

Saranac River Trail Greenway

FEASIBILITY STUDY | SUMMER 2016

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THE SARANAC RIVER TRAIL GREENWAY WILL BENEFIT EVERYONE



This is wonderful. This is a great idea.

We love trails, this is really cool!

I think this is an awesome idea!! If it's done environmentally friendly what are you waiting for?!!

Great!

This is really cool.

My kids would love this!

Coming from a small town Cadyville this is an amazing project for the community. We've never had much to do and this now gives us the opportunity to adventure beyond our small area.

I'd love a place to go walking.

The trail will pay for itself many times over.

I work with the elderly and the disabled and there is just nowhere to go, we would love to have somewhere to go...

It's so beautiful here it would be wonderful for that to exist here.

I would love to see access to some good fishing spots.

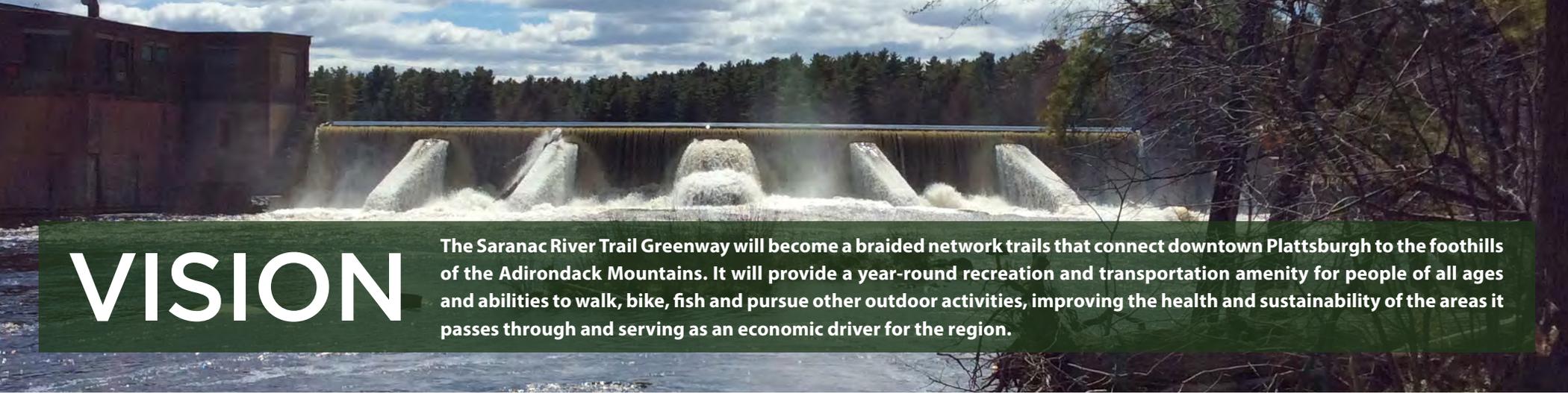
We need more of this.

A safe place for my daughter to ride her bike would be really awesome There just aren't many places on our side of Plattsburgh.

A trail to High Falls would be awesome. I swam there as a girl and I took my grandkids there - it's beautiful.

It's so beautiful here it would be wonderful for [the trail] to exist here.

Text represents a sampling of comments collected at the Clinton County Fair in support of the SRTG.



VISION

The Saranac River Trail Greenway will become a braided network trails that connect downtown Plattsburgh to the foothills of the Adirondack Mountains. It will provide a year-round recreation and transportation amenity for people of all ages and abilities to walk, bike, fish and pursue other outdoor activities, improving the health and sustainability of the areas it passes through and serving as an economic driver for the region.

Executive Summary

Saranac River Trail Greenway (SRTG) is a 27-mile corridor in Clinton County, New York that connects communities along the river from the shores of Lake Champlain into the Adirondack Park. This plan provides the potential alignment for a ‘braided’ network of different trail types, including off-road and on-road trails that will allow people who enjoy walking, hiking, bicycling, paddling, fishing and other trail uses along the greenway. The proposed route is not a single, paved pathway along it’s entire length, but instead provides a combination of shared-used paths, low-volume roadways, natural surface trails, wetland boardwalks and other connections appropriate to the local context of each community.

The SRTG plan is proposed in sections going from east to west, beginning with the existing Saranac River Trail in the City of Plattsburgh and connecting the communities of Schuyler Falls, the Town of Plattsburgh, Morrisionville, Cadyville, Woods Mills,

Saranac, Moffitville and Redford. Each section of the plan is identified with a theme (Section 1: Downtown Connector, Section 2: Hydro Power Alley, Section 3: Adirondack Gateway and Section 4: High Falls

Connector). Important destinations along the way include “Main Street” villages, High Falls Dam, Clinton County Fairgrounds and the natural beauty of the Saranac River landscape. The project will help improve local economies, support public health, and connect people with nature.

The planning process for the SRTG included a review of existing conditions, opportunities and challenges using both digital tools and field work. Public outreach included an active steering committee, public meetings and tabling at the County Fair. Multiple route options were considered for each section, and an evaluation matrix was utilized to identify the proposed trail concept. The proposed trail is identified in sections that can be implemented in phases as opportunities for funding and integration into other infrastructure projects become available over time.

The key to making the SRTG move forward is for this plan to become the vision for a coordinated effort by public, private and non-profit partners. Clinton County has provided the structure for an ongoing collaboration with the municipalities, the existing sections of trail in the City of Plattsburgh have proven that the project is possible, and community support has been evident throughout the planning process. With continued leadership, this plan will be the catalyst for creating the Saranac River Trail Greenway.

The Saranac River Trail Greenway represents a conceptual vision for a connected greenway system extending from Peace Point Park on the shores of Lake Champlain to Pub Hill Rd in the Town of Saranac. The potential alignment for the greenway is identified in this report, which includes both on-road and off-road segments, some of which could affect parcels in public, quasi-public and private ownership. The fact that an alignment is shown on a parcel does not indicate consent – rather it represents a long-term planning objective for where the trail could be routed. As the trail is developed in phases, negotiations with individual property owners will be necessary before each section of the trail can move forward.

SARANAC

SCHUYLER FALLS

27.0 mi

25.0 mi

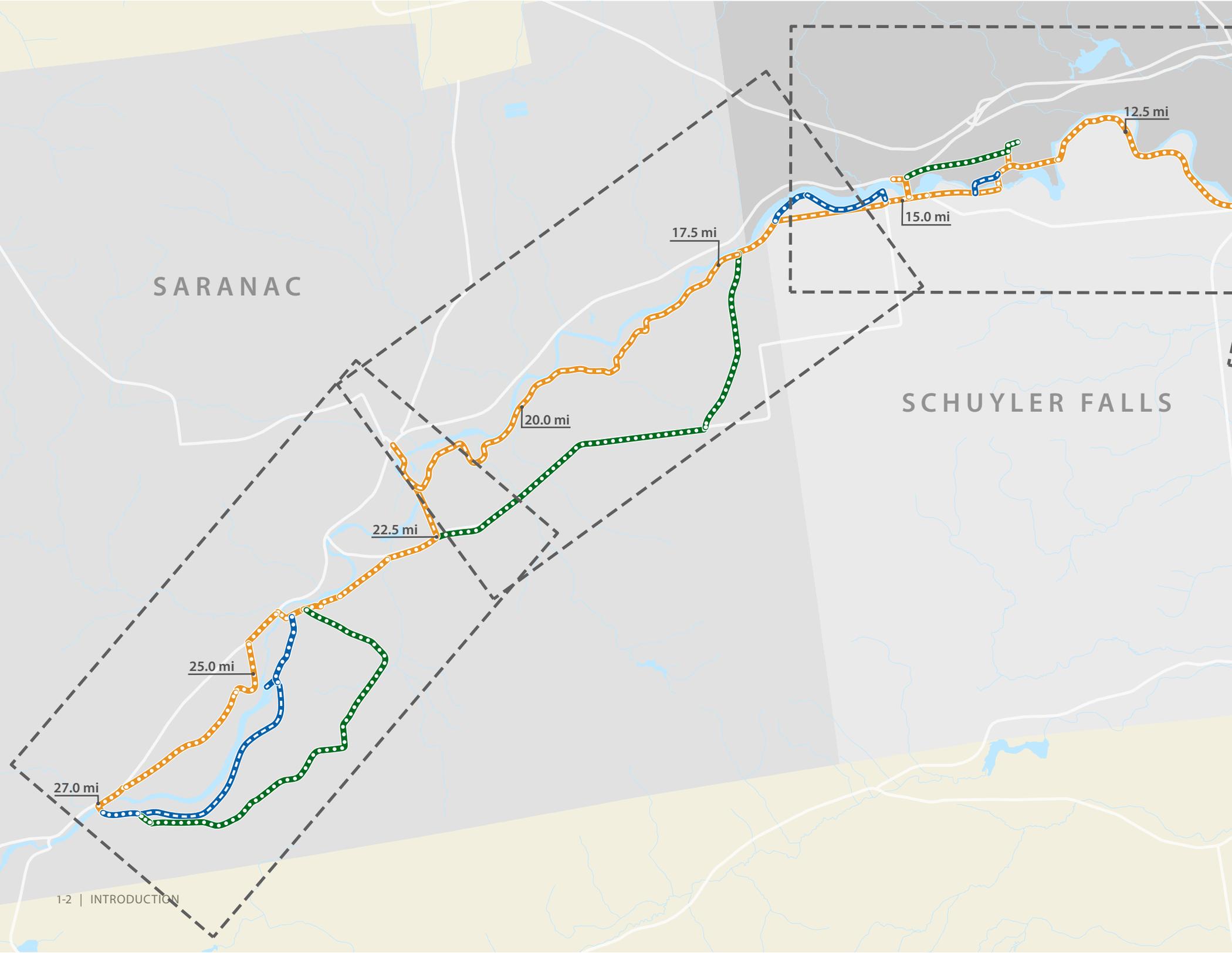
22.5 mi

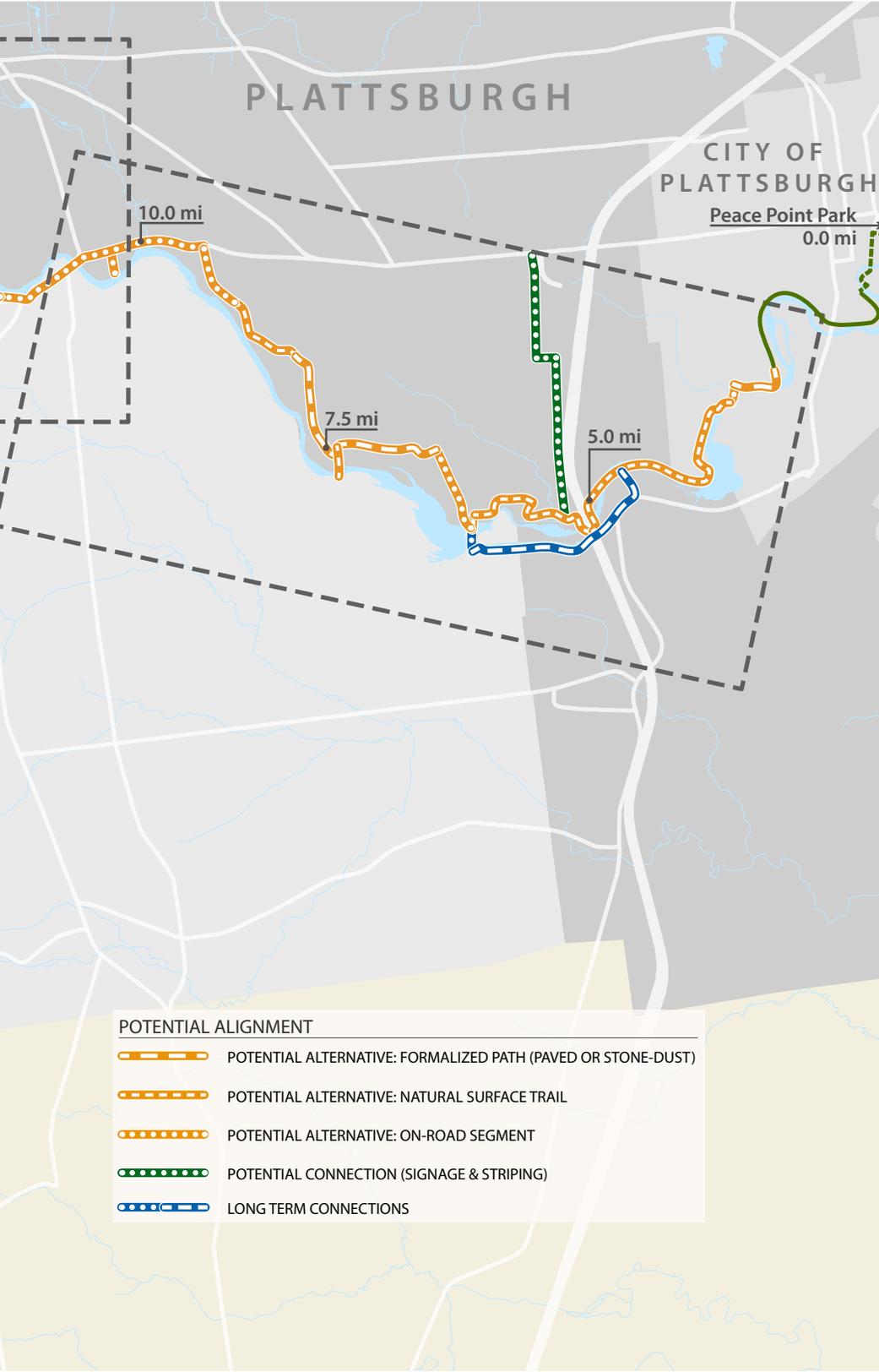
20.0 mi

17.5 mi

15.0 mi

12.5 mi





POTENTIAL ALIGNMENT

Several alignment options were developed for the Saranac River Trail Greenway corridor. To determine the feasibility and desirability of each option, they were evaluated using a set of criteria developed by the planning team in coordination with the Project Advisory Committee and the public. After modifying the alignment to reflect stakeholder input, a potential alignment for the development of a 27 mile greenway extending from the City of Plattsburgh to Saranac was established. This alignment is comprised of a braided network of on-and-off road segments that together form a connected greenway that will link residents and visitors to the many destinations in Adirondack Coast Region and along the Saranac River.

The development of the trail will occur in phases, with the first phase of the SRTG beginning at the end of the existing Saranac River Trail. This plan presents the concept for the alignment as it extends from west from this point, 24 miles into the Town of Saranac. By and large, the trail maintains a close connection with the Saranac River, and it is routed to connect with places that people live, learn, work and play throughout the corridor. Due to topographic challenges and the lack of linear rights-of-way paralleling the river, the surface type of the trail varies along its length to complement the terrain and setting of particular segments.

This report presents the potential alignment for the Saranac River Trail Greenway, dividing the corridor into four sections. Each map identifies several points of interest that will be connected, as well as proposed trailheads and parklet locations that would be integrated into the trail, creating start and end points. The potential alignment is shown on the maps as a gold color, reflecting the standard that greenway seeks to attain. Additionally, corollary on-road segments are identified, as well as long-term alignment options that may not be feasible today for a variety of reasons, but which represent appealing alignments if identified barriers can be overcome. It is important to include these routes as desirable future options, which should be incorporated into the SRTG as funds and momentum allow.



1,178,000 MORE BIKE TRIPS PER YEAR



205,000 MORE WALK TRIPS PER YEAR



\$62,000 IN HEALTH BENEFITS PER YEAR



\$1,394,000 IN TRANSPORTATION BENEFITS PER YEAR



\$36,000 IN ENVIRONMENTAL BENEFITS PER YEAR

over

\$1.4 MILLION

IN TOTAL BENEFITS PER YEAR

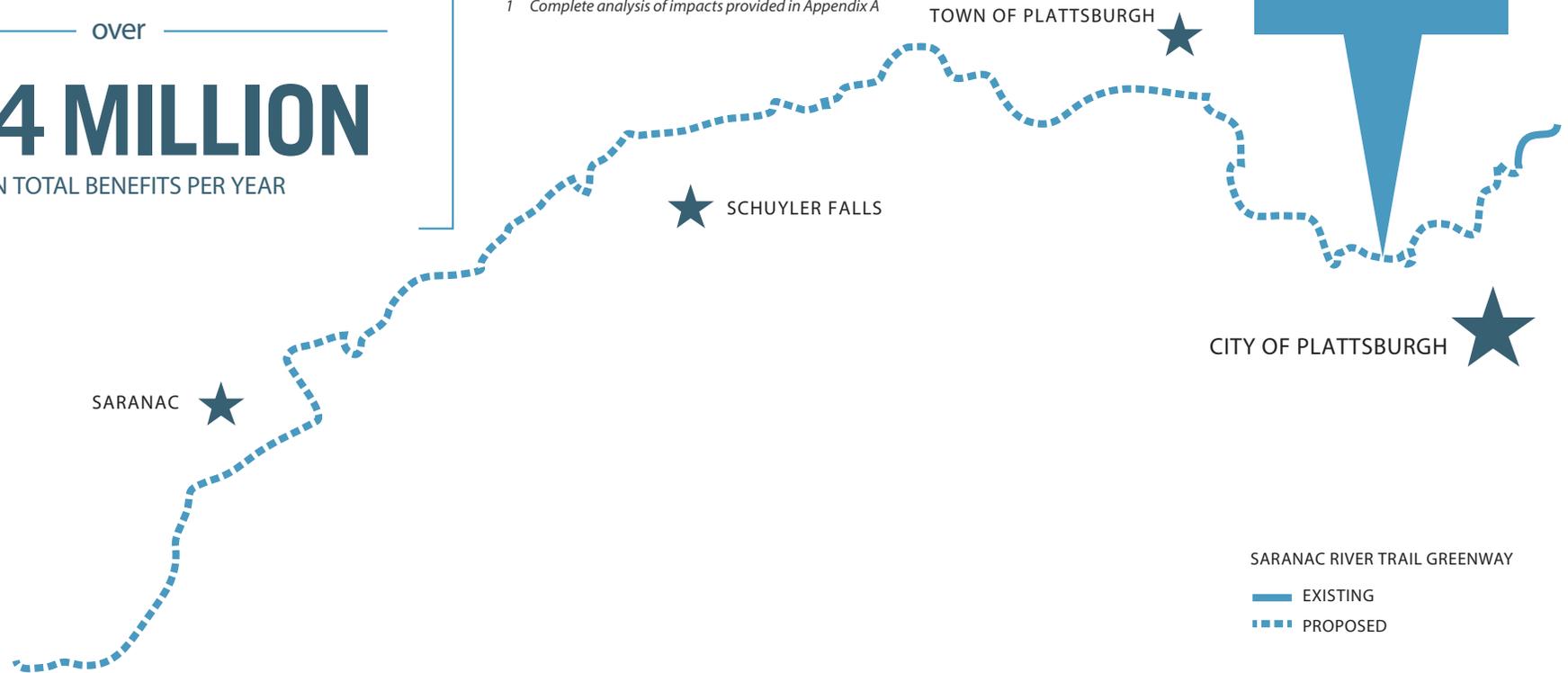
When the SARANAC RIVER TRAIL GREENWAY IS COMPLETE,

CLINTON COUNTY REGION WILL GAIN:

The Saranac River Trail Greenway will connect neighborhoods from the City and Town of Plattsburgh to Schuyler Falls and Saranac, providing residents and visitors a window into the Adirondack Coast and all it has to offer. **Designed for active transportation and outdoor recreation, this path will extend a total of 27 miles, linking residents and visitors to nature, world class fishing, jobs, schools, shopping, restaurants, parks, and other attractions.** With over 1.5 miles already built, the trail system is already bolstering the quality of life in the region.¹

¹ Complete analysis of impacts provided in Appendix A

43,000
PEOPLE LIVE WITHIN A
15 MINUTE BIKE RIDE
OF THE PROPOSED GREENWAY.

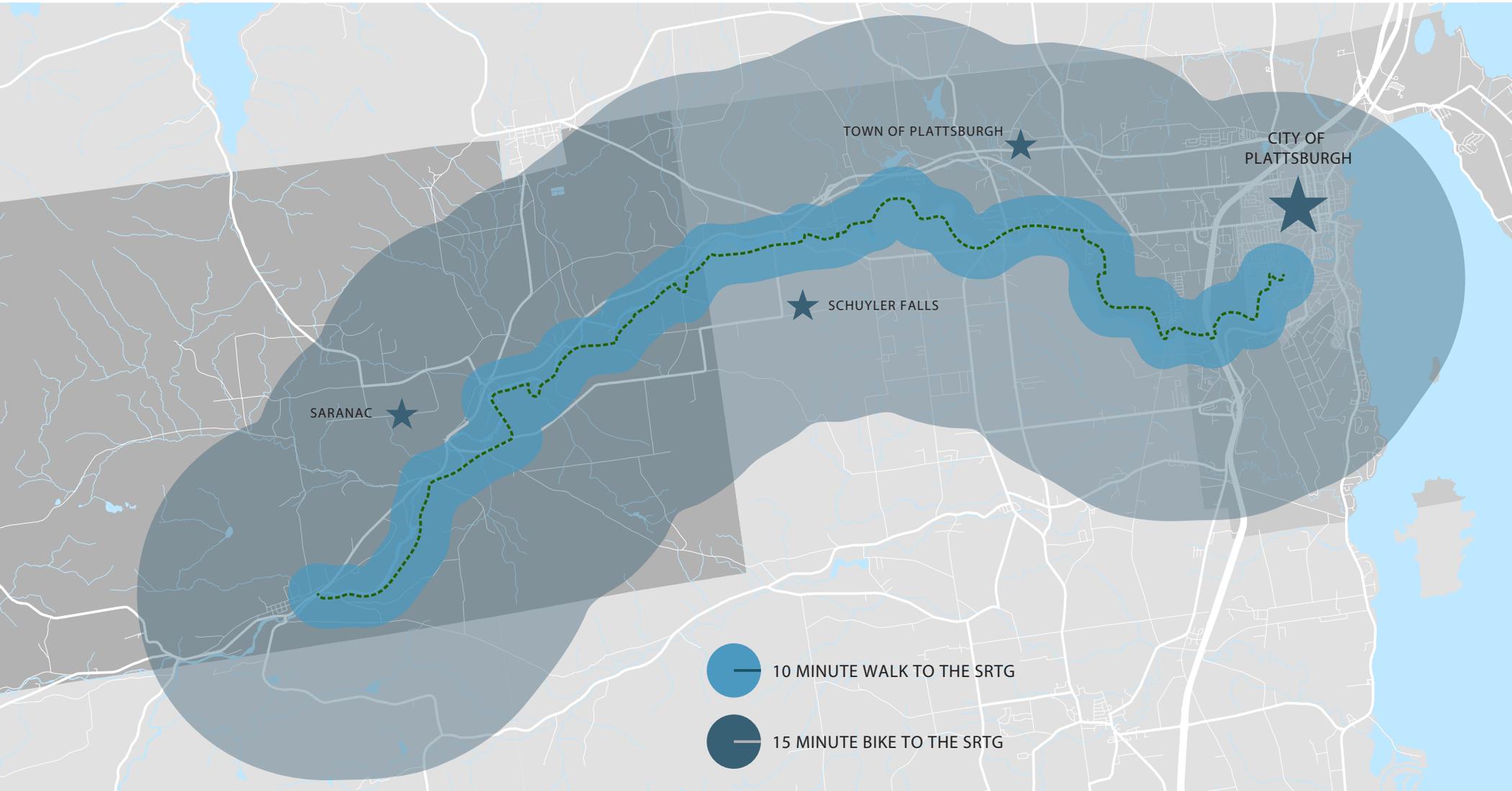


SARANAC RIVER TRAIL GREENWAY
— EXISTING
- - - PROPOSED

Who lives Near the Greenway

While the construction of the Saranac River Trail Greenway will benefit all residents and visitors to the Adirondack Coast region, those living within one-half mile of the trail (about a 10 minute walk) and three miles of the trail (about a 15 minute bike) will have the most convenient access to the Greenway. These neighbors will gain the most from its construction. To calculate what this means, we have estimated impacts of the trail system for residents living within a 10 minute walk and 15 minute bike of the trail. **All estimated values are rounded and should be considered order of magnitude estimates rather than exact amounts.**

UNDERSTANDING ACCESS TO THE SARANAC RIVER TRAIL GREENWAY





The SRTG in Context

The Saranac River Trail Greenway will build upon the completed section of the Saranac River Trail that runs from Plattsburgh High School to the bridge at Durkee St in Downtown Plattsburgh. Plans and designs are moving forward to connect the trail to Peace Point Park on the shore of Lake Champlain. The SRTG will be a westward extension of these portions of the Saranac River Trail, ultimately connecting Peace Point Park to Pup Hill Rd in the Town of Saranac and covering a cumulative distance of 27 miles. The map at right depicts how the SRTG will be integrated into Downtown Plattsburgh, and how this trail system will connect with other non-motorized facilities and routes heading north and south along the shore of Lake Champlain. It is envisioned that the SRTG will become an integrated greenway that seamlessly connects with these other facilities, and together, they will provide residents and visitors with world class amenities that allow them to travel and recreate in the region without a vehicle.

It is most likely that sections of the SRTG will be built in phases, and phases may or may not occur in sequence from east to west. The phases which are implemented largely depend on which sections are funded, and the four municipalities that the trail passes through should coordinate efforts to ensure that the different phases of the trail are developed in a logical manner.



SARANAC RIVER GREENWAY TRAIL
EXTENDS 25 MI to SARANAC

Public Input Summary

The expansion of the Saranac River Greenway trail will affect many stakeholders and property owners, and will require coordination among several public agencies. Do to the scope of the project, a robust public outreach strategy was employed to gather feedback, gain support, and ensure that the final recommendation for the SRTG reflected the public's vision.

Many channels of communication were used to share information throughout the duration of the project. A custom facebook page was set up for the project, and a brochure summarizing it was distributed at events throughout the summer. Additionally, project partners promoted events and meetings using their social media channels, and draft reports were uploaded to the Friends of the Saranac River Trail website for public comment and review.



Public & Stakeholder Outreach

Several public outreach sessions were held over the course of the project, and each provided meaningful input that was incorporated into the final plan. These meetings and outreach sessions included:

- Three Planning Advisory Committee Meetings
- Alternative Alignments public listening session and open house
- A booth at the Clinton County Fair for a week

- SUNY Plattsburgh University Stakeholder meeting and listening session
- Superintendent of Plattsburgh City Schools meeting and listening session

Clinton County Fair

The Clinton County Fair was a particularly successful public outreach method for the project. Since the SRTG covered such a large area, traditional public meeting were expected to reach a relatively small number of people that would be affected by and use the greenway. In order to engage a greater cross-section of those who would likely benefit from the trail, a booth was rented for entire length of the Fair.

At the booth, maps of the alternative trail alignments for the SRTG were laid out on large tables so that the public could view and comment upon them. Over 100 brochures were handed out to people who stopped at the booth, and people's general comments were recorded. Of the 41 comments collected, 38 were positive, three were neutral and none were negative or opposed to the idea of the SRTG. All of the comments are included in Appendix D of this report.

The people that stopped by the table also had the opportunity to have their picture taken in the "What type of trail user are you" photo booth. For those that weren't too shy to have their picture taken, they could stand in the booth and hold up icons representing the types of things they would like to use the greenway to do. This was a great way for people to show that they were supportive SRTG's vision. In total, over 75 pictures were taken, and the cross-section of people that smiled in front of the camera was impressive. From infants and toddlers, to young parents, whole families, empty nesters and grandmas and grandpas, the entire range of people who live and recreate in Clinton County were represented. A sample of the pictures that capture this diversity are displayed in the introduction to this report.



A photo booth was set up at the Clinton County Fair where the public could have their picture taken to show support of the SRTG and display the types of things that they would like to do along it.



Estimating Greenway Benefits

In order to calculate health, environmental, and transportation impacts, this analysis utilizes five-year socio-demographic and travel behavior estimates generated by the US Census Bureau. Currently, less than 1 percent of Clinton County residents bicycle to work and 4 percent walk to work.¹ With better access to trails that connect destinations and jobs, the number of people bicycling and walking in Clinton County will rise to be more in-line with peer cities throughout the United States.

How Clinton County Compares

How will a fully-developed trail network change the way Clinton County residents travel? To better understand this shift, we looked at travel behavior in cities similar to Clinton County and its largest City, Plattsburgh, but with more advanced bicycle and pedestrian networks. These cities, known as peer cities, were selected based on similarities in the design of their street networks, geographic locations, terrain, and the make-up of their populations.

All of the peer cities have achieved Bronze Level League of American Bicyclist's Bicycle Friendly Community[®] award designation. The designation of a city as a Bicycle Friendly

Community[®] or as a Walk Friendly Community[®] represents a significant investment in improving the bicycle and walking environment. Because of this, residents on average are more likely to bicycle or walk in the seven peer cities compared to Clinton County. Currently, only 0.23 percent of the Clinton County population bicycles to work compared to an average of 1.72 percent in the seven peer cities. In addition, 4.4 percent of people in Clinton County walk to work compared to an average of over 6 percent in the peer cities.

Calculating Impacts

A series of over 50 factors from various studies and peer-reviewed journal articles were utilized to convert the estimated number of new bicycle and walking trips that will result from the construction of the Saranac River Trail Greenway into dollar figures. These individual factors are explained in more detail in the Appendix C.

The primary purpose of the analysis is to create a clearer, fuller picture of how the Saranac River Trail Greenway will improve the quality of life of Clinton County-area residents. **The estimated impacts reflect the benefits that may be experienced with the full build-out of the 27 mile trail, and key impacts are shown on pages 1-9 to 1-11.** A more detailed explanation of the results of the benefits model is included in Appendix C.

¹ American Community Survey. (2009-2013).

When the SRTG IS COMPLETE

THE CLINTON COUNTY REGION WILL GAIN



Transportation Benefits

Much of the land that parallels the Saranac River is private or protected, and there is no linear route that people can currently use to access jobs and recreate along it. This means that the approximately 43,000 residents living within one mile of the SRTG do not have access to a connected trail system. The trail system will not only provide new access to trails and recreation for Clinton County's population, but it will also provide access to schools, jobs, retail, and other services.

In addition to improved access, the Greenway will also save money on transportation costs. While money doesn't always change hands, real savings can be estimated from the reduced costs associated with congestion, collisions, road maintenance, and gas. Construction of the trail system will save households over \$.6 million annually in vehicle operation costs and over \$.7 million for the regional transportation costs, for a total of over \$1.3 million in total transportation cost savings for the region.

HOUSEHOLD VEHICLE OPERATION COSTS



\$616,000 IN REDUCED HOUSEHOLD VEHICLE OPERATION COSTS PER YEAR

COMMUNITY-WIDE VEHICLE OPERATION COSTS

\$1,394,000

IN REDUCED COMMUNITY-WIDE VEHICLE OPERATION COSTS PER YEAR



VEHICLE MILES TRAVELED



1,081,000

FEWER MILES TRAVELLED BY AUTOMOBILES EVERY YEAR

TRAIL ACCESS



43,000 RESIDENTS

WITHIN A 15 MINUTE BIKE OF THE GREENWAY WITH NEW ACCESS TO TRAILS

Health and Environmental Benefits

Building a well-designed, connected trail system across Clinton County will encourage a shift from energy-intensive modes of transportation such as cars and trucks to active modes of transportation such as bicycling and walking. While many of the active living-related benefits of a trail network can be difficult to quantify – such as improved mental health, educational growth, connection to nature, and sense of place – a growing body of literature links parks and trails to increased physical activity, decreased healthcare costs, and improved air quality.

The completed Saranac River Trail Greenway will dramatically shape the ability of residents in the region to get out and live more active, healthier lifestyles. Mid-level estimates show that the region could realize an increase of over 1.3 million bicycling and walking trips, remove over 1.6 million pounds of pollutants from the atmosphere, and spur over 187,000 new hours of physical activity.

In addition, studies show that increased physical activity helps seniors stay mentally fit², reduces the risk of coronary heart disease, and even decreases the amount of insulin needed by people with Type I diabetes.³

² Yaffe, Kristine, et al. "More Physical Activity Leads to Less Cognitive Decline." *Internal Medicine*. July 23, 2001. <http://www.american-trails.org/research/benefits/VAcognitive.html>

³ "A Step in the Right Direction." *American Hiking Society*.

When the SRTG IS COMPLETE,

THE CLINTON COUNTY REGION WILL GAIN



WALK TRIPS

65,000
MILES WALKED PER YEAR

That's the equivalent of

21
CROSS-COUNTRY ROAD TRIPS



BIKE TRIPS

1,648,000
MILES BIKED PER YEAR

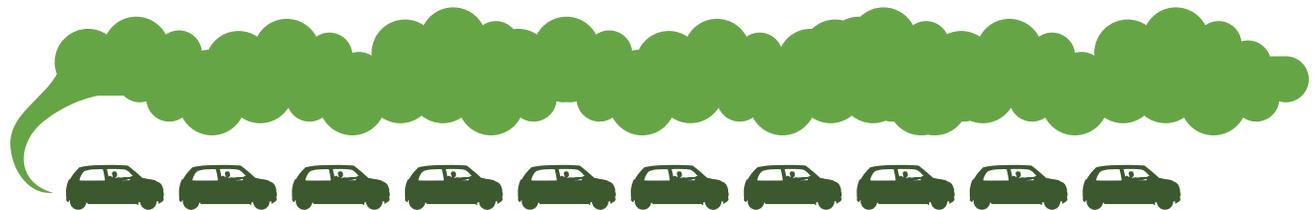
That's the equivalent of



65
TRIPS AROUND THE EARTH!

REDUCED VEHICLE EMISSIONS

\$1,394,000 FROM REDUCED VEHICLE EMISSIONS PER YEAR



When the SRTG IS COMPLETE,

THE CLINTON COUNTY REGION WILL GAIN



Economic Benefits

Creating a major recreational resource like the Saranac River Trail Greenway would attract tourists riding on two wheels, wearing hiking boots, running shoes, and paddling gear, and casting fishing poles, ultimately serving as a needed economic boost to the region.

Tourism represents the use of outside purchasing power to support local businesses, and the ability of Saranac River Trail Greenway to attract tourism spending is an important factor in analyzing the overall impact of the trail system.

While it is difficult to accurately forecast the exact change in tourism spending resulting from the implementation of the Greenway, an examination of current tourism activity and tourism spending near similar, completed trail projects provides a useful proxy for evaluating tourism benefits of the SRTG.¹ Once built, the trail system could generate nearly **\$1.4 million in tourism spending per year**. And when estimating the impact the SRTG will have on adjacent property values, based upon increases in property values seen in other communities where greenways have been implemented, the total estimated **increase in property value will top \$16.3 million**.

¹ Riddel. "A Dynamic Approach to Estimating Hedonic Prices for Environmental Goods: An Application to Open Space Purchase." (2001); "Quantifying the Economic Value of Protected Open Space in Southeastern Pennsylvania." (2010). Econsult Corporation; Campbell and Monroe. "The Economic Impact of the Catawba Regional Trail." (2004); "The Potential Economic Impacts of the Proposed Carolina Thread Trail." (2007). Econsult Corporation; "Valuing the Conversion of Urban Green Space." (2010). Econsult Corporation.

TOURISM SPENDING



\$1,462,200

IN ESTIMATED
TOURISM SPENDING PER YEAR



PROPERTY VALUE



\$16,301,200

IN ESTIMATED PROPERTY VALUE
GROWTH



MASTER MAP KEY

This report presents a highly graphic visualization of the proposed Saranac River Trail Greenway. Several maps were developed to describe the existing conditions of the corridor, opportunities and challenges presented by these conditions, potential alignments for the SRTG, and finally, the potential alignment. Each of these maps includes many icons and other items to convey information about the corridor. In some instances, legends were abbreviated due to space constraints. The legend below is the Master Map Key, and should be referred to when reviewing maps that have an abbreviated legend.

POINTS OF INTEREST		LAND USE AND RIGHTS-OF-WAY	PROPOSED AMMENITIES
 FISHING	 WINTER RECREATION	 WETLANDS	 PROPOSED TRAIL HEAD
 CANOEING	 DAM	 TOWN, CITY, STATE & FEDERAL LAND	 PROPOSED POCKET PARK
 KAYAKING/WHITewater	 MOTOR VEHICLE BRIDGE	 NYSEG OWNED LAND	 KEY SRTG CONNECTION
 PADDLE CRAFT PUT-IN	 PEDESTRIAN BRIDGE	 INSTITUTIONAL / EDUCATIONAL LANDS	
 PORTAGE	 CLOSED BRIDGE	 CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY	
 PARKING	 UNIVERSITY	 DELAWARE & HUDSON RAILWAY	
 PARK	 SCHOOL	 NYS DEC FISHING EASEMENT	
 MOUNTAIN BIKING	 BEACH	 SHARED USE PATH	
 RUNNING	 SENIOR HOUSING	 ABANDONED RAIL LINE	
 HIKING	 TOWN HALL	 SNOWMOBILE TRAIL	
 CAMPING	 AIRPORT	 POWER LINES	
 TRAIL HEAD	 POCKET PARK OPPORTUNITY		
 DISC GOLF	 HISTORICAL MARKER		
 FOOD AND WATER			
 LODGING			

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CHAPTER 2: EXISTING CONDITIONS

The Saranac River Trail Greenway Feasibility Study formalizes a vision for a world-class greenway system that will enhance quality of life, connect communities to public land, and spur economic development opportunities for communities along the 27-mile corridor.



Existing Conditions

Introduction

The Saranac River Trail Greenway (SRTG) concept is the culmination of over two decades of community initiatives aimed at enhancing the region's natural resources and providing citizens with recreation and active transportation opportunities. The commitment of the communities along the Saranac River and the construction of the Saranac River Trail emphasize the wide-ranging support for the completion of a Greenway system along the Saranac River. This chapter summarizes past plans and highlights key initiatives that have been instrumental in progressing forward the SRTG vision. It also identifies the existing trails, access-ways and destinations that the Greenway would connect. The implementation of the SRTG will hinge on the integration of existing trails and rights-of-way along the Saranac River. This chapter includes maps of the corridor that illustrate these existing access-ways, along with the many destinations the SRTG will link.

Summary of Previous Plans & Programs

Assessing the feasibility for a Greenway system between The City of Plattsburgh and The Town of Saranac begins with a review of existing trail proposals, concept studies, and city and town master plans. This review seeks to establish existing support for and recommendations related to non-motorized facilities along the Saranac River corridor.

The following trail concepts and master plans are summarized in this section, organized by Municipality:

- Saranac River Trail Feasibility Study
- City of Plattsburgh Local Waterfront Revitalization Report
- Town of Plattsburgh Comprehensive Land Use Plan
- Town of Plattsburgh Local Waterfront Revitalization Plan
- Town of Plattsburgh Recreational Master Plan
- Town of Saranac Comprehensive Plan and Revitalization Program

Saranac River Trail Feasibility Study (2006)

The Saranac River Trail Feasibility Study prepared by Alta Planning + Design in 2006 helped lay the foundation for the implementation of a two-mile long, 10-foot wide, asphalt, paved, shared-use trail to be built along the Saranac River, between the Imperial Dam west of Plattsburgh High School and the Lake Champlain Waterfront. The study also included the feasibility of a northern extension of the trail to connect to Cumberland Head via the Karen Fleury Bike Path, as well as a western extension in the Town of Plattsburgh terminating at the I-87 bridge. The study identified connections between local schools, the SUNY Plattsburgh Campus, downtown Plattsburgh, residential neighborhoods, and the redeveloped lakefront area. The trail concept included the heritage and history of Plattsburgh and recommended the integration of iconic and significant historic events into the design to tell the story of Plattsburgh. A trail user analysis identifying the wide diversity of users and the common

shared interests among them was developed in an effort to understand and assess the needs of trail users both from the local community members and eco-tourist visitors.

Alta identified several 'next steps' aimed at generating long-term support for a successful River Trail, including forward-thinking planning activities, such as seeking opportunities to preserve the right-of-way during future infrastructural upgrades, identifying state and federal grant funding opportunities, and recognizing the value of the neighborhood clean-ups and trail segment adoptions that are spear-headed by local organizations and agencies. Research on the expected benefits of the trail, utilizing the "BikeCost" model, included a decrease of more than 427,000 vehicle miles traveled (VMT) per year due to the increase of commuter cycling and a decrease of over 81,000 VMT per year as a result of an increase in pedestrian commuting. Additionally, the estimated annual benefits for recreation are over \$244,000, while the annual health care cost savings are over \$11,000.



The Saranac River Trail was completed in 2011, and is the first section of the Saranac River Trail Greenway to be built

A detailed list of opportunities and constraints, alternative trail alignment routes, parcel location and ownership information, and priority project cost estimates with emphasis on maintenance routines following construction establish this study as a benchmark guide to the future successful implementation of Phase II of the Saranac River Trail Greenway.

City of Plattsburgh Local Waterfront Revitalization Report (2010)

The City of Plattsburgh developed an LWRP report in order to coordinate efforts for the revitalization of its waterfront resources among federal, state and local agencies, with the primary goal being to maximize these resources through thoughtful planning among multiple stakeholders. Key objectives of this report are outlined below:

- Increase public awareness of, and accessibility to, the Lake Champlain and Saranac River waterfronts;
- Capitalize on the economic development/downtown revitalization potential of waterfront redevelopment;
- Address ways to accommodate increasing public demand for recreational resources
- Craft a reasonable plan for protecting and enhancing the city's waterfront, cultural, and natural resources.

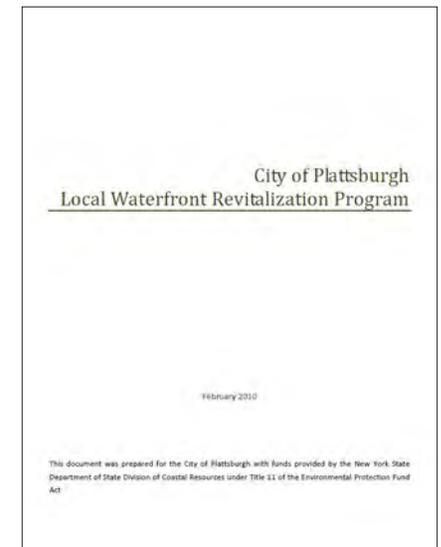
Throughout the time that Plattsburgh has been developing their LWRP, many projects have advanced with EPF LWRP funds through planning, design, feasibility and construction, including Peace Point Park and the first phase of the Saranac Riverwalk. In addition to LWRP funds, the City has made successful use of numerous other federal and state funding programs for community planning, housing rehabilitation and commercial

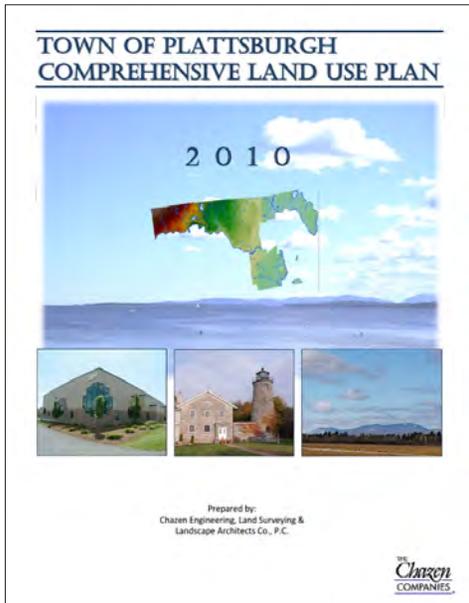


revitalization, such as U.S. Department of Housing and Urban Renewal's Community Development Block Grant (CDBG) programs and New York State programs such as Economic Development Zone designation, RESTORE, AHC and Rental Rehab programs. Significant improvements that have been made include:

- Riverwalk Park: including a picnic area and pedestrian bridge on the south bank of the Saranac River
- Handicapped-accessible fishing dock at McDonough Monument
- Landscape improvements and walkway paving at Champlain Monument
- City Beach
- Heritage Park received a new boardwalk, biking trail, and picnic pavilion

The new boat launch and parking area at Pickett's Corner is one example of a successful LWRP Project that will serve as a destination along the SRTG





- Walking trails linking the city's historic and natural resources

The pursuit of these projects, "are all part of the city's larger vision of creating a system of walking trails and publicly-accessible areas along Lake Champlain and the Saranac River, which will be addressed in the development of this LWRP" (pg. 2).

Town of Plattsburgh Comprehensive Land Use Plan (2009)

When the Plattsburgh Air Force Base closed in 1995, Clinton County moved its airport operations to the former base, opening up a 600 acre parcel along the Saranac River in the heart of Plattsburgh, where the former airport operated. The proposed rezoning of this parcel would accommodate a mix of affordable housing, commercial uses, and conserved lands, accommodate the expansion of existing businesses, and promote professional offices and 'green' or tech related industries. The redevelopment of this parcel would include the preservation of lands adjacent to the Saranac River for pedestrian access.

The Plan also recommends the development of a Local Waterfront Revitalization Program (LWRP) which would establish comprehensive land and water use policies for the Town of Plattsburgh's waterfront resources. This LWRP would lay the framework for the planning of critical waterfront areas and lead to the implementation of improvement projects that would improve the town's appearance, enhance and capitalize on natural resources, and provide an environment that will stimulate economic development. "LWRP's help to identify and attract desirable development, execute waterfront and water quality related projects, secure financial assistance in the form of grants, and ensure federal and state consistency with the Town's waterfront vision and policies" (Town of Plattsburgh

Comprehensive Land Use Plan, pg. 101). The Town's plan will complement the already established City of Plattsburgh LWRP. Additional information about leveraging LWRP projects regionally are provided in the Local Waterfront Revitalization Program section.

The plan identifies the Lake Champlain and Saranac River waterfronts as two of the most important local resources, providing scenic beauty and unparalleled opportunities for recreation. Recommendations include efforts to improve and maintain public and visual access to these resources in addition to preserving and enhancing the respective ecosystems along both waterfronts.

The plan also discusses how the Town of Plattsburgh park system has been expanded and linked by a network of pedestrian/bicycle trails that also connect the Town to the City of Plattsburgh. The trail system is supplemented by an on-going transportation initiative that includes bus service, ride sharing, and community bicycles. Specific recommendations made in the Land Use Plan regarding Town parks include expanding the park system, with an emphasis on more trails and increased waterfront access, in addition to designating and signing a bicycle trail network that would connect to its future off-road trail network. A recommended Recreation Master Plan would include a robust public outreach effort, land acquisitions and programmatic additions, and the planning and development of a town-wide trail system that connects key nodes "such as Town Hall and parks, and it should incorporate the Saranac River" (pg. 98). The recognition of the economic, educational, social, and ecological benefits of green infrastructure in the plan provides documented support for the expansion of the Saranac River Greenway Trail.

