,000	\$ 2,820,000
US 9W & Feura Bush Road/Glenmont Road	Roundabout	Local Share of Federally-Funded Project	\$ 460,000	\$ 460,000
		Total Estimated Cost	\$ 460,000	\$ 460,000
US 9W & Wemple Road	NB Left-turn lane SB Left-turn lane Replace Traffic Signal	Construction	\$ 595,000	\$ 740,000
		Right-of-Way	\$ 40,000	\$ 50,000
		Design	\$ 60,000	\$ 75,000
		Construction Admin/Inspection	\$ 55,000	\$ 70,000
		Total Estimated Cost	\$ 750,000	\$ 935,000
US 9W & Jericho Road	Install Traffic Signal	Construction	\$ 170,000	\$ 210,000
		Right-of-Way	\$ -	\$ -
		Design	\$ 16,000	\$ 20,000
		Construction Admin/Inspection	\$ 14,000	\$ 15,000
		Total Estimated Cost	\$ 200,000	\$ 245,000
Feura Bush Road & Elsmere Avenue	EB Left-turn lane WB Right-turn lane Replace Traffic Signal	Construction	\$ 900,000	\$ 1,120,000
		Right-of-Way	\$ 50,000	\$ 62,000
		Design	\$ 95,000	\$ 118,000
		Construction Admin/Inspection	\$ 80,000	\$ 100,000
		Total Estimated Cost	\$ 1,125,000	\$ 1,400,000
Total Improvement Program Cost			\$ 4,795,000	\$ 5,860,000

Section 6: Funding Considerations

The 9W Corridor Study identified public/private partnerships for sharing the costs of new transportation infrastructure as a key component to successful implementation of transportation improvements in the study area, and particularly as a mechanism to address the respective impacts of site development contributing to the need for these improvements. This approach is outlined in CDTC's *Procedures for Public/Private Highway Financing in the Capital District*. The basic methodology considers existing traffic volumes, future development and non-development volumes and the amount of additional reserve capacity created by the transportation improvements to identify a basis for allocating public and private shares for funding the improvement(s). This approach in assessing transportation mitigation costs has been successfully used for several GEIS areas in the Capital Region. The Town of Bethlehem has similarly been using a form of this methodology for accepting cost share contributions from development that has occurred in the corridor study area.

The application of CDTC's public/private cost share methodology was conducted considering the Year 2026 cost basis for improvements. This information provides an opportunity for the Town to consider the effects of the pace of development on the timing and implementation costs of the improvements for assessing contribution amounts.

Table 6-1 shows the breakdown of the factors contributing to the calculation of the public and private share allocations for each of the intersection improvements described in Section 5.1. These factors include the 2017 Base volumes (existing traffic), the future 2026 Build volumes (combined existing and development traffic), and the total capacity of the intersection with the identified improvements (determined by incremental, proportional increases of the Build volumes to reach a LOS D-E threshold of the overall intersection or a critical approach whereby additional future improvement might be needed). These values are used to derive the percentage of the public and private (developer) shares for contributing toward the cost of improvements. Table 6-1 also shows the resulting public/private costs based on the Year 2026 cost basis. These assessments indicate that the respective cost shares for all the improvements identified are 29% public share and 71% private/developer share.

Table 6-2 illustrates the practical application of this methodology by showing the applicable private develop cost shares for mitigation of the transportation impacts of the five development projects that have applications before the Town:

- Wemple Road Apartments
- Reserve at Feura Bush PDD
- Brookside Meadows Conservation Subdivision
- Hillman Farms Conservation Subdivision
- Glenmont Plaza Retail Expansion

CDTC's STEP model was used to separately identify the amount of traffic generated by these five developments at each study intersection. The proportion of each development project is shown at the study intersections in the context of their individual contribution to all cumulative development, which is then used to calculate the respective share of total cost for all improvements. In this method, the costs are factored both by the amount of traffic generated by each project and by the respective cost of the improvement at any of the impacted intersections. The format of this matrix also enables the Town to update it as future site development applications are received to track the growth in volumes at the study intersections and the accumulated share contributions.

