


Route 9W Corridor Management Plan

Towns of Marlborough and Lloyd of Ulster County, NY

Draft Final Report - February 14 2018

ROUTE 9W CORRIDOR MANAGEMENT PLAN

Towns of Marlborough and Lloyd

Ulster County, NY

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SECTION 1. INTRODUCTION AND VISION

Planning Background and Process

In 2016, the Ulster County Transportation Council (UCTC) issued a Request for Proposals (RFP) to develop a Corridor Management Plan (CMP) for a portion of the Route 9W from the hamlet of Marlboro north to Blue Point Road. A Technical Advisory Committee consisting of representatives from the Towns of Marlborough, Town of Lloyd, and New York State Department of Transportation was appointed by UCTC to work with the consulting team hired to prepare the plan. Consulting firms BFJ Planning and Susan G. Blickstein began work on the plan in the Spring of 2017. This is the first CMP for both the Town of Marlborough and the Town of Lloyd.

The purpose of the CMP is to develop short and long-range recommendations to improve vehicular and non-vehicular access, safety and mobility along the Route 9W corridor. The plan contains an examination of existing conditions, a corridor safety assessment, and an evaluation of future impacts of development proposals and land use policies. The concluding recommendations and implementation plan outline actions that should be taken to improve corridor access, operations, safety, and aesthetics and mitigate future impacts.

The CMP builds upon the following list of previous studies commissioned by the UCTC, Ulster County, and the respective Towns:

- *Marlboro Hamlet Area Transportation Plan (2008)*
- *Ulster County Non-Motorized Transportation Plan (2008)*
- *Marlborough Safe Routes to School Action Plan (2016)*
- *Rethinking Transportation Ulster County Long Range Transportation Plan 2040 (2015)*
- *Town of Lloyd Comprehensive Plan (2013)*
- *Marlboro Hamlet Enhancements Design Report (2015)*
- *Town of Marlborough Comprehensive Plan (2017)*
- *Town of Marlborough Local Waterfront Revitalization Plan (2018)*
- *Land Use Referral Guide, Ulster County Planning Board (2017)*
- *The Community Design Manual, Ulster County Planning Board (2017)*

Public Participation

The project team used a variety of outreach methods to solicit input from the community on their experiences living, working, visiting, and traveling on Route 9W. In-person and online surveys were used during the plan's visioning process to inform the study's goals. Workshops and Focus Groups were used to hone in on ideas and solicit feedback on preliminary recommendations. Comments from each of these outreach methods were reviewed and appropriately integrated into the Plan.

Public Surveys

Intercept surveys were conducted throughout the day on Monday, May 15, 2017 along Route 9W at locations in both the Town of Lloyd and the Town of Marlborough. The use of intercept surveys enables direct and voluntary interaction and conversations as people go about their daily work, errands, and business within the community. Overall, the field team spoke with 92 people about their use, experience, and perceptions of safety and the character of Route 9W in the Study Area, as well as issues and opportunities that should be addressed.

An online survey, administered through SurveyMonkey, was open for three months and advertised through the project website, email lists, press releases, social media posts, and flies. The purpose was to provide an alternative method to in-person engagement to target stakeholders who do not typically attend public meetings. The survey included questions about transportation, safety, pedestrian and bicycle conditions, and land use issues for the corridor. The survey received 125 responses.

Focus Groups

The project team conducted two focus group meetings (June 1 and September 22, 2017) with business owners and operators located along the Route 9W corridor. In these meetings, the moderator asked participants a series of questions to understand how their business uses the corridor and to identify challenges and potential solutions. The first focus group was used to understand existing issues along the corridor. The second focus group was used to solicit input on preliminary recommendations.

Workshops

The project team hosted two evening workshops (June 8 and November 16, 2017) at the Marlboro Elementary School present findings and recommendations and solicit feedback from the public. The objective of the first workshop was to provide an overview of study background and process, introduce the consultant team and identify issues and concerns from stakeholders. The objective of the second workshop was to present and solicit input on the plan's preliminary recommendations.

A summary of each engagement is contained in Appendix A

Goals and Objectives

The study's main goal is to develop transportation strategies that address both corridor safety and improve the quality of life that are embraced by the community, in accordance with local plans and regulations, and serve all users.

The study's objectives were developed in consultation with the Technical Advisory Committee and input solicited through the plan's initial phase of public outreach. The following six objectives reflect issues experienced by the corridor's users and opportunities for improvement:

- *Address traffic safety issues, reduce speeding*
- *Improve traffic flow*
- *Improve pedestrian walking and crossing conditions along select sections of the corridor*
- *Improve bicycle opportunity in the corridor and connections to surrounding trails*
- *Improve streetscape aesthetics*
- *Manage and mitigate future land use development*

These planning goals and objectives provide the foundation for recommendations to address issues and explore opportunities.

SECTION 2. ROUTE 9W TODAY

Study Area Overview

The study area, shown in Figure 1, consists of a nearly 6.5 mile length of Route 9W from Marlboro Hamlet to the southern portion of the Town of Lloyd, which is the site of future large scale mixed-use development. The Marlboro and Milton hamlets serve as the primary nodes of attractions and population. The following provides an overview of the land use and major trip generators found within the study area:

Marlboro Hamlet

Marlboro hamlet, located at the southern end of the study area, serves as one of the activity nodes along Route 9W. Marlboro is relatively dense in population and retail services in comparison with the rest of the corridor. There is a mix of residential, commercial, office, agricultural, recreational, and institutional land uses. Some of the significant features of Marlboro hamlet include the Marlboro Free Library at the southernmost point of the Study Area, Marlboro Elementary School and Middle School, the Western Ave/King Street triangle area, and the Lattintown Creek, which is piped under 9W and continues downstream to the Hudson River.

Milton Hamlet

The hamlet of Milton, located further north in the Town of Marlborough, is concentrated around Main Street and Milton Turnpike on the east side of the corridor. Route 9W runs north-south through the hamlet area with a signalized intersection at Milton Turnpike. Milton, like Marlboro, has a variety of land uses such as residential, commercial, industrial, agricultural, recreational, and institutional, within a relatively small and dense area. There are some existing sidewalks along Main Street and Milton Turnpike in the core of Milton and posted speed limits are lower (30 mph) in the hamlet core relative to the Route 9W corridor.

Areas connecting the Hamlets

The connecting section of the Route 9W Study Area, located between the Marlboro and Milton hamlets (approximately Riverview Drive to Willow Tree Road), consists primarily of single-family residential homes, agricultural land, industrial uses, and some commercial retail. The surrounding development is significantly less dense than that of the hamlets.

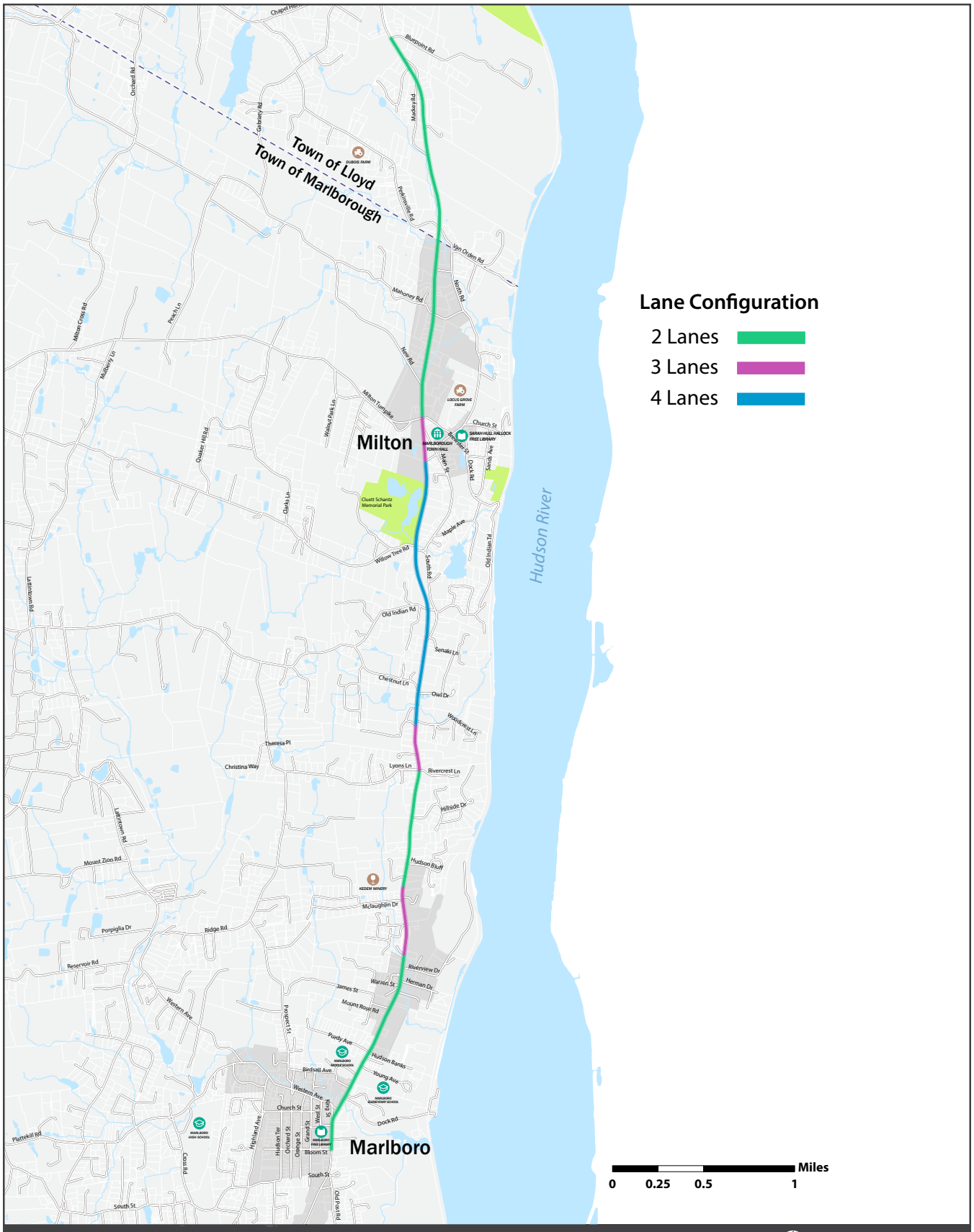


Figure 1: Route 9W Corridor Study Area with Lane Configurations *Source: Ulster County GIS*

Town of Lloyd

Route 9W enters the Town of Lloyd approximately 200 feet south of the intersection with Milton Road and Perkinsville Road. The Route 9W study area within Lloyd extends approximately 1.2 miles from the border with Marlborough to Blue Point Road to the north. This section is relatively undeveloped, with the exception of a handful of single-family homes and some commercial businesses near Mackey Road.

Roadway Configuration

The character of the Route 9W corridor is much determined by its lane configuration. The roadway varies in width, from a narrow 30 feet in Marlboro Hamlet to nearly 60 feet in the low density areas between the hamlets. The roadway's current design prioritizes vehicular through traffic, providing additional lanes as roadway width allows. Figure 1 shows the lane configurations found along the corridor. In Marlboro Hamlet, the posted speed limit is 40, except for a 30 mph section through the hamlet center. The remainder of the corridor has a posted speed limit of 55 mph. The transition from 40 mph to 55 mph occurs at the start of the 3-lane section at Riverview Drive. The roadway's horizontal and vertical curvature contributes greatly to driver behavior.

Intersections

The study area contains two signalized intersections at Young Avenue and Milton Turnpike. The intersection at King Street (Marlboro Triangle) is equip with a signal that can activated by the Marlboro fire department to stop traffic on Route 9W. The signal otherwise operates as a flashing yellow.

Route 9W is the primary arterial roadway in the study area vicinity and has great influence over the street network and development pattern. With the exception of Milton Turnpike, the street network on the east and west side of the corridor to not line up, causing most four-leg intersections to be skewed or off-set. The lack of a street grid forced Route 9W to serve the function of a local, collector, and arterial roadway. There are an abundance of informal T-intersections caused by the proliferation of driveways.

Multi-modal Travel

Pedestrian and Bicycle Facilties

Marlboro Hamlet

The Marlboro Hamlet section of the corridor has the most multi-modal improvements within the Study Area. ADA stamps/curb drops are in place at Young Avenue, along with a sidewalk on the western side of Route 9W that extends south from the elementary to the middle school. There is also a crosswalk at the Young Avenue signalized intersection, with pedestrian-actuation and countdown signals. The shoulder width varies from a few feet in some places to eight (8'+)

feet or more in others, with some areas in poor condition (potholes, gravel) and areas that are difficult to distinguish from the roadway altogether.

There are no markings for bicycles to share the road with motorists through the hamlet. Sidewalks are in place throughout much of the Hamlet area – at least on one side of the road – but vary in condition, size, and ADA compliance. There are limited opportunities for safe pedestrian crossings of Route 9W, as there are only three crosswalks across this stretch of Route 9W, including the one at the southern leg of Young Avenue at the Marlboro Elementary School. During field visits, cars frequently did not stop for pedestrians at marked crosswalks.

North of Marlboro Hamlet

The remainder of the corridor north of the hamlet lacks any sidewalks, crosswalks or ADA improvements. There are no crosswalks, push buttons or ADA improvements at the Milton Turnpike intersection. Some pedestrian and bicycle activity was observed at this intersection, which is located a short walk from Main Street, which has some sidewalks.

Similar to Marlboro Hamlet, there are no markings for bicycles to share the road with motorists. Shoulder width north of Marlboro Hamlet vary depending on the lane configuration. South of Rivercrest and Lyon Lanes, where the lane configuration is either two or three lanes, shoulder widths range from 3 to 12 feet. In the four-lane section between Rivercrest Lane and Milton Turnpike, there are very narrow shoulders in most locations. In the two-lane section North of Milton Turnpike, the shoulders are generally consistent at 8 feet.

Transit Services

Ulster County Area Transit (UCAT) provides fixed route bus service and paratransit shuttle services in the study area. The Kingston Pougkeepsie Line (KPL) is scheduled to provide service along this portion of Route 9W twice day, at 7:00am and 6:25pm. UCAT provides “Rural Route Service” every 2nd, 3rd, and 4th Wednesday of the month by appointment. ADA paratransit service is available to eligible persons.

Traffic Safety

Crash data were obtained from NYSDOT for the most recent available five-year period, 2012 to 2016. The crash analysis includes crashes that occurred within 200 feet of the corridor. The crashes are classified into four categories of severity: fatal, injury, property-damage (damage over $1,000), and non-reportable (damage under $1,000). Of the 575 crashes that occurred along the corridor between 2012 and 2016, two (2) resulted in fatalities and a quarter (25%, 144) resulted in injuries. Two of the injury crashes involved pedestrians and 1 involved a bicyclist.

Table 1: Top Crash Intersections (5 Years - 2012-2016)

Map ID	Intersection	Injury	Property Damage	Total
1	Milton Turnpike	13	31	44
2	King Street	4	21	25
3	Young Avenue	7	17	24
4	Perkinsville Road	4	18	22
5	Dock Road (Marlboro)	3	17	20
7	Lyons Lane/Rivercrest Ln	2	17	19
6	Willow Tree Road	6	13	19
8	Western Avenue	5	13	18
9	Old Indian Road	9	7	16
10	Birdsall Avenue	3	12	15
11	Hillside Drive	4	11	15

Figure 2 shows the location of all motor vehicle crashes aggregated into clusters by severity. Pedestrian and bicycle crash locations are indicated also indicated on this map. The majority (71%) of crashes occurred within 200 feet of an intersection. Table 1 lists the intersections that have had a total of 15 or more crashes. The greatest number of crashes occurred at the signalized intersection of Milton Turnpike and Route 9W. The largest crash cluster is found in the Marlboro Hamlet, where five of the top crash intersections are located. These are the study area's most active areas. However, intersections with the highest proportion of injury crashes are located between the hamlets and in the Milton Industrial Park.