Town of Plattsburgh Local Waterfront Revitalization Plan (2015)

This plan, which is still under development, is focusing on the growth and revitalization of hamlets along the Saranac River and

Lake Champlain, including Morrisonville, Cadyville, Treadwells Mills, Cliff Haven, and Cumberland Head. The plan is identifying opportunities to develop better access to the Saranac River for recreational and transportation uses. It is also taking into account the natural, cultural, economic, and recreational resources within the defined project area, including plans to develop the Saranac River Greenway Trail. With a grasp on the resources and character of the area, the plan will identify priority projects that will increase waterfront and community revitalization, including recreational trails, fishing access sites, parks, streetscape enhancements, and programs. The plan is expected to support the expansion of the Saranac River Greenway Trail as a means to promote waterfront access and connect the hamlets.

Town of Plattsburgh Recreational Master Plan (2010)

This plan emphasizes shifting recreational needs and trends based on lifestyle and demographic shifts occurring now and projected into the future. The report states clearly that “current recreational trends are moving towards walking and biking... Recommendations include adding hiking and biking trails, nature trails and water access both to the Saranac River and Lake Champlain” (Pg. ii). Goals include creating an array of recreational opportunities which will attract a diverse citizenry with a variety of interests. This will in turn contribute to the economic health and vitality of the Town and its community members.

The Recreational Master Plan notes a general shortage of water access, trails and bikeways, it states specifically that the Town’s parks could be better connected to surrounding neighborhoods via sidewalks and bicycle trails. The recognition of these missing links within the recreational landscape provides the impetus to improve bikeways, trails, and water access for all users. Separate



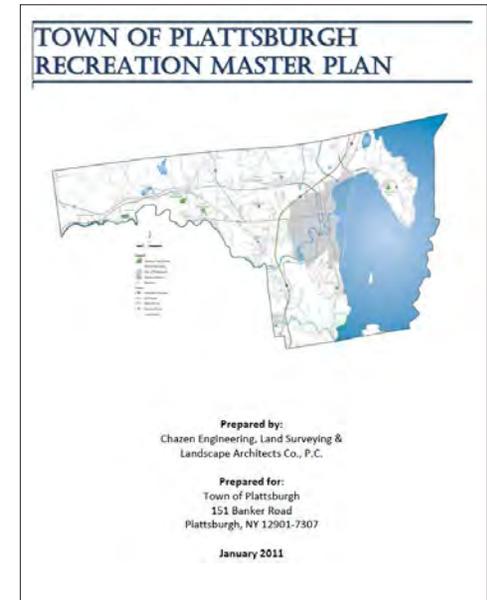
tables within the report list ‘Biking’ under ‘Current Unmet Need’ and ‘Bike trails for both transportation and local and regional recreation’ under ‘Future Unmet Need.’ The report further recommends the addition of bike racks to each park to encourage users to cycle from home to the park. The projected 10 year demographic shift will require an increase in the number of Greenway trails for seniors in addition to people of all ages.

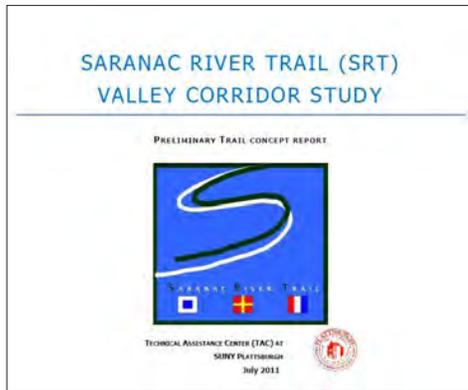
The Recreation plan recognizes the need for an integrated bike trail system that connects parks and locations in Town in addition to existing trail systems at the Town’s borders. A specific recommendation is the extension of the existing trail along the Saranac River from its border with the City to Morrisonville. The plan acknowledges the various landowner entities and stakeholders that would be a part of the trail planning process in addition to the need to think creatively about leveraging one project to help pay for another when securing funding.

Town of Saranac Comprehensive Plan and Revitalization Program (on-going)

The Town of Saranac Comprehensive Plan established 8 primary goals. One of them was to “support traditional recreational uses and provide new recreational choices, both water and land based that meet the needs of residents and tourists alike without compromising the Town’s healthy environment.” In order to accomplish this goal, the plan created a set of next-steps to be implemented. These steps included developing a system of signs and wayfinding, working with local cycling groups, and developing a network of trails for different uses based upon successful Adirondack trails. The plan studied tourism for the

Locals have long recognized the benefits a greenway system along the Saranac River would provide





town and found that bicycling was an important part of the tourist economy. The plan also recognized the resources that were available to the Town of Saranac, and the benefits that would come from developing scenic and recreational trails along the Town of Saranac’s Waterfront.

Trail Concepts

The vision for the SRTG has been progressed for more than a decade. The construction of the Saranac River Trail in 2011 marked the implementation of the first link of the larger Greenway system. Since, focus has been placed on expanding the system westward towards the Adirondack Park. This section summarizes the plans that have identified opportunities for routing the SRTG.

Saranac River Trail Valley Corridor Study – Preliminary Trail Concept Report (2011)

In 2010, a task force convened to discuss the future of the Saranac River Trail beyond the City of Plattsburgh. The group consisted of many diverse stakeholders including representatives from the Clinton County Health Department, SUNY Plattsburgh, the City of Plattsburgh, the Town of Plattsburgh, the Town of Saranac, Eastern Adirondack Healthcare Network, The Development Corporation of Clinton County, and the Saranac River Trail Advisory Committee. The decision they made was to hire the Technical Assistance Center (TAC) at SUNY Plattsburgh to draft a preliminary concept plan including the following tasks:

- Organize and convene the SRT task force
- Measure bicyclist and pedestrian usage of the SRT and within Clinton county
- Community outreach
- Obtain input from municipalities
- Identify and define trail projects

- Create a list of prioritized trail projects
- Create concept map

Community input was requested via a newspaper article. Eight comments were received by the TAC project director via telephone or email. Thirty-six attendees participated in two public meetings. Project research and document review revealed many references in favor of expanding, linking, and completing the Saranac River Trail. Additionally, the study forecasted that the passage of the Complete Streets policy in the New York State legislature -- which requires “consideration of people of all ages walking, riding bicycles, driving cars, and taking public transportation in any transportation project that uses federal and state funds, including the construction, reconstruction, restriping, and rehabilitation of roadways” -- would have major implications on biking and walking facilities within the state.

This report did not investigate property rights and estimates for potential path segments are conceptual only. The report identifies proposed alignments, priority projects, opportunities, constraints, and maps of proposed trail alignments and potential areas of interest and future project areas. Priority projects were prioritized utilizing three factors:

1. Ease of implementation
2. Community input regarding priorities
3. Provision of connectivity to existing trail

Additional Trail Concepts

Additional trail concepts have been developed by various stakeholders, but have not been formalized or published. These ‘back of a napkin’ ideas have been captured through multiple rounds of communication with the Project Advisory Committee, and will be taken into consideration when developing alternative alignments for the SRTG.



Community Connections and Support

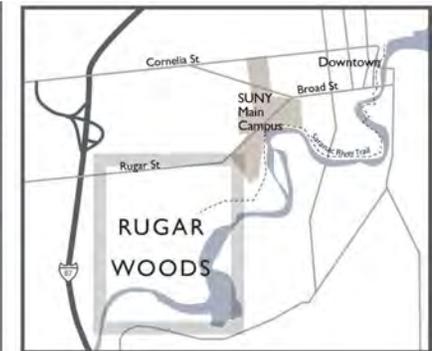
The SRTG is intended to connect many existing trails, including hiking, biking, fishing, and winter recreation trails, as well as countless destinations located along the Saranac River from the City of Plattsburgh to the Town of Saranac. This section identifies these trails and access-ways, and also the many supporters of the Greenway expansion, including both public, private and non-profit parties partners, that have collaboratively sought the completion of the Saranac River Trail Greenway.

Trails + Access Ways

The implementation of the SRTG will hinge on the integration of existing trails and rights-of-way along the Saranac River. This section identifies trails and access-ways along the river that could serve as Greenway alignment opportunities and connections.

Rugar Woods

Rugar Woods features wildlife viewing points and 10 miles of recreational trails that community members and SUNY Plattsburgh students often bike, hike, run, and walk. Additionally, students conducting research use Rugar Woods as a field site. Rugar Woods was the site of the 2005 State University of New York Athletic Conference Cross Country Championships. The SUNY map of Rugar Woods highlights the Saranac River Trail extension from Rugar Woods to downtown Plattsburgh. Rugar Woods contains approximately 1.6 miles of frontage along the Saranac River.



Rugar Woods is an actively managed forest preserve along the north/west bank of the Saranac River. Managed and owned by SUNY Plattsburgh, the preserve offers hiking, biking, running, orienteering and winter recreation opportunities. With approximately 1.6 miles of frontage along the Saranac River, it is popular among SUNY Plattsburgh and Plattsburgh City School students and faculty, who study, live and work nearby.



Image Left: High Falls Dam boasts a deep gorge and rushing water, yet few know about this beautiful destination

Image Below Left: NYSEG provides public access at several locations along the Saranac River, which include parking, information and trails



New York State Electric & Gas Hydroelectric Dams

New York State Electric and Gas (NYSEG) owns and operates hydroelectric dams along the Saranac River, and is supportive of the vision of the SRTG.¹ The banks of the Saranac River near the dams are accessible to the public for walking and hiking, and represent an important destination point along the SRTG. Trailheads are provided at these access locations, complete with small parking areas and visitor information. Maps at the sites detail portage take out and put in locations, portage routes, public access points, location of floating barriers, and parking areas. The image at right shows one example of a trailhead provided by NYSEG.

High Falls Dam: High Falls Dam has a portage take-out that follows the NYSEG Access Road on the south side of the Saranac River. There are two additional white-water portage put-in points on the north side of the Saranac River, accessible via the NYSEG Access Road off of Route 3. Public access parking is available where the Access Road terminates at the white-water put-in point. High Falls Dam is a likely destination location for trail users as it provides beautiful scenery.

Cadyville Dam: Cadyville Dam has a portage structure on the North side of the Saranac river just before the floating barrier. Paddlers portaging from this area will walk down Park Row and cross an abandoned railroad en route to the access point between Mill C and Kents Falls dams.

Mill C Dam: Mill C Dam is located just West of the Goddeau Rd. bridge and has no portage structures. Parking to access Mill C Dam is located on Kents Falls Road. Access to the dam is beyond the gated NYSEG Access Road.

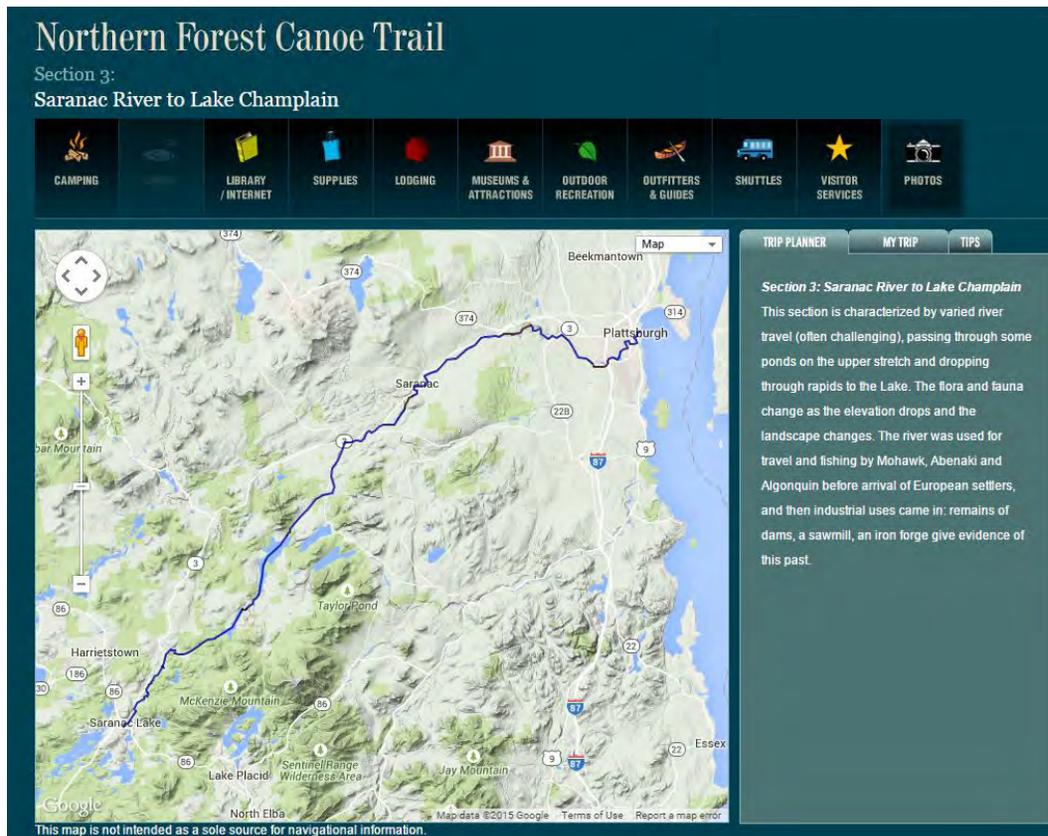
Kent Falls Dam: Kent Falls Dam is one of the newer dams on the Saranac, completed in 1991. Portagers entering the Saranac on the north side of the River just before Kents Falls Dam must quickly cross the River to exit at the next portage. Public access parking is on the North side of the Saranac River at the closed Kents Falls Road bridge. There is a popular white-water portage put-in point just after the Kents Falls dam. The final portage put-in point is at the end of the .5 mile penstock at the Kents Falls Powerhouse.

Imperial Dam: The Imperial Dam was originally built in 1819 to supply process water and electricity to the Imperial wallpaper mill. Rebuilt in 1903, it was renamed Imperial Dam and continues to breed controversy today. Environmental advocates argue that the dam no longer serves its intended purposes of flood water retention or electricity generation. Additionally, the dam prevents salmon from reaching 15 kilometers of pristine spawning habitat. Money set aside for a fish ladder has yet to be spent due to structural deficiencies revealed during an inspection. There's been documented interest in removal of the dam and efforts need to be coordinated with the development of the SRTG. More detail will be provided as to the specifics of the dam's future in the opportunities and challenges section of this report.

¹ The planning team led a conference call with representatives from NYSEG to discuss alignment options proposed to be routed upon NYSEG lands. NYSEG indicated that they must allow public access on some of their property for recreational use as a condition of their permits. In discussing the potential SRTG alignment, NYSEG indicated that it did not see issue with them in concept, except with one option on the south side of the river near the Kent Falls Dam. The potential alignment was subsequently updated to reflect this comment. NYSEG noted that while they need to provide public access to the river, trail users should be protected and prevented from accessing the river adjacent to their intakes. This concern and restriction has been noted in the report. In general, NYSEG was supportive of the SRTG vision and the trail development because it would help demonstrate to the Federal Energy Regulatory Commission (FERC), who issues NYSEG's permits, that they are complying with the public access condition of their permits. Any section of trail that has the potential to be routed on NYSEG property will need to be coordinated with and require the approval of NYSEG.

Northern Forest Canoe Trail

The 740 mile Northern Forest Canoe Trail (NFCT) includes a significant segment along the Saranac River. Section 3 of the trail begins at Saranac Lake and follows the Saranac River through the Town of Saranac and Plattsburgh to Lake Champlain. Paddlers often stay at Baker's Acres Campground in Saranac. Paddlers would benefit from greater access to shops, restaurants and lodging along the river, and also be provided with the opportunity to walk/bike from the river to these destinations, through the implementation of the SRTG.



The Northern Forest Canoe Trail (NFCT) is a popular blueway trail that runs along the Saranac River from Old Forge to Lake Champlain, and is an important blueway connection for the SRTG. Section 3 of the NFCT travels through the study area, and is characterized by varied river conditions (often challenging), including rapids on the way to Lake Champlain

New York State Department of Environmental Conservation (NYSDEC) - Public Fishing Rights

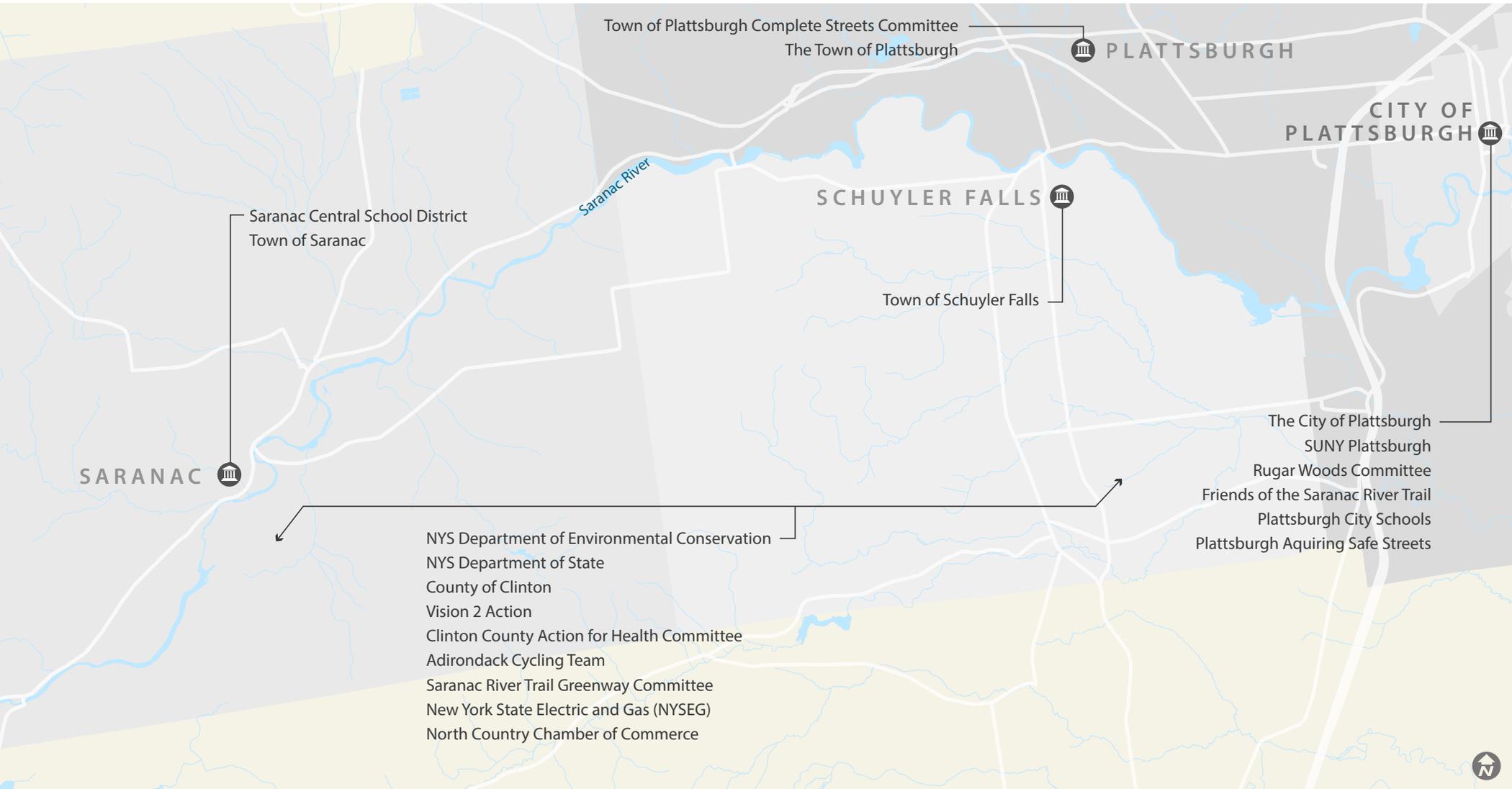
The NYSDEC has secured permanent easements from willing landowners to allow anglers the right to fish and walk along the banks of streams and rivers in designated areas. According to maps provided by NYSDEC, there are nine segments of NYSDEC easements along the Saranac River between Cadyville and the City of Plattsburgh. It is important to note that this easement is strictly for the purpose of fishing, and that courtesy and respect towards the land and its owner will ensure continuation of this right and privilege. See existing conditions maps 3 and 4 for specific locations. Currently, these easements only allow fishing access. These easements could potentially be amended to allow other non-motorized uses, such as walking and biking, and therefore are opportunities, but cooperation and negotiation with property owners would be necessary and their potential use represents a long term planning objective.



The NYSDEC has secured easements across private property to provide public fishing access.

Community Supporters

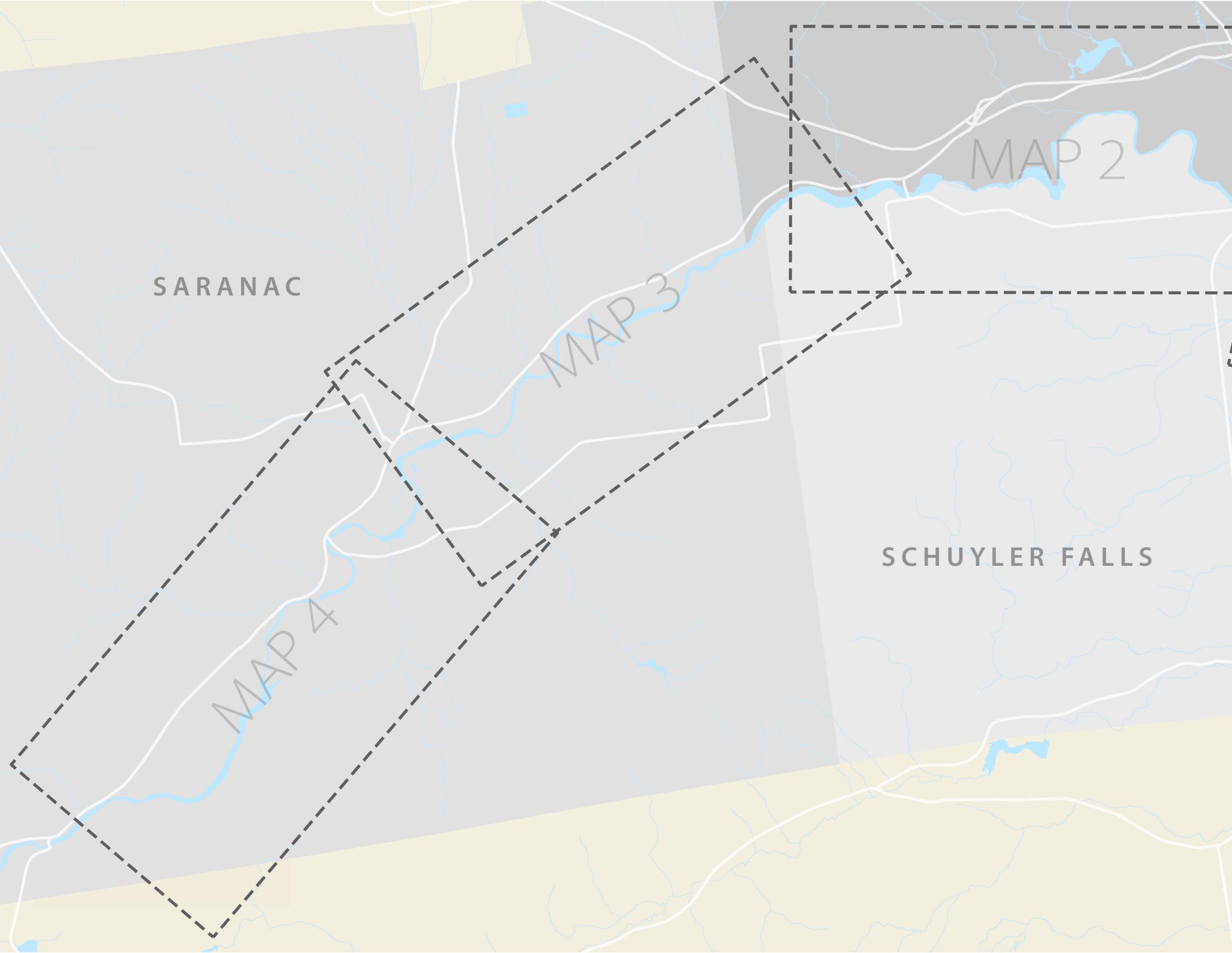
The development of the Saranac River Trail Greenway has broad-based support from public, private and non-profit agencies. The health, economic and environmental benefits that would result from the Greenway's completion has led these agencies to seek its implementation. The SRTG will only come to fruition through partnerships across jurisdictions and coordination among multiple stakeholder groups. The community supporters listed in this section then are instrumental in progressing the vision of the SRTG. The geographic distribution of these stakeholders is displayed in the map below, and their affiliation with the SRTG is identified on the subsequent page.



PUBLIC & PRIVATE AGENCIES	
Organization	Affiliation With SRTG
County of Clinton	Administering the grant for the SRTG Feasibility Study and supports the development of the Greenway.
City of Plattsburgh	Developed LWRP encouraging community recreational use of Saranac River waterfront.
Town of Plattsburgh	Recreation Master Plan supports westward expansion of SRTG.
Town of Schuyler Falls	Proposed trail alignment travels through Schuyler Falls and the Town supports the development of the Greenway.
Town of Saranac	Proposed trail alignment ends in the Town of Saranac and the Town supports the development of the Greenway.
SUNY Plattsburgh	Existing trail segment heavily used by both students and employees of SUNY Plattsburgh. Supports extension of Greenway and recognizes its marketing potential.
Plattsburgh City Schools	Greenway would pass near the high school, and it would provide students, faculty and staff with an active recreation and transportation corridor.
Town of Plattsburgh Complete Streets Committee	The extension of the SRTG is consistent with the mission of the Complete Streets Committee, which seeks to make travel by all modes of transportation safe and viable.
NYS Department of Environmental Conservation*	The NYSDEC owns easements along the Saranac River that provides anglers the right to fish along private property, and NYSDEC is supportive of the SRTG because it has “recreational and economic development potential”.
NYS Department of State	THE NYSDOS funded the SRTG westward expansion feasibility study. EPF LWRP funds have been used for a wide variety of planning, feasibility, design and construction projects contributing to the SRTG effort.
Clinton County Action for Health Committee	Committee focused on identifying and implementing ways to reduce chronic disease in the community through enhanced nutrition and physical activity initiatives.
Saranac Central Schools	Potential trail alignment offers healthy options for students and employees traveling to and from schools.
Rugar Woods Committee	SUNY Plattsburgh-sponsored committee that helps plan future use of Rugar Woods.
North Country Chamber of Commerce	Representatives from the Chamber of Commerce acknowledge the benefits that the SRTG would bring to local businesses.

COMMUNITY GROUPS	
Organization	Affiliation With SRTG
Vision 2 Action	Engaged body of citizens in Clinton County that provides direction to leaders in planning for the future of the community. The projected local economic and health benefits of the SRTG are consistent with V2A's mission.
Friends of the Saranac River Trail	Nonprofit focused on completion and maintenance of the SRTG within the City of Plattsburgh.
Saranac River Trail Greenway Committee	Nonprofit focused on completion of the westward expansion of the SRTG to the Town of Saranac.
Adirondack Cycling Team	Organization that helps to foster the growth of bicycle touring within the Adirondack coast area, to promote the health and fitness of members in a safe, social, and fun way.
Plattsburgh Acquiring Safe Streets	Group of citizens who successfully advocated for a road diet resulting in the addition of bicycle lanes on North Margaret Street (State Route 9) in the City of Plattsburgh.

* These easements could potentially be amended to allow other non-motorized uses, such as walking and biking, and therefore represent opportunities, but cooperation and negotiation with property owners would be necessary and their potential use represents a long-term planning objective. NYSDEC is supportive of the vision of the SRTG. The planning team led a conference call with a representative from NYSDEC who said they support the vision of the SRTG because of its recreational and economic development potential, which are two key goals of the agency.



SARANAC

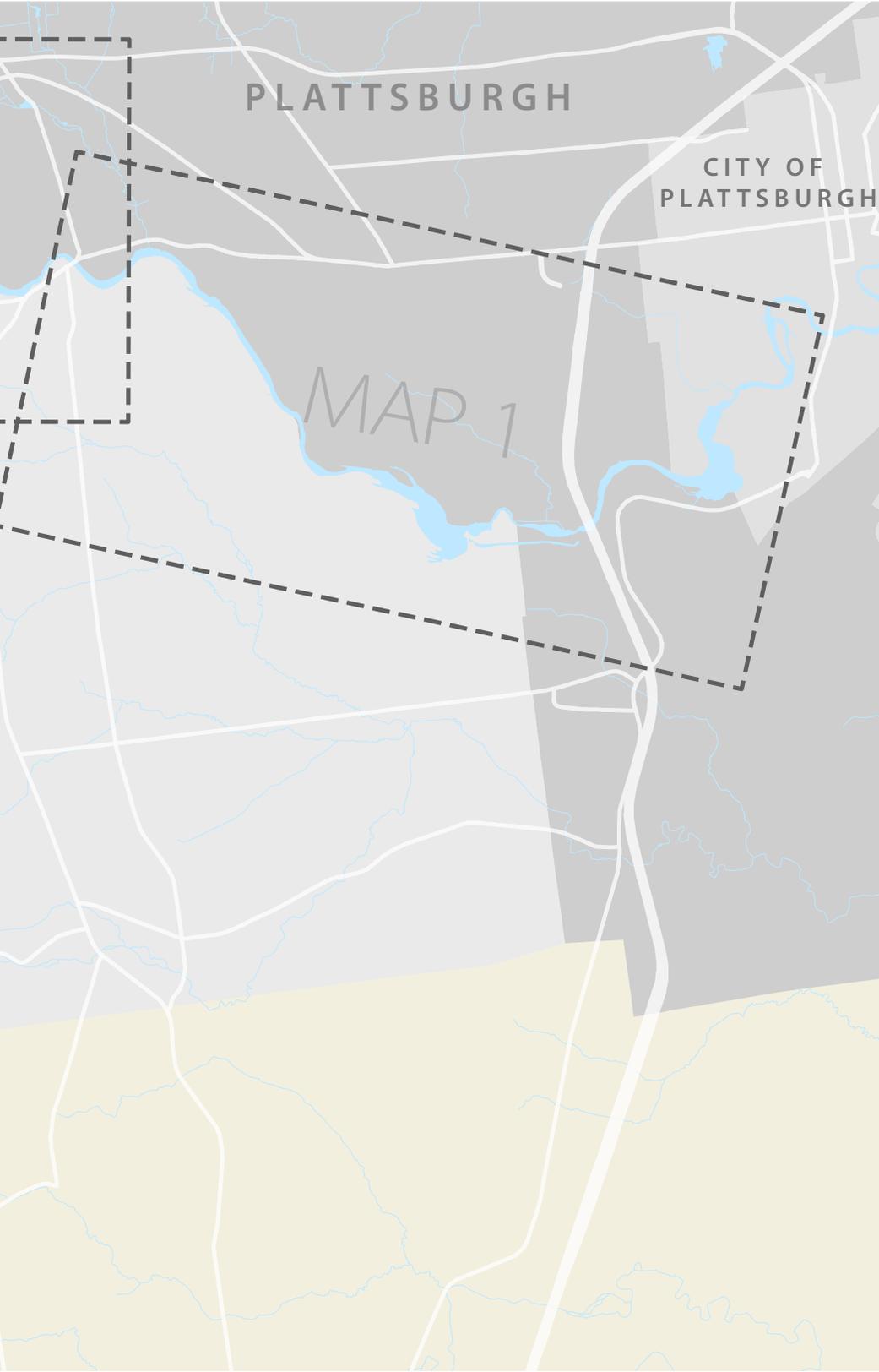
MAP 2

MAP 3

MAP 4

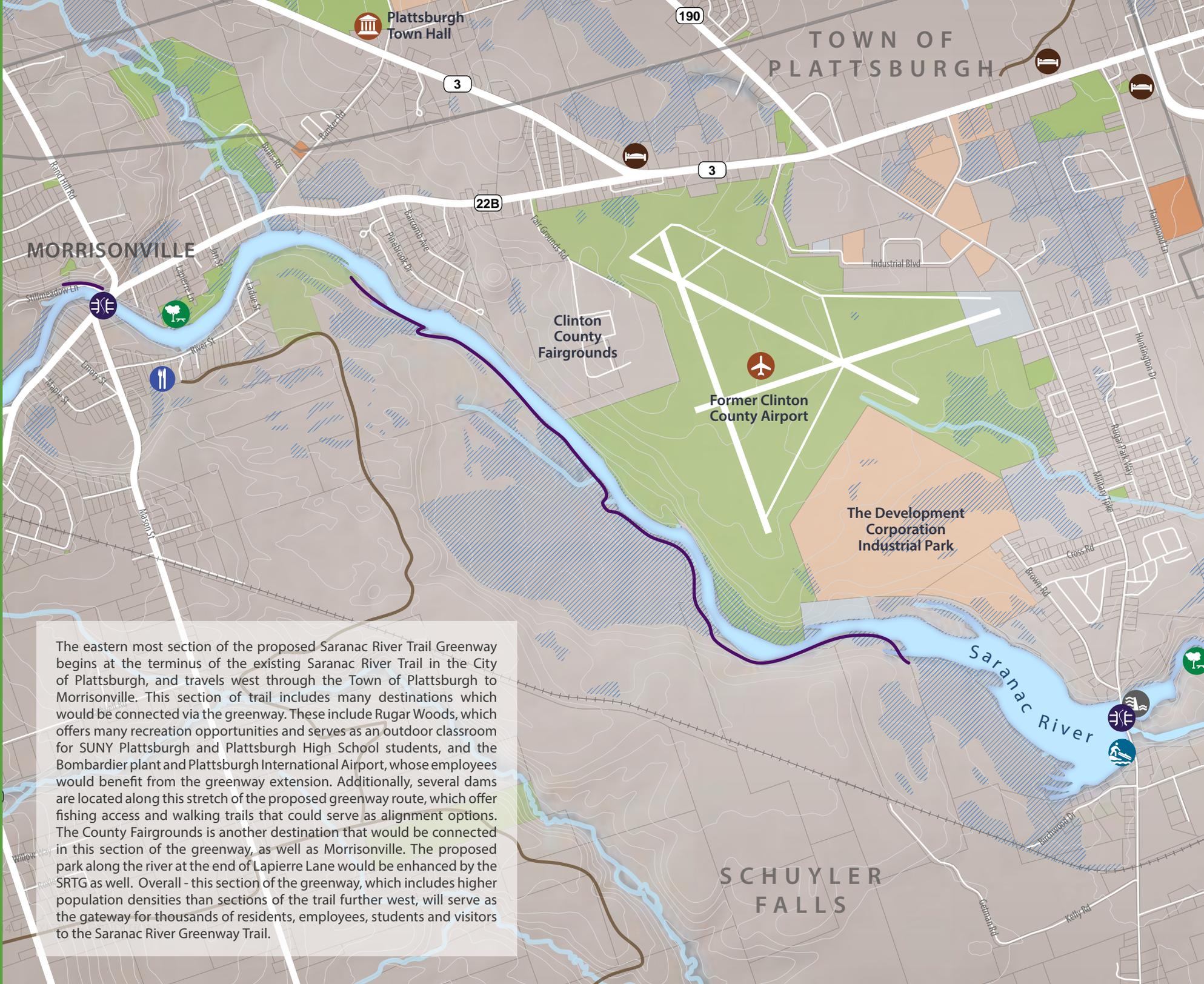
SCHUYLER FALLS

MAP 1



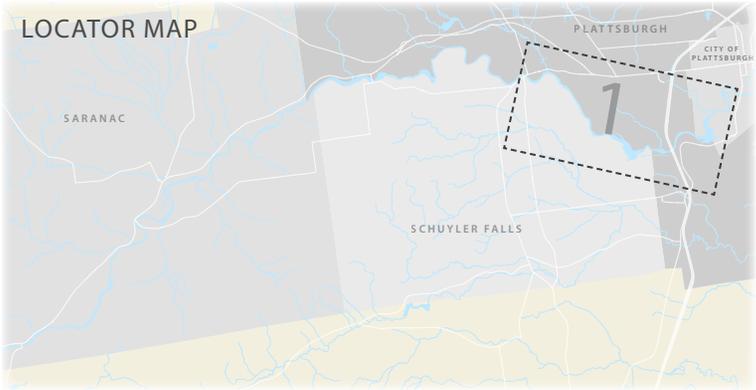
CONNECTIONS

The Adirondack Coast is rich with recreational opportunities during all seasons of the year. The proximity of hiking, cycling, canoeing, whitewater kayaking, and winter recreation activities to the city, town centers and surrounding neighborhoods encourages the frequent pursuit of outdoor adventures. There are many important, beautiful, and historic destinations along the Saranac River corridor between the The City of Plattsburgh and Towns of Plattsburgh, Schuyler Falls, and Saranac. Connections between neighborhoods, schools, scenic places of leisure, and employment/economic centers are critical for the success of the Saranac River Trail Greenway. These key destinations are highlighted on the following four maps (the coverage of each section map is shown on the overview map to the left). The maps also identify existing accessways to the Saranac River, including fishing access, NYSEG properties, electric power line rights-of-way, and natural surface trails. These existing roadways, routes and accessways provide alignment opportunities for the SRTG. Following each of the four destination maps, maps with photographs of important sections along the corridor are also provided that help tell a story about the existing conditions along the Saranac River. The maps extend from east to west, beginning at the terminus of the existing Saranac River Trail.



The eastern most section of the proposed Saranac River Trail Greenway begins at the terminus of the existing Saranac River Trail in the City of Plattsburgh, and travels west through the Town of Plattsburgh to Morrisonville. This section of trail includes many destinations which would be connected via the greenway. These include Rugar Woods, which offers many recreation opportunities and serves as an outdoor classroom for SUNY Plattsburgh and Plattsburgh High School students, and the Bombardier plant and Plattsburgh International Airport, whose employees would benefit from the greenway extension. Additionally, several dams are located along this stretch of the proposed greenway route, which offer fishing access and walking trails that could serve as alignment options. The County Fairgrounds is another destination that would be connected in this section of the greenway, as well as Morrisonville. The proposed park along the river at the end of Lapierre Lane would be enhanced by the SRTG as well. Overall - this section of the greenway, which includes higher population densities than sections of the trail further west, will serve as the gateway for thousands of residents, employees, students and visitors to the Saranac River Greenway Trail.

Data Source: NYS Department of Environmental Conservation, Google Images, Bing Images, GoAdirondack.com, SUNY Plattsburgh, NorthernForestCanoeTrail.org, Clinton County



- | | |
|---------------------|----------------------|
| FOOD & WATER | LODGING |
| FISHING | WINTER RECREATION |
| CANOEING | DAM |
| KAYAKING/WHITEWATER | MOTOR VEHICLE BRIDGE |
| PADDLE CRAFT PUT-IN | PEDESTRIAN BRIDGE |
| PORTAGE | CLOSED BRIDGE |
| PARKING | UNIVERSITY |
| PARK | SCHOOL |
| MOUNTAIN BIKING | BEACH |
| RUNNING | SENIOR HOUSING |
| HIKING | TOWN HALL |
| CAMPING | AIRPORT |
| TRAIL HEAD | |
| DISC GOLF | |

- NYS DEC FISHING EASEMENT
 - SHARED USE PATH
 - ABANDONED RAIL LINE
 - SNOWMOBILE TRAIL
 - POWER LINES
-
- WETLANDS
 - TOWN, CITY, STATE & FEDERAL LAND
 - NYSEG
 - INSTITUTIONAL / EDUCATIONAL LANDS
 - CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY
 - DELAWARE & HUDSON RAILWAY





Plattsburgh Town Hall

TOWN OF PLATTSBURGH

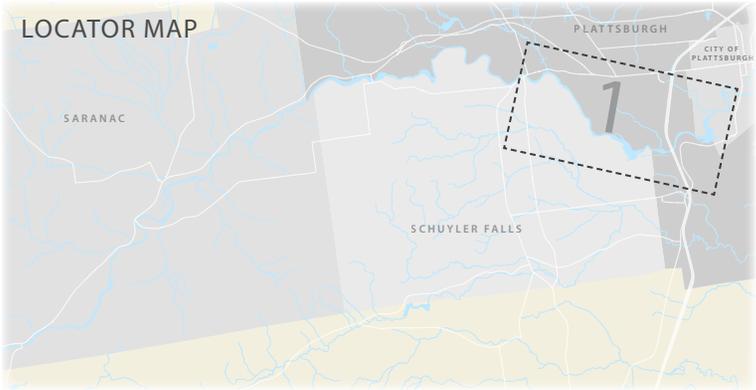
MORRISONVILLE

Clinton County Fairgrounds

Former Clinton County Airport

Saranac River

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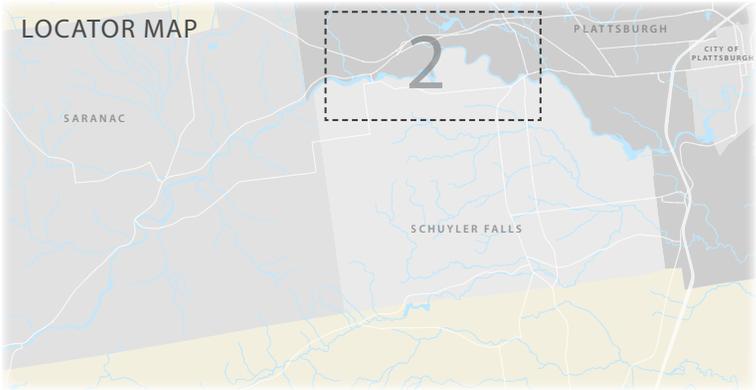
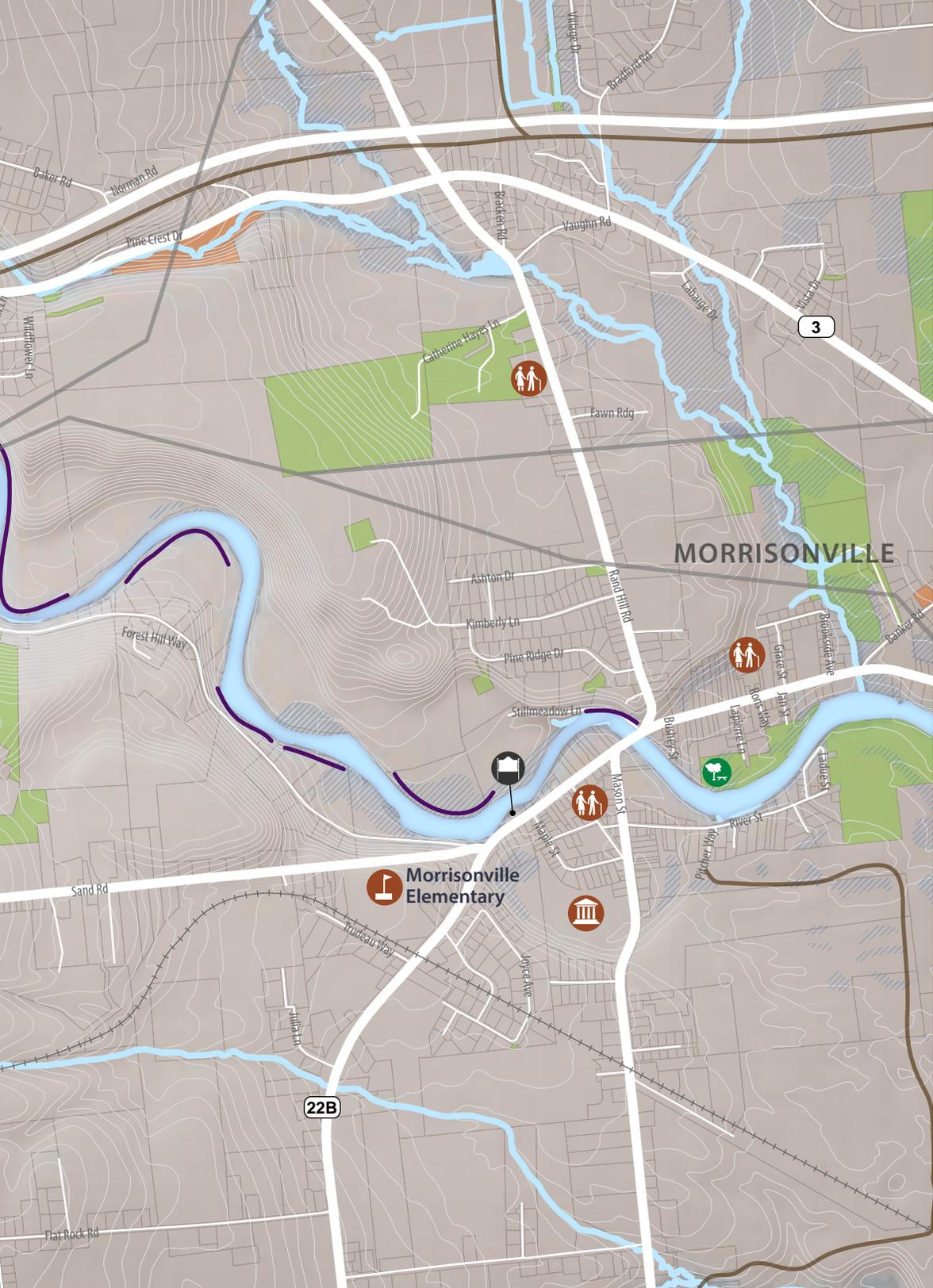


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|--|---------------------|--|----------------------|
| | FISHING | | WINTER RECREATION |
| | CANOEOING | | DAM |
| | KAYAKING/WHITEWATER | | MOTOR VEHICLE BRIDGE |
| | PADDLE CRAFT PUT-IN | | PEDESTRIAN BRIDGE |
| | PORTAGE | | CLOSED BRIDGE |
| | PARKING | | UNIVERSITY |
| | PARK | | SCHOOL |
| | MOUNTAIN BIKING | | BEACH |
| | RUNNING | | SENIOR HOUSING |
| | HIKING | | TOWN HALL |
| | CAMPING | | AIRPORT |
| | TRAIL HEAD | | |
| | DISC GOLF | | |
-
- NYS DEC FISHING EASEMENT
 - SHARED USE PATH
 - ABANDONED RAIL LINE
 - SNOWMOBILE TRAIL
 - POWER LINES

The second section of the proposed Saranac River Trail Greenway continues through Morrisonville and Cadyville in Plattsburgh and through Woods Mills in Schuyler Falls. This section of trail includes many destinations which would be connected via the greenway. These include Morrisonville Elementary School, Kents Falls Dam, Mill C Dam, Cadyville Dam, Cadyville Park, Cadyville Town Beach, and Gougeville Spring. The connection between places of learning and employment and recreation opportunities, including activities such as cross country skiing, disc golf, mountain biking, hiking, running, fishing, and swimming at Cadyville Town Beach offer numerous benefits for a variety of trail users along this portion of the corridor. Overall – this section of the greenway connects the hamlets of Cadyville and Morrisonville through picturesque woods, and would provide a recreational jump-off point for residents of the hamlets and The Town of Plattsburgh.



