Sterling-Fair Haven
Community Connection Trail
Final Feasibility Report

DOS Contract No: C1002285

Issued: September 2024

Colliers Engineering & Design

NEW YORK STATE Department of State

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New York State
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Drone image kindly provided by onePhoto Photography.

INTRODUCTION

This chapter introduces the background and establishment of the Sterling-Fair Haven Community Connection Trail (CCT). Topics addressed in this chapter include:

- Project purpose;
- Study corridor;
- Project goals;
- Project background;
- Project oversight and planning.

INTRODUCTION

Project Purpose

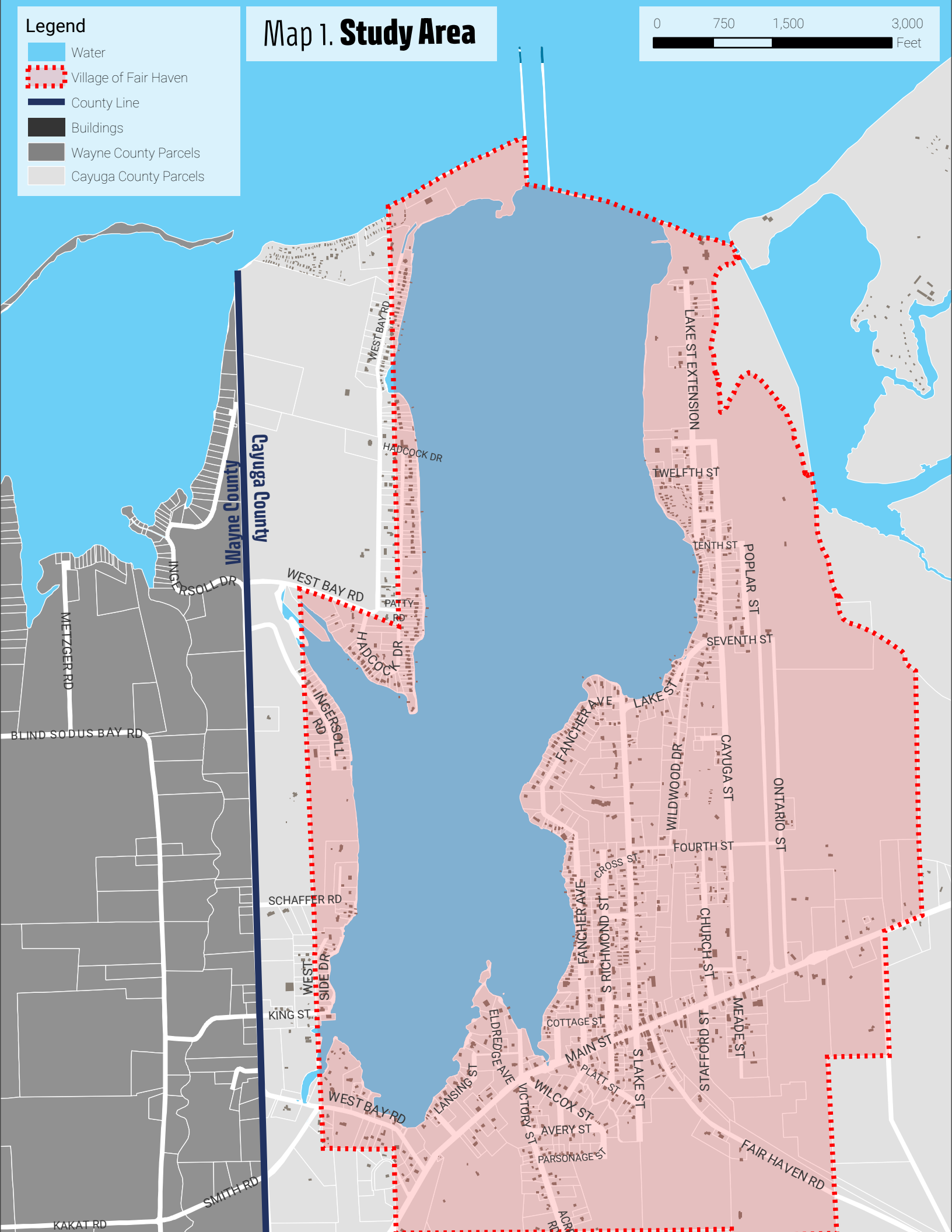
The Cayuga County Department of Planning and Economic Development developed a Local Waterfront Revitalization Program (LWRP) for the Town of Sterling and Village of Fair Haven which identified strategies, policies, projects, and regulations to revitalize the waterfront.

The Sterling-Fair Haven Community Connection Trail (CCT) was identified as one of 77 projects outlined in the substantially complete LWRP. The Trail is envisioned as a walking/biking trail along Little Sodus Bay between Fair Haven and West Barrier Bar Park on Lake Ontario, supporting non-motorized trail usage. The current feasibility study will determine the trail layout, width, crossings, materials, construction documents, permits, easements, and cost estimates. Project implementation does not include eminent domain.

The trail will connect the community and enhance public access while balancing the relationship between sensitive ecosystem areas, recreation areas, and the lake and bays. The study is an important step towards building a regional trail network, increasing connectivity, expanding public access equitably, connecting key projects highlighted in the substantially complete LWRP, and realizing long-term economic, environmental, health and social benefits.

Study Corridor

The study corridor for this feasibility study is located along the west side of Little Sodus Bay in Cayuga and Wayne Counties, stretching from the Village of Fair Haven to West Barrier Bar Park. The corridor crosses through the Town of Sterling, the Village of Fair Haven, and the Town of Wolcott, as shown on Map 1 Study Area. The study corridor is approximately 3.6 miles in length. The corridor crosses a variety of land use character areas, including compact residential development, waterfront cottages, forests and woodlands, wetlands and water crossings, and local businesses including marinas, campgrounds, a winery, and the central business district within the Village of Fair Haven.


Legend
Water
Village of Fair Haven
County Line
Buildings
Wayne County Parcels
Cayuga County Parcels
Map 1. Study Area
0
750
1,500
3,000
Feet
Wayne County
Cayuga County
WEST BAY RD
HADCOCK DR
LAKE ST EXTENSION
TWELFTH ST
TENTH ST
POPLAR ST
SEVENTH ST
INGERSOLL DR
METZGER RD
BLIND SODUS BAY RD
PATTY RD
INGERSOLL RD
FANCHER AVE
LAKE ST
WILDWOOD DR
CAYUGA ST
ONTARIO ST
FOURTH ST
CROSS ST
SCHAFFER RD
S RICHMOND ST
CHURCH ST
WEST SIDE DR
KING ST
COTTAGE ST
MEADE ST
ELDREDGE AVE
MAIN ST
PLATT ST
STAFFORD ST
LANSING ST
VICTORY ST
WILCOX ST
LAKE ST
AVERY ST
PARSONAGE ST
FAIR HAVEN RD
SMITH RD
KAKAT RD

Project Goals

Developing sustainable construction and maintenance strategies to create a cost-effective, safe and durable trail system.

Increasing awareness and appreciation of the trail and surrounding ecosystem through wayfinding and interpretive signage.

Engaging key stakeholders, businesses, communities, and partners early and continuously to understand and balance all users' needs.

Designing a trail that responds to the transportation, social, recreational, cultural, and economic context of the Sterling-Fair Haven community.

Creating an inclusive design to support use by people of all abilities and ages year-round.

Prioritizing sustainable trail design that minimizes environmental impact, complements the unique setting, and enhances habitats.

Project Background

The CCT originated through the efforts of the Community Connection Trail non-profit group. This group recognized the need to build connections between the overlapping communities along West Bay Road, destinations, and neighborhoods.

As part of their work, they identified locations for proposed sidewalk, proposed trail, town road trails, and completed trails as compared to the existing road network in the project area. They corresponded with multiple local residents and stakeholders, built a foundation for the brand, including a tagline, logo, and signage, implemented two trail segments, trail markers, and a trailhead near King Street.

Continuity of this group was important to the development of this project, therefore members of this non-profit group were included on this study's Project Advisory Committee.

Related Studies

Town of Sterling and Village of Fair Haven Local Waterfront Revitalization Plan (LWRP)

The Cayuga County Department of Planning and Economic Development (CCPED) has substantially completed a Local Waterfront Revitalization Program (LWRP) for the Town of Sterling and the Village of Fair Haven through a 3-year process. The program identifies strategies, policies, projects, and local regulations aimed at revitalizing the waterfront area. The substantially complete LWRP identifies seventy-seven projects, organized in three categories: Natural Resources, Public Access & Recreation, and Tourism. LWRP Project No.67 is the Sterling-Fair Haven Community Connection Trail.

This project was funded through the 2022 Department of State Environmental Protection Fund as part of the Local Waterfront Revitalization Program. The trail is envisioned as a walking/biking trail along the west side of Little Sodus Bay between downtown Fair Haven and West Barrier Bar Park, along the shore of Lake Ontario.

PROJECT OVERSIGHT

To contribute to a safe, attractive, and sustainable environment, the CCT applies **Context Sensitive Solutions (CSS)**, which is a collaborative, interdisciplinary approach that involves stakeholders and members of the public in designing a trail corridor that celebrates, enhances, and complements the local setting. This approach leads to the preservation and improvement of scenic, historic, cultural, community, and environmental resources, while also addressing safety, mobility, and sustainability. The wealth of historic, cultural, and natural resources along the CCT corridor will require future design development that places an emphasis on context sensitive solutions.

Project Advisory Committee

A project advisory committee (PAC) comprised of residents, local stakeholders, and municipal representatives convened six (6) times to oversee the trail development at major development stages. Members included:

- Kari Terwilliger, Cayuga County Planning Director
- Bradly Broadwell
- Chris Colloca, Colloca Winery
- Heidi Schlegel
- June Smith, Sterling-Fair Haven CCT Non-Profit
- Karen Engels
- Kenneth Bush, Jr.
- Lynn Chatfield, Town of Wolcott Supervisor
- Mike Borrelli, Interim President of the Blind Sodus Bay Improvement Association
- Pearce Sloan
- Tim Howell
- Walt Aikman
- William McVea, Sr.

NYSDOS Contacts: April Brun and Jaime Reppert (now retired)

Consultant Team: Led by Colliers Engineering & Design, with assistance from Allieway Marketing and Popli Design Group

PAC Meeting #1 was held on August 3, 2023 as an in-person meeting to introduce members of the PAC and the consultants.

PAC Meeting #2 was held on October 19, 2023 as an in-person walking and driving tour at specific locations along the corridor to gather feedback on existing conditions.

PAC Meeting #3 was held on January 4, 2024 in a hybrid format to review trail guidance and standards, as well as potential trail loops and spurs.

PAC Meeting #4 was held on March 14, 2024 in a hybrid format to review branding, project objectives and design criteria, updated project alternatives, and review materials for the public meeting.

PAC Meeting #5 was held on May 22, 2024 in a hybrid format to review key components of the draft feasibility report.

PAC Meeting #6 was held on July 18, 2024 in a hybrid format to review the draft final feasibility report.

A summary of PAC meetings can be found in Appendix A.

Public Meetings

To engage and solicit feedback from the public, a project website was established (**sterlingfairhavencct.com**) and two public meetings were held during the duration of the study. Documentation and summary of public meetings are included in Appendix B.

Public Meeting #1 was held as an in-person meeting on April 11, 2024 at the Fair Haven Fire Department. An introductory presentation was included to review existing conditions, needs, and potential alternatives. A gallery of boards were presented to describe the project and solicit input.

Public Meeting #2 was held as an in-person meeting on June 5, 2024 again at the Fair Haven Fire Department. This meeting was held to review the draft feasibility report.

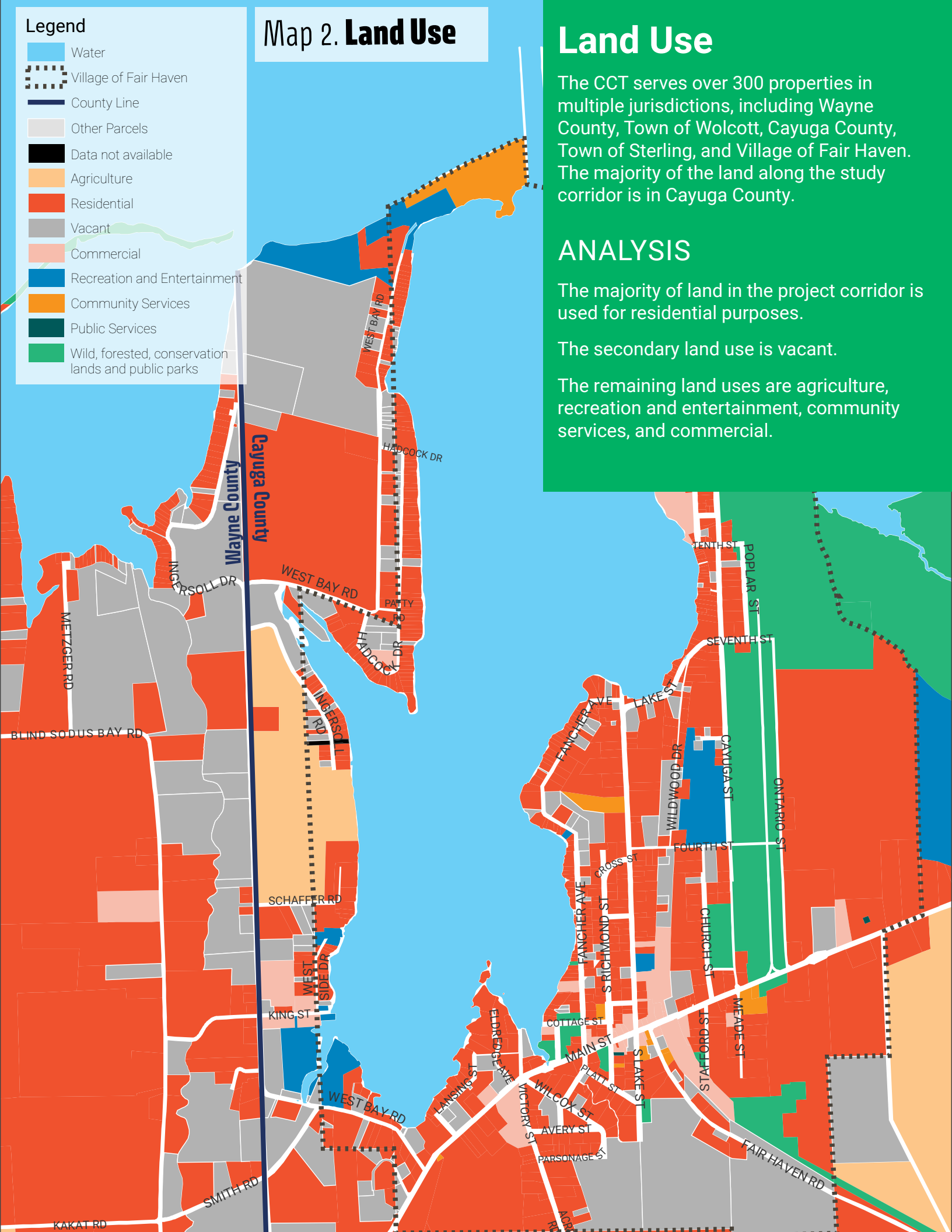
Stakeholder Interviews

To gather qualitative insights about the community's vision and concerns about the future of the project, stakeholder interviews were conducted. Key themes included improving accessibility and recreation, infrastructure and development needs, preserving small town charm, and concerns about the trail on private property and protection of landowner liability. See Appendix C for key takeaways.