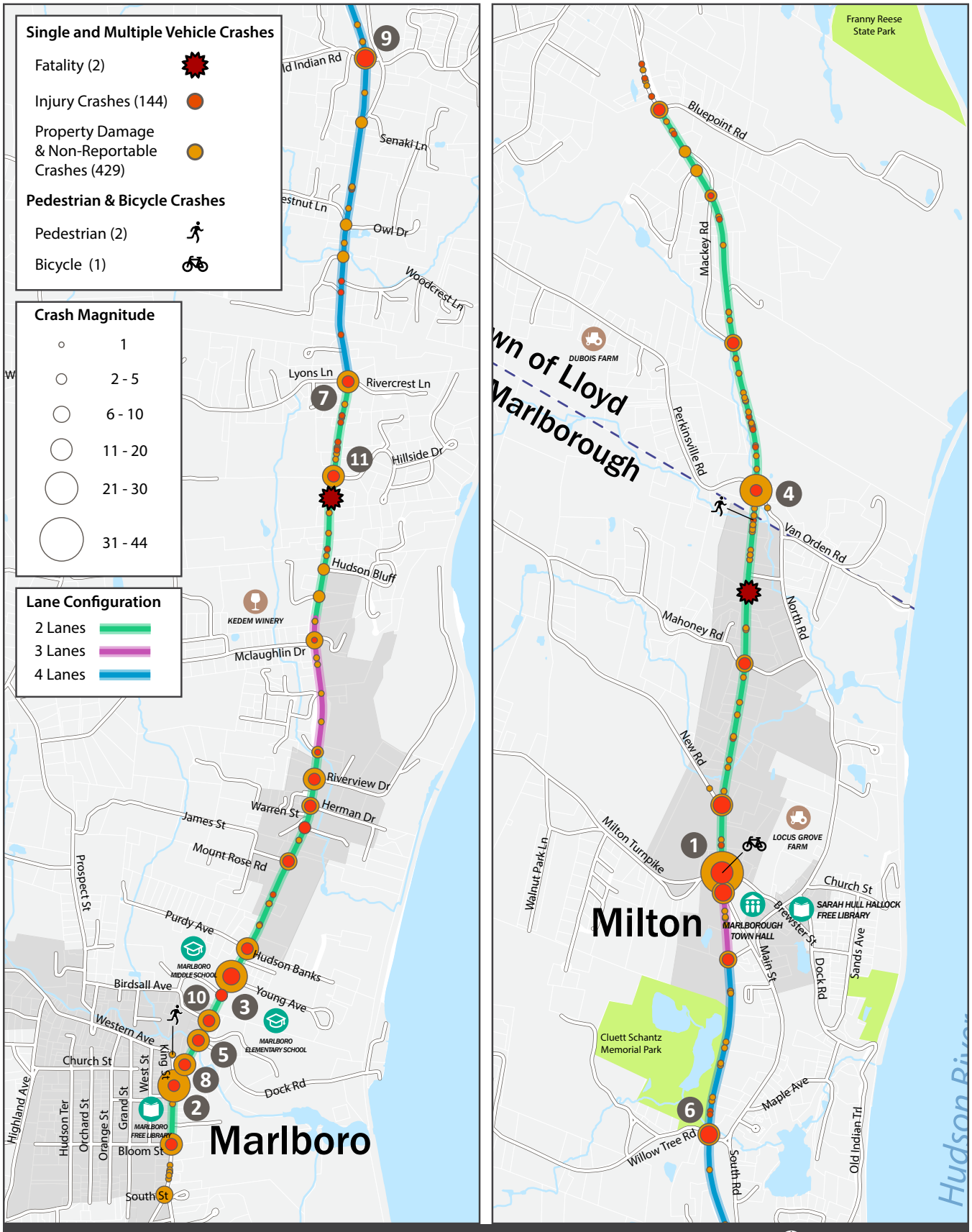


Figure 2: Vehicular Crashes (5 Years, 2012-2016)

SECTION 3. ROADWAY SAFETY AUDIT

As part of the Corridor Management Plan, a Safety Assessment was conducted following the Roadway Safety Audit (RSA) process detailed in guidelines produced by the Federal Highway Administration (FHWA) and the New York State Metropolitan Planning Organization (NYSMPO). The purpose of the assessment is to identify existing issues contributing to roadway crashes and develop recommendations to improve safety. The Safety Assessment builds upon the existing conditions analysis and stakeholder concerns conveyed through the first phase of public engagement.

Focus Area

The RSA focus area covers a two-mile segment of Route 9W in the northern portion of the study area between Old Indian Road and Perkinsville Road. This area was chosen because it is the site of several high-crash locations and it is an area has received little attention in previous studies. The Project Team and Technical Advisory Committee felt it was important to examine the area to assess the need traffic calming in the four lane section between Riverview Drive and Milton Turnpike and the two-lane section going through Milton Industrial Park.

The RSA focused on three specific areas, as shown in Figure 3::

- Perkinsville Road (Spanning quarter-mile north and south of Perkinsville Road intersection)
- Milton Turnpike (St. James Place to roughly 500 feet north of Milton Turnpike intersection)
- Route 9W between Old Indian Road and Willow Tree Road.

RSA Process

The Safety Assessment Team consisted of six members of the Project Team and TAC members who have experience in traffic planning, engineering and enforcement. The Team was tasked with performing field observations at the selected focus areas during various times to examine conditions. Each location was visited once during the AM peak period (7-9am), PM peak period (4-6pm), and after dark (8pm-10pm) over the course of two day (Tuesday, September 26 and Wednesday, September 27 of 2017). Prior to conducting the field observations, the Safety Assessment Team reviewed detailed crash maps and traffic data to identify contributing factors. A meeting was held after the field observations to review and confirm the RSA findings.

Findings

The following summarizes the safety issues that were identified during the RSA process. Recommendations addressing these issues have been incorporated into the plan's overall recommendations, which are featured in Section 6.

High Travel Speeds

Drivers were found to be comfortable driving at high speeds through this section of the Route 9W corridor. The highest speeds were observed at the intersections of Willow Tree Road and Old Indian Road where the horizontal and vertical curvature, four travel lanes and wide visual field create an environment that encourages fast driving. Lane reconfigurations and streetscape improvements have been recommended to traffic calm this area.

Difficulty Making Left-Turns from Route 9W

Current lane configurations in the four-lane section and two-lane section in Milton Industrial Park make it challenging for drivers to make left-turns from Route 9W because of the lack of turn pockets. At unsignalized intersections, drivers are rushed to make left-turns because they must made across opposing traffic from a through lane. In the two-lane section, queues often form while the turning vehicle waits for a gap in opposing traffic. In the four lane section, the challenge of making a left-turn is increased because the driver must wait for a gap in two lanes of opposing traffic.

The Team observed many drivers were reluctant to slow down for vehicles making turns. At the intersection of Perkinsville Road, located along the two-lane section, the Team observed drivers using the shoulder to pass vehicles waiting to make left-turns. Left-turn lanes have been recommended as part of the intersection reconfigurations at the intersections of Willow Tree Road and Old Indian Road as well as along the two-lane section in Milton Industrial Park.

Intersection Geometry

Perkinsville Road, Willow Tree Road, and Old Indian Road intersect Route 9W at skewed angles, which make it more challenging for drivers to turn in and out of them. The minor roads are poorly delineated because they have large corner radii . While intersection realignment is not feasible due to existing developments, recommendations have been developed to help better define intersections with roadway features, landscaping, signage, and lighting.

Visibility

The Team identified visibility deficiencies along the roadway and at intersections due to inconsistent lighting and incomplete reflectors. Pavement markings were found to be in good condition for daytime use, but they are difficult to see at night because the paint is not reflective.

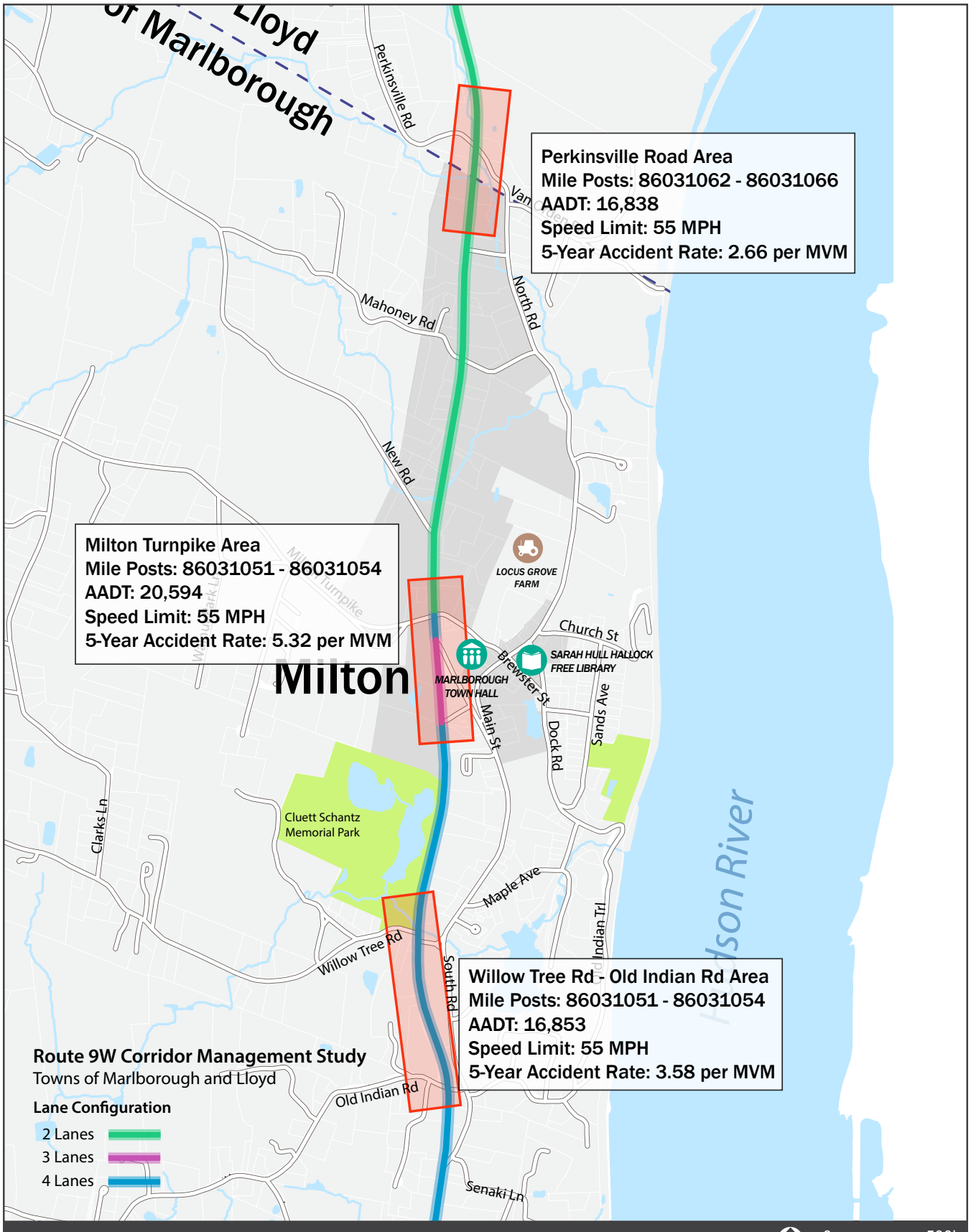


Figure 3: Roadway Safety Audit Focus Areas *Source: Ulster County GIS,*

SECTION 4. FUTURE TRAFFIC CONDITIONS

Local and Regional Growth

Historical traffic volume data collected by NYSDOT shows a fluctuation in Annual Average Daily Traffic (AADT) along Route 9W in the study area since 2004. Between 2004 and 2011, AADT decreased 18% from nearly 20,000 to 16,500 vehicles per day. The most recent NYSDOT count in 2014 shows a 26% increase from 2011. However, counts commissioned by UCTC in 2017 showed an AADT of 16,520 at NYSDOT count location, which represents a 20% decrease from 2014. This data shows an overall traffic decreased of 8% in the last 10 years despite the surge recorded in 2014. Decreases in AADT have been seen throughout the region. In conjunction with UCTC, it was determined that a modest 0.5% annual growth rate should be assumed for future traffic forecasts.

The demographic analysis in the Town of Marlborough's Comprehensive Plan shows a projected decline in the enrollment of school children in the Marlboro Central School District, a relative decline in the "under 40" population; and an increase in the senior and elderly populations (Behan, 2017). Both Towns are interested in attracting new residents and have mixed-use developments in the pipeline, as outlined in the following section.

Planned Developments

Bayside Development

The Bayside Development has been approved on the west side of U.S. Route 9W, south of Purdy Avenue, opposite Young Avenue. This development will include 104 dwelling units and approximately 12,600 sq.ft. of commercial space. Marlborough Middle School borders the site to the south. Access to the site is proposed via a new roadway connection to Route 9W opposite Young Avenue where there is currently a signalized intersection and crosswalk.

Hudson Valley Wine Village

The Town of Lloyd has recently approved the master plan for the Hudson Valley Wine Village, a large development to be built on the east side of Route 9W, generally south of Bluepoint Road. The master plan defines the Hudson Valley Wine Village project as mixed-use development with approximately 913 residential dwelling units, a 103 room hotel/conference center and restaurant space, 50,000 sq. ft. of new commercial space (office/retail) and 450,000 sq. ft.of light industrial space and 51,727 sq. ft. of adaptive reuse of the existing winery structure. The project is in a conceptual phase would be developed in stages over a 10- to 20-year period.

Project generated traffic will enter and exit the site through two new access points that will be constructed between Bluepoint Road and Mackey Road (South). The southerly access is proposed to connect directly to Route 9W, while the northerly one is via a reconstructed Sam Williams Road to create an intersection opposite Paladino Drive. This new access road would also be made available to the existing residences. An emergency only connection to Bluepoint Road is also expected to be provided.

Traffic Impacts

This section summarizes the anticipated traffic impacts resulting from local and regional background growth as well as the Bayside and Hudson Wine Village Developments.

Marlboro Hamlet

Marlboro Triangle is the hamlet's bottleneck due to the high volume of left turns movements from Route 9W and King Street. If the triangle's roadway configuration remains unchanged, these issues are expected to exacerbate and cause further delays along the corridor. The 2008 Marlboro Hamlet Area Transportation Plan identified several alternative solutions to address this issue – two of which were identified as the preferred alternatives for improvements: Alternative 2 and 6.

- Alternative 2 includes the installation of Traffic Signals at both King Street and Western Avenue. King Street and Western Avenue would remain as one-way eastbound and one-way westbound, respectively. A left turn lane would be constructed on the northbound Route 9W approach to the Western Avenue intersection. Pedestrian signals and crosswalks would be installed at each intersection, as well as new sidewalks throughout the area. Parking would be prohibited along Route 9W from King Street to Dock Road.

- In Alternative 6, Western Avenue and King Street would both become two-way streets and the intersection of Western Avenue and King Street would be controlled by two coordinated traffic signals with pedestrian phases on each approach. Vehicles traveling to Route 9W northbound would be required to make left turns from Western Avenue, while traveling to Route 9W southbound would require right turns from King Street. Also, as part of this alternative, vehicles traveling west on Western Avenue would be required to make left turns at King Street where a separate left turn lane would be provided.

The implementation of either of these alternatives is expected to significantly reduce intersection delay time, which is vital to the future operations of Route 9W.

The Bayside project is expected to generate 105 additional vehicle trips in the AM Peak Hour and 177 additional trips in the PM Peak Hour. Two-thirds of the project generated traffic is expected to travel to and from the south and the remaining third is expected to travel to and from the north. The Traffic Impact Study prepared

by Maser Consulting in 2015 concluded that the project generated traffic will not have a significant impact on area intersections if improvements are made to Marlboro Triangle.

Milton Turnpike

In the long term, the intersection of Milton Turnpike and Route 9W will experience an increase in peak hour delays as local and regional traffic volumes grow and the intersection is used by pedestrians and bicyclists. The intersection could operate more efficiently if it was converted into a roundabout, which reduce delays at all approaches because it would allow vehicles to continuously move through the intersection. A roundabout would bring traffic benefits to the corridor, by regulating traffic flow and creating an opportunity for vehicles to make U-turns.

Town of Lloyd

The Hudson Valley Wine Village is a large development that will increase traffic volumes on Route 9W and increase activity in the northern edge of the study area. Given this study was prepared for a master plan, it is difficult to know the additional traffic that will be generated from this development. The Traffic Impact Study prepared by Maser Consulting in 2012 conducted a full-build analysis that estimated an additional 851 additional trips in the AM Peak Hour and 1,130 additional trips in the PM Peak Hour. This represents a worst-case scenario. Forty percent (40%) of the project generated traffic is expected to travel to and from the south, through the study area.

The study recommends the following improvements to address peak hour traffic impacts:

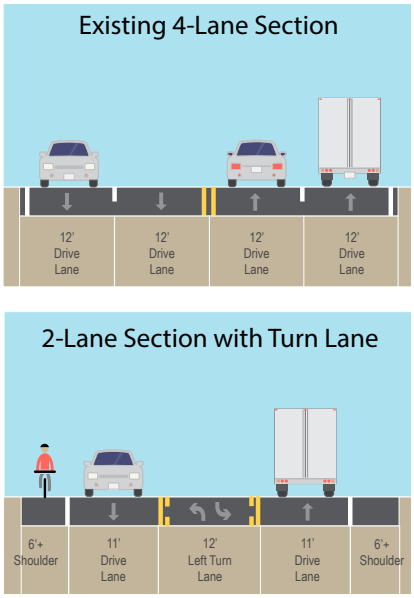
- The provision of left and right turn lanes and signalized intersections at the two project entrance roads on Route 9W to help reduce delay times for vehicles turning onto Route 9W.
- The construction of a spine road connecting to either the existing Bluepoint Road or to Sam Williams Road should be completed to provide emergency access once significant development occurs or the access road extends more than 1500± feet.
- Consideration of providing a shuttle service for residents from the Project to Bridgeview Plaza in Highland to access additional UCAT bus services or eventually extending the service area for more frequent service to help reduce the peak hour trip generation of the Project.

The additional volumes will impact intersection operations downstream of this development, mainly creating greater demand at the south and northbound through movements at the signalized intersection of Milton Turnpike and Route 9W. However, the signalization of intersections at the site driveways are expected to improve conditions at other nearby unsignalized intersections because it will create more gaps in north and southbound traffic.

SECTION 5. OVERVIEW OF CORRIDOR IMPROVEMENTS

Lane Reconfigurations

One of the key issues that emerged from the public engagement process, from the safety audit, and from the consultant team's assessment is the inconsistent character and configuration of Route 9W and the speeding issues created by this configuration. The sections of Route 9W in the southerly and northerly portions of the Town of Marlborough, as well as the study section in the Town of Lloyd, have one traffic lane in each direction with shoulders on both sides. In between these two sections Route 9W varies between 2-lane, 3-lane and 4-lane sections, with most of the 4-lane sections lacking shoulders. Left turns from the 4-lane sections occur from the left-hand through lane. Drivers tend to take advantage of the 3-lane and 4-lane sections to pass other vehicles and speed. These sections of Route 9W are perceived as an expressway and set the tone (and speed) for this arterial throughout most of its length.



Lane reconfiguration from 4-Lane Section to 2-Lane Section with Turning Lane

These wider sections are not warranted from a capacity point of view, since the 2-lane sections north and south carry at least as much traffic and function relatively well. The effect of the wider sections is to allow cars to pass each other and to encourage higher speeds. This configuration reflects the highway design thinking prevalent in the period 1950 through 1980, when the main goal was to provide a maximum number of lanes and optimize the circulation freedom of the automobile.

This irregular configuration is a major contributor to the crashes in the corridor. Drivers are induced to speed on the 4-lane sections and tend to arrive in the narrower sections at speeds that are unsafe. The high number of northbound and southbound rear-end crashes at the intersection of Milton Turnpike and Route 9W support this argument.

