Safe Routes to School Action Plan

Saugerties Junior and Senior High School – Saugerties, NY

FINAL - June 2015

Saugerties School District

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UCTC 2014 UPWP Project 44.23.02 - 01: Complete a Safe Routes to School Demonstration Project

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Section 1. Safe Routes to School Overview

1.1 Introduction

This project was funded by the Ulster County Transportation Council (UCTC) utilizing Federal Highway Administration funds and is part of a model Safe Routes to School (SRTS) program for Ulster County.[1] The information in this action plan will be compiled with other plans for schools from around the region and will be included in a Safe Routes to School Toolbox. This Safe Routes to School Action Plan is customized for the Saugerties Junior-Senior High School Campus, located in the Town of Saugerties, NY. The document provides analysis of the existing conditions surrounding the school and suggests 'next step' projects and programs to improve the safety, health, and wellness of the schools' students, faculty, staff and visitors.

The goal of this action plan is to identify recommended physical improvements and operational measures for the school site and within one mile of the site, including conceptual design and cost estimates for the recommended physical improvements. The action plan also prioritizes follow-on activities to advance the recommendations. This action plan will progress Safe Routes to School for the Saugerties Junior-Senior High School Campus. The key to success, however, is a dedicated and active Safe Routes to School team, inspired by a local school champion. The champion may be a teacher, an administrator, a parent, and/or a community volunteer. In order for that team to succeed, next step projects in this action plan should be implemented with community consent and reflect the team's available time, skills, interests, and priorities.

This action plan will be available for use by the school team as a framework to guide actionable next steps, both in the short-term and long-term. Included with each recommended project or program in this document will be recommendations about which school team members should be involved in its implementation and the role each should play to help ensure its success.

1.2 Safe Routes to School Program Overview

"Safe Routes to School" was established as a national program in 2005 by the Federal Highway Administration (FHWA) in order to empower communities to make walking and bicycling to school a fun, safe and routine activity for children and their parents. The program established a framework that has been used successfully by schools, communities, and Metropolitan Planning Organizations across the United States to develop comprehensive approaches that encourage safe walking and biking to local schools. –Along with increasing pedestrian and cyclist safety, the framework also embraces the goals of improving student health and enhancing environmental quality. To accomplish these goals a comprehensive program must be established to create an environment that enhances, supports, and sustains walking and cycling as viable options for travel. With this in

[1] Visit the Ulster County Transportation Council Safe Routes to School resource page at http://ulstercountyny.gov/planning/transportation-council/safe-routes-to-school

mind, SRTS emphasizes a holistic approach to create change that encompasses the five (5) E approach; Engineering, Education, Encouragement, Enforcement, and Evaluation.

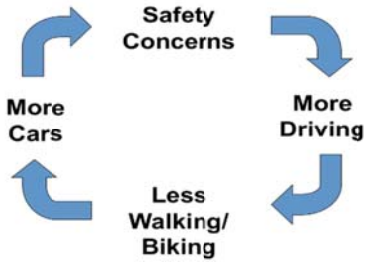
- **Engineering**: physical improvements to the environment such as crosswalks, sidewalks and signals.
- **Education**: methods to teach children, parents and neighbors about the benefits of walking and cycling to school as well as teaching appropriate walking, driving and cycling behaviors to support safe travel in the school zone.
- **Encouragement**: programs such as Walk to School Day, the Walking School Bus, contests and other initiatives to entice children, parents and others to walk or bicycle to school.
- **Enforcement**: incorporates law enforcement efforts to ensure drivers, bicyclists and pedestrians obey traffic laws and practice appropriate behaviors.
- **Evaluation**: uses measurements or indicators such as the number of children walking or bicycling to school to ascertain the success of any SRTS program.

1.3 Why are Safe Routes to School Important?

Although almost half of the students in the United States walked or biked to school prior to the 1980s, the number of students walking or bicycling to school has sharply declined since then. Statistics show that 48 percent of all K-8th grade students walked or bicycled to school in 1969 and 89 percent of those lived within a mile of the school they attended. In 2009, only 13 percent of K-8th grade students walked or bicycled any distance to get to school and only 35 percent of students that lived within one mile of school walked or bicycled[2]. This decline is due to a number of factors, including urban growth patterns and school siting requirements that encourage school development in outlying areas, increased traffic, and parental concerns about safety. The situation is self-perpetuating: As more parents drive their children to school, there is increased traffic at the school site, resulting in more parents becoming concerned about traffic and driving their children to school.

According to a 2004 survey by the Center for Disease Control[2], parents whose children did not walk or bike to school cited the following barriers:

- Distance to school - 61.5%
- Traffic-related danger - 30.4%
- Weather - 18.6%



The downward spiral of walking and bicycling to school

1 National Center for Safe Routes to School, How Children Get to School, November 2011. Available: saferoutesinfo.org/sites/default/files/resources/NHTS_school_travel_report_2011_0.pdf. Accessed: March 2014

[2] U.S. Centers for Disease Control and Prevention. Barriers to Children Walking to or from School United States 2004, Morbidity and Mortality Weekly Report September 30, 2005. Available: www.cdc.gov/mmwr/preview/mmwrhtml/mm5438a2.htm. Accessed: March 2014.

- Crime danger - 11.7 %
- Opposing school policy - 6.0%
- Other reasons (not identified) - 15.0%

A comprehensive Safe Routes to School program addresses many of the reasons for reductions in walking and biking through a multi-faceted approach that uses education, encouragement, engineering and enforcement efforts to develop attitudes, behaviors and physical infrastructure that improve the walking and biking environment.

1.4 Benefits of a Safe Routes to School Program

Safe Routes to School programs directly benefit schoolchildren, parents, and teachers by creating a safer travel environment near schools and reducing motor vehicle congestion at school drop-off and pick-up zones. Students that choose to walk or bike to school are rewarded with the health benefits of a more active lifestyle, responsibility and independence that comes from being in charge of the way they travel, and learn at an early age that walking and biking can be safe, enjoyable and good for the environment. Safe Routes to School programs offer additional benefits to neighborhoods by helping to slow traffic and provide infrastructure improvements that facilitate walking and biking for everyone. Identifying and improving routes for students to safely walk and bicycle to school is one of the most cost-effective means of reducing weekday morning traffic congestion and can help reduce auto-related pollution.

In addition to safety and traffic improvements, a Safe Routes to School program helps integrate physical activity into the everyday routine of school children. Since 1980, the number of children who are overweight has more than doubled from 7 percent to 18 percent for children 6-11, and from 5 percent to nearly 21 percent for adolescents aged 12-19. Health concerns related to sedentary lifestyles have become the focus of statewide and national efforts to reduce health risks associated with being overweight. Children who walk or bike to school have an overall higher activity level than those who are driven to school, even though the journey to school makes only a small contribution to activity levels.[3]

The entire family can benefit from Safe Routes to School

[3] Cooper A, Page A, Foster L, Qahwaji D. Commuting to school: are children who walk more physically active? American Journal of Preventive Medicine. 2003 November;25(4):273-6.
Cooper A, Andersen L, Wederkopp N, Page A, Frosberg K. Physical activity levels of children who walk, cycle, or are driven to school. American Journal of Preventive Medicine, 2005 October; 29(3):179-184.

Section 2. Existing Conditions

2.1 Arrivals and Departures

At Saugerties High School and Saugerties Junior High School, students have multiple modes of transportation available to them. Some of the primary modes are listed below.

2.1.1 Parent Drop-offs/Pickups

For both the Junior and Senior High schools, parents dropping off their students are the one of the primary sources of transportation for arrivals and departures. There is a designated drop-off location to the south side of the high school, in a lane adjacent and connected to the parking lot. Entrance to the parking lot and drop off location is at the south west corner of the campus and consists of three lanes. One lane is designated for entry, and the other two are designated for exiting. The two exiting lanes are designated turn lanes, one for turning left and one for turning right. These lanes are all connected until they reach the parking lot, at which point the lanes veer off at a fork in the driveway. The two exiting lanes come down from the northern side of the lot to the fork. The single entry lane veers east from the fork, following the southern edge of the parking lot.

This driveway is connected to the Washington Avenue Extension. Most vehicles come from the south, traveling north on the Washington Avenue Extension, and turning right into the lot. During peak drop-off and pick-up times, cars exiting this driveway may have to compete with buses traveling north to the bus loop and returning south from the bus loop.

In the drop-off location, there are two crosswalks, leading from the parking lot, to the school entrances. They are towards the north-eastern corner of the parking lot and are spaced approximately 50 feet apart. These serve as safe crossings for those who park in the available lot. In addition to the crosswalks, there is an existing speed bump, approximately 250 feet from the parking lot, crossing the exiting lanes. This slows the vehicles down, making the lane safer to cross for pedestrians.

Cars form a line in the drop-off/pick-up area, but leave room for the crosswalk.

2.1.2 Bus Arrivals/Departures

Buses are provided for students at Saugerties Junior and Senior High School that live outside of a 1 mile radius from the school. This leaves the majority of the Village of Saugerties north of the State Highway 32 Bridge without access to a school bus.

The bus pick-up and drop-off location is directly in front of the junior and senior high schools, within the designated bus loop. Buses travel north on the Washington Avenue Extension and then turn right, approximately 500 feet passed the parking lot entrance, in order to pull into the bus loop. The bus loop is reserved solely for buses, and is respected by the parents. The bus loop is separated from other traffic, and thus buses can pull in and out of the loop relatively easily.

2.1.3 Pedestrian and Bicycle Arrivals/Departures

Relatively few students choose to bike to either school, while a number of students will walk; although this is not the majority. For those who do choose to walk to school, there is an existing shared-use path, approximately 900 feet long, leading from the southwest corner of the campus, to the Senior High School. From there, students can enter the high school or walk along the existing sidewalk to the middle school.

There is also a wide sidewalk that leads from the middle school and follows the bus loop driveway to Washington Avenue Extension. Once on Washington Avenue Extension, there are no available sidewalks from Robinson Street to the school. There is an existing shared-use path on the west side of Washington Avenue Extension that starts at Robert Moser Drive and follows Washington Avenue Extension for a short while before veering off into the Cantine Memorial Field.

There are two crosswalks across Washington Avenue Extension in front of the school, including one crossing from the shared-use path leading from the school to the Cantine Memorial Field, and one that crosses from the bus loop's driveway to the Cantine Memorial Field. There is also a crosswalk that spans Robert Moser Drive at its intersection with Washington Avenue. These can be seen in the Existing conditions maps in the following sections. Both of these crosswalks connect pedestrians to the shared use path noted previously. In addition, there is a designated crossing guard that helps students cross Washington Avenue. The crossing guard is stationed outside of the middle and high schools and is a full time police officer, placed there by the Police Department. This is one of many steps that the Police Department has taken to ensure pedestrian safety throughout Saugerties. Others include campaigns that have been launched to stop J-walking and educate pedestrians on the proper use of crosswalks. This has reduced pedestrian crashes by 50% in the Town of Saugerties.

Share the Road Sign on Washington Avenue Extension

Bicyclists have the option of riding in the street or the shared use path. They can enter the school using the school driveway or the adjacent wide sidewalk once on school grounds. Bike racks are available on campus but are not readily visible from the school entrances.

Along Washington Avenue Extension, there is a posted sign on the south-west corner of the campus that reads "SHARE THE ROAD." The sign is in relatively new condition, but has tilted to the right,

limiting its visibility. There are a number of these signs that exist along the bike routes throughout the Town of Saugerties.