EXISTING CONDITIONS

This chapter examines the layers of social, environmental, and physical existing conditions that characterize the Sterling-Fair Haven Community Connection Trail (CCT). Topics addressed in this chapter include:

- Land use;
- Land cover;
- Wetlands;
- Floodplains;
- Topography;
- Sensitive ecological and habitat areas;
- Recreation;
- Soils;
- Traffic volumes and speeds;
- Crashes.



Land Use

The CCT serves over 300 properties in multiple jurisdictions, including Wayne County, Town of Wolcott, Cayuga County, Town of Sterling, and Village of Fair Haven. The majority of the land along the study corridor is in Cayuga County.

ANALYSIS

The majority of land in the project corridor is used for residential purposes.

The secondary land use is vacant.

The remaining land uses are agriculture, recreation and entertainment, community services, and commercial.

Land Cover

To better understand the types of land cover that exist in the corridor, data was collected from the National Land Cover Dataset (NLCD). The NLCD was published in 2016 through the United States Geologic Survey to provide spatial reference data and descriptive data pertaining to land characteristics, such as urban, agriculture, and forest. The dataset also provides percent impervious surface and percent tree canopy cover.

ANALYSIS

The dominant land covers along the corridor include deciduous and mixed forest, developed open space, developed low to medium intensity, pasture/hay, and cultivated crops.

There are two areas that intersect with woody and emergent wetlands.

Wetlands

New York State Department of Environmental Conservation (NYSDEC) protects wetlands that are greater than 12.4 acres in size in accordance with the 1975 Freshwater Wetlands Act (Article 24). Development activity requires a permit in a protected wetland or its adjacent area. The permit standards in the regulations require that impacts to wetlands be avoided and minimized. In addition, there is a 100-foot buffer, called the “check zone” around the mapped wetland in which the actual wetland may occur. If a project may encroach into this area, NYSDEC must be consulted to determine where the precise boundary of the wetland is. Provisions will be going into effect in 2025 and 2028, which may bring additional freshwater wetlands under the jurisdiction of NYSDEC.

ANALYSIS

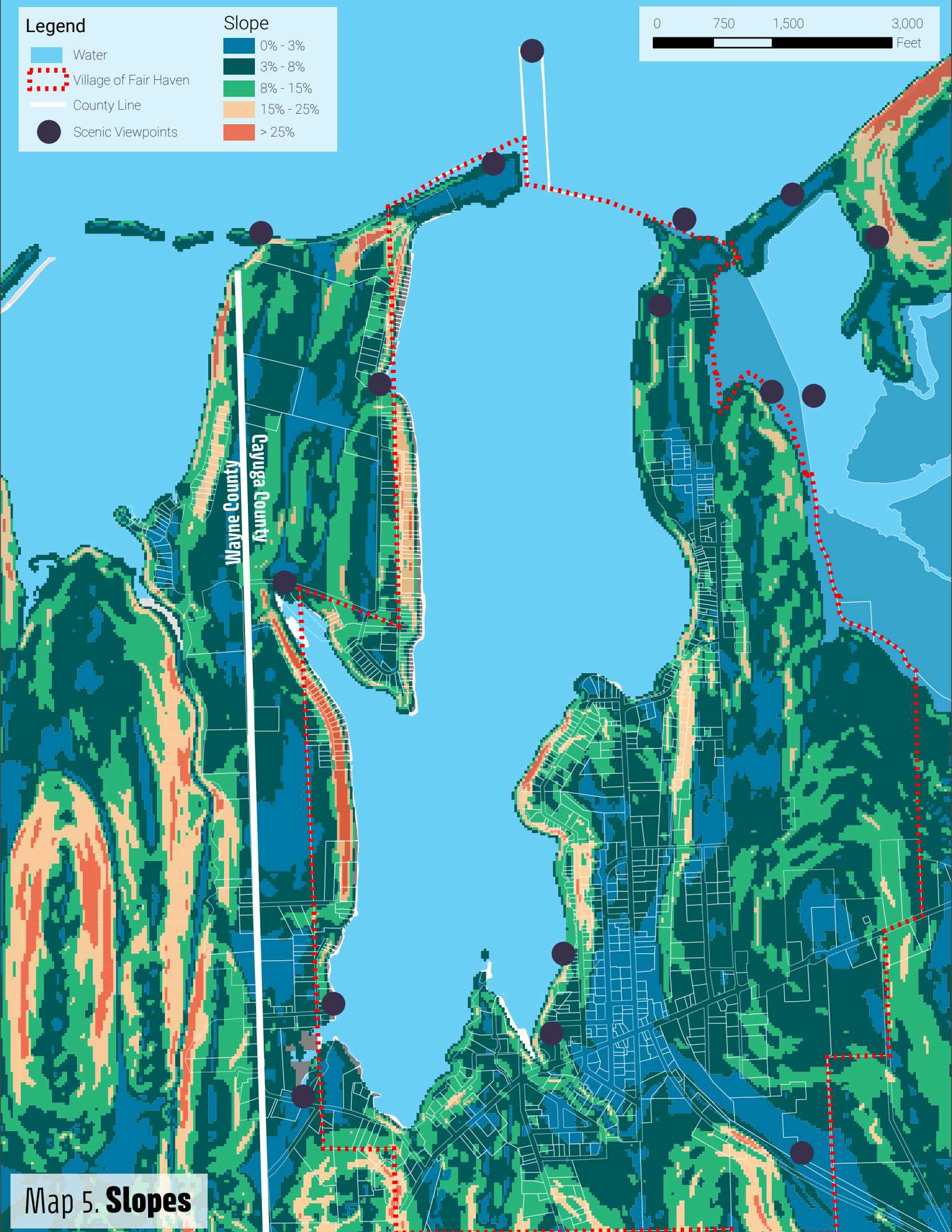
As shown on Map 4a, there are four areas that contain wetlands. There is a freshwater emergent wetland to the south of the bridge at Meadow Cove, and there are freshwater forested/shrub wetlands along Blind Sodus Creek and north and south of West Bay Road in the vicinity of Turtle Cove.

Floodplains

Areas with a 1% chance of flooding annually, or 100 year flood zones, are displayed on Map 4b. These areas are likely to be impacted by flooding during major weather events. Currently, the Federal Emergency Management Administration (FEMA) is updating flood maps, which may reflect the increased intensity of flooding due to climate change.

ANALYSIS

As shown on Map 4b, FEMA 100-Year Floodplains exist at West Barrier Bar Park and along the shoreline of Lake Ontario, to the north and south of the bridge near Meadow Cove, to the north and south of the culverts in the vicinity of Turtle Cove, to the north of West Bay Road south of Smith Road, north of Lansing Street, and along Main Street between Wilcox Street and Platt Street intersections.


Legend
Water
Village of Fair Haven
County Line
Scenic Viewpoints
Slope
0% - 3%
3% - 8%
8% - 15%
15% - 25%
> 25%
0
750
1,500
3,000
Feet
Wayne County
Cayuga County

Map 5. **Slopes**

Existing Slopes & Topography

Topography is one of the most influential factors involved in trail planning efforts. The elevation and slope of a trail is directly related to accessibility and difficulty ratings. Therefore, topography determines the types of user groups that may use the trail. The CCT is intended to create a neighborhood-friendly, safe, equitable and accessible path for pedestrians and bicyclists. Therefore, identifying segments along the corridor that encounter or avoid steep slopes and significant elevation changes is important for the course of this study.

There are multiple scenic viewpoints along the trail due to its proximity to Little Sodus Bay, Lake Ontario, and the significant elevation changes that occur throughout the course of the corridor.

See Map 5 on the previous page for slopes in the vicinity of the project area.

ANALYSIS

Slopes greater than 25% are present adjacent to the corridor along the shoreline adjacent to Fairpoint Marina and adjacent to residencies on the east side of Ingersoll Road.

Slopes between 15%-25% exist north of the curve to the east of the bridge, along Blind Sodus Creek, and near the intersection of West Bay Road and Route 104A.

Slopes between 8%-15% exist in the remaining northern portions of the corridor, along Blind Sodus Creek, and south of Smith Road.

Slopes between 3%-8% exist along the existing CCT east of the bridge, along West Bay Road between Ingersoll and Smith Road, and leading into the Village of Fair Haven.

Slopes between 0%-3% are experienced near the bridge, in the vicinity of King Street and sporadically leading into the Village of Fair Haven.

Given the steep slopes present at the north end of West Bay Road, there is a need for an off-road trail to provide equitable, accessible connections to the CCT.

Trail Slope & General User Experience

0%

Relatively easy for all bicyclists, pedestrians, and wheelchair users

2%

Not challenging for all bicyclists or pedestrians, but novices, wheelchair users, and children will feel resistance

5%

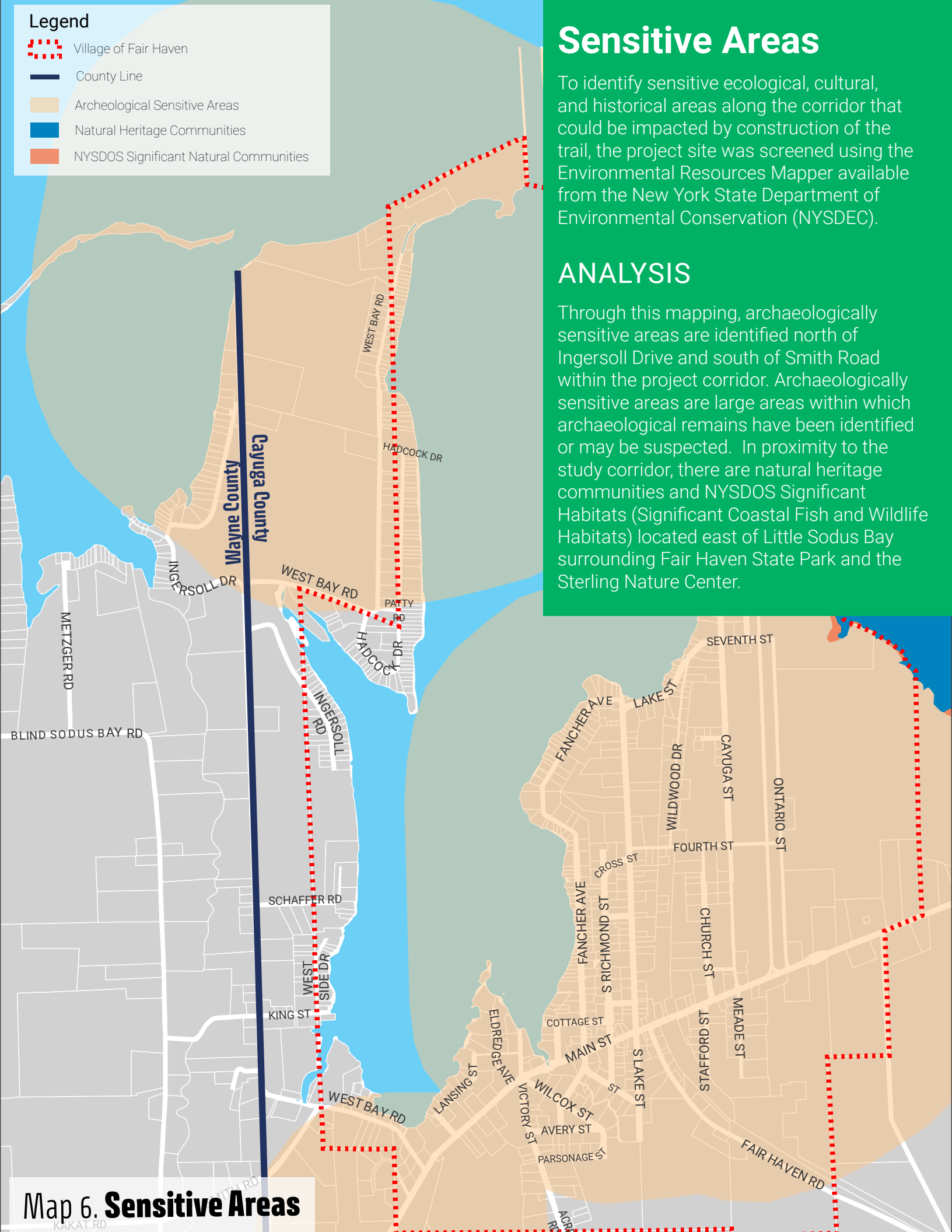
Manageable for all bicyclists and pedestrians over short periods with some fatigue, notable fatigue for wheelchair users and maximum slope for ADA compliance

8%

Uncomfortable for all bicyclists and pedestrians over long distances with notable fatigue, and very difficult for wheelchair users. Considered a wheelchair ramp, may not exceed 30' and must have handrail for ADA compliance

>15%

Difficult for all user groups, not accessible for manual wheelchair users. Some may need to walk their bicycles.