This assessment leads to the following improvement principles regarding the general configuration of Route 9W in the study area:

- Set a general design standard for Route 9W in this area as a 2-lane arterial, with consistent shoulders throughout the corridor
- Provide protected left-turn lanes at those intersections or driveways that have high left-turn volumes
- Provide one uphill passing lane in the northbound direction and one in the southbound direction in the segment of Route 9W between the two hamlets

This more consistent and standard design of Route 9W will reduce speeding and the 85th percentile speeds without having a significant impact on total travel times throughout the corridor. The reduction in speeding will facilitate the other improvements recommended in the next section.

Access Management

Recommended Driveway Narrowing using Landscaping

The main purpose of access management is to optimize the safety and efficiency of Route 9W. Given that the primary function of this state highway is to satisfy through traffic (trips between the hamlets and towns in the corridor) as opposed to providing access to adjacent parcels of land, it is important to design Route 9W so that it can fulfill that function in a safe manner. A multitude of driveways and street connections along Route 9W adds conflict points and safety hazards and will increase the number of injuries and fatalities. The stop-and-go conditions associated with a high density of driveways also impede the fluidity of the highway and will require its widening faster than if access is controlled. Good access management will therefore enhance the efficiency of the highway.

A secondary, but also very important purpose of access management is the aesthetic quality of the highway corridor. The proliferation of driveways and related signage, and the wide open driveways often associated with older commercial uses have a negative impact on the visual quality of the corridor and property values. Finally, the reduction of the number of conflicts with driveways will improve the quality of pedestrian and bicycle circulation along the highway independently of the presence of sidewalks or bicycle facilities.

Many of the plan's recommendations reference the following access management principles:

- Reduce the number of driveways: The reduction of the number of driveways will reduce crashes in the corridor, but it will also increase the opportunities to provide better and safer access control. It will make it easier to provide individual left-turn lanes for these driveways, since the greater number of turning movements may warrant that type of treatment.

- Avoid placing additional driveways on 9W and maximize opportunities to provide from the side or back of the parcel. Driveways should be located on local streets rather than the state highway. At a minimum the access off Route 9W can be converted to a right-turn-in and right-turn-out only movement. This will improve the safety for the turning movements and safety for traffic on Route 9W.

- Add landscaping and improve parking configuration & efficiency. The addition of landscaping along the Route 9W frontage will enhance the visual quality of the corridor significantly. This is the case particularly for parcels of land that today have wide open driveways, where vehicles often park in a perpendicular fashion to the state highway and occasionally back into the traffic lane to get out of the parking space. This unsafe practice should be avoided.

Expansion of Pedestrian Network

An effective pedestrian network connects population centers and traffic generators to points of intersest. While the Marlboro hamlet has an established patchwork of multi-modal features, including some sidewalks and trails, they are not well connected and extend to only a few points within the hamlet. This opportunity is greatly diminshed outside of Marlboro Hamlet due to the lack of pedestrian infrastructure of any kind, except along Main Street in Milton Hamlet.

The plan includes recommendations that address network gaps in the existing network and highlight opportunities to expand sidewalks and crossing opportunities in the hamlets. Whenever possible, the Towns should explore opportunities to create off-road shared-use paths.

One of the most pressing issues is the lack of pedestrian crossings across Route 9W. The plan recommends adding crossings in Milton Hamlet and upgrading existing crosswalks in Marlboro Hamlet to encourage greater compliance by drivers. *Enhanced Crossings,* which provide both warning signs and pedestrian actuated flashing lights, are recommended for crossings at unsignalized intersections or at midblock locations.

Creation of a Bicycle Route Network

Route 9W is not presently a safe nor comfortable road for the vast majority of cyclists due to current lane configurations, pavement conditions and relatively high travel speeds. However, bicycling should be encouraged locally within the Hamlets and regionally along County Routes. The plan outlines an inital bicycle network consisting of shared roadways on local streets and use of shoulders on collector roads. Bicycle parking should be provided in the hamlets and in parks and schools.

The plan's roadway configuration and safety recommendations aim to create a consisten shoulder and reduce vehicular travel speeds, which will make Route 9W a better candidate for bicycle route designation. A long term vision imagines a shared-use path on one side of Route 9W, that would connect the hamlets.

Streetscape Design

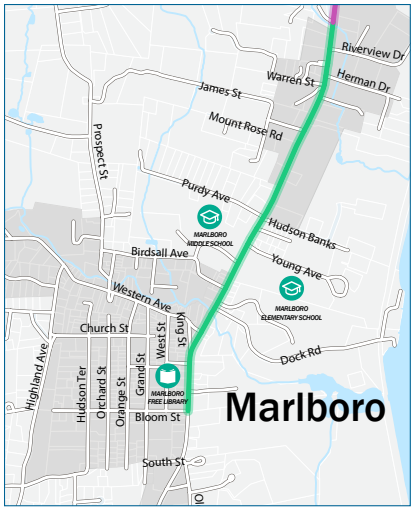
Streetscape elements such as building form, street furniture, landscaping, and lighting, define a community's character and have significant influence on how streets function. There should be a greater effort to encourage public and private investment in the corridor's appearance to build the corridor's identity so it is no longer perceived as an area to pass through. Streetscape improvements are an effective tool for calming traffic and will be a vital component of a multi-pronged effort to reduce speeds throughout the corridor.

SECTION 6. RECOMMENDATIONS

The plan's recommendations are arranged in the following seven categories:

- *Roadway Configuration and Safety (R)*
- *Intersection Improvements (I)*
- *Transit Service (T)*
- *Pedestrian and Shared-Use Paths (P)*
- *Bicycle Infrastructure (B)*
- *Streetscape Improvements (S)*
- *Land Use and Access Management (L)*

ROADWAY CONFIGURATION AND SAFETY



Location:

- *Between Birdsall Avenue and Young Avenue, Marlboro Hamlet, Town of Marlborough*

Agencies Involved:

- *Marlboro Central School District*
- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:

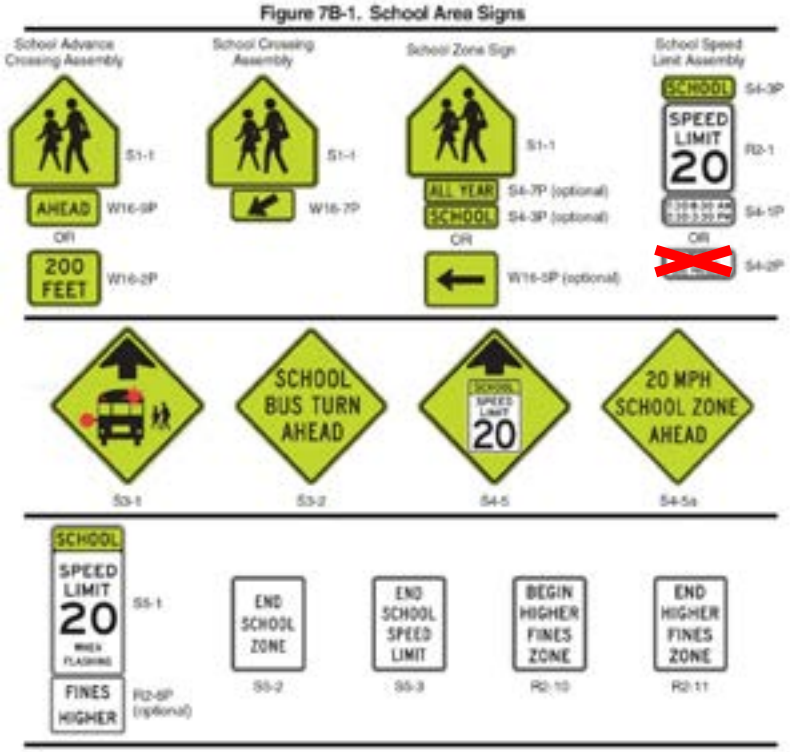
- *Short-term*

RECOMMENDATION R-1: ESTABLISH SCHOOL ZONE WITHIN QUARTER-MILE OF MARLBORO ELEMENTARY & MIDDLE SCHOOLS

Description

Per the 2016 Marlborough Safe Routes to School Plan, a school zone with signage and reduced speed limits should be placed along Route 9W (no more than 0.25 miles from a school entrance/exit) and should extend between Birdsall Avenue and Purdy Avenue to the north. The speed limit should be reduced from 40 mph to 30 mph to restore the school zone speed limit that was previously set before the installation of the traffic signal at Young Avenue.

The school zone will include both the Elementary School and Middle School and the new Bayside Development and will provide more comfortable walking and biking conditions on roads that students travel along. The Manual on Uniform Traffic Control Devices (MUTCD) provides guidance on the use of school area signage and markings. The signs that should be used include: School Advance Warning Assembly, the School Crosswalk Warning Assembly, and the School Speed Limit Assembly.



School Area Signs *Source: Manual of Uniformed Control Devices, Alta Planning*

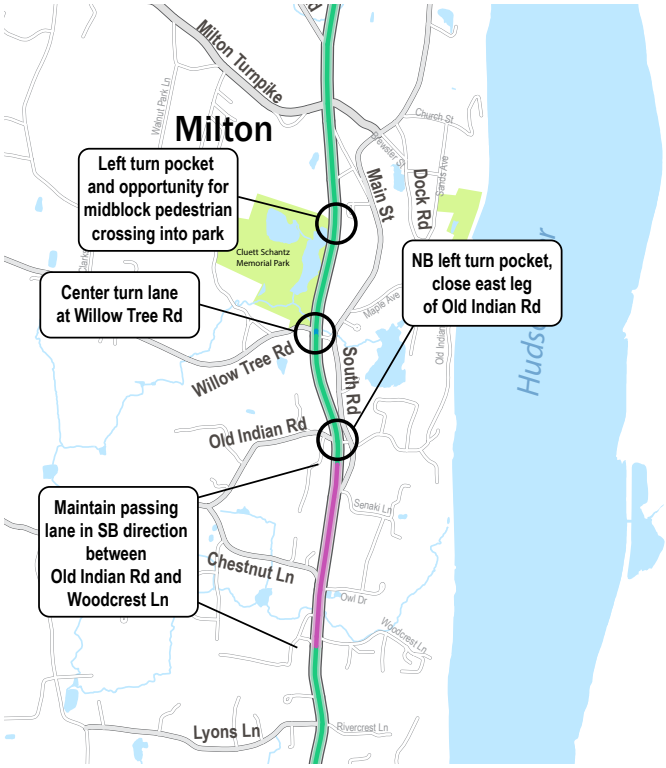
ROADWAY CONFIGURATION AND SAFETY

RECOMMENDATION R-2: LANE RECONFIGURATION FROM FOUR LANES TO TWO LANES WITH LEFT TURN POCKETS AT INTERSECTIONS BETWEEN RIVERCREST LANE AND MILTON TURNPIKE

Convert four-lane section to two travel lanes with left turn pockets provided at intersections between Rivercrest Lane and Milton Turnpike. It is recommended that the southbound passing lane be maintained between Old Indian Road and Woodcrest Lane to provide opportunity for motorists to pass slow moving heavy vehicles.

The current four-lane configuration encourages speeding, which poses a risk to motorists making turns on and off Route 9W. The lane reconfiguration will provide the following benefits:

- Provide protected turn lane for motorists to make left turns. Reduces occurrence of rear end and right angle crashes
- Reduction in number of passing zones and narrowing of travel lanes will encourage motorists to travel at or below speed limit.
- Provides the appropriate roadway conditions for a speed limit reduction from 55 mph to an ideal speed of 45 mph
- Additional width available for roadway median and reduction in speed provides opportunities for midblock pedestrian crossings across Route 9W.



Recommended Lane Reconfiguration

Source: BFJ Planning

Location:

- *Between Rivercrest Lane and Milton Turnpike, Town of Marlborough*

Agencies Involved:

- *New York State Department of Transportation*
- *Town of Marlborough*

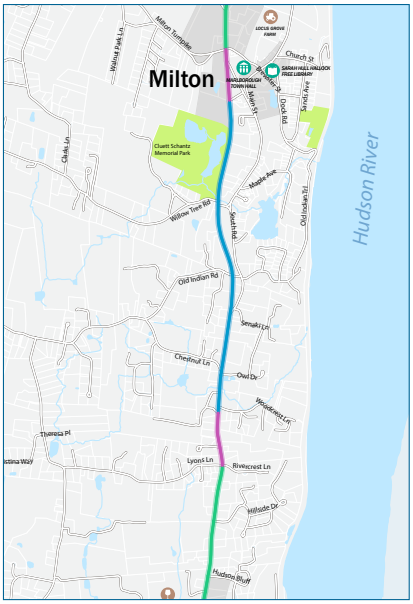
Timeframe:

- *Mid-term*

Contingent Upon:

- *This project requires coordination between the Town of Marlborough, and the New York State Department of Transportation. The should be done in conjunction with NYSDOT repaving of Route 9W.*

ROADWAY CONFIGURATION AND SAFETY



RECOMMENDATION R-3: REDUCE SPEED LIMIT BETWEEN MILTON HAMLET AND MARLBORO HAMLET FROM 55 MPH TO 45 MPH

As a follow-up to Recommendation R-2, the speed limit between Riverview Drive and Milton Turnpike should be reduced from the state speed limit of 55 mph to a suggested limit of no more than 45 mph.

Location:
- *Between Riverview Drive and Milton Turnpike, Town of Marlborough*

Agencies Involved:
- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:
- *Mid-term*

Contingent Upon:
- *This is contingent upon the lane re-configuration described in Recommendation R-2*

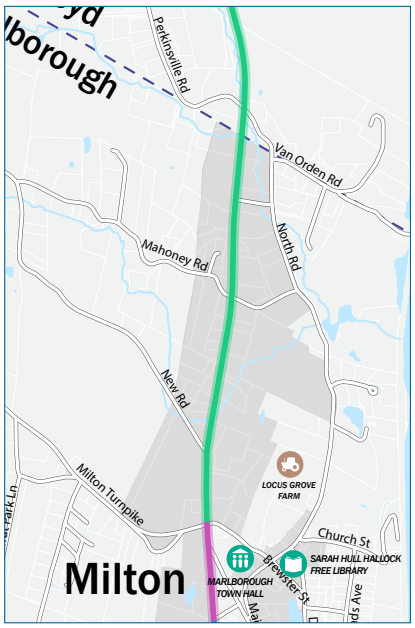
RECOMMENDATION R-4: REDUCE SPEED LIMIT BETWEEN MILTON HAMLET AND MILTON INDUSTRIAL PARK FROM 55 MPH TO 40 MPH

The speed limit between Milton Turnpike and Perkinsville Road should be reduced from the state speed limit of 55 mph to a suggested limit of 40 mph to better complement the land use pattern. This area has a similar character to Marlboro Hamlet between Young Avenue and Riverview Drive, where the current posted speed limit is 40 mph.

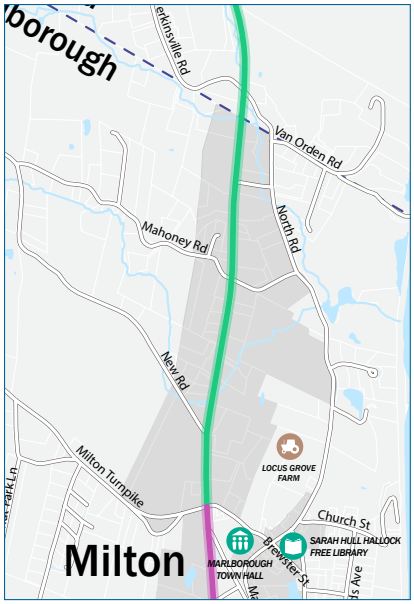
Location:
- *Between Milton Turnpike and Perkinsville Road, Town of Marlborough*

Agencies Involved:
- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:
- *Mid-term*



ROADWAY CONFIGURATION AND SAFETY



RECOMMENDATION R-5: ADD LEFT-TURN LANES IN MILTON INDUSTRIAL PARK

Provide left-turn pockets in two-lane section in Milton Industrial Park to reduce opportunity for rear-end and right-angle collisions and improve traffic flow along this section of Route 9W. The number of intersections should be reduced using access management techniques to consolidate and narrow driveways. In the long term, efforts should be made to widen the roadway to provide a consistent shoulder throughout this section.