Data Source: NYS Department of Environmental Conservation, Google Images, Bing Images, GoAdirondack.com, SUNY Plattsburgh, NorthernForestCanoeTrail.org, Clinton County

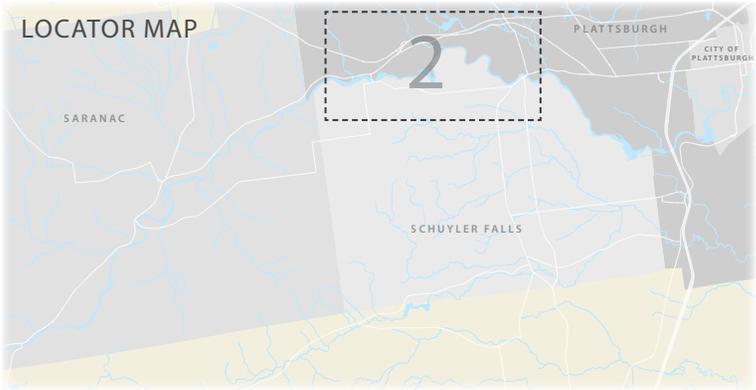
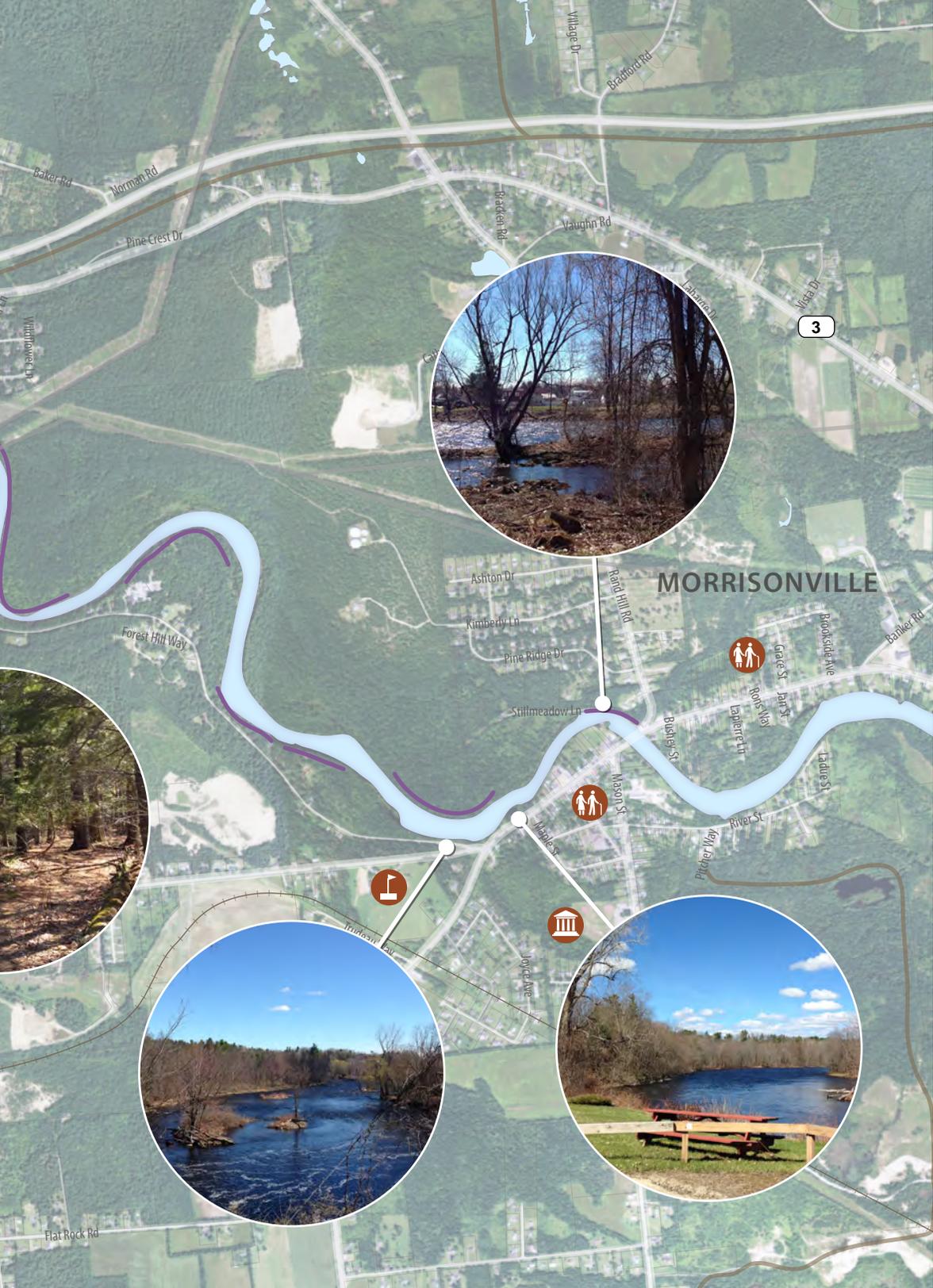


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|--|---------------------|--|----------------------|
| | FOOD & WATER | | LODGING |
| | FISHING | | WINTER RECREATION |
| | CANOEING | | DAM |
| | KAYAKING/WHITEWATER | | MOTOR VEHICLE BRIDGE |
| | PADDLE CRAFT PUT-IN | | PEDESTRIAN BRIDGE |
| | PORTAGE | | CLOSED BRIDGE |
| | PARKING | | UNIVERSITY |
| | PARK | | SCHOOL |
| | MOUNTAIN BIKING | | BEACH |
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| | TRAIL HEAD | | |
| | DISC GOLF | | |
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- NYS DEC FISHING EASEMENT
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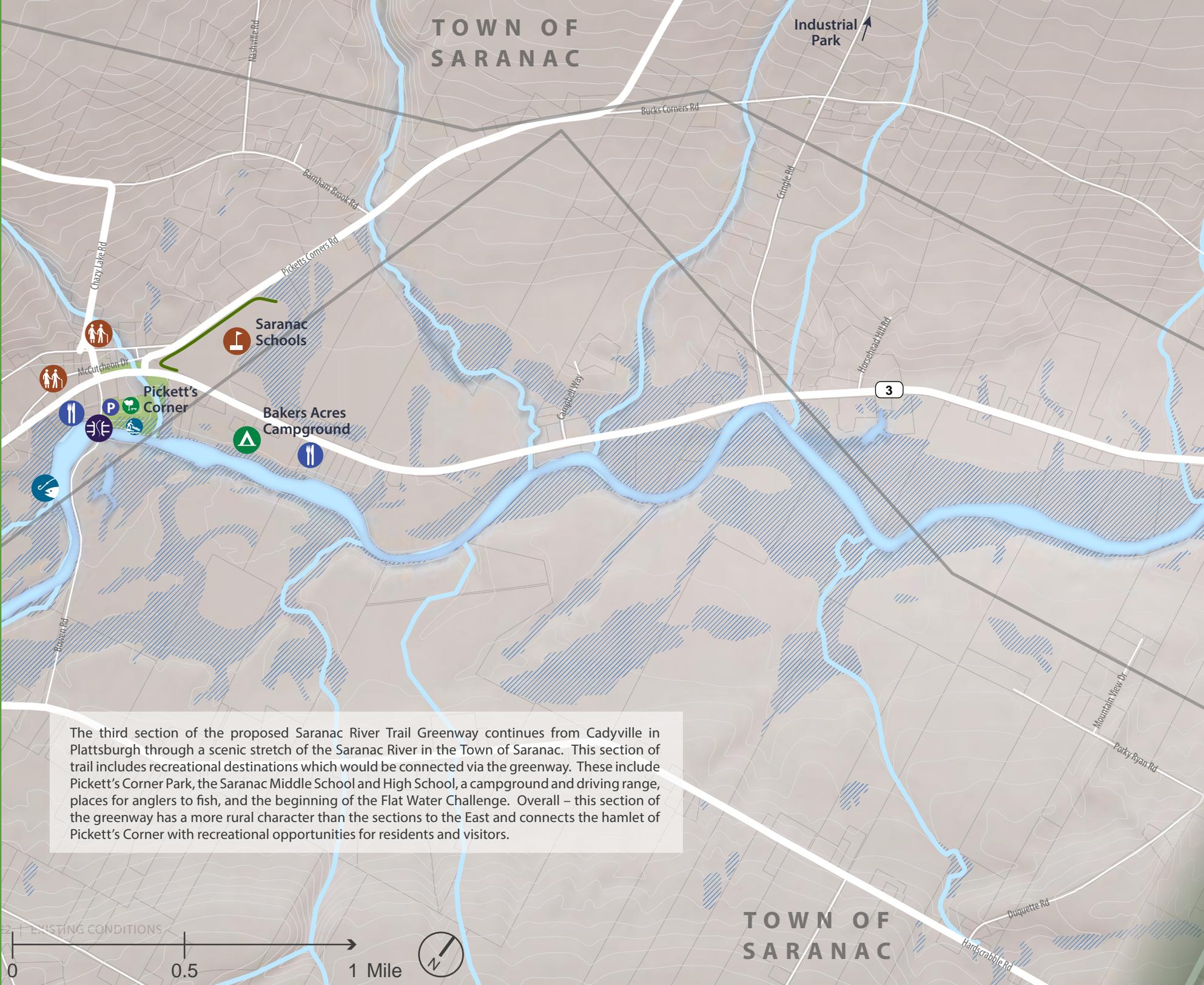
TOWN OF PLATTSBURGH



Data Source: NYS Department of Environmental Conservation, Google Images, Bing Images, GoAironadack.com, SUNY Plattsburgh, NorthernForestCanoeTrail.org, Clinton County



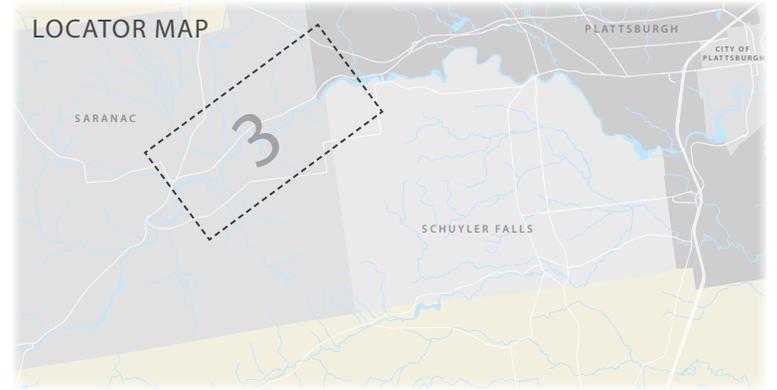
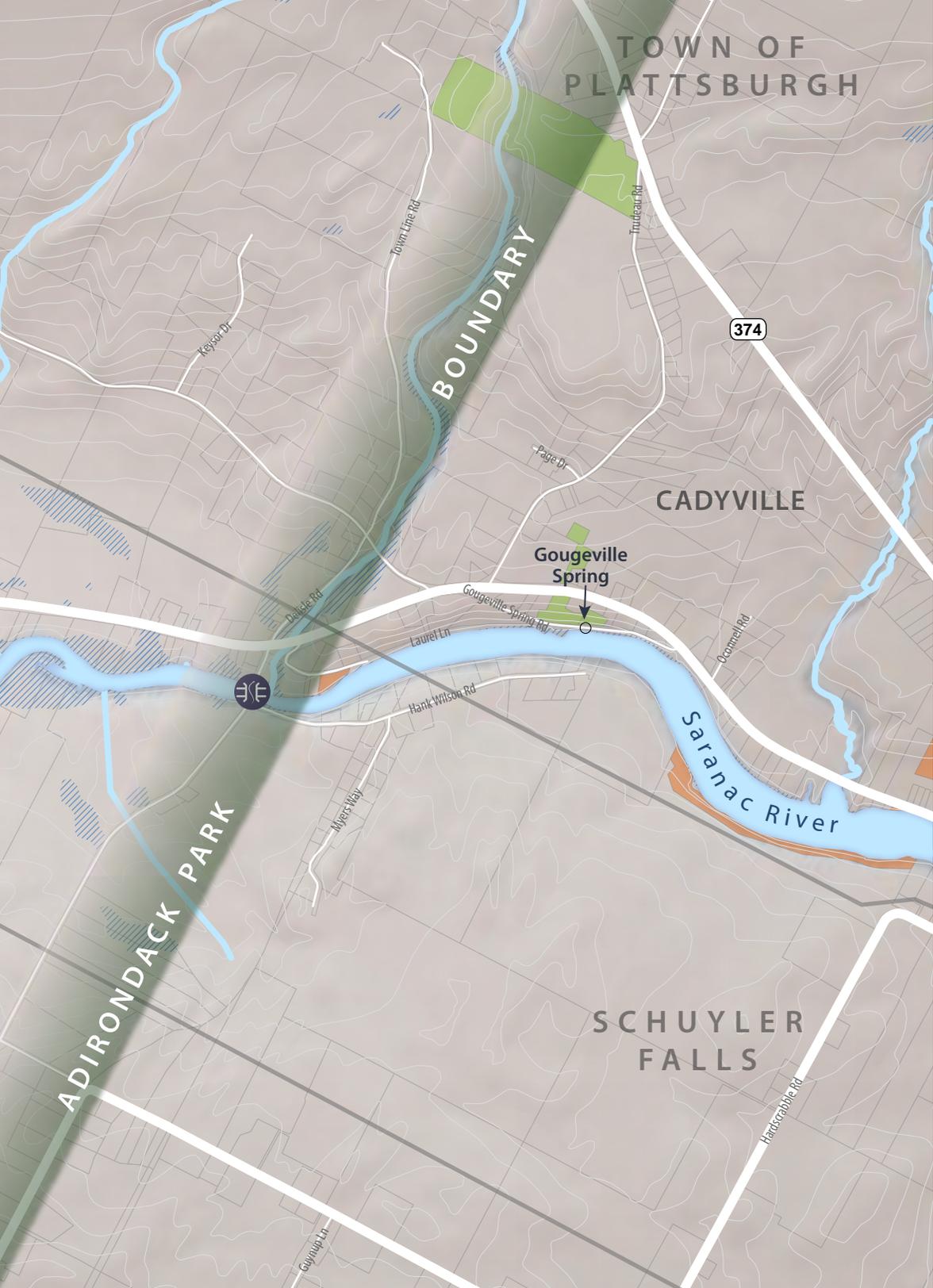
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|--|---------------------|--|----------------------|
| | FISHING | | WINTER RECREATION |
| | CANOEOING | | DAM |
| | KAYAKING/WHITEWATER | | MOTOR VEHICLE BRIDGE |
| | PADDLE CRAFT PUT-IN | | PEDESTRIAN BRIDGE |
| | PORTAGE | | CLOSED BRIDGE |
| | PARKING | | UNIVERSITY |
| | PARK | | SCHOOL |
| | MOUNTAIN BIKING | | BEACH |
| | RUNNING | | SENIOR HOUSING |
| | HIKING | | TOWN HALL |
| | CAMPING | | AIRPORT |
| | TRAIL HEAD | | |
| | DISC GOLF | | |
-
- NYS DEC FISHING EASEMENT
 - SHARED USE PATH
 - ABANDONED RAIL LINE
 - SNOWMOBILE TRAIL
 - POWER LINES



The third section of the proposed Saranac River Trail Greenway continues from Cadyville in Plattsburgh through a scenic stretch of the Saranac River in the Town of Saranac. This section of trail includes recreational destinations which would be connected via the greenway. These include Pickett's Corner Park, the Saranac Middle School and High School, a campground and driving range, places for anglers to fish, and the beginning of the Flat Water Challenge. Overall – this section of the greenway has a more rural character than the sections to the East and connects the hamlet of Pickett's Corner with recreational opportunities for residents and visitors.



TOWN OF SARANAC



- | | | | |
|--|---------------------|--|----------------------|
| | FOOD & WATER | | LODGING |
| | FISHING | | WINTER RECREATION |
| | CANOEING | | DAM |
| | KAYAKING/WHITEWATER | | MOTOR VEHICLE BRIDGE |
| | PADDLE CRAFT PUT-IN | | PEDESTRIAN BRIDGE |
| | PORTAGE | | CLOSED BRIDGE |
| | PARKING | | UNIVERSITY |
| | PARK | | SCHOOL |
| | MOUNTAIN BIKING | | BEACH |
| | RUNNING | | SENIOR HOUSING |
| | HIKING | | TOWN HALL |
| | CAMPING | | AIRPORT |
| | TRAIL HEAD | | |
| | DISC GOLF | | |
-
- NYS DEC FISHING EASEMENT
 - SHARED USE PATH
 - ABANDONED RAIL LINE
 - SNOWMOBILE TRAIL
 - POWER LINES
-
- WETLANDS
 - TOWN, CITY, STATE & FEDERAL LAND
 - NYSEG
 - INSTITUTIONAL / EDUCATIONAL LANDS
 - CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY

TOWN OF SARANAC

Industrial Park



Saranac Schools



Bakers Acres Campground

Pickett's Corner

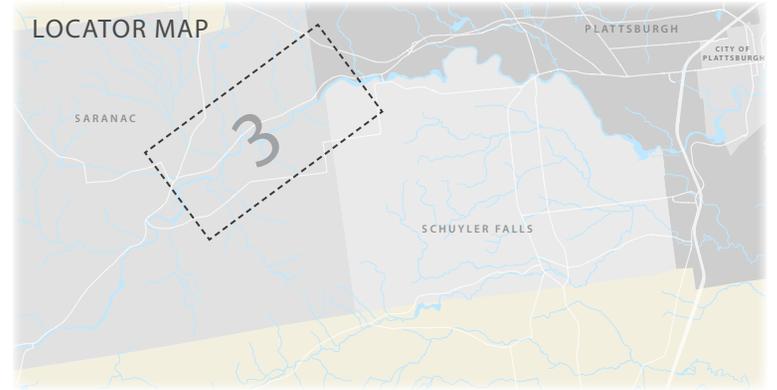


TOWN OF SARANAC

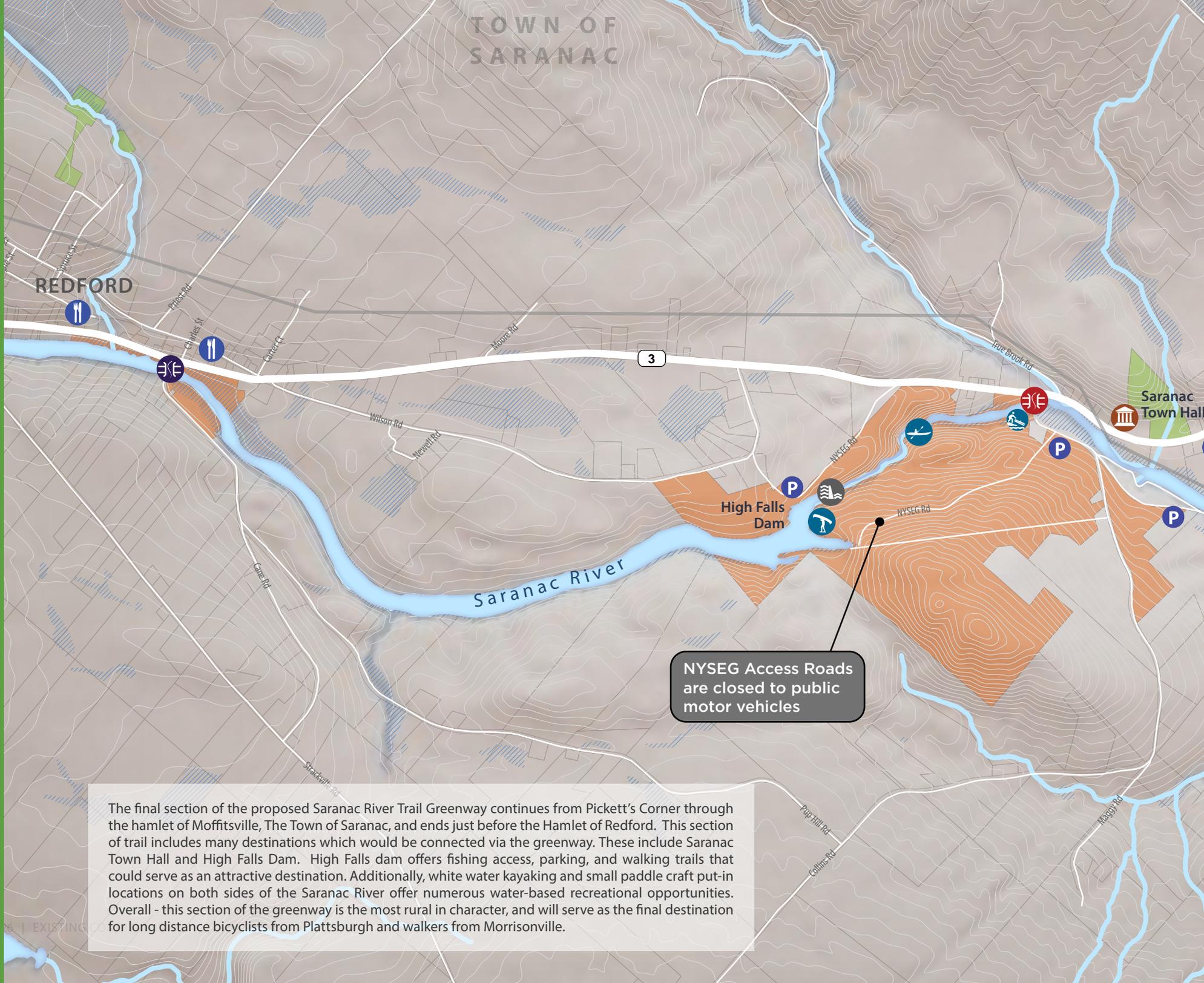
24 EXISTING CONDITIONS

0 0.5 1 Mile





- | | | | |
|--|---------------------|--|----------------------|
| | FISHING | | WINTER RECREATION |
| | CANOEING | | DAM |
| | KAYAKING/WHITEWATER | | MOTOR VEHICLE BRIDGE |
| | PADDLE CRAFT PUT-IN | | PEDESTRIAN BRIDGE |
| | PORTAGE | | CLOSED BRIDGE |
| | PARKING | | UNIVERSITY |
| | PARK | | SCHOOL |
| | MOUNTAIN BIKING | | BEACH |
| | RUNNING | | SENIOR HOUSING |
| | HIKING | | TOWN HALL |
| | CAMPING | | AIRPORT |
| | TRAIL HEAD | | |
| | DISC GOLF | | |
-
- | | |
|--|--------------------------|
| | NYS DEC FISHING EASEMENT |
| | SHARED USE PATH |
| | ABANDONED RAIL LINE |
| | SNOWMOBILE TRAIL |
| | POWER LINES |



TOWN OF SARANAC

REDFORD

3

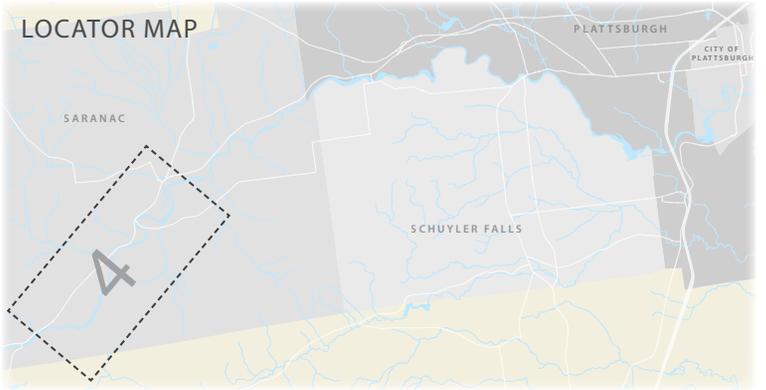
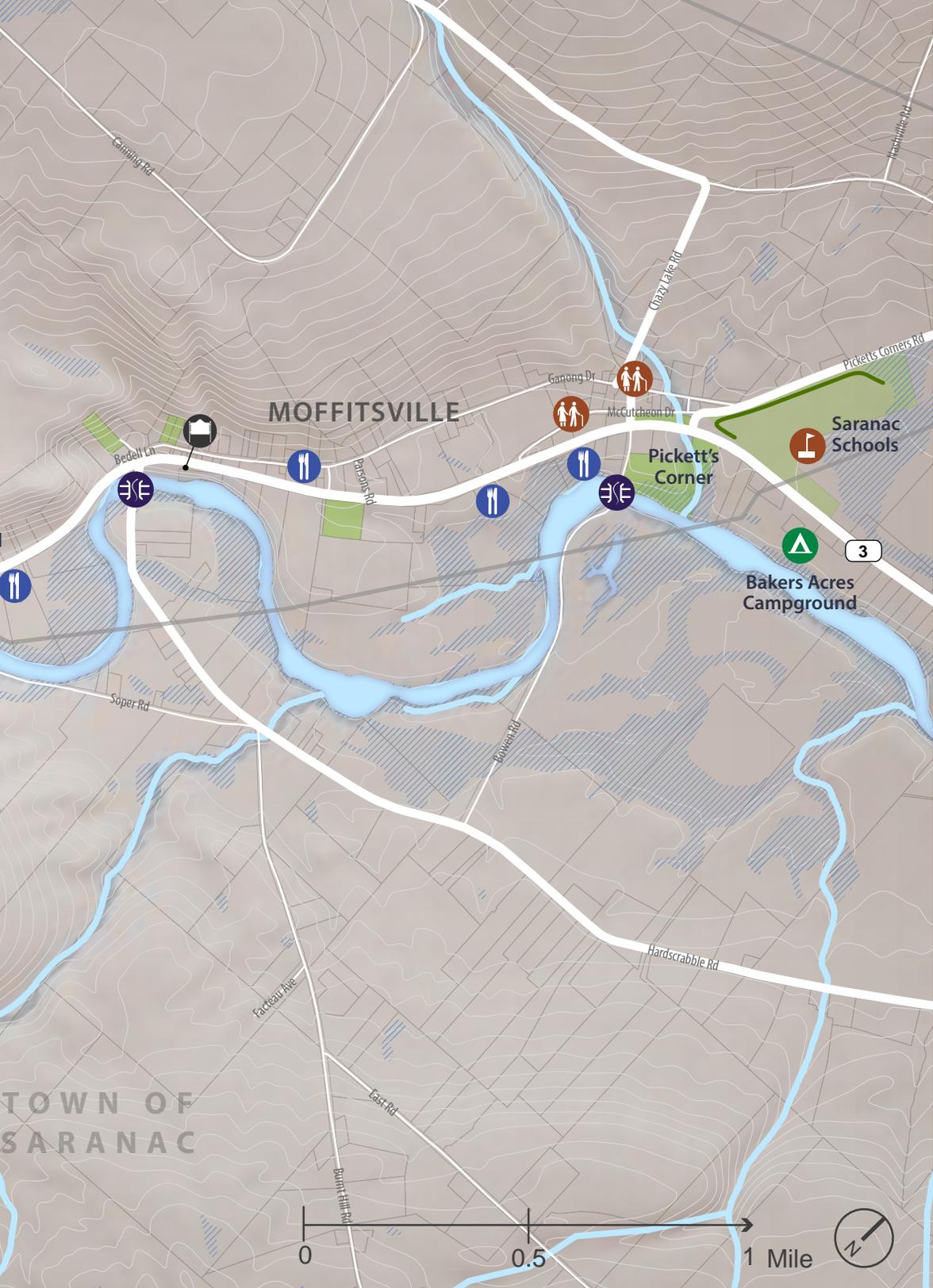
Saranac River

High Falls Dam

Saranac Town Hall

NYSEG Access Roads are closed to public motor vehicles

The final section of the proposed Saranac River Trail Greenway continues from Pickett's Corner through the hamlet of Moffitsville, The Town of Saranac, and ends just before the Hamlet of Redford. This section of trail includes many destinations which would be connected via the greenway. These include Saranac Town Hall and High Falls Dam. High Falls dam offers fishing access, parking, and walking trails that could serve as an attractive destination. Additionally, white water kayaking and small paddle craft put-in locations on both sides of the Saranac River offer numerous water-based recreational opportunities. Overall - this section of the greenway is the most rural in character, and will serve as the final destination for long distance bicyclists from Plattsburgh and walkers from Morrisonville.



- | | | | |
|--|---------------------|--|----------------------|
| | FOOD & WATER | | LODGING |
| | FISHING | | WINTER RECREATION |
| | CANOING | | DAM |
| | KAYAKING/WHITewater | | MOTOR VEHICLE BRIDGE |
| | PADDLE CRAFT PUT-IN | | PEDESTRIAN BRIDGE |
| | PORTAGE | | CLOSED BRIDGE |
| | PARKING | | UNIVERSITY |
| | PARK | | SCHOOL |
| | MOUNTAIN BIKING | | BEACH |
| | RUNNING | | SENIOR HOUSING |
| | HIKING | | TOWN HALL |
| | CAMPING | | AIRPORT |
| | TRAIL HEAD | | |
| | DISC GOLF | | |
-
- NYS DEC FISHING EASEMENT
 - SHARED USE PATH
 - ABANDONED RAIL LINE
 - SNOWMOBILE TRAIL
 - POWER LINES
-
- WETLANDS
 - TOWN, CITY, STATE & FEDERAL LAND
 - NYSEG
 - INSTITUTIONAL / EDUCATIONAL LANDS



TOWN OF SARANAC

REDFORD

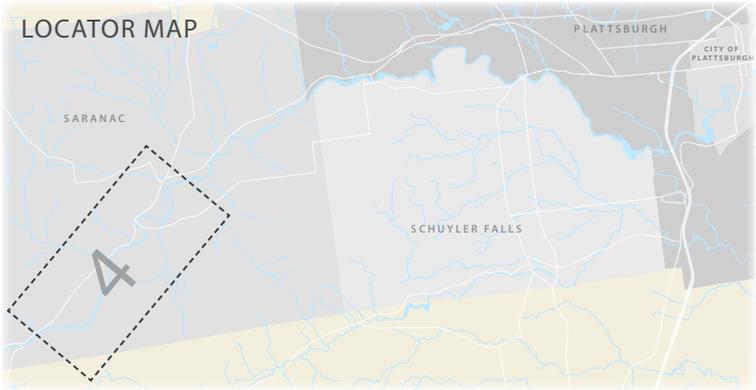
Saranac River

High Falls Dam

Saranac Town Hall

TOWN OF SARANAC





- FISHING
 - CANOEING
 - KAYAKING/WHITewater
 - PADDLE CRAFT PUT-IN
 - PORTAGE
 - PARKING
 - PARK
 - MOUNTAIN BIKING
 - RUNNING
 - HIKING
 - CAMPING
 - TRAIL HEAD
 - DISC GOLF
 - WINTER RECREATION
 - DAM
 - MOTOR VEHICLE BRIDGE
 - PEDESTRIAN BRIDGE
 - CLOSED BRIDGE
 - UNIVERSITY
 - SCHOOL
 - BEACH
 - SENIOR HOUSING
 - TOWN HALL
 - AIRPORT
-
- NYS DEC FISHING EASEMENT
 - SHARED USE PATH
 - ABANDONED RAIL LINE
 - SNOWMOBILE TRAIL
 - POWER LINES



CHAPTER 3: ALIGNMENT ALTERNATIVES

The north side or the south side of the river? Which destinations and neighborhoods should it connect to? What type of trail surface should it have? By evaluating different alignment options for the SRTG, a potential alignment can be determined that fulfills the goals and objectives of the community.



Alignment Alternatives

Introduction

The Saranac River Trail Greenway will travel approximately 27 miles, connecting the City of Plattsburgh to the Town of Saranac. The SRTG has the potential to become a 4-season “braided” necklace of different trail types within the corridor, ranging from paved shared use paths in more urbanized areas, to the rural sections with on-road bike routes, and natural surface trails. This chapter is divided into two sections, which together, describe opportunities and challenges to developing a trail in the Saranac River corridor, as well as potential alignment options for a connected greenway from Peace Point Park in Plattsburgh to Pup Hill Rd in the Town of Saranac.

Section 1: Opportunities and Challenges Analysis

The opportunities and challenges analysis builds upon information described in the existing conditions chapter, and generates a complete picture of the barriers to trail development in the study corridor and options to overcome these barriers. Overall, a variety of opportunities and challenges were identified, including public lands, rights-of-way, existing easements, and topography. This analysis was instrumental to the development of alignment options for the SRTG.

Section 2: Trail Typologies and Alternative Alignments

The opportunities and challenges review provided the framework for the identification of alternative alignment options for the SRTG. Opportunities were leveraged and solutions to challenges were found to develop several options for creating a connected greenway between the City of Plattsburgh and the Town of Saranac. Each alignment was then evaluated according to several criteria to determine the desirability of the various options. The SRTG will consist of several different trail typologies along its 27 mile course. The different types of trails that could be incorporated into the greenway are also described in this section.

Opportunities

There are many opportunities to make connections to destinations and for trail alignments along the Saranac River Trail Greenway corridor. These opportunities were analyzed and grouped according to common themes. Descriptions of these major themes are provided below, and maps on subsequent pages display detailed information about the opportunities available for each section of the SRTG.



Existing Trails

Existing walking, hiking, snowmobiling, and ATV trails have been identified as attractive options for trail alignments. These trails exist on both public and private lands. Trails on private land may not be open for public access



Fishing Easements

The New York State Dept of Environmental Conservation has secured easements along private property to provide fishing access to the public. Currently, these easements only allow fishing access. These easements could potentially be amended to allow other non-motorized uses, such as walking and biking, and therefore are opportunities, but cooperation and negotiation with property owners would be necessary and their potential use represents a long term planning objective.



Utility & Rail Rights-Of-Way

Rights-of-way (ROW) along power lines, NYSEG Access Roads, and abandoned railroad corridors provide potential alignment opportunities along the Saranac River. While these lands do present a major opportunity, there are considerable technical, legal and bureaucratic obstacles to their use and they represent long term planning goals.



Point of Interest

Destinations along the river, including both man-made and natural points of interest, will serve as trip beginning and end-points for many users. Destinations include dam overlooks, restaurants, schools and offices, and campgrounds / lodging.



Existing Road/Bridge Infrastructure

Low-volume country roads that are amenable to non-motorized transportation, existing vehicular bridges that cross the Saranac River, and closed bridges that could be converted into bike and pedestrian crossings have been identified as significant opportunities for trail connections.



Private Parcel Opportunity

There are many private parcels along the banks of the Saranac River that are undeveloped. Trail alignments that include private lands represent long-term planning goals because of the need to negotiate acceptable easements with property owners.



Public Parcel Opportunity

There are trail alignment opportunities along the riverbanks through publicly owned, and largely undeveloped, parcels of land. Trail use must be compatible with long-term plans for the properties.

Challenges

Challenges also exist, both natural and man-made, to the development of the Saranac River Trail Greenway. These challenges were analyzed and grouped according to common themes. Descriptions of these major themes are provided below, and maps on subsequent pages display detailed information about the challenges to developing the SRTG.



Infrastructural Barrier

Major barriers that limit access to the river include Interstate 87, and the dam penstock infrastructure for the generation of hydro-electric power.



Terrain

Many banks along stretches of the Saranac River are very steep, which limit the ability to construct trails in these areas.



Property Owners

There are several opportunities to route the SRTG through private properties, but trail alignments that include private lands represent long-term planning goals because of the need to negotiate acceptable easements with property owners. Alignments that avoid private property could be implemented more quickly.



River Crossings

There are existing bridges that cross the Saranac River, but which are closed and would need to be rehabilitated in order to be incorporated into the SRTG.¹ Additionally, there are instances where a river crossing is desirable, but no such crossing exists. Some of the bridges along the corridor are in private ownership, and coordination with the land owners would be necessary to integrate these bridges into the trail.



Wetlands

Wetlands are present along several sections of the Saranac River. Portions of the SRTG could be routed through wetlands, but these alignments would be more expensive to construct, as they would require boardwalks and permits. Routing the greenway through wetlands does present an excellent educational opportunity.



Existing Road Infrastructure

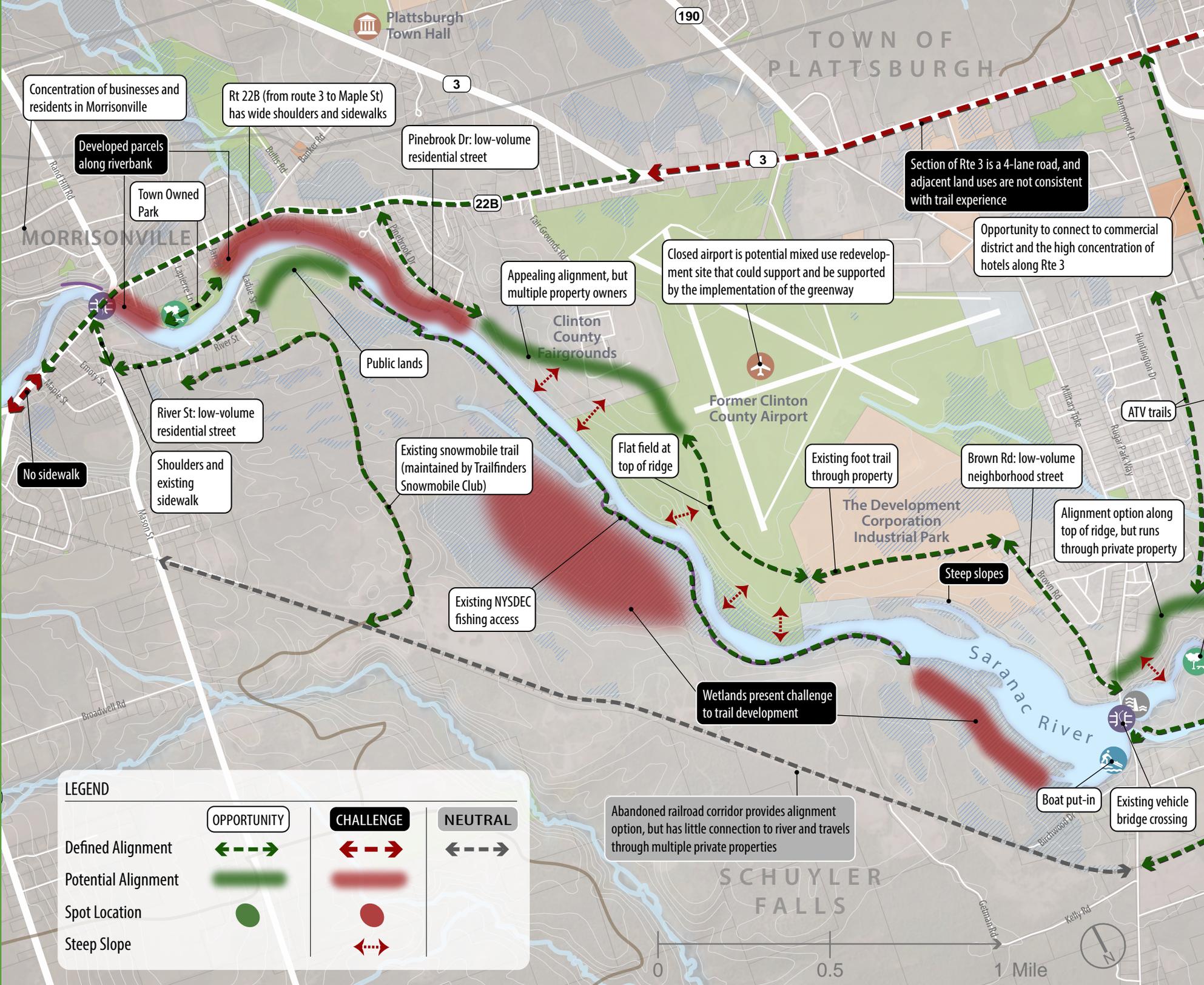
Several roads parallel the Saranac River, but are less appealing alignment options due to high posted speed limits, minimal shoulders and sidewalks, and few connections to the River.



Developed Riverbanks

Developed parcels along the banks of the Saranac River are a barrier to alignment options.

¹ Bridge rehabilitation is expensive, but there is an established precedent nationwide for the rehabilitation and construction of bridges for non-motorized trails. An engineering assessment of bridges along the corridor will be needed to assess the feasibility and cost to rehabilitate the bridges for non-motorized use.



Concentration of businesses and residents in Morrisonville

Rt 22B (from route 3 to Maple St) has wide shoulders and sidewalks

Developed parcels along riverbank

Town Owned Park

Pinebrook Dr: low-volume residential street

Section of Rte 3 is a 4-lane road, and adjacent land uses are not consistent with trail experience

Opportunity to connect to commercial district and the high concentration of hotels along Rte 3

Closed airport is potential mixed use redevelopment site that could support and be supported by the implementation of the greenway

Appealing alignment, but multiple property owners

Public lands

River St: low-volume residential street

No sidewalk

Shoulders and existing sidewalk

Existing snowmobile trail (maintained by Trailfinders Snowmobile Club)

Flat field at top of ridge

Existing foot trail through property

Brown Rd: low-volume neighborhood street

Alignment option along top of ridge, but runs through private property

Existing NYSDEC fishing access

Steep slopes

Wetlands present challenge to trail development

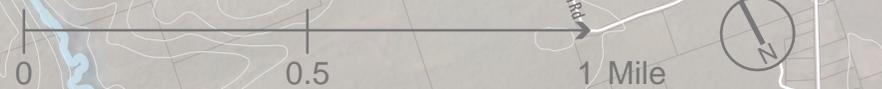
Abandoned railroad corridor provides alignment option, but has little connection to river and travels through multiple private properties

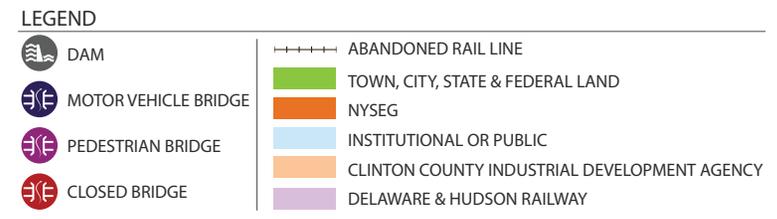
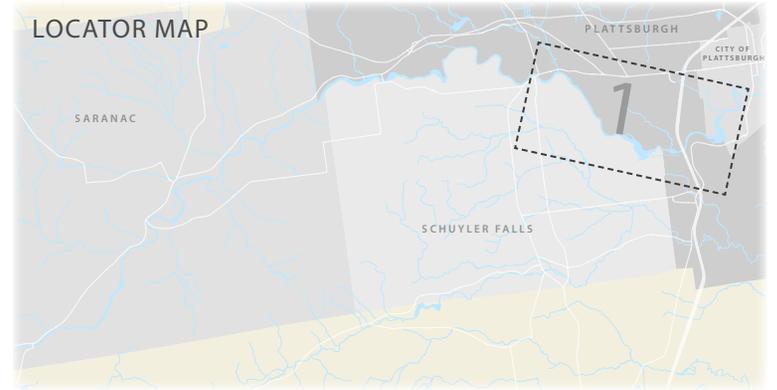
Boat put-in

Existing vehicle bridge crossing

LEGEND

	OPPORTUNITY	CHALLENGE	NEUTRAL
Defined Alignment	←---→	←--→	←---→
Potential Alignment	—	—	—
Spot Location	●	●	
Steep Slope		⬮	



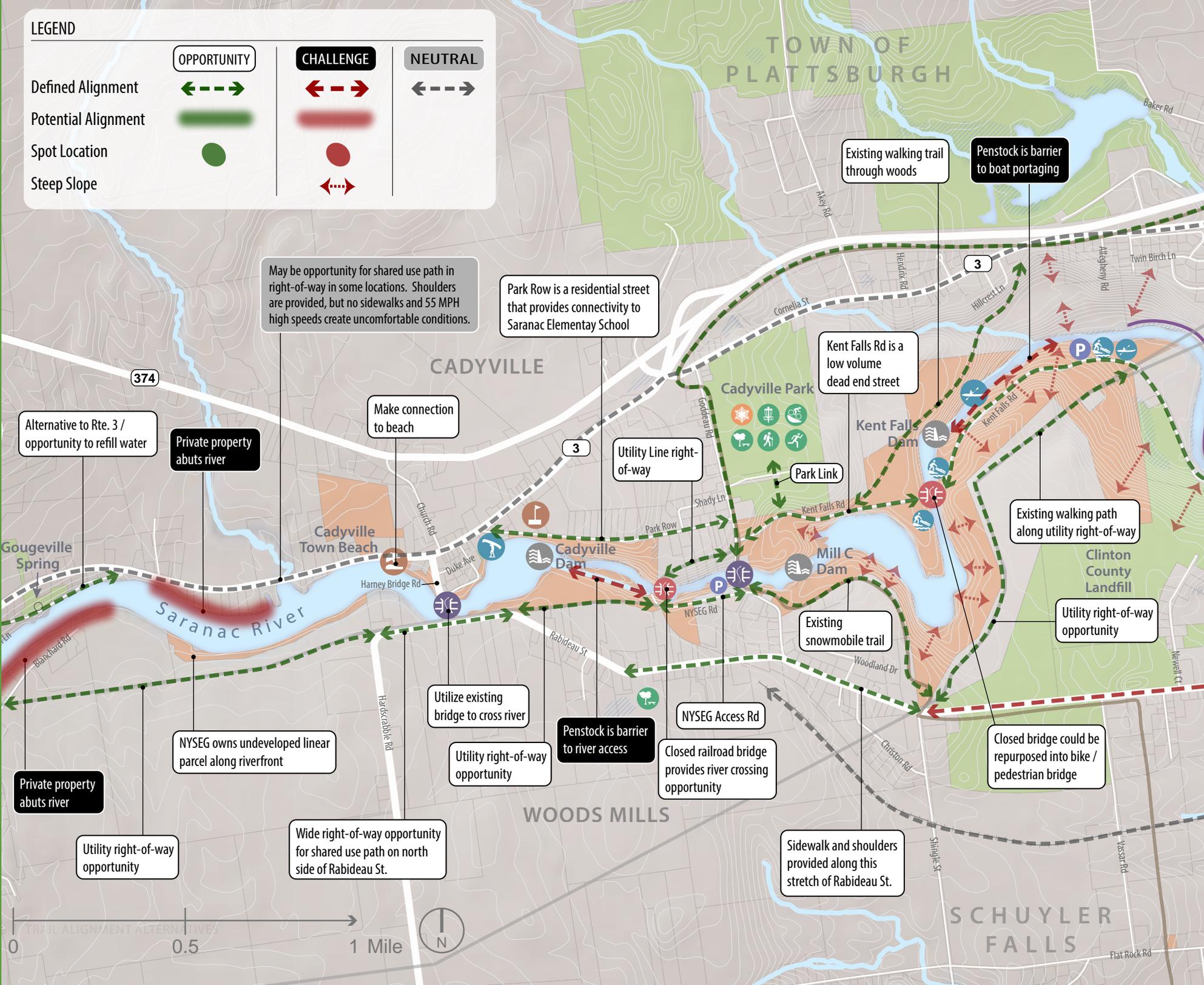


Significant opportunities exist in this section of the proposed greenway, which extends west from the existing Saranac River Trail to Morrisonville. Specific opportunities include: the SUNY-owned Rugar Woods, fishing easements on town-owned land between Rugar Woods and I-87, existing trails within The Development Corp. Industrial Park, the former Clinton County Airport, Brown Road, land along the Clinton County Fairgrounds and adjacent parcels, and Pinebrook Road. Combined, these parcels and rights-of-way provide attractive alignment opportunities. On the south side of the river, an unused rail corridor beginning near the corner of Arizona Avenue and Crete Boulevard, crosses I-87 via an abandoned bridge, and ends near the corner of Kelly Road and Military Turnpike. This provides a significant opportunity for crossing the I-87 corridor.