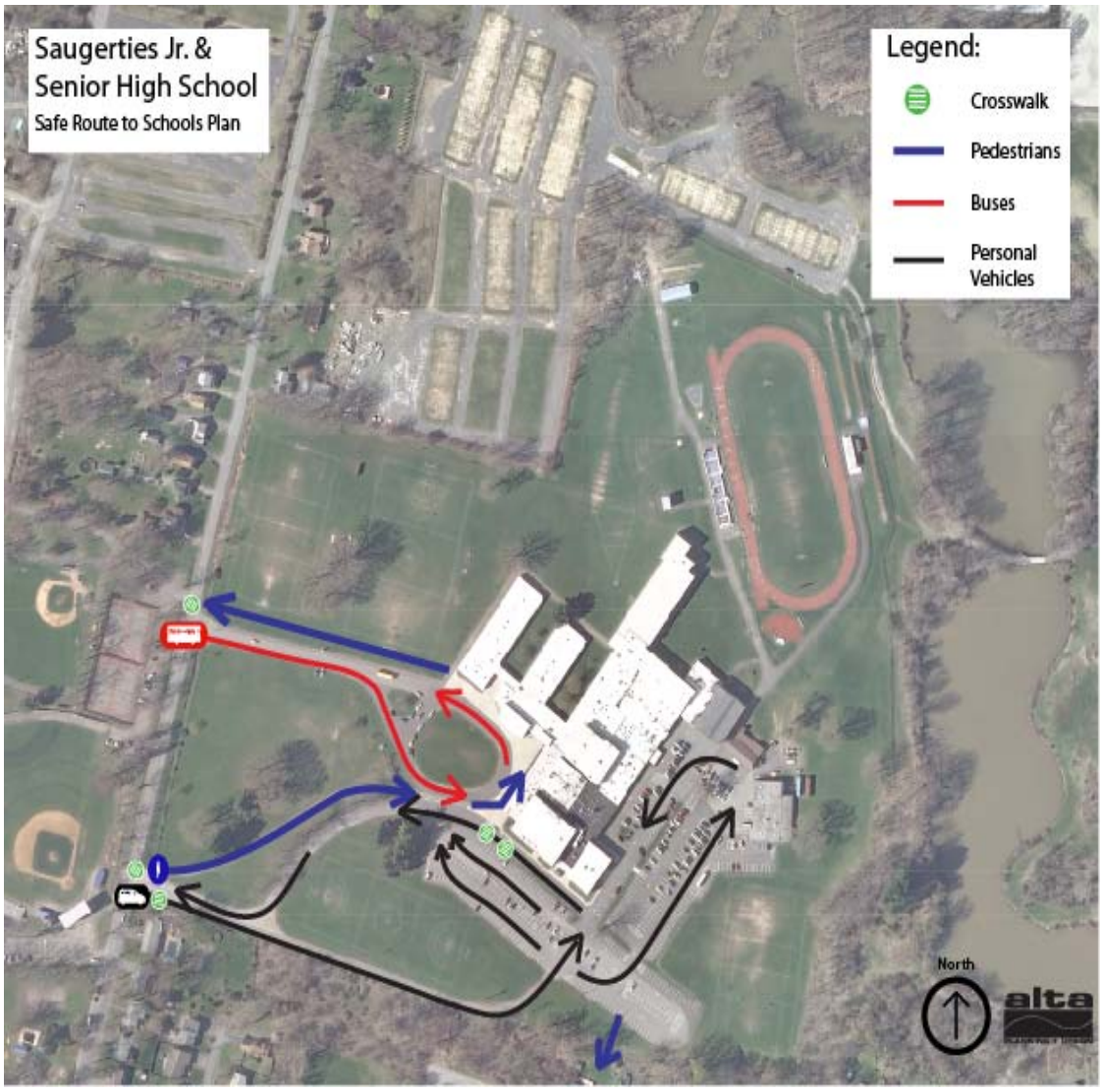
2.1.4 Vehicle Arrivals/Departures

Driving to and from school is another available option for transportation for some students. There is parking made available to them in the school's parking lot. There is ample parking available for both staff and students and therefore no need to restrict student parking from that perspective. Students can receive a parking pass from the school as long as they meet the requirements established by the school's policies. The students who do take advantage of this option to arrive and depart from school utilize the same driveway as parents and staff.

It was noted that a larger percentage of vehicles exiting the school at the end of the day intend to head south. Many drivers, especially students, will turn right on and make a U-turn to head south instead of waiting for a gap to make the left.

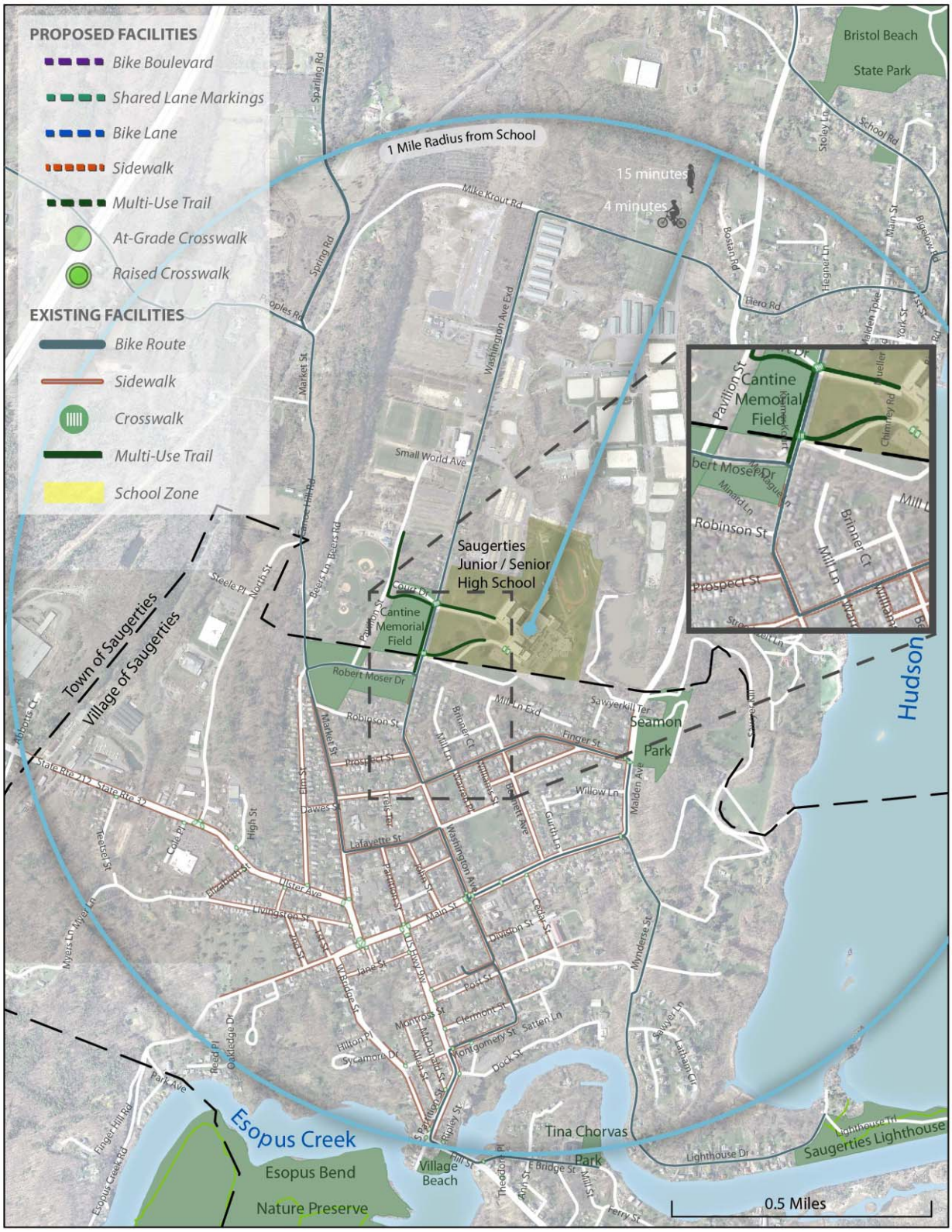
Personal vehicles departing from the parking lot while pedestrians use the adjacent path, and buses line up in the loop.

2.2 Campus Circulation Map



The Circulation Map (Map 1), seen above, illustrates the circulation of pedestrian, bus, and vehicle arrivals and departures. As can be seen on the map, the bus loop is separated from the parking lot by the shared-use path. Bicycles can access the site via the school driveway or the path.

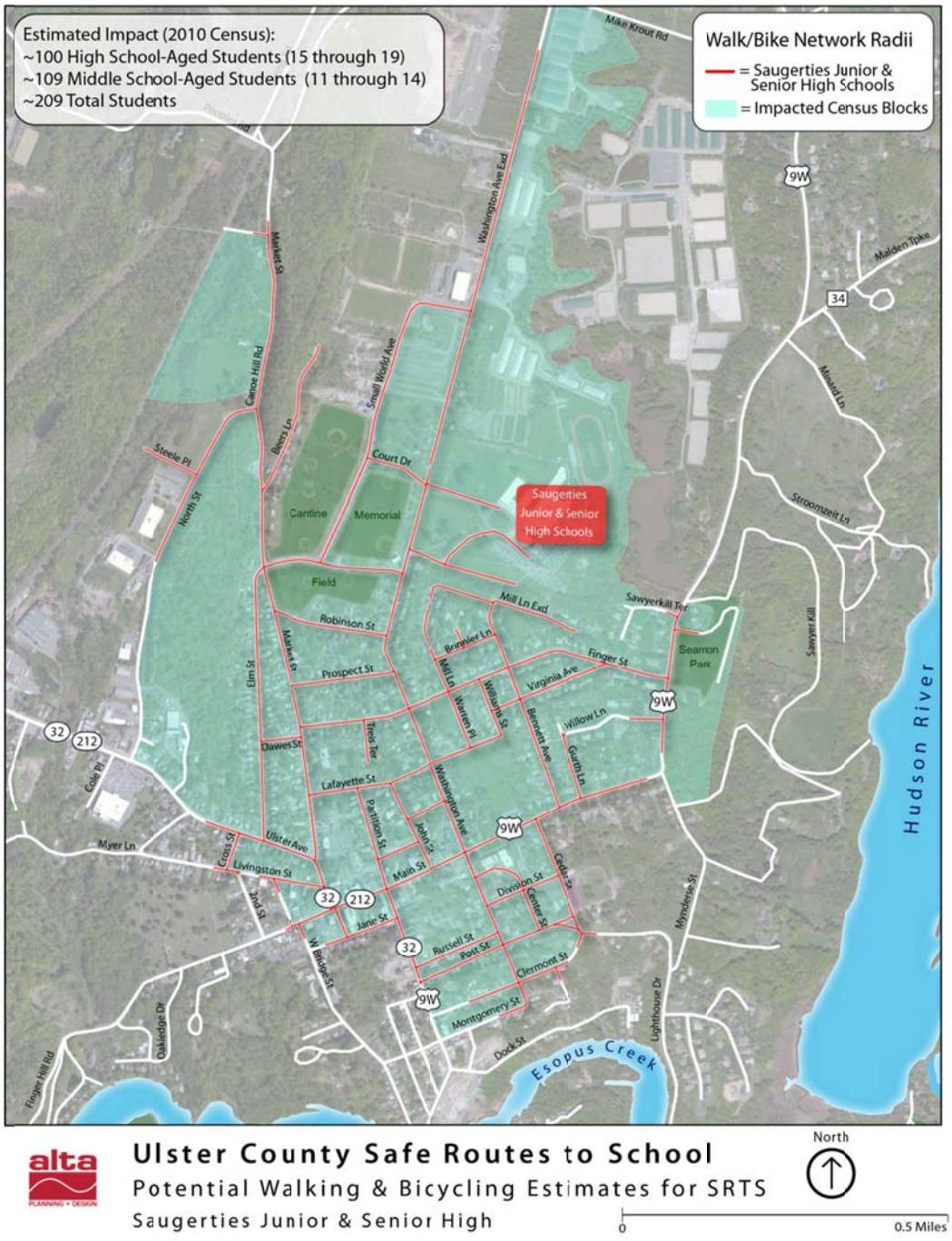
2.3 Existing Conditions Map



Map 2 - Existing Conditions

2.4 Potential Influence

In order to understand the potential impact of safe routes to school improvements for the Saugerties Junior-Senior High School, an analysis was conducted to determine approximately how many students live within the defined one-mile walking/bicycling radius of the school. These estimates are based on available 2010 census date. The following proposed safe routes to school program has the potential to impact up to 209 students.



Section 3. Recommendations

3.1 Physical Improvements

Engineering measures for Safe Routes to School include the design, construction and maintenance of physical infrastructure that can improve the safety and comfort of students that are walking and biking to school. This infrastructure includes signage, stenciling, and traffic control devices such as stop signs, bulb-outs, sidewalks, paths, bike lanes, and trails.