Location:

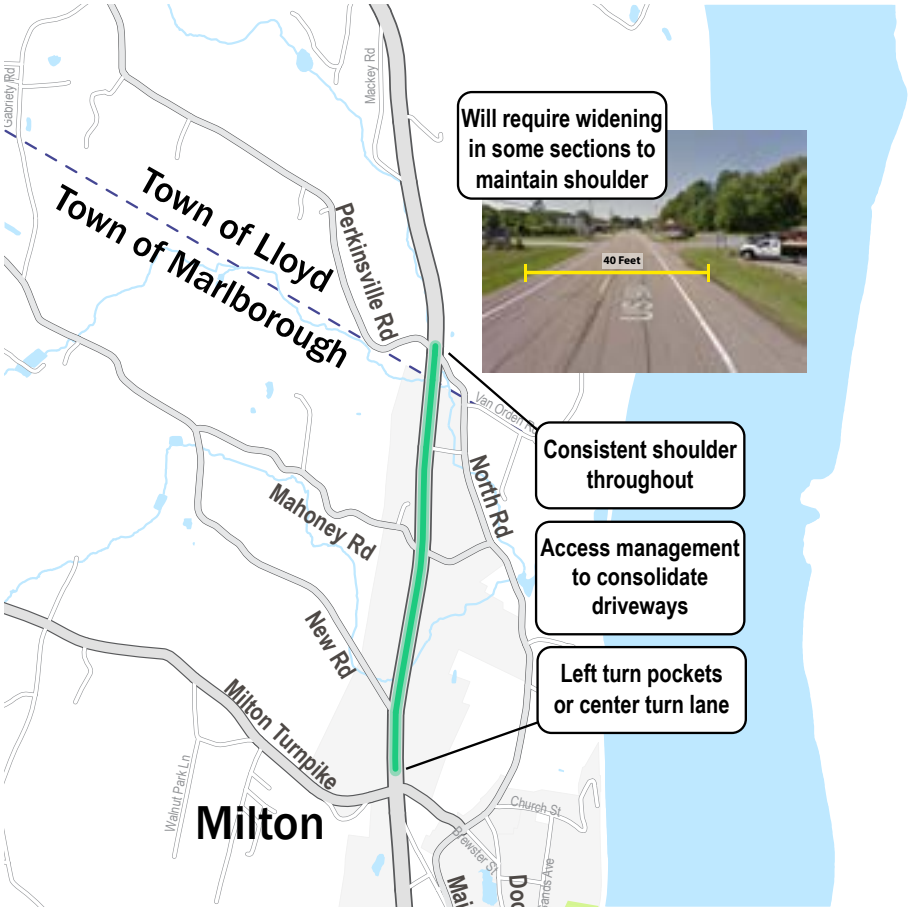
- *Between Milton Turnpike and Perkinsville Road, Milton Hamlet, Town of Marlborough*

Agencies Involved:

- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:

- *Mid-term*



Two-Lane Section in Milton Industrial Park

Source: BFJ Planning

ROADWAY CONFIGURATION AND SAFETY

RECOMMENDATION R-6: PROVIDE CONSISTENT SHOULDERS THROUGHOUT CORRIDOR

Provide 6'+ wide, well maintained shoulders throughout the Route 9W corridor to accommodate multi-modal travel. This can be achieved through a combination of repaving, lane re-configurations, and/or roadway widening. Shoulders should be incorporated in all future roadway projects and is stated as an objective of the roadway improvements in Recommendations R-2 and R-5.

Shoulders increase safety by providing motorists with a recovery area as well as space for emergency, maintenance, and enforcement activities. Shoulders also provide safety and comfort to bicyclists and can accommodate pedestrian activity.

Exceptions will have to be made in the historic portion of Marlboro hamlet because of right-of-way constraints that exist due to the existing development pattern.

Location:
- *Corridor-wide, Town of Marlborough and Town of Lloyd*

Agencies Involved:
- *New York State Department of Transportation*
- *Town of Marlborough*
- *Town of Lloyd*

Timeframe:
- *Mid-term*

Contingent Upon:
- *This project requires coordination between the Town of Marlborough, the Town of Lloyd, and the New York State Department of Transportation. The should be done in conjunction with NYSDOT repaving of Route 9W.*

ROADWAY CONFIGURATION AND SAFETY

RECOMMENDATION R-7: EVALUATE CENTERLINE MARKINGS, GUARDRAILS AND REFLECTORS ALONG CORRIDOR

The Roadway Safety Audit revealed that portions of Route 9W have damaged guardrails and reflectors and that roadway centerlines need to be examined to revise passing zones. A corridor-wide audit should be conducted to evaluate the extent of these deficiencies.

Location:

- *Corridor-wide, Town of Marlborough and Town of Lloyd*

Timeframe:

- *Short-term*

Agencies Involved:

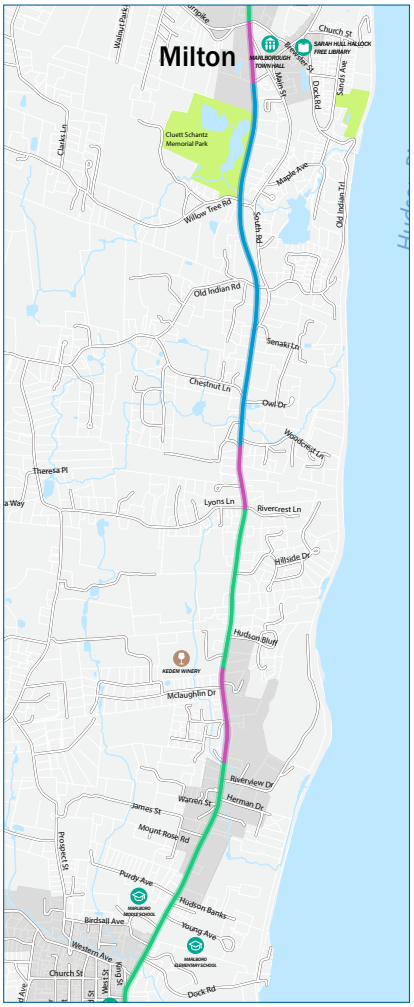
- *New York State Department of Transportation*
- *Town of Marlborough*
- *Town of Lloyd*

ROADWAY CONFIGURATION AND SAFETY

RECOMMENDATION R-8: INSTALL ADDITIONAL DEER CROSSING SIGNS

The study's crash analysis shows many incidents of vehicle collisions with animals have occurred throughout the corridor. While deer are a commonplace in Hudson Valley and are known to enjoy the agriculture of Marlborough, their migration patterns have adjusted due to changes in the build environment, such as installation of electric fences. The signage inventory revealed there are few deer warning signs posted along Route 9W to warn drivers of their presence.

It is recommended that additional deer warning signage be installed to convey that deer are present throughout the corridor. This signage should be installed at the edges of the hamlets, where the land use transitions from commercial to agriculture and low density residential.



Deer Warning Sign in Saratoga County Source: Manual of Uniformed Control Devices

Location:

- *Corridor-wide, Town of Marlborough and Town of Lloyd*

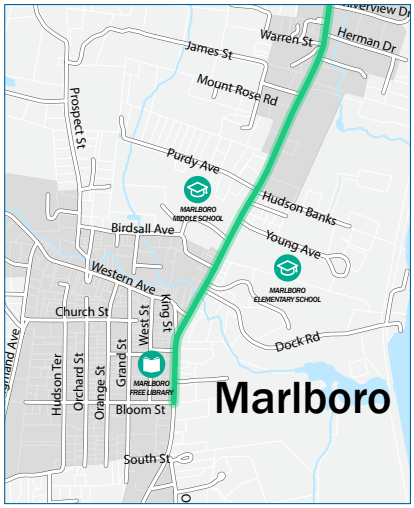
Agencies Involved:

- *New York State Department of Transportation*
- *Town of Marlborough*
- *Town of Lloyd*

Timeframe:

- *Short-term*

INTERSECTION IMPROVEMENTS



Location:

- *Marlboro Triangle, Marlboro Hamlet, Town of Marlborough*

Agencies Involved:

- *Ulster County Transportation Council*
- *Town of Marlborough*
- *New York State Department of Transportation*

Timeframe:

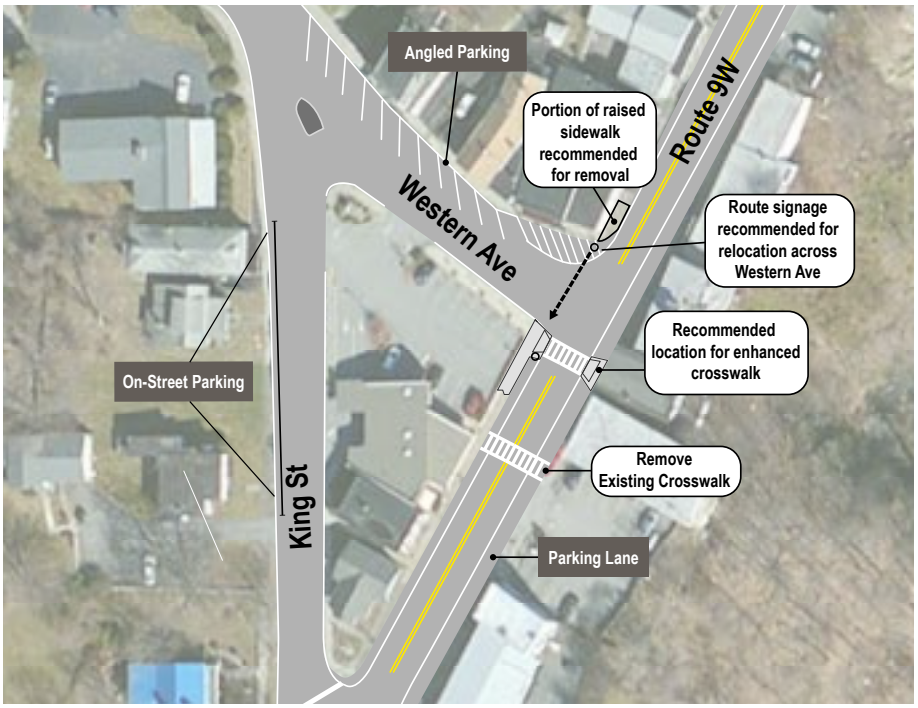
- *Short-term*

RECOMMENDATION I-1: STUDY PARKING AND PEDESTRIAN INFRASTRUCTURE AT MARLBORO TRIANGLE TO ASSESS FEASIBILITY OF ADDING LEFT-TURN LANE

The 2008 Marlboro Hamlet Area Transportation Plan identified two preferred alternatives for improvements to circulation at Marlboro Triangle (See Section 5). Both alternatives need to be reexamined to take into account changes to land ownership and concerns about removing on-street parking. The construction of a left-turn lane will require widening of the existing roadway, which will have an impact on parking and pedestrian facilities.

The proposed re-examination should study on-street parking occupancy and turnover to determine impact of the removal of on-street parking, explore the acquisition of land for off-street parking, and identify shared-parking opportunities. The 2008 alternatives should be updated to reflect current land use, the location of current and future pedestrian infrastructure, and chosen on-street parking strategy.

A first set of improvements, outlined in Recommendation P-1, would increase convenience and safety at the pedestrian crossing at the triangle by relocating it to the corner with Western Avenue. To provide adequate sight distance for southbound traffic, a portion of the raised sidewalk wrapping the corner building should be removed.



Existing On-street Parking and Recommended Pedestrian Improvements for Marlboro Triangle

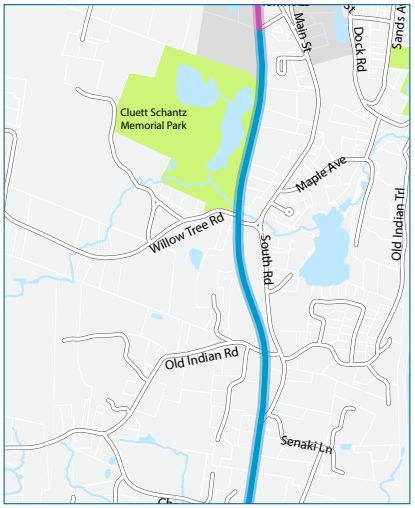
Source: BFJ Planning

INTERSECTION IMPROVEMENTS

RECOMMENDATION I-2: ADD CENTER-TURN LANE TO INTERSECTION AT WILLOW TREE ROAD

The intersection of Route 9W and Willow Tree Road has a negative offset that causes a conflict point between left-turning vehicles. Realigning the intersection will be challenging due to existing residential developments on south west and north east corners. Closing one leg of Willow Tree Road is also not feasible because the street is an important collector road to areas west of Route 9W and is one of only few viable access points to South Road south of Milton Turnpike.

In conjunction with the lane reconfiguration in this portion of the corridor, it is recommended that a center turning lane is placed at this intersection to facilitate left turns. While this turn lane does not eliminate the aforementioned conflict, the speed reduction from the lane reconfiguration will make it easier for drivers to safely turn in and out of the intersection.



Location:

- *Intersection of Willow Tree Road and Route 9W, Town of Marlborough*

Agencies Involved:

- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:

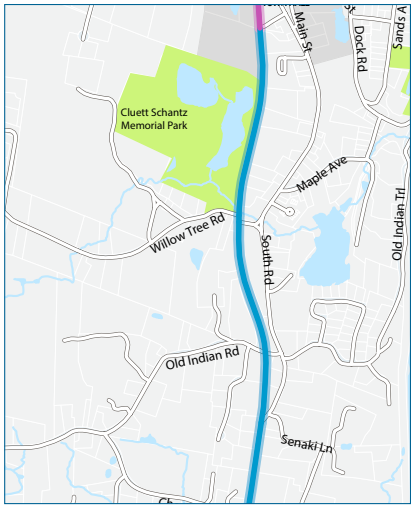
- *Mid-term*

Contingent Upon:

- *The project is contingent upon the lane re-configuration described in Recommendation R-2*

Center Turn Lane at Intersection of Route 9W and Willow Tree Road Source: BFJ Planning

INTERSECTION IMPROVEMENTS



RECOMMENDATION I-3: RECONFIGURE INTERSECTION AT OLD INDIAN ROAD

The intersection of Old Indian Road and Route 9W has a skewed alignment due to roadway curvature and changes in topography. The west leg of Old Indian Road serves as a collector road to agricultural uses in central Marlborough. The east leg is a short, narrow and street residential street that terminated at South Road. This leg is difficult to see from Route 9W due to topography and tree coverage.

In conjunction with the lane reconfiguration in this portion of the corridor, it is recommended that a left turn pocket is installed in the northbound direction. It is also recommended that the east leg of Old Indian Road is closed. Motorists traveling southbound can access this street by taking a left at Willow Tree Road.

Location:

- *Intersection of Old Indian Road and Route 9W, Town of Marlborough*

Agencies Involved:

- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:

- *Mid-term*

Contingent Upon:

- *The project is contingent upon the lane re-configuration described in Recommendation R-2*

Re-configuration of Route 9W & Old Indian Road Intersection *Source: BFJ Planning*

INTERSECTION IMPROVEMENTS

Location:

- *Intersection of Milton Turnpike and Route 9W, Town of Marlborough*

Agencies Involved:

- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:

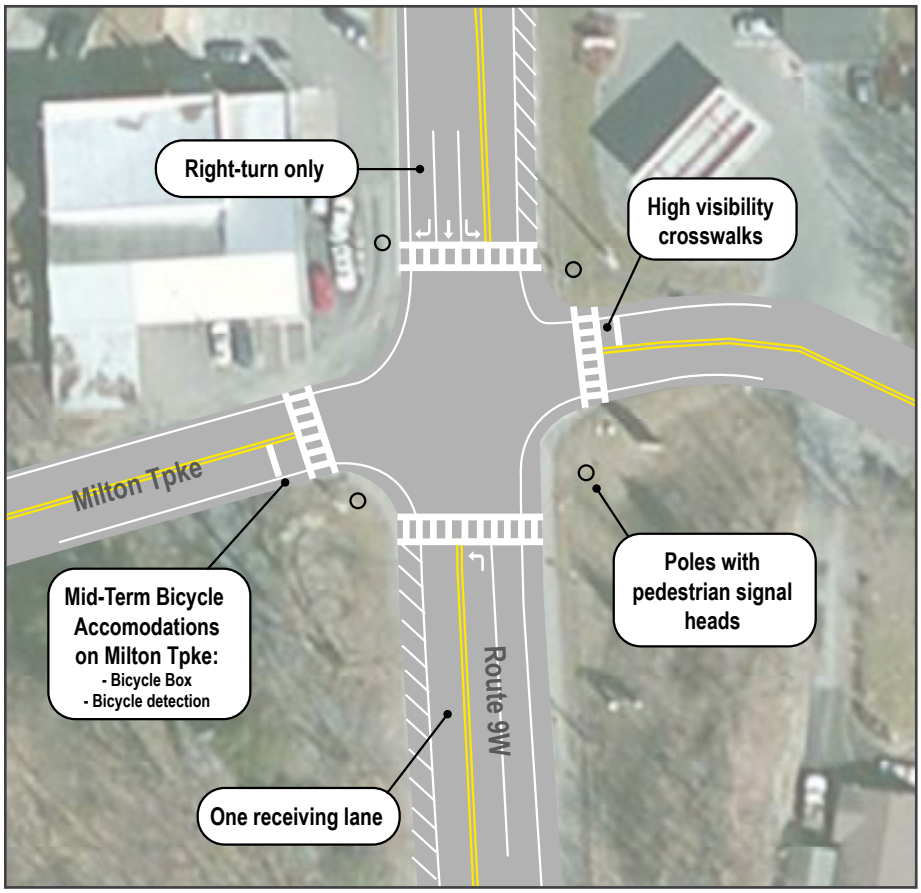
- *Short-term*

RECOMMENDATION I-4: RECONFIGURE SIGNALIZED INTERSECTION AT MILTON TURNPIKE

This intersection should be reconfigured for multi-modal use because it is an important node for bicyclists and will experience more pedestrian activity as the Milton Hamlet sidewalk network expands. It is recommended that the intersection have high-visibility crosswalks, as well as ADA curb ramps and, depending on right of-way widths, sidewalks. Pedestrian signal heads and push buttons should be installed at the corners.

To address speeding concerns and the intersection's high accident rate, it is recommended that there is only one southbound receiving lane on Route 9W. This will discourage motorists from making lane changes while traveling through the intersection. This lane reconfiguration is in concert with recommended lane reductions in the four lane section (Recommendation R-2).

To accommodate bicyclists traveling on Milton Turnpike, the intersection should be fitted with bike friendly loop detector with location marking to allow a bicyclist to trigger the light and safely cross even if vehicles are not present.



Reconfiguration of Route 9W & Milton Turnpike for Multi-modal use *Source: BFJ Planning*

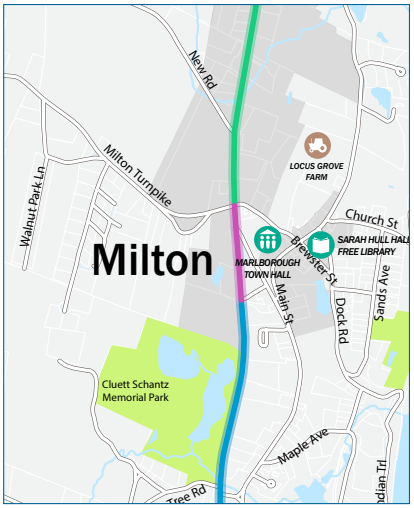
INTERSECTION IMPROVEMENTS

RECOMMENDATION I-5: CONVERT SIGNALIZED INTERSECTION AT MILTON TURNPIKE INTO A ROUNDABOUT

As the intersection experiences increased demand from growth in vehicular, pedestrian, and bicycle traffic, it is recommended that the intersection is converted from a signalized intersection to a single lane roundabout. The roundabout will not only increase intersection capacity and reduce delay, it will also reduce crash rates. Roundabouts are safer for all users because vehicles must travel through the intersection at a slower speed. The intersection will provide an opportunity for motorists to make a U-turn in this section of the corridor, which could reduce the number of left turns and contribute to access management efforts. Lastly, the roundabout will serve as a memorable gateway to Milton hamlet.