Challenges along this section include steep slopes and wetlands, particularly west of I-87 and on the south side of the river. Additional challenges include crossing the I-87 corridor, heavily developed residential properties that abut the river in Morrisonville, multiple private property owners along potentially attractive alignment routes, and alignment options that provide limited visual connection to the Saranac River.

LEGEND

	OPPORTUNITY	CHALLENGE	NEUTRAL
Defined Alignment	← - - - - - →	← - - - - - →	← - - - - - →
Potential Alignment	—	—	—
Spot Location	●	●	
Steep Slope		↔	



Alternative to Rte. 3 / opportunity to refill water

Private property abuts river

May be opportunity for shared use path in right-of-way in some locations. Shoulders are provided, but no sidewalks and 55 MPH high speeds create uncomfortable conditions.

Park Row is a residential street that provides connectivity to Saranac Elementary School

Make connection to beach

Utility Line right-of-way

Kent Falls Rd is a low volume dead end street

Penstock is barrier to boat portaging

Existing walking path along utility right-of-way

Utility right-of-way opportunity

Existing snowmobile trail

Closed bridge could be repurposed into bike / pedestrian bridge

Private property abuts river

NYSEG owns undeveloped linear parcel along riverfront

Utilize existing bridge to cross river

Utility right-of-way opportunity

Penstock is barrier to river access

NYSEG Access Rd

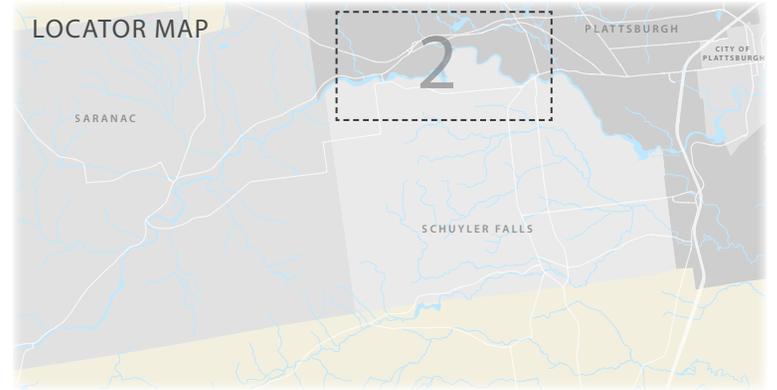
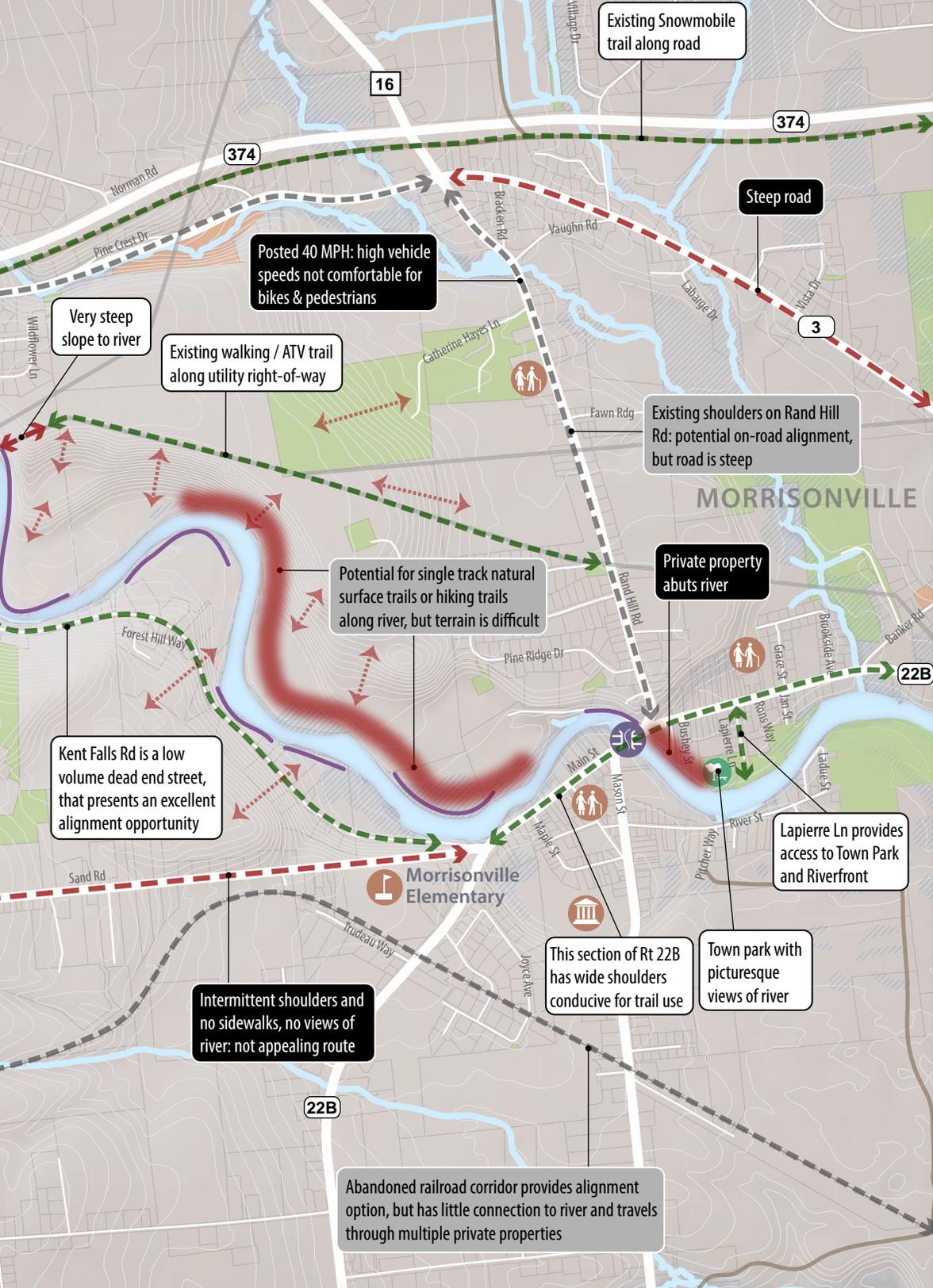
Closed railroad bridge provides river crossing opportunity

Utility right-of-way opportunity

Wide right-of-way opportunity for shared use path on north side of Rabideau St.

Sidewalk and shoulders provided along this stretch of Rabideau St.



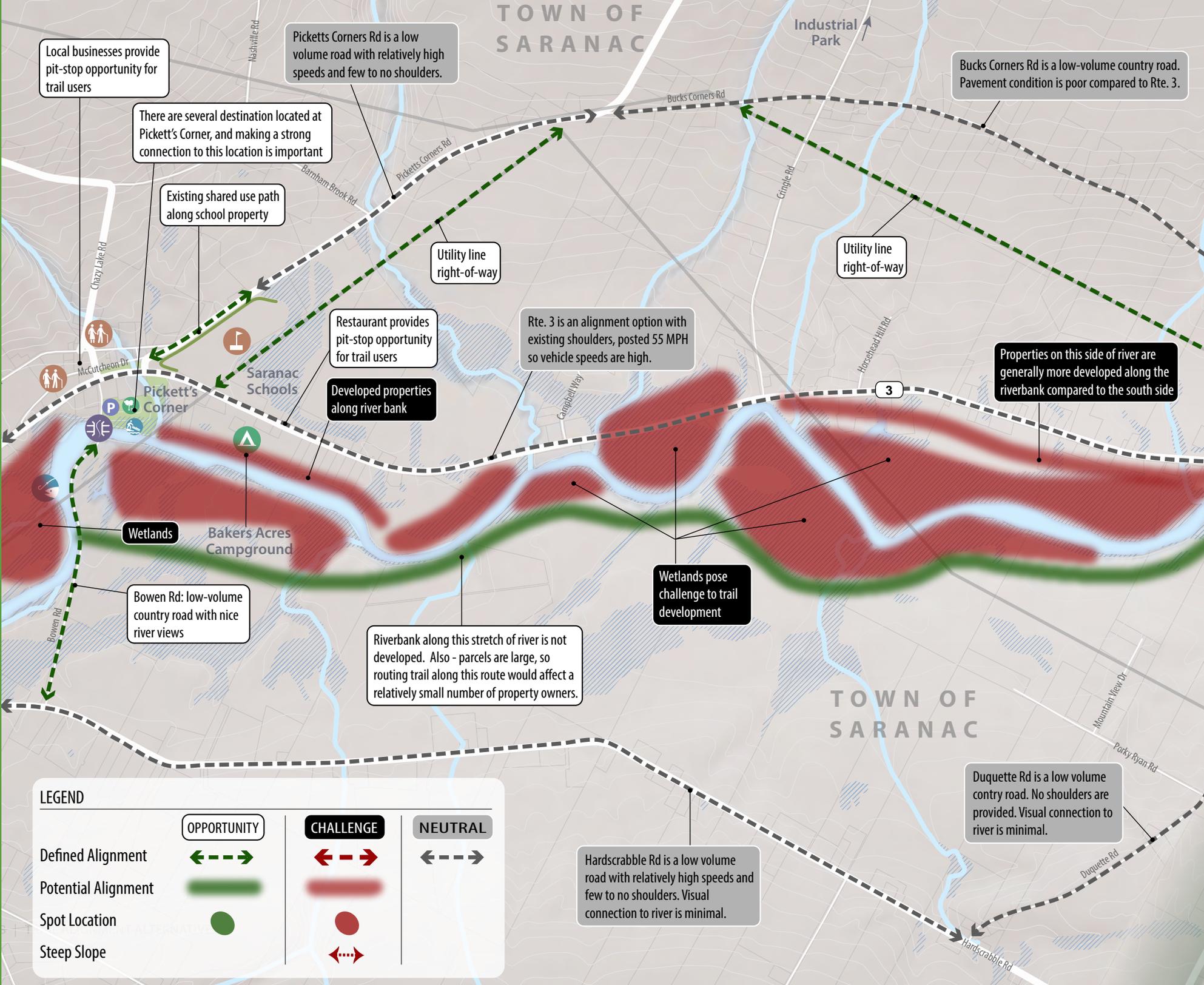


LEGEND

	DAM		ABANDONED RAIL LINE
	MOTOR VEHICLE BRIDGE		TOWN, CITY, STATE & FEDERAL LAND
	PEDESTRIAN BRIDGE		NYSEG
	CLOSED BRIDGE		INSTITUTIONAL OR PUBLIC
			CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY
			DELAWARE & HUDSON RAILWAY

Major opportunities for attractive trail alignments exist in this section of the SRTG, which travels from Morrisonville and Cadyville. In particular, there are several low-volume country roads that parallel the river, including Route 22B, Rabideau Street, and Kent Falls Rd. Kent Falls Rd is particularly appealing because it is a dead end road, and existing traffic volumes are very low. Linear corridors also exist in this section and provide alignment opportunities. These include: existing utility-line rights-of-ways and NYSEG access roads, snowmobile trails, and abandoned railroad/utility lines. Several operational bridges exist that provide multiple river crossing opportunities, and there are closed bridges that could be repurposed into bike/pedestrian crossings, including a bridge closed to motor vehicle traffic at Kent Falls Rd and an abandoned rail bridge crossing the river near the Cadyville Dam Pump Station. Connections to a town park on Lapierre Lane, Cadyville Park, Cadyville town beach, and multiple schools will provide appealing options for both start and end-point destinations for trail users.

Challenges along this section of the corridor include very steep slopes along both banks of the Saranac River, numerous dams that have large penstock infrastructure that pose barriers to river access, wetlands, and developed private parcels that abut the river. Route 3, which is posted 55 MPH, parallels the river, but high speeds, minimal shoulders, and lack of sidewalks minimize the appeal of Route 3 as a potential on-road alignment.



Local businesses provide pit-stop opportunity for trail users

Picketts Corners Rd is a low volume road with relatively high speeds and few to no shoulders.

Bucks Corners Rd is a low-volume country road. Pavement condition is poor compared to Rte. 3.

There are several destination located at Pickett's Corner, and making a strong connection to this location is important

Existing shared use path along school property

Utility line right-of-way

Utility line right-of-way

Restaurant provides pit-stop opportunity for trail users

Rte. 3 is an alignment option with existing shoulders, posted 55 MPH so vehicle speeds are high.

Properties on this side of river are generally more developed along the riverbank compared to the south side

Developed properties along river bank

Wetlands

Bakers Acres Campground

Wetlands pose challenge to trail development

Bowen Rd: low-volume country road with nice river views

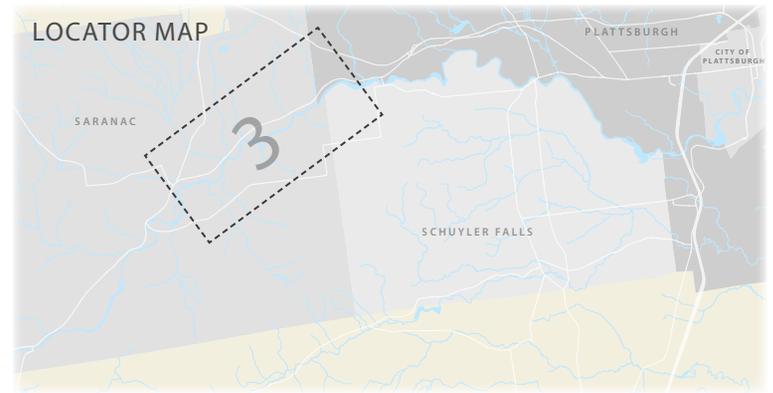
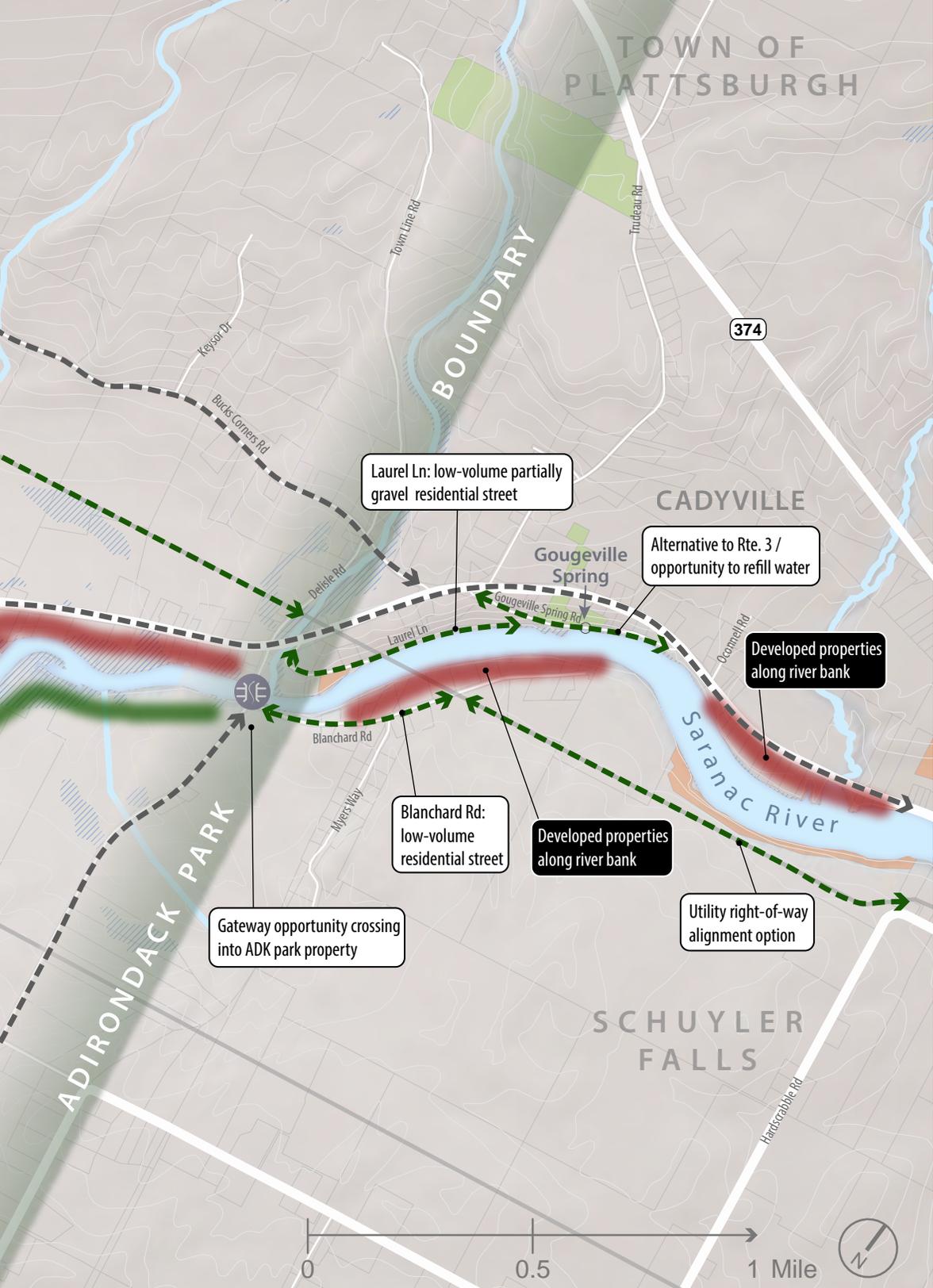
Riverbank along this stretch of river is not developed. Also - parcels are large, so routing trail along this route would affect a relatively small number of property owners.

Duquette Rd is a low volume contry road. No shoulders are provided. Visual connection to river is minimal.

Hardscrabble Rd is a low volume road with relatively high speeds and few to no shoulders. Visual connection to river is minimal.

LEGEND

	OPPORTUNITY	CHALLENGE	NEUTRAL
Defined Alignment			
Potential Alignment			
Spot Location			
Steep Slope			

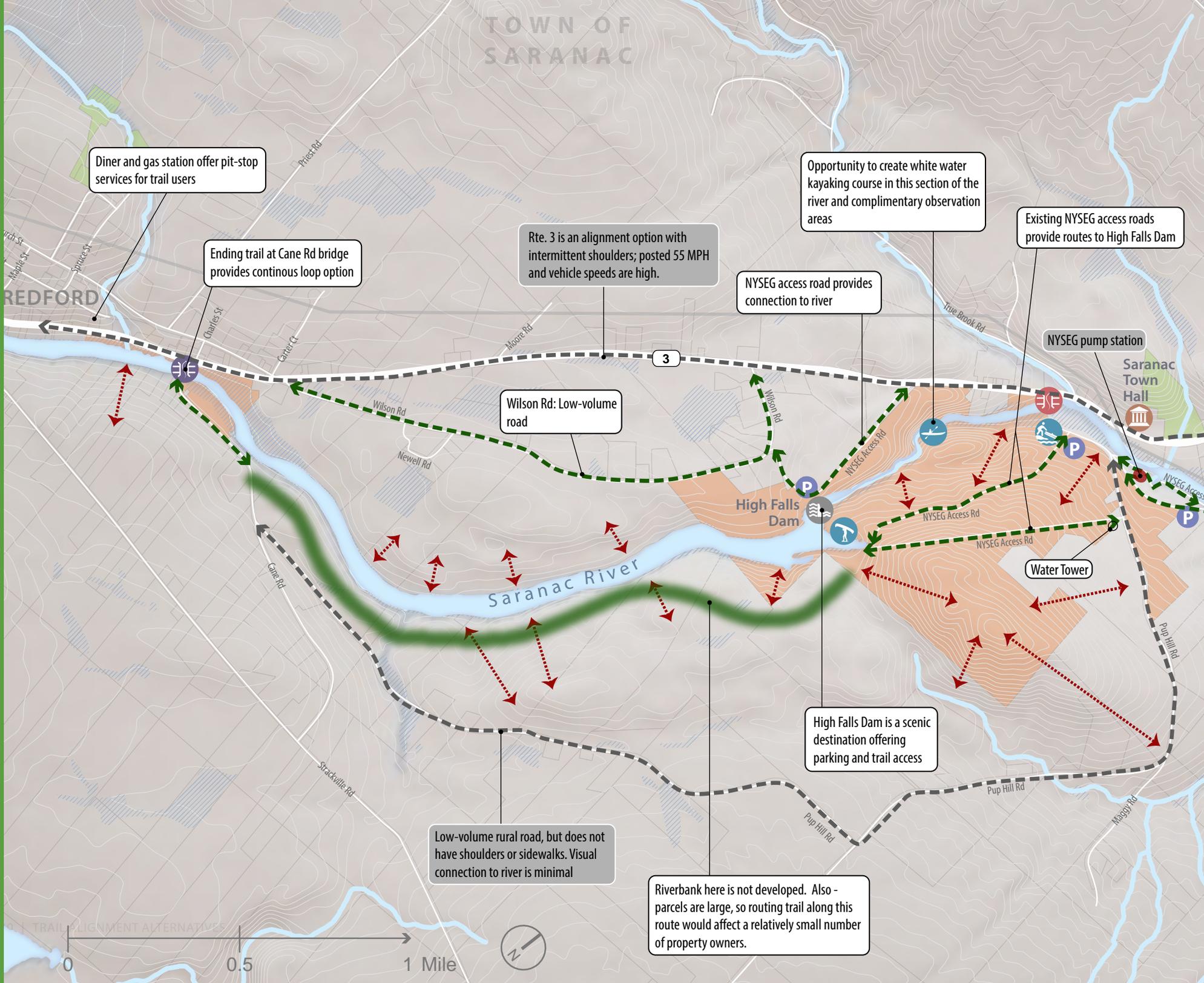


LEGEND

- DAM
- MOTOR VEHICLE BRIDGE
- PEDESTRIAN BRIDGE
- CLOSED BRIDGE
- ABANDONED RAIL LINE
- TOWN, CITY, STATE & FEDERAL LAND
- NYSEG
- INSTITUTIONAL OR PUBLIC
- CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY
- DELAWARE & HUDSON RAILWAY

Opportunities for trail alignments between Cadyville and Pickett’s corner include short utility right-of-way segments and low-volume country roads such as Blanchard Rd, Gougeville Spring Rd., and Laurel Ln. Significant opportunities include the fact that, within this section, the SRTG crosses into Adirondack Park lands, as well as the presence of several largely undeveloped parcels along the south bank of the river. Additionally, Pickett’s corner park, the Saranac Central School campus and Bakers Acres campground offer a variety of trip start and end points. The absence of steep slopes along this stretch of river is an opportunity for off-road trail alignments.

The challenges that exist in this section of the SRTG include developed properties that abut the northern river bank, significant wetlands on the north and south side of the river, and few segments of attractive on-road alignments. On the north side of the river, although Bucks Corners Road is low volume, it has poor pavement conditions and no shoulder. Pickett’s Corners Road has high speeds and few to no shoulders. Route 3, which is posted 55 MPH, parallels the river, but its high speeds, minimal shoulder, and lack of sidewalks, make it less appealing for a potential on-road alignment. Hardscrabble Rd and Duquette Rd are both low-volume country roads on the south side of the river, but have narrow-to-no shoulders, and have limited visual connection to the River. In sum, the roads on the north and south sides of the river are generally less attractive alignment options.



Diner and gas station offer pit-stop services for trail users

Ending trail at Cane Rd bridge provides continuous loop option

Rte. 3 is an alignment option with intermittent shoulders; posted 55 MPH and vehicle speeds are high.

Opportunity to create white water kayaking course in this section of the river and complimentary observation areas

Existing NYSEG access roads provide routes to High Falls Dam

Wilson Rd: Low-volume road

NYSEG access road provides connection to river

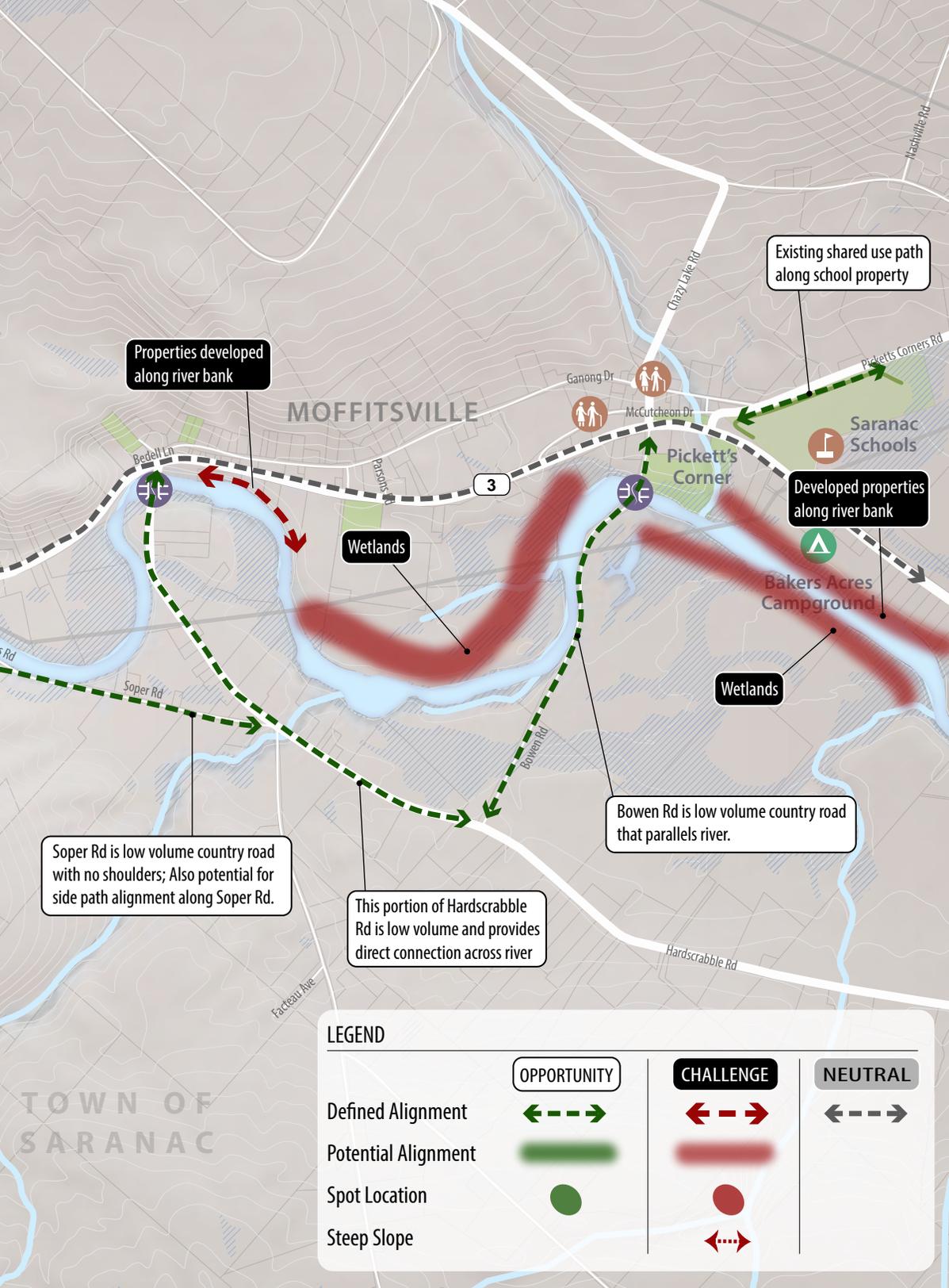
NYSEG pump station

High Falls Dam is a scenic destination offering parking and trail access

Low-volume rural road, but does not have shoulders or sidewalks. Visual connection to river is minimal

Riverbank here is not developed. Also - parcels are large, so routing trail along this route would affect a relatively small number of property owners.

TRAIL ALIGNMENT ALTERNATIVES



Soper Rd is low volume country road with no shoulders; Also potential for side path alignment along Soper Rd.

This portion of Hardscrabble Rd is low volume and provides direct connection across river

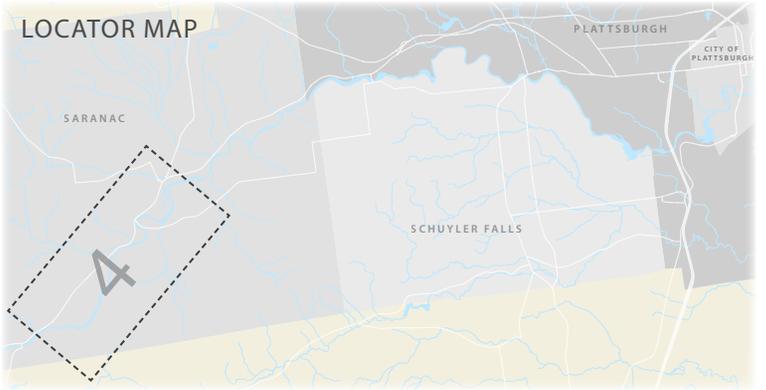
Bowen Rd is low volume country road that parallels river.

Existing shared use path along school property

Developed properties along river bank

LEGEND

	OPPORTUNITY	CHALLENGE	NEUTRAL
Defined Alignment	← - - - - - →	← - - - - - →	← - - - - - →
Potential Alignment	—	—	—
Spot Location	●	●	
Steep Slope		↔	



LEGEND

	ABANDONED RAIL LINE
	TOWN, CITY, STATE & FEDERAL LAND
	NYSEG
	INSTITUTIONAL OR PUBLIC
	CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY
	DELAWARE & HUDSON RAILWAY

Key opportunities along the final segment of the greenway, which connects Moffitsville to Redford, include Pickett's corner park, NYSEG access roads between Soper Road and High Falls Dam, and largely undeveloped parcels that flank the south side of the River. High Falls Dam is a scenic destination and will serve as the primary point of interest for many trail users. An opportunity for an appealing off-road alignment exists on the south bank of the river along large and undeveloped private parcels between High Falls Dam and the Cane Rd bridge. Additionally, there are long stretches of on-road alignments opportunities following low-volume country roads, including Bowen Rd, a portion of Hardscrabble Rd, Soper Rd, and Pup Hill Rd.

Challenges to the development of the SRTG along this section of the river include poor visual connection to the river along portions of otherwise attractive on-road segments. Other challenges include wetlands, steep slopes, and properties developed adjacent to the riverbank. Potential trail alignments along NYSEG Access Roads are particularly steep. Overall, negotiations with property owners along this section of the SRTG will be critical. Large portions of the most appealing alignment options travel through private property and NYSEG owned lands, and therefore, negotiations with these property owners would be necessary to determine if they would be amenable to having a trail routed through their property.

Trail Type Options

To make a connected greenway system from the City of Plattsburgh to the Town of Saranac, the SRTG is envisioned to be a 4-season “braided” network of trail types within the corridor, ranging from paved shared use paths in more populated areas, to the rural sections with on-road bike routes, natural surface trails. Some sections may include multiple trail types oriented towards different users and desired experiences. Sample trail types are pictured below, and cross-sections and details of each type are provided in Chapter 4.

— OFF-ROAD TYPOLOGIES



Shared Use Paths



Walking/Hiking Trail



Stone Dust Trail



Utility Access Rd



Sidepath



Boardwalk

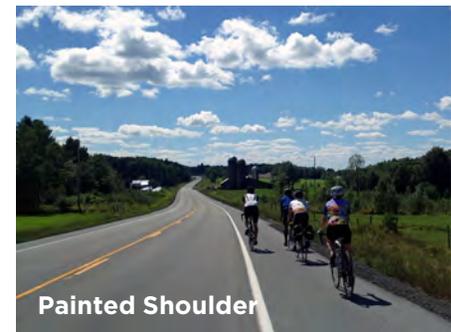
— ON-ROAD TYPOLOGIES



Bike Lanes & Sidewalks



Shared Lane Marking & Gravel Shoulder



Painted Shoulder



Alternative Alignments Analysis

Introduction

The opportunities and challenges analysis provided detailed information about the conditions along the Saranac River Trail Greenway Corridor. This information was used to develop alternative alignments for the SRTG, which are presented in this section. The alignment options were developed after careful analysis of roads, NYSEG and NYS DEC properties, railroad and utility line rights-of-way, and public and private parcels. Every effort was taken to develop options that maintained a parallel route to the course of the Saranac River. The following list describes the considerations that were used to develop the alternative alignments for the Saranac River Trail Greenway.

Potential Trail within River Corridor: The trail may be routed adjacent to the Saranac River where there is available space and floodplain/wetland constraints are minimized.

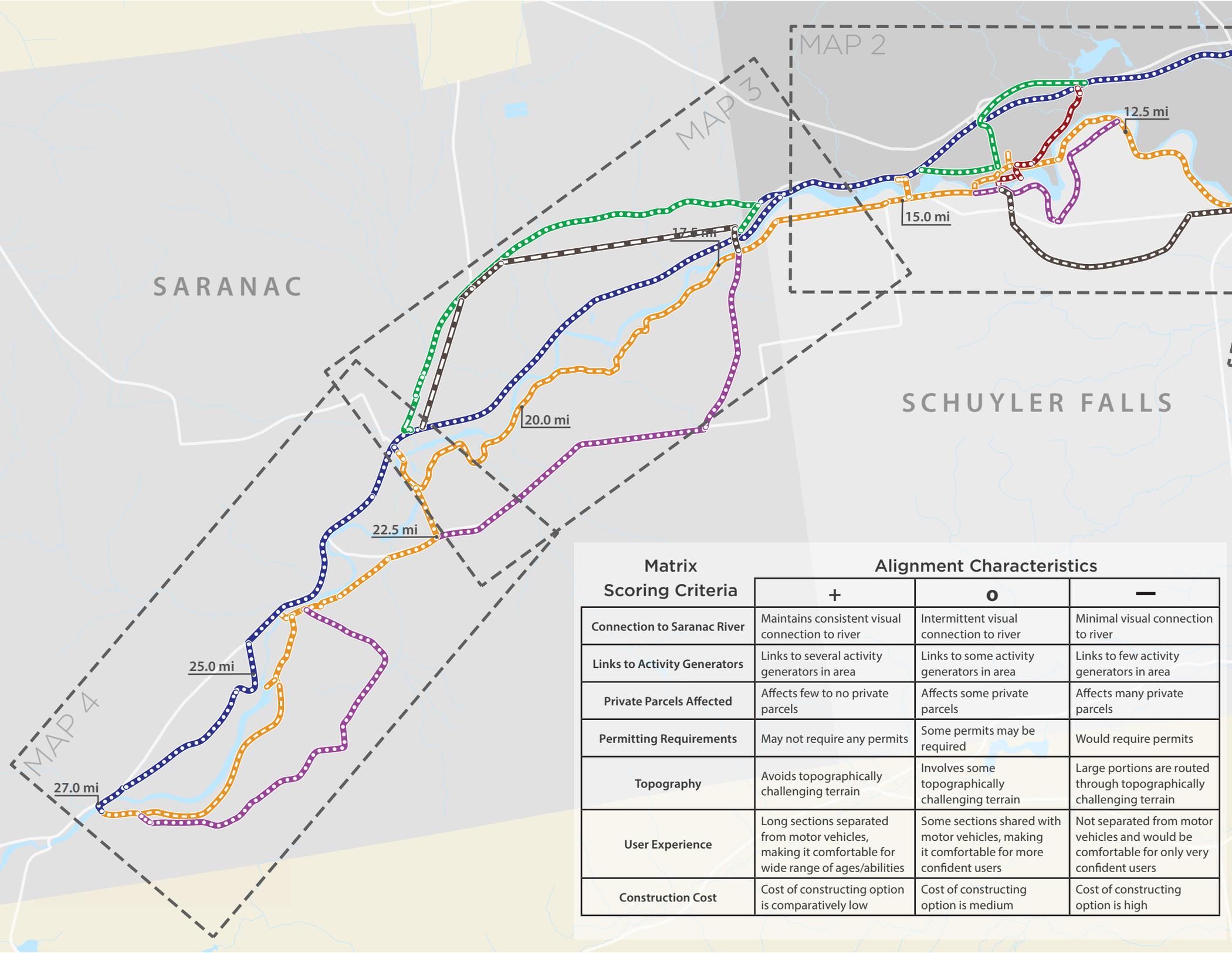
Potential Trail within Utility Line, NYSEG Access Roads, or Rail Corridor: With cooperation from the utility companies and property owners, a trail can potentially take advantage of existing utility lines, NYSEG Access ways, or unused rail corridors.

Potential Trail through Undeveloped Land: In some areas, the trail may be routed through an undeveloped area where there is no existing corridor for it to follow.

Potential Trail through Public Land: In many instances, the opportunity for trail alignment passes through publicly owned parcels, including Town/City, County and State lands. Additionally, the NYS DEC has obtained public fishing easements along the river, and the potential exists to expand the use of these existing easements to include walking and biking.

Potential Connection within Public Roadway: In some areas there is potential for a trail to be routed within the existing right-of-way of a public road. This can mean the trail takes advantage of an existing wide shoulder and/or sidewalk. It could also entail sharing roadway space with vehicles on roads with low speeds and traffic volumes. In other cases it could require that additional improvements be made to make space for trail users within the right-of-way.

Potential Spur Trail/Street Improvement: Spur trails can connect off the main spine of the trail system, which travels east-west, to a destination to the north or south.



SARANAC

SCHUYLER FALLS

Matrix Scoring Criteria	Alignment Characteristics		
	+	o	-
Connection to Saranac River	Maintains consistent visual connection to river	Intermittent visual connection to river	Minimal visual connection to river
Links to Activity Generators	Links to several activity generators in area	Links to some activity generators in area	Links to few activity generators in area
Private Parcels Affected	Affects few to no private parcels	Affects some private parcels	Affects many private parcels
Permitting Requirements	May not require any permits	Some permits may be required	Would require permits
Topography	Avoids topographically challenging terrain	Involves some topographically challenging terrain	Large portions are routed through topographically challenging terrain
User Experience	Long sections separated from motor vehicles, making it comfortable for wide range of ages/abilities	Some sections shared with motor vehicles, making it comfortable for more confident users	Not separated from motor vehicles and would be comfortable for only very confident users
Construction Cost	Cost of constructing option is comparatively low	Cost of constructing option is medium	Cost of constructing option is high

ALTERNATIVE ALIGNMENTS

Alignment options were developed for each of the four sections of the SRTG corridor to rule out less viable options for more viable ones. To determine the potential of each option, they were evaluated using the set of criteria described below. A matrix is provided for the four sections that evaluates the options against the criteria, along with an annotated map describing the method. **The scoring methodology used in the matrix is described on the map to the left.** The relative viability of the different options is indicated through the scoring matrix, as well as through annotations on the corresponding maps.

Connection to Saranac River: Connecting the SRTG to the Saranac River is important for recreational and aesthetic reasons. Alignment opportunities that provide frequent access to view or cross the River are prioritized over other options with minimal visual/physical connection to the Saranac River.

Links to Activity Generators: The SRTG will link parks, schools, businesses, and residential areas to common recreational and scenic destinations. The proximity of these links is important for the convenience of trail users, and options that maximize connections to activity generators are preferred.

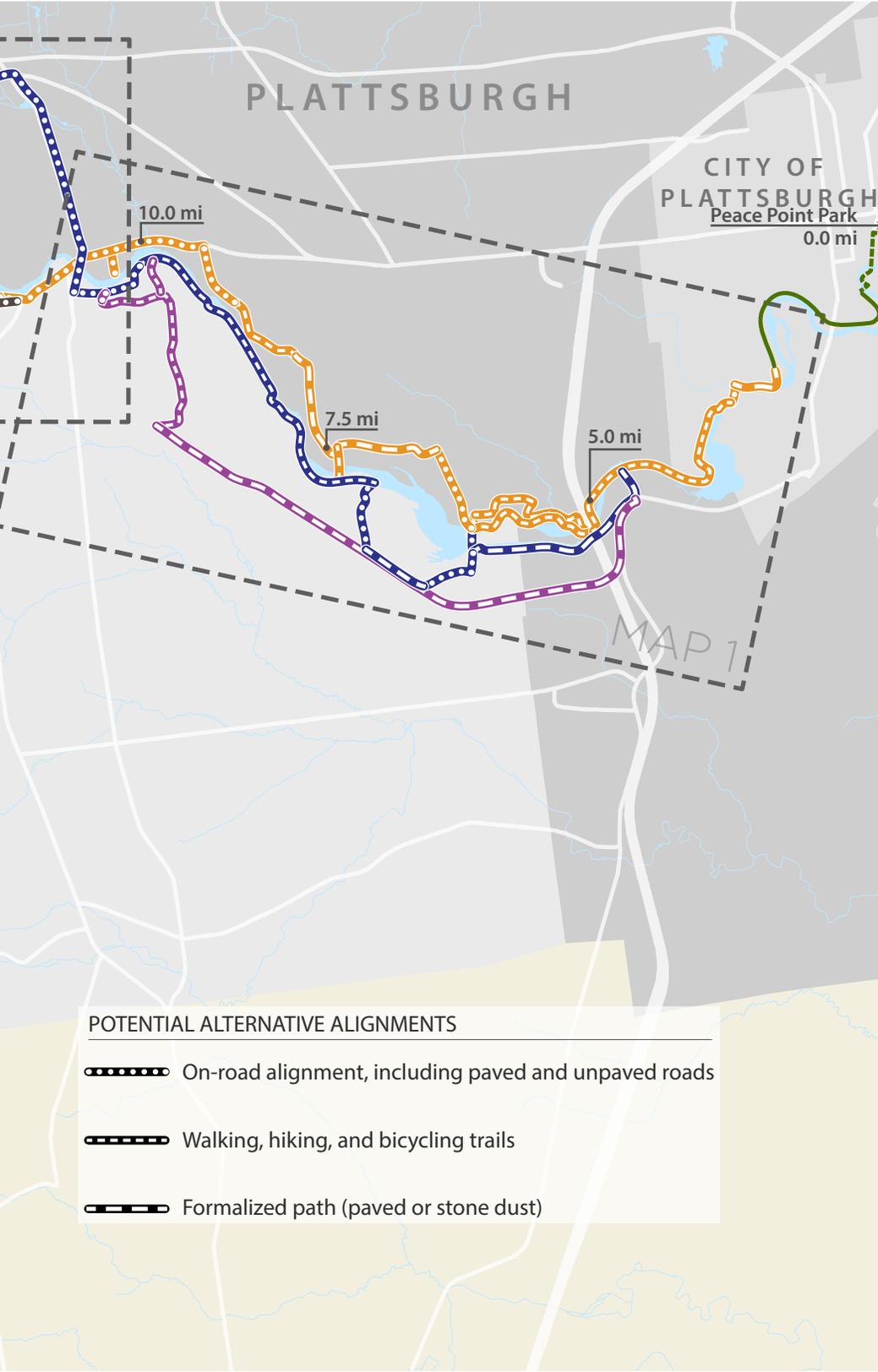
Private Parcels Affected: The number of private parcels crossed by a potential alignment increase the need for easements or property acquisitions. Options that minimize impacts on private property owners are preferred.

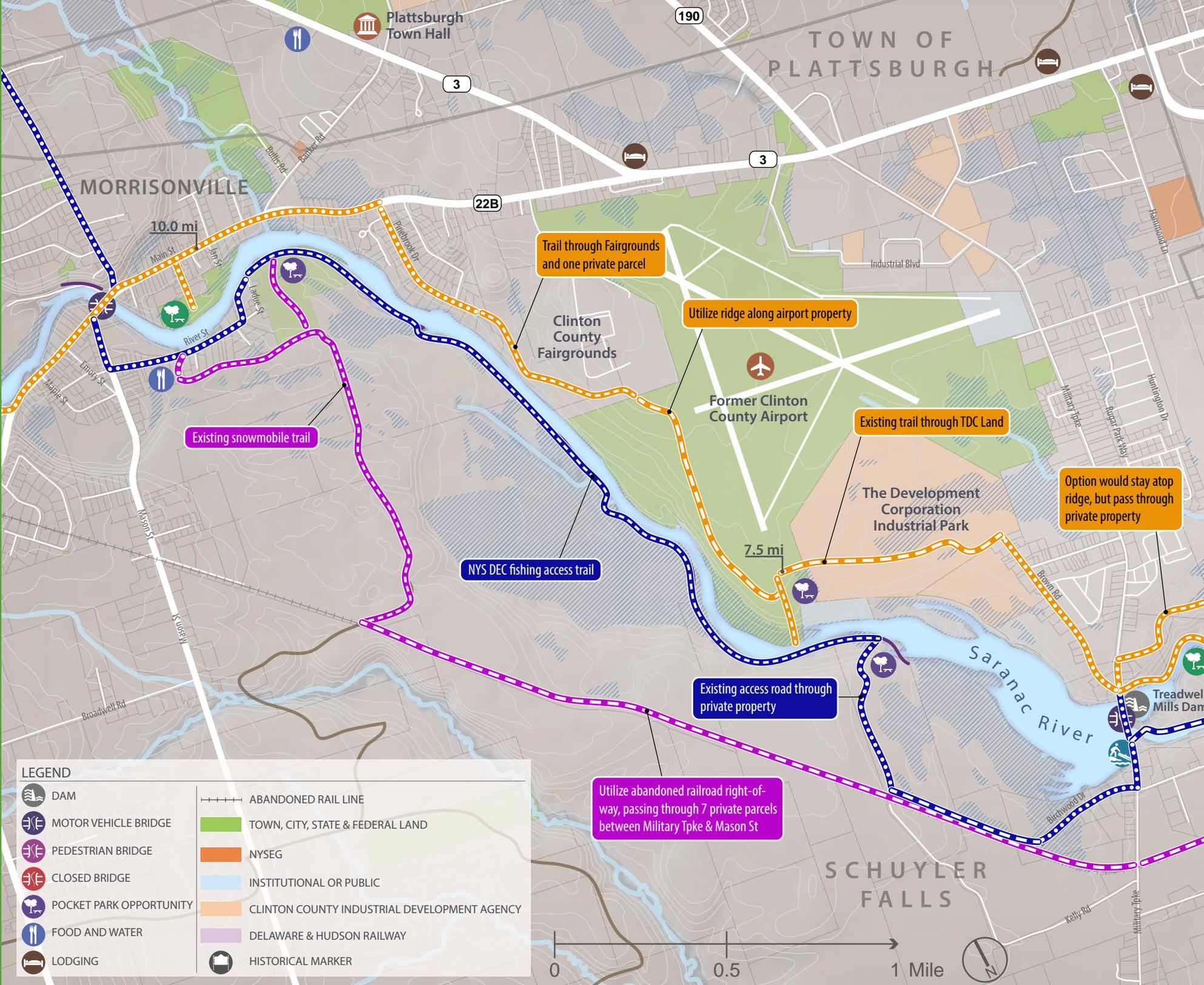
Permitting Requirements: Many of the trail alignments travel through forested terrain where the presence of sensitive habitats are located, such as wetlands. Options that avoid environmentally sensitive habitats and that would require fewer permits are preferred.