Simple engineering measures such as pedestrian refuges can improve real and perceived safety.

Specific engineering strategies that can be applied within the School Zone, in areas along the school route, at street crossings, and to slow traffic down are provided below. Many of the strategies – such as on-street warning signs – are most effective if they are only used during school commute hours. Although some engineering solutions entail higher-cost infrastructure improvements, many engineering tools can be implemented without large expenditures, such as posting signs, modifying signal timings, or striping crosswalks or bike lanes. The engineering strategies listed below may also be utilized by the community to improve pedestrian and bicycle safety in projects other than this Safe Routes to School Action Plan.

The following specific recommendations for the Saugerties Junior-Senior High School Campus should be considered by the school administration. Note that some of the recommendations will require participation by partner agencies such as the Town of Saugerties, the Department of Transportation, and local Police Departments for their implementation. The map at the end of this section visually displays the recommendations and their respective locations.

3.1.1 Signage and School Zone Recommendations

In New York State, school zones can be designated on all roadways contiguous to a school serving K through 12th grade. A New York School Speed Limit assembly (see figure to right) shall be used to indicate the speed limit where a reduced speed zone for a school area has been established or where a speed limit is specified for such areas by statute. The New York School Speed Limit assembly shall be placed at or as near as practical to the point where the reduced speed zone begins. In order for a school speed limit to be established, the school and the jurisdiction responsible for the highway must provide written documentation of their support for a school speed limit.[4]

This image shows a New York State MUTCD approved school speed limit sign, figure number 7B 100.

[4] NYS Supplement to the Manual for Uniform Traffic Control Devices, page 163, https://www.dot.ny.gov/divisions/operating/oom/transportation-systems/repository/B-2011Supplement-adopted.pdf

As dictated by NYS Vehicle and Traffic Law, the numerical value of a school speed limit should be approximately 10 MPH below the normally prevailing 85th percentile speed on the highway, or at approximately the actual 85th percentile speed within the zone during school crossing periods. School speed limits shall not be set below 15 MPH and the maximum length of a school speed zone shall not be greater than 1320 feet (0.25 mile) on a highway passing a school building, entrance or exit of a school abutting on the highway. With School Zones signed and delineated, focused traffic enforcement can occur to target speeding and other moving violations.

A school zone speed limit of 20 mph (10 mph below the current roadway speed limit) is recommended. School zones should be delineated on Washington Avenue and Washington Avenue Extension, in front of the Junior-Senior High School. These recommended school zones are shown on Map 3.2, on page 19.

School Area Signage

The Manual on Uniform Traffic Control Devices (MUTCD) provides guidance on the use of school area signs and markings. The key signs should include the School Advance Warning Assembly, the School Crosswalk Warning Assembly, and the School Speed Limit Assembly. One way of increasing the visibility of school area signage is through the use of Fluorescent Yellow-Green signs.

School advance warning assembly from the MUTCD figure S1-1.

3.1.2 Sidewalk, Path, and Crossing Recommendations

Sidewalk

Sidewalks are the most fundamental element of the walking network, as they provide an area for pedestrian travel that is separated from vehicle traffic. Installing new sidewalks can be costly, but fixing short gaps in an existing sidewalk network is important to ensure the continuity of the system and can be a relatively low-cost fix. The sidewalk infrastructure around the school is well-developed and well-utilized by the current walking population. The installation of sidewalks on the following streets are recommended as part of the Safe Routes to School program and are shown on Map 3.2.A on page 19.

-West Bridge Street	-Bennett Street	-Elm Street
-Cedar Street	-Division Street	-Robinson Street
-Post Street	-Lafayette Street	-Williams Street
-Washington Avenue Extension	- Robert Moser Drive	

The first priority gap in the sidewalk network is on Washington Avenue Extension, on the west side, between Prospect Street and the school campus. The existing sidewalk piece is in disrepair. It is already proposed to extend the existing sidewalk to connect to the existing shared use path. In addition, a second phase should be included, placing sidewalk along the south side of Robert Moser Drive and to Market Street, to fill gaps along the roadway.

Crossings

School crosswalks denote the preferred location for children to cross the street. High visibility crosswalks should be installed at key locations around the schools and along walking routes to and from the schools. Many of the intersections around the schools are lacking crosswalks or the paint has faded. The "SLOW SCHOOL XING" marking can be used in advance of uncontrolled school crosswalks.

Various striping patterns can be used. The standard crosswalk striping pattern consists of two parallel lines, called the "transverse" pattern. Higher-visibility patterns can also be used, such as longitudinal and combination markings, which add bars for increased visibility. High visibility markings should be considered for all high-volume crossings near schools, and where conditions demonstrate a need for an increased visibility marking (e.g., a mid-block location). Yellow crosswalks can also be used in immediate proximity to the school (within 500 feet) to further deliniate that it is a school zone crosswalk. Locations for recommended crosswalk installation are listed below and shown on Map 3.1 on page. The leg(s) of the intersection where the crosswalk is recommended is indicated in parathesis such as (N) for the northern leg of the intersection.

Advanced School Crossing Pavement Marking

High Visibility Crosswalks

Yellow School Zone Crosswalks

- School parent drop off area (raised)
- School parking area – path connection
- Robert Moser Dr & Washington Ave (W/S)
- Robert Moser Dr & Market St (S)
- Robinson St & Washington Ave (W/S)
- Robinson St & Market St (E/S)
- Prospect St & Washington Ave (W/S)
- Prospect St & Market St (E/S)
- Finger St & Market St (S)
- Finger St & Washington (W/S-raised)
- Finger St & Warren Place (E/S)
- Finger St & Bennett Ave (W/S)
- Virginia Ave & Bennett Ave (E/W)
- Bennett Ave & Main St (N/W)
- Lafayette St & Market St (N/E)
- Lafayette St & Washington Ave (N/E/W)
- Washington Ave & Division St (S/E)
- Washington Ave & Post St (S/E/W)
- Cedar St & Division St (N/W)
- Jane St & W Bridge St (E/S)
- Washington Ave & proposed path (raised)
- Washington Ave & Small World Ave (W)
- Route 9 & Malden Turnpike (N – RRFB)
- Route 9 & Fiero Rd (E)

In-Street Yield-to-Pedestrian Devices

"Yield to Pedestrian" Sign

In-Street Yield-to-Pedestrian Signs are flexible signs installed in the median to enhance a crosswalk at uncontrolled crossing locations. These signs communicate variations of the basic message 'State Law: Yield to Pedestrians.' At school crosswalks, these signs are sometimes installed on a portable base and brought out in the morning and back in at the end of each day by school staff, which may reduce the chance that the sign will become "invisible" to motorists by being left out all the time. For permanently-installed signs, maintenance can be an issue as the signs may be run over by vehicles and need to be replaced occasionally. Installing the signs in a raised median can help extend their lifetime. Installing "shark's tooth" yield pavement markings at these crossings can also increase yield rates for pedestrians at the crosswalk.

Rectangular Rapid Flashing Beacons

Rectangular rapid flashing beacons (RRFBs) are recommended at crosswalks on high speed roads. These beacons have a push button that activates flashing lights for pedestrians as they cross the road. The flashing makes the motorists aware of the pedestrian. This is recommended for the crossing of the path across Malden Avenue.

Rectangular Rapid Flashing Beacon (RRFB)

Raised Crosswalk

Raised crosswalks combine pedestrian crossings with a speed table. A speed table is a form of vertical traffic calming that encourages vehicles to slow down. The raised crosswalk should be elevated so that it is flush with the sidewalk and include yield pavement markings on the slope of the speed table, as shown to the right.

Raised crosswalk

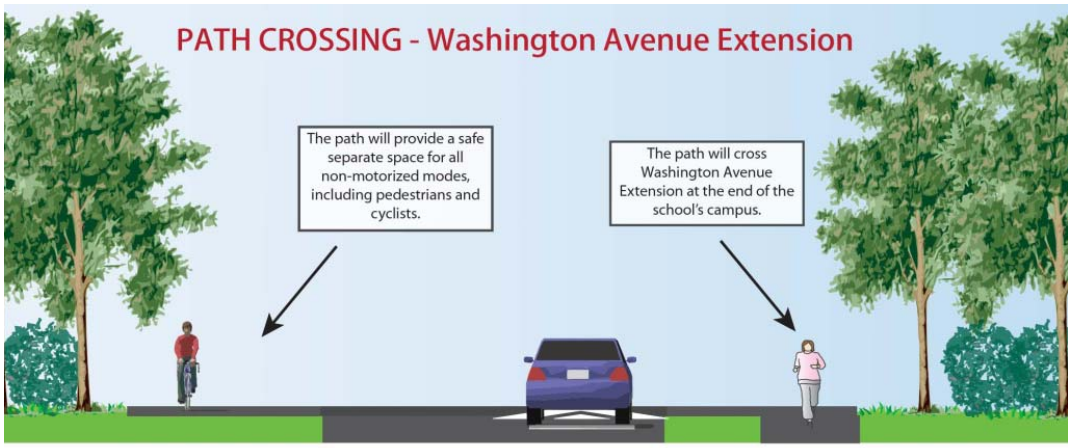
3.1.3 Shared Use Path Recommendations

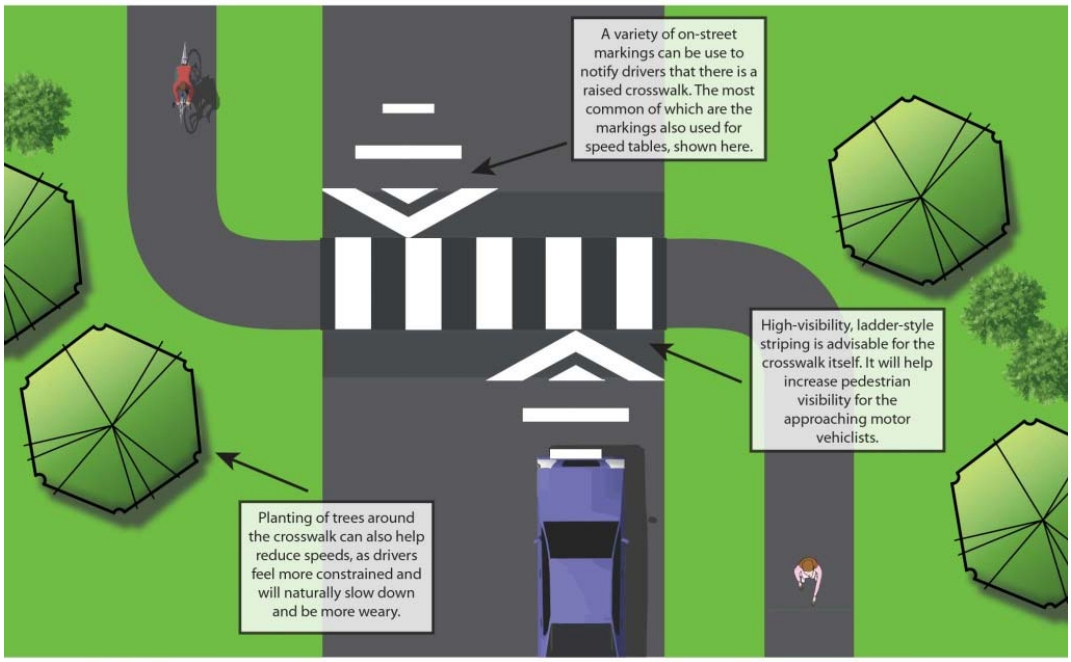
Shared use paths may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. These facilities are frequently found in parks, or as neighborhood cut-throughs to shorten connections and offer an alternative to busy streets. Shared use paths should be a minimum of 8 feet wide to allow for two-way bicycle travel.

One location where a path can be built is on the school grounds. To the south of the school, there is a small clearing that connects the school grounds to Mill Lane Extension and Bennett Avenue.

Paving an official trail at this location would provide access for students walking and bicycling. The path can then continue to the school's parking lot and then around to the sports fields.