The roundabout will have to be designed to accommodate large semi-trailer trucks, which will require additional land to be acquired from adjacent properties.

Roundabout in Greenwich, New York Source: NYSDOT



Location:

- *Intersection of Milton Turnpike and Route 9W, Town of Marlborough*

Agencies Involved:

- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:

- *Long-term*

Contingent Upon:

- *This project requires land acquisition from adjacent properties and coordination with Central Hudson Gas & Electric.*

INTERSECTION IMPROVEMENTS

RECOMMENDATION I-6: ADD LEFT TURN LANE TO NORTHBOUND APPROACH OF ROUTE 9W AND DRIVEWAY TO CLUETT SCHANTZ PARK

In conjunction with the lane reconfiguration in this portion of the corridor, it is recommended that a left turn pocket is placed at this intersection to facilitate left turns into Cluett Schantz Park. The rear driveway of Milton Hardware should be consolidated with the park driveway to better define the intersection.

The speed reduction resulting from the lane reconfiguration presents the opportunity for a enhanced pedestrian crossing to provide access between the park and the east side of Route 9W. This proposed crossing is discussed further in Recommendation P-7.

Location:

- *Intersection of Cluett Schantz Park driveway and Route 9W, Town of Marlborough*

Agencies Involved:

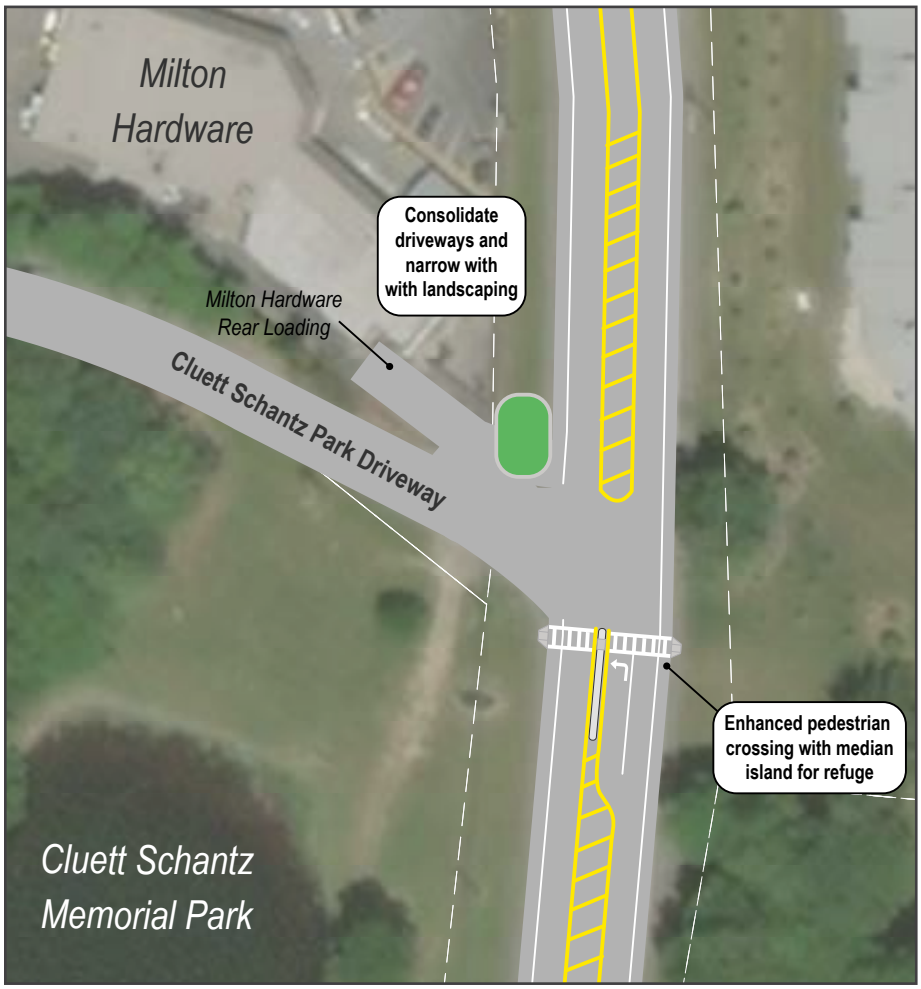
- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:

- *Mid-term*

Contingent Upon:

- *The project is contingent upon the lane reconfiguration described in Recommendation R-2*
- *Driveway consolidation requires coordination with property owner.*



Addition of Left Turn Lane and Enhanced Pedestrian Crossing at intersection of Route 9W and Cluett Schnatz Park Driveway

Source: BFJ Planning

INTERSECTION IMPROVEMENTS

RECOMMENDATION I-7: IMPROVE VISIBILITY OF INTERSECTIONS WITH COLLECTOR ROADS

The Roadway Safety Audit found that intersections with collector roads were often difficult for motorists to identify due to their skewed alignment with Route 9W. The intersections are often easy to miss due to roadway curvature, poor landscaping, and inadequate signage. At night, intersections were found to be lit inconsistently, with some legs found completely in the dark.

It is recommended that a standard is developed for intersections with collector roads with the goal of making them recognizable to visitors traveling to, or through, the area. The intersection that currently have large radii should be better defined using landscaping or guardrails. Wayfinding signage should be used in addition to intersection warning signs to alert motorists of name of upcoming intersections. At night, visibility can be improved using a combination of lighting and reflectors.

Location:

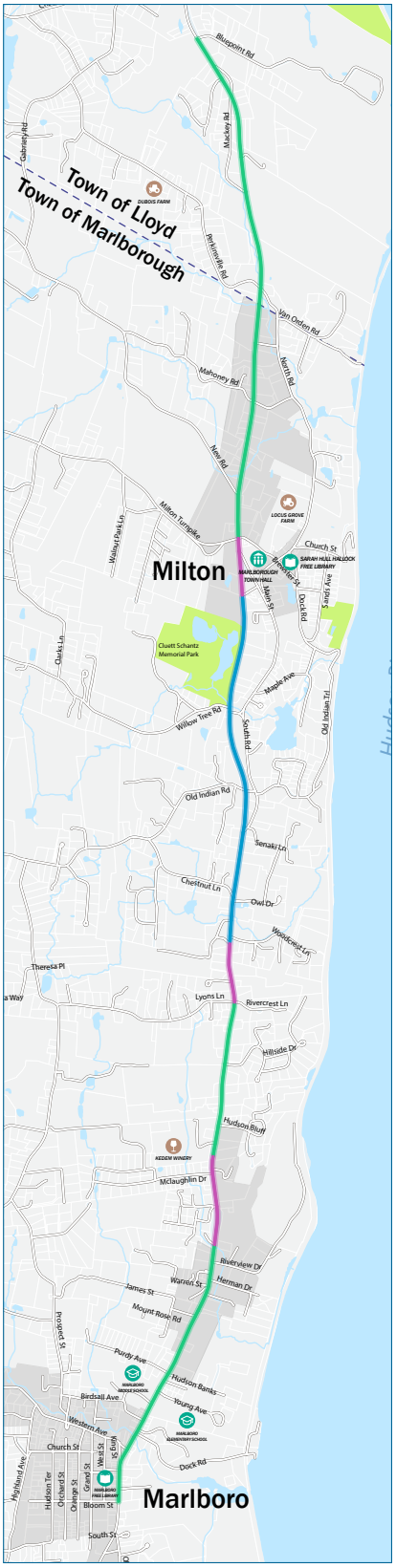
- *Corridor-wide, Town of Marlborough and Town of Lloyd*

Timeframe:

- *Mid-term*

Agencies Involved:

- *New York State Department of Transportation*
- *Town of Marlborough*
- *Town of Lloyd*



TRANSIT SERVICE IMPROVEMENTS

RECOMMENDATION T-1: IMPROVE BUS STOP AT MILTON TURNPIKE

Description

The study area has one bus stop, which is located at the south east corner of the intersection of Milton Turnpike and Route 9W. While landscaped, this corner does not provide a flat surface for customers to stand.

The bus stop area should be upgraded to provide a level surface and seating.

Location:

- *Intersection of Milton Turnpike at Route 9W, Milton Hamlet, Town of Marlborough*

Agencies Involved:

- *Ulster County Area Transit*
- *Town of Marlborough*
- *New York State Department of Transportation*
- *Central Hudson Gas & Electric*

Timeframe:

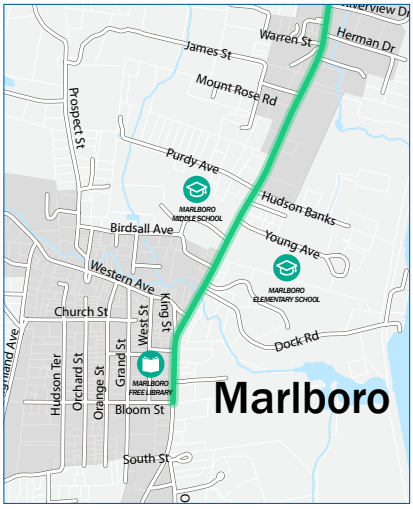
- *Short-term*

Contingent Upon:

- *Bus stop improvements will need to coordinated with Central Hudson Gas & Electric, which runs a gas line under east side of the intersection.*

RECOMMENDATION T-2: ADD BUS STOP AT MARLBORO TRIANGLE TURNAROUND

The KPL Line terminates in Marlboro Triangle before it turns to head back north towards Highland. A bus stop sign should be placed at the turnaround, or at a location further north. If space permits, this new bus stop should include seating.



Location:

- *Marlboro Triangle, Marlboro Hamlet, Town of Marlborough*

Agencies Involved:

- *Ulster County Area Transit*
- *Town of Marlborough*
- *New York State Department of Transportation*

Timeframe:

- *Short-term*

Contingent Upon:

- *This project may require coordination with property owners in Marlboro Triangle.*

TRANSIT SERVICE IMPROVEMENTS

Location:
- *Communities served by KPL Line*

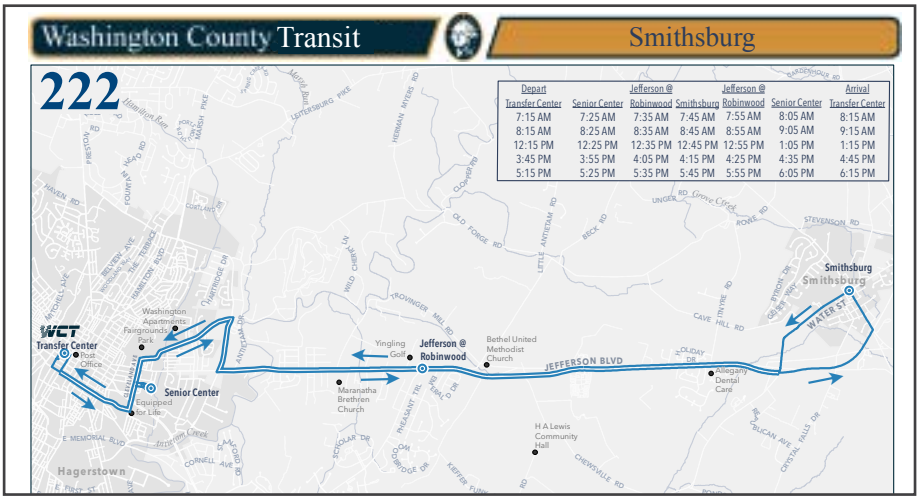
Agencies Involved:
- *Ulster County Area Transit*
- *Town of Marlborough*
- *Town of Lloyd*

Timeframe:
- *Short-term*

RECOMMENDATION T-3: IMPROVE CUSTOMER INFORMATION ABOUT UCAT SERVICE

Current information on the Kingston Pougkeepsie Line (KPL) is challenging to find and interpret. It is recommended that the agency create more user friendly service schedules and route maps that can be featured at bus stops, printed in pamphlets, and posted online. Information about the KPL route and other UCAT services should be featured on the websites for both Towns.

Example of bus route information card with schedule and destinations



Source: Washington County Transit

RECOMMENDATION T-4: EVALUATE KPL LINE SERVICE PERFORMANCE

Once the signage and customer information improvements from Recommendations T-1 through T-3 have been implemented, the agency should review ridership and service performance to determine necessary changes to the route, service hours, and frequency. The agency should evaluate if the KPL's current limited schedule is meeting its goals.

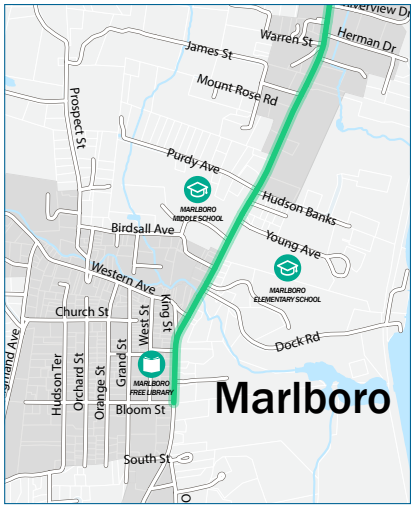
Location:
- *Communities served by KPL Line*

Agencies Involved:
- *Ulster County Area Transit*
- *Town of Marlborough*
- *Town of Lloyd*

Timeframe:
- *Mid-term*

Contingent Upon:
- *Improvements described in Recommendations T-1 through T-3*

PEDESTRIAN AND SHARED-USE PATH IMPROVEMENTS



Location:

- *Marlboro Hamlet, Town of Marlborough*

Agencies Involved:

- *Town of Marlborough*
- *New York State Department of Transportation*

Timeframe:

- *Short-term*

RECOMMENDATION P-1: ENHANCE CROSSWALKS ON ROUTE 9W IN MARLBORO HAMLET WITH PEDESTRIAN ACTIVATED FLASHING LED SIGNAGE

Create high visibility crosswalks across Route 9W in the heart of the hamlet by installing warning signage with pedestrian-actuated flashing LEDs* to facilitate safe crossing and improved stop compliance by motorists. Enhanced crossings are recommended at the following locations:

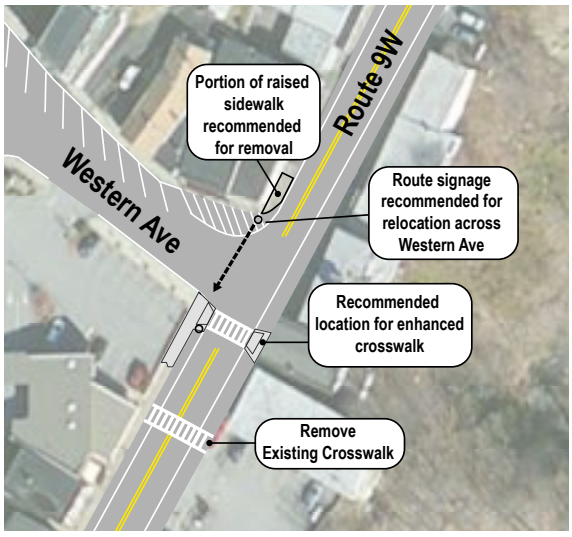
1. Western Avenue at Route 9W

The current crossing is located mid-block between King Street and Western Avenue, generally from Key Bank to Pizza Town. Although the crosswalk has appropriate markings and signage, drivers rarely stop for pedestrians. Given high travel speeds, especially during off-peak hours, and the informal on-street parking along the east side of Route 9W which obscures pedestrians, an enhanced crossing with flashing LED signage would greatly improve pedestrian visibility and safety at this location. The crosswalk should be relocated further north at the intersection, to encourage greater use by pedestrians crossing 9W to access Western Avenue.

2. Dubois Street at Route 9W

This intersection has a painted crosswalk. A higher visibility crosswalk with advance warning signs is warranted given prevailing travel speeds, especially during off-peak periods.

*If Rectangular Rapid Flashing Beacons (RRFB) are not approved for use, alternative devices should be used. At the time this report was written, the Federal Highway Administration (FHWA) had recently repealed the interim approval for RRFBs in a memo issued on December 21, 2017 due to a patent claim. As a result, RRFBs are no longer in compliance with the Manual of Uniformed Traffic Control Devices (MUTCD). RRFBs that are already in place may continue to operate until the end of their life cycle, however new or replaced RRFBs are in violation of federal policy.



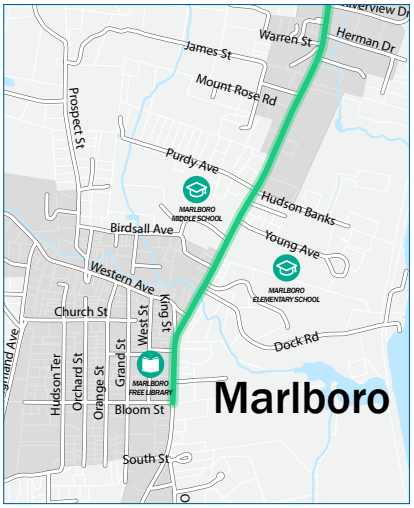
Marlboro Triangle Source: BFJ Planning

RRFB Source: NYSDOT

Figure 4: Marlboro Hamlet Pedestrian Improvement Recommendations

PEDESTRIAN AND SHARED-USE PATH IMPROVEMENTS

RECOMMENDATION P-2: INSTALL CROSSWALKS ACROSS MINOR STREETS INTERSECTING ROUTE 9W TO COMPLETE PEDESTRIAN NETWORK IN MARLBORO HAMLET



Crosswalks are recommended at the following intersections on Route 9W to complete gaps in the hamlet's pedestrian network:

- Dubois Street: A crosswalk should be installed across Dubois Street.
- Bloom Street: A crosswalk should be added across Bloom Street to connect to the existing ADA-accessible sidewalks on the west side of Route 9W.
- Birdsall Avenue: Currently, there is no crosswalk across Birdsall Avenue on the west side of Route 9W. A striped crosswalk should be placed across Birdsall Avenue, along with ADA curb ramps.