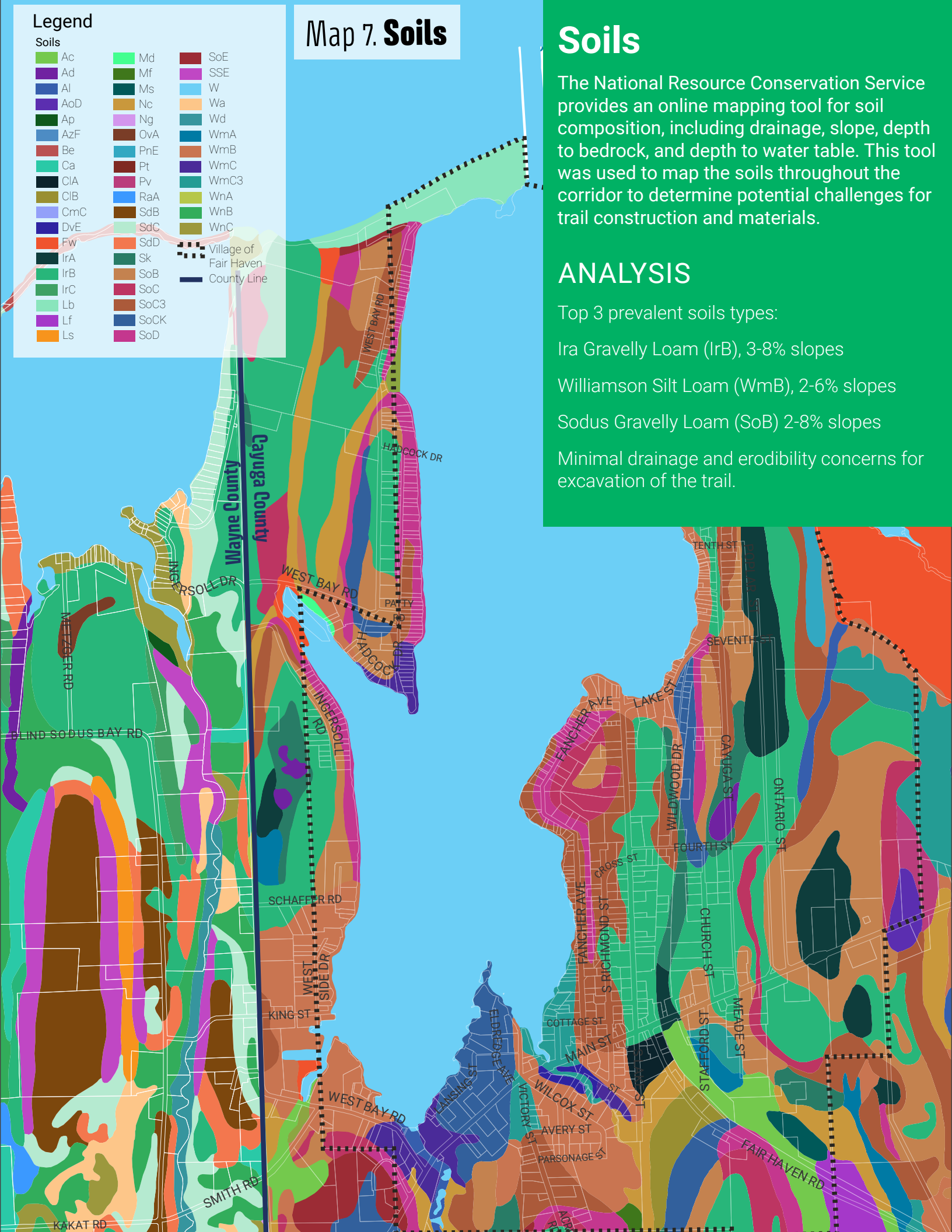
Sensitive Areas

To identify sensitive ecological, cultural, and historical areas along the corridor that could be impacted by construction of the trail, the project site was screened using the Environmental Resources Mapper available from the New York State Department of Environmental Conservation (NYSDEC).

ANALYSIS

Through this mapping, archaeologically sensitive areas are identified north of Ingersoll Drive and south of Smith Road within the project corridor. Archaeologically sensitive areas are large areas within which archaeological remains have been identified or may be suspected. In proximity to the study corridor, there are natural heritage communities and NYSDOS Significant Habitats (Significant Coastal Fish and Wildlife Habitats) located east of Little Sodus Bay surrounding Fair Haven State Park and the Sterling Nature Center.

Map 6. **Sensitive Areas**



Soils

The National Resource Conservation Service provides an online mapping tool for soil composition, including drainage, slope, depth to bedrock, and depth to water table. This tool was used to map the soils throughout the corridor to determine potential challenges for trail construction and materials.

ANALYSIS

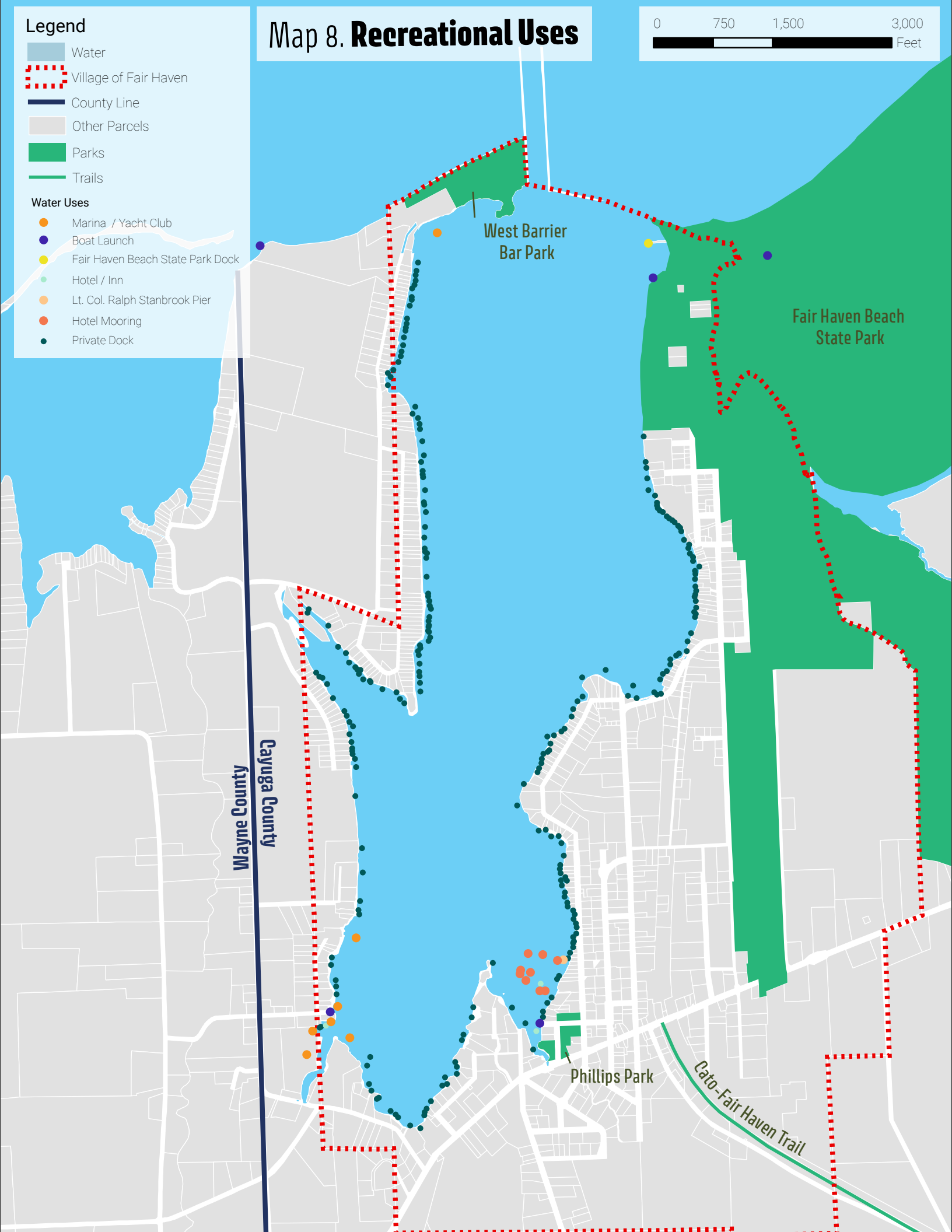
Top 3 prevalent soils types:

Ira Gravelly Loam (IrB), 3-8% slopes

Williamson Silt Loam (WmB), 2-6% slopes

Sodus Gravelly Loam (SoB) 2-8% slopes

Minimal drainage and erodibility concerns for excavation of the trail.


Legend
Water
Village of Fair Haven
County Line
Other Parcels
Parks
Trails
Water Uses
Marina / Yacht Club
Boat Launch
Fair Haven Beach State Park Dock
Hotel / Inn
Lt. Col. Ralph Stanbrook Pier
Hotel Mooring
Private Dock
Map 8. Recreational Uses
0
750
1,500
3,000
Feet
West Barrier Bar Park
Fair Haven Beach State Park
Wayne County
Cayuga County
Phillips Park
Cato-Fair Haven Trail

Existing Recreational Uses

The CCT is connected to several natural resources, including Lake Ontario and Little Sodus Bay. The value of these resources has supported the establishment of Fair Haven Beach State Park, regional trail systems, including the Cato-Fair Haven Trail and the Seaway Trail, as well as recreation-based businesses. These establishments present a variety of on-land and in-water private and public recreational opportunities that draw locals and regional tourists, especially during the summer months.

See Map 8 on the previous page for recreational usage around the project area.

ANALYSIS

There are several private docks along the east side of Little Sodus Bay that provide lake access to residencies along the study corridor.

There are three private boat launches along the CCT, which exist at Fairpoint Marina, Anchor Marina, Turtle Cove Resort & Marina. In proximity to the corridor, there is also a boat launch at the west end of Fairpoint Campground, and boat launches in the Village of Fair Haven at Pleasant Beach Hotel.

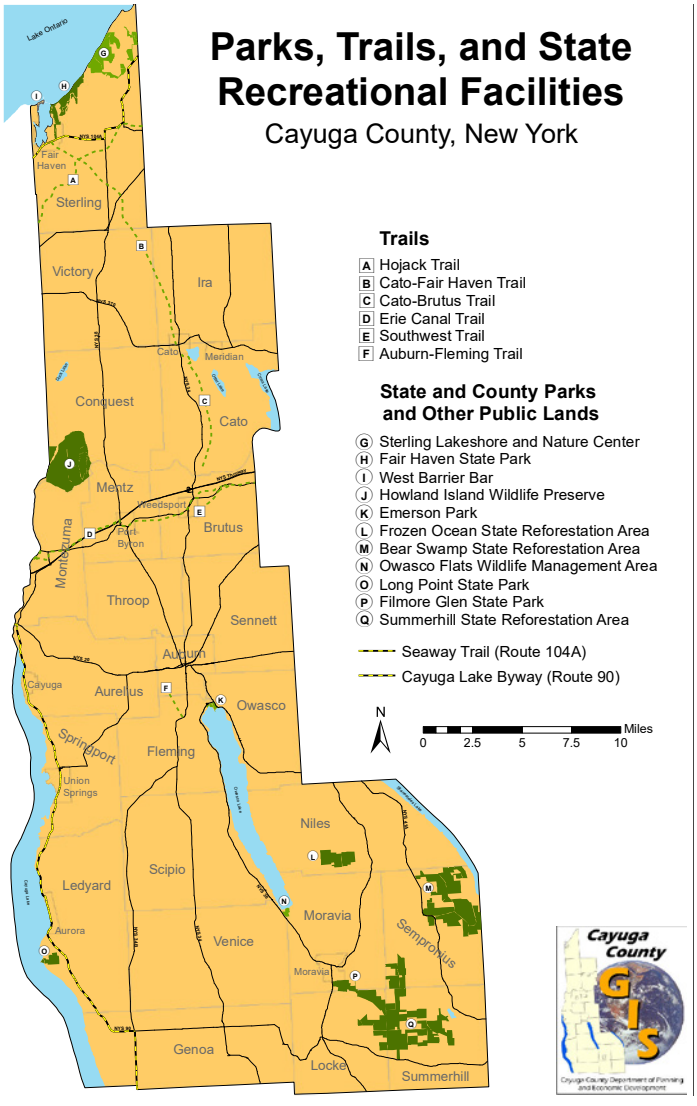
There are four public boat launches, which are located at the end of King Street, end of Cottage Street, at West Barrier Bar Park, and at the State Park. These can accommodate traditional boats and watercraft.

There are three parks in proximity to the corridor, including West Barrier Bar Park at the northern terminus of the trail as it reaches Lake Ontario, as well as Phillips Park in the Village of Fair Haven a few blocks from the southern terminus of the corridor, and Fair Haven Beach State Park located to the northeast of the Village and Little Sodus Bay.

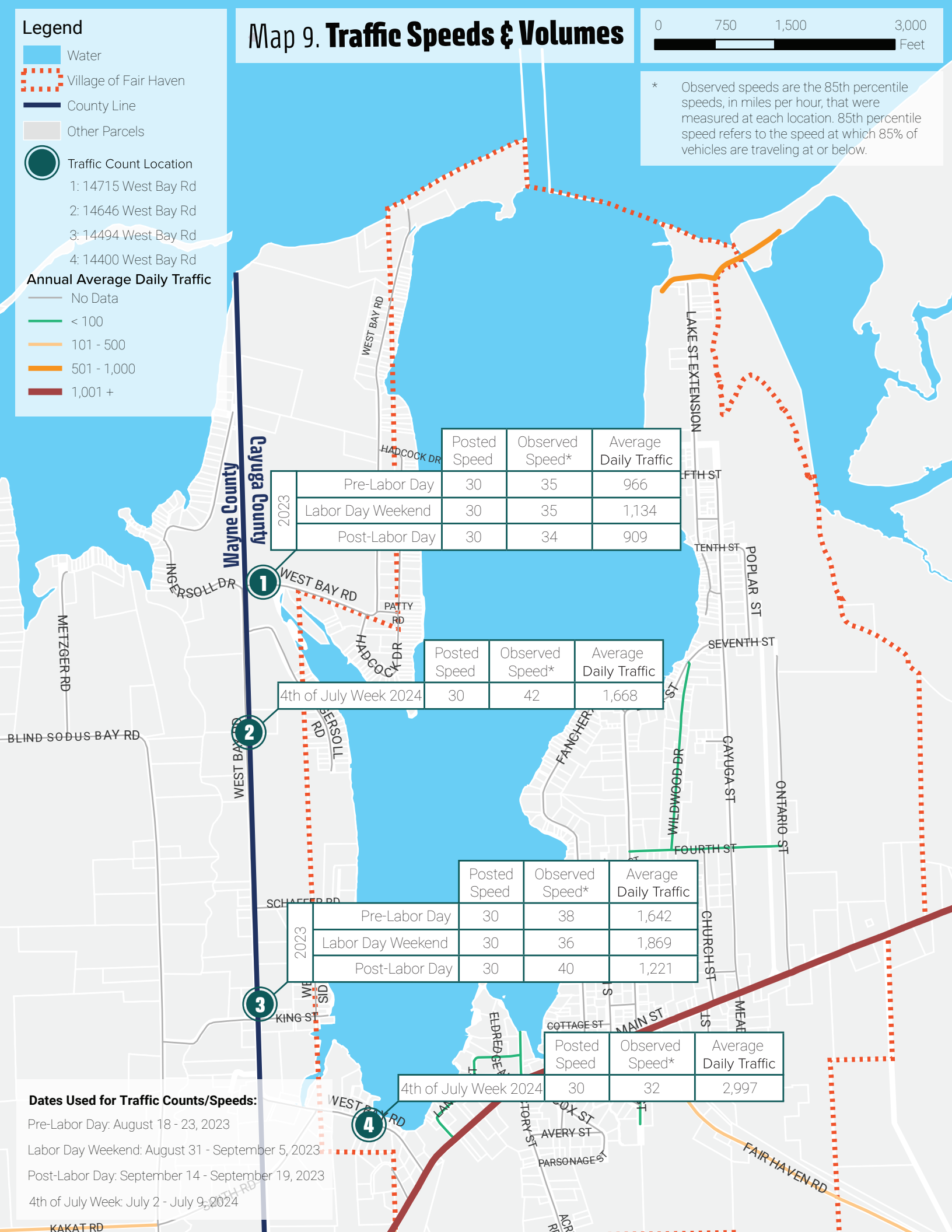
The Cato-Fair Haven Trail is four blocks from the terminus of the CCT in the Village of Fair Haven.