An additional shared use path can then be extended through the property of HITS on the Hudson Showgrounds to the sports field. The path can cross the private bridge and then follow the property line until it crosses Malden Avenue. Both of these recommendations would require easements.





Another for a shared use path would be on Washington Avenue Extension. Many students travel north to get to the ice rink after school. It is recommended that a shared use path be considered north of the school, on the east side of Washington Avenue Extension until it reaches the private residential property north of the school's campus. There, the path will cross the road through the use of a raised crosswalk, and continue north on the west side until it reaches the ice rink, as shown in the figure to the right.

3.1.4 On Street Bicycle Improvements

Although it may be appropriate for younger children to bicycle on the sidewalk, designated on-street bicycle facilities can provide a space for older or more experienced children to bicycle on-street. Particularly for older grade levels, as children become more confident in their cycling skills and ride at faster speeds, designated on-street facilities may help to reduce bicycle/pedestrian conflicts on congested walkways near schools. Use of on-street facilities is more appropriate for children with better bike handling skills, as they need to be aware to stay within the bike lane (if striped) or to the right of traffic (on signed routes), obey stop signs and other traffic signals, and to watch for traffic pulling out of side streets or driveways.

Three types of on-street bicycle improvements are outlined below. While these treatments can be applied incrementally over time on specific roadway segments, it is important to note that these facilities function best as part of a larger network. It is also important to select an appropriate facility type and provide connectivity between each.

Marked Shared Roadway

Shared Lane Markings

A marked shared roadway is a general purpose travel lane marked with shared lane markings (SLM) used to encourage bicycle travel and proper positioning within the lane. In constrained conditions, the SLMs are placed in the middle of the lane to discourage unsafe passing by motor vehicles, shown in the left lane in the adjacent image. On a wide outside lane, the SLMs can be used to promote bicycle travel to the right of motor vehicles, shown in the right lane in the adjacent image. In all conditions, SLMs should be placed outside of the door zone of parked cars. Marked Shared Roadways may be signed with Bike Route and/or May Use Full Lane signage. Shared lane markings are proposed on the following roadways:

-Russell Street -Montgomery Street -Mynderse Street

-Latham Circle -Post Street

Bike Lanes

Bicycle lanes designate an exclusive space for bicyclists with pavement markings and signage. The bicycle lane is located adjacent to motor vehicle travel lanes and bicyclists ride in the same direction as motor vehicle traffic. Bicycle lanes are typically on the right side of the street (on a two-way street), between the adjacent travel lane and curb, road edge or parking lane.

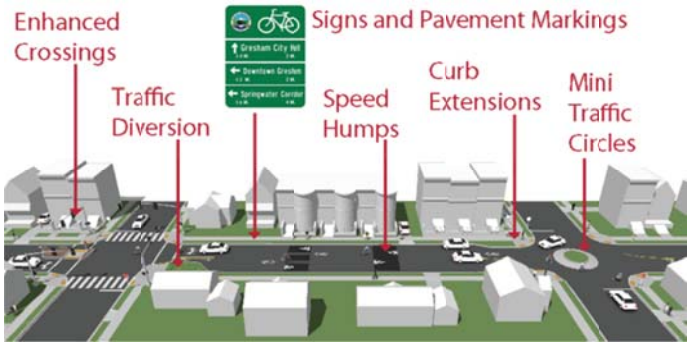
Bike Lanes

The following bike lanes are proposed:

- Washington Avenue Extension (see section 3.1.4)

Bicycle Boulevards

Bicycle boulevards are low-volume, low-speed streets modified to enhance bicyclist comfort by using treatments such as signage, pavement markings, traffic calming and/or traffic reduction, and intersection modifications. These treatments allow through movements of bicyclists while discouraging similar through-trips by non-local motorized traffic. Streets should contain a minimum of three traffic calming enhancements if they are to be considered bicycle boulevards and should include a variety of traffic calming treatments. These traffic calming enhancements can include, but are not limited to, speed humps, curb extensions, mini traffic circles, and stop signs.



Range of possible treatments to create a Bicycle Boulevards

Bennett Avenue is conveniently placed to be a low volume alternative route to the school for pedestrians and cyclists. Installing a bicycle boulevard on Bennett Avenue would not only increase safety for cyclists on their way to school, but also increase the safety of pedestrians, as motor vehicle traffic would be diverted to another street, such as Washington Avenue, and/or vehicle speeds would be reduced. The proposed shared use path to the school would complete this connection.

3.1.5 Washington Avenue Bicycle and Pedestrian Improvements

Washington Avenue between Main Street and the school campus was identified by the local School Working Group as one of the more important focus areas for this study. The street is an important north/south Village arterial that serves the school campus as well as other popular destinations, such as the Kiwanis Ice Arena, Cantine Memorial Field and the HITS facility. Traffic volume on this residential street is within an expected range considering the facilities served by it, measuring 2,418 AADT in 2014. While speed counts have not been performed on the street, SWG comments, local complaints, and observation by staff indicated that traffic consistently travels at speeds well above the posted limit. Considering that this is also the primary access route to the school campus for walkers and bikers, the street should receive priority for potential safety improvements. Between the school and Main Street, there are no marked bicycle accommodations and significant gaps in the sidewalk network, leaving children and parents to walk and ride in the street with no protection from traffic. This can be seen in the image to the right, taken from Google Street View.

Pedestrian Improvements

As mentioned before, the sidewalks on Washington Avenue should be considered the highest priority for sidewalk repairs. The sidewalk from Prospect Street to the school campus is currently in disrepair and should be fixed. In addition, the plan to extend the sidewalk on the west side to Robert Moser Drive should be implemented. The previously mentioned sidewalks crosswalks should also be installed on Washington Avenue in order to allow pedestrians to safely cross the street.

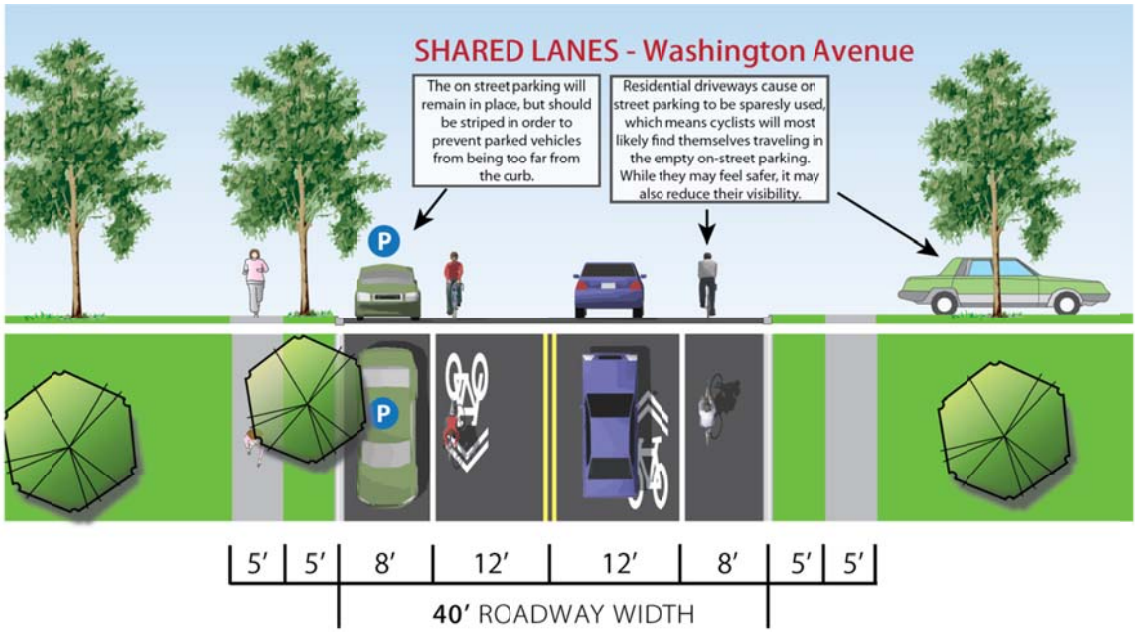
Bicycle Improvements

Several alternatives for Washington Ave are provided below in an effort to provide local residents with a selection of options that it deems to be most suitable for this important local thoroughfare. It is important to note that these alternatives are flexible and can be refined with professional guidance based on accepted state and federal roadway standards. Each alternative will have the beneficial effect of clearly designating appropriate spaces for pedestrians, cyclists and motorists through improved lane striping. Lane striping alone can have the added benefit of slowing traffic; research has shown that narrower lane widths can effectively manage speeds without decreasing safety, and that wider lanes do not correlate to safer streets.[i]. Lane widths of 10 feet are appropriate in urban areas and have a positive impact on a street's safety without impacting traffic operations; lane widths of 11 feet may be appropriate here due to bus and trailer traffic.

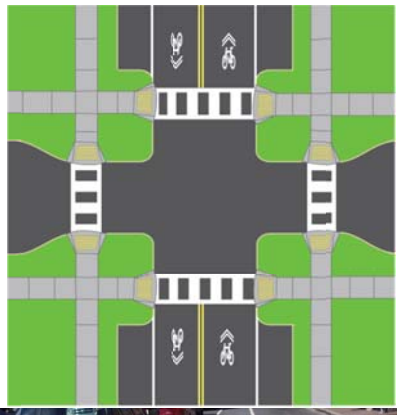
Alternative A – Shared Lane Markings

This alternative for bicycle design on Washington Avenue is the implementation of shared lane markings. Shared lane markings, also known as sharrows, indicate to motorists and cyclists alike that the lane they are travelling on is designated for both modes of transportation. These markings help identify certain streets as bike ways and cause motorists to be more aware of the cyclists.

This alternative prevents the need to remove any on street parking and is the cheapest of the three alternatives. However, considering the significant amount of room on Washington Avenue, the availability of private driveways, and the need to keep students safe on their way to the school, it is advised that this alternative is considered as a possible interim solution. The diagram below illustrates the cross-section of this alternative.



With the implementation of shared lanes, curb extensions can also be added. Curb extensions narrow the roadway and decrease the pedestrian crossing time. They also act as a traffic calming agent, causing motor vehicles to slow down as they approach them. This increases the safety of all users. They should be added at the locations of the new crosswalks. An example of curb extensions can be seen in the image to the right.



Top: Example of the proposed curb extensions.

Middle and Lower: Examples of existing bike lanes.

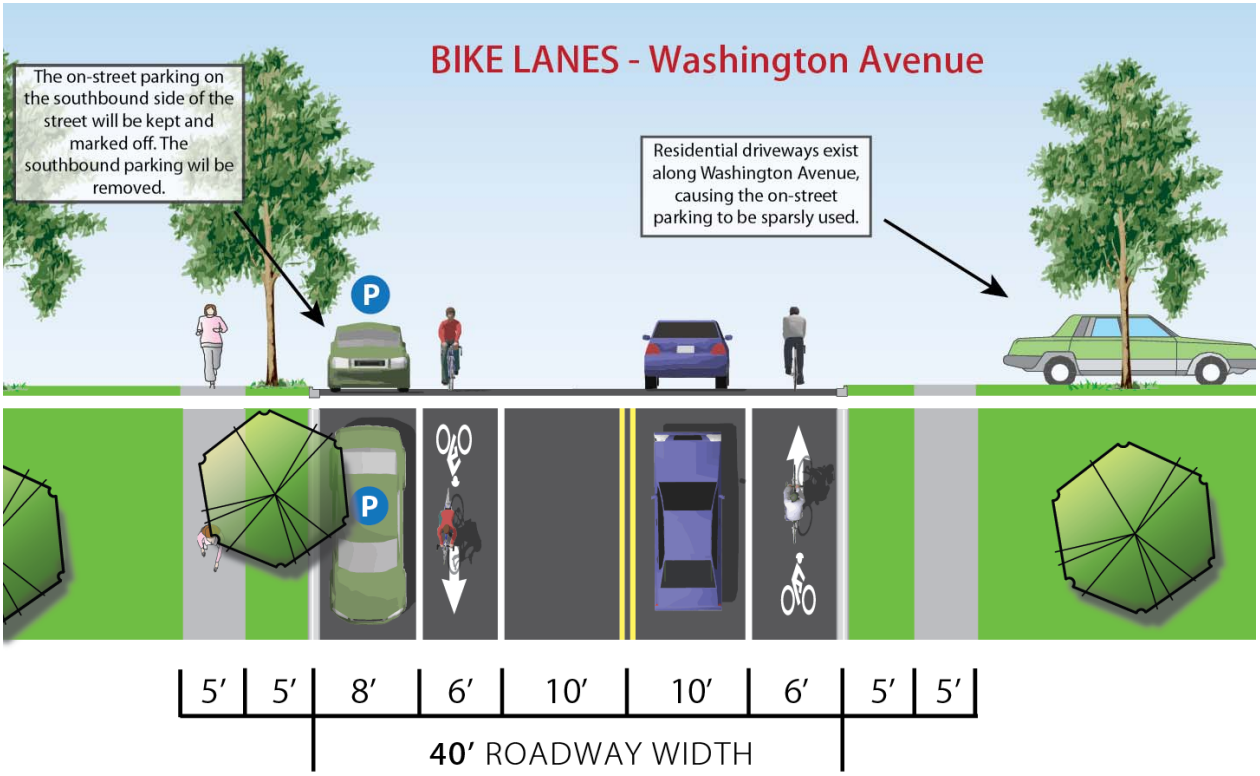
<u>Alternative B – Bike Lanes</u>

The proposed bike lanes would run on either side of Washington Avenue for the entire duration between Main Street and Robert Moser Drive. The northbound bike lane would continue slightly farther, until it reaches the driveway for the schools.