Location:
- *Marlboro Hamlet, Town of Marlborough*

Timeframe:
- *Short-term*

Agencies Involved:
- *Town of Marlborough*

PEDESTRIAN AND SHARED-USE PATH IMPROVEMENTS

RECOMMENDATION P-3: FILL IN GAPS IN SIDEWALK NETWORK BETWEEN WESTERN AND YOUNG AVENUE

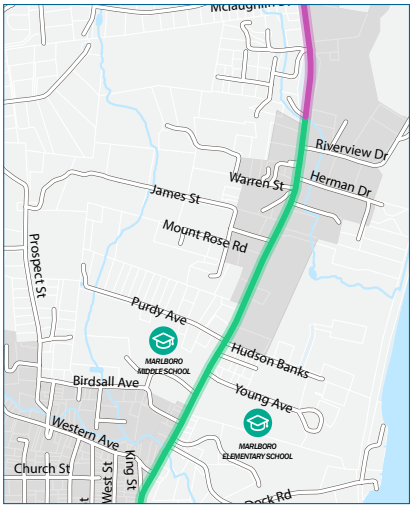
Sidewalks are recommended to fill the following network gaps, found between Western Avenue and Young Avenue:

Route 9W north of Western Avenue to Dock Road

- No sidewalk is presently in place on the east side of Route 9W from Dock Road to Birdsall Avenue. The future addition of a sidewalk, landscaping, and clearly defined driveways along the east side of Route 9W would improve pedestrian safety and help to create a sense of arrival into the hamlet center.
- The west side of 9W, which is primarily residential in character, has an existing sidewalk that extends approximately from Dock Road (across the street) up to Birdsall Avenue, that would benefit from widening and repaving, especially since it serves school age children.

Birdsall Avenue to Purdy Avenue

- North of Birdsall Avenue, the sidewalk on the west side of 9W becomes a narrow dirt/gravel path and informal parking across the front of the first few residential lots. The path turns to a combination of concrete and gravel up until the Marlboro Middle School exit road. The dirt path should be replaced with a new concrete sidewalk.
- The east side of Route 9W does not have any existing improvements; however, the shoulders on Route 9W between the gas station and the Elementary School are wide enough for bicycle lanes, and a sidewalk can be added along the frontage of the Elementary School property.
- There are no existing pedestrian or bicycle improvements north of Young Avenue to Purdy Avenue. However, the shoulders provide enough space to continue the sidewalks and/or install bicycle lanes.



Location:

- *Between Western Avenue and Young Avenue, Marlboro Hamlet, Town of Marlborough*

Agencies Involved:

- *New York State Department of Transportation*
- *Town of Marlborough*

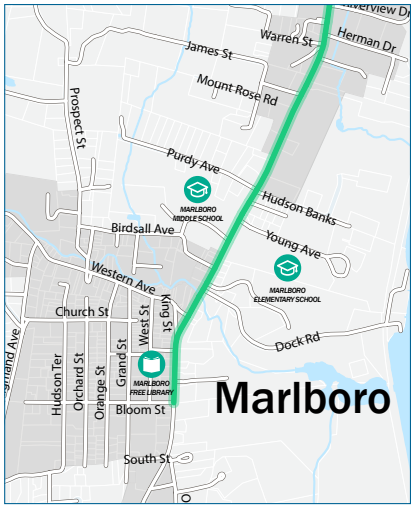
Timeframe:

- *Short-term*

Contingent Upon:.

- *This project will involve coordination with property owners.*

PEDESTRIAN AND SHARED-USE PATH IMPROVEMENTS



RECOMMENDATION P-4: SUPPORT THE MALBORO MILLS WATERFALL WALKWAY

The Marlboro Mills Waterfall Walkway is a proposed trail project that builds from the existing Lattintown Creek trail, which provides view of the ravine falls.

As the Marlboro Mills Waterfall Walkway vision is developed and waterfront access becomes increasingly desirable, an enhanced crosswalk as described in Recommendation P-1 should be installed across Route 9W at Dock Road. This crossing is vital to the trail's connectivity.

Location:

- *Lattintown Creek, Marlboro Hamlet, Town of Marlborough*

Agencies Involved:

- *Town of Marlborough*

Timeframe:

- *Short-term*

Contingent Upon:

- *This project requires coordination with property owners*

Proposed Marlboro Mills Waterfall Walkway

Source: Marlboro Hamlet Enhancements Design Report, 2015, Barton & Loguidice

PEDESTRIAN AND SHARED-USE PATH IMPROVEMENTS

RECOMMENDATION P-5: INSTALL HIGH VISIBILITY CROSSWALKS IN MILTON HAMLET

Description

Within the hamlet core, high-visibility crosswalks are recommended at the intersection of Milton Turnpike and Main Street as well as the intersection of South Road and Main Street.

Location:
- *Milton Hamlet, Town of Marlborough*

Timeframe:
- *Short-term*

Agencies Involved:
- *Town of Marlborough*

Contingent Upon:
- *This project requires coordination between property owners and the Town of Marlborough.*

RECOMMENDATION P-6: EXTEND SIDEWALK NETWORK IN MILTON HAMLET

Description

It is recommended that sidewalks are constructed at the following locations:

East Side of Route 9W

- Along west side of South Road from Milton Harvest to the Town/Police building
- Along east side of South Road from Josie's Path to sidewalk along Main Street.
- Along east side of Route 9W between Milton Turnpike and South Road.

West Side of Route 9W

A sidewalk and curb ramp should be placed at each corner of the intersection of Route 9W and Milton Turnpike with a sidewalk extending along the northwest side of Route 9W to the baseball fields on New Road.

Location:
- *Milton Hamlet, Town of Marlborough*

Timeframe:
- *Short-term*

Agencies Involved:
- *Town of Marlborough*
- *New York State Department of Transportation*

Contingent Upon:
- *This project requires coordination between property owners, the Town of Marlborough, and the New York State Department of Transportation.*

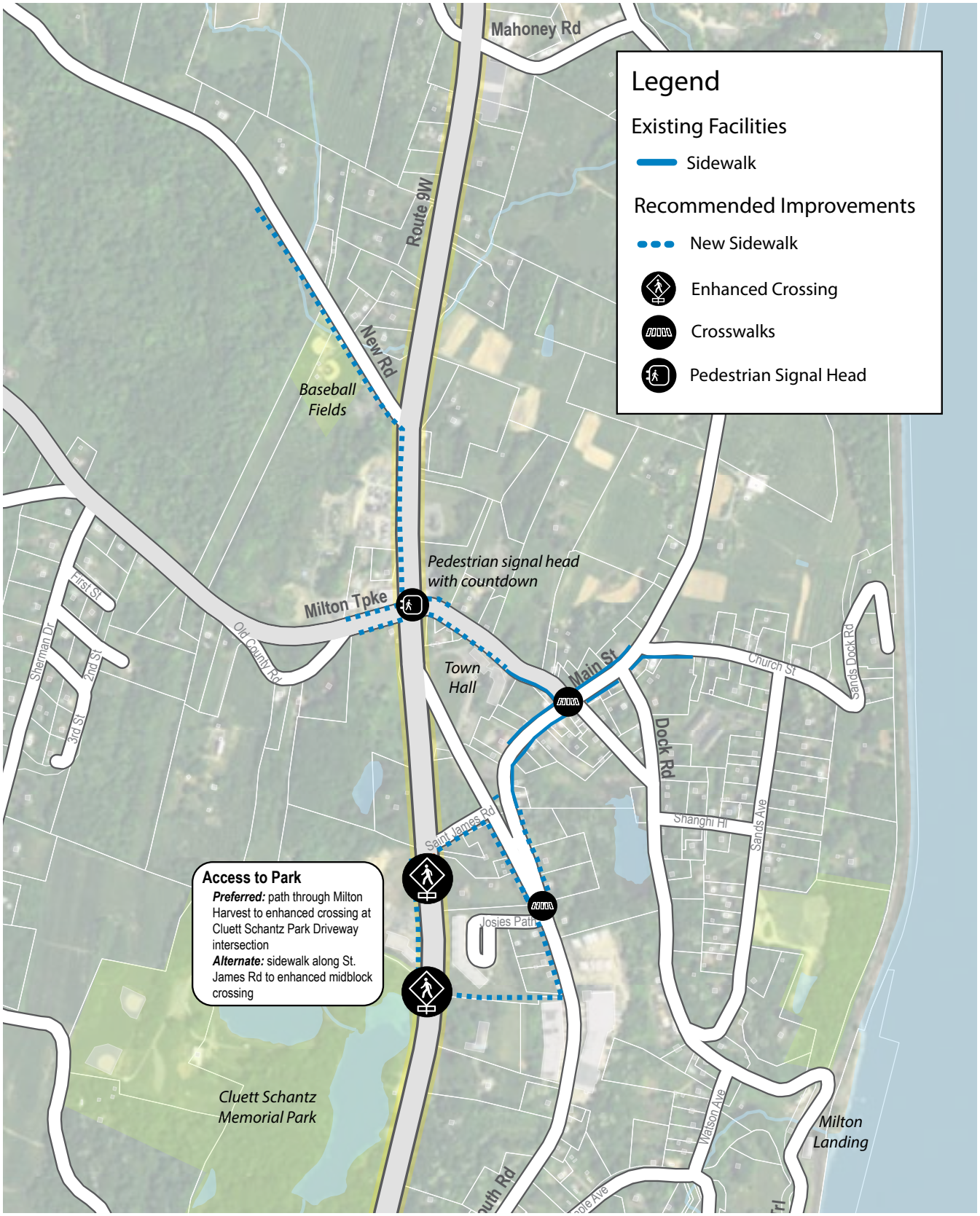


Figure 5: Milton Hamlet Pedestrian Improvement Recommendations

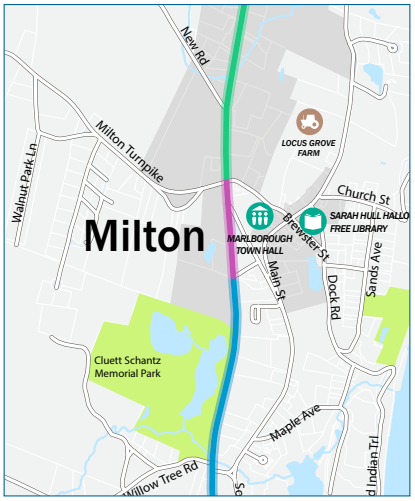
PEDESTRIAN AND SHARED-USE PATH IMPROVEMENTS

RECOMMENDATION P-7: ADD MIDBLOCK CROSSING ACROSS 9W TO CLUETT SCHANTZ PARK

A high-visibility crosswalk should be placed across Route 9W along with ADA curb ramps and warning signage with pedestrian-actuated flashing LEDs to allow pedestrians to walk from the village area on the east side to the park on the west side of 9W.

Cluett Schantz Park is located across from the Milton Harvest senior housing community and Brooklyn Bottling (on South Road). The Town of Marlborough should work with property owners, such as Milton Harvest, to provide an access path/sidewalk between South Road and Route 9W.

If such an easement is not feasible, the crosswalk and other safety measures could be placed across Route 9W opposite from St. James Road and should then include a sidewalk along the west side of Route 9W to the entrance of the park.



Location:

- *Intersection of Cluett Schantz Park driveway and Route 9W, Town of Marlborough*

Agencies Involved:

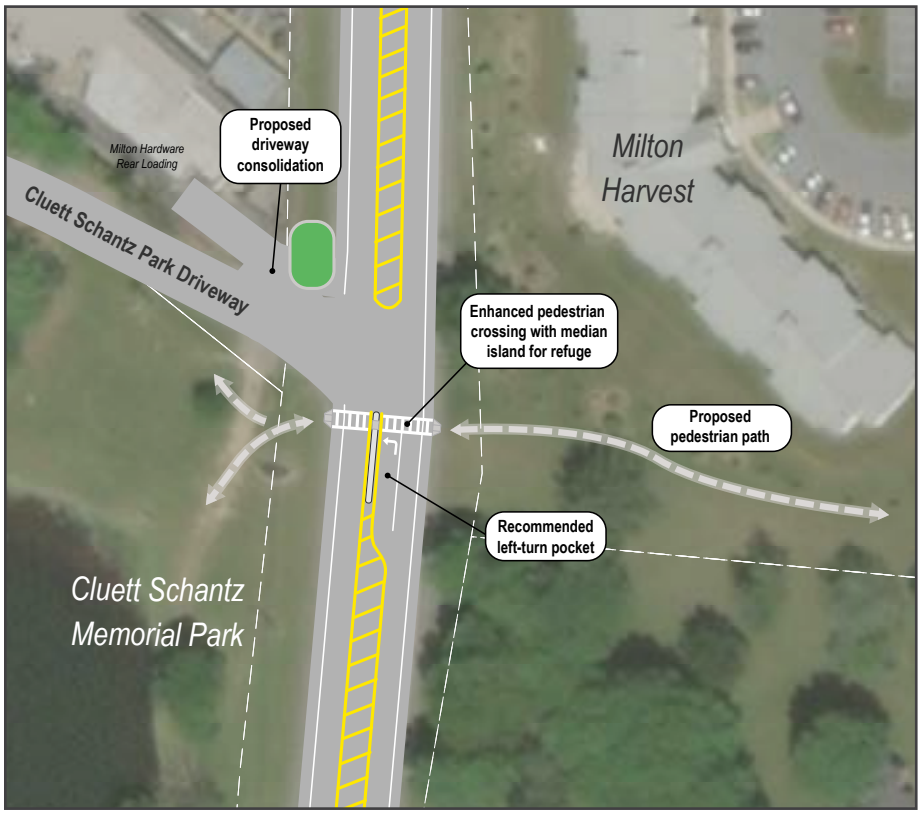
- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:

- *Mid-term*

Contingent Upon:

- *The project is contingent upon the lane re-configuration described in Recommendation R-2, speed and the limit reduction described in Recommendation R-3*



Addition of Northbound Left Turn Lane at Cluett Schnatz Park Driveway

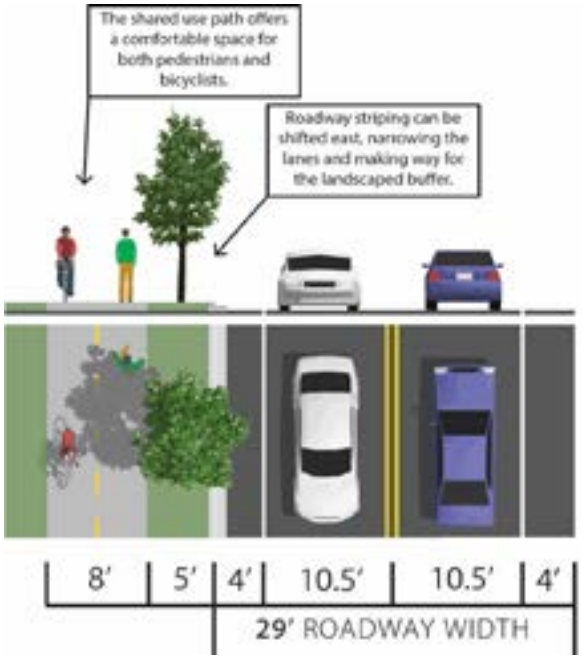
Source: BFJ Planning

PEDESTRIAN AND SHARED-USE PATH IMPROVEMENTS

RECOMMENDATION P-8: SHARED-USE PATH CONNECTING THE HAMLETS

A shared-used path on one side of Route 9W between Marlboro and Milton Hamlets. This path should be constructed on which ever side is most feasible, but preference is given to the east side of Route 9W which has better access to traffic generators and the waterfront.

This recommendation is part of a longer-term vision to better connect the Hamlets. It is currently envisioned beginning north of Lattintown Creek and ending at South Road.



Source: Figure 18, 2016 Marlboro Safe Routes to School Plan, Alta Planning + Design

Route 9W Cross-section with Proposed Shared Use Path

Location:
- *Between Marlboro and Milton Hamlets, Town of Marlborough*

Agencies Involved:
- *New York State Department of Transportation*
- *Town of Marlborough*

Timeframe:
- *Long-term*

Contingent Upon:
- *Coordination with Central Hudson Gas & Electric may be necessary due to location of gas line.*

RECOMMENDATION P-9: CONSTRUCT HUDSON RIVER TRAIL BETWEEN BOTH DOCK ROADS

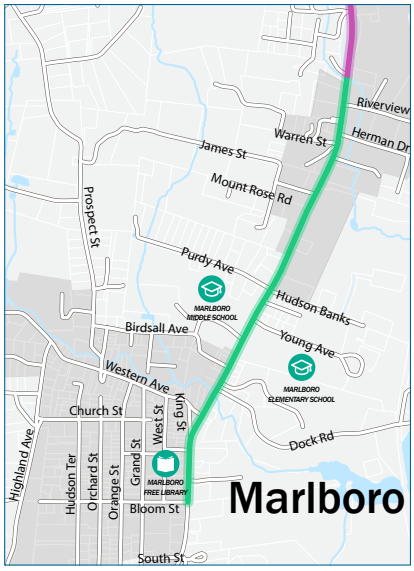
This recommendation envisions a future trail that improves access to the Hudson River and connects the Hudson waterfront between both Dock Road in Marlboro Hamlet and Dock Road/Old Indian Trail in Milton Hamlet. It is part of a longer-term vision to provide a local alternative to Route 9W.