The Seaway Trail is located along Route 104A through the Village of Fair Haven.

In connecting to the Cato-Fair Haven Trail and the Seaway Trail, the CCT is providing an important regional and statewide trail connection up to Lake Ontario. See the map below for recreational facilities across the County.



Map 9. Traffic Speeds & Volumes



		Posted Speed	Observed Speed*	Average Daily Traffic
2023	Pre-Labor Day	30	35	966
	Labor Day Weekend	30	35	1,134
	Post-Labor Day	30	34	909

	Posted Speed	Observed Speed*	Average Daily Traffic
4th of July Week 2024	30	42	1,668

		Posted Speed	Observed Speed*	Average Daily Traffic
2023	Pre-Labor Day	30	38	1,642
	Labor Day Weekend	30	36	1,869
	Post-Labor Day	30	40	1,221

	Posted Speed	Observed Speed*	Average Daily Traffic
4th of July Week 2024	30	32	2,997

Dates Used for Traffic Counts/Speeds:

Pre-Labor Day: August 18 - 23, 2023

Labor Day Weekend: August 31 - September 5, 2023

Post-Labor Day: September 14 - September 19, 2023

4th of July Week: July 2 - July 9, 2024

Traffic Speeds & Volumes

West Bay Road draws traffic from local residents, regional tourists, and seasonal visitors. The posted speed along West Bay Road and Route 104A entering the Village of Fair Haven is 30mph, however, stakeholders and community members voiced they had observed speeds that exceeded the speed limit over 10mph, which pose a safety concern for the CCT.

In addition to vehicle speeds, Average Annual Daily Traffic (AADT) can have a significant impact on the perception of safety and comfort along a trail. AADT provides an estimate of the number of vehicles passing through a road segment by dividing the total number of vehicles by 365 days. This data was gathered from the New York State Department of Transportation (NYSDOT) Traffic Data Viewer pertaining to Route 104A and roadways in the Village of Fair Haven.

Speed data was not available for this project area, and traffic volume data was not available for West Bay Road. Therefore, in coordination with the Wayne County Highway Department and Department of Public Works, traffic counters were deployed in the week leading up to labor day weekend, labor day weekend, and the week after labor day weekend (August-September, 2023) and surrounding the 4th of July holiday (July, 2024). Two counters were deployed in 2023, one at the intersection of Ingersoll Drive and West Bay Road (14715 West Bay Road), and the other near King Street and West Bay Road (14494 West Bay Road), and two counters were deployed in 2024, one at 14646 West Bay Road south of Ingersoll Road, and another at 14400 West Bay Road, east of Anchor Marina, to capture traffic volumes and actual speeds. These locations were selected due to proximity to curves in the roadway, coverage of the corridor, and proximity to potential crossing locations for the CCT. Compiled field data is included below, and data locations are included in Map 9 on the previous page.

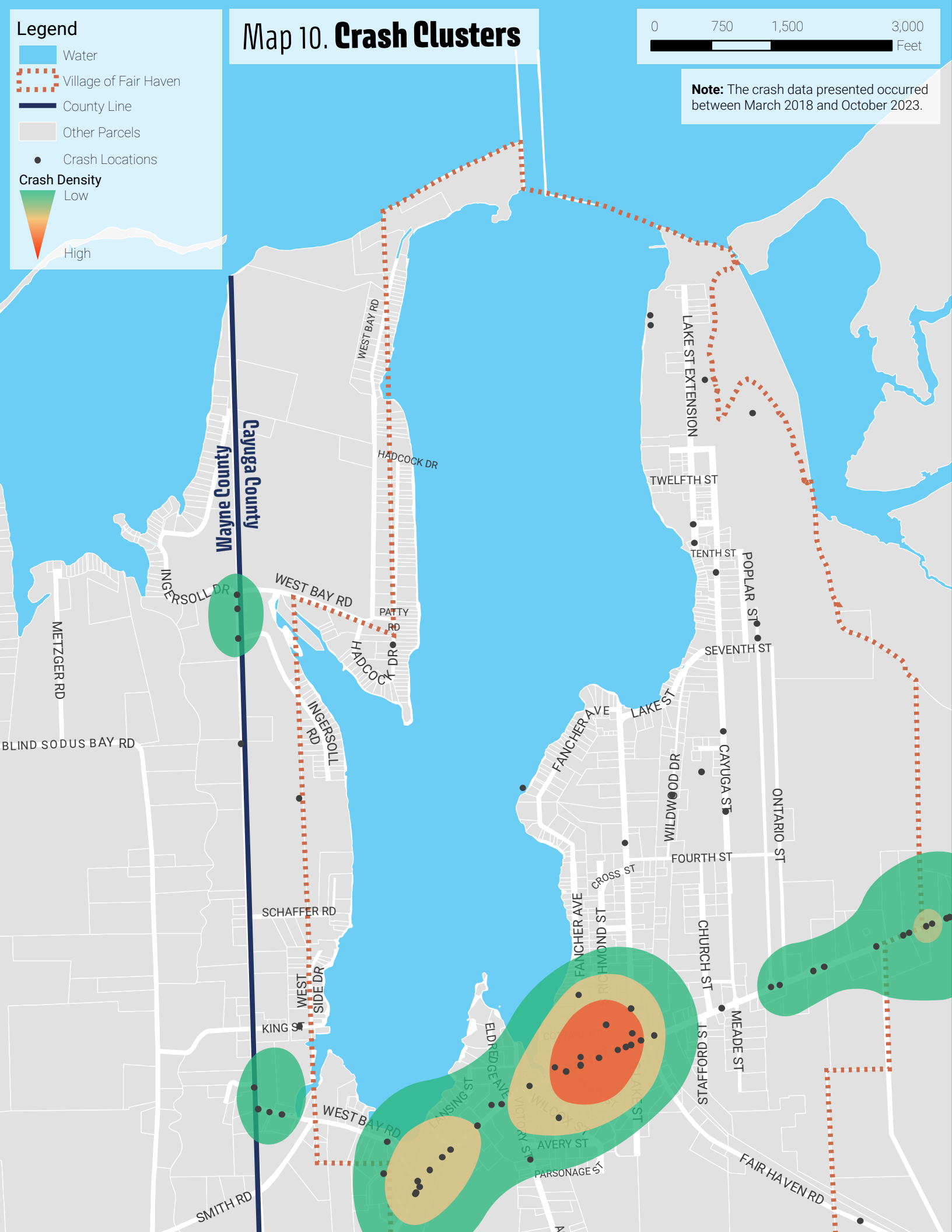
ANALYSIS

Based on 2023 field data, there was about 1.5 times more traffic on holidays than average traffic on a given day.

Based on 2023 and 2024 field data, the there are over 1,200 vehicles traveling along the corridor on average per day.

Based on NYSDOT data, over 1,000 vehicles use Main Street each day and less than 100 use the adjacent streets.

Traffic Count Location	Dates (See Map Legend)	Year	Number of Vehicles Traveling at a Certain Speed (MPH)													
			1-5	6 -10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	>65
1	Pre-Labor Day	2023	0	17	190	125	684	1993	2681	1073	165	11	8	0	1	0
	During	2023	0	4	40	205	1109	2473	2354	1028	154	17	3	0	0	0
	Post-Labor Day	2023	0	2	36	151	647	1530	1432	402	63	9	3	0	0	0
2	Pre-Labor Day	2023	0	24	227	388	1013	1824	3922	3029	981	250	44	12	0	3
	During	2023	0	5	60	545	1330	2990	4548	2116	515	146	41	11	5	0
	Post-Labor Day	2023	0	6	83	260	731	1144	2534	2258	924	233	53	19	4	1
3	4th of July Week	2024	3	78	92	90	1648	4432	3797	1639	967	313	69	9	2	3
4	4th of July Week	2024	0	108	280	761	4933	10235	5873	1542	198	41	2	1	1	0


Legend
Water
Village of Fair Haven
County Line
Other Parcels
Crash Locations
Crash Density
Low
High
Map 10. Crash Clusters
0
750
1,500
3,000
Feet
Note: The crash data presented occurred between March 2018 and October 2023.
Wayne County
Cayuga County
WEST BAY RD
HADCOCK DR
LAKE ST EXTENSION
TWELFTH ST
TENTH ST
POPLAR ST
SEVENTH ST
INGERSOLL DR
WEST BAY RD
PATTY RD
HADCOCK DR
METZGER RD
BLIND SODUS BAY RD
INGERSOLL RD
FANCHER AVE
LAKE ST
WILDWOOD DR
CAYUGA ST
ONTARIO ST
FOURTH ST
CROSS ST
SCHAFFER RD
WEST SIDE DR
KING ST
RICHMOND ST
CHURCH ST
MEADE ST
STAFFORD ST
ELDRED GEE AVE
LANSING ST
WILCOX ST
VICTORY ST
AVERY ST
PARSONAGE ST
WEST BAY RD
SMITH RD
FAIR HAVEN RD

Crash Data

To better understand safety and potential patterns along the trail corridor, data was collected from the NYDOT Crash Location and Engineering Analysis Repository (CLEAR) between March 2018 and October 2023 for crash locations. It is important to overlay collective vehicular, bicycle, and pedestrian conflicts occurring along the corridor to determine areas of concern and potential conflict.

There are low density crash clusters between Ingersoll Drive and Ingersoll Road intersections with West Bay Road and between Smith Road and King Street intersections with West Bay Road in the project area. There are also a few crashes west of Eldredge Avenue, and one crash south of Ingersoll Road. There is a medium crash cluster at the intersection of Route 104A and West Bay Road. There is a high density of crashes within the Village of Fair Haven, at the terminus of the project area.

Reference Map 10 on the previous page.

ANALYSIS

There were no pedestrian or bicycle crashes along the corridor.

Generally, there are minimal crashes along the majority of West Bay Road.

Low and Medium density crashes seem to occur at major curves in the roadway alignment.

Connections to the Village of Fair Haven may need to place emphasis on off-road trails to alleviate potential conflict with vehicular traffic.

There may be a need to locate the crossing to the Village north of the intersection of West Bay Road with Route 104A due to visibility, topography, and the crash clusters.

CRASH CLUSTER SITES

Intersection of Ingersoll Dr and West Bay Rd.

Curve in West Bay Rd between Smith Rd and King St.

Intersection of Route 104A and West Bay Rd.

Intersection of Route 104A and Eldredge Ave.

NEEDS & OPPORTUNITIES

This chapter utilizes the existing conditions to create a set of needs, opportunities, and constraints that form a foundation for potential alternative trail segments of the Sterling-Fair Haven Community Connection Trail (CCT). Topics addressed in this chapter include:

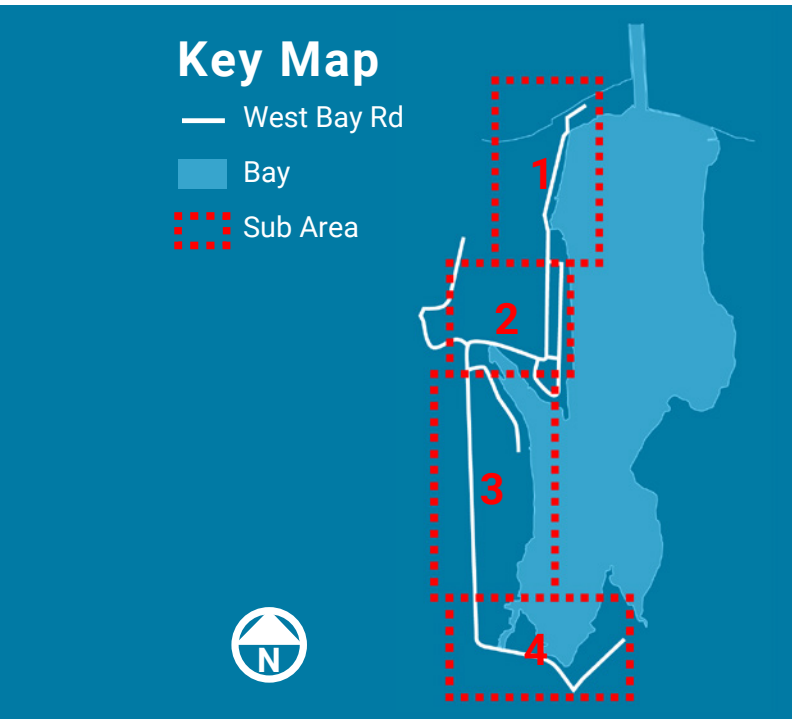
- Project sub areas;
- Community destinations;
- Needs assessment;
- Opportunities & constraints mapping.

Community Destinations

There are several destinations and attractions along the Sterling-Fair Haven Community Connection Trail, which can easily be reached by driving, walking, bicycling, and/or paddling. These include parks, other trail systems, lodging, commercial/entertainment, and marinas. The location and frequency of these features plays a significant role in the characteristics along the corridor. Reference Map 11 on the following page.

Project Sub Areas

Four sub areas within the project limits, identified north to south, were defined in order to hone in on the unique character, opportunities, and challenges within each smaller geographic area. These sub areas are described in the following sections, and displayed on the map below.



Sub Area 1 - Hadcock Dr to West Barrier Bar Park

The first sub area encompasses approximately 0.7 miles of West Bay Road in the Town of Sterling and Village of Fair Haven from Hadcock Drive to West Barrier Bar Park, and includes adjacent properties to the west of the corridor that lead to Ingersoll Drive in the Town of Wolcott. Key features include the scenic viewpoint looking north on the marina, the campground, West Barrier Bar Park, and Lake Ontario.

Sub Area 2 - Ingersoll Rd to Hadcock Dr

The second sub area encompasses approximately 0.8 miles of West Bay Road in the Town of Sterling from Ingersoll Road to Hadcock Drive, Ingersoll Road in the Village of Fair Haven (nearly a half mile in length), and Ingersoll Drive in the Town of Wolcott (approximately 0.7 miles). Key features include a water crossing at the bridge, Meadow Cove, and the existing off-road trail segment.

Sub Area 3 - King St to Ingersoll Rd

The third sub area encompasses 0.9 miles of West Bay Road in the Town of Sterling from King Street to Ingersoll Road. This area also includes adjacent properties that border Blind Sodus Creek, Schaffer Road, and West Side Drive.