Table 6-1: Public-Private Cost Share Assessment - 2026 Cost Basis

Intersection	Traffic Control		Improvement	2017 Base Volume	2026 Build Volume	Future Capacity (w/ Imprvmnts)	Cumulative Development Volume	Reserve Capacity Volume (w/ Imprvmnts)	Estimated Improvement Cost	Public Share		Developer Share		Development Cost Per Trip (Avg)
	Existing	Proposed								%	Cost	%	Cost	
1 US 9W & Bender Lane	Signal	Roundabout	Roundabout	1,920	2,400	2,615	480	215	\$ 2,820,000	30.94%	\$ 872,374	69.06%	\$ 1,947,626	
2 US 9W & Feura Bush Rd/Glenmont Rd	Signal	Roundabout	Roundabout	2,170	2,685	3,000	515	315	\$ 460,000	37.95%	\$ 174,578	62.05%	\$ 285,422	
3 US 9W & Wemple Rd	Signal	Signal	NB & SB Left-turn lanes; Replace Signal	1,255	2,050	2,130	795	80	\$ 935,000	9.14%	\$ 85,486	90.86%	\$ 849,514	
4 US 9W & Jericho Rd	Stop sign	Signal	Install traffic signal	1,020	1,880	2,745	860	865	\$ 245,000	50.14%	\$ 122,855	49.86%	\$ 122,145	
5 US 9W & Clapper Rd	Stop sign	Stop sign	none	915	1,620	-	705	-	-	-	-	-	-	
6 Feura Bush Rd & Elsmere Ave	Signal	Signal	(1) EB Left-turn lane; WB Right-turn lane; Replace Signal - or- (2) SB Right-turn lane; Replace Signal	1,490	1,800	1,945	310	145	\$ 1,400,000	31.87%	\$ 446,154	68.13%	\$ 953,846	
7 Feura Bush Rd & Wemple Rd	Signal	Signal	none	1,240	1,560	-	320	-	-	-	-	-	-	
Totals							3,985	1,620	\$ 5,860,000	29%	\$ 1,701,447	71%	\$ 4,158,553	\$ 1,043.55

Table 6-2: Private Development Cost Shares - 2026 Cost Basis

Intersection	Improvement	Cumulative Development Volume	Volume from Proposed Development	Wemple Rd Apartments		Reserve at Feura Bush PDD		Brookside Meadows Conservation Subdivision		Hillman Farms Conservation Subdivision		Glenmont Plaza retail expansion	
				Volume	% of Cumulative Developmnt Vol	Volume	% of Cumulative Developmnt Vol	Volume	% of Cumulative Developmnt Vol	Volume	% of Cumulative Developmnt Vol	Volume	% of Cumulative Developmnt Vol
1 US 9W & Bender Lane	Roundabout	480	88	31	6.46%	9	1.88%	19	3.96%	26	5.42%	3	0.63%
2 US 9W & Feura Bush Rd/Glenmont Rd	Roundabout	515	116	41	7.96%	18	3.50%	22	4.27%	29	5.63%	6	1.17%
3 US 9W & Wemple Rd	NB & SB Left-turn lanes; Replace Signal	795	78	13	1.64%	1	0.13%	27	3.40%	35	4.40%	2	0.25%
4 US 9W & Jericho Rd	Install traffic signal	860	87	6	0.70%	0	0.00%	36	4.19%	45	5.23%	0	0.00%
5 US 9W & Clapper Rd	none	705	123	6	0.85%	0	0.00%	52	7.38%	65	9.22%	0	0.00%
6 Feura Bush Rd & Elsmere Ave	(1) EB Left-turn lane; WB Right-turn lane; Replace Signal - or- (2) SB Right-turn lane; Replace Signal	310	21	8	2.58%	4	1.29%	2	0.65%	3	0.97%	4	1.29%
7 Feura Bush Rd & Wemple Rd	none	320	22	8	2.50%	4	1.25%	3	0.94%	3	0.94%	4	1.25%
Totals		3,985	535										

Development Cost Share Allocation

Intersection	Improvement	Cumulative Development Cost Share	Accrued Value from Development (Sum)	Wemple Rd Apartments		Reserve at Feura Bush PDD		Brookside Meadows Conservation Subdivision		Hillman Farms Conservation Subdivision		Glenmont Plaza retail expansion	
1 US 9W & Bender Lane	Roundabout	\$ 1,947,626	\$ 357,065	\$ 125,784	\$ 36,518	\$ 77,094	\$ 105,496	\$ 12,173					
2 US 9W & Feura Bush Rd/Glenmont Rd	Roundabout	\$ 285,422	\$ 64,289	\$ 22,723	\$ 9,976	\$ 12,193	\$ 16,072	\$ 3,325					
3 US 9W & Wemple Rd	NB & SB Left-turn lanes; Replace Signal	\$ 849,514	\$ 83,349	\$ 13,891	\$ 1,069	\$ 28,851	\$ 37,400	\$ 2,137					
4 US 9W & Jericho Rd	Install traffic signal	\$ 122,145	\$ 12,357	\$ 852	\$ -	\$ 5,113	\$ 6,391	\$ -					
5 US 9W & Clapper Rd	none	-	-	-	-	-	-	-					
6 Feura Bush Rd & Elsmere Ave	(1) EB Left-turn lane; WB Right-turn lane; Replace Signal - or- (2) SB Right-turn lane; Replace Signal	\$ 953,846	\$ 64,615	\$ 24,615	\$ 12,308	\$ 6,154	\$ 9,231	\$ 12,308					
7 Feura Bush Rd & Wemple Rd	none	-	-	-	-	-	-	-					
Totals		\$ 4,158,553	\$ 581,674	\$ 187,866	\$ 59,870	\$ 129,405	\$ 174,591	\$ 29,943					