Location:
- *Between Dock Roads in Marlboro and Milton Hamlets, Town of Marlborough*

Agencies Involved:
- *Town of Marlborough*

Timeframe:
- *Long-term*

BICYCLE INFRASTRUCTURE



RECOMMENDATION B-1: SHARED ROADWAYS IN MARLBORO HAMLET

Description

Provide share bicycle use of key roadways within hamlets where Route 9W and other roads narrow, with both roadway markings ('sharrows') and signage ('Share the Road') to encourage safe and comfortable roadway sharing by vehicles and bicycles.

Similar to Route 9W, King Street and Western Avenue would also benefit from 'sharrows' to highlight shared roadway conditions.

Location:
- *Marlboro Hamlet, Town of Marlborough*

Timeframe:
- *Short-term*

Agencies Involved:
- *Town of Marlborough*
- *New York State Department of Transportation*

Contingent Upon:
- *This is contingent upon Recommendation B-5, NYSDOT designation of Route 9W as a bicycle route.*

RECOMMENDATION B-2: PROVIDE BICYCLE PARKING IN MARLBORO HAMLET

Description

Provide safe and convenient bicycle parking within Marlboro hamlet. Recommended locations include the public library, Marlboro Triangle, on school campuses, and at the future bayside development.

Location:
- *Marlboro Hamlet, Town of Marlborough*

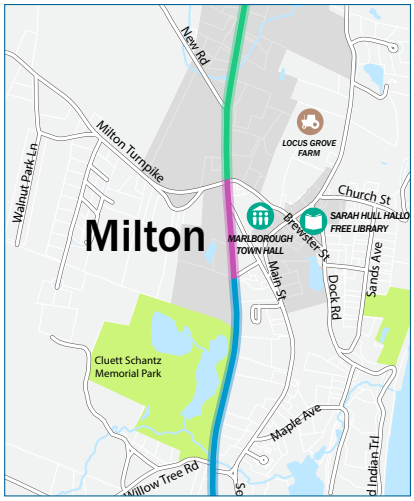
Timeframe:
- *Short-term*

Agencies Involved:
- *Town of Marlborough*

Contingent Upon:
- *This project requires coordination between property owners and the Town of Marlborough.*

Figure 6: Milton Hamlet Bicycle Improvement Recommendations (B1 & B2)

BICYCLE INFRASTRUCTURE



Location:
- *Milton Hamlet, Town of Marlborough*

Agencies Involved:
- *Town of Marlborough*

Timeframe:
- *Short-term*

Contingent Upon:
- *This project requires coordination with Brooklyn Bottling on South Road.*

RECOMMENDATION B-3: SHARED ROADWAYS IN MILTON HAMLET

Description

Bicycle infrastructure and activity should be encouraged along side streets as much as possible between South Road and Milton Road around Milton hamlet. This shared roadway/bicycle route network would include Milton Turnpike, South Road, Main Street, North Road, and Milton Road. 'Sharrow' markings and shared roadway signage should be used to encourage safe roadway sharing by cars and bicycles.

The route on South Road should initially extend south to Willow Tree Road, with a possible extension to include all of the South Road in the future. To accommodate this, the section of South Road that traverses the Brooklyn Bottling facilities will need to be clearly delineated and striped to enhance safety for all roadway users.

Additionally, "Share the Road" signs should be placed along Dock Road which runs from Main Street/North Road to the waterfront along the Hudson River where there is a public park and the Milton-on-Hudson historic train station. Sidewalks may not be feasible nor necessary along Dock Road; however, pedestrian warning signs should also be included along Dock Road as there may be pedestrians walking between the hamlet and waterfront and the road is very narrow and steep.

RECOMMENDATION B-4: PROVIDE BICYCLE PARKING IN MILTON HAMLET AND PARKS

Description

The addition of bicycle parking on Main Street in Milton and at the Milton Train Station would provide an opportunity for cyclists to lock their bikes and enjoy the Town's waterfront and commercial amenities. Bicycle parking should also be provided at Town Hall and the Town's other parks.

Location:
- *Milton Hamlet and Cluett Schantz Park, Town of Marlborough*

Agencies Involved:
- *Town of Marlborough*

Timeframe:
- *Short-term*

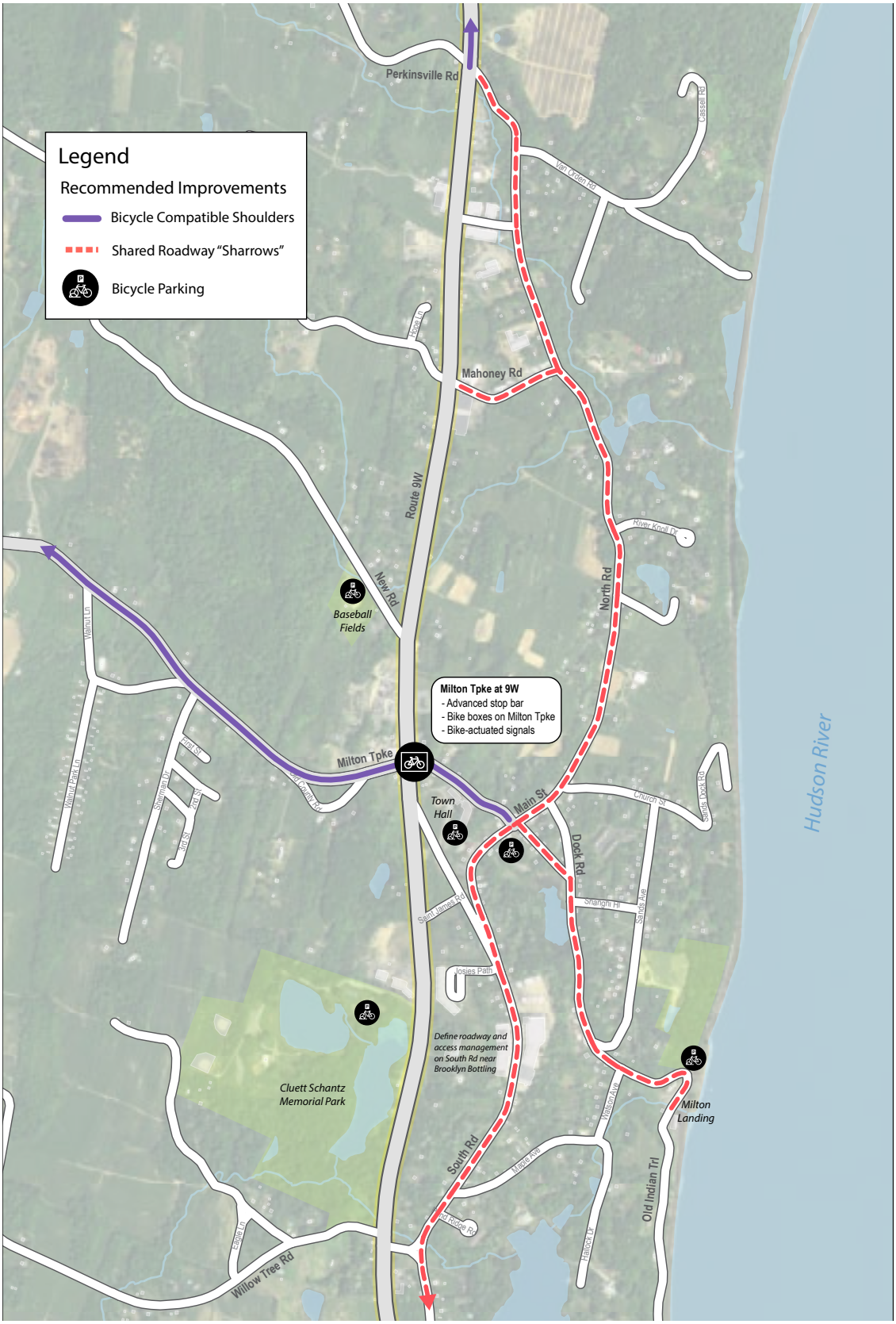


Figure 7: Milton Hamlet Bicycle Improvement Recommendations (B3 & B4)

BICYCLE INFRASTRUCTURE

RECOMMENDATION B-5: DESIGNATE 9W AS A BICYCLE ROUTE

In the case that Route 9W is reconfigured to accommodate a consistent shoulder (except in Hamlets due to right-of-way constraints), Ulster County and the Towns of Marlborough and Lloyd should seek to have the corridor designated as a bicycle route by NYSDOT.

This Route 9W bicycle route would be the missing link to connect to the Walkway Over the Hudson/Hudson Valley Rail Trail and the future Empire Trail amenities. It would provide the opportunity for bicycling on the west side of the Hudson River that connects to Newburgh-Beacon Bridge and regional routes into the lower Hudson Valley.

Location:
- *Corridor-wide, Town of Marlborough and Town of Lloyd*

Agencies Involved:
- *Town of Marlborough*
- *Town of Lloyd*
- *New York State Department of Transportation*

Timeframe:
- *Mid-term*

Contingent Upon:
- *This project is contingent upon the creation of a consistent shoulder along Route 9W as described in Recommendation R-6.*
- *The Towns should solicit support from regional bicycle advocacy organizations.*

RECOMMENDATION B-6: DESIGNATE REGIONAL BICYCLE ROUTES

Description

Bicycle route designation and bicycle compatible shoulders are recommended for the following County Routes to provide a route to connect the hamlets:

- Milton Turnpike (C.R.10) from Route 9W to Lattintown Road (C.R. 11).
- Lattintown Road (C.R. 11).
- C.R. 14A/Western Avenue.
- C.R. 14/Western Avenue and Plattekill Road between Lattintown Road and Western Avenue.

Location:
- *County Routes and local roads in the Town of Marlborough*

Agencies Involved:
- *Town of Marlborough*
- *Ulster County*

Timeframe:
- *Short-term*

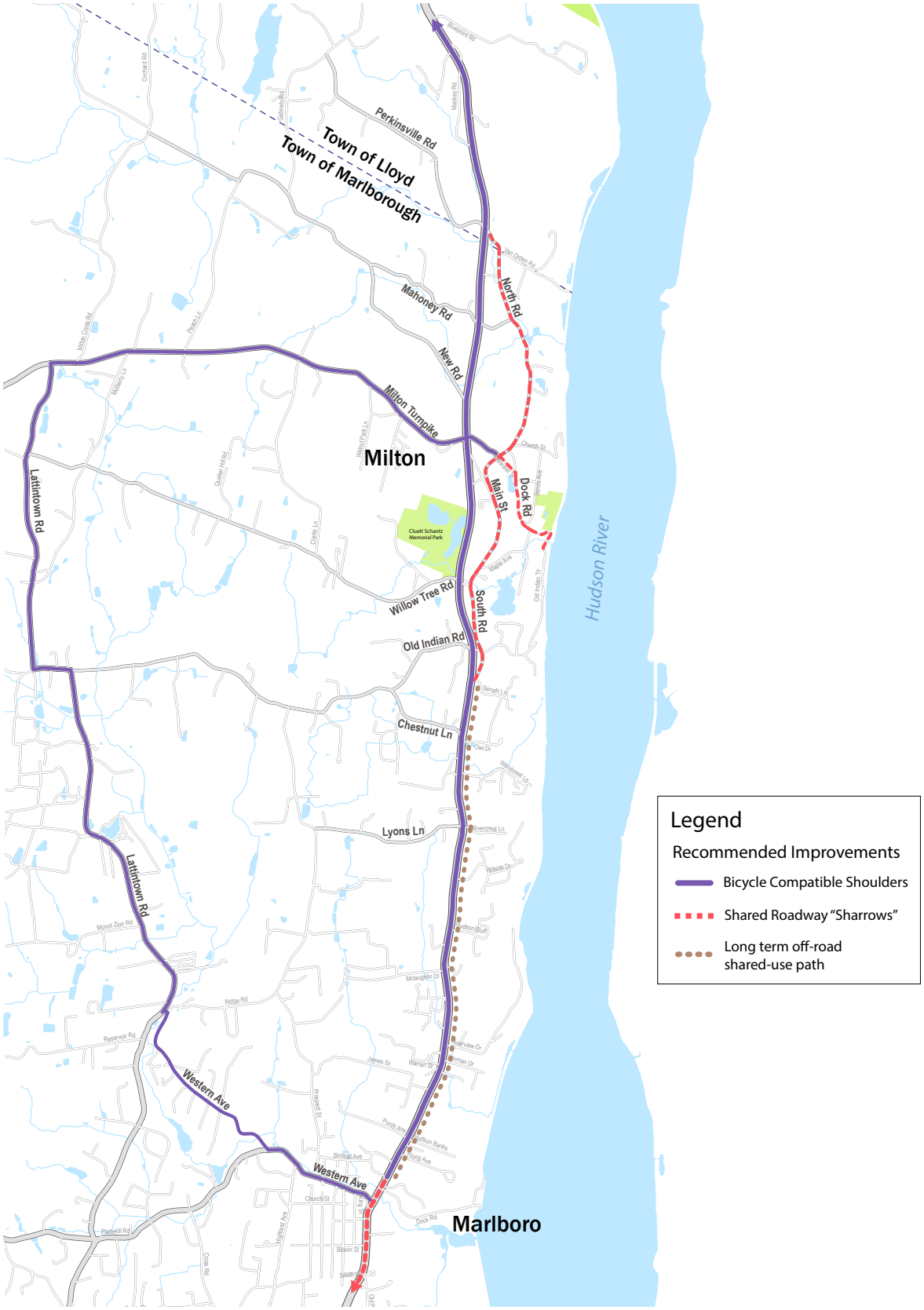


Figure 8: Roadways Recommended for Regional Bicycle Routes (B5 & B6)

STREETSCAPE IMPROVEMENTS

Location:
- *Corridor-Wide, Town of Marlborough and Town of Lloyd*

Agencies Involved:
- *Town of Marlborough*
- *Town of Lloyd*
- *New York State Department of Transportation*

Timeframe:
- *Short-term*

Contingent Upon:
- *Design and Maintenance Coordination committee (Towns) should oversee coordination of streetscape improvements.*

RECOMMENDATION S-1: IMPROVE LIGHTING, LANDSCAPING AND SIDEWALKS

The Towns should partner with property owners with frontage on Route 9W on beautification projects and safety improvements to improve corridor character. Streetscape improvements contribute to the plan's overall traffic calming goals by creating a sense of enclosure along the corridor. Recommended streetscape treatments and standards should be documented in a set of design guidelines (Recommendation S-3).

Preferred Street Trees for Urban Streets

Ornamental Street Lamps with Landscaping and Sidewalks

Source: Marlboro Hamlet Enhancements Design Report, 2015, Barton & Loguidice

STREETSCAPE IMPROVEMENTS

RECOMMENDATION S-2: IMPROVE GATEWAY & WAYFINDING SIGNAGE

Gateway treatments should be installed to communicate to motorists that they are entering a place and encourage visitors to spend time in the hamlets. Existing gateway signage in Milton should be updated to better communicate arrival and wayfinding signage should direct motorists towards Main Street. The following locations recommended for gateway treatments:

Marlboro Hamlet

- South Entrance Gateway: Signage is recommended to be placed at the corner of the parking lot across from St. Mary Church near the intersection of Route 9W and Old Post Road. It is recommended that the signage is incorporated in the stone wall treatment proposed for site in the 2015 Marlboro Hamlet Enhancements Design Report.
- North Entrance Gateway: Signage should be places at the intersection of Route 9W and Purdy Avenue.

Milton Hamlet

- South Entrance Gateway: Current gateway signage, located on the southeast corner of the Intersection of Route 9W and Milton Turnpike, is difficult to see and contains too much information. This signage should be redesigned to place greater emphasis on directing motorists to Main Street.
- North Entrance Gateway: More striking gateway signage should supplement the existing Milton regulatory destination sign located just south for Perkinsville Road at northern edge of Milton Industrial Park. Wayfinding signage should direct visitors towards Main Street.

Source: Marlboro Hamlet Enhancements Design Report, 2015, Barton & Loguidice

Recommended Treatment for South Entrance Gateway

Location:

- *Marlboro Hamlet and Milton Hamlet, Town of Marlborough*

Agencies Involved:

- *Town of Marlborough*
- *New York State Department of Transportation*

Timeframe:

- *Short-term*

Contingent Upon:

- *This project requires coordination between property owners, Town of Marlborough, and the New York State Department of Transportation*
- *Design and Maintenance Coordination committee (Towns) should oversee coordination of streetscape improvements.*

STREETSCAPE IMPROVEMENTS

Location:
- *Corridor-wide, Town of Marlborough and Town of Lloyd*

Agencies Involved:
- *Town of Marlborough*
- *Town of Lloyd*

Timeframe:
- *Short-term*

Contingent Upon:
- *Design and Maintenance Coordination committee (Towns) should oversee coordination of streetscape improvements.*

RECOMMENDATION S-3: CREATION OF DESIGN GUIDELINES FOR ROUTE 9W

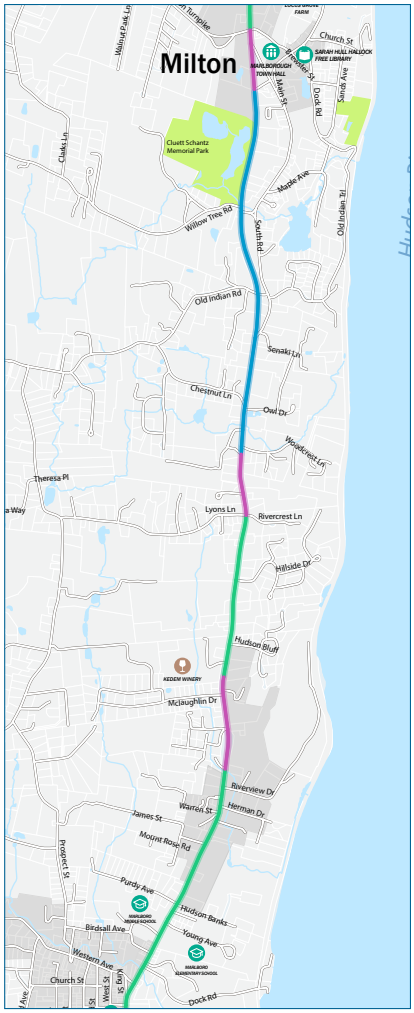
Develop a set of guidelines that encourage a cohesive buildings and streetscape treatments of future developments on parcels along Route 9W. Guidelines should be developed for the each hamlet center and the adjacent commercial and light industrial zones (Highway Development Zone).