Legend
Water
Parcels
Parks & Trails
Lodging
Commercial / Entertainment
Marinas
Map 11. Community Destinations
0
750
1,500
3,000
Feet
West Barrier Bar Park
Fair Point Marina
Shady Shores RV Resort
Fair Haven State Park Boat Launch
1.4 miles
2 miles
40 min
10 min
1.8 miles
0.7 miles
15 min
4 min
0.6 miles
1 mile
20 min
5 min
Colloca Estate Winery
Turtle Cove Resort & Marina
Bayside Marina
Anchor Resort & Marina
Pleasant Beach Hotel
Phillips Park
Central Business District
Cato-Fair Haven Trail
WEST BAY RD
HADCOCK DR
INGERSOLL DR
PATTY RD
INGERSOLL RD
METZGER RD
BLIND SODUS BAY RD
WEST SIDE DR
KING ST
LAKE ST EXTENSION
TWELFTH ST
TENTH ST
POPLAR ST
SEVENTH ST
FANCHER AVE
LAKE ST
WILDWOOD DR
CAYUGA ST
ONTARIO ST
FOURTH ST
CROSS ST
S RICHMOND ST
CHURCH ST
MAIN ST
MEADE ST
COTTAGE ST
ELDREDGE AVE
LANSING ST
VICTORY ST
WILCOX ST
PLATT ST
S LAKE ST
AVERY ST
PARSONAGE ST
FAIR HAVEN RD
SMITH RD
KAKAT RD

Sub Area 4 - Fair Haven to King St

The fourth sub area encompasses about 0.6 miles of West Bay Road in the Village of Fair Haven from the intersection of Route 104A to Smith Road, a quarter mile of Route 104A from West Bay Road to existing sidewalk west of Eldredge Avenue. This area includes one water crossing at Turtle Cove, the existing CCT trailhead south of King Street, and connection to the existing sidewalks in the Village.

Challenges

1. There are narrow right of ways along West Bay Road north of Hadcock Drive and near the intersection of Route 104A.
2. There are two water crossings with less than a 2' shoulder and narrow right of ways.
3. There are steep slopes in the northern portion of the corridor.
4. There are narrow right of ways on Ingersoll Drive, Ingersoll Road, and on Hadcock Drive.
5. There are swales adjacent to the pavement edge south of Ingersoll Road to the east and then to the west just north of Route 104A.
6. There are three major curves in the roadway alignment that affect visibility at intersections.
7. Perception of speeds are higher than posted speeds and observed speeds.

Opportunities

1. Potential partnership with a few private property owners could diversify the off-road trail experience, enable ADA access, and connect to Blind Sodus Bay.
2. Continuity in the trail will draw visitors to the Village of Fair Haven and promote economic development and tourism.
3. A safe trail corridor will provide an enhanced recreational amenity for residents and visitors.
4. Trail spurs could unify land and water based recreation and tourism.
5. Connections with the Cato-Fair Haven Trail will expand regional trail systems to Lake Ontario.
6. Features, vegetation, and signage along the trail could provide traffic calming to the high speeds perceived by the public.

See Map 12 on the following page for opportunities and constraints throughout the corridor.

Map 12. Opportunities & Constraints

0 750 1,500 3,000 Feet

Legend

- Topography
- Right of Way
- Utility
- Viewshed
- Vegetation
- Existing Feature
- Water Crossing/Feature

Drone image kindly provided by onePhoto Photography.

ALTERNATIVES ANALYSIS

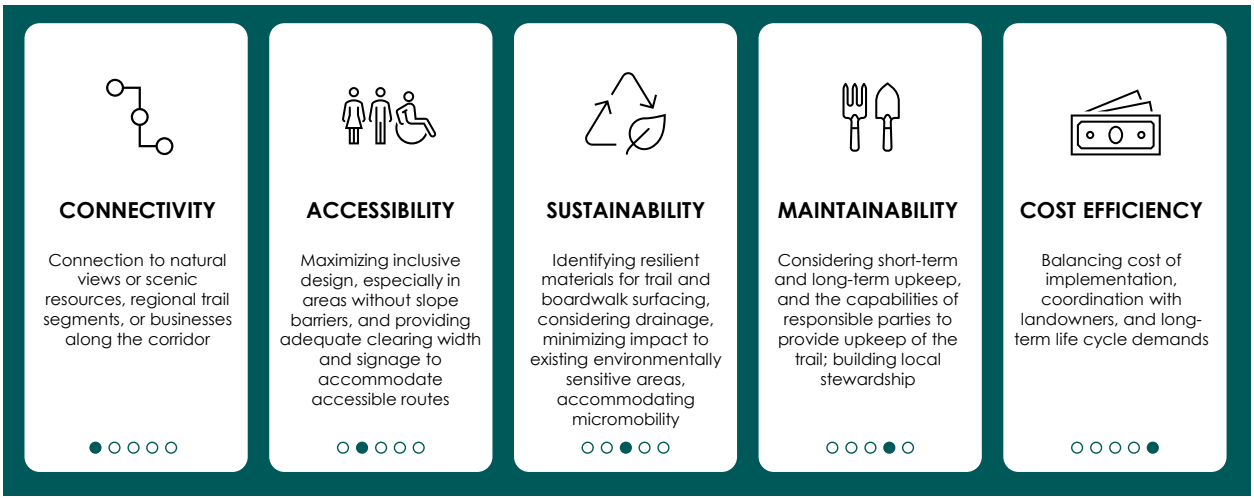
This chapter explores the design alternative segments, including loops and spurs, that were considered to build the Sterling-Fair Haven Community Connection Trail. The topics addressed in this chapter include:

- Design evaluation criteria;
- Trail segment exploration, alternatives, and rankings;
- Illustrative renderings and cross sections;
- Preliminary Trail Plan Concept.

DESIGN GOALS

Measurable Outcomes

Paired with the key findings of the existing conditions and needs assessment, a set of design goals was developed that can be used to assess trail segments that are explored in this report:



Best Practices & Standards

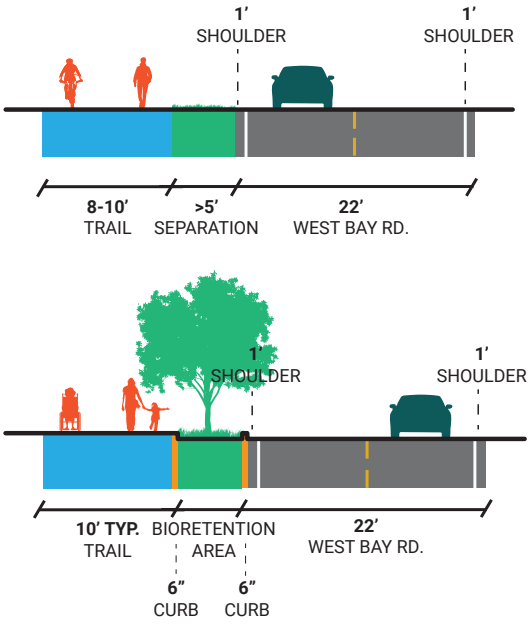
All trail alternatives have been developed using state and nationally accepted trail design guidelines and standards to ensure eligibility for grant funding, including, but not limited to:

- The New York State Highway Design Manual
- American Association of State Highway Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities
- FHWA's Designing Sidewalks and Trails for Bicycle Access Parts 1 and 2
- FHWA's Selecting Roadway Design Treatments for Bicycles
- New York State Office of Parks, Recreation, and Historic Preservation (NYS OPRHP) Trails Technical Standards and Guidelines
- Empire State Trail Design Guidelines
- New York State Department of Transportation Pedestrian Safety Action Plan
- AASHTO Pedestrian Guide
- Rural Design Guide (source of renderings included in this section)

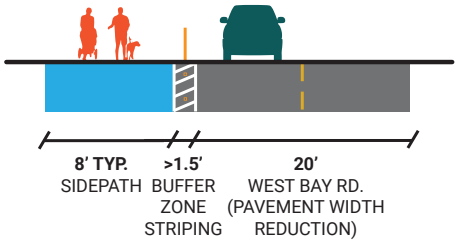
The following facilities were considered in the CCT trail segment exploration:

- **Enhanced Paved Shoulder:** AASHTO defines paved shoulders as shared use facilities on roadways where bicycling is permitted. These increase the minimum standard shoulder width, and may offer buffering capabilities including rumble strips, pavement markings, and can be accompanied by signage for improved visibility to motorists.
  - To accommodate bicyclists and pedestrian use of the shoulder, provide a minimum width of 4 ft (1.2 m) adjacent to a road edge or curb, exclusive of any buffer or rumble strip.
- **Wide Curb Lanes:** NYSDOT defines wide curb lanes as shared facilities where motor vehicles and bicycles are both accommodated in a wider travel lane. They reduce real and perceived operating conflicts between bicycles and motor vehicles, have minor impacts on an existing roadway, and provide motorists with better visibility of bicyclists. The recommended width is 12' minimum.
- **Separated Sidepath:** Defined by Rural Design Guidelines, a sidepath is a bidirectional shared use path located immediately adjacent and parallel to a roadway that offers a high quality experience for all ages and abilities and maintains rural and small town character. There are some constraints related to sidepaths relative to driveways and road access.
  - The absolute minimum width is 8', the minimum recommended width for a shared pedestrian and bicycle facility is 10', and the recommended width is 12' according to the Highway Design Manual.
  - The preferred minimum roadway separation width is 6.5', with a minimum separation width of 5', as recommended by AASHTO.
- **Off-Road Shared Use Trail:** Defined by Rural Design Guidelines as a travel

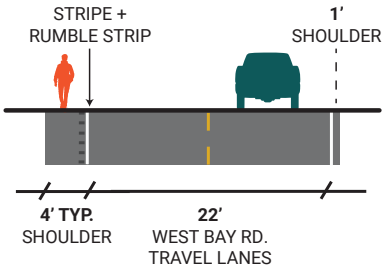
OFF - ROAD SHARED USE TRAIL



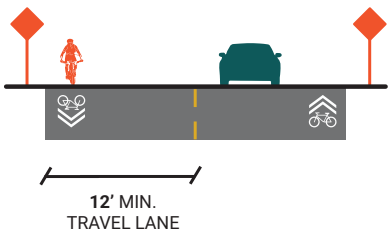
SEPARATED SIDEPATH



ENHANCED PAVED SHOULDER



WIDE CURB LANE/ SHARED ROADWAY



Street Posted Speed Range	15-25 mph		25-30 mph			
FACILITY TYPE	2 lane	3 lane	2 lane	2 lane with median refuge	3 lane	2 la
Marked and Signed Crosswalk*	✓	✓	EJ	EJ	X	E
Crosswalk with Yield Lines	EJ	✓	✓	✓	✓	E
Raised Crosswalk	✓	✓	EJ	EJ	EJ	E
Rectangular Rapid Flashing Beacon Crossing	X	EJ	✓	✓	✓	✓
Pedestrian Hybrid Beacon Crossing	X	X	EJ	EJ	EJ	E
Full Traffic Signal Crossing	X	X	EJ	EJ	EJ	E
Grade Separated Crossing	X	X	EJ	EJ	EJ	X

LEGEND	
Desirable	✓
Engineering Judgement	EJ
Not Recommended	X

*All options shall include a marked crosswalk. This indicates there are no further improvements needed.

Crossings (NYSDOT Pedestrian Safety Action Plan)

area separate from motorized traffic for bicyclists, pedestrians, wheelchair users, joggers, and other users, providing a low-stress experience for a variety of users.

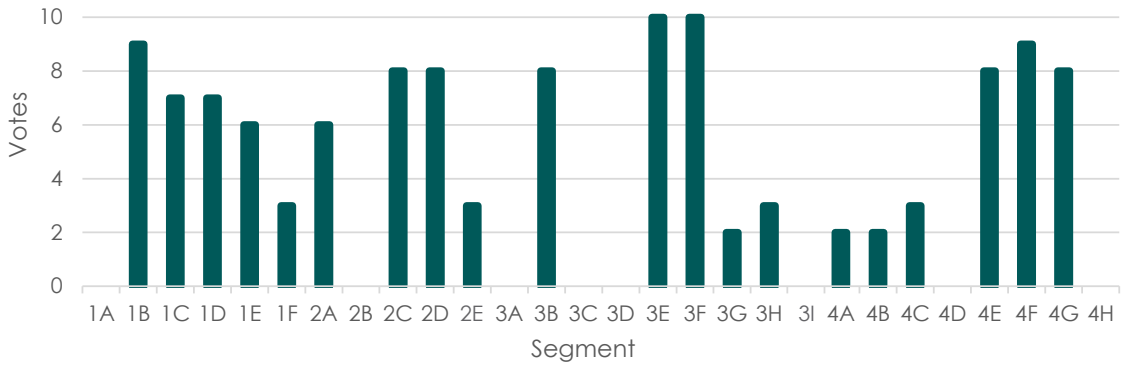
- The absolute minimum width is 8', the minimum recommended width for a shared pedestrian and bicycle facility is 10', and the recommended width is 12' according to the Highway Design Manual.
- According to AASHTO, Horizontal clearance of 3' should be provided on each side of the pathway from signs, poles, trees, or other fixed objects. Vertical clearance is a minimum of 8' to 10'.

Other Considerations:

- **High Visibility Crosswalks:** Defined by FHWA use patterns that are visible to both the driver and pedestrian from farther away to be used at all mid-block pedestrian crossings and uncontrolled intersections. They are often accompanied by lighting, enhanced signing, and pavement markings, including stop or yield bar and in-street signing.
- **Trail Surfacing:** According to the NYS OPRHP Trails Technical Standards and Guidelines, the preferred surface material for a biking trail is smooth pavement, such as asphalt, concrete, crushed stone, or stabilized natural surface trail.
- **Sight Distance:** Sight distance should be a minimum of 50'-100' on downhill curves or road crossings.

Alternative Exploration & Priority Segments

A set of alternative routes were developed for each sub area; utilizing a combination of the right of way, adjacent roadway right of ways, utility corridors, public lands, and limited private property. At the first Public Meeting, attendees were asked to rank the priority of each alternative segment. The following results indicate the most desirable or highest priority segments include 1B, 3E, 3F and 4F with 9 to 10 votes. In contrast, the least desirable or lowest priority segments include 1A, 2B, 3A, 3C, 3D, 3I, 4D, and 4H with no votes. Reference Map 13 on the following page.




Legend
Water
Parcels
Existing CCT Trail Segments
Off-Road Trail on Private Property
Off-Road Trail in Right of Way
On-Road Trail
Elevated Trail
Paddle Points
Decision Points
Rendering Locations
Map 13. Trail Segment Exploration
0
750
1,500
3,000
Feet
Lake Ontario
Blind Sodus Bay
Little Sodus Bay
1A
1B
1C
1D
1E
1F
2A
2B
2C
2D
2E
3A
3B
3C
3D
3E
3F
3G
3H
3I
4A
4B
4C
4D
4E
4F
4G
4H
WEST BAY RD
HADCOCK DR
PATTY RD
INGERSOLL RD
METZGER RD
BLIND SODUS BAY RD
SCHAFFER RD
WEST SIDE DR
KING ST
SMITH RD
LAKE ST EXTENSION
TWELFTH ST
TENTH ST
POPLAR ST
SEVENTH ST
FANCHER AVE
LAKE ST
WILDWOOD DR
CAYUGA ST
ONTARIO ST
FOURTH ST
CROSS ST
S RICHMOND ST
CHURCH ST
COTTAGE ST
MAIN ST
PLATT ST
S LAKE ST
STAFFORD ST
MEADE ST
ELDRED AVE
LANSING ST
VICTORY ST
WILCOX ST
AVERY ST
PARSONAGE ST
FAIR HAVEN RD
Note: Implementation of trail segments on private property will require coordination with landowners for trail access through agreements or easements. Trail implementation will not involve eminent domain.