Section 7: Conclusions

Traffic data collected in the Spring of 2017 shows that traffic conditions in the study area are consistent with the previous Route 9W corridor study completed in 2008 and Traffic Impact Studies completed for individual site developments in the study area. Although daily traffic volumes have increased over the period 2005-2017, peak hour traffic demand has not changed over this period. The daily and peak hour volume trends suggest that growth in the Town and region is contributing to increased travel in the US 9W corridor, but that this change is not placing a corresponding increase on peak demand. Regional strategies for travel demand management and transportation system management are likely to be contributing to this trend. Flexible work schedules, work-from-home and changes in retail shopping trends (on-line shopping) are also likely to be contributing to this trend. From a transportation system management perspective, this is a positive trend because it reduces the need to invest in capacity that is only utilized for short periods of the day.

The Town has taken steps toward implementing many of the recommendations of the previous corridor study including advancement of a roundabout project at the intersection of US 9W and Feura Bush Road/Glenmont Road. The Town has also been active in monitoring private development and accepting private-share contributions toward funding of transportation improvements.

The assessment of future transportation needs for the Year 2026 planning horizon was updated to reflect the development growth that has occurred in the study area since the 2008 study was completed and to take a new look at the remaining development potential for the study area within the remaining 9-year period to the 2026 planning horizon. Under this current development scenario, it is estimated that the potential development through the 2026 planning horizon would be expected to generate 4,425 new vehicle and transit trips during the PM peak hour. This is less than half the number of trips that were considered by the original study.

Analysis of the future traffic operations for the 2026 planning horizon show that improvements are recommended at the following intersections to address congestion/mobility issues:

- US 9W and Bender Lane
- US 9W & Feura Bush Road/Glenmont Road
- US 9 W & Wemple Road
- US 9W & Jericho Road
- Feura Bush Road & Elsmere Avenue

The recommended improvements are as follows:

- US 9W & Bender Lane: convert the existing signalized intersection to a roundabout.
- US 9W & Feura Bush Road/Glenmont Road: the currently programmed design/construction of a roundabout will address existing and future congestion at this location.
- US 9W and Wemple Road: construct a separate left-turn lane for northbound and southbound approaches on US 9W and replace the traffic signal equipment to reflect the new geometry and signal phasing.
- US 9W and Jericho Road: install a traffic signal (when signal warrant criteria are satisfied).
- Feura Bush Road and Elsmere Avenue: two potential options have been identified for this intersection (see next page).

Option 1: Construct an eastbound left-turn lane and a westbound right-turn lane on Feura Bush Road, and replace the traffic signal equipment to reflect this new geometry; or

Option 2: Construct a southbound right-turn lane on Elsmere Avenue and replace the traffic signal equipment to reflect this new geometry.

The Town has also identified other larger-scale transportation strategies for mobility, such as the North-South Collector, that may also address traffic operations at this intersection.

It is estimated that the total cost of these recommended improvements is \$5.86 million (2026 cost basis). These estimates include considerations for design, permitting, construction administration/inspection and right-of-way acquisition/easements.

The 2008 study recommended that roundabouts be considered at these locations (except the Feura Bush Rd/Elsmere intersection). While providing roundabouts at these intersections could ultimately be a consideration for implementation, it was not considered for the context of assessing the funding aspect of the study since a roundabout would create greater reserve capacity than would be necessary to specifically address the projected future transportation need, and at higher cost.

Considerations for US 9W corridor widening between NY Route 32 and Feura Bush Road/Glenmont Road is not indicated to be a critical transportation need for the 2026 planning horizon based on the current projections of the growth potential within the corridor. However, ongoing planning efforts should continue to anticipate the need for this type of improvement beyond 2026.

The original study also identified recommendations for broader actions and guiding principles to support mobility but also to enhance the corridor for multimodal accommodations and to enhance the quality of the corridor. These actions and guiding principles continue to be applicable to the study area and are not addressed in this current technical study.

Public/private partnerships for sharing the costs of new transportation infrastructure will be a key component to successful implementation of transportation improvements in the study area, and particularly as a mechanism to address the respective impacts of site development contributing to the need for these improvements. The assessment of this funding method indicates that the respective cost shares for all the improvements identified are 29% public share and 71% private/developer share.

Tables 6-1 and 6-2 presented in Section 6 provide a tool for ongoing updates and tracking of development in the study area. It is recommended that the Town Planning staff and Planning Board utilize this resource as a tool during development reviews in the Route 9W corridor area. Through the SEQR process this mechanism can identify cumulative project impacts on the Route 9W Corridor and developer contributions for transportation improvements, consistent with the Route 9W Corridor Study.

This mechanism can also be used for development projects that are located outside of the Route 9W corridor boundary but are located in proximity to and may generate traffic to the study area. However; individual traffic impact studies by those projects may be needed to assess impacts on intersections not included in this US Route 9W traffic assessment.