Topography: The terrain surrounding the Saranac River Trail Greenway corridor is rugged, and very steep in many locations. Options that avoid steep terrain are preferred.

User Experience: The alternative alignments include various trail typologies. Options that are separated from motor vehicle traffic and are routed closer to the scenic beauty of the Saranac River provide a better user experience and are preferred.

Construction Cost: Cost is an important consideration when developing alternative alignments. Those options that minimize cost are preferred over more expensive options.





LEGEND

- | | | | |
|--|-------------------------|--|--|
| | DAM | | ABANDONED RAIL LINE |
| | MOTOR VEHICLE BRIDGE | | TOWN, CITY, STATE & FEDERAL LAND |
| | PEDESTRIAN BRIDGE | | NYSEG |
| | CLOSED BRIDGE | | INSTITUTIONAL OR PUBLIC |
| | POCKET PARK OPPORTUNITY | | CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY |
| | FOOD AND WATER | | DELAWARE & HUDSON RAILWAY |
| | LODGING | | HISTORICAL MARKER |



Existing snowmobile trail

NYS DEC fishing access trail

Trail through Fairgrounds and one private parcel

Utilize ridge along airport property

Existing trail through TDC Land

Option would stay atop ridge, but pass through private property

Utilize abandoned railroad right-of-way, passing through 7 private parcels between Military Tpke & Mason St

Existing access road through private property

MORRISONVILLE

TOWN OF PLATTSBURGH

SCHUYLER FALLS

10.0 mi

7.5 mi

Plattsburgh Town Hall

Former Clinton County Airport

The Development Corporation Industrial Park

Treadwell Mills Dam

Saranac River

Clinton County Fairgrounds

Main St, Jan St, River St, Larkin St, Emory St, Mason St, Broadwell Rd

22B

190

3

3

Brown Rd

Birdwood Dr

Kelly Rd

Military Tpke

Willow Ptke

Hubbard Park Way

Huntington Dr

Industrial Blvd

Plattsburgh



Evaluation Criteria Matrix

CRITERIA	OPT A	OPT B	OPT C
Connection to Saranac River	+	+	-
Links to Activity Generators	+	o	-
Priv. Parcels Affected	-	-	-
Permitting Requirements	o	-	o
Topography	o	+	+
User Experience	+	+	o
Construction Cost	o	-	o

OPTION A

Most Appealing Aspect: Option would connect to major activity generators on the north side of the river, including SUNY Plattsburgh and Plattsburgh HS, the SRT, and Morisonville

Least Appealing Aspect: There are instances along this alignment where no trail currently exists, and negotiations with private property owners would need to be undertaken

OPTION B

Most Appealing Aspect: Option would maintain an appealing river-side route by utilizing trails and infrastructure along the river, including NYSEG lands and NYS DEC fishing easements

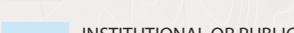
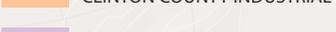
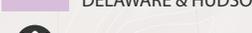
Least Appealing Aspect: Much of the land along this alignment is designated as wetlands, which would require permits and limit the type of trail that could be constructed

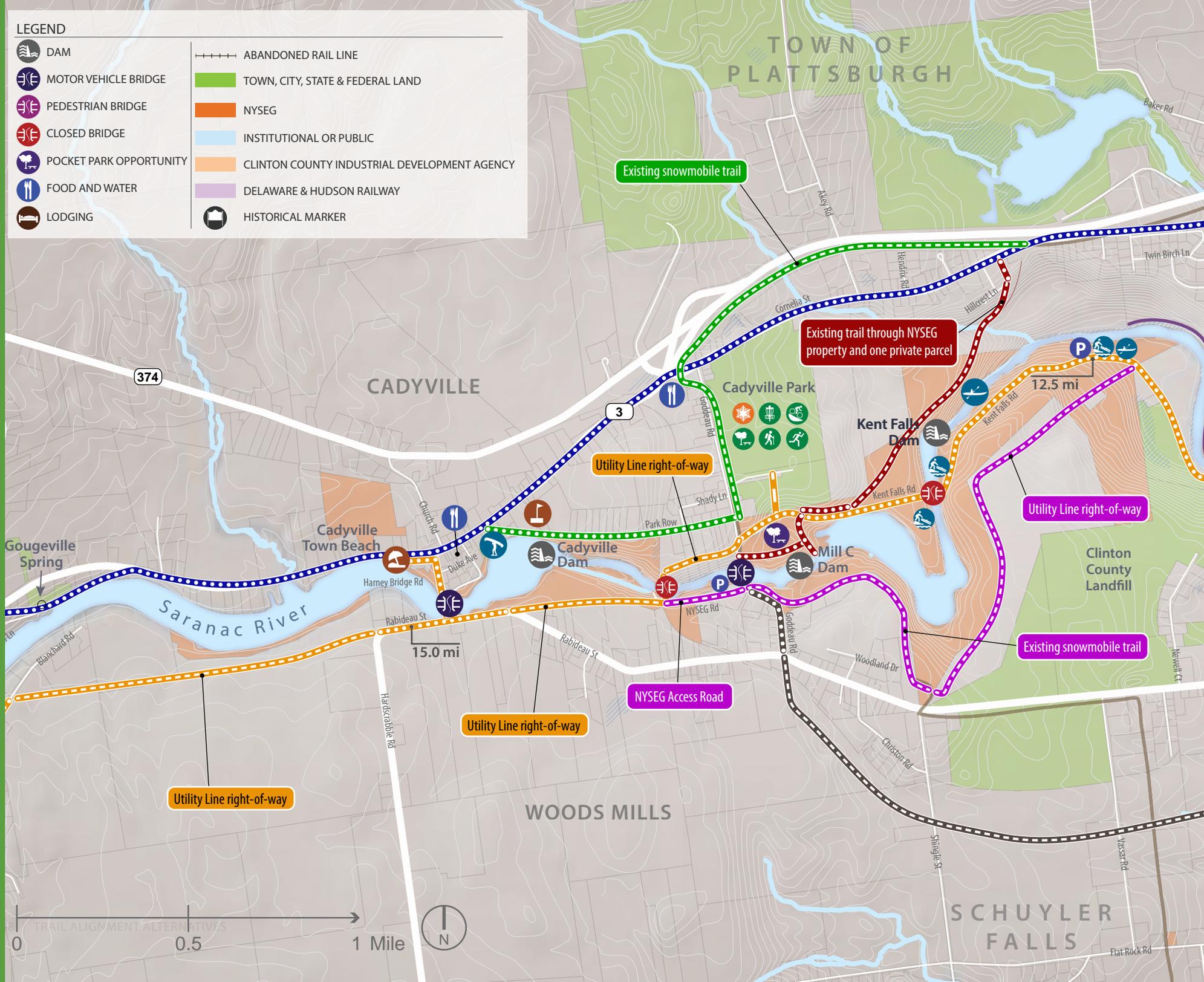
OPTION C

Most Appealing Aspect: Option would utilize existing railroad/utility line ROW and snowmobile trails, minimizing construction expense

Least Appealing Aspect: The railroad parcel is no longer intact, which would require negotiations with 7 private property owners to secure easements. Also, the alignment, while following the course of the Saranac River, has minimal visual connection to it

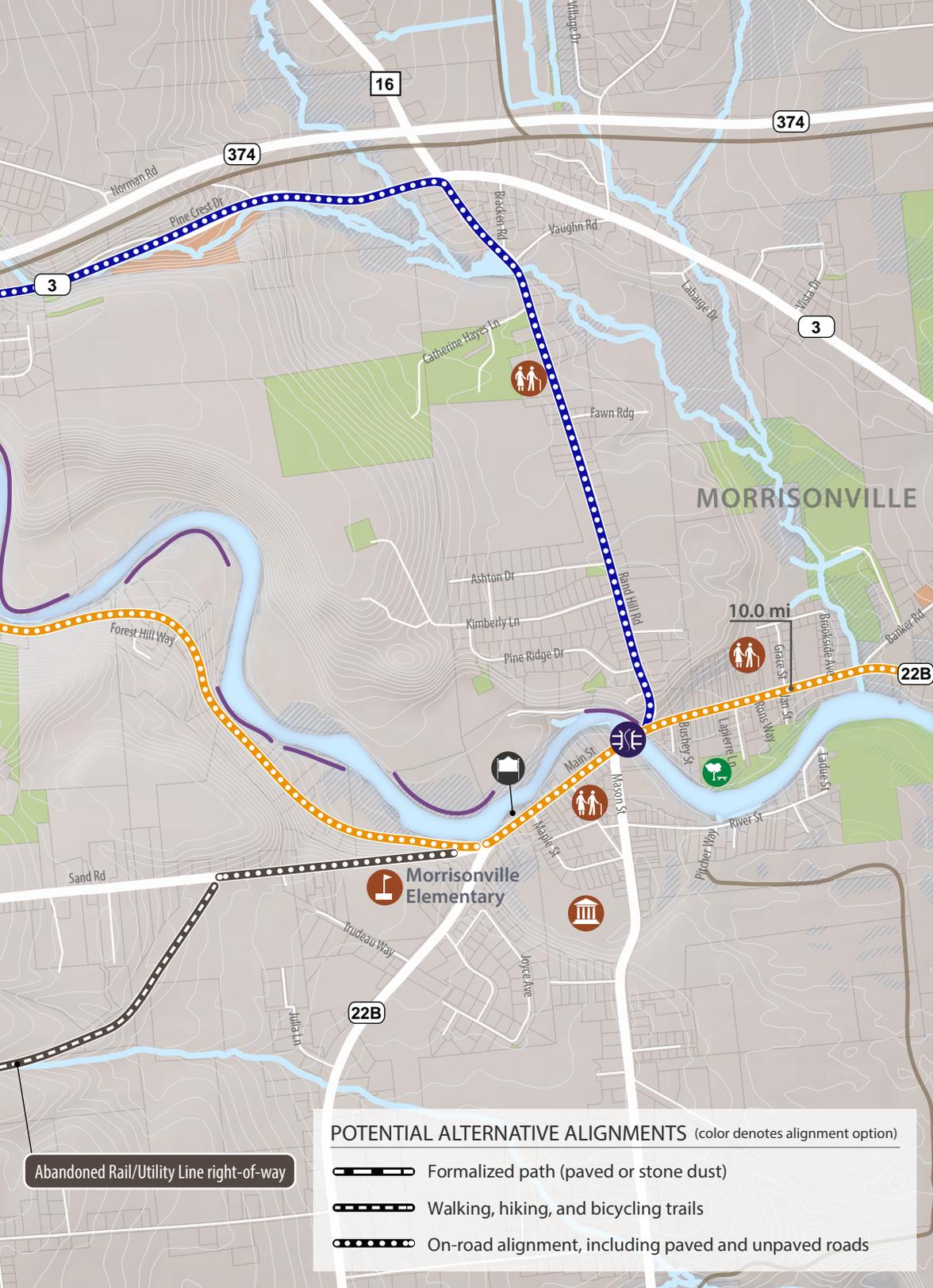
LEGEND

-  DAM
-  MOTOR VEHICLE BRIDGE
-  PEDESTRIAN BRIDGE
-  CLOSED BRIDGE
-  POCKET PARK OPPORTUNITY
-  FOOD AND WATER
-  LODGING
-  ABANDONED RAIL LINE
-  TOWN, CITY, STATE & FEDERAL LAND
-  NYSEG
-  INSTITUTIONAL OR PUBLIC
-  CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY
-  DELAWARE & HUDSON RAILWAY
-  HISTORICAL MARKER



Data Source: NYS Department of Environmental Conservation, Google Images, Bing Images, GoAironadack.com, SUNY Plattsburgh, NorthernForestCanoeTrail.org, Clinton County





Evaluation Criteria Matrix

CRITERIA	OPT A	OPT B	OPT C	OPT D	OPT E	OPT F
Saranac River Connection	+	-	o	-	-	o
Links to Activity Generators	+	o	-	o	+	+
Priv. Parcels Affected	+	+	o	-	+	+
Permitting Requirements	+	+	+	+	+	+
Topography	o	-	-	+	o	-
User Experience	+	-	+	o	o	+
Construction Cost	o	+	+	o	+	o

OPTION A

Most Appealing Aspect: Option would utilize existing infrastructure and rights-of-way along the river, making a strong connection to it and minimizing permitting/construction costs

Least Appealing Aspect: Two now closed bridges would need to be rehabilitated for this alignment. This poses a increased construction cost, but also an appealing opportunity

OPTION B

Most Appealing Aspect: Option would be routed on-road, which would minimize construction cost for the alignment

Least Appealing Aspect: This option is routed upon Rand Hill Rd, which is very steep, and Rte 3, which has high vehicle speeds and is not comfortable to walk/bike along

OPTION C

Most Appealing Aspect: Option would utilize existing utility line right-of-way and snowmobile trail, which would minimize construction cost

Least Appealing Aspect: The Utility line right-of-way is extremely steep in some locations, which would limit the number of users who could use this segment of trail

OPTION D

Most Appealing Aspect: Option would primarily travel upon abandoned railroad right-of-way/utility line

Least Appealing Aspect: Alignment would be routed upon Sand Rd, which is not comfortable to bike/walk upon. Alignment would have little visual connection to Saranac River

OPTION E

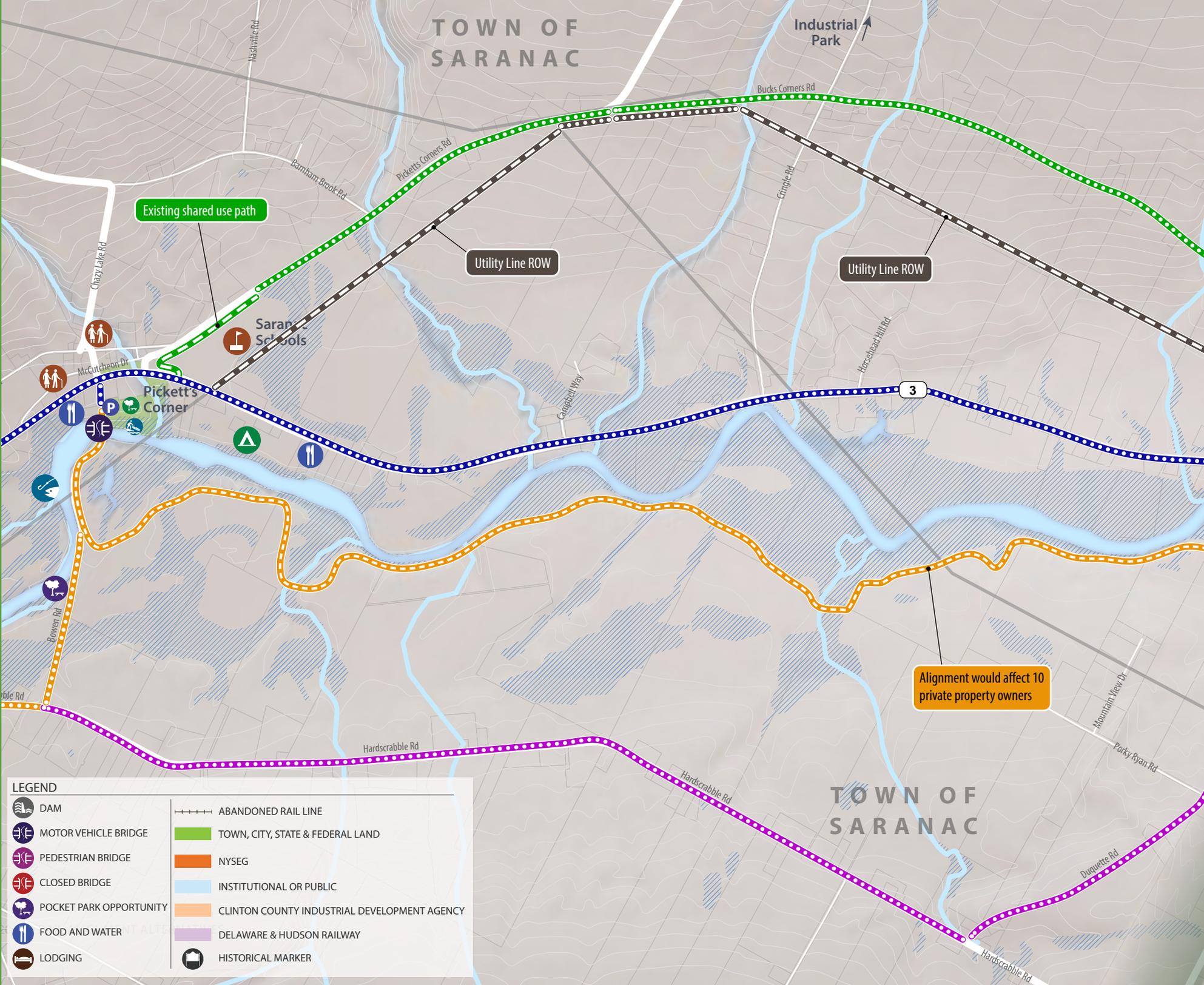
Most Appealing Aspect: Option would leverage an existing snowmobile trail to provide an alignment alternative to Route 3, and make direct connections to Cadyville Park and Beach

Least Appealing Aspect: Option would have minimal visual connection to river for much of the alignment.

OPTION F

Most Appealing Aspect: Option provides an alternative to Route 3, and leverages an existing trail through one private parcel and NYSEG lands, making a strong connection to Mill C Dam

Least Appealing Aspect: Alignment would travel upon hilly terrain that would limit the types of users would could use this section of the trail



Existing shared use path

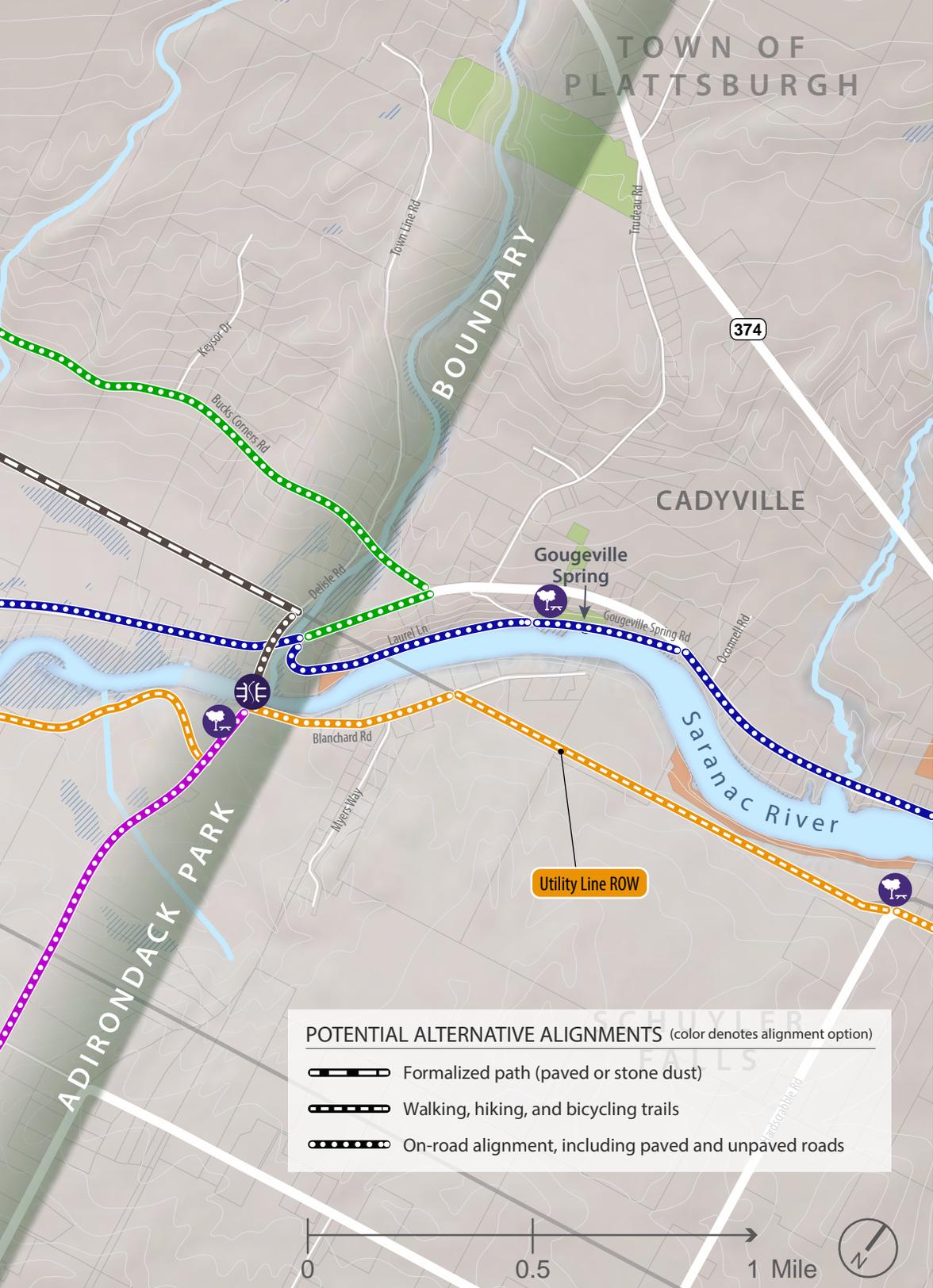
Utility Line ROW

Utility Line ROW

Alignment would affect 10 private property owners

LEGEND

- | | | | |
|--|-------------------------|--|--|
| | DAM | | ABANDONED RAIL LINE |
| | MOTOR VEHICLE BRIDGE | | TOWN, CITY, STATE & FEDERAL LAND |
| | PEDESTRIAN BRIDGE | | NYSEG |
| | CLOSED BRIDGE | | INSTITUTIONAL OR PUBLIC |
| | POCKET PARK OPPORTUNITY | | CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY |
| | FOOD AND WATER | | DELAWARE & HUDSON RAILWAY |
| | LODGING | | HISTORICAL MARKER |



Evaluation Criteria Matrix

CRITERIA	OPT A	OPT B	OPT C	OPT D	OPT E
Connection to Saranac River	+	o	-	o	-
Links to Activity Generators	+	+	-	+	-
Priv. Parcels Affected	-	+	+	-	+
Permitting Requirements	-	+	+	o	+
Topography	o	o	o	o	o
User Experience	+	-	-	o	-
Construction Cost	-	+	o	o	+

OPTION A

Most Appealing Aspect: Option would be routed close to the Saranac River, providing a unique and enjoyable trail user experience

Least Appealing Aspect: Alignment travels through undeveloped private parcels that would require negotiations to obtain easements

OPTION B

Most Appealing Aspect: Option would be routed on-road, which would minimize construction cost for the alignment

Least Appealing Aspect: Much of this option would be routed upon Route 3, which has high vehicle speeds and is not comfortable to walk/bike along

OPTION C

Most Appealing Aspect: Option would be routed on-road, which would minimize construction cost for the alignment

Least Appealing Aspect: Alignment would be routed upon Hardscrabble and Duquette Roads, which have high vehicle speeds and minimal shoulders

OPTION D

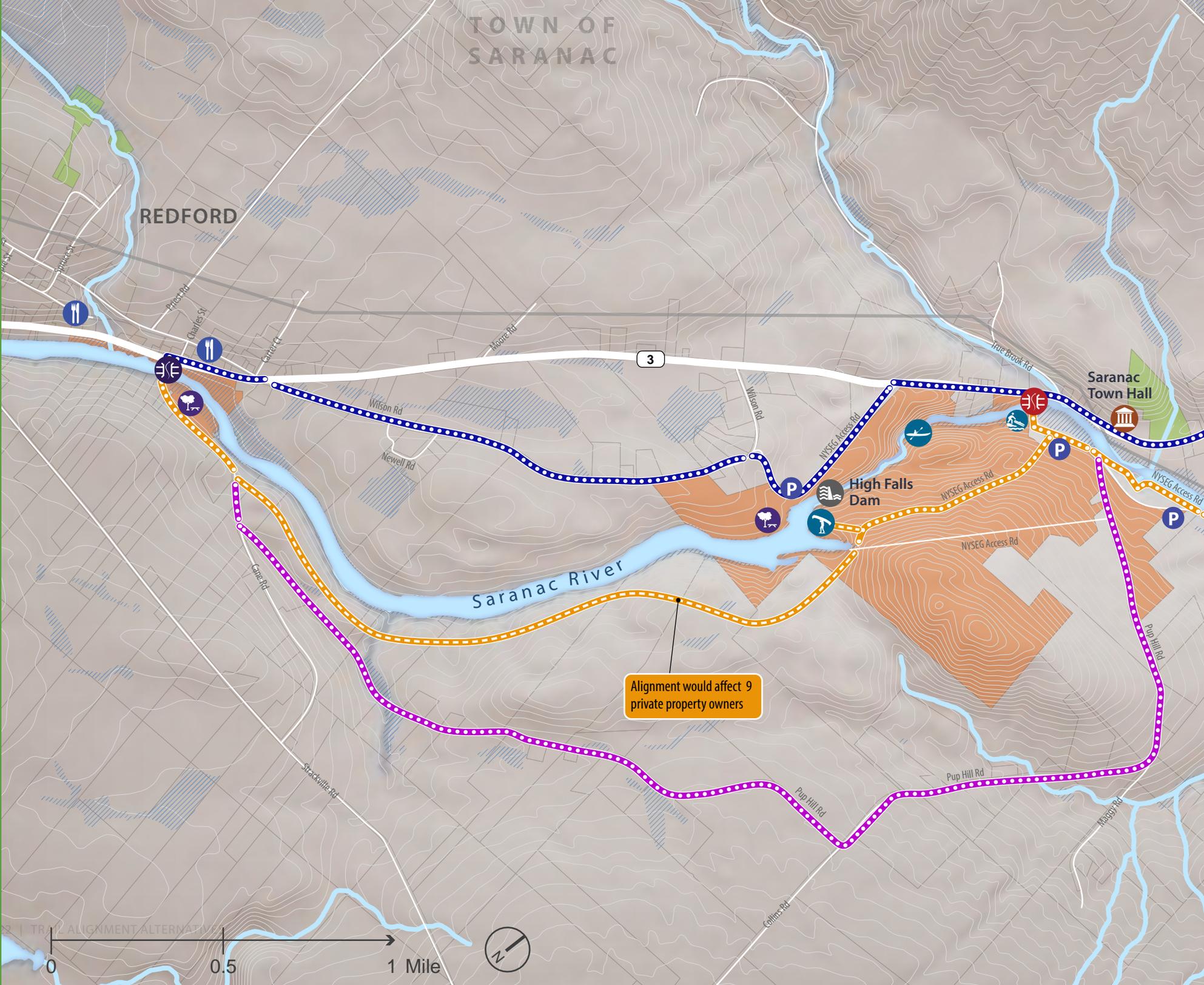
Most Appealing Aspect: Option would utilize existing utility line right-of-way that has moderate slopes

Least Appealing Aspect: Although the option parallels the Saranac River, it has little visual connection to it.

OPTION E

Most Appealing Aspect: Option would use Bucks Corner Rd, a low-volume country road that provided an alternative route to Option B and Option D

Least Appealing Aspect: Bucks Corner Rd had poor pavement quality, is a rather circuitous route, and has very minimal visual connection to the river.

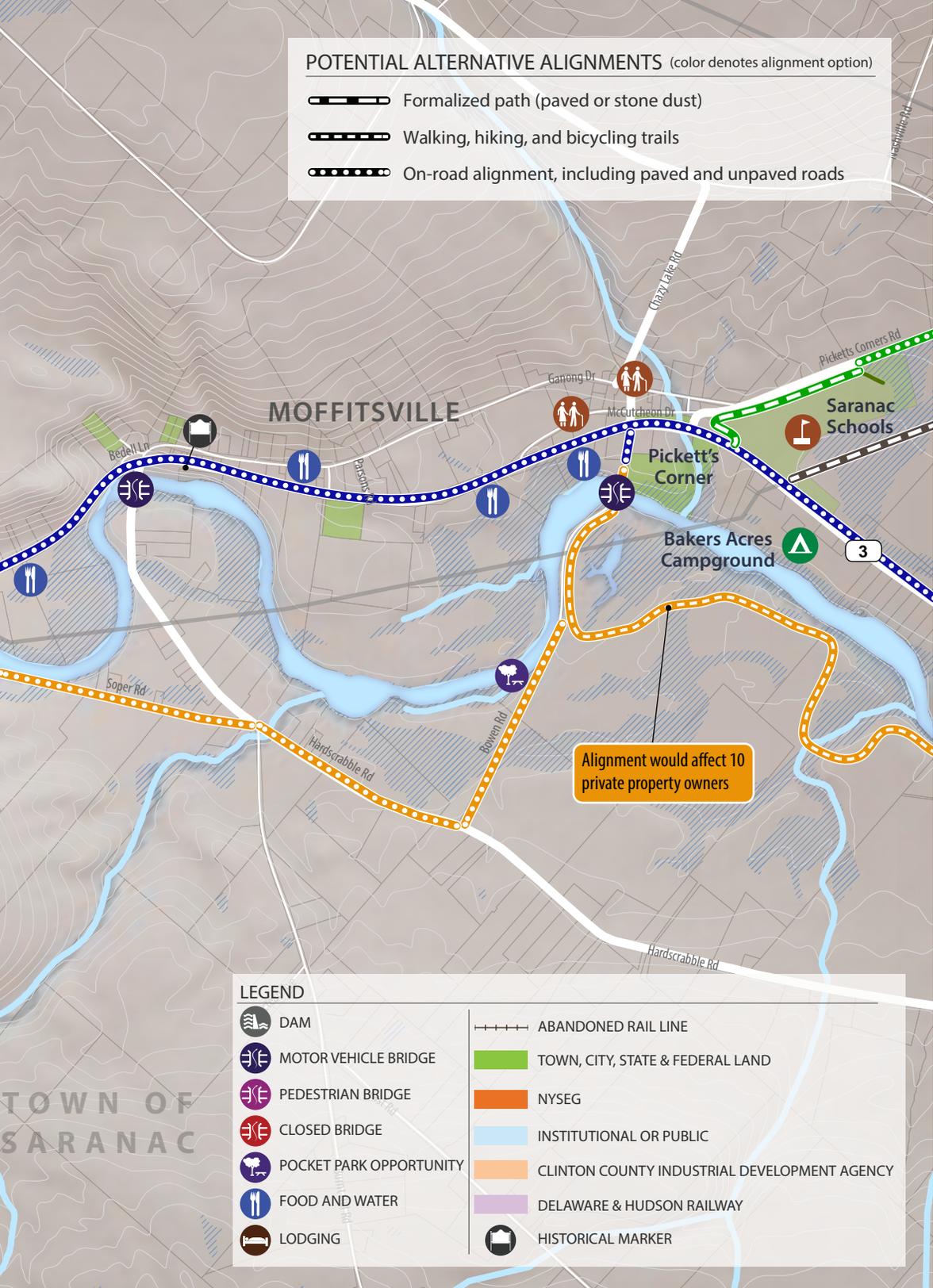


Alignment would affect 9 private property owners



POTENTIAL ALTERNATIVE ALIGNMENTS (color denotes alignment option)

-  Formalized path (paved or stone dust)
-  Walking, hiking, and bicycling trails
-  On-road alignment, including paved and unpaved roads



LEGEND

 DAM	 ABANDONED RAIL LINE
 MOTOR VEHICLE BRIDGE	 TOWN, CITY, STATE & FEDERAL LAND
 PEDESTRIAN BRIDGE	 NYSEG
 CLOSED BRIDGE	 INSTITUTIONAL OR PUBLIC
 POCKET PARK OPPORTUNITY	 CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY
 FOOD AND WATER	 DELAWARE & HUDSON RAILWAY
 LODGING	 HISTORICAL MARKER

Evaluation Criteria Matrix

CRITERIA	OPT 1	OPT 2	OPT 3
Connection to Saranac River	+	+	-
Links to Activity Generators	+	+	-
Priv. Parcels Affected	-	+	+
Permitting Requirements	o	+	+
Topography	o	o	o
User Experience	+	o	-
Construction Cost	o	+	+

OPTION A

Most Appealing Aspect: Option would use several different trail typologies to maintain close connection with the river, including public roads and NYSEG accessways

Least Appealing Aspect: Alignment is routed through several private parcels, which would require negotiations to secure easements

OPTION B

Most Appealing Aspect: Option would be routed primarily upon Rte 3, and would also utilize secondary roads adjacent to the river, minimizing construction/permitting hurdles

Least Appealing Aspect: Much of this option would be routed upon Route 3, which has high vehicle speeds and is not comfortable to walk/bike along

OPTION C

Most Appealing Aspect: Option would be routed upon Pup Hill Rd minimizing construction/permitting hurdles

Least Appealing Aspect: Pup Hill Rd has high vehicle speeds and minimal shoulders, making it uncomfortable for the majority of people to walk/bike upon

CHAPTER 4: POTENTIAL ALIGNMENT

The potential alignment for the Saranac River Trail Greenway represents the public's vision for a connected trail system from Lake Champlain to the Adirondack Park. It is imagined as a braided network of trail types that together will provide a world-class recreation and transportation amenity for residents and visitors alike.



Potential Alignment

Introduction

The development of the potential alignment for the Saranac River Greenway Trail was a collaborative effort that involved many stakeholders from the public, private and non-profit sectors. Together, the planning team worked with these stakeholders and the public to articulate and illustrate a vision for the development of a roughly 27 mile greenway that would connect Downtown Plattsburgh to Saranac, maintaining a close connection to the Saranac River as it extended westward from Peace Point Park. This trail is anticipated to have many health, economic and environmental benefits, and will be used to increase the number of Clinton County residents using active modes of transportation and recreation.

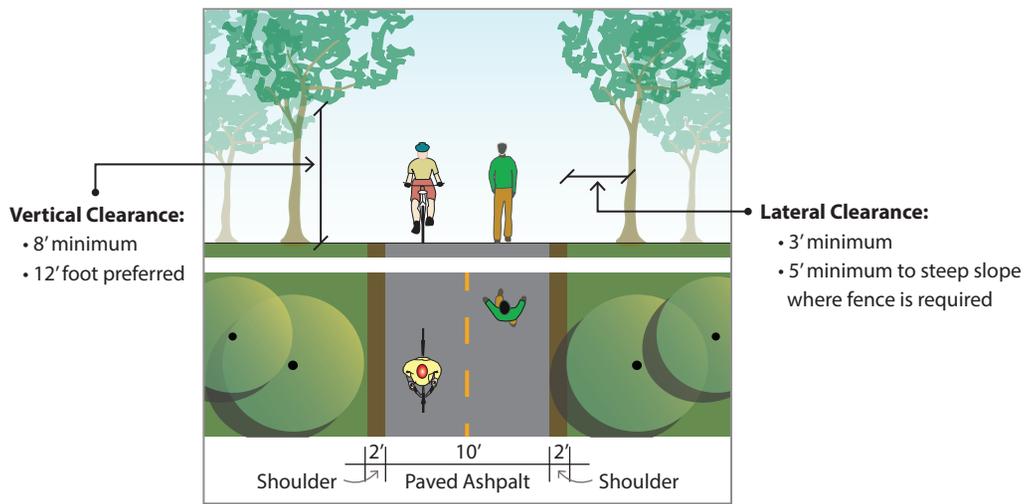
This chapter of the plan presents the vision for the path that the SRTG will take, and how its different sections will look. The proposed SRTG will not be a single trail type along the entire route. Rather, the trail will adapt to the landscape as it moves west from Plattsburgh, creating a 'braid' of trail types for the wide range of trail uses and conditions along the Greenway. Designed in this manner, the trail will become an appealing amenity for families looking to ride and walk sections; will become a tourist draw from people living outside the region; will provide

avid anglers with many opportunities to access the excellent fishing holes; and will provide long-distance bicyclists with varied terrain and routes. Like a braided fishing line, the SRTG will create a strong connection between residents and visitors of Clinton County to the many destinations along the Saranac River. When completed, the trail will provide unparalleled access to nature and elevate the status of walking, biking and other non-motorized uses in the Adirondack Coast region.

Trail Types

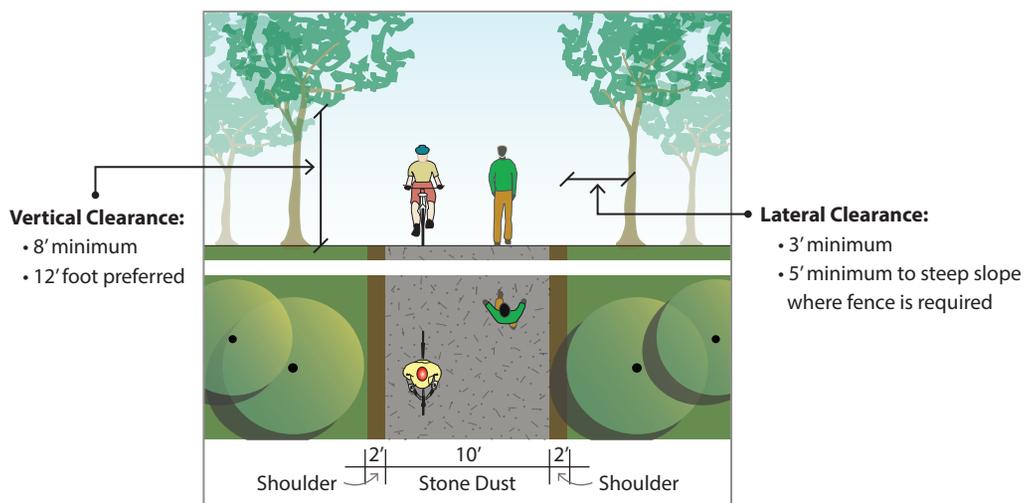
The potential alignment for the SRTG is envisioned to be comprised of a braided network of different trail types. The following section illustrates the trail types that have the potential to be integrated with the SRTG. The detailed maps of the trail on pages 3-10 to 3-17 identify the potential alignment for each segment of the SRTG. These recommendations are conceptual in nature, and as each segment of the trail is implemented, engineering judgement should be exercised and coordination with property owners will be necessary.

TRAIL TYPE 1: SHARED USE PATH



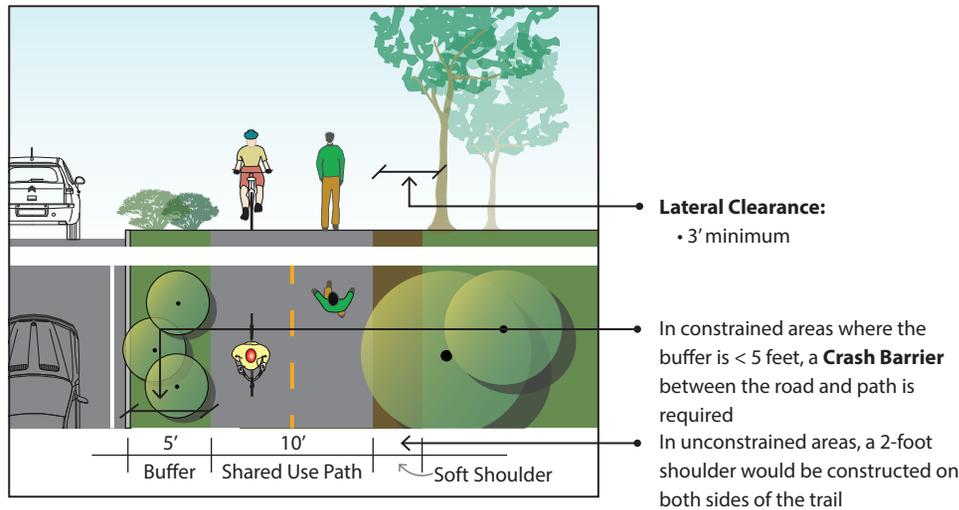
Shared Use Paths are an ideal treatment for a wide variety of trail users. Typically constructed of asphalt, concrete, or firmly packed crushed aggregate, these hard surfaces trails are a durable option, and as long as grades of 5 percent or less are maintained, they are accessible to those with disabilities. Cross slopes of 2% or less should be maintained. The trail tread of shared-use paths should be at least 10 ft wide in order to allow two-way traffic. Additionally, a 2 ft soft shoulder should be provided on either side of the trail tread to allow for passing. A minimum of 8 ft vertical clearance from overhead objects should be maintained, and a maintenance schedule should be employed to keep clearances. Where railings are necessary due to steep slopes adjacent to the trail, 42 inch railings should be installed. This trail typology is recommended in areas of the SRTG that are expected to be most heavily trafficked, and will be placed along gradually sloping areas of the corridor, such as railroad beds or utility rights-of-way, or other flat stretches of land.

TRAIL TYPE 2: SHARED USE PATH - STONE DUST



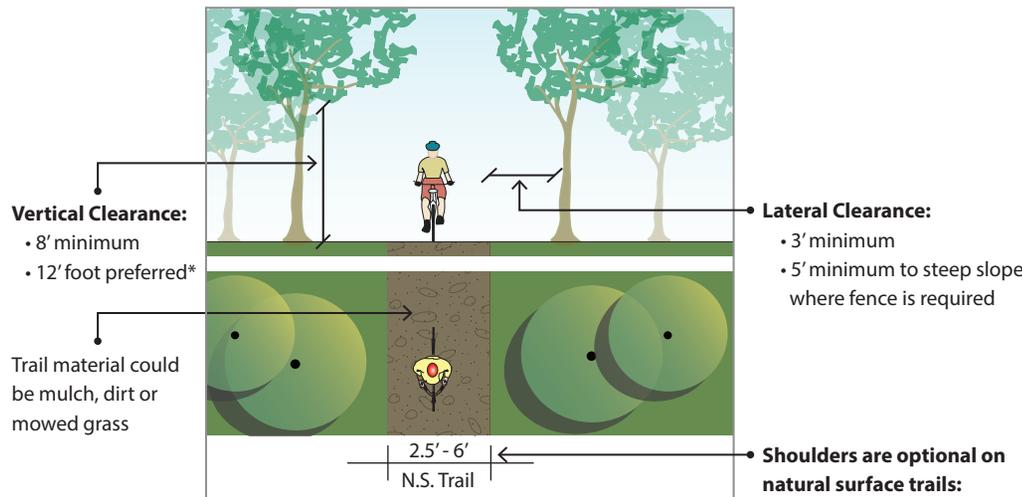
Crushed stone trails are made out of a composite of crushed stones and a binder. The stones are typically made of granite that are less than 3/8 inch in diameter, and the binder most often used is stone dust, which is a by-product of the crushing process. Slightly excavating the trail's foundation and using a vibratory compactor ensures that the trail will remain firm and stable and not sink into the soil beneath. Stone-dust trails are not appropriate in areas prone to flooding or where soils have poor drainage, as they can erode in wet environments. Additionally, a 2 ft soft shoulder should be provided on either side of the trail tread to allow for passing. This trail typology fits in well with natural settings and is the preferred option for sections of the trail that traverse wooded environments with topographical challenges, areas that will generally see less use because they are located near relatively few activity generators. There is also a cost savings to installing a stone dust trail instead of a paved trail, while still accommodating the same types of users (bicycles roll well on this hard surface; stone dust is ADA compliant) and permitting two-way traffic.

TRAIL TYPE 3: SIDEPATH



Sidepaths are typically asphalt or other hard-surface dedicated paths for pedestrians and bicyclists that are separated from roadways by a vegetated buffer or vertical barrier, such as a curb. Sidepaths are recommended along portions of the SRTG adjacent to roadways where high speeds, low shoulder widths, or other hazards make bicycling and walking on-road uncomfortable. Sidepaths should be 10 ft wide to accommodate two-way traffic, with 2 ft soft shoulders on both sides. Thoughtful design and striping on side paths is important to inform trail users when crossing driveways, railroad tracks, or other streets. In locations where a 5' separation between the roadway and the trail cannot be maintained, additional barriers, such as a split rail fence, should be considered. In these constrained areas, a 3' soft shoulder can be placed on the side of the trail opposed to the travel lane. In unconstrained situations, a 2' soft shoulder should be maintained on both sides of the trail.