The bike lanes would be 6 feet wide and labeled with the markings shown to the right (AASHTO Guide for the Development of Bicycle Facilities recommends a minimum bike lane width of 5'). In addition, colored pavement can be installed. Colored pavement, seen in the image to the right, further indicates bicycle priority in the bike lanes and increases their visibility. The colored pavement should be installed at the

entrances and exits of the bike lanes and any area that can be identified as conflict zones between cyclists and vehicles. This includes intersections and any large commercial driveways.

In order to install the bike lanes on Washington Avenue, on-street parking would be removed on one side of the corridor. Since Washington Avenue is primarily a suburban residential street, with frequent private driveways, the removal of parking is expected to have a small impact on the communities' daily parking needs. The northbound lane's street parking was chosen to be removed since there are a higher number of driveways on the east side of the roadway.



With the layout shown in the diagram above, curb extensions can still be installed. They should be installed only on the side where there is on-street parking at locations of the crosswalks. This will reduce pedestrian crossing time and slow down motor vehicles.

Alternative C – Cycle Track

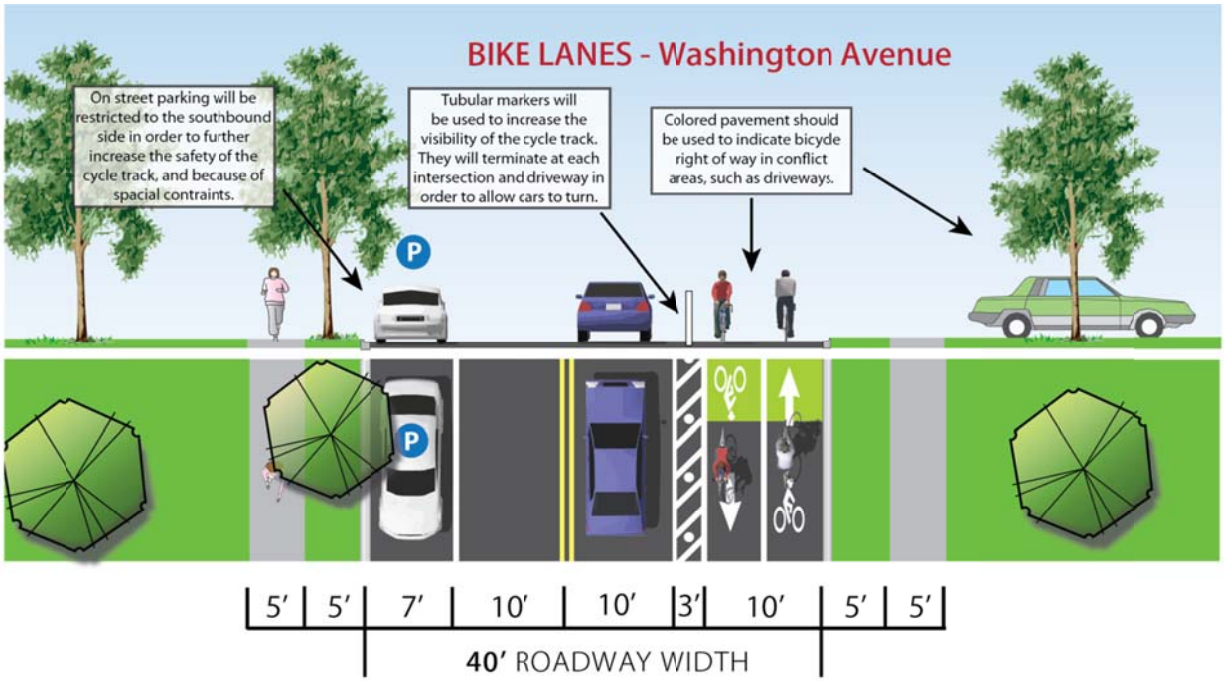
Another alternative is to install a 2-way cycle track on the span of Washington Avenue. Cycle tracks create a protected space for cyclists. Cyclists are separated from motor vehicle traffic by a three foot striped buffer with bollards placed every 10 feet.

The proposed design alternative is to install the 2-way cycle track adjacent to the north bound side of the street. This allows students to either enter or exit the cycle track at the start of the school's campus, without having to cross the street. The cross-section on the next page illustrates the reconfiguration of the roadway in order to allow this to happen.

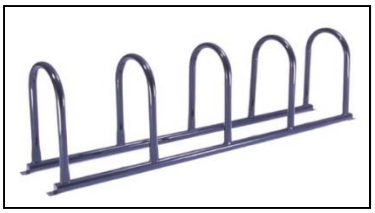
The cycle track would be 10 feet wide with a 3 foot buffer zone. The buffer zone would have tubular markers running down its center every 10 feet. These markers will terminate at every intersection and driveway in order to allow motor vehicles to make the necessary turns. The tubular markers should be terminated 15 feet before and after every driveway in order to account for proper turning radii. The markings for the buffer zone will continue over the path of the driveways though. These tubular markers help increase the visibility of the cycle track and provide a barrier from collisions for cyclists.

In order to incorporate the cycle track, on street parking will have to be prohibited on the north bound side. This will increase the safety of the cycle track, as well as make room for it. The reconfiguration shown below has some room for alterations. While 10 foot lanes are allowable and result in slower motor vehicle traffic speeds, another design could consist of 11 foot lanes with an 8 foot cycle track. It is important to note though that the standard cycle track width is 12 feet and 8 foot 2-way cycle tracks are permissible in constrained environments only.

This alternative is recommended for high volume roads. It provides the largest separation from motor vehicles for the cyclists, but it also more expensive to install and requires the most annual maintenance.



3.1.6 Bicycle Parking Recommendations



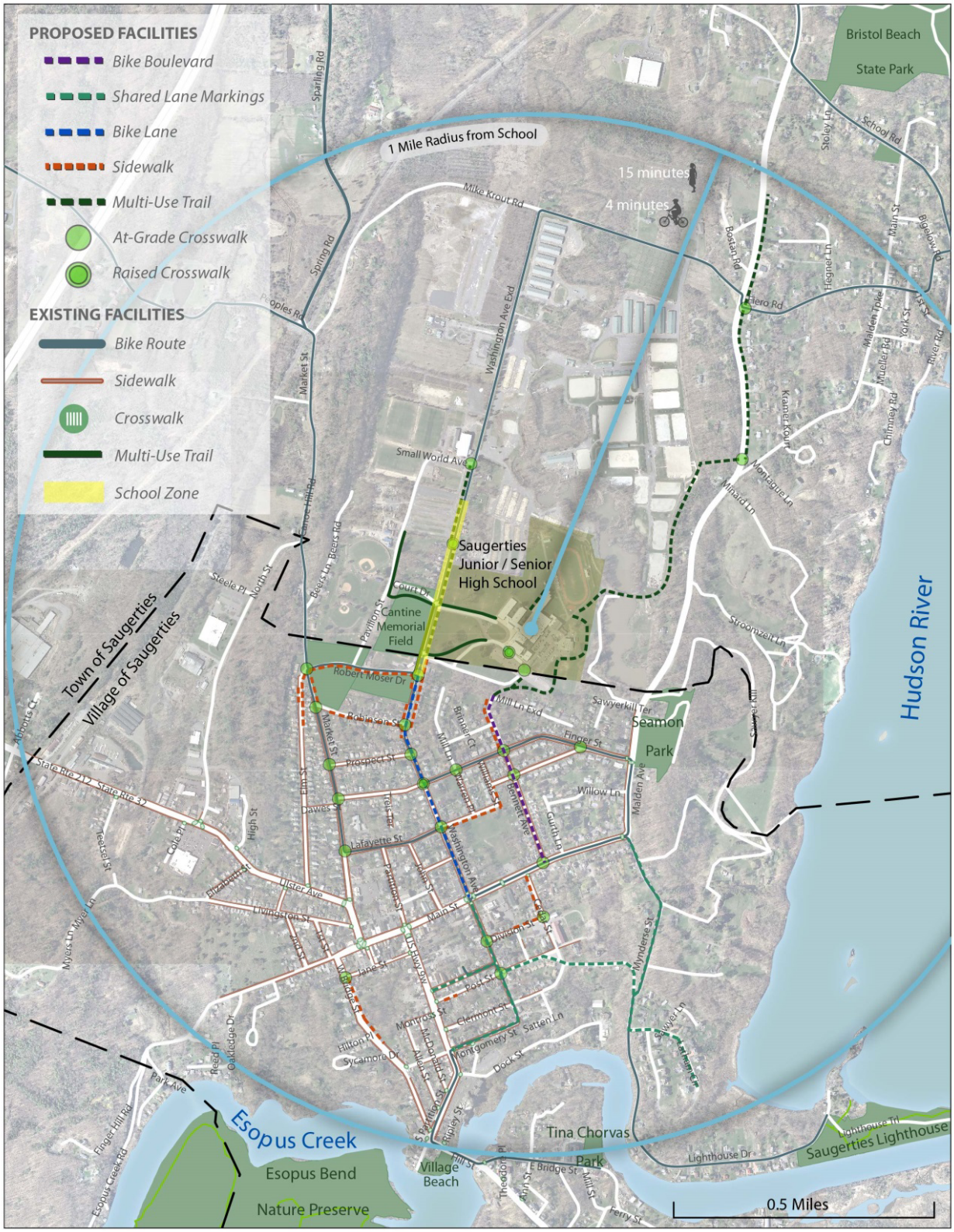
The bike rack photos show model examples of the preferred design to support the bicycle in an upright position without placing additional strain on the wheels.

It was noted by the steering committee that bike racks are located at the school but they are not in a visible or covered location. Providing a secure and convenient location for bicycle parking is one way to help encourage more students to bicycle to school. Attributes of good bike parking include:

- Protection from vandalism/theft
- Protection from damage to the bicycle
- Protection from weather
- Convenient to destination

A sufficient amount of parking must be made available so that bicycles are not crowded. The location must be convenient to the end destination, i.e. close to the building entrance. The location should also provide the owner with a sense that their property will be secure. If possible, racks should be covered to keep them free of rain and snow. Many schools use "wheel holder" type racks which only support the bicycle by the wheel and can damage the bicycle, and also do not allow the bike to be locked up by the frame with a U-lock. The preferred bike rack design should keep the bike upright by supporting the frame, allow the bike to be locked by the frame, and allow one or both wheels to be secured.

3.2 School Improvement Plan Map



Map 3 – Recommended Improvements

3.3 Program Recommendations

While Safe Routes to School (SRTS) programs have historically focused on elementary school age children and their parents, working directly with students in middle and high school is an effective method of engaging champions and fighting climate change. Middle and high school students:

- Have more independence than younger students and can safely walk, bike, or take the bus without parent supervision.
- Tend to travel further for school, sports, and other activities.
- Have more freedom to make their own transportation choices.
- Can be more influenced by their peers.
- Are looking for opportunities to add to their resume for college.
- May seek leadership opportunities to prepare for college or for entering the workforce.
- May be required to undertake a service learning project or participate in community service.