SUB AREA 1

1A – West Bay Road through Segment 1A may accommodate a separated bi-directional on-road facility as is or be reduced in width to accommodate a standard separated off-road trail from the Campground to the Park.

1B – Due to constraints in the right of way (ROW), utilities, and slopes along West Bay Road, Segment 1B is envisioned as an off-road trail alternative dependent on agreements with private property owners from the campground to just north of Hadcock Drive. The trail would utilize existing campground roadways and a new off-road through forested lands in private property, offset at least 100' from residencies along West Bay Road. At the southern end of Segment 1B, the trail would connect to an existing driveway that leads to West Bay Road.

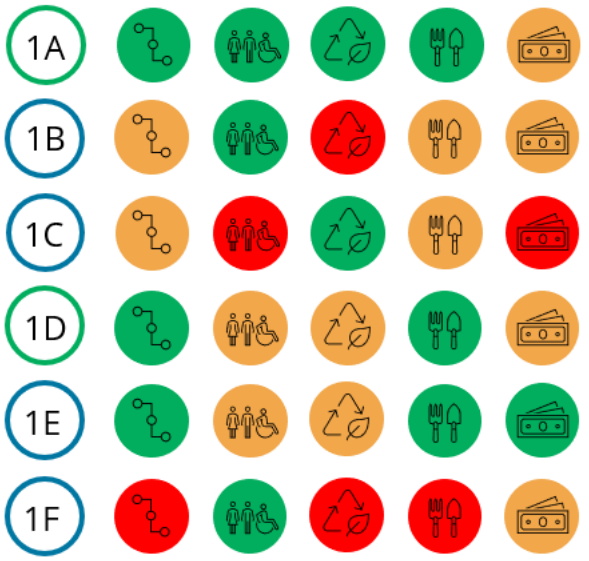
1C– Segment 1C exists on an existing 4' wide shoulder. To separate this facility from vehicular traffic, the trail would be 6' from edge of pavement to avoid utility conflicts partially in the ROW and partially on private property on the west side of West Bay Road. To minimize impacts to private property, but implement a standard sidepath, utility relocations and pavement expansion into private property would be required to meet width requirements.

1D –Due to a widening in the ROW, Segment 1D would be a separated off-road trail within the ROW extending south of 1C.

1E – Segment 1E is located in a short segment where the ROW is constricted to 6' width to connect 1B and 1D to Hadcock Drive. This segment could include an expanded shoulder, protected by a rumble strip and pavement markings.

1F– Segment 1F spurs from 1B to Ingersoll Drive, utilizing an existing driveway on private property, to connect Cayuga County to Wayne County and Little Sodus Bay to Blind Sodus Bay, dependent on landowner agreements.

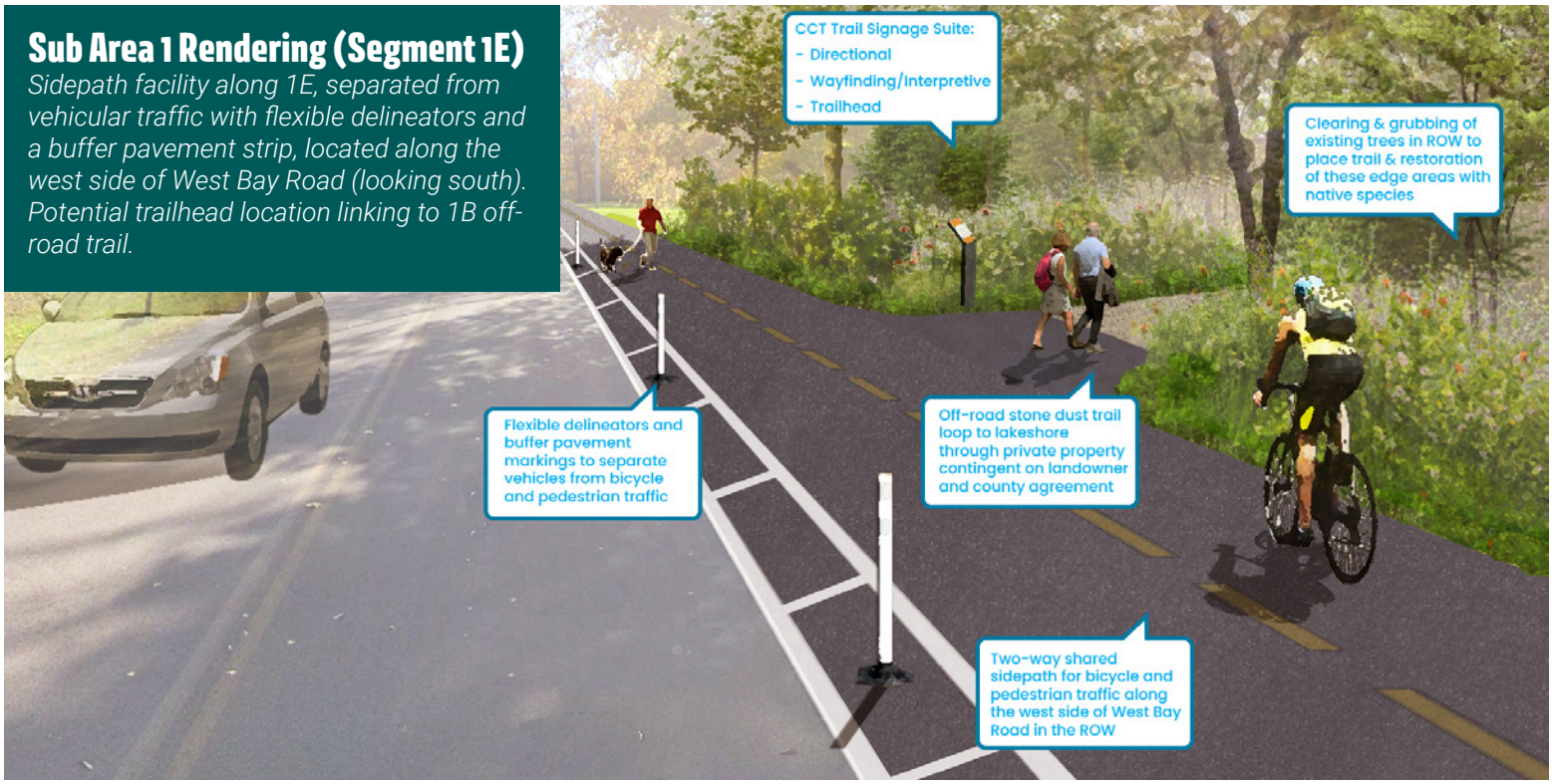
Design Goal Ranking



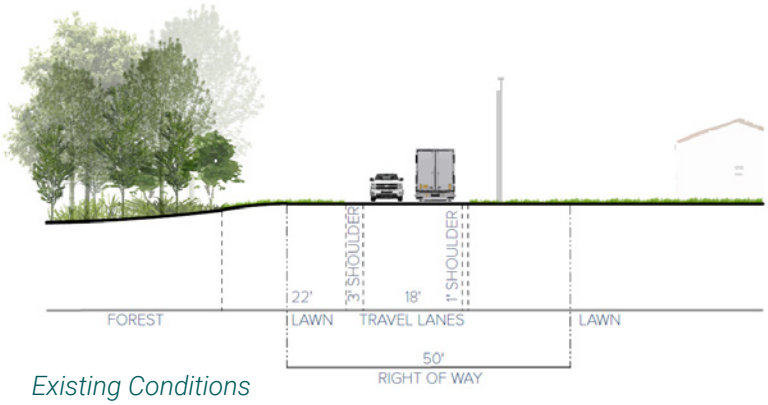
Key Map

Sub Area 1 Rendering (Segment 1E)

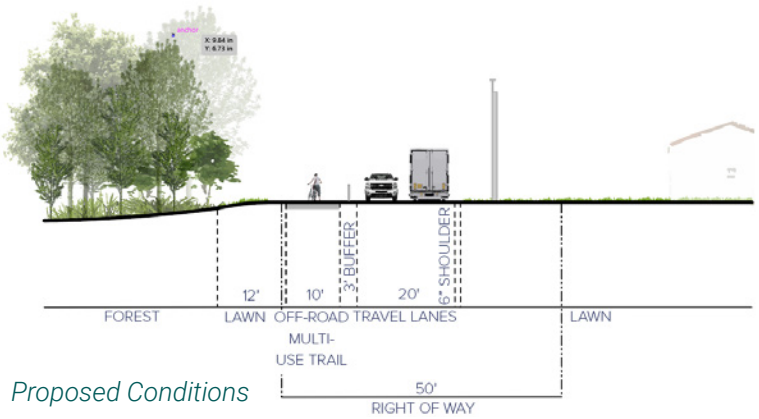
Sidepath facility along 1E, separated from vehicular traffic with flexible delineators and a buffer pavement strip, located along the west side of West Bay Road (looking south). Potential trailhead location linking to 1B off-road trail.



Segment 1B Cross Section

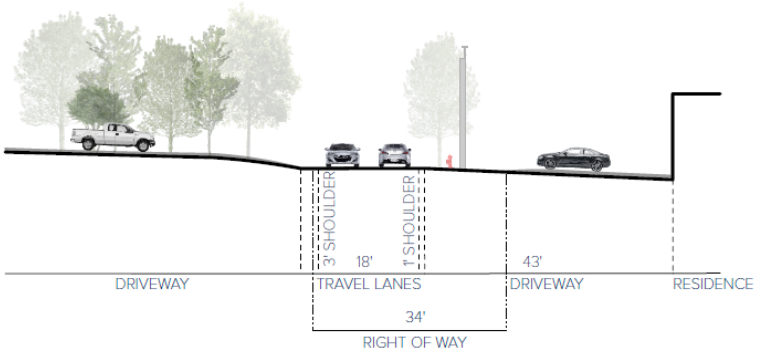


Existing Conditions

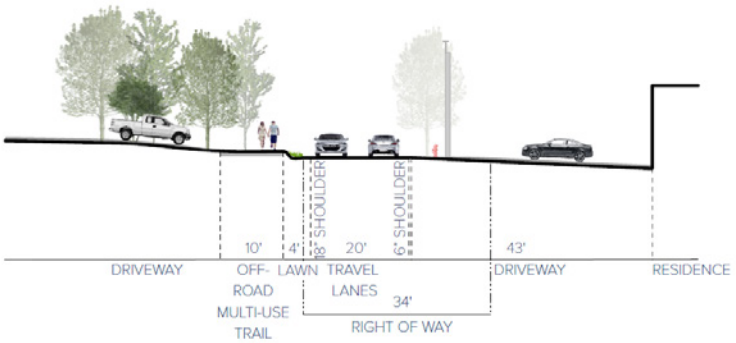


Proposed Conditions

Segment 1C Cross Section



Existing Conditions



Proposed Conditions

SUB AREA 2

2A – With 10' average width to work with in the ROW, Segment 2A is envisioned as on-road extension of the improvements illustrated on page 43 for 1E; a sidepath facility separated from vehicular traffic with flexible delineators and a buffer pavement strip within the ROW.

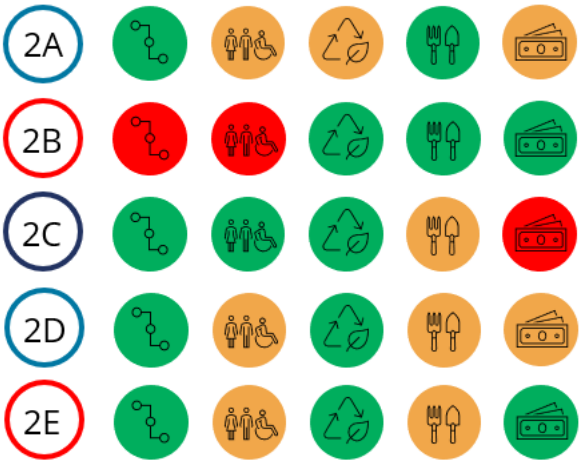
2B – Due to ROW constraints, Segment 2B would be an on-road trail facility that would share the roadway with vehicles along Hadcock Drive, leading to the east end of the bridge. A high visibility crossing would be necessary at Hadcock Drive and at the bridge to access this segment of trail. Improvements would include pavement markings, symbols, and road share signage to alert vehicles of the shared use. Expansion of the pavement width by 2' on each side would be necessary to accommodate a standard 14' width wide curb lane for trail users and motorists to share the roadway.

2C– Segment 2C is an elevated trail that passes over a wetland and floodplain area to the north of the bridge, expanding the existing CCT trail segment. The elevation of this trail would need to consider floodplain elevations and sensitivity to the wetland environment. Implementation of this segment would require landowner agreements.

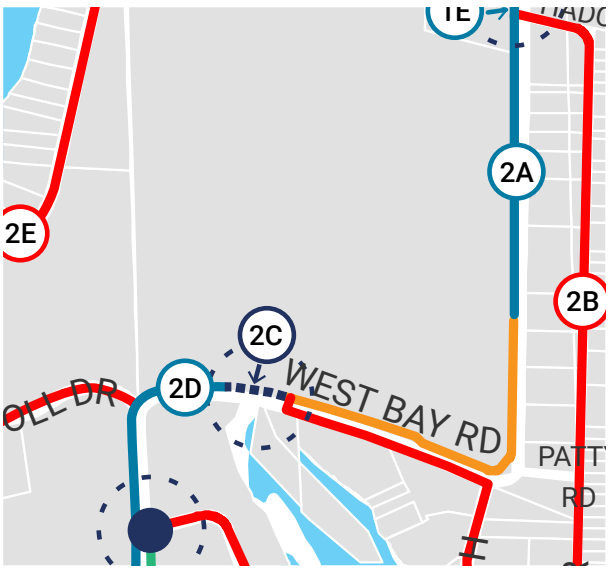
2D – Segment 2D is a section of on-road adjacent trail to the north/west of West Bay Road. This segment connects the trail from Ingersoll Drive to Ingersoll Road and furthermore, connects Wayne County and Blind Sodus Bay to Cayuga County and Little Sodus Bay. Implementation would require landowner agreements. There is a utility building that the trail passes by, which could be used for parking. This segment of trail follows one of the bends in West Bay Road, and along a steep slope. There may be a need for signage and buffering to improve levels of perceived safety.

2E – Due to ROW constraints, Segment 2E would be an on-road trail facility that would share the road with vehicles on Ingersoll Drive. Improvements would include pavement markings, sharrows, and signage to alert vehicles of the shared use. Expansion of the pavement width by at least 4' would be necessary to accommodate a wide curb lane for trail users and motorists to share the roadway.