Future development in the hamlet center should reflect the area's historic character and incorporate and/or support sidewalks, crosswalks, street trees and pedestrian scale lighting. Future development in the Highway Development zone should maximize the visual framing of buildings; buffer parking and service areas; and include sidewalks, street trees, and lighting.

Vision for Character of Future Development in the Town of Marlborough's Highway Development Zone

Source: Town of Marlborough Comprehensive Plan, 2017, Behan Planning

LAND USE AND ACCESS MANAGEMENT



RECOMMENDATION L-1: RESTRICT USES PERMITTED IN BUSINESS CORRIDOR OVERLAY DISTRICT IN AREA BETWEEN HAMLETS

The Town of Marlborough developed the Business Corridor Overlay District floating zone to provide a mechanism to improve non-conforming commercial and light industrial uses along Route 9W located within the R-1 Residential and R-Ag-1 Rural Agricultural zoning districts. Parcels are generally located between the hamlets. If designated by the Town Board, the property is permitted uses allowable in the Highway Development District, which permits a wide range of commercial and light industrial uses.

In an effort to preserve the Town's farmland and open space and to preserve the economic viability of the hamlets, it is recommended that the Business Corridor Overlay District prevent the creation of additional town centers. The Overlay District text should be revised to restrict retail uses except in cases where it is part of a mixed-use development that will not significantly harm the hamlets.

The Overlay District should incorporate future corridor design guidelines (Recommendation S-3) and the Access Management Plan (Recommendation L-2).

Location:
- *Town of Marlborough*

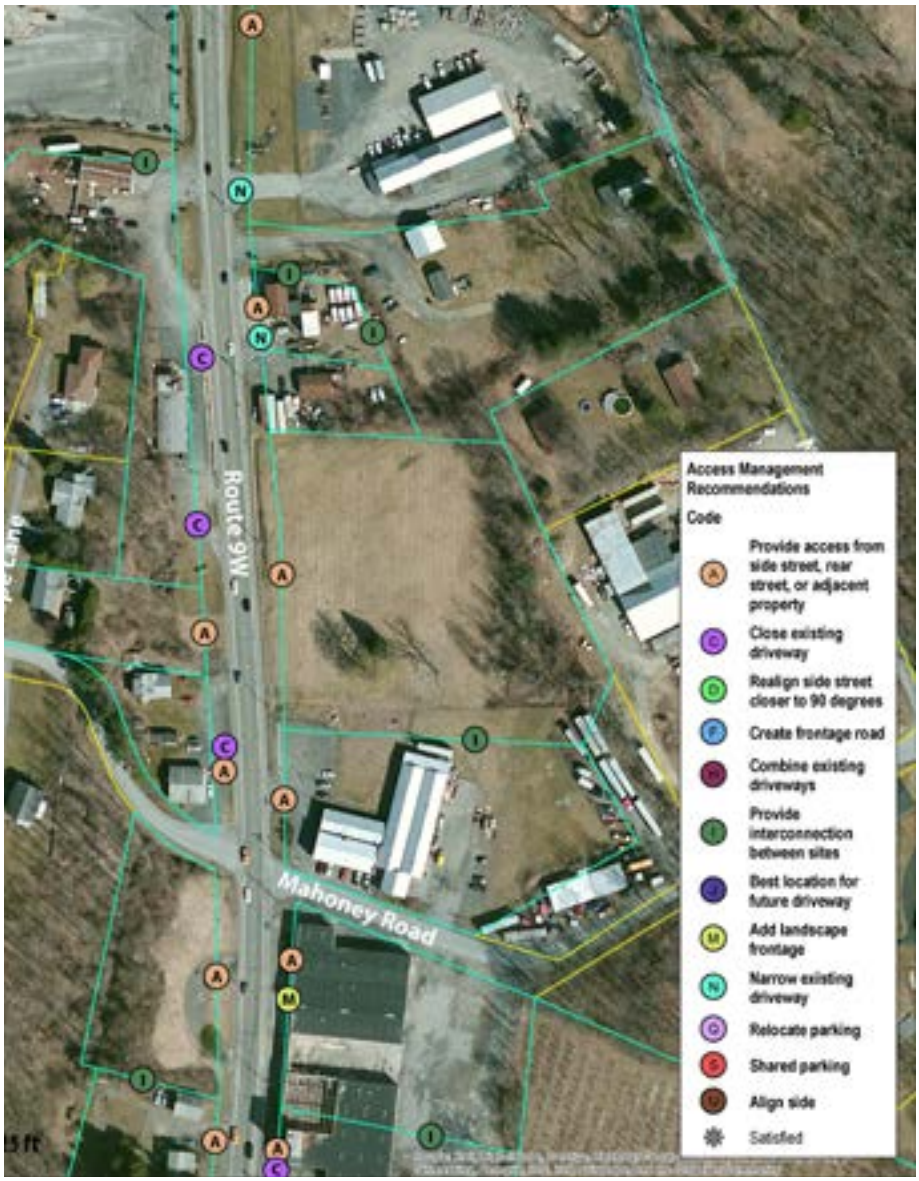
Timeframe:
- *Short-term*

Agencies Involved:
- *Town of Marlborough*

LAND USE AND ACCESS MANAGEMENT

RECOMMENDATION L-2: REVISE ZONING TO INCORPORATE ACCESS MANAGEMENT PLAN

The Access Management Plan featured in this Corridor Management Plan (Appendix E) was created as a tool for the Planning Boards of the Towns of Marlborough and Lloyd to improve safety, fluidity, and aesthetics along the Route 9W study area. Access management can be best achieved when an applicant has an application before the Planning Board. It is recommended that the Town Boards incorporate the Access Management Plan into their respective Zoning Codes by reference.



Map from Access Management Plan *Source: BFJ Planning*

Location:
- *Town of Marlborough and Town of Lloyd*

Agencies Involved:
- *Town of Marlborough*
- *Town of Lloyd*
- *New York State Department of Transportation*

Timeframe:
- *Short-term*

Contingent Upon:
- *Execution of the Access Management Plan requires coordination between property owners and the Town of Marlborough.*
- *Long-term success contingent upon coordination between New York State Department of Transportation driveway approvals.*

SECTION 7. IMPLEMENTATION

Summary Table

The following table shows all of the recommendations developed for the Corridor Management Plan . Each recommendation is listed with *Responsible Agencies* involved and the *Time Frame* for implementation, categorized as follows:

- Short-term (Under 2 years) recommendations include installation of traffic and wayfinding signage, adoption of land use policies, and the access management plan.
- Mid-term (1-5 years) recommendations involve routine capital infrastructure imprvements such as the construction of sidewalks, signal upgrades, and roadway repaving and remarking.
- Long-term (5+ years) recommendations include significant capital improvements that will involve further study to determine feasibility and funding strategies.

Lastly, if a recommendation is dependent upon the actions of another, it is referenced in the *Contingent Upon* column.

ROADWAY CONFIGURATION AND SAFETY RECOMMENDATIONS						
RECOMMENDATION		DESCRIPTION	RESPONSIBLE AGENCIES		TIMEFRAME	CONTINGENT UPON
			Primary	Secondary		
MARLBORO HAMLET						
R-1	Establish School Zone within quarter-mile of Marlboro Elementary & Middle Schools	School zone with signage and reduced speed limits should be placed along Route 9W (no more than 0.25 miles from a school entrance/exit) and should extend between Birdsall Avenue and Purdy Avenue to the north.	NYSDOT	Town of Marlborough	Short-Term	
BETWEEN HAMLETS						
R-2	Lane reconfiguration from four lanes to two lanes with left turn pockets at intersections between Rivercrest Lane and Milton Turnpike.	Convert four-lane section to two travel lanes with left turn pockets provided at intersections between Rivercrest Lane and Milton Turnpike. Southbound passing lane maintained between Old Indian Road and Woodcrest Lane.	NYSDOT	Town of Marlborough	Mid-Term	
R-3	Reduce speed limit between Milton Hamlet and Marlboro Hamlet from 55 mph to 45 mph	Speed limit reduction of at least 10 mph recommended between Riverview Drive and Milton Turnpike.	NYSDOT	Town of Marlborough	Mid-Term	R-2
MILTON HAMLET						
R-4	Reduce speed Limit in Milton Hamlet and Milton Industrial Park from 55 mph to 40 mph	Speed limit reduction of at least 15 mph recommended between Riverview Drive and Milton Turnpike.	NYSDOT	Town of Marlborough	Mid-Term	
R-5	Add left-turn lanes in Milton Industrial Park	Provide left-turn pockets in two-lane section to reduce opportunity for collisions.	NYSDOT	Town of Marlborough	Mid-Term	

CORRIDOR-WIDE						
R-6	Provide consistent shoulders throughout corridor	Provide 6'+ wide, well maintained shoulders to accommodate multi-modal travel.	NYSDOT	Town of Marlborough, Town of Lloyd	Mid-Term	R-2
R-7	Evaluate centerline markings, guiderails, and reflectors (per Roadway Safety Audit)	Corridor-wide audit of roadway features per recommendations from Roadway Safety Audit.	NYSDOT		Short-Term	
R-8	Install additional deer warning signs	Increase number of deer warning signs along corridor with focus on edge of hamlets.	NYSDOT		Short-Term	

INTERSECTION RECOMMENDATIONS						
RECOMMENDATION		DESCRIPTION	RESPONSIBLE AGENCIES		TIMEFRAME	CONTINGENT UPON
			Primary	Secondary		
MARLBORO HAMLET						
I-1	Study parking and pedestrian infrastructure at Marlboro Triangle to assess feasibility of adding left-turn lane	Re-examination of preferred alternatives for circulation improvement focusing on the challenges associated with incorporating a left turn lane at Route 9W and Western Avenue.	Ulster County Transportation Council	Town of Marlborough	Short-Term	
BETWEEN HAMLETS						
I-2	Add center turn lane to intersections at Willow Tree Road	Create center turning lane at offset intersection for vehicles turning left from 9W.	NYSDOT	Town of Marlborough	Mid-Term	R-2
I-3	Reconfigure intersection at Old Indian Road	Add left turn pocket on Route 9W at northbound approach and close the easterly leg of Old Indian Road.	NYSDOT	Town of Marlborough	Mid-Term	R-2
MILTON HAMLET						
I-4	Reconfigure signalized intersection at Milton Turnpike	Reconfigure intersection to accommodate pedestrian and bicycle users and to calm southbound vehicle traffic.	NYSDOT		Short-Term	
I-5	Convert signalized intersection at Milton Turnpike to a roundabout	Explore feasibility of converting signalized intersection to single lane roundabout.	NYSDOT	Ulster County	Long-Term	
I-6	Add left turn lane to intersection of Route 9W and Cluett Schantz Park Driveway	Provide left turn lane at intersection to provide greater access to Cluett Schantz Park. Consolidate park driveway with rear driveway of Milton Hardware.	NYSDOT	Town of Marlborough	Mid-Term	R-2
CORRIDOR-WIDE						
I-7	Improve visibility of intersections at collector roads	Add lighting, reflectors, define edges, and improve signage per Roadway Safety Audit.	NYSDOT	Town of Marlborough, Town of Lloyd	Short-Term	

TRANSIT RECOMMENDATIONS						
RECOMMENDATION		DESCRIPTION	RESPONSIBLE AGENCIES		TIMEFRAME	CONTINGENT UPON
			Primary	Secondary		
T-1	Improve bus stop at Milton Turnpike	Uppgrade current bus stop area to improve customer waiting experience.	NYSDOT, Town of Marlborough	Ulster County Area Transit	Short-Term	
T-2	Add bus stop at Marlboro Hamlet	Provide formal bus stop near Marlboro Triangle for customers to hail bus.	Ulster County Area Transit	Town of Marlborough	Short-Term	
T-3	Improve customer information about KPL line	Include improved bus route maps and schedules for KPL line. Provide information on Town websites.	Ulster County Area Transit	Town of Marlborough, Town of Lloyd	Short-Term	
T-4	Evaluate KPL Line Service Performance	Evaluate ridership after signage and customer information improvements have been implemented to adjust service route and schedules for more effective service.	Ulster County Area Transit		Mid-Term	T-1, T-2, T-3

PEDESTRIAN AND SHARED-USE PATH RECOMMENDATIONS						
RECOMMENDATION		DESCRIPTION	RESPONSIBLE AGENCIES		TIMEFRAME	CONTINGENT UPON
			Primary	Secondary		
MARLBORO HAMLET						
P-1	Install enhanced crossings on Route 9W in Marlboro Hamlet with warning signage and pedestrian-actuated flashing lights	Upgrade existing crosswalks at Marlboro Triangle and Dubois Street to enhanced crossings.	NYSDOT	Town of Marlborough	Short-Term	
P-2	Install crosswalks on minor streets to complete pedestrian network in Marlboro Hamlet	Crosswalks are recommened across Bloom Street, Dubois Street, and Birdsall Avenue.	Town of Marlborough		Short-Term	
P-3	Fill in gaps in sidewalk network between Western Avenue and Young Avenue	Provide consistent sidewalks to support the hamlet's commercial uses, safe route to school goals, and future residential growth.	Town of Marlborough		Short-Term	
P-4	Support the Malboro Mills Waterfall Walkway	The proposed trail runs along Lattintown Creek and crosses Route 9W.	Town of Marlborough		Short-Term	
MILTON HAMLET						
P-5	Install high visibility crosswalks in Milton Hamlet	Crosswalks are recommened at the intersections of Milton Turnpike & Main Street and South Road & Main Street.	Town of Marlborough		Short-Term	
P-6	Extend sidewalk network in Milton Hamlet	Sidewalks are recommended along several roadways in Milton Hamlet.	NYSDOT	Town of Marlborough	Short-Term	
P-7	Add crossing to Cluett Schantz Park	Provide an enhanced crossing across 9W to provide access to west side of Route 9W. Explore feasibility of a shared-use path connection from South Road across Milton Harvest to Route 9W.	NYSDOT	Town of Marlborough	Mid-Term	R-2, R-3

BETWEEN HAMLETS						
P-8	Shared-use path connecting the hamlets	A shared-use path along one side of Route 9W is part of a longer-term vision to better connect the hamlets.	NYSDOT	Town of Marlborough	Long-Term	
P-9	Construct trail between both Dock Roads	A future trail that improved access to the Hudson Rive and connects the Hudson waterfront between both Dock Roads.	Town of Marlborough		Long-Term	

BICYCLE RECOMMENDATIONS						
RECOMMENDATION		DESCRIPTION	RESPONSIBLE AGENCIES		TIMEFRAME	CONTINGENT UPON
			Primary	Secondary		
MARLBORO HAMLET						
B-1	Shared roadways in Marlboro hamlet	Provide shared bicycle use of key roadway within hamlets where Route 9W and other roads narrow, with both roadway markings ('sharrows') and 'Share the Lane' signage.	Town of Marlborough		Short-Term	
B-2	Bicycle Parking in Marlboro hamlet	Provide safe, convenient bicycle parking within the hamlets and encourage communities to adopt a requirement for bicycle parking in mixed-use and multi-family developments.	Town of Marlborough		Short-Term	
MILTON HAMLET						
B-3	Shared roadways in Milton hamlet	Provide shared bicycle use of key roadway within hamlets where Route 9W and other roads narrow, with both roadway markings ('sharrows') and 'Share the Lane' signage.	Town of Marlborough		Short-Term	
B-4	Bicycle parking in Milton hamlets and parks	Provide safe, convenient bicycle parking on Main Street, at Town Hall, and in parks.	Town of Marlborough		Short-Term	
CORRIDOR-WIDE						
B-5	Designate 9W as a bicycle route	Permitting roadway reconfigurations that provide a consistent shoulder along Route 9W, the corridor should be designated as a bicycle route, which would provide connections to regional routes throughout the Hudson Valley.	NYSDOT		Mid-Term	R-6
B-6	Regional bicycle routes	Make connections to future trails within the Study Area, the future Empire Trail, and existing Walkway Over the Hudson/Hudson Valley Rail Trail	Ulster County	Town of Marlborough, Town of Lloyd	Short-Term	

STREETSCAPE RECOMMENDATIONS						
RECOMMENDATION		DESCRIPTION	RESPONSIBLE AGENCIES		TIMEFRAME	CONTINGENT UPON
			Primary	Secondary		
S-1	Improve Lighting, Landscaping and Sidewalks	Work with property owners with frontage on Route 9W on beautification projects and safety improvements to improve corridor character.	Town of Marlborough, Town of Lloyd		Short-Term	
S-2	Creation of Design Guidelines for Route 9W	Develop guidelines that encourage cohesive design of buildings and streetscape treatments along Route 9W.	Town of Marlborough, Town of Lloyd		Short-Term	
S-3	Gateway & Wayfinding Signage	Provide gateway treatments to northbound and southbound entries to Marlboro Hamlet. Replace current gateway signage in Milton Hamlet.	Town of Marlborough, NYSDOT		Short-Term	

LAND USE RECOMMENDATIONS						
RECOMMENDATION		DESCRIPTION	RESPONSIBLE AGENCIES		TIMEFRAME	CONTINGENT UPON
			Primary	Secondary		
L1	Restrict uses permitted in Business Corridor Overlay District in area between hamlets	Town Board should revise Overlay Zone regulations to limit uses between hamlets	Town of Marlborough		Short-Term	
L2	Revise zoning to incorporate Access Management Plan	Town Board should incorporate Access Management Plan into Zoning Code by reference	Town of Marlborough, Town of Lloyd	NYSDOT	Short-Term	