Middle and high school students can make their own transportation decisions and are full of new ideas to share with peers. Developing teen interest in the environment and harnessing their energy is a great way to promote sustainable transportation and develop new materials that can be used to promote the program to younger grades.

3.3.1 Education Programs

Bike Rodeo

The School District, along with the Town and Village, should team together and conduct annual bike rodeos. These could be conducted as after school or Saturday events, or even with the National Bike to School Day activities. A bicycle rodeo provides children with a basic understanding of the rules of the road; educates those children and their parents about elementary bike safety; gives trained personnel a chance to look over the equipment the kids are riding; and involves parents, teachers, and/or local civic organizations in a worthwhile activity. A bicycle rodeo involves "stations" that teach skills, such as:

- Looking over a shoulder without weaving
- Fast-braking without skidding
- Dealing with traffic at intersections

A bike rodeo would be a great opportunity for the high school to lead by example and conduct the rodeo for the middle school and elementary school students.

Cornell University offers an organizers guide to conducting a bike rodeo which can be found here: http://www.bike.cornell.edu/pdfs/Bike_Rodeo_404.2.pdf

Walk/Bike Lesson Plans

A variety of existing lessons and classroom activities are available to help teach students about walking, bicycling, health and traffic safety. These can include lessons given by law enforcement officers or other trained professionals or as a lesson plan developed by teachers. Example topic lessons are: Safe Street Crossing; Helmet Safety; Rules of the Road for Bicycles; and Health and Environmental Benefits of Walking and Biking.

The lessons should be grade-appropriate and can be incorporated into the subjects of health, environment, social science, math and physics.

Sample lesson plans are available at a number of Safe Routes to School program websites:

The National Highway Traffic Safety Administration: http://www.nhtsa.gov/people/injury/pedbimot/bike/Safe-Routes-2002/classact.html

New York State Department of Transportation: https://www.dot.ny.gov/divisions/operating/opdm/local-programs-bureau/srts/srts-curriculum

Traffic safety education

Alameda County SRTS Educator Guide: http://www.alamedacountysr2s.org/tools-and-resources/#educatorguide

School Zone Traffic Safety / Share the Road Campaign

A School Zone Traffic Safety Campaign creates awareness of students walking and bicycling to school. A safety campaign is an effective way to reach the general public and encourage drivers to slow down and look for students walking and biking to school. A School Zone Traffic Safety Campaign uses signs and banners located near schools (for example, in windows of businesses, yards of people's homes and print publications) to remind drivers to slow down and use caution in school zones. This can also be coupled with a "share the road" campaign, which is a commonly known phrase in New York. This campaign can be kicked off at the start of each school year or in conjunction with special events, such as Walk and Bike to School Month, which takes place in October.

Students help with a Share the Road campaign

Banners and signs can be effective tools to remind motorists about traffic safety in school zones. Large banners can be hung over or along roadways near schools with readable letters cautioning

traffic to slow down, stop at stop signs or watch for students in crosswalks with memorable messages such as:

- Give Our Kids a Brake
- Drive 25, Keep Kids Alive (http://www.keepkidsalivedrive25.org/)
- Share the Road (http://sharetheroad.org/)

3.3.2 Encouragement Programs

Walk and Bike to School Day celebrations

Walk and Bike to School Day/Week/Month

Walk and Bike to School Day/Week/Month are special events encouraging students to try walking or bicycling/biking to school. The most well-known of these is International Walk to School Day, a major annual event that attracts millions of participants in over 30 countries in October.

Walk and bike to school days can be held yearly, monthly, or even weekly, depending on the level of support and participation from students, parents and school and local officials. Some schools organize more frequent days – such as weekly Walking/Wheeling Wednesdays or Walk and Roll Fridays – to give people an opportunity to enjoy the event on a regular basis. Parents and other volunteers accompany the students, and staging areas can be designated along the route to school where groups can gather and walk or bike together. These events can be promoted through press releases, articles in school newsletters and posters and flyers for students to take home and circulate around the community.

International Walk to School Day - http://www.walktoschool-usa.org/.

Middle and high school students can put a new twist on common Safe Routes to School activities, such as Walk and Roll to School Days.

Some sample events, developed by students, include:

Green Day/No Cars on Campus

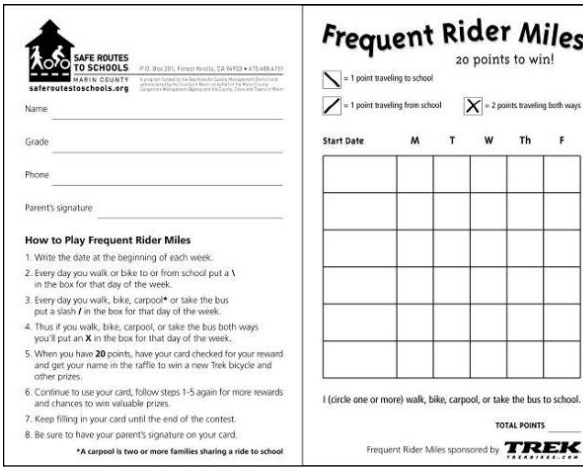
Rather than focusing on walking and biking, No Cars on Campus events focus on everything but cars. These events help promote transit use, and other active modes such as skateboarding. By encouraging everything but car use, teens are thinking about a variety of ways they can travel that are better for the environment and their health. Students can then put on lunch time activities or special presentations in the empty parking lot.

Golden Sneaker Contest

The Golden Sneaker Contest takes the concept of a Walk & Roll to School Day and turns it into a competition between homeroom classes that rewards the classroom with the greatest percentage of green trips (active and shared modes) in a given time period, such as two weeks or one month. Typical tally sheets can be adapted for use in middle and high schools and additional activities can be incorporated into classes, such as calculating total pounds of CO2 saved during the contest. The winning classroom receives a Golden Sneaker trophy. An additional incentive for teens to participate could be a smoothie or pizza party for the winning class. The contest also provides an opportunity to promote a social media campaign at participating schools.

Friendly Walking/Biking Competitions (Incentive Programs)

Contests and incentive programs reward students by tracking the number of times they walk, bike, carpool or take transit to school. Contests can be individual, classroom competition or inter-school competitions. Local businesses may be willing to provide incentive prizes for these activities. Students and classrooms with the highest percentage of students walking, biking or carpooling compete for prizes and "bragging rights." Contests can center around walking or riding a familiar distance, such as the distance from Saugerties to NYC, the length of the Hudson River, or the distance across New York State.


SAFE ROUTES TO SCHOOLS
MARIN COUNTY
saferoutestoschools.org

Name

Grade

Phone

Parent's signature

How to Play Frequent Rider Miles

1. Write the date at the beginning of each week.
2. Every day you walk or bike to or from school put a \ in the box for that day of the week.
3. Every day you walk, bike, carpool* or take the bus put a slash / in the box for that day of the week.
4. Thus if you walk, bike, carpool, or take the bus both ways you'll put an **X** in the box for that day of the week.
5. When you have **20** points, have your card checked for your reward and get your name in the raffle to win a new Trek bicycle and other prizes.
6. Continue to use your card, follow steps 1-5 again for more rewards and chances to win valuable prizes.
7. Keep filling in your card until the end of the contest.
8. Be sure to have your parent's signature on your card.

*A carpool is two or more families sharing a ride to school

Frequent Rider Miles

20 points to win!

\ = 1 point traveling to school

/ = 1 point traveling from school

X = 2 points traveling both ways

Start Date	M	T	W	Th	F

I (circle one or more) walk, bike, carpool, or take the bus to school.

TOTAL POINTS _____

Frequent Rider Miles sponsored by TREK

Example of a Frequent Rider Miles sheet

Small incentives, such as shoelaces, stickers and bike helmets, can be used to increase participation. It can also be effective to allow different grades and schools (high school vs. grade school vs. middle school) to compete against each other in a mobility challenge.

Example of a Pollution Punchcard

Programs can be modified for students who live too far away from school to walk or bike. Modification can include walking or biking at lunch time or gym class. Also, students can count the miles walked or biked to the bus stop or with parents and guardians outside of the school day.

Other Incentives

Incentives can be used to encourage participation in activities and events and for long-term involvement in sustainability efforts on campus. Raffles and awards that include larger give-aways tend to be more appealing to older students, even if fewer people receive the prize.

Effective incentives for teens include:

- Food at meetings or events
- Gift cards
- Technology, such as an iPad or GoPro Cameras for larger competitions
- Bike lights
- Key chains
- Reusable bags with items, such as Bike to Work Day giveaways
- Pencils or other useful school-related items

Other types of incentives:

- Letters of recommendation
- Community service hours
- Credit for service learning projects
- Internship credit
- Special privileges, such as tickets to school events or games, first place in line, etc.

Suggested Route to School Maps

Suggested Route to School maps show stop signs, signals, crosswalks, sidewalks, trails, overcrossings and crossing guard locations around a school. These can be used by families to identify the best way to walk or bike to school.

Liability concerns are sometimes cited by cities or school districts as reasons not to publish walking route maps. While no walking route will ever be completely free of safety concerns, a well-defined route should provide the greatest physical separation between walking students and traffic, expose students to the lowest traffic speeds and have the fewest roadway crossings. Route to school maps should be updated annually, especially in the first few years of implementation and as infrastructure improvements are made.

Walking School Buses

Parents and guardians often cite distrust of strangers and the dangers of traffic as reasons why they do not allow their students to walk to school. Walking School Buses are a way to make sure that children have adult supervision as they walk to school. Walking School Buses are formed when a group of children walk together to school and are accompanied by one or two adults (usually parents or guardians of the

Students participate in a walking school bus

children on the "bus"). As the walking school bus continues on the route to school they pick up students at designated meeting locations.

Walking school buses can be informal arrangements between neighbors with children attending the same school or official school-wide endeavours with trained volunteers and structured meeting points with a pick-up timetable. In this setting, there is opportunity for older siblings to walk their brothers or sisters to local elementary schools, or lead larger walking school buses, either before or after school.

More information about Walking School Buses is available at the end of this document. Additionally, a Walking School Bus "how to" guide is available from the National Center for Safe Routes to School (http://www.saferoutesinfo.org/guide/walking_school_bus/index.cfm).

Bike Trains

A bike train is a group of students riding to school together, usually with adults. However, in middle and high schools, students are old enough to ride on their own. Bike trains can be organized through classes or using an online tool and students can pick up their peers along the way. Holding a bicycle safety class is a great first step to launching a bike train as it provides safety skills that students can practice on their rides to and from school.

Students participate in a bike train

Bike trains can also help to reinforce helmet use among students. Schools should enforce the helmet law for students participating in the bike train. As high school students with helmets become a frequent sight, peers will also be encouraged to wear a helmet. It provides students with an opportunity to lead by example.

Bike Field Trips

Field trips are often organized by renting a bus or going through the tedious process of recruiting parent drivers. Bike Field Trips can be offered as an alternative when the destination is within biking distance and doesn't pose undue hazards. Students who do not own a bike often borrow one for the day in order to join their peers on the field trip. Law enforcement can be involved to monitor the route and/or help direct traffic. Students can be given brief safety updates before the ride. Teachers and other volunteers can ride along to help monitor the ride.

Messaging and Outreach

To promote sustainable transportation choices to youth, communicate using the mechanisms students use and consider appropriate messages. As technology continues to advance, methods of communication do as well. Students are more likely to use their phone than their computers and communicate via text message or app. Students frequently switch to the latest social media platforms and therefore any safe routes to school

program should determine which platform is currently in use but also be prepared for students to switch again mid-stream.

Social Media

Social media can be used to promote clubs, events, and activities that focus on green transportation choices. Students, clubs, and schools may have a Facebook page, Twitter account, or Instagram for photos. It is beneficial to have a broad social media presence since not all teens will use all of these sites.