Design Goal Ranking

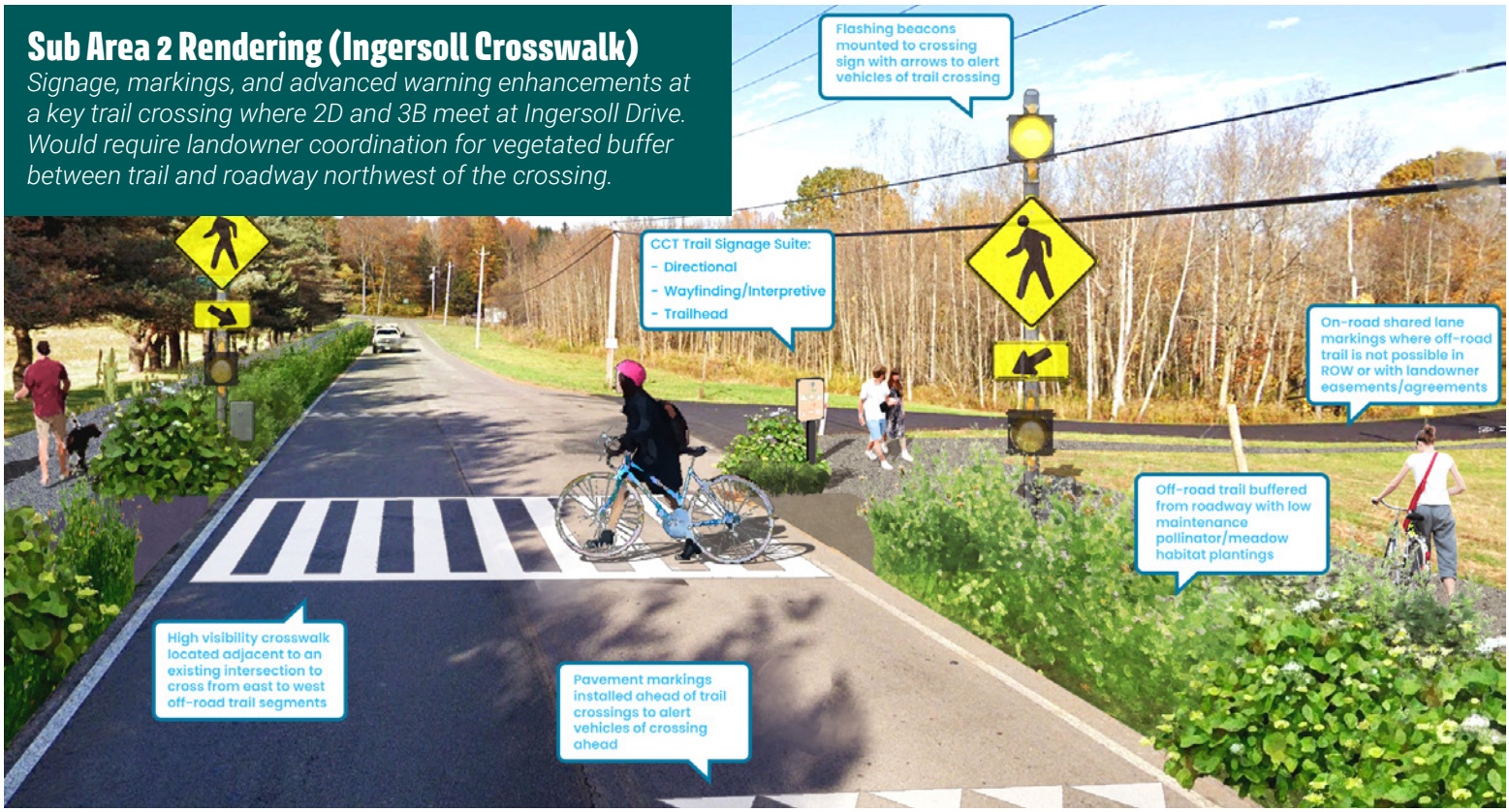


Key Map



Sub Area 2 Rendering (Ingersoll Crosswalk)

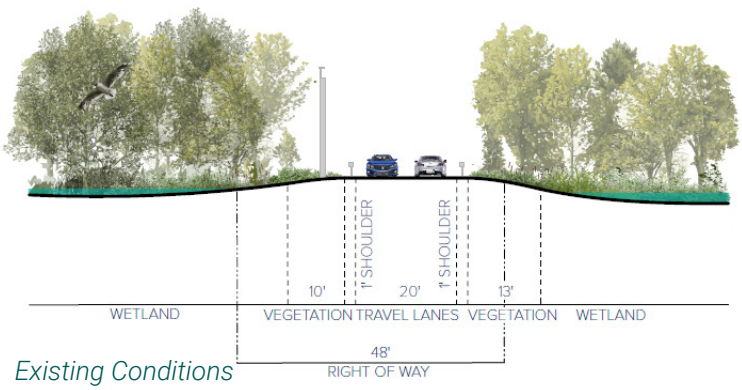
Signage, markings, and advanced warning enhancements at a key trail crossing where 2D and 3B meet at Ingersoll Drive. Would require landowner coordination for vegetated buffer between trail and roadway northwest of the crossing.



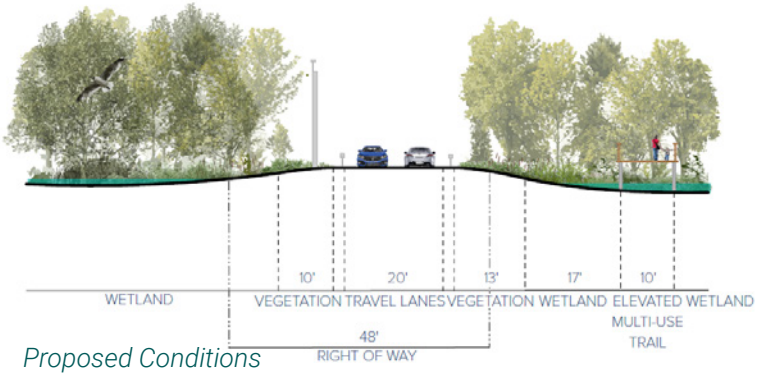
Sub Area 2 Rendering (Segment 2C)

Extension of existing off-road CCT, connecting to a helical pier structure over the wetland and overlook of Meadow Cove.

Segment 2C Cross Section Alternative 1



Existing Conditions



Proposed Conditions

SUB AREA 3

3A – Segment 3A is a scenic off-road trail that connects to Blind Sodus Creek through multiple private properties on the west side of West Bay Road. Implementation would require agreements with several landowners, grading to traverse steep slopes, and a creek bridge to connect to the west side of the creek. There may be opportunities to access Blind Sodus Bay through a paddle point.

3B – Located on the east side of West Bay Road from Ingersoll Road to Colloca Winery, there is enough width adjacent to the roadside swale within the ROW for Segment 3B to be a standard separated off-road trail at least 8' in width with some minor pole relocations and a few areas with modification of roadside swales. Moderate modification of swales would be required to meet a trail width of 10' width, which is the recommended width.

3C– Segment 3C would connect the intersection of West Bay Road and Ingersoll Road to Colloca Winery and its private trail system through an on-road trail facility in the ROW. An expansion of the pavement width by 4' would be necessary to accommodate an expanded curb lane. Pavement markings, sharrows, and signage would also be included to alert motorists of the shared usage.

3D – Segment 3D would connect 3A to West Bay Road, aligning with the intersection of Schaffer Road. This segment would traverse steep topography and require coordination and agreements from landowners.

3E – Segment 3E is a continuation of 3B as an off-road trail segment from Colloca Winery to Schaffer Road needing minor pole relocations and minimal roadside swale modifications to meet 8' width and moderate modifications to meet 10' width.

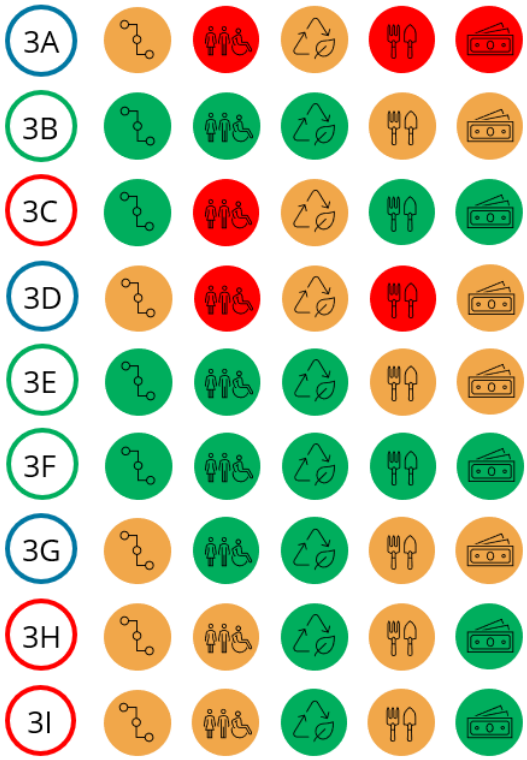
3F– Segment 3F is a continuation of segment 3E to meet the existing CCT trailhead south of King Street with similar needs.

3G– Segment 3G follows a local, informal segment of trail through private property to connect Schaffer Road and Colloca Winery trails to West Side Drive and Bayside marina. The trail would require landowner agreements.

3H – Segment 3H would utilize low-traffic existing roadways as a non-standard trail along West Side Drive and King Street, where Bayside Marina and Anchor Marina are located.

3I – Segment 3I would connect the off-road trail segment along Blind Sodus Creek to the intersection of West Bay Road and King Street. It is likely that one or two crossings may be necessary to access the trail going north or south, and a pavement expansion of at least 4' would be needed to establish standard wide curb lanes.

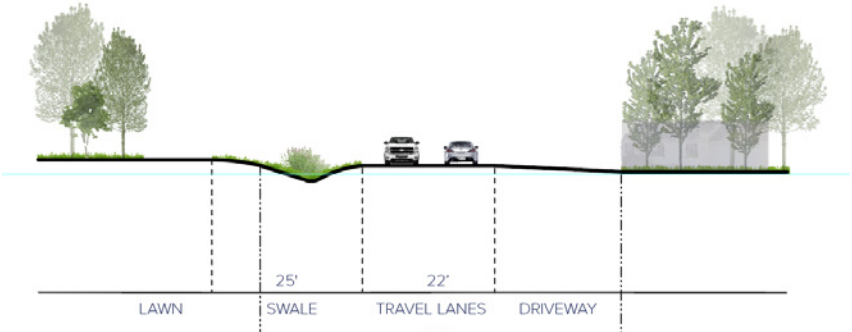
Design Goal Ranking



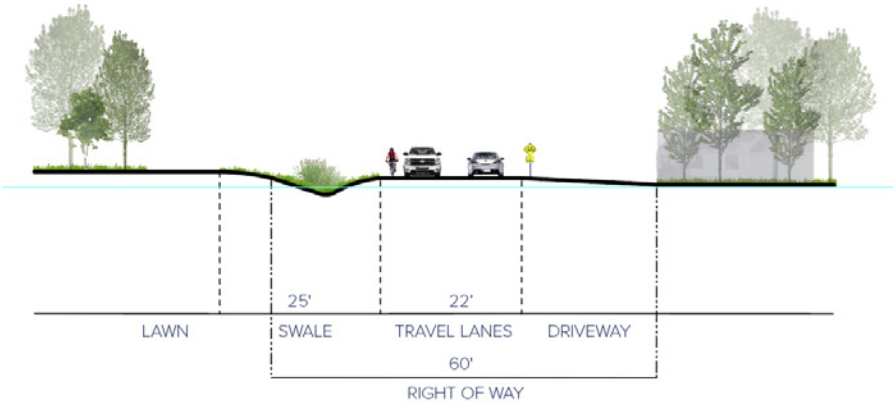
Sub Area 3 Rendering (Segment 3B)

An off-road trail adjacent to existing overhead electric and roadside swales would be implemented in the ROW along the east side of West Bay Road.

Segment 3C Cross Section

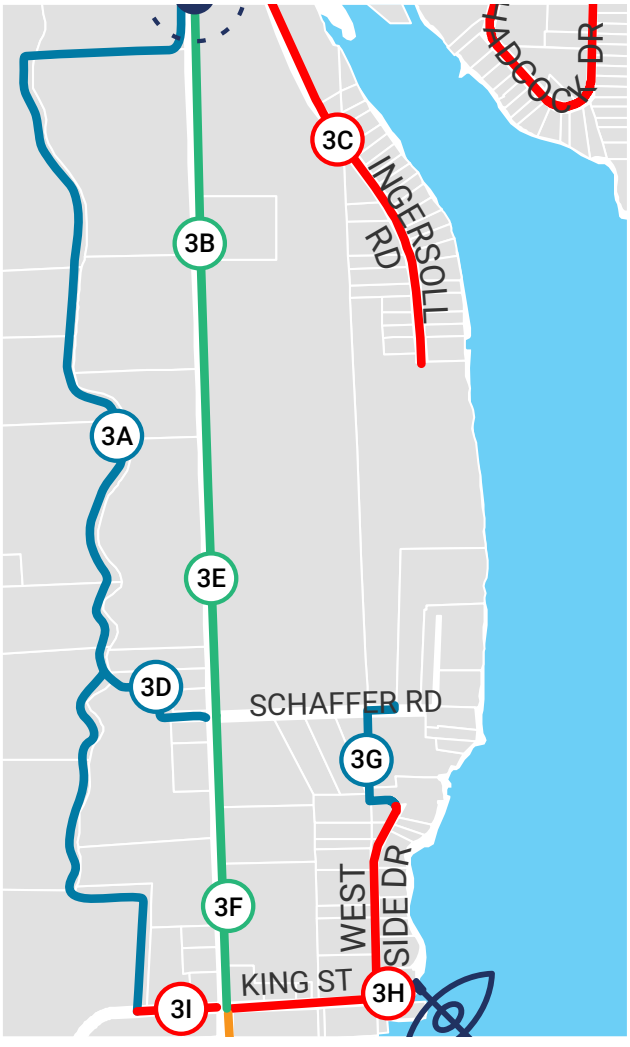


Existing Conditions



Proposed Conditions

Key Map



SUB AREA 4

4A – Segment 4A continues the off-road trail to the east of West Bay Road from the existing CCT trailhead south of King Street to the bend along West Bay Road. This segment would utilize the ROW, which widens in this section of the corridor.

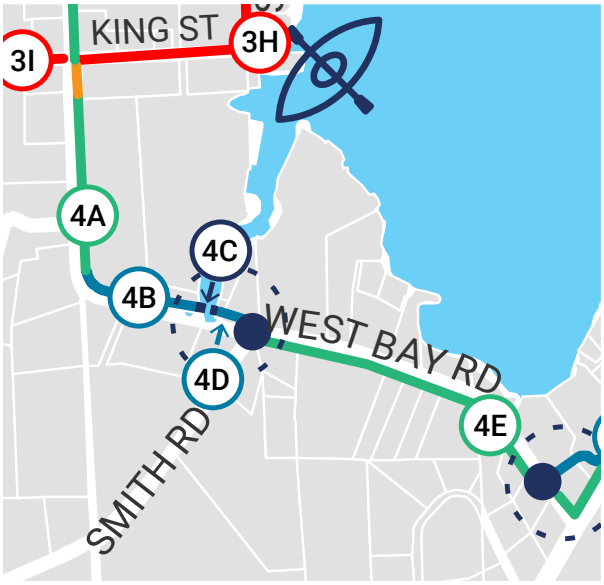
4B – Segment 4B is a short section of trail in the ROW and private property that would require an access easement to meet width requirements for a standard sidepath or off-road trail. Implementation would require landowner coordination. This segment would lead to the water crossing near Smith Road.