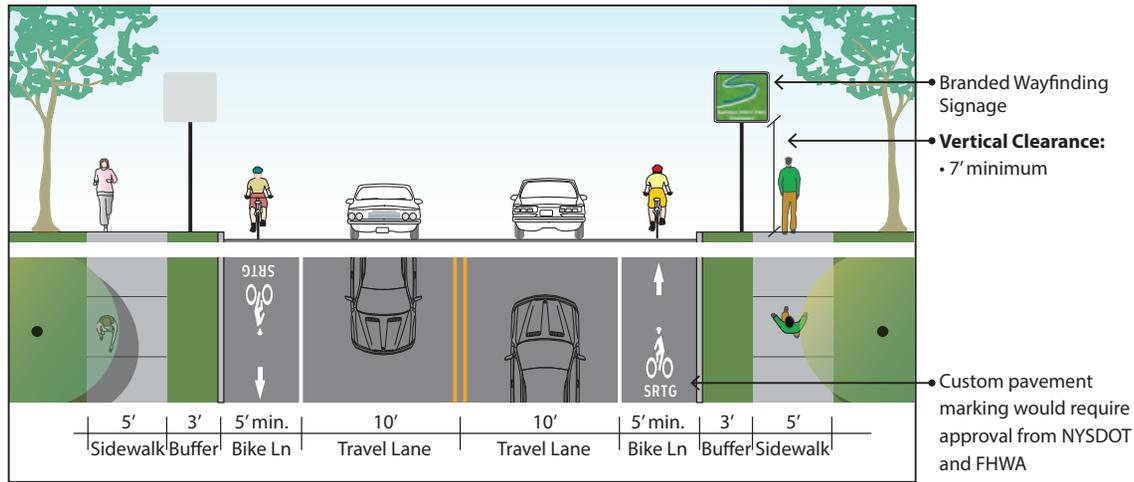
TRAIL TYPE 4: NATURAL SURFACE TRAIL



**Maintaining proper clearings requires frequent maintenance, maintaining wider clearances could save time and resources in the long run*

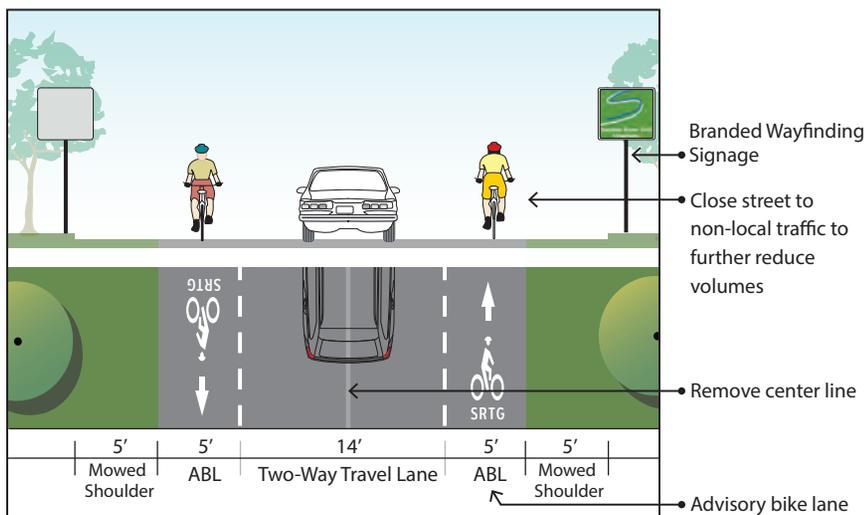
Walking/Hiking trails are natural surface trails that meander through wooded environments, and provide a low-impact option for accessing ecologically sensitive habitats. Surface materials range from bare earth to mulch and grass. Due to the natural settings and minimal improvements made to walking/hiking trails, this type of trail needs to be maintained seasonally and cleared of brush, fallen trees, and other obstacles that could impede a trail user. A seasonal work plan should be established to maintain this type of trail. Maintaining wider than minimum lateral and vertical clearances can help to reduce the frequency of maintenance. Due to the rugged nature of natural trails, this typology is not ADA accessible. This type of trail is ideal for traversing topographically challenging terrain with minimal human impact, and are recommended along sections of the SRTG that are hard to reach and that are environmentally sensitive. To minimize erosion, walking trails should follow contours as much as possible to allow water to flow over the trail, instead of along it.

TRAIL TYPE 5: DOWNTOWN CONNECTOR TYPICAL



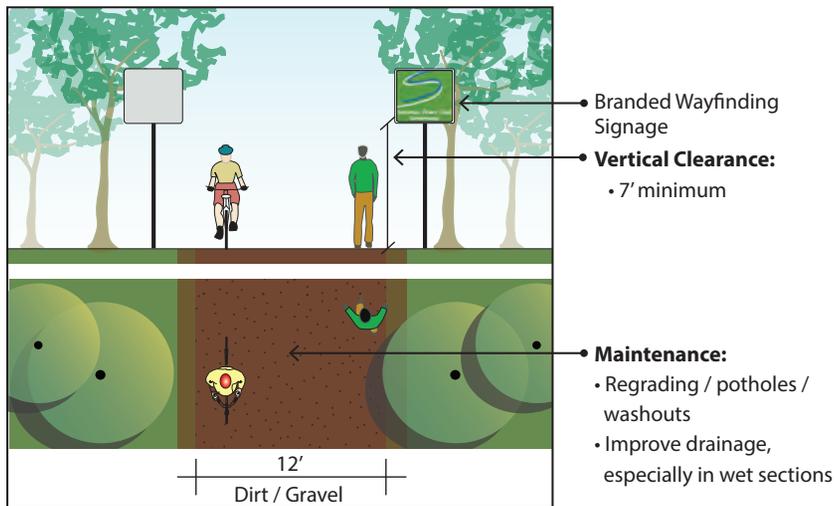
This trail typology is recommended for Main St, travelling through Morrisonville. This section of the trail will connect directly to many destinations along the street, and thoughtful design is required to create a seamless and enjoyable trail user experience. The recommended treatment for this section of the trail proposes that a 5 ft sidewalk to be maintained on one or both sides of the street to accommodate pedestrians. Where road width is available, bike lanes of at least 5 ft should be maintained, and in the long term, narrow sections of the street should be widened to maintain consistent bike lane width. Branded wayfinding signage should be installed along the streets length, as well as custom SRTG bike lane markings. NYS DOT and FHWA must provide approval for any variance from the standard bike lane marking.

TRAIL TYPE 6: LOW-VOLUME ON-ROAD CONNECTOR



Kent Falls Rd provides an excellent opportunity for routing nearly three miles of the SRTG, and due to its length, a site specific recommendation is warranted. The existing bridge at the end of the road is currently closed, resulting in very low traffic volumes along both stretches of road approaching the bridge. It is recommended that Kent Falls Rd be signed as a local traffic only street to further reduce volumes, and that the street center line be removed so that advisory bike lanes can be installed along the street's length. Advisory bike lanes are appropriate on streets with low traffic volumes that are too narrow to install standard bike lanes and travel lanes separately. Advisory bike lanes are marked with a dashed line to the left, directing cars to travel outside the lane if possible. These markings give bicyclists a space to ride, but are also available to motorists if space is needed to drive past an on-coming vehicle. It is also recommended that 5' shoulders be mowed on either side of the street to provide a space for pedestrians to walk. Sand deposits have been known to accumulate on the side of Kent Falls Rd. Efforts should be prioritized to remove this sand seasonally, as it poses a hazard to bicyclists. Study should be conducted before installation of treatment to confirm that volumes and speeds are consistent with guidance and standards of local governing agencies for advisory lane treatments. A speed study could also be done to potentially reduce speed limit.

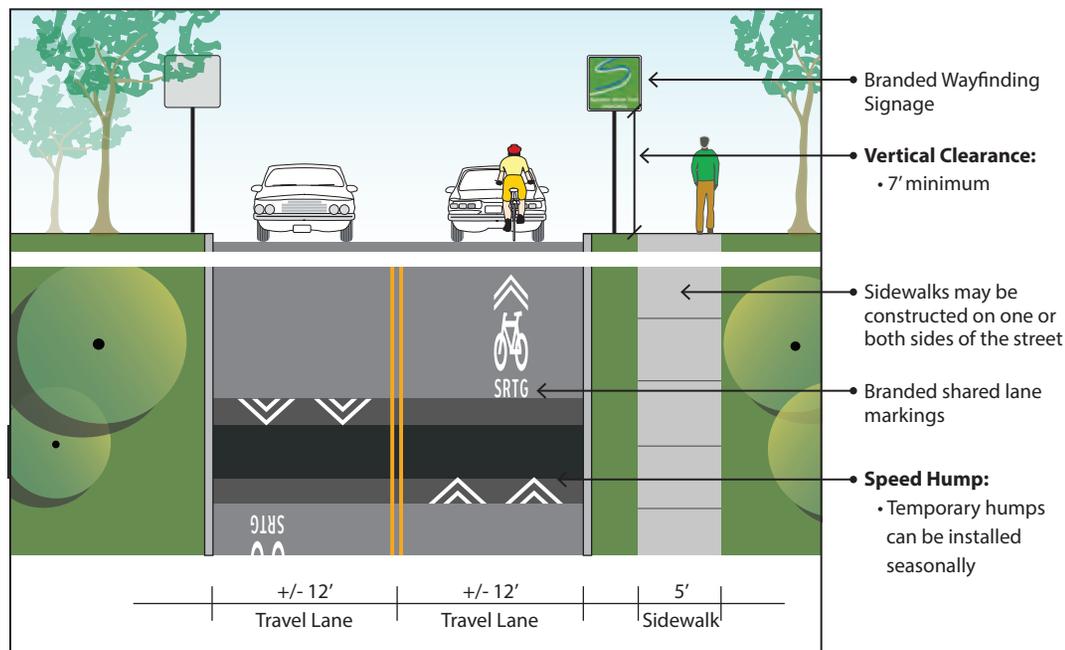
TRAIL TYPE 7: UTILITY ACCESS ROAD



Some sections of the SRTG are recommended to be routed upon utility access roads, dirt and gravel roads owned by NYSEG or other utilities for use by their vehicles.¹ Some of these roads are currently open to the public, while others are gated. If the portions of utility roads that are recommended to be incorporated into the SRTG are, they should receive enhancements that ensure a positive trail users experience. With cooperation from roadway owners, roads will be signed with non-motorized access only signage (with the exception of utility vehicles), as well as with SRTG branded wayfinding signage. Roads should be surfaced with an aggregate that is strong enough to support heavy vehicles but also fine enough to provide a smooth surface that is amenable to bicycling. Also, the roads will undergo seasonal maintenance that would include regrading, pothole filling and washout repairs, as well as improved drainage and storm water management. Particular emphasis will be placed upon on improving wet sections of road, and repairs will be scheduled to coincide with the end of the Spring wet season.

¹ While these roads do present a major opportunity, there are considerable technical, legal and bureaucratic obstacles to their use and they represent long term planning goals.

TRAIL TYPE 8: NEIGHBORHOOD TRAFFIC CALMING



Some sections of the SRTG are recommended to be routed upon several low-volume residential streets, which are envisioned to become shared streets, known as Neighborhood Greenways. For these streets, treatments are recommended to reduce volumes and minimize travel speeds, two key goals of a shared street environment. Shared roadways are most comfortable when the difference between bicycle and motorist speeds is minimal, and speed humps are recommended to reduce speed differentials. If speed humps pose a winter maintenance issue, temporary speed humps can be installed in the warmer months to calm traffic during the seasons when these trail sections will see the most use. Additionally, sidewalks should be constructed on one or both sides of the street to provide a space for pedestrians to walk. SRTG branded wayfinding signage will help to guide users along these streets and connect them to other portions of the Greenway. Shared lane markings (sharrows) are also recommended. Sharrows alert motorists to the presence of bicyclists along the roadway, and help to define the position in the lane that bicyclists should assume. Additional traffic calming features can be implemented where appropriate, which are elaborated upon on page 3-7.

*Study should be conducted before installation of treatment to confirm that volumes and speeds are consistent with guidance and standards of local governing agencies for shared roadway treatments.

POTENTIAL PHASING PLAN

- 1. Rugar Woods
- 2. I-87 to Runway
- 3. Main St to Kent Falls Rd
- 4. Adirondack Gateway
- 5. Wetlands Connector
- 6. High Falls Connector

SARANAC

SCHUYLER FALLS

MAP 2

MAP 3

MAP 4

5. Wetlands Connector

4. Adirondack Gateway

3. Main St to Kent Falls Rd

6. High Falls Connector

12.5 mi

15.0 mi

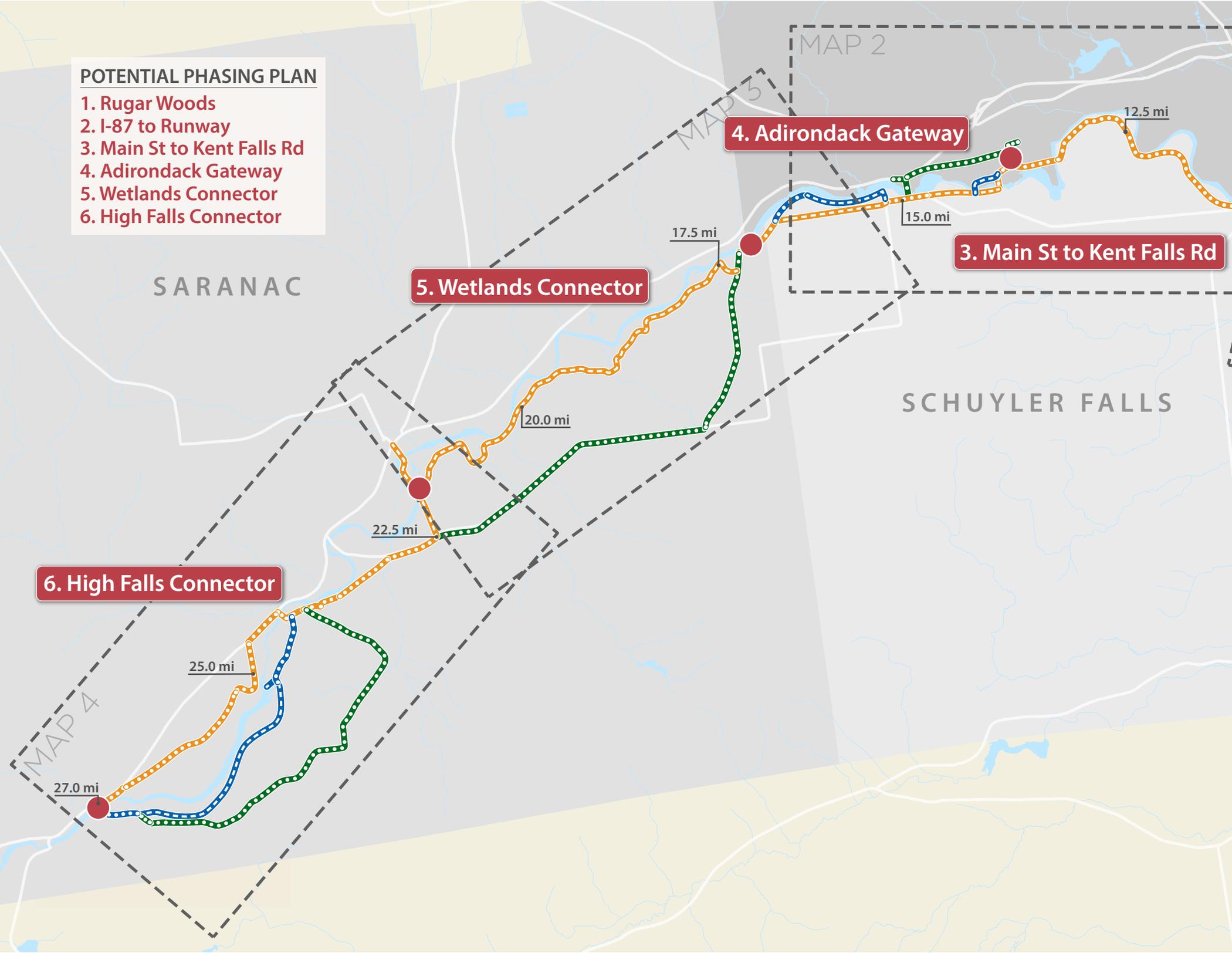
17.5 mi

20.0 mi

22.5 mi

25.0 mi

27.0 mi



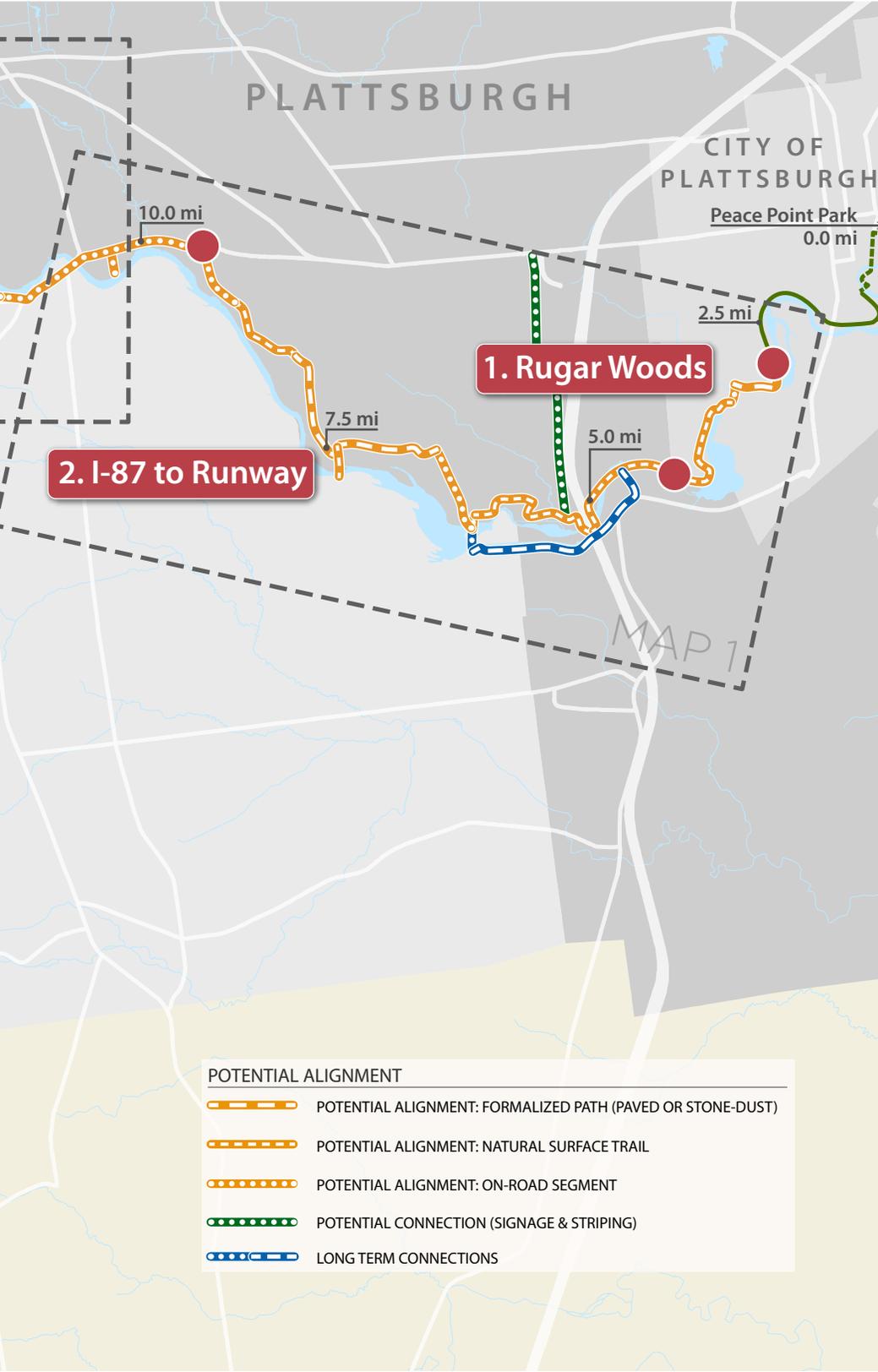
POTENTIAL ALIGNMENT

Several alignment options were identified for the Saranac River Trail Greenway corridor. To determine the feasibility and desirability of the options, each was evaluated against criteria developed by the planning team in coordination with the Project Advisory Committee and the public. After modifying the alignment to reflect stakeholder input, a potential alignment for the development of a 27 mile greenway extending from the City of Plattsburgh to Saranac was established. The potential alignment is envisioned to be comprised of a braided network on-and-off road segments that together form a connected greenway, linking residents and visitors to the many destinations along the river corridor.

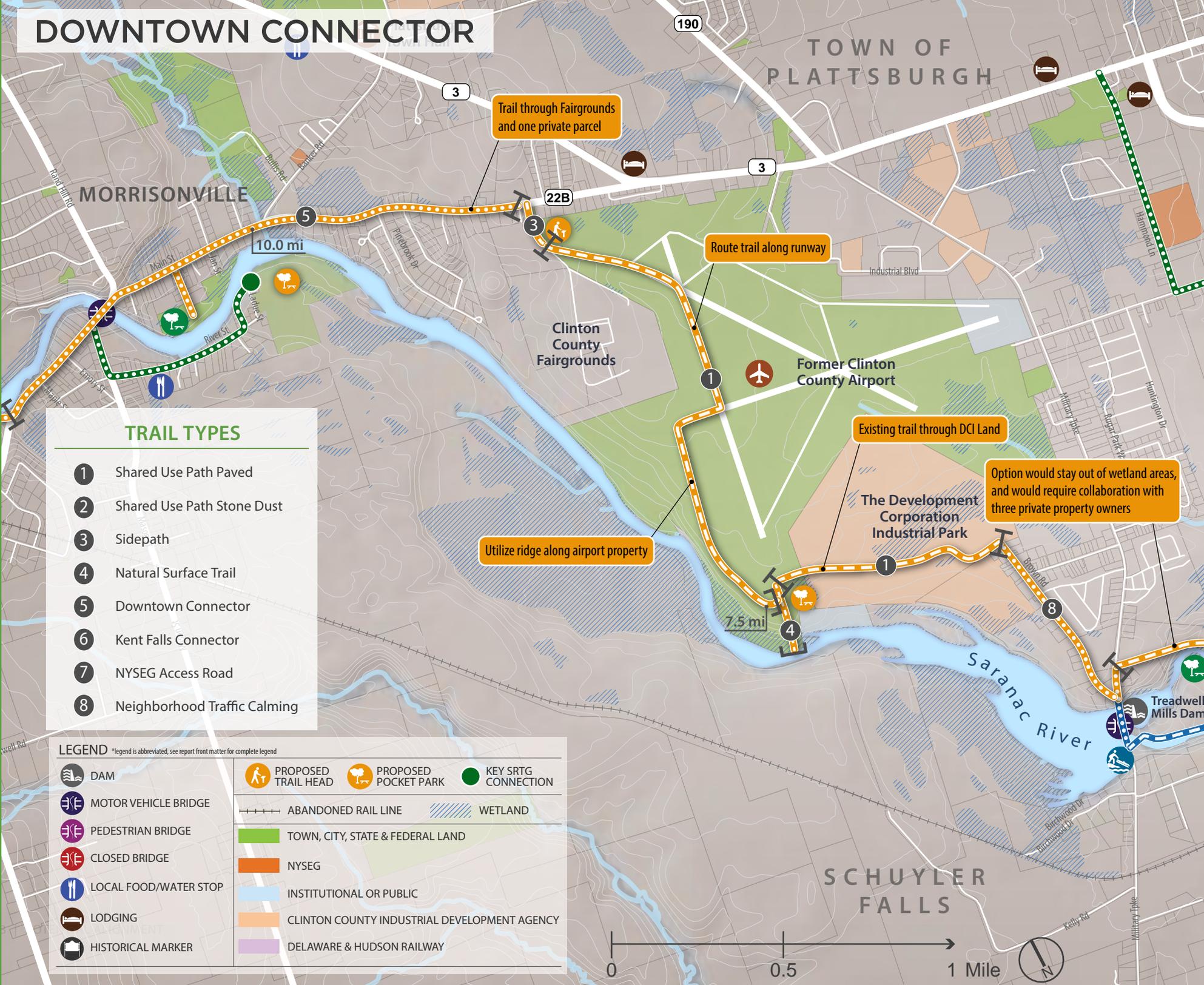
The development of the trail will occur in phases, with the first phase of the SRTG beginning at the end of the existing Saranac River Trail. This plan presents the concept for the alignment as it extends 24 miles west from this point into the Town of Saranac. By and large, the trail maintains a close connection with the Saranac River and is routed to connect people to the places that they live, learn, work and play along the corridor. Due to topographical challenges and the lack of linear rights-of-way paralleling the river, the surface type of the trail varies along its length to complement the terrain and setting of particular segments.

This chapter presents the potential alignment for the Saranac River Trail Greenway, dividing the corridor into four sections. Each map identifies several points of interest that will be connected, as well as proposed trailheads and pocket parks that could be incorporated into the trail, creating start and end points for trail users. The potential alignment is shown on the maps as a gold color, reflecting the standard that greenway seeks to attain. Additionally, corollary on-road segments are identified, as well as long-term alignment options that may not be feasible today for a variety of reasons, but which represent appealing alignments. These routes as desirable future options that should be incorporated into the SRTG as funds and momentum allows.

The potential alignment for the greenway identified in this chapter would affect parcels in public, quasi-public and private ownership. The fact that an alignment is shown on a parcel does not indicate consent – rather it represents a long-term planning objective for where the trail could be routed. As the trail is developed in phases, negotiations with individual property owners will be necessary before each section of the trail can move forward.



DOWNTOWN CONNECTOR



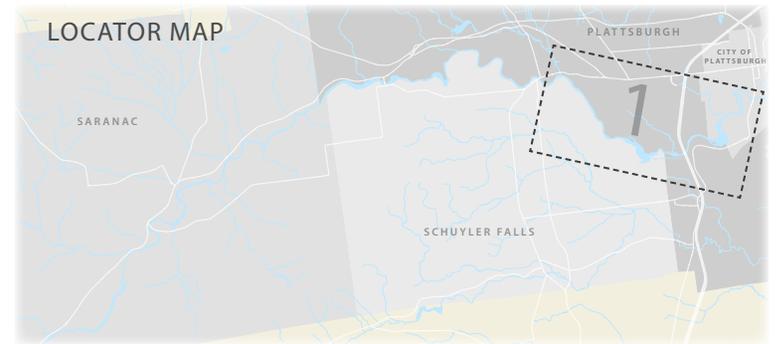
TRAIL TYPES

- 1 Shared Use Path Paved
- 2 Shared Use Path Stone Dust
- 3 Sidepath
- 4 Natural Surface Trail
- 5 Downtown Connector
- 6 Kent Falls Connector
- 7 NYSEG Access Road
- 8 Neighborhood Traffic Calming

LEGEND

*Legend is abbreviated, see report front matter for complete legend





The potential alignment for the Downtown Connector section of the SRTG begins at the end of the Saranac River Trail. It would continue across the high school and Rugar Woods property, and then underneath I-87. From here, the trail would be routed on-road, and then cross through the Development Corporation and Former Clinton County Airport parcels, ultimately connecting with Main St in Morrisonville. Since this section links areas that are more densely populated, use of this section of the trail is projected to be greater and large segments are recommended to be shared use paths. The on-road sections are intended to become thoughtfully designed Complete Streets, which accommodate all road users, providing an enjoyable trail experience and connecting trail users directly to local businesses in Morrisonville

Alignment Notes:

SUNY Plattsburgh & Plattsburgh City School Property: SUNY Plattsburgh and the Superintendent of Plattsburgh City Schools are both supportive of the SRTG alignment in concept through their property.

I-87 Undercrossing: When this overpass was reconstructed, the Town of Plattsburgh coordinated with NYSDOT to ensure that a bench cut was created under the bridge so that a trail could be routed there in the future. There are engineering challenges to developing a trail here, but this crossing represents a critical link, and this alignment is the most feasible solution to overcoming the Northway barrier.

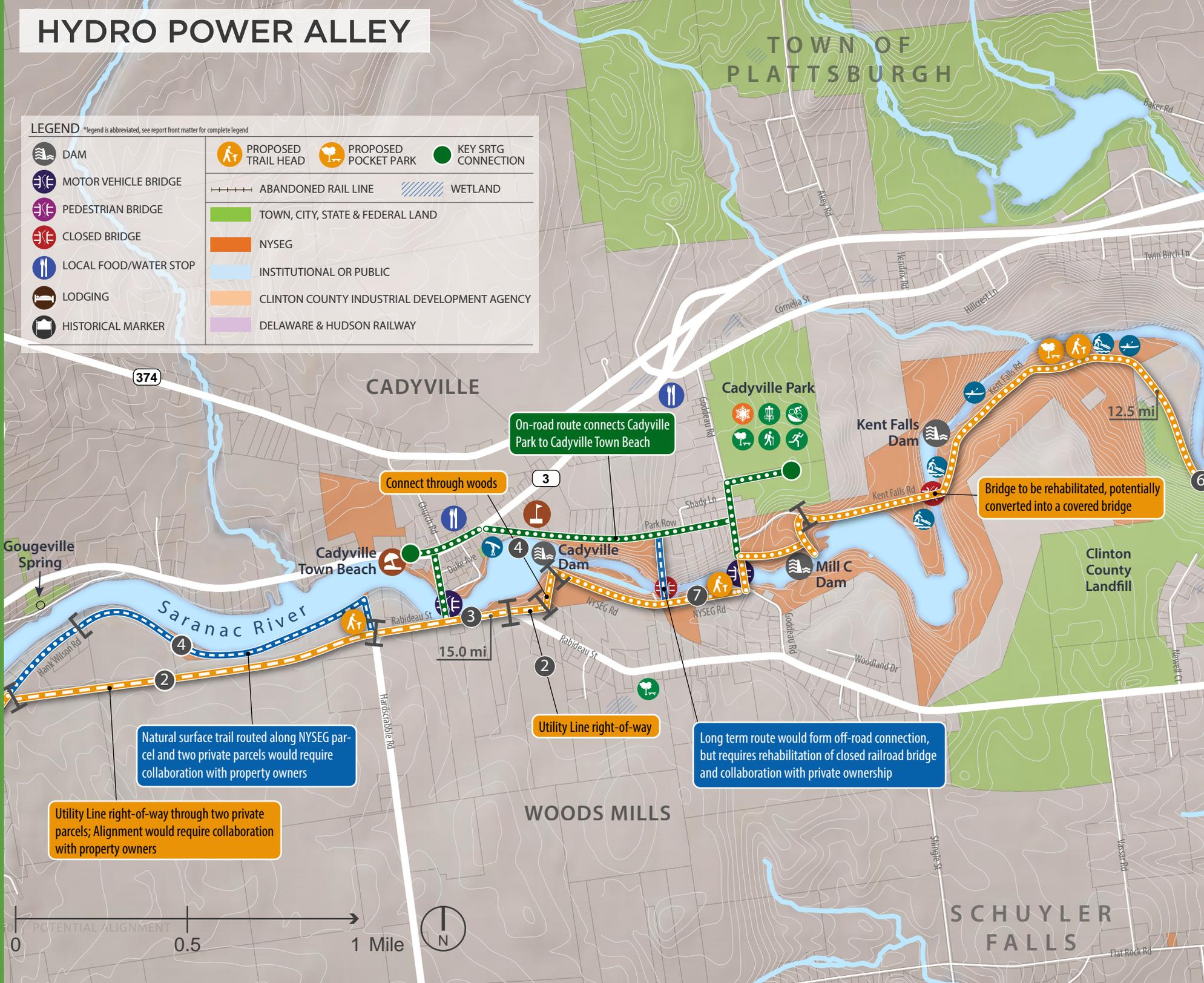
Clinton County Airport Parcel: The former airport is owned by Clinton County. The Town of Plattsburgh's Comprehensive Plan and Zoning Ordinance includes conservation/recreation as part of the planned future uses of this parcel. Clinton County & the Town of Plattsburgh are both supportive of the SRTG alignment in concept through the parcel.

The Development Corporation (TDC) Parcel: TDC is supportive of the SRTG project in concept through the parcel.

HYDRO POWER ALLEY

LEGEND *Legend is abbreviated, see report front matter for complete legend

	DAM		PROPOSED TRAIL HEAD		PROPOSED POCKET PARK		KEY SRTG CONNECTION
	MOTOR VEHICLE BRIDGE		ABANDONED RAIL LINE		WETLAND		
	PEDESTRIAN BRIDGE		TOWN, CITY, STATE & FEDERAL LAND				
	CLOSED BRIDGE		NYSEG				
	LOCAL FOOD/WATER STOP		INSTITUTIONAL OR PUBLIC				
	LODGING		CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY				
	HISTORICAL MARKER		DELAWARE & HUDSON RAILWAY				



On-road route connects Cadyville Park to Cadyville Town Beach

Connect through woods

Bridge to be rehabilitated, potentially converted into a covered bridge

Natural surface trail routed along NYSEG parcel and two private parcels would require collaboration with property owners

Utility Line right-of-way through two private parcels; Alignment would require collaboration with property owners

Utility Line right-of-way

Long term route would form off-road connection, but requires rehabilitation of closed railroad bridge and collaboration with private ownership



Data Source: NYS Department of Environmental Conservation, Google Images, Bing Images, GoAironadack.com, SUNY Plattsburgh, NorthernForestCanoeTrail.org, Clinton County



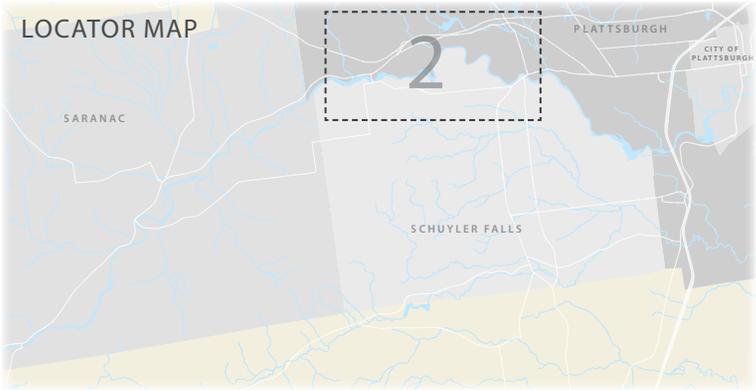
TRAIL TYPES

- 1 Shared Use Path Paved
- 2 Shared Use Path Stone Dust
- 3 Sidepath
- 4 Natural Surface Trail
- 5 Downtown Connector
- 6 Kent Falls Connector
- 7 NYSEG Access Road
- 8 Neighborhood Traffic Calming

POTENTIAL ALIGNMENT

- POTENTIAL ALIGNMENT: FORMALIZED PATH (PAVED OR STONE-DUST)
- POTENTIAL ALIGNMENT: NATURAL SURFACE TRAIL
- POTENTIAL ALIGNMENT: ON-ROAD SEGMENT
- POTENTIAL CONNECTION (SIGNAGE & STRIPING)
- LONG TERM CONNECTIONS

LOCATOR MAP



The potential alignment for the Hydro Power Alley section of the SRTG extends from Main St in Morrisonville to Hank Wilson Rd, connecting trail users to many of the hydroelectric dams within this stretch of the Saranac River. A significant stretch of this section has the potential to be routed upon Kent Falls Rd, which would require the rehabilitation of the closed Kent Falls Rd bridge into a bike and pedestrian bridge. The potential alignment continues, connecting users to the Mill C Dam, crossing the river at Goddeau Rd, and utilizing various rights-of-way on the south side of the river to ultimately link to Hank Wilson Rd. A variety of trail types are recommended for this section, including on-road segments and off-road segments routed upon utility access ways. When completing this section of the trail, particular emphasis should be placed on making a connection to the historic importance of hydroelectric power in the region's history using interpretive signage and artwork placed at key locations.

Alignment Notes:

Kent Falls Rd Bridge: This bridge (BIN 3335790) is owned by Clinton County. Clinton County is supportive of the SRTG alignment over this bridge.

NYSEG Affected Parcels: NYSEG saw no issue in concept with segments of trail in this section that would affect their property. These segments represent long-term planning objectives and can only move forward with the willing cooperation of NYSEG.

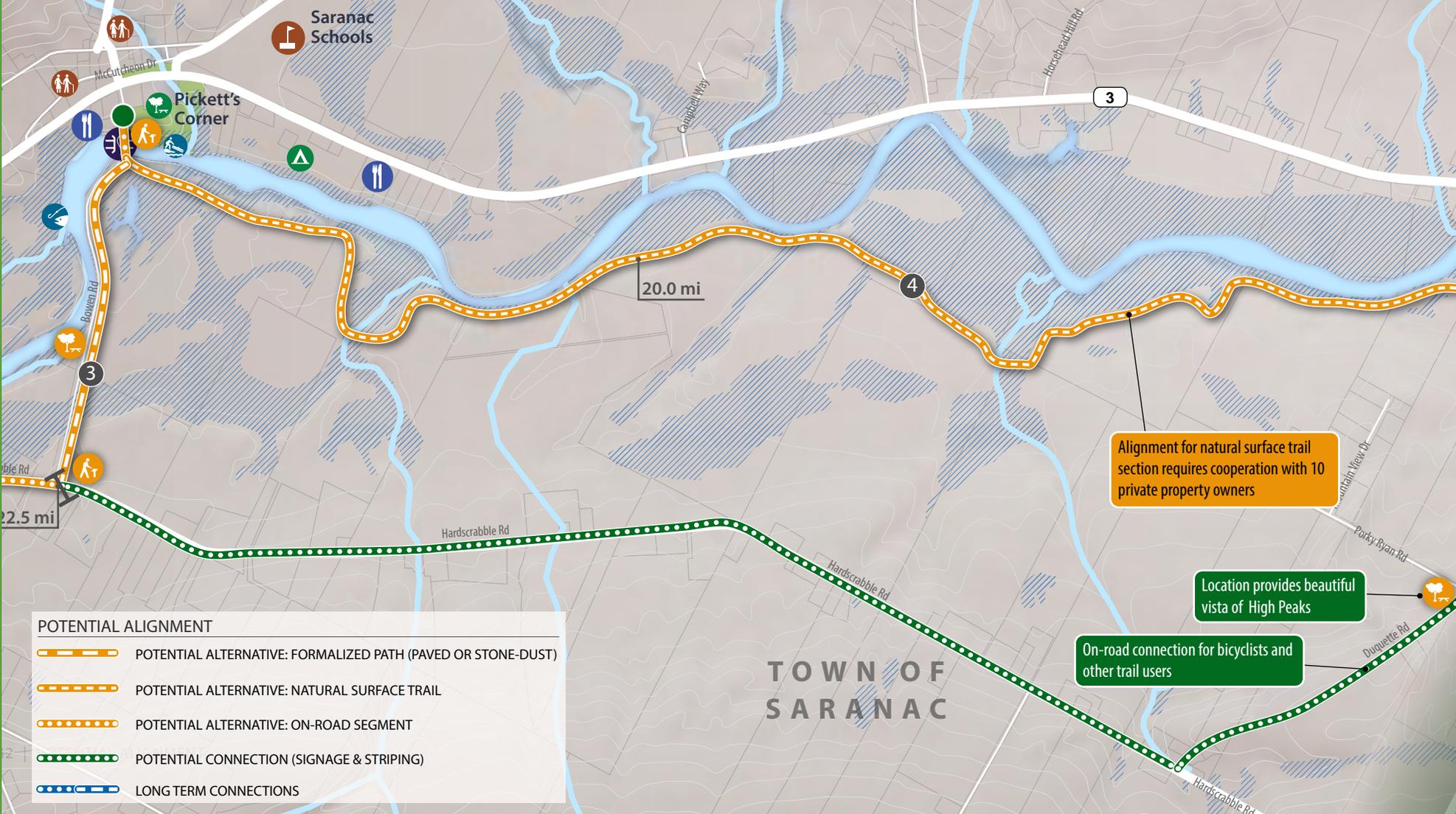
ADIRONDACK GATEWAY

TOWN OF SARANAC

Industrial Park

LEGEND *Legend is abbreviated, see report front matter for complete legend

	DAM		PROPOSED TRAIL HEAD		PROPOSED POCKET PARK		KEY SRTG CONNECTION
	MOTOR VEHICLE BRIDGE		ABANDONED RAIL LINE		WETLAND		
	PEDESTRIAN BRIDGE		TOWN, CITY, STATE & FEDERAL LAND				
	CLOSED BRIDGE		NYSEG				
	LOCAL FOOD/WATER STOP		INSTITUTIONAL OR PUBLIC				
	LODGING		CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY				
	HISTORICAL MARKER		DELAWARE & HUDSON RAILWAY				



Alignment for natural surface trail section requires cooperation with 10 private property owners

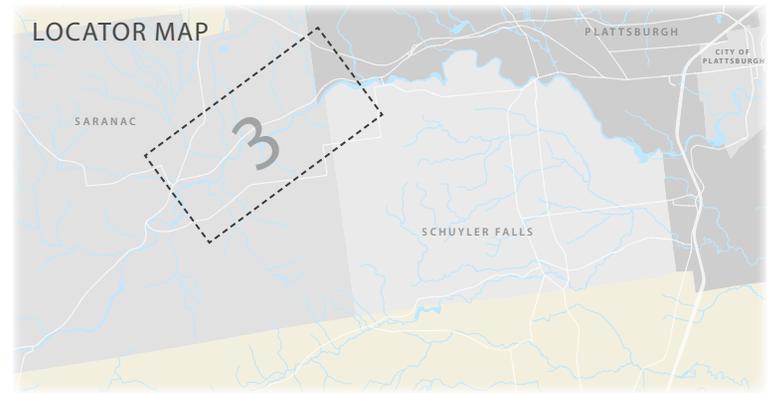
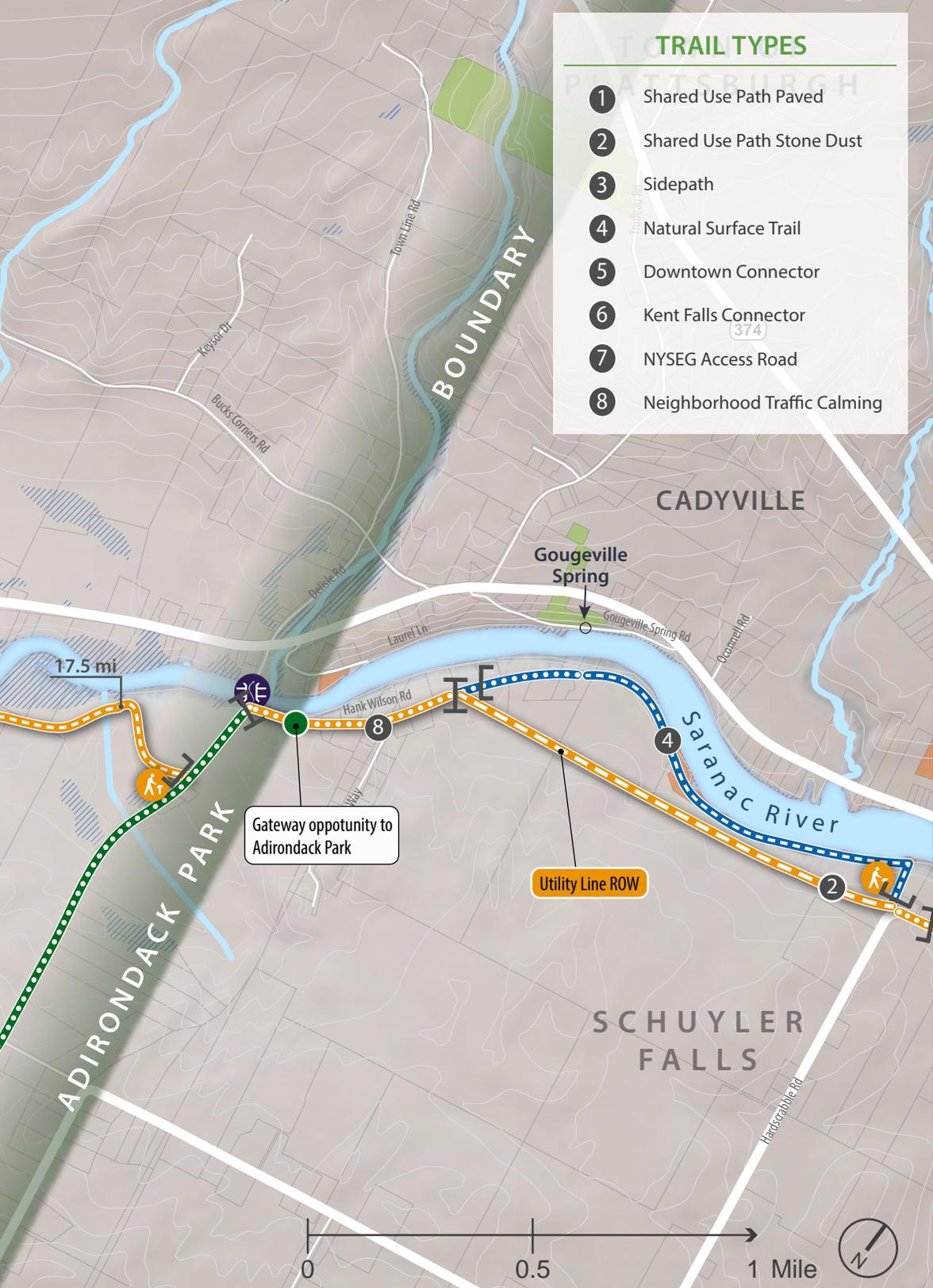
Location provides beautiful vista of High Peaks

On-road connection for bicyclists and other trail users

POTENTIAL ALIGNMENT

	POTENTIAL ALTERNATIVE: FORMALIZED PATH (PAVED OR STONE-DUST)
	POTENTIAL ALTERNATIVE: NATURAL SURFACE TRAIL
	POTENTIAL ALTERNATIVE: ON-ROAD SEGMENT
	POTENTIAL CONNECTION (SIGNAGE & STRIPING)
	LONG TERM CONNECTIONS

TOWN OF SARANAC



The potential alignment for the Adirondack Gateway section of the SRTG extends west from Hank Wilson Rd and crosses into the Adirondack Park. This is an excellent gateway opportunity, and a trail-side structure should be erected here to emphasize this important entrance. Crossing into the parkland, there is potential to have a walking & biking natural surface/boardwalk trail that would extend on the south side of the river, ultimately connecting with Bowen Rd. This would provide a rugged but beautiful alignment meandering along the bank of the river. This portion of the trail would require cooperation from 10 property owners. Additionally, an on-road alignment is proposed along Duquette and Hardscrabble Rd, which both offer inspiring views of the High Peaks. A lookout platform is recommended along Duquette Rd to further enhance this view and serve as a draw for people to use this alignment.