Promotional Videos

Videos are a great promotional tool that can engage students at every step in the process. Students can be involved in the development, filming, editing, and promotional phases.

Consider creating a YouTube Channel to highlight videos developed by local students and include others that students find inspirational.

If your school or district has media classes, consider hosting a video contest or have students work together to develop short Public Service Announcements about active transportation. The San Ramon Valley Street Smarts' Be Reel Middle School Video Contest has some good resources and examples.

Sample videos developed by or for teens include:

- Alameda County Safe Routes to Schools student-created videos
- Marin Safe Routes to School promotional videos
- Drake High School Distracted Driving video
- Spare the Air Youth Partner Videos

Websites and Blogs

Websites and blogs can be a good way of getting students involved in promoting activities and events. They can support for active transportation modes by showing others that peers are choosing these modes. Students can take turns posting short articles about upcoming or just past events, or about the benefits of exercise and active transportation.

Example blogs include:

- Safe Routes to School National Partnership blog
- San Francisco SRTS blog

Websites that highlight youth involvement in climate change and transportation include:

- The Alliance for Climate Education suggests ways youth can take action to fight climate change through their Do One Thing (DOT) pledge challenge.
- The US Environmental Protection Agency's A Student's Guide to Global Climate Change provides information and tools to learn about climate change.

- Young Voices for the Planet features a film series profiling youth for their low greenhouse gas lifestyles and provides discussion questions for teachers.ManagEnergy Kid's Corner is a project of the Intelligent Energy Europe and includes curriculum materials and activities about reducing fossil fuel and energy use.
- Eco2School team works with classes, clubs and student leaders to develop a comprehensive climate change education program that focuses on student leadership and empowerment.

3.3.3 Enforcement Programs

Radar Trailer

Speed Radar Trailers can be used to reduce speeds and enforce speed limit violations in known speeding problem areas. In areas with speeding problems, police set up an unmanned trailer that displays the speed of approaching motorists along with a speed limit sign.

Example of a radar Trailer

Speed radar trailers can be used as both an educational and enforcement tool. By itself, the unmanned trailer serves as effective education to motorists about their current speed compared to the speed limit, especially in school zones. As an alternative enforcement measure, the police department may choose to station an officer near the trailer to issue citations to motorists exceeding the speed limit. Because they can be easily moved, radar trailers are often deployed on streets where local residents have complained about speeding problems. If frequently left in the same location without officer presence, motorists may learn that speeding in that location will not result in a citation and the strategy can lose its benefits. For that reason, radar trailers should be moved frequently. Radar trailers and police enforcement are recommended on Washington Avenue Extension near the school driveways.

3.3.4 Evaluation Programs

Perform Annual Hand Tally and Parent Surveys

Since 2005, the federal Safe Routes to School program has set aside federal funding to help states, cities, towns and schools increase the number of students walking and biking to school. One requirement of receiving this money is that schools must perform annual hand tally and parent surveys so that the national program can track the effectiveness of the various programs across the country.

The National Center for Safe Routes to School has developed a recommended methodology, survey and count forms and reporting forms (http://www.saferoutesinfo.org/guide/evaluation/index.cfm). A teacher administers the hand tally survey to the students in their classroom. The parent surveys

are either mailed or sent home to parents or guardians. The National Database (http://www.saferoutesdata.org/) stores the data and provides simple analysis reports. The Saugerties Junior-Senior High School should perform annual counts to assist in future grant applications and comply with future funding sources.

Walk Audits

Youth can participate in a walk audit/assessment around their school to identify traffic safety concerns and potential solutions, while learning about urban planning and civil engineering. Ideally, the school can partner with City planners and engineers, who can explain their roles to develop and improve transportation infrastructure.

Students can help design solutions using SketchUp or other online tools, and can write letters of support for grant applications to help fund identified projects.

Section 4. Next Steps

The next steps presented below are intended to allow for a flexible approach to implementation. The decision to undertake a project or program should be made based on the available resources of the school team, the municipality, UCTC, and the NYSDOT.

$	= Minimal to $500	Volunteer effort and low funding required
$$	= $500 to $10,000	Moderate amounts of funding required
$$$	= $10,000 +	High amounts of funding required

Priority Recommendation # 1	Identification of SRTS Facilitator & Initiation of Basic Bicycling and Walking Safety Education
Cost	$
Groups	School Administration, Local Advisory Committee, and UCTC
Description	The school should identify a staff member or volunteer (possibly an interested parent) to facilitate the initiation of the Safe Routes to School Program for the school.

Priority Recommendation # 2	Formation of Safe Routes to School Task Force & Program Promotion
Cost	$
Groups	Safe Routes to School Facilitator and School Administration
Description	The facilitator should reach out to interested persons to begin the formation of an informal SRTS taskforce for the school. The taskforce should include members of the local advisory committee, the Saugerties Complete Streets advisory committee, parents, teachers, school administration and local residents.

Priority Recommendation # 3	Washington Avenue Improvements
Cost	$$
Groups	Safe Route to School Taskforce, School Administration, and the Town of Saugerties
Description	Sign and install bike lanes or a cycle track on Washington Avenue, connecting Main Street to the school, which will open up a safe, quick, and easy route to the school for biking students from the majority of Saugerties. Also, construct the shared use path from the school to the ice rink, along Washington Avenue Extension, and install the raised crosswalk across Washington Avenue Extension. Fill in the sidewalk gaps and install high visibility crosswalks along Washington Avenue, and streets directly connected to Washington Avenue. This will provide access to the school for students who choose to walk and separate them from the motor vehicle traffic.

Priority Recommendation # 4	School Zone Signage and Speed Limit
Cost	$-$$
Groups	Safe Routes to School Facilitator, School Administration, and the Town of Saugerties
Description	The school, through the SRTS taskforce, should reach out to the town of Saugerties to seek written permission to install a school speed zone on the recommended roadway segments. After this approval is granted, high-visibility fluorescent yellow green signs designating the school zone and school zone speed should be installed. Police enforcement and temporary radar trailers can also be used to promote and enforce the new speed limit.

Priority Recommendation # 5	International Walk and Bike to School Day Events
Cost	$$$
Groups	Safe Routes to School Taskforce and School Administration
Description	International Walk to School Day is annually held on the first Wednesday of October and can serve as the kickoff event for the Safe Route to Schools program and be used to raise awareness and enthusiasm. Events can be held including the kick-off of social media awareness around the program, the start of a walking competition, and an assembly can be held. The enthusiasm can be rebuilt in the spring with similar programs surrounding National Bike to School Day, annually held on the first Wednesday in May. Introducing other suggested programs throughout the year should also be a priority. More information can be found at http://www.walkbiketoschool.org/.

Priority Recommendation # 6	Bennett Ave Bicycle Boulevard
Cost	$$$
Groups	Safe Routes to School Taskforce, School Administration, Town of Saugerties, and HITS on the Hudson
Description	Convert Bennett Street into a Bicycle Boulevard, and fill in Sidewalk gaps on Bennett Street. This will create an additional route for students choosing to walk and bike to school, connecting more neighborhoods.

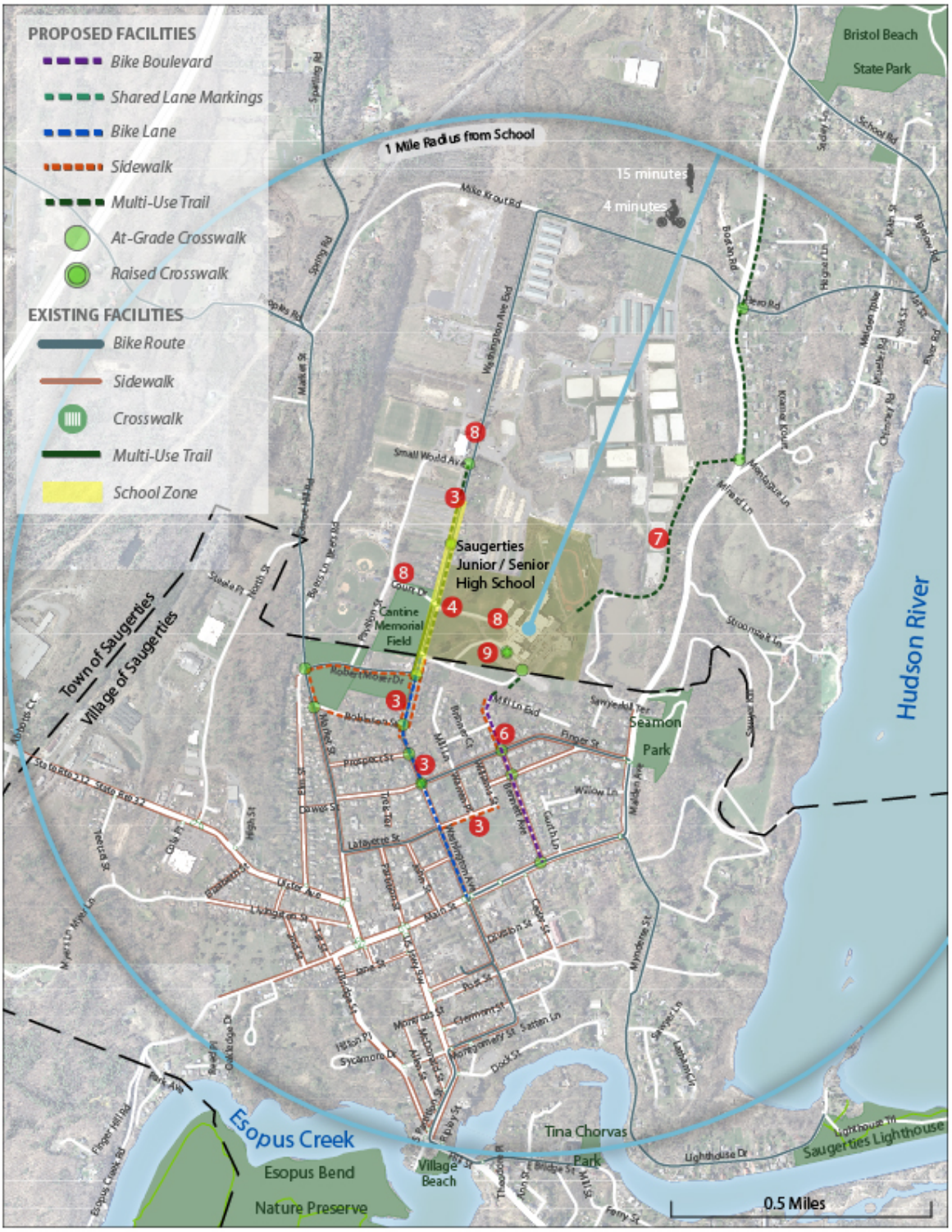
Priority Recommendation # 7	School - HITS Shared Use Path
Cost	$$$
Groups	Safe Routes to School Taskforce, School Administration, Town of Saugerties, and HITS on the Hudson
Description	Work with HITS on the Hudson to obtain a public easement and create a written agreement to use their private bridge and construct a shared use path across the southern property boundaries. Continue the path across the school campus and connect it down to Bennett Avenue. This will create a route for students living in the neighborhoods northeast of the school campus.

Priority Recommendation # 8	Installation of Bicycle Storage at key Locations
Cost	$$
Groups	Safe Routes to School Taskforce, School Administration, Village of Saugerties, and School Board Members
Description	Purchase and install bike racks at each school, located near the entrance in a secure and visible location. Underneath an overhang or some other type of roof structure would be beneficial. Bike racks should also be installed in the park across the street and near the ice rink on Washington Avenue Extension, under similar conditions.

Priority Recommendation #9	Advanced Pedestrian Crossings
Cost	$$
Groups	Safe Routes to School Taskforce, School Administration, and Village of Saugerties
Description	Install the remaining raised crosswalks on Washington Avenue and on the school campus.

Planning Level Costs and Potential Funding Sources				
Recommendations	**Unit**	**Quantity**	**Cost**	**Total**
School Zone Signage	Each	2	$500	$1,000
Sidewalks	Linear foot	5,340	$65	$347,100
High Visibility Crosswalks	Each	24	$1,500	$36,000
School Zone Crosswalks	Each	3	$3,000	$9,000
Raised Crosswalks	Each	5	$7,100	$35,500
Shared Lanes	Linear foot	8,080	$8	$64,650
Bike Lanes	Linear foot	2,480	$12	$29,800
Bicycle Boulevards	Linear foot	1,770	$20	$35,400
Shared Use Path (paved)	Linear foot	6,501	$100	$650,100
Bike racks	Each	8	$500	$4,000
RRFBs (Flashing Beacons)	Each	2	$14,200	$28,400

4.1 Priority Project Map



Section 5. Funding Sources

The following section outlines sources of funding for bicycle, pedestrian, and safe routes to school projects in New York State. Federal, state, local, and private sources of funding are identified. The following descriptions are intended to provide an overview of available options and do not represent a comprehensive list. Funding sources can be used for a variety of activities, including: planning, design, implementation, encouragement, and maintenance. Additionally, the School District should work with the Town of Lloyd to take advantage of funding provided for other roadway projects, such as repaving and water/sewer main replacement to install bicycle and pedestrian accommodations. It should be noted that this section reflects the funding available at the time of writing. The funding amounts, fund cycles, and even the programs themselves are susceptible to change without notice.

Federal transportation funding is typically directed through state agencies to local governments either in the form of grants or direct appropriations, independent from state budgets. Federal funding typically requires a local match of 20%, although there are sometimes exceptions, such as the recent American Recovery and Reinvestment Act stimulus funds, which did not require a match.

The following is a list of possible Federal funding sources that could be used to support construction of many pedestrian and bicycle improvements. Most of these are competitive and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. However, it should be noted that the FHWA encourages the construction of pedestrian and bicycle facilities as an incidental element of larger ongoing projects. Examples include providing paved shoulders on new and reconstructed roads, or building sidewalks, on-street bikeways, trails and marked crosswalks as part of new highways.

MOVING AHEAD FOR PROGRESS IN THE TWENTY-FIRST CENTURY (MAP-21)

The largest source of federal funding for bicycle and pedestrian is the US DOT's Federal-Aid Highway Program, which Congress has reauthorized roughly every six years since the passage of the Federal-Aid Road Act of 1916. The latest act, Moving Ahead for Progress in the Twenty-First Century (MAP-21) was enacted in July 2012 as Public Law 112-141. The Act replaces the Safe, Accountable, Flexible, Efficient Transportation Equity Act – a Legacy for Users (SAFETEA-LU), which was valid from August 2005 - June 2012.

MAP-21 authorizes funding for federal surface transportation programs including highways and transit for the 27 month period between July 2012 and September 2014. It is not possible to guarantee the continued availability of any listed MAP-21 programs, or to predict their future funding levels or policy guidance. Nevertheless, many of these programs have been included in some form since the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991, and thus will be likely to continue to provide funds for active transportation projects and programs into the foreseeable future.

In New York State, federal monies are administered through the New York State Department of Transportation (NYSDOT) and metropolitan planning organizations (MPOs). The Ulster County Transportation Council (UCTC) serves as a Metropolitan Planning Organization (MPO) for the

Kingston Urbanized area as well as the entirety of Ulster County.[5] Most, but not all, of these programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing intermodal connections. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system. There are a number of programs identified within MAP-21 that are applicable to bicycle, pedestrian, and safe routes to school projects. These programs are discussed below. More information: http://www.fhwa.dot.gov/map21/summaryinfo.cfm. Further, UCTC regularly posts notices regarding the availability of Federal funds on its website, listed below.

TRANSPORTATION ALTERNATIVES

Transportation Alternatives Program (TAP) is a new funding source under MAP-21 that consolidates three formerly separate programs under SAFETEA-LU: Transportation Enhancements Program (TEP), Safe Routes to School (SR2S), and the Recreational Trails Program (RTP). These funds may be used for a variety of pedestrian, bicycle, and streetscape projects including sidewalks, bikeways, multi-use paths, and rail-trails. TAP funds may also be used for selected education and encouragement programming such as Safe Routes to School, despite the fact that TA does not provide a guaranteed set-aside for this activity as SAFETEA-LU did. Unless the Governor of a given state chooses to opt out of Recreational Trails Program funds, dedicated funds for recreational trails continue to be provided as a subset of TAP. MAP-21 provides $85 million nationally for the RTP. Complete eligibilities for TAP include:

1. Transportation Alternatives as defined by Section 1103 (a)(29). This category includes the construction, planning, and design of a range of bicycle and pedestrian infrastructure including "on-road and off-road trail facilities for pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990." Infrastructure projects and systems that provide "Safe Routes for Non-Drivers" is a new eligible activity. For the complete list of eligible activities, visit:
http://www.fhwa.dot.gov/environment/transportation_enhancements/legislation/map21.cfm

2. Recreational Trails. TAP funds may be used to develop and maintain recreational trails and trail related facilities for both non-motorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized and motorized uses. These funds are available for both paved and unpaved trails, but may not be used to improve roads for general passenger vehicle use or to provide shoulders or sidewalks along roads. Recreational Trails Program (RTP) funds may be used for:

- Maintenance and restoration of existing trails
- Purchase and lease of trail construction and maintenance equipment
- Construction of new trails, including unpaved trails
- Acquisition or easements of property for trails

[5] Visit http://ulstercountyny.gov/planning/transportation to learn more about the Ulster County Transportation Council

- State administrative costs related to this program (limited to seven percent of a state's funds)
- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a state's funds)

3. Safe Routes to School: The purpose of the Safe Routes to Schools eligibility is to promote safe, healthy alternatives to riding the bus or being driven to school. Education and enforcement projects must be within two miles of primary or middle schools (K-8). Eligible projects may include:
   - Education Efforts: These programs are designed to teach children safe bicycling and walking skills while educating them about the health benefits, and environmental impacts. Projects and programs may include creation, distribution and implementation of educational materials; safety based field trips; interactive bicycle/pedestrian safety video games; and promotional events and activities (e.g., assemblies, bicycle rodeos, walking school buses).
   - Enforcement Efforts: These programs aim to ensure that traffic laws near schools are obeyed. Law enforcement activities apply to cyclists, pedestrians and motor vehicles alike. Projects may include development of a crossing guard program, enforcement equipment, photo enforcement, and pedestrian sting operations.

4. Planning, designing, or constructing roadways within the right-of-way of former Interstate routes or divided highways.

Average annual funds available through TAP over the life of MAP-21 equal $814 million nationally, which is based on a 2% set-aside of total MAP-21 authorizations. Projected apportionments for New York State total $25.8 million for FY 2013 and $32.7 million for FY 2014. Note that state DOT's may elect to transfer up to 50% of TAP funds to other highway programs, so the amount listed above represents the maximum potential funding. To date, however, New York State has supported full funding of the TAP program. Remaining TAP funds (those monies not re-directed to other highway programs) are disbursed through a separate competitive grant program administered by NYSDOT. Local governments, school districts, tribal governments, and public lands agencies are permitted to compete for these funds.

SURFACE TRANSPORTATION PROGRAM

The Surface Transportation Program (STP) provides states with flexible funds which may be used for a variety of highway, road, bridge, and transit projects. A wide variety of bicycle and pedestrian improvements are eligible, including on-street bicycle facilities, off-street trails, sidewalks, crosswalks, bicycle and pedestrian signals, parking, and other ancillary facilities. Modification of sidewalks to comply with the requirements of the Americans with Disabilities Act (ADA) is also an eligible activity. Unlike most highway projects, STP funded bicycle and pedestrian facilities may be located on local and collector roads which are not part of the Federal-aid Highway System. 50% of each state's STP funds are sub allocated geographically by population; the remaining 50% may be spent in any area of the state.

MAP-21 doubles the amount of funding available through the Highway Safety Improvement Program (HSIP) relative to SAFETEA-LU. HSIP provides $2.4 billion nationally for projects and programs that help communities achieve significant reductions in traffic fatalities and serious

injuries on all public roads, bikeways, and walkways. MAP-21 preserves the Railway-Highway Crossings Program within HSIP but discontinues the High-Risk Rural roads set-aside unless safety statistics demonstrate that fatalities are increasing on these roads.

Bicycle and pedestrian safety improvements, enforcement activities, traffic calming projects, and crossing treatments for non-motorized users in school zones are eligible for these funds. NYSDOT estimates that they will receive an average of $92.8 million annually for this program through the lifetime of MAP-21. Despite this relatively large investment, competing transportation investments make these funding sources highly competitive. Furthermore, most Federal funds are limited to federal-aid eligible roads only; functional classification of local roadways can be found on the New York State Functional Class online mapping tool at http://gis3.dot.ny.gov/html5viewer/?viewer=FC. The programming of these funds is coordinated by NYSDOT and the local MPO – Ulster County Transportation Council. When funding is available for programming toward new projects, UCTC will typically conduct an extensive "call for projects" public process in an effort to solicit potential projects for inclusion on the Transportation Improvement Program (TIP). The TIP is typically updated every 2 years and is due for its next update cycle during the 2016 Federal Fiscal Year. Contact UCTC staff at uctc@co.ulster.ny.us to learn more about this process, available funding and associated schedules. The current UCTC 2014 – 2018 TIP can be viewed online at the following address: http://ulstercountyny.gov/planning/transportation-improvement-plan.

COMMUNITY DEVELOPMENT BLOCK GRANTS

The Community Development Block Grants (CDBG) program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal CDBG grantees may "use Community Development Block Grants funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities; paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grants funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs." Safe Routes to School projects that enhance accessibility are the best fit for this funding source. More information: www.hud.gov/cdbg.

ADDITIONAL FEDERAL FUNDING

The landscape of federal funding opportunities for bicycle and pedestrian programs and projects is always changing. A number of Federal agencies, including the Bureau of Land Management, the Department of Health and Human Services, the Department of Energy, and the Environmental Protection Agency have offered grant programs amenable to bicycle and pedestrian planning and implementation, and may do so again in the future. For up-to-date information about grant programs through all federal agencies: http://www.grants.gov/

NEW YORK STATE FUNDING

Several specific NYS funding sources are detailed below; however, the best source of state funding is the consolidated funding application (CFA). The CFA's are typically due in August of each year and the application applies for a variety of state programs and funding.

CONSOLIDATED LOCAL STREET AND HIGHWAY IMPROVEMENT PROGRAM (CHIPS)

A New York State-funded program administered through the NYSDOT to assist localities in financing the construction, reconstruction or improvement of local highways, bridges, highway-railroad crossings and other local facilities. Eligible CHIPS bicycle and pedestrian projects include: bike lanes and wide curb lanes, shoulder improvements, roundabouts, new signs, new or upgraded traffic signals and traffic calming installations (www.dot.ny.gov/programs/chips).

CHIPS funds are administered by local municipalities after they are apportioned to them by the New York State Legislature through the annual NYS budget process. These funds are then used to address necessary road improvements which are prioritized by the local highway department or department of public works in consultation with elected officials through a capital improvement program or other local budgetary structure. Many municipalities rely heavily on these funds for routine annual maintenance of local streets and such work is typically planned several years in advance. Local citizens should therefore contact their elected officials to begin a discussion as to how these funds may be used to address possible pedestrian and bicycle improvements in the future.

NYS DEPARTMENT OF HEALTH- PREVENTATIVE HEALTH AND HEALTH SERVICES (PHHS) BLOCK GRANT

The Preventive Health and Health Services (PHHS) Block Grant provides funding for health problems in the state of New York that range from tuberculosis to adult physical activity. PHHS Block Grant dollars fund a total of 19 different New York State health programs, including the Healthy Heart Program. PHHS Block Grant funds are used to promote and evaluate increases in the number of adults participating in regular sustained physical activity. From 1995-2004, nearly 1.2 million New York State residents received help from local HHP contractors to increase their physical activity levels (www.health.ny.gov/funding/grants/block_grant.htm).

PRIVATE FOUNDATIONS

Private foundations are an increasingly important source of funds safe routes to school planning and implementation. More info: http://www.foundationcenter.org/

[i] Eric Dumbaugh and Wenhao Li, "*Designing for the Safety of Pedestrians, Cyclists, and Motorists in Urban Environments*." Journal of the American Planning Association 77 (2011): 70.