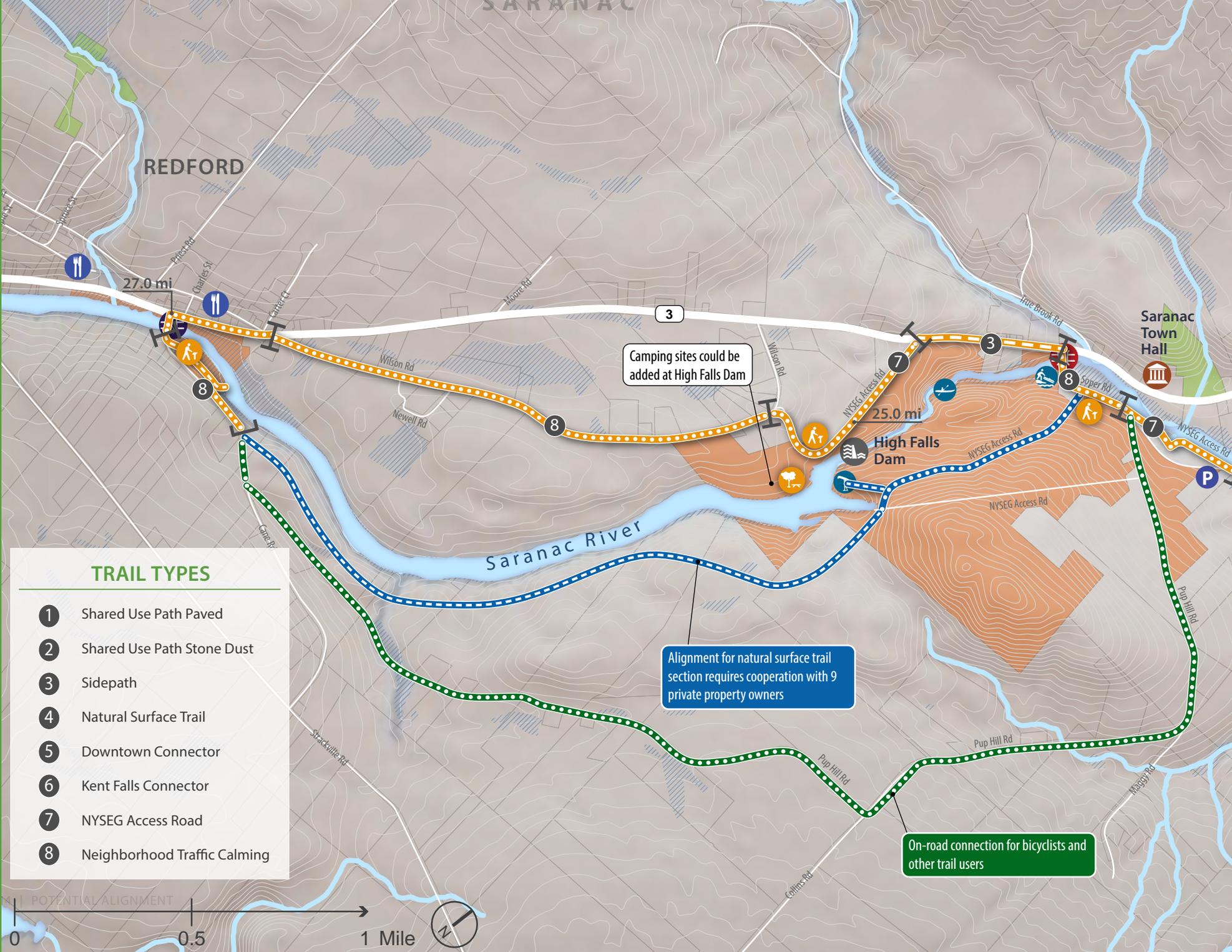
Alignment Notes:

Section of Trail through Private Parcels: Segments of the trail that have the potential to be routed on private property are desirable alignment options. These segments represent long-term planning objectives and can only move forward with the willing cooperation of land owners.

WATERFALL WAY

TOWN OF SARANAC

REDFORD



Camping sites could be added at High Falls Dam

Alignment for natural surface trail section requires cooperation with 9 private property owners

On-road connection for bicyclists and other trail users

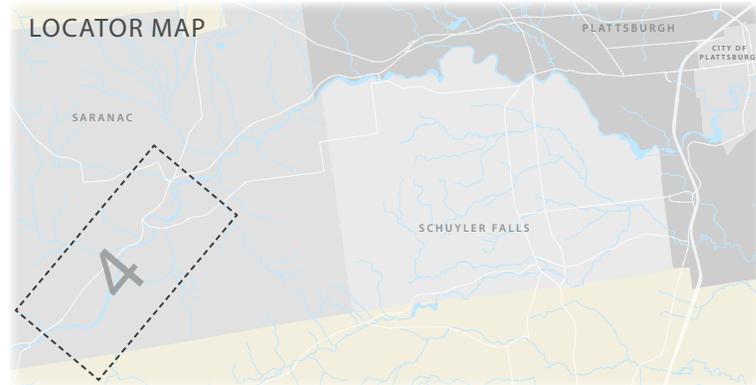
TRAIL TYPES

- 1 Shared Use Path Paved
- 2 Shared Use Path Stone Dust
- 3 Sidpath
- 4 Natural Surface Trail
- 5 Downtown Connector
- 6 Kent Falls Connector
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- 8 Neighborhood Traffic Calming

POTENTIAL ALIGNMENT

- POTENTIAL ALIGNMENT: FORMALIZED PATH (PAVED OR STONE-DUST)
- POTENTIAL ALIGNMENT: NATURAL SURFACE TRAIL
- POTENTIAL ALIGNMENT: ON-ROAD SEGMENT
- POTENTIAL CONNECTION (SIGNAGE & STRIPING)
- LONG TERM CONNECTIONS

LOCATOR MAP



Alignment for natural surface trail section requires cooperation with 10 private property owners

The potential alignment for the Waterfall Way section of the SRTG connects trail users to the dramatic High Falls Dam and Gorge, which has the potential to become a major tourist attraction. This section includes various trail types to link users to the closed bridge at the end of Soper Rd. From here, the potential alignment crosses the river northbound, and continues along the side of Rte 3, connecting to a NYSEG access road and ultimately to High Falls Dam. Here there is potential for a lookout, picnic area, and walking trails along the gorge. For all of these features, safety is the number one priority, and features should be carefully designed to prevent accidents in this beautiful but steep area. In the long term, an additional alignment has the potential to be placed on the south side of the river, which would provide another perspective and allow trail users to complete the SRTG without travelling upon Rte 3. Although safety is more of a concern on the south side of the dam (due to the dam intake), careful design could result in a safe trail user experience. Additionally, an on-road alignment is proposed along Pup Hill Rd to provide an alternative route for long-distance bicyclists.

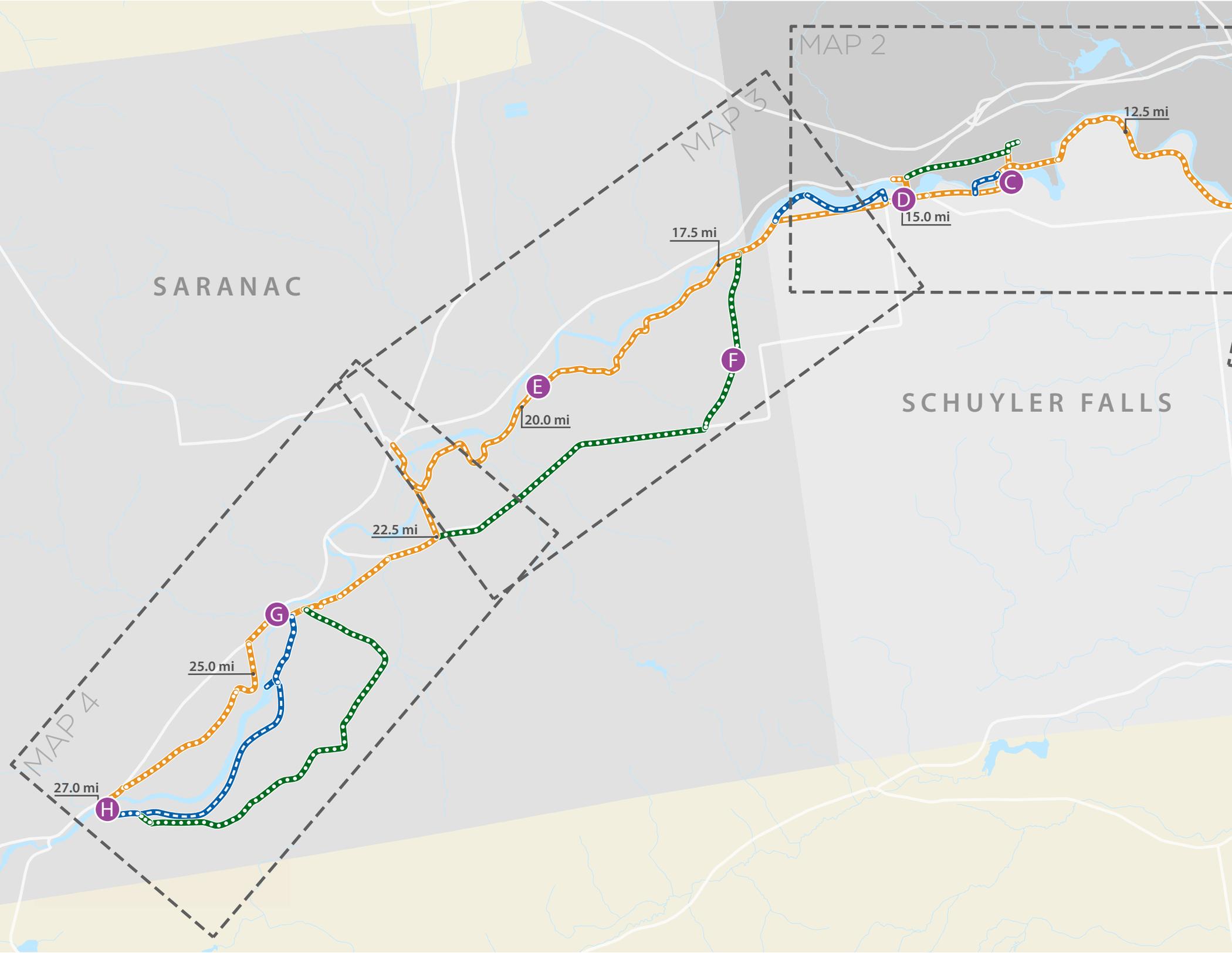
Alignment Notes:

NYSEG Affected Parcels: NYSEG saw no issue in concept with segments of trail in this section that would affect their property, with the exception of the Long Term Option west of High Falls Dam. The long term option was less desirable because it would put users near their dam intakes. This section was still included in the plan because it represents a desirable future alignment. All segments affective NYSEG property represent long-term planning objectives and can only move forward with the willing cooperation of NYSEG.

LEGEND

*Legend is abbreviated, see report front matter for complete legend

- | | | | |
|-----------------------|--|----------------------|---------------------|
| DAM | PROPOSED TRAIL HEAD | PROPOSED POCKET PARK | KEY SRTG CONNECTION |
| MOTOR VEHICLE BRIDGE | ABANDONED RAIL LINE | WETLAND | |
| PEDESTRIAN BRIDGE | TOWN, CITY, STATE & FEDERAL LAND | | |
| CLOSED BRIDGE | NYSEG | | |
| LOCAL FOOD/WATER STOP | INSTITUTIONAL OR PUBLIC | | |
| LODGING | CLINTON COUNTY INDUSTRIAL DEVELOPMENT AGENCY | | |
| HISTORICAL MARKER | DELAWARE & HUDSON RAILWAY | | |



SARANAC

SCHUYLER FALLS

MAP 2

MAP 3

MAP 4

27.0 mi

25.0 mi

22.5 mi

20.0 mi

17.5 mi

15.0 mi

12.5 mi

H

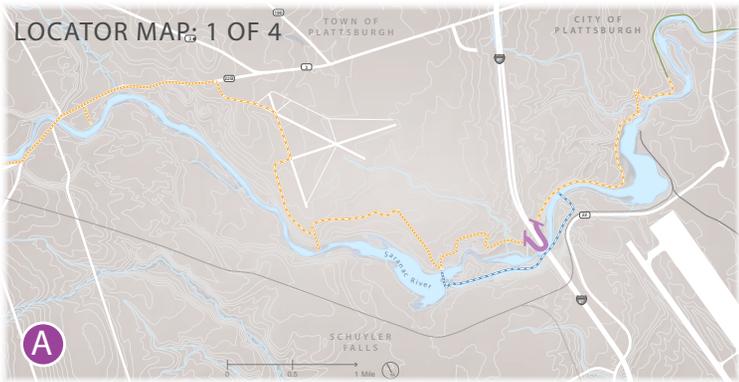
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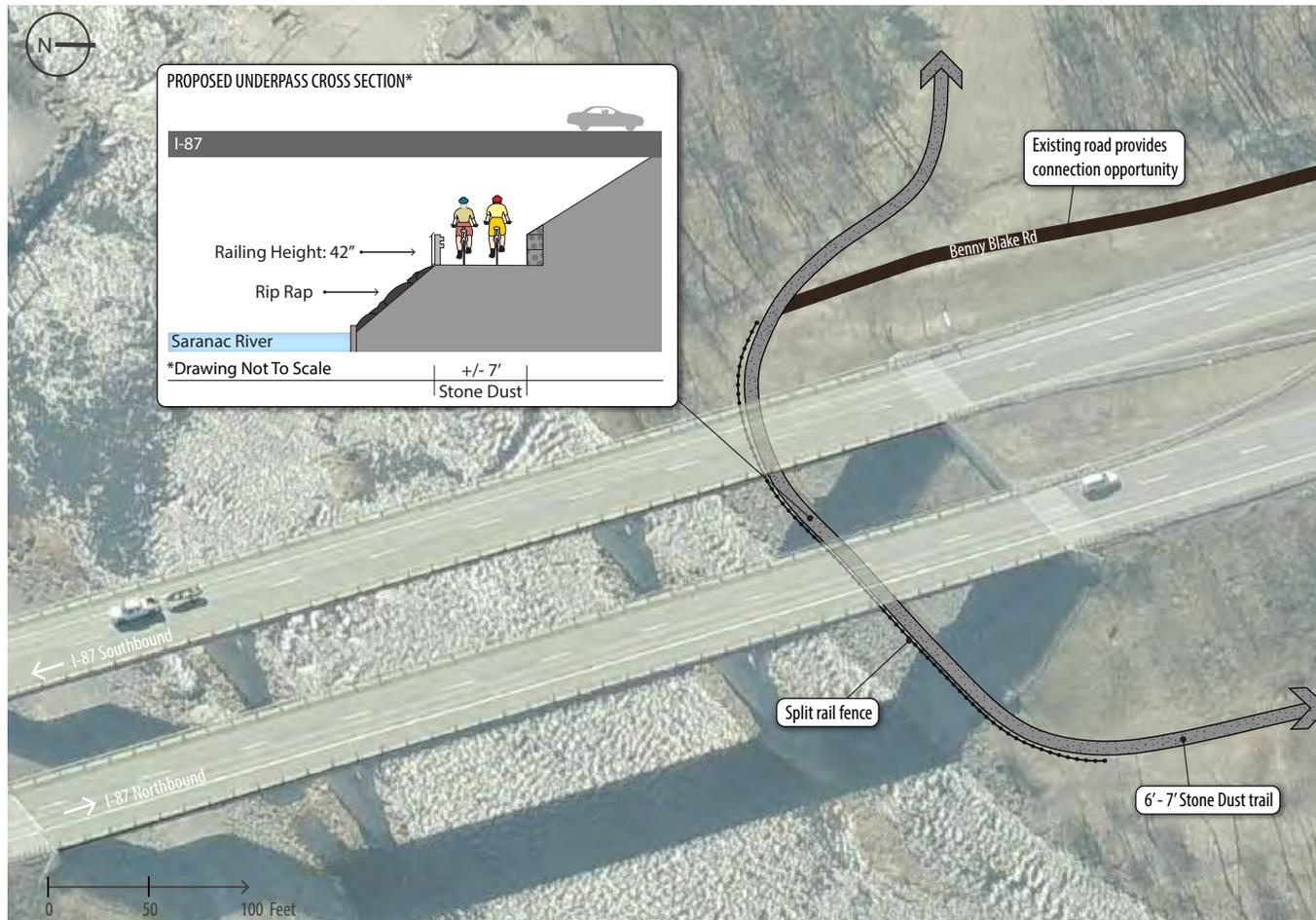


I-87 Underpass Proposal²

The I-87 priority concept illustrates an option for crossing under the Northway. This is a key connection, and using the existing path under the interstate combined with improvements is the most cost effective option to overcome the Northway barrier. The existing path is approximately 7' wide, which is a constrained width for a shared use path. The existing gravel/dirt surface could be replaced with a crushed stone, providing a more erosion resistant and dryer trail surface. Additionally, a 42" (min.) fence is recommended on the south/river facing side of the path. The stone dust trail would continue on both approaches to the under-crossing.

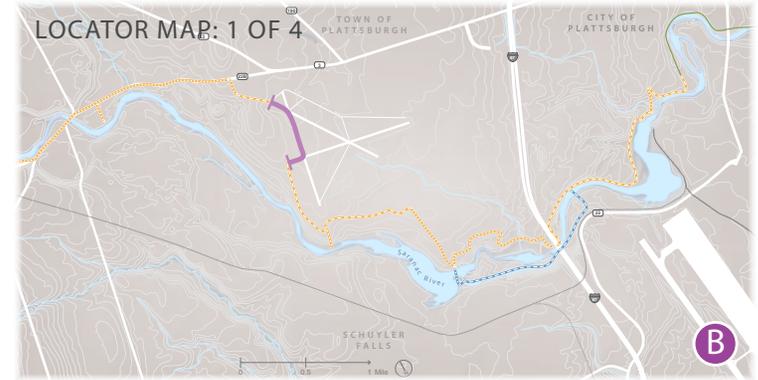
²When this overpass was reconstructed, the Town of Plattsburgh coordinated with NYS DOT to ensure that a bench cut was created under the bridge so that a trail could be routed there in the future. There are engineering challenges to developing a trail here, but this crossing represents a critical link, and this alignment is the most feasible solution to overcoming the Northway barrier.

Cost Estimate	
1. Stone Dust Trail	\$9,110
2. Retaining Wall	\$27,600
3. Split Rail Fence	\$4,500
Sub Total	\$41,210
4. Additional Costs	35%
Total	\$55,634



Airport Runway Segment³

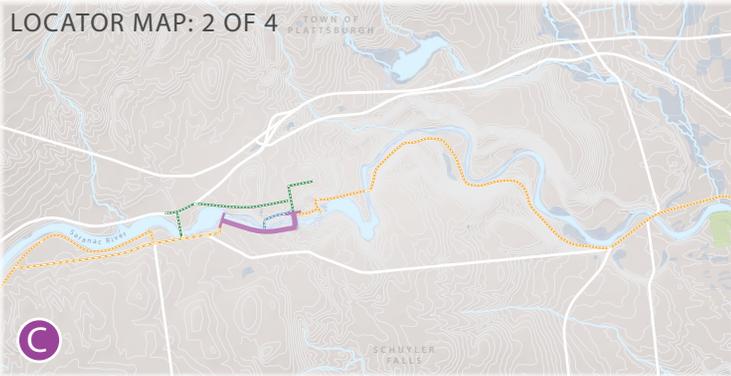
The potential alignment passes through the former Clinton County Airport. This parcel and its aviation history provides a unique opportunity to create a distinct trail user experience. The airport runways, although overgrown with weeds, are largely intact and could potentially be incorporated into the Greenway. After skirting the perimeter of the airport property, the alignment has the potential to bend right and is envisioned to travel north along the northwest/southeast runway, ultimately connecting with Fair Grounds Rd. The photo rendering below showcases an option for how the trail could look routed upon the runway. A boulevard of trees would provide shading for trail users, and sculptures could be incorporated into the Greenway that paid homage to Plattsburgh's aviation history.



Cost Estimate	
1. Runway rehab for trail section	\$14,290
2. Green Median	\$56,500
3. Trail Sculptures	\$4,000
Sub Total	\$57,025
4. Additional Costs	35%
Total	\$76,983



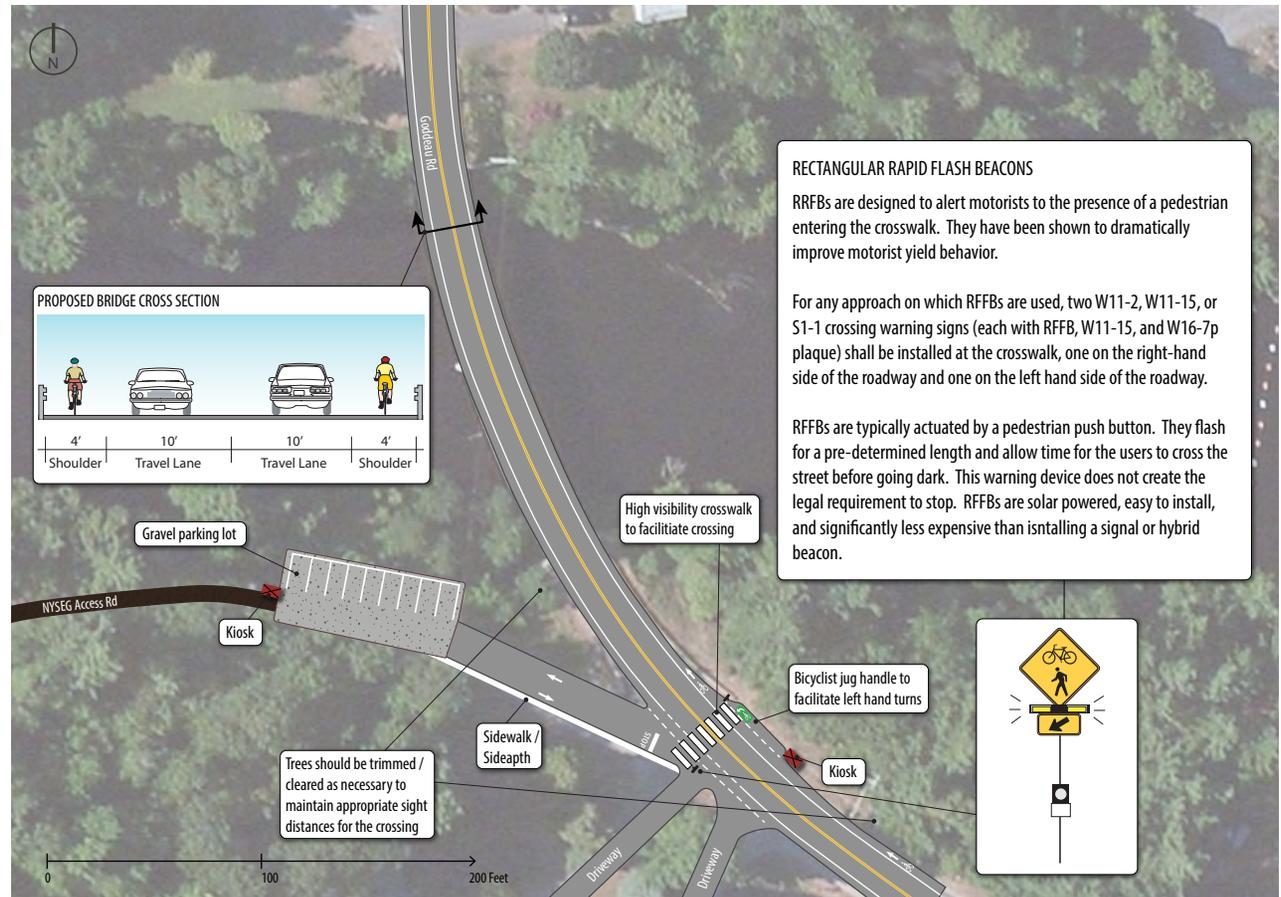
³ The former airport is owned by Clinton County. The Town of Plattsburgh's Comprehensive Plan and Zoning Ordinance includes conservation/recreation as part of the planned future uses of the parcel. There is also TDC (The Development Corp – local IDA) land abutting it. Both Clinton County and TDC are supportive of the SRTG project.



Goddeau Rd. Bridge Connection

On-road sections of the Greenway need to be thoughtfully designed to maintain a cohesive and enjoyable trail user experience, and the Goddeau Rd Bridge Connection is no exception. The illustration below presents one alternative option for the enhancement of this crossing. In this option, there is potential to reduce travel lanes over the bridge to 10', and the shoulders widened to 4'. Although the shoulders will still be relatively narrow, this design will provide a better experience for bicyclists and pedestrians crossing the bridge. In addition, a jug handle two-stage crossing area is proposed on the east side of Goddeau Rd, along with a crosswalk and Rectangular Rapid Flash Beacons. This facility will provide bicyclists and pedestrians a place to queue and cross the street perpendicular to traffic. Additionally, a larger parking area could be built, along with kiosks that would provide trail information. In the long term, the closed railroad bridge to the west of the Goddeau Rd crossing could be rehabilitated to provide a bike & ped only facility to cross the river, or alternatively, a cantilevered extension could be added to the Goddeau Rd bridge to create space for an adjacent side path.³

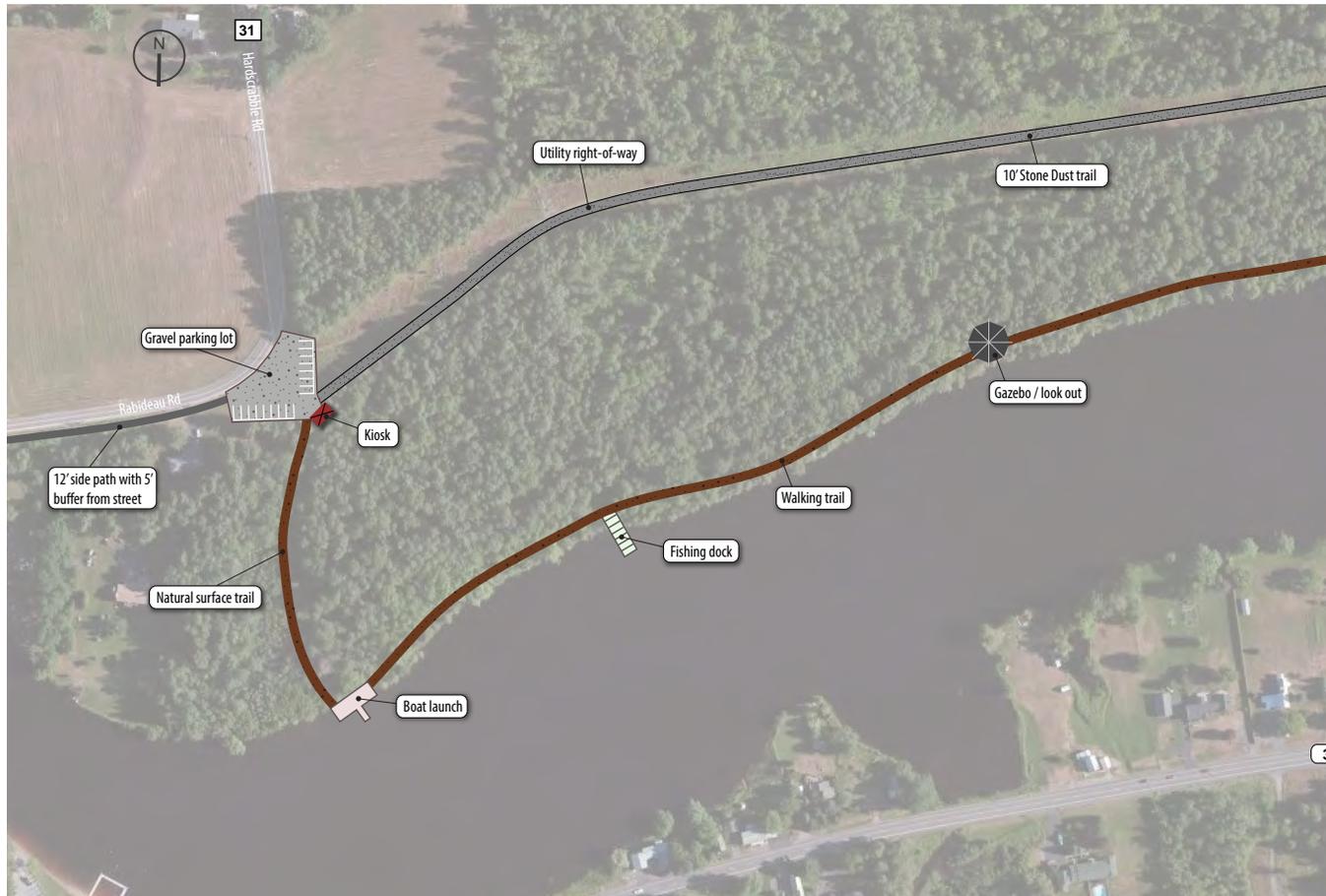
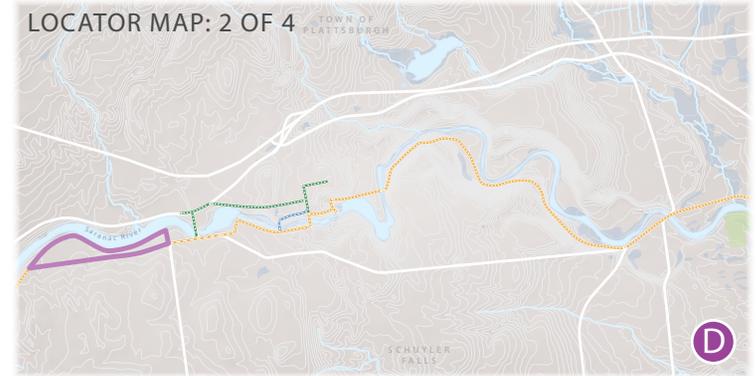
Cost Estimate	
1. Runway rehab for trail section	\$14,290
2. Green Median	\$56,500
3. Trail Sculptures	\$4,000
Sub Total	\$45,586
4. Additional Costs	35%
Total	\$61,541



³ The closed railroad bridge is in private ownership. The owner of this bridge is noted in the appendix, and they are receptive to discussion about public use of the structure. Any use of the bridge would require negotiations with the property owner.

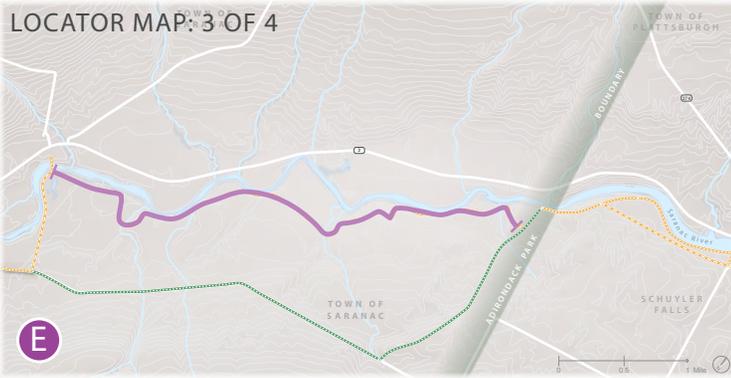
West of Hardscrabble

A trailhead could be built where the SRTG has the potential to extend west from Hardscrabble onto a utility line right-of-way. At this juncture, a parking area complete with kiosks and trail information could be incorporated. This priority concept also illustrates how two complementary routes can be designed parallel to one another. On the northern route, there is potential to construct a stone dust trail along the existing utility line right-of-way.⁴ This will provide an accessible trail option for a variety of trail users, including those on bicycles and with disabilities. Parallel to this, a walking/mountain biking/hiking trail is proposed that would meander along the river bank. Along this route, boat launches, fishing docks and gazebos/lookouts can be incorporated to provide attractions along the river that people can connect to.



Cost Estimate	
1. Trail Facility	
2. Parking Lot	\$183,424
3. Water Facilities	\$26,775
4. Trail Amenities	\$42,500
Sub Total	\$18,000
5. Additional Costs	\$270,699
Total	35%
	\$365,444

⁴ There is an established precedent for the construction of trails nationally along utility rights-of-way. While this alignment does present a major opportunity, there are considerable technical, legal and bureaucratic obstacles to their use and it represents a long term planning goal.



Boardwalk Section

As the SRTG crosses into the Adirondack Park, the trail has the potential to be routed through private property, but only with the willing cooperation of land owners. This section of trail would be designed as a walking/hiking/mountain biking trail. This section would cross over wetlands and some small creeks, and for these segments, boardwalks can be used to connect people to these sensitive habitats. Boardwalks are raised trails that provide the ability to cross wetlands. Boardwalks are designed to minimize impact upon the natural environment, and key details of boardwalk design are illustrated below. The development of the trail should at all costs avoid sensitive areas. In instances where sensitive areas cannot be avoided, low-impact design techniques should be employed to minimize the environmental impact of the trail. Boardwalks represent a preferred method for developing trails in sensitive habitats.

Cost Estimate

1. Trail Boardwalk	\$515,000
2. Natural Surface Trail	\$136,675
Sub Total	\$651,675
3. Additional Costs	35%

WIDTH

Boardwalk width should be a minimum of 10 feet when no rail is used. A 12 foot width is preferred in areas with higher average anticipated use and whenever rails are used.

HEIGHT

When the height of the boardwalk exceeds 3 feet, railings are required. For shared-use boardwalks, railings need to be built 54" above the surface of the boardwalk.

STRUCTURAL INTEGRITY

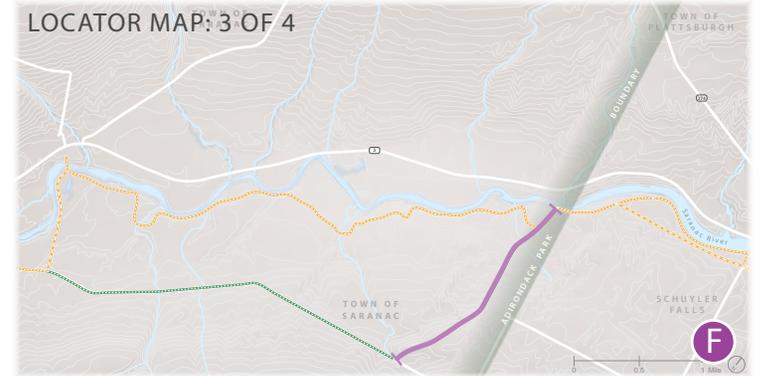
If access by vehicles is desired, boardwalks should be designed to structurally support the weight of a light-duty maintenance truck used by local agencies.



MATERIALS AND MAINTENANCE: Decking should be either non-toxic treated wood or recycled products. Long-term maintenance can be minimized through good design and the use of quality materials.

Duquette Rd Lookout

Some sections of the greenway are proposed to be signed on-road routes, primarily intended for use by long distance bicyclists. These segments are proposed upon low-volume rural roads that provide inspiring vistas of the High Peaks. One particularly impressive viewing point is located where the potential alignment travels north/south on Duquette Rd. A lookout could be incorporated along this section of road that provides trail users with an elevated perspective of the beautiful view. Additionally, benches, bicycle racks, and a map kiosk could be incorporated into the design to further enhance the lookout area, providing trail users with a space to rest and information about the SRTG. By providing a prominent lookout structure, this area becomes a destination in-and-of itself, serving as a draw for people to visit the site. Wayfinding signage and shared lane pavement markings along the road will help to guide on-road trail users along this stretch of the greenway.



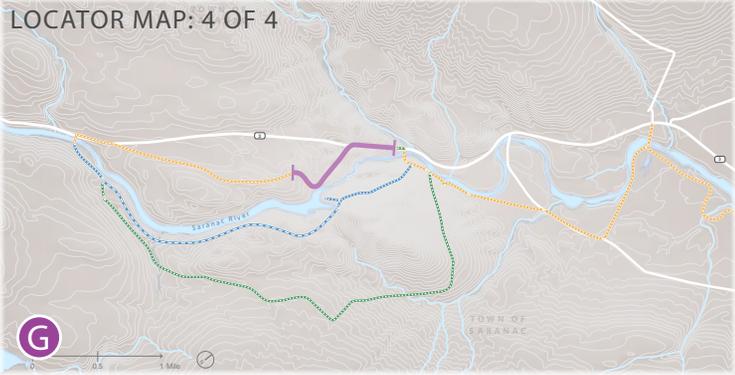
Cost Estimate

1. Tower	\$30,000
2. Gravel Clearing	\$7,500
3. Trail Amenities	\$1,800
4. Shared Lane Markings	\$22,800
Sub Total	\$62,100
5. Additional Costs	35%
Total	\$83,835

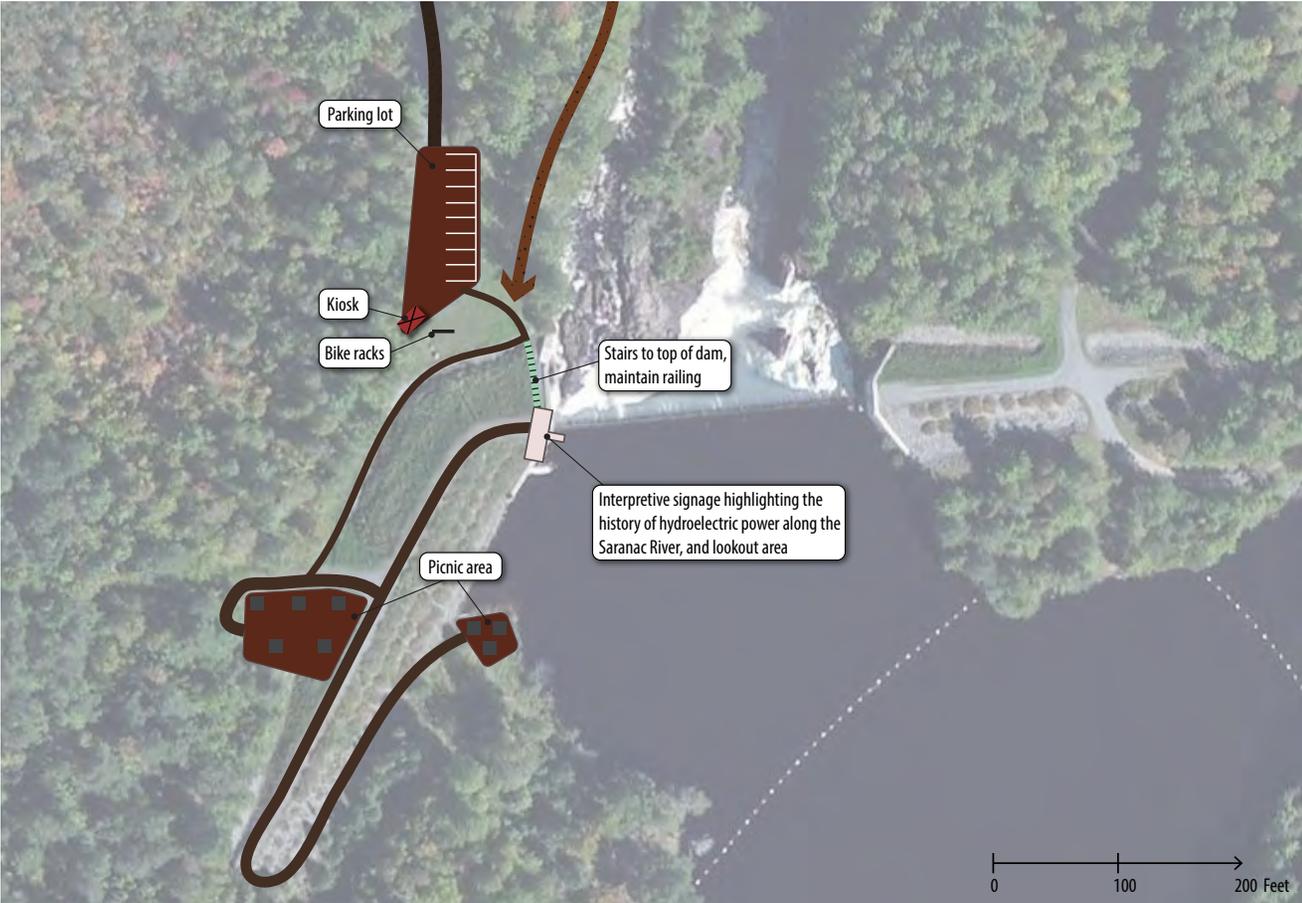
Conceptual rendering of a lookout structure and trailhead that could be implemented along a portion of the potential alignment on Duquette Rd.

High Falls Dam Trailhead

High Falls Dam is one of the most intriguing features of the entire SRTG corridor. The dramatic falls crashing into the gorge below offer a truly unique experience, and will become a major attraction for the trail’s western end, enticing people to use the greenway. Some amenities already exist here, including a gravel parking lot and paths that the public can use to walk to the top of the dam. The proposed concept for this important trailhead would include many more features that would convert the northern bank of the river into a park-like setting, complete with picnic areas, kiosks and bike parking. Interpretive signage should be incorporated into the design to inform people about the history of the dam and hydroelectric power generally. Additionally, a natural surface trail could be routed north along the river, providing a path to view and access the gorge beneath the dam. This trail would need to be very thoughtfully designed to maintain the safety of trail users, complete with fencing and signage intended to prevent accidents and alert people to proceed with caution in this rugged area.⁵



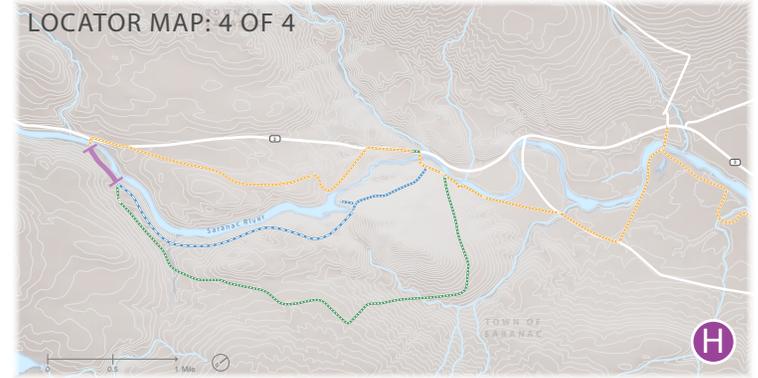
Cost Estimate	
1. Parking Lot Improvement	\$2,812
2. Picnic Areas	\$16,875
3. Natural Surface Trail	\$3,300
4. Trail Amenities	\$16,875
Sub Total	\$26,987
3. Additional Costs	35%
Total	\$36,433



⁵This trailhead represents a long-term planning objective and it can only move forward with the willing cooperation of NYSEG.

West-End Trailhead

Many users will begin their excursion along the SRTG in Plattsburgh, but the western end of the trail also represents the beginning of the trail for people starting on the greenway near Redford. There is potential for a trailhead off of Pup Hill Rd, marking this point as the beginning of the trail in the easterly direction. Proposed on the north side of Pup Hill Rd, and just east of the Cane Rd bridge, the trailhead will serve as a gateway to the SRTG, inviting people coming from the High Peaks to access the trail. Many amenities will be provided here, including parking, kiosks with information about the trail, a walking trail that leads directly to the river where people can put-in boats and fish, as well as benches and bicycle racks. The trailhead should be designed to blend into the natural setting, and situated to avoid wetlands that are present on the parcel that it is proposed to occupy. This parcel is owned by NYSEG, and their cooperation would be necessary to move this concept forward.⁶



Cost Estimate	
1. Natural Surface Trail	\$3,410
2. Water Facilities	\$27,500
3. Parking Lot	\$79,750
4. Trail Amenities	\$4,600
Sub Total	\$115,260
5. Additional Costs	35%
Total	\$155,601

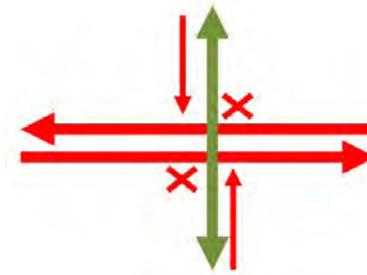


⁶ NYSEG saw no issue with this trailhead in concept. This trailhead represents a long-term planning objective and it can only move forward with the willing cooperation of NYSEG.

Traffic Calming for Neighborhood Greenways



Neighborhood Greenways have been used all over the country with a primary objective of calming traffic



Volume management tactics help to divert traffic away from neighborhood bikeways, reducing volumes along the bikeway

Horizontal Deflection

Horizontal traffic calming devices cause drivers to slow down by constricting the roadway space or by requiring careful maneuvering.



Chicanes deflect vehicles and reduce mid-block speeds



Chokers create pinch-points that reduce speeds mid-block



Traffic Circles reduce speeds through intersections



Curb extensions increase turn radii and reduce turning speed

Strategies for Reducing Volume

Maintaining motor vehicle volumes below 3,000 AADT (annual average daily traffic), where 1,000 - 1,500 AADT is preferred, significantly improves bicyclists' comfort. To manage volume, physical or operational measures can be taken on routes that have been identified as a bicycle boulevard. These volume management elements also provide an opportunity for landscaping, stormwater management, and other pedestrian and bicycle supportive amenities.

Traffic Restriction Signage



The most straightforward traffic volume reduction strategy is signage restricting motor vehicle through movement

Choker Entrances



Choker entrances are used to reduce motor vehicle volumes by restricting/constraining vehicle passage while allowing full bicycle passage to a boulevard

Stop Sign Placement



At minor intersections, stop signs on bicycle boulevards should be placed on side street approaches in a way that favors through traffic on the bicycle boulevard

Median Traffic Diverters



Median diverters restrict through motor vehicle movements while providing a refuge for bicyclists to cross in two stages

Greenway Wayfinding

In most situations two wayfinding signs are recommended in each direction at an intersection. These comprise a decision sign before the turn and a confirmation sign after the turn. In some situations it may also be useful to add turn fingerboards to provide clarity at complex intersections, or waymarkers to highlight routes.

The image to the right displays the typical configuration of wayfinding signs at a decision point with two intersecting bikeways. Each direction has a decision sign on the approach and a confirmation sign on the exit. In normal situations the default approach is to use two signs for each arm of an intersection. If one of the intersecting roads is not a designated bike route, signs would not be necessary along that street, and only confirmation signage would be necessary on the opposing street.

PAVEMENT MARKINGS

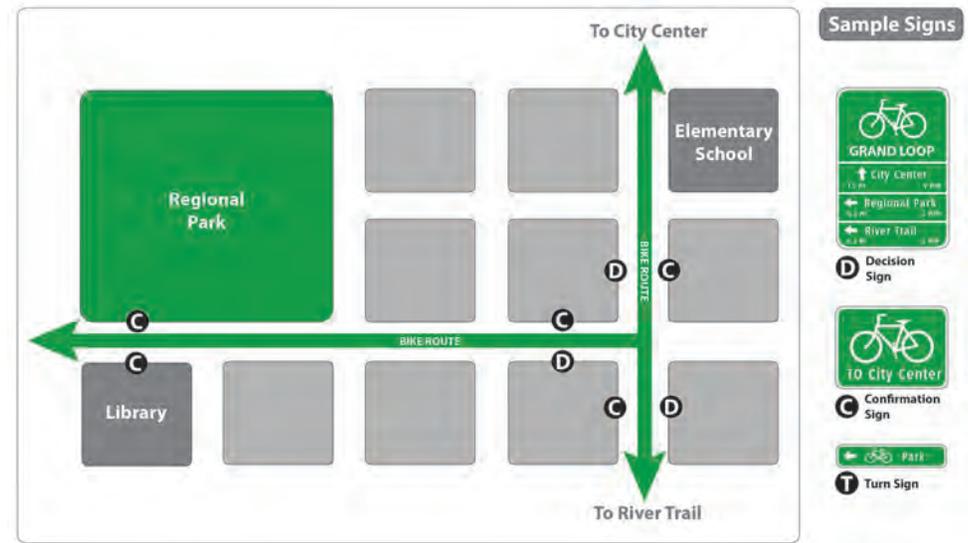
Pavement markings increase visibility of neighborhood bikeways and reinforce that cyclists are on a bicycle facility. The pavement markings also help direct riders through jogs in the route. Pavement markings vary widely by jurisdiction. Some communities develop unique, custom markings to reinforce the branding of the bikeway network. However, custom marking development does require FHWA experimentation approval or acceptance of increased municipal liability.

SHARED LANE MARKINGS

SLMs used on neighborhood bikeways should be applied using the same basic principles as any other street. The center of the marking should be a minimum of 4' from the pavement edge, or parking lane (if present). However, placing SLM in the center of the travel lane increases the life of the markings because there is less tire wear from motorists.



Neighborhood Greenways have been used successfully all over the country to create complete streets and calm traffic



20 mph speed limits on neighborhood greenways help to keep the speed differential between motorists and bicyclists low



Neighborhood greenways pavement markings are an opportunity to develop unique branding with wayfinding



Shared Lane Markings encourage motorists to share the road

CHAPTER 5: ACTION PLAN & MAINTENANCE



Action Plan Introduction

This plan includes a vision for a connected greenway system that will help make Clinton County a premier recreation destination. Implementing this plan will depend upon on-going collaborations between public, private and non-profit partners. Each of the plan recommendations have significant potential, and in addition, key agencies can support non-motorized travel through policy actions. For example, the Local, County, and State Highway Departments can improve roadway shoulders, and this will help pedestrians, bicyclists and others safely access key destinations. To advance the SRTG towards completion, the following implementation steps are recommended:

Concept Plan Adoption: The Clinton County Legislature and individual municipalities can adopt a resolution in support of the plan.

SRTG Professional Advisory Committee: The current mission of the non-profit Saranac River Trail Greenway Inc. includes planning, development and expansion of the Saranac River Trail Greenway. The Professional Advisory Committee includes SRTG members in addition to local legislators and planning professionals with expertise in SRTG issues who support and coordinate projects, initiatives and maintenance associated with the Greenway.

Friends of Saranac River Trail: is a non-profit grass-roots organization open to members of the public. It develops and promotes the tourist, recreational, commercial, historical, and natural opportunities of the Saranac River Trail by providing public information; coordinating volunteer opportunities; developing and purchasing trail amenities such as signs, benches, and the universally accessible Max Moore Memorial Treehouse. These groups are expected to work together closely to promote the vision of the Saranac River Trail and Greenway for the benefit of residents of and visitors to Clinton County and New York.

New Trails Partners: Traditionally, trails have been built by volunteer trail organizations and public land managers. Clinton County has opportunities to engage new partners including the regional arts community, scouting programs, community service organizations and others to expand the SRTG.

Complete Streets Policy: Clinton County can adopt a policy that includes appropriate infrastructure for bicycling, walking and trails into ongoing roadway projects. This policy will support the NY State Complete Streets legislation that passed in 2011. In Ulster County, NY a similar policy was tailored to meet the conditions of rural roads in the Catskill Mountain region.

“Adopt a Trail” Program: In order to ensure long term support, each trail project can be ‘adopted’ by local community partners. The adoption process can include working to secure funding and resources for each section, and eventually to serve as a community building effort for long term trail maintenance and operations.

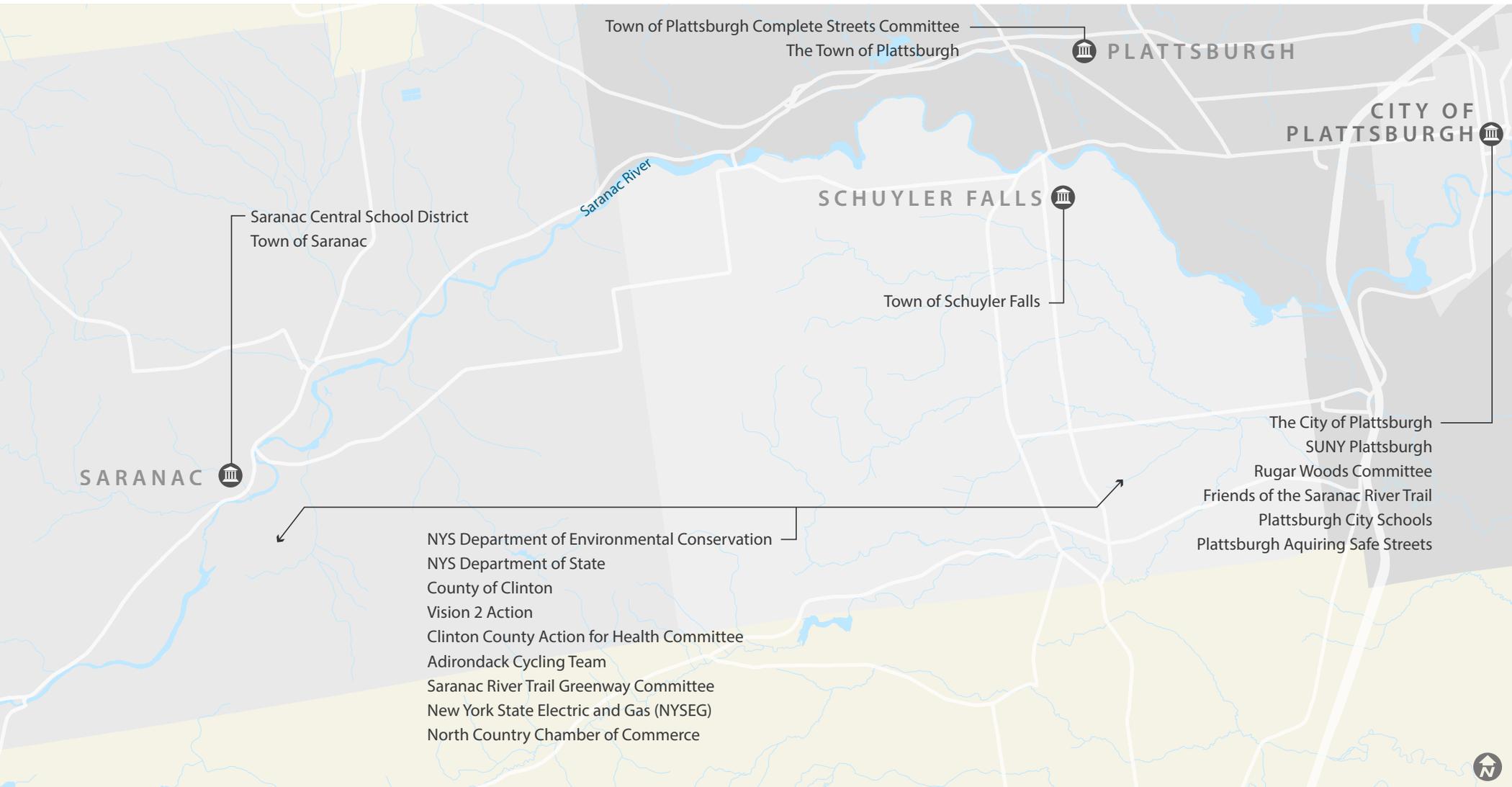
Branding / Marketing: It is important to use a consistent “brand” for the SRTG, including a logo, website, and promotional materials. The identity of the trails can serve as a defining feature in the county. Where possible, the wayfinding signage and graphics can be provided on existing trails, as new sections are built, and to identify future alignments.

Celebrations: Where possible, every step forward on a project should be celebrated publicly. National Trails Day, Walk/Bike to School Day, the Battle of Plattsburgh Festival, The Clinton County Fair, and other events are opportunities to keep the SRTG initiative visible.

Events: The distance and location of the SRTG makes it a prime corridor to host races. At roughly 27 miles, a marathon could be run along its length, and a triathlon could be organized that included sections of the greenway, surrounding roads for the bike leg, and the river for the swim leg. Kayaking and fishing competitions could also be held along the river. These events are great opportunities to promote the SRTG and raise money for its expansion.

Community Supporters

The development of the Saranac River Trail Greenway has broad-based support from public, private and non-profit agencies. The health, economic and environmental benefits that would result from the Greenway's completion has led these agencies to seek its implementation. The SRTG will only come to fruition through partnerships across jurisdictions and coordination among multiple stakeholder groups. The community supporters listed in this section then are instrumental in progressing the vision of the SRTG. The geographic distribution of these stakeholders is displayed in the map below, and their affiliation with the SRTG is identified on the subsequent page.



PUBLIC & PRIVATE AGENCIES

Organization	Affiliation With SRTG
County of Clinton	Administering the grant for the SRTG Feasibility Study and supports the development of the Greenway.
City of Plattsburgh	Developed LWRP encouraging community recreational use of Saranac River waterfront.
Town of Plattsburgh	Recreation Master Plan supports westward expansion of SRTG.
Town of Schuyler Falls	Proposed trail alignment travels through Schuyler Falls and the Town supports the development of the Greenway.
Town of Saranac	Proposed trail alignment ends in the Town of Saranac and the Town supports the development of the Greenway.
SUNY Plattsburgh	Existing trail segment heavily used by both students and employees of SUNY Plattsburgh. Supports extension of Greenway and recognizes its marketing potential.
Plattsburgh City Schools	Greenway would pass near the high school, and it would provide students, faculty and staff with an active recreation and transportation corridor.
Town of Plattsburgh Complete Streets Committee	The extension of the SRTG is consistent with the mission of the Complete Streets Committee, which seeks to make travel by all modes of transportation safe and viable.
NYS Department of Environmental Conservation*	The NYSDEC owns easements along the Saranac River that provides anglers the right to fish along private property, and NYSDEC is supportive of the SRTG because it has "recreational and economic development potential".
NYS Department of State	THE NYSDOS funded the SRTG westward expansion feasibility study. EPF LWRP funds have been used for a wide variety of planning, feasibility, design and construction projects contributing to the SRTG effort.
Clinton County Action for Health Committee	Committee focused on identifying and implementing ways to reduce chronic disease in the community through enhanced nutrition and physical activity initiatives.
Saranac Central Schools	Potential trail alignment offers healthy options for students and employees traveling to and from schools.
Rugar Woods Committee	SUNY Plattsburgh-sponsored committee that helps plan future use of Rugar Woods.
North Country Chamber of Commerce	Representatives from the Chamber of Commerce acknowledge the benefits that the SRTG would bring to local businesses.

COMMUNITY GROUPS

Organization	Affiliation With SRTG
Vision 2 Action	Engaged body of citizens in Clinton County that provides direction to leaders in planning for the future of the community. The projected local economic and health benefits of the SRTG are consistent with V2A's mission.
Friends of the Saranac River Trail	Nonprofit focused on completion and maintenance of the SRTG within the City of Plattsburgh.
Saranac River Trail Greenway Committee	Nonprofit focused on completion of the westward expansion of the SRTG to the Town of Saranac.
Adirondack Cycling Team	Organization that helps to foster the growth of bicycle touring within the Adirondack coast area, to promote the health and fitness of members in a safe, social, and fun way.
Plattsburgh Acquiring Safe Streets	Group of citizens who successfully advocated for a road diet resulting in the addition of bicycle lanes on North Margaret Street (State Route 9) in the City of Plattsburgh.

* These easements could potentially be amended to allow other non-motorized uses, such as walking and biking, and therefore represent opportunities, but cooperation and negotiation with property owners would be necessary and their potential use represents a long-term planning objective. NYSDEC is supportive of the vision of the SRTG. The planning team led a conference call with a representative from NYSDEC who said they support the vision of the SRTG because of its recreational and economic development potential, which are two key goals of the agency.

ACTION PLAN NEXT STEPS

The SRTG Feasibility Study provides a comprehensive set of recommendations for trail alignments along the Saranac River corridor that, once implemented, will firmly establish the SRTG as one of New York's great multi-use trails. Implementing the recommended alignments contained in this document will require commitment, persistence, creativity, partnerships, funding, and continued community support.

As Clinton County and its local, state, and federal partners work to bring the SRTG to life, a clear, action-oriented implementation strategy is necessary for success. This section of the report provides an action plan to direct implementation activities. These items will sustain momentum for the SRTG as the young concept grows into a tangible destination and activity. A general phasing strategy is provided to guide the allocation of resources over a fifteen to twenty year period. Cost estimates for the different trail types and recommended alignments are listed in this chapter, as are various local and external funding sources to assist with project financing and the permits that may be required. This section concludes with a discussion of administrative structure and responsibilities to maximize the full capacities and resources of all parties involved in creating the SRTG.

Establish an Administrative Structure

At first glance, the number of potential partners noted on page 5-3 who could be involved with the development of the SRTG may seem daunting. In addition to the Saranac River Trail Greenway, Inc, local businesses and engaged citizens, there are more than a dozen local, state, and federal agencies and organizations that can play a role in shaping the SRTG. An administrative structure and accompanying responsibilities for project partners should be

established in order to develop effective partnerships and utilize the resources and capacities of SRTG collaborators to the fullest extent possible. The end of this section provides a potential administrative structure. This section offers guidance for creating a Joint Powers Administrative Model. Such a model has worked successfully for implementing and operating multi-jurisdictional trail projects across the country.

Continue Public Outreach and Engagement Activities

Public outreach and engagement activities are integral to the success of the SRTG. Building a strong brand and identity, growing and sustaining public support, and transforming public agencies and the community at-large into stewards of the trail all rely on continued public outreach and engagement. Outreach opportunities, such as the booth set up at Clinton County Fair, raise awareness for the trail and provide opportunities for area residents to play an active role in shaping recreation, transportation, and tourism assets and amenities in Clinton County. The Saranac River Trail Greenways, Inc. and its community partners should develop an engagement strategy that combines fun and engaging public events for local community members, a strong online and social media presence, and an emphasis on recreational tourism to position the SRTG as an indispensable community resource.

Continue Land & Easement Acquisition

While many segments of the SRTG can be implemented using existing rights-of-way, many off-road path projects will require the acquisition of additional property and/or easements. Because off-road paths provide the most accessible, comfortable, and enjoyable trail experience for users of all ages and abilities, it is imperative that the Saranac River Trail Greenways, Inc. pursue

opportunities to assemble land and easements for shared-use path development throughout the corridor. Although acquisition of land and easements should be prioritized for trail segments connecting to existing population centers and recreation areas like the City of Plattsburgh and Morrisonville, opportunities to acquire any lands for shared-use path development along the SRTG corridor should be pursued when they arise.

General Phasing

Constructing the SRTG is a long-term endeavor that will require the proper alignment of political will, local, and external funding, rights-of-way and easements, and community support. In order to maximize the impact of the SRTG's growth and development over time, the following general guidance for project partners to implement the recommended alignments. This strategy consists of three general themes that balance the need for short-term successes, sustained momentum, and long-term realization of the SRTG as a premier recreation and transportation asset for Clinton County and the surrounding region. These general themes are followed by specific next steps for the six proposed phases of the SRTG.

Expanding into Local Communities

There are numerous recommendations to provide additional on-street routes through local communities along the corridor. These on-street routes represent low-cost, easily implementable projects that can expand the reach of the SRTG and continue to sustain interest in and support for the trail in its beginning years. Municipalities, Clinton County, and NYSDOT should evaluate roadway resurfacing and reconstruction projects for overlap with the proposed SRTG on an annual basis.

Changing Form, Changing Minds

Expanding the existing Saranac River Trail west will be a significant milestone in the evolution of the SRTG. This project will change the perception and use of the Saranac River Trail from a recreational biking and

walking amenity for Plattsburgh residents and visitors, to a county-wide asset that encourages walking, bicycling, and other trail-related activities for people of all ages and abilities. An extension of the existing SRT to the west, extending through the High School and SUNY Plattsburgh property should be designed and constructed within a three year period. This will continue to change public perception of the SRTG from a tourism asset to a community-wide, quality of life asset.

Ongoing Shared-Use Path Development

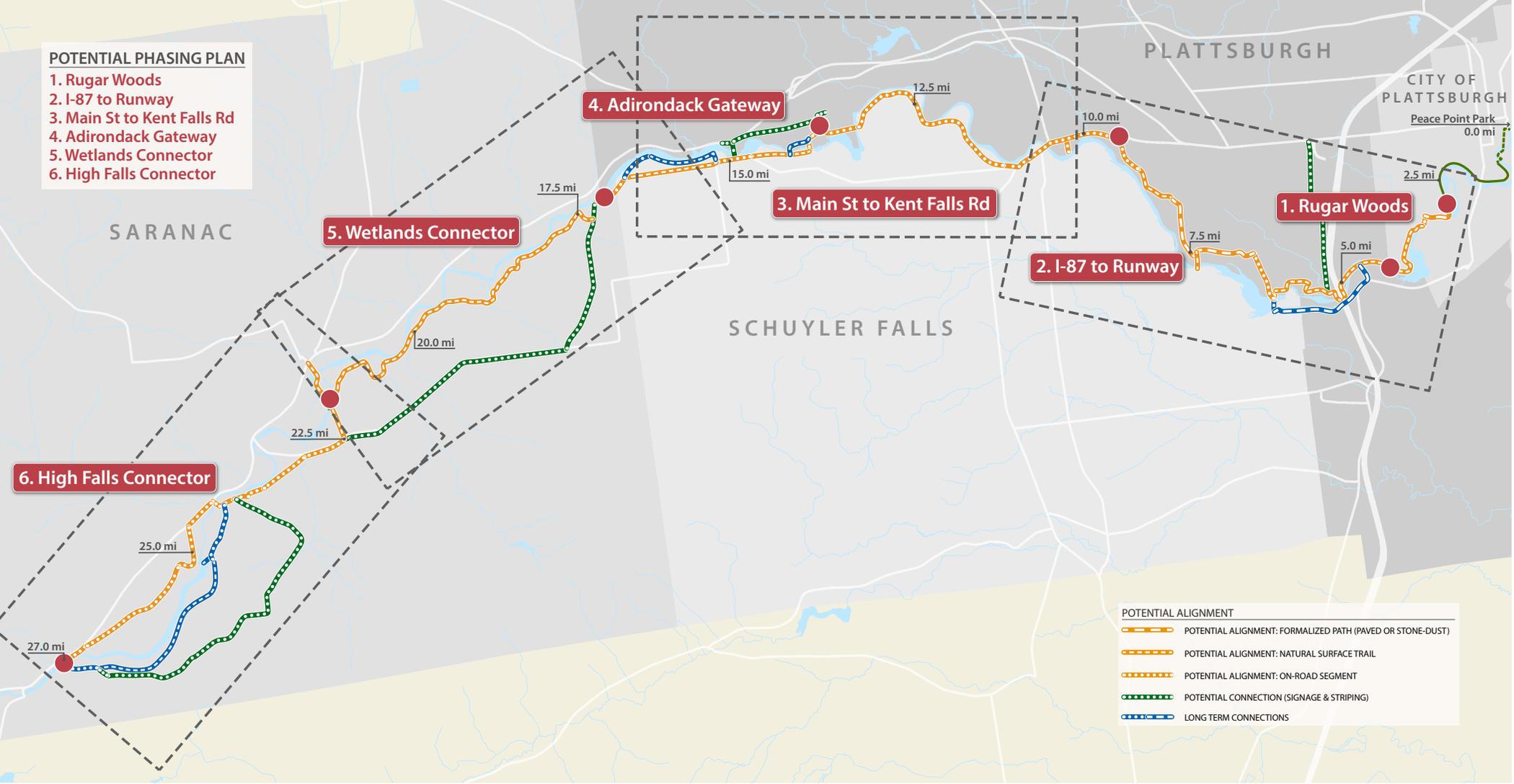
Land acquisition, easement procurement, engineering and design, and project funding can be time consuming processes. In order to facilitate continuous, incremental development of the shared-use path segments of the SRTG, the planning team recommends that the project partners pursue opportunities for shared-use path development on an ongoing basis.

Specific Phasing Recommendations

For each segment of the proposed SRTG, several specific action items have been developed that the Saranac River Trail Greenway, Inc should lead to progress them toward implementation. Many of these recommendations identify discussions that need to occur between parties to solidify ownership or easements, joint funding applications, or progression to preliminary design. While it is recommended that progression of implementation the SRTG continue from east to west, opportunities to build segments of the trail should not be ignored. Any funding opportunity, public or municipal interest, roadway resurfacing project, or development opportunity should be taken full advantage of to complete the SRTG. While competing specific segments ahead of the phased plan may leave gaps in the overall trail, they will still be community assets and will eventually be connected as the SRTG expands.

POTENTIAL PHASING PLAN

1. Rugar Woods
2. I-87 to Runway
3. Main St to Kent Falls Rd
4. Adirondack Gateway
5. Wetlands Connector
6. High Falls Connector



POTENTIAL ALIGNMENT

- POTENTIAL ALIGNMENT: FORMALIZED PATH (PAVED OR STONE-DUST)
- POTENTIAL ALIGNMENT: NATURAL SURFACE TRAIL
- POTENTIAL ALIGNMENT: ON-ROAD SEGMENT
- POTENTIAL CONNECTION (SIGNAGE & STRIPING)
- LONG TERM CONNECTIONS

Phase 1: Rugar Woods

- Advance portion of SRTG that would pass through High School and SUNY Plattsburgh Property to the design phase.
- Continue lines of communication with the High School and SUNY Plattsburgh regarding the trail development
- Move forward with opportunities to obtain easements through private property in this section, such as the City of Plattsburgh accepting an trail easement from SUNY Plattsburgh (which is currently being discussed).

- Collaborate with City of Plattsburgh, Town of Plattsburgh and Clinton County to advance projects that affect public rights-of-way

Phase 2: I-87 to Runway

- Engage NYS DOT to advance opportunity to construct trail under the Northway
- Begin discussions with three property owners and discuss opportunities to obtain easements to connect trail from the Northway to Military Tnpk

- Collaborate with Clinton County and the Town of Plattsburgh to advance the opportunity to route the trail through the former Clinton County Airport property
- Collaborate with Development Corporation to advance the opportunity to route the trail through the Development Corporation parcel
- Collaborate with Clinton County and the Town of Plattsburgh to advance designs for on-road sections of the trail that would affect public rights-of-way, such as Brown Rd and Main St

Phase 3: Main St to Kent Falls Rd

- Collaborate with Clinton County, Schuyler Falls and Town of Plattsburgh to advance designs for on-road sections of trail that would affect public rights-of-way, such as Main St, Kent Falls Rd, Park Row, Rabideau St and Hank Wilson Rd. Identify if any of these roadways are on resurfacing plans in the next five years. If not, identify other funding sources (see Funding Sources Section).
- Collaborate with Clinton County to assess the opportunity to reopen or rehabilitate the Kent Falls Bridge (owned by Clinton County; BIN 3335790) into an exclusive bike and pedestrian bridge

Phase 4: Adirondack Gateway

- Collaborate with NYSEG to determine appropriate alignments of trails that would affect their property
- Begin discussions to advance opportunity to use property to route a portion of the trail. The right-of-way crosses two private parcels, and collaboration with these property owners would be necessary as well

Phase 5: Wetlands Connector

- As trail advances towards the Adirondack Park, begin discussions with the Adirondack Park Agency to discuss alignments that would affect park land.
- Collaborate with Clinton County, and the Towns of Saranac and Schuyler Falls to advance designs for on-road sections of the trail that would affect public rights-of-way, such as Hank Wilson Rd, Duquette Rd and Hardscrabble Rd. Identify if any of these roadways are on resurfacing plans in the next five years. If not, identify other funding sources (see Funding Sources Section).
- As trail advances towards the Adirondack Park, a long section of the trail has the potential to be routed through undeveloped, private land. Easements can take several years to obtain, and discussions with property owners should commence immediately to determine opportunities to obtain easements across these parcels. No section of trail can be developed without the willing cooperation of land-owners, and this portion of the SRTG represents a long term planning goal.

Phase 6: High Falls Connector

- Collaborate with Clinton County, and the Town of Saranac to advance designs for on-road sections of the trail that would affect public rights-of-way, such as Hank Wilson Rd, Soper Rd, Pup Hill Rd, Rte 3, and Wilson Rd. Identify if any of these roadways are on resurfacing plans in the next five years. If not, identify other funding sources (see Funding Sources Section).
- Collaborate with NYSEG to determine appropriate alignments of trails that would affect their property. Identify design details that will be required, such as setbacks from the Saranac River or NYSEG facilities.

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, efforts within the City of Plattsburgh and Towns of Schuyler Falls, Saranac and Plattsburgh should be coordinated 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.

Federal Funding Sources

Moving Ahead For Progress In The Twenty-First Century (Map-21)

The largest source of federal funding for bicycle and pedestrian infrastructure 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). Since there is no designated MPO for Clinton County, federal transportation dollars for the county are programmed directly by NYSDOT. 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>.

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 TAP 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
- 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.

The programming of these funds is coordinated by NYSDOT. The Transportation Improvement Program is typically updated every 2 years.

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, additional funding sources may be available. Most state funding applications can be made through the consolidated funding application (CFA); the CFA is a portal for accessing multiple state agency funding programs.. The CFA's are typically due in August of each year and the application applies for a variety of state funding and state administered programs. The Environmental Protection Fund (EPF) is the largest state funding source for trail planning, design and construction that can be applied for through the CFA. EPF sources for trails include the Department of State's Local Waterfront Revitalization Program and the NYS Office of Parks, Recreation and Historic Preservation's Municipal Grant Program.

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).

NYS Department of State – Local Waterfront Revitalization Program (LWRP)

The Department of State works with communities through the LWRP to promote community revitalization and resource protection through community-based plans and projects. The Department of State provides funding through the Environmental Protection Fund for projects that enhance public access to waterways and state lands, promote sustainable economic development, protect and improve water quality, and revitalize hamlets and downtowns. Eligible activities include planning, feasibility, design and construction of trails, and streetscape enhancements. EPF LWRP funds have been used for a wide variety of planning, feasibility, design and construction projects contributing to the SRTG effort. For more information: <http://www.dos.ny.gov/opd/programs/lwrp.html>

The New York State Office of Park, Recreation and Historic Preservation

The New York State Office of Park, Recreation and Historic Preservation provides funding through the Consolidated Funding Application. There are several grant programs that the NYSOPRHP administers, many of which can be used to fund trail projects. The most relevant funding program for the SRTG is the Parks Program, a matching grant program for the “acquisition, development and planning of parks and recreational facilities to preserve, rehabilitate or restore lands, waters or structures for park, recreation or conservation purposes and for structural assessments and/or planning for such projects.” Both municipalities and not-for-profits are eligible to apply for this. NYSOPRHP also administers other programs, including the Historic Preservation, Heritage Areas, and the Snowmobile Trail Grant Program, which also could be leveraged for trail projects.

Private Foundations

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

Additional Resources

Local Waterfront Revitalization Program

The New York State Department of State Office of Planning & Development Local Waterfront Revitalization Program (LWRP) is defined as, "a comprehensive program that refines legislatively established waterfront policies by incorporating local circumstances and objectives." LWRP projects are locally driven, voluntary efforts that bring together diverse stakeholders to assess current opportunities and constraints and lead to consensus on the desired future of community waterfront resources. LWRP projects seek to meet the following goals:

- Preserve the environmental integrity of water resources, while capitalizing upon the economic opportunities presented by these assets
- Promote use of ports and harbor areas, which serve a critical function within the state's transportation/industrial network
- Conserve and protect fish and wildlife resources
- Encourage and facilitate public access to waterfront resources for recreational uses
- Determine appropriate land-use regulations to mitigate damage to natural resources and property caused by flooding and erosion
- Restore and revitalize natural and man-made resources
- Conserve and protect agricultural areas
- Ensure coordinated efforts in regard to waterfront resources among federal, state and local agencies

DOS has sponsored many planning, design and construction projects that have or can contribute to the development of the SRGT through EPF LWRP funds. This feasibility study is being funded through EPF LWRP funds. The design of the initial segment of the Saranac River Trail in Plattsburgh was funded by DOS, as was the development of Peace Point Park. The identification of specific actions and projects needed to develop the SRGT is an essential step in seeking additional funding.



Permitting Requirements

This section outlines the permits that may need to be obtained to construct certain segments of the SRTG. Knowledge of the permitting requirements will be useful when choosing the best trail routing option. The need for one or many permits does not exclude the possibility of a trail, but it is better to anticipate the time and work involved in obtaining the permits in advance so the trail can be completed on schedule. A determination of permitting requirements would need to be completed during preliminary design of each phase of the project. The following is a summary of potential regulatory agencies and possible required permits for the completion of the Saranac River Trail Greenway, organized from the federal to local level.

Federal Permits

United States Army Corps of Engineers (USACE)

Impacts to wetlands that do not fall under state, but federal jurisdiction, will require a permit from USACE. A wetland specialist will delineate on-site wetlands and prepare jurisdictional determination correspondence to both NYSDEC and USACE.

Federal Energy Regulatory Committee

The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC regulates hydroelectric dams nationwide, including those that NYSEG owns and operates along the Saranac River. NYSEG's hydro facilities operate under a permit from FERC, and FERC is responsible for ensuring that they are complying with the conditions of their permits.

As a condition of their permits, Licensees, such as NYSEG, are expected to provide adequate public access upon project lands. The specifics of this condition are listed in **Title 18 CFR 2.7**, which is included as Appendix E. Lines of communication should be established with NYSEG, so that when they review their permit applications and plan recreational facilities, recommendations within this report proposed on NYSEG's property can be incorporated. Since the SRTG will provide recreational access, its implementation on NYSEG's land will help to fulfill FERC's recreational use requirement for project lands.

State Permits

State Environmental Quality Review (SEQR)

The State Environmental Quality Review seeks to establish, "a process to systematically consider environmental factors early in the planning stages of actions that are directly undertaken, funded or approved by local, regional and state agencies. By incorporating environmental review early in the planning stages, projects can be modified as needed to avoid adverse impacts on the environment." A lead agency will need to be determined for the environmental quality review of each project as it is undertaken. This is typically the local municipality or the county, but can be a state agency. That lead agency will determine if the proposed action is Type II, unlisted, or Type I. Unlisted or Type I actions will require an environmental assessment form. The lead agency will request either a short or long environmental assessment form to be completed. At the conclusion of the review process, a positive or negative determination will be made by the lead agency.

State Historic Preservation Office (SHPO)

Local historical societies, State Historic Preservation Office (SHPO) and the National Register of Historic Places will need to be contacted to find out if the proposed trail will have any impact on historical properties in the area. Once the trail locations are further identified, additional information can be provided on potential historic property impacts. SHPO must sign-off on State agency permits.

NYS Department of Environmental Conservation (DEC)

The Saranac River is classified as a Class C, C(t) waterway. In Plattsburgh, the Saranac River becomes a class A waterway. As a Class C or C(t) within the study area, the Saranac River Trail Greenway does not fall subject to additional permits that would be required if the river were a navigable waterway.

Due to this classification, erosion and sediment control plans are required for trail construction. A storm water pollution prevention plan (SWPPP) is not required unless more than an acre is being disturbed in a non-linear fashion. Other DEC permits that may be required, include:

- Wild, Scenic and Recreational Rivers Permit Program: Trails are allowed adjacent to rivers with a permit in wild, scenic, recreational, and community areas.
- Protection of Waters Permit: Required for the installation of culverts or bridges, bank stabilization, fill or dredging.
- Freshwater Wetland Permit: Required if any class of wetlands is to be impacted by the proposed trail. This permit will be required for any boardwalk segments of the proposed SRTG.

NYS Department of Transportation (DOT)

Right-of-Way Work Permit: Needed for work within State Highway ROWs including signage, sidepaths, and crossings. Specifically, such a permit will be required for the recommended Northway Underpass.

NYS Adirondack Park Agency (APA)

Permits are required for activities in or affecting wetlands and for shoreline development, disturbance or vegetation, and cutting along lakes & rivers. Within the Adirondack Park, the APA administers certain DEC permits. A wetland permit through APA will be required for any boardwalk segments of the SRTG.

New York State Energy and Gas Corporation

All work proposed on NYSEG property or easements will require review and approval by NYSEG. Additional fencing or barriers will be required in areas adjacent to intakes for the dams located along the Saranac River. Projects on NYSEG property must be reviewed and approved by NYSEG. Their internal review process includes review by various departments. Additionally, their dams operate under a licence from FERC. For NYSEG to renew their permits, they must comply with FERC's stipulations, some of which relate to providing recreational access on the project land. FERC reviews the lands for their recreational potential, and then will seek, within their authority, that licensees ultimately develop, at their own expense, recreational resources. Details of these requirement are included in **Title 18 CFR 2.7**, which is included as Appendix E.

Local Permits

Towns along the Saranac River may have additional building or land use permits or approvals that may be required. Planning board or town council presentations and approvals may be required. This will vary based on the town, the type of improvement, and the funding source utilized for design and construction. This should be researched and discussed with the relevant local municipalities during preliminary design of any SRTG segment.

Administrative Structure and Responsibilities

Trail governance and administration can take a variety of forms, usually determined by a multitude of factors, from the length and location of the trail to the number of local agencies and their capacities to administer and maintain the facility. Clearly articulated and delegated responsibilities for each partner agency, organization, and group involved in trail development and maintenance are critical to the long-term success of any trail.

While it is common for trails within a single park or trails along an abandoned railroad corridor to have a single managing agency, many longer trails that cross multiple jurisdictions or utilize roadway rights-of-way often require greater oversight and inter-agency collaboration, acquisition, construction, maintenance and operations tasks.

Two potential administrative structures were examined for their potential application to the Saranac River Trail Greenway: a **Lead Agency Model** and a **Joint Powers Model**. Both these models are described in this section.

Unlike many trails managed and operated under the Lead Agency Model, the SRTG lacks a contiguous corridor for trail development, like an abandoned railroad. In addition, the trail potentially will consist of both on-road bikeways and off-street shared-use paths, traversing public lands and rights-of-way owned and operated by a multitude of federal, state and local jurisdictions. For these reasons, the single-entity administrative model is not likely a feasible option. The Joint Powers Model, in comparison, provides a more collaborative structure to facilitate trail management and operations through a governing board with representation from

Trail Administration & Management: The Lead Agency Model

The lead agency model for trail management consists of an existing entity providing oversight for all administrative, management, maintenance, and operations tasks. In this model, it is still common for local agencies, non-profits, or foundations to provide financial assistance, assist with litter and trash removal, and develop programming and events to activate the trail facility and increase usage. Support from other project partners is formalized through a memorandum of understanding (MOU) or contract to provide services.

State agencies and county governments often employ this administrative model for trails entirely within their jurisdiction, particularly for trails along abandoned railroads or riparian corridors where the governing agency owns a significant length of contiguous property (or has easements granting use). In some states, state-wide recreation departments own and maintains a number of trails that connect and are within various state and local recreation and conservation areas.

In other states, regional governments receive support from multiple foundations and “friends of the trail” groups to develop and maintain county-wide networks of linear trails. The functions of these groups are to assemble land for trail development, assist with maintenance activities and costs, encourage trail stewardship among county residents, and address other pertinent needs in order to increase trail usage and create a high quality experience for trail users.



Trail Administration & Management: The Joint Powers Model

Many trails traverse multiple jurisdictions, run through public parks and open spaces, and utilize local roads and state highways where no off-street alternatives are available. In such instances where activities transcend jurisdictions and boundaries, municipalities, counties, local school districts, and other public authorities can exercise joint powers to provide a service, such as a regional trail. The regulations describing such intergovernmental cooperation are expressed in the NYS Constitution, Article VIII § 1; State Finance Law, § 54(10)(H). As stated here, a cooperative agreement can be created “To provide any municipal facility, service, activity or undertaking which each has the power to provide separately.”

Joint powers boards and commissions have been particularly successful with trail development projects in Minnesota and California, where these intergovernmental agreements are more commonplace. Notable examples include the Cannon Valley Trail Joint Powers Board in Minnesota, the Honey Lake Valley Recreation Authority in Lassen County, California, the San Dieguito River Park Joint Powers Authority in San Diego County, California, and the Centennial Trail Joint Powers Board in Kootenai County, Idaho. Joint powers agreements for trail development and maintenance can vary significantly in terms of content, delegation of responsibilities, administrative structure, and other characteristics that outline the nature of the agency and the terms to which all parties agree. Sample joint powers agreements can be found in the appendix.

JOINT POWERS AGREEMENT ROCORI Trail Construction Board

The parties to this Agreement are governmental units of the State of Minnesota. This Agreement is made pursuant to the authority conferred upon the parties by Minnesota Statute §471.59.

1. PURPOSE

The Cities of Rockville, Cold Spring and Richmond (collectively, “Cities” and individually, by their common names) have been working together to design, construct and fund a regional trail connecting the terminus of the anticipated Glacial Lakes Trail outside of Richmond, through Cold Spring, to the northern boundary of Rockville

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partner agencies and citizens from the community. This model better accommodates the unique conditions along the study corridor and is the recommended administrative structure to govern the SRTG.

Through a joint powers agreement and memoranda of understanding, the participating agencies and organizations can play an active role in securing funds, designing and constructing the trail, and maintaining the facility as a valuable asset for the region. The joint powers agreement can be amended to include additional partners as the scope or scale of the project changes. Potential entities to be included on the joint powers board include:

- The City of Plattsburgh, and the Towns of Schuyler Falls, Saranac and Plattsburgh
- SUNY Plattsburgh
- Plattsburgh City Schools
- Saranac Central School District
- Friends of the Saranac River Trail
- County of Clinton
- North Country Chamber of Commerce
- Vision 2 Action
- Adirondack Park Agency
- NYS Departments of State, Environmental Conservation, Transportation and Health

For those agencies that do not participate as members of the joint powers board, involvement in the project should be determined based on their interest, resources, and capacity. The joint powers board should document such involvement through a memorandum of understanding. Sample joint powers agreements and memoranda of understanding are included in the appendix.

Operations & Maintenance

Maintaining the various sections of the SRTG will guarantee an enjoyable trail user experience. As new sections of the trail are constructed, a maintenance schedule should be established. The following chart describes the annual cost/mile for the eight trail types that will comprise the SRTG. A full summary of the maintenance tasks per trail type is included in Appendix B. Table 4.2 summarizes the key maintenance activities and the frequency at which they should occur.

Table 4.1: Annual Cost Per Mile of Maintenance Activities

**Costs were estimated at a 'per mile per year' basis, with the exception of way-finding which was estimated for individual sign and marking replacement.*

OPERATIONS & MAINTENANCE		
Trail Types		Annual Cost/mi
1	Shared Use Path	\$225 - \$250
2	Stone Dust Path	\$175 - \$200
3	Sidepath	\$250 - \$300
4	Natural Surface Path	\$100 - \$125
5	Downtown Connector	\$900 - \$1,000
6	Kent Falls Connector	\$50-100
7	Utility Access Road	\$100 - \$125
8	Neighborhood Traffic Calming	\$200 - \$225
A	Boardwalk	\$500 - \$600
B	Wayfinding	\$25 - \$300
B-1	Signage & Kiosks	\$25 - \$75
B-2	On-Street Markings	\$150 - \$300

Table 4.2 Maintenance Activities for Trails

		Frequency	Recommendations
Facility Repair or Replace	Resurfacing	10 - 12 years	Replace asphalt or concrete.
	Drainage	As needed	Regrade to prevent or eliminate low spots and drainage issues.
	Structures	30 years or as needed	Addition or repair of culverts, bridges, boardwalks, retaining walls, etc., to prevent or eliminate drainage/ erosion issues.
	Rerouting	As needed	Reroute trail, if necessary, to avoid environmentally sensitive or overused areas, safety issues, or construction projects.
Seasonal Maintenance	Regular Inspection	2 times/year	Includes all on-road bikeways, identify needed repairs of pavement, signs, markings, etc.
	Shoulder Sweeping	2 times/year	All roadways signed as a portion of the SRTG. Sweeping should occur at least twice annually, with the first instance occurring after the winter thaw to remove salt/sand from the road shoulder
	Remove debris and litter	As needed	Prioritize removal by the most heavily used facilities and geographic location. Limited development trails should be emphasized as natural environments and warnings should be posted that hazardous conditions may exist with the changing seasons.
	Remove snow and ice	As needed	Prioritize removal by the most heavily used facilities and geographic location. Limited development trails should be emphasized as natural environments and warnings should be posted that hazardous conditions may exist with the changing seasons.
Habitat Enhancement	Vegetative Enhancements	As needed	Install fencing, prune trees and shrubs, apply herbicide, and take other measures to support a healthy and attractive habitat surrounding the trail.

The operations of the Saranac River Trail Greenway should be integrated and operated as seamlessly as possible, offering citizens and visitors a first class system. Coordination and cost-effective management and function are essential. To help achieve a sustainable operations program, the following actions are suggested:

- The agencies, such as Clinton County, NYSDEC, NYSDOS, APA, the Saranac River Trail Greenway, Inc, and local municipalities, should work together to develop a Memorandum of Understanding with a specific listing of all functions, frequency of tasks, and quality standards. The MOU can be written collaboratively by the involved agencies. The MOU should include an annual operating and implementation budget. It is anticipated that the operations budget will increase with continued build out of the trail.
- The program should identify sustainable funding sources, such as an endowment or dedicated funding through local governments.
- The MOU should designate an individual or committee responsible for implementing and maintenance of the Saranac River Trail Greenway.
- A 'contract' should be established with the appropriate departments and/or outside private contractors to carry out the various operations, management, and programming functions.
- The lead person should also work cooperatively with other department heads, non-profit and private sector partners, and agency staff to assure a coordinated effort amongst all of the alternative modes including: shared-use paths, sidewalks, on-street bicycling, and transit services.

As build-out of the Saranac River Trail Greenway continues, annual operations and programming could include the following responsibilities and tasks:

1. Special Events Planning
2. Volunteer Coordination

Guiding Principles for an Effective Operations Program

The following guiding principles will help assure the preservation of a first class system:

- Good maintenance begins with sound planning and design.
- Foremost, protect life, property, and the environment.
- Promote and maintain a quality transportation and recreation experience.
- Develop a management plan that is reviewed and updated annually with tasks, operational policies, standards, and routine and remedial maintenance goals.
- Maintain quality control and conduct regular inspections.
- Include field crews, police, and fire/rescue personnel in both the design review and on-going management process.
- Maintain an effective, responsive public feedback system and promote public participation.
- Be a good neighbor to adjacent properties.

3. Environmental Education / Stewardship
4. Outreach Programming
5. Program Development
6. Safe Routes to Schools Coordination
7. Health and Fitness Coordination
8. Trail Patrol Coordination
9. Trail Patrol Staff/Volunteers
10. System Engineering/Planning



The quality and condition of a shared-use path is essential to the long-term success of the project. System Maintenance refers to the care, upkeep and smooth functioning of shared-use paths. If the facility is well maintained and cared for, it will assure both the safety and enjoyment of the residents and visitors who use it. A proper maintenance program will reduce long-term costs by extending the life of the components, and it will also win the continued support of the residents, homeowners, and businesses.

Typical annual maintenance includes:

- Sweeping of the path after the spring snow pack melts
- Shoulder mowing and sweeping operations
- Periodic maintenance and repairs -including seal coating of path surfaces (approximately every 4-5 years on a rotating basis) striping, signage, benches, bike racks, and installation of safety fencing, safety signage, and devices, etc.
- Snow plowing and/or grooming for cross-country skiing
- Bridge maintenance
- Trash removal
- Tree and vegetation trimming
- Crack sealing and repair

Facilities Maintenance

The SRTG maintenance program should maintain the following elements:

- Off-Street Shared-Use Pathways
- Natural Surface / Single Track Trails (part of a future integrated system)
- Trail-Related Corridors (landscaped and open space areas associated with trails and greenways, including streams and conservation areas)
- On-Street Bicycle Routes (bike lanes, bike routes, and streets used for biking)
- Trailheads
- Sidewalks
- Wayfinding Signage, Fixtures and Furnishings (on-street and off-street)
- Regulatory and Safety Signage
- Tunnels, Pedestrian Bridges, Underpasses, and At-Grade Street Crossings
- Trail-Related Parks and Features
- Access Parking and Maintenance Roads
- Rest Areas

Health, Economic and Environmental Benefits

The chart below summarizes the health, environmental, transportation and economic benefits that could be realized through the implementation of the SRTG. These conservative estimates are presented as a range from low to mid to high. A more detailed explanation of these benefits is included in Appendix C.

	LOW ESTIMATE		MID ESTIMATE		HIGH ESTIMATE	
	BIKE	WALK	BIKE	WALK	BIKE	WALK
HEALTH						
Annual Trips	907,000	109,000	1,178,000	205,000	1,569,000	663,000
Annual Miles	1,269,000	34,000	1,648,000	65,000	2,195,000	209,000
Annual Hours of Physical Activity	127,000	12,000	165,000	22,000	220,000	70,000
Recommended Physical Activity Min. Met	977	92	1,269	169	1,692	538
Regional Physical Activity Need Met	2.27%	0.86%	2.95%	1.58%	3.93%	5.02%
Healthcare Cost Savings	\$41,000	\$5,000	\$53,000	\$9,000	\$71,000	\$26,000
ENVIRONMENTAL						
CO2 Emissions Reduced (lbs)	1,192,000	45,000	1,549,000	84,000	2,062,000	271,000
Other Vehicle Emission Reduced (lbs)	26,000	1,000	33,000	2,000	44,000	6,000
Total Vehicle Emission Costs Reduced	\$26,000	\$1,000	\$34,000	\$2,000	\$45,000	\$6,000
TRANSPORTATION						
Annual VMT Reduced	788,000	31,000	1,023,000	58,000	1,362,000	188,000
Reduced Traffic Congestion Costs	\$55,000	\$2,000	\$72,000	\$4,000	\$95,000	\$13,000
Reduced Vehicle Crash Costs	\$394,000	\$15,000	\$512,000	\$29,000	\$682,000	\$94,000
Reduced Road Maintenance Costs	\$118,000	\$4,000	\$153,000	\$8,000	\$204,000	\$28,000
Household Vehicle Operation Cost Savings	\$449,000	\$18,000	\$583,000	\$33,000	\$776,000	\$107,000
ECONOMIC						
Estimated Increase in Tourism Spending	\$1,462,200		\$1,462,200		\$1,462,200	
ADDITIONAL BENEFITS	\$2,590,200		\$2,954,200		\$3,609,200	

Note: Estimates reflect conceptual benefits that would be generated at given increases in walking use as if they existed in study area today. Values are rounded for readability. Values are not discounted and do not reflect future demographic growth, cost changes or other multiplier changes. Full full explanation of results see Appendix A.

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