4C– Segment 4C would be an off-road elevated or floating boardwalk along Turtle Cove, north of West Bay Road, accommodating fluctuation in water levels. Due to current usage of this area for fishing, there may be a desire to expand the trail width beyond minimum 8'-10' standards to allow stationary use for fishing and passing traffic of pedestrians and bicyclists. This segment would require landowner agreements, permits and consideration for mitigating and minimizing impacts, as it crosses a floodplain, sensitive species area, and a wetland.

4D – Segment 4D would be a bi-directional sidepath on the north side of West Bay Road crossing to the south east of Smith Road. This segment would require a landowner agreement. The trail must consider impacts to trees and root systems encountered in this short segment. There also may be an opportunity for shared parking agreements with Anchor Marina to allow parking for trail users.

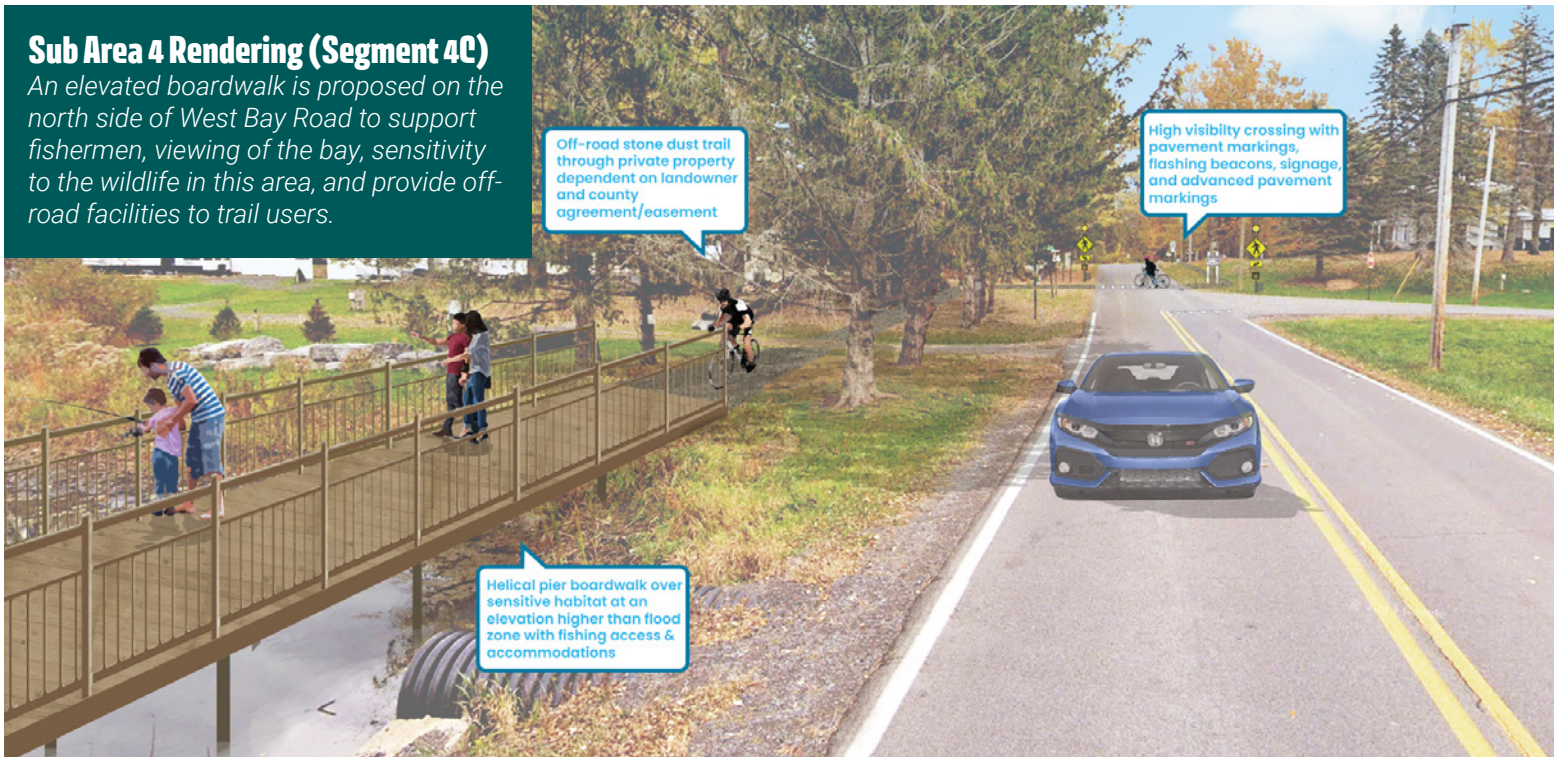
Design Goal Ranking

Key Map



Sub Area 4 Rendering (Segment 4C)

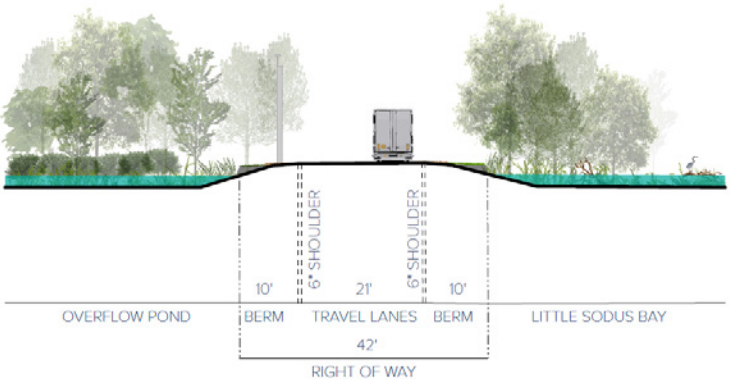
An elevated boardwalk is proposed on the north side of West Bay Road to support fishermen, viewing of the bay, sensitivity to the wildlife in this area, and provide off-road facilities to trail users.



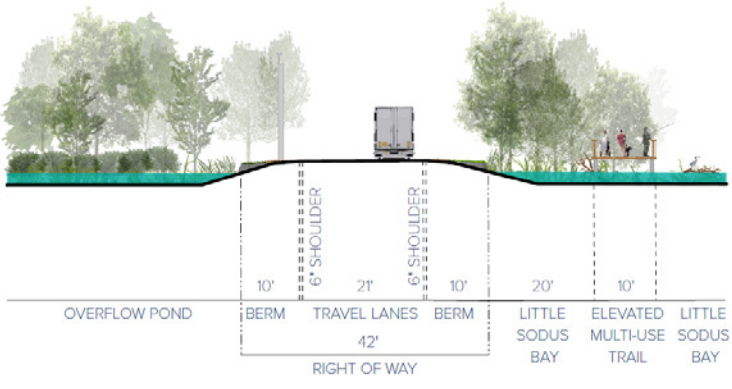
ADA Accessible Railing Design for Fishing

Helical Pier Boardwalk

Segment 4C Cross Section



Existing Conditions



Proposed Conditions

SUB AREA 4

4E – Segment 4E utilizes the ROW south of West Bay Road through the placement of a sidepath or a separated off-road trail, and an enhanced shoulder south of the curve in the roadway. Utility poles and overhead electric need to be considered, and a crossing will be necessary to connect the trail to the Village of Fair Haven.

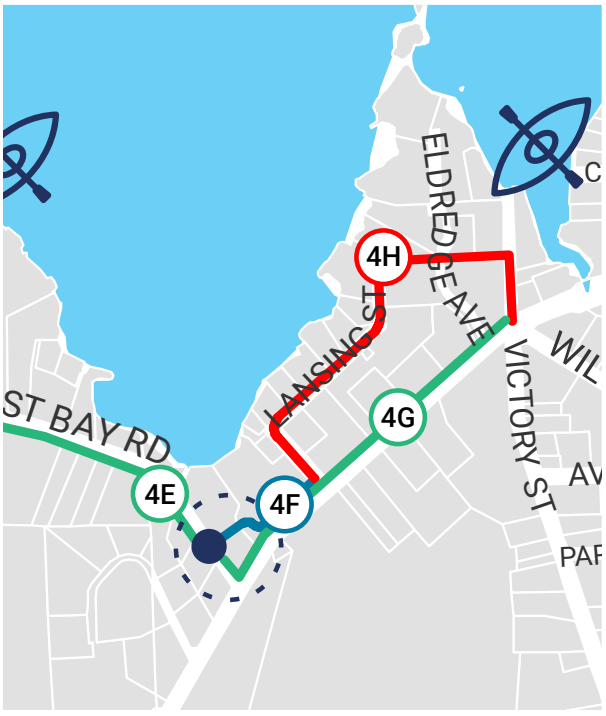
4F– Segment 1F would be an off-road trail that would require an easement with two private property owners to access Lansing Street from West Bay Road. A high visibility crossing will be necessary to navigate from the west side to east side of West Bay Road, in an area where there is limited visibility and slopes in proximity to the intersection with Route 104A. A trailhead may be desirable to mark the transition between the Village portion of trail and trail along West Bay Road.

4G– Segment 4G connects to a NYSDOT sidewalk project that was implemented in 2007 from the Village to just west of Eldredge Avenue. This section includes a narrower ROW than is present in the Village, paired with roadside swales, elevation changes, and utility lines which may require modifications and relocations for implementation of a separated off-road facility.

4H– Segment 4H would follow Lansing Street and lead to Eldredge Avenue and Main Street in the Village of Fair Haven through an on-road trail facility in the ROW. An expansion of the pavement width by 4' would be necessary to accommodate an expanded curb lane. Pavement markings, sharrows, and signage would also be included to alert motorists of the shared usage.

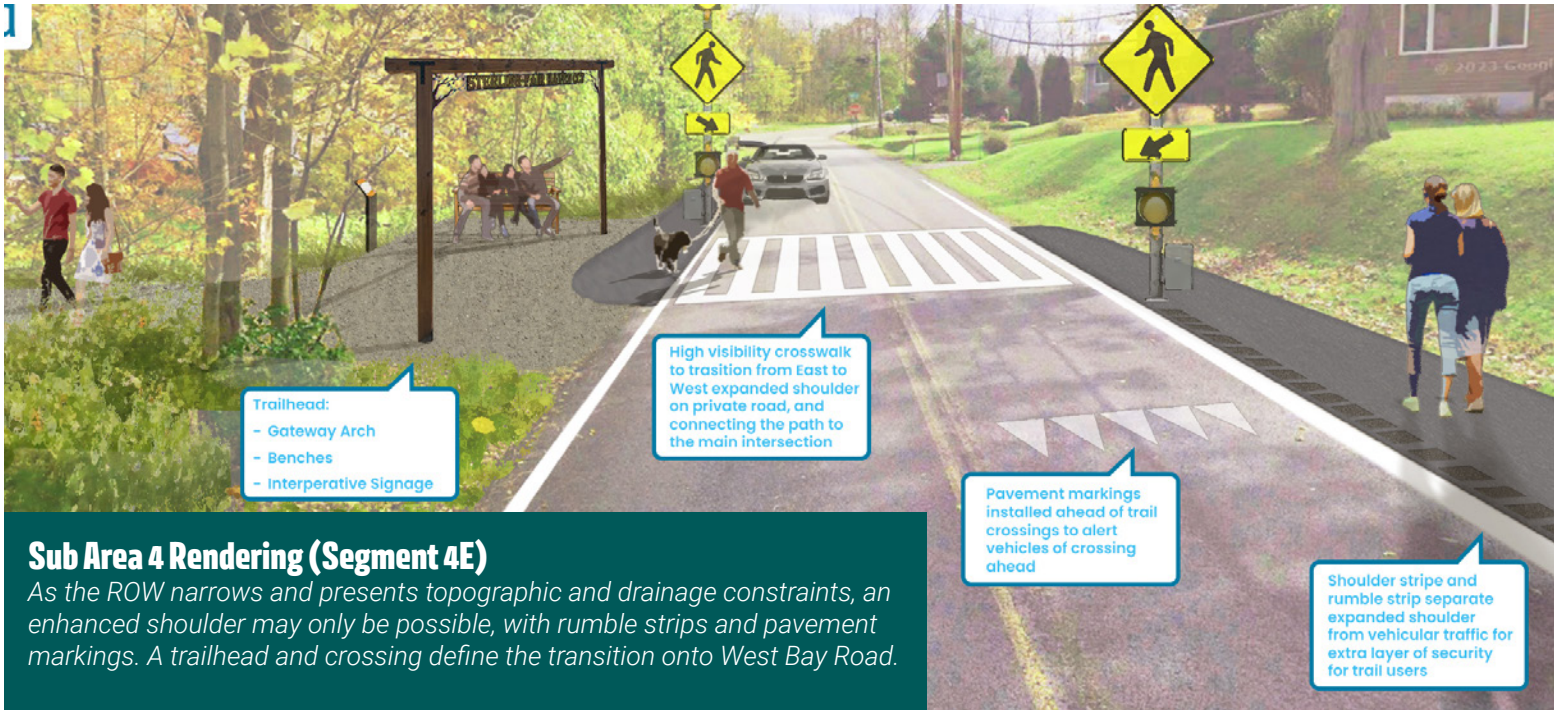
Design Goal Ranking

Key Map



Sub Area 4 Rendering (Segment 4E)

With a wide ROW, this segment could include a separated sidepath on the south side of West Bay Road with plantings for shade, habitat, and traffic calming.



Sub Area 4 Rendering (Segment 4E)

As the ROW narrows and presents topographic and drainage constraints, an enhanced shoulder may only be possible, with rumble strips and pavement markings. A trailhead and crossing define the transition onto West Bay Road.

Nature Play

Pollinator Parkway

Seating using Local Materials

PRELIMINARY TRAIL PLAN CONCEPT

The preliminary trail plan concept was developed based on stakeholder and public input, feasibility, and design goal ranking of the trail segments explored. Shared parking opportunities at existing parking lots, potential trailhead locations, and essential wayfinding locations were added to the plan.

Sub Area 1

In Sub Area 1, the CCT is an off-road trail along West Barrier Bar Park, which would connect to and utilize existing roadways at Fairpoint Campground. From there, the trail would either continue as an off-road facility on private property and meet West Bay Road north of the existing drive, or it would continue along West Bay Road as an enhanced shoulder with buffering. Coordination and agreements with three landowners would be required for implementation of 1B, with a potential barrier to screen the trail from adjacent properties, and with 11 landowners for implementation of 1C.

Sub Area 2

In Sub Area 2, the trail transitions to a separated sidepath with flexible delineators and buffer pavement striping along the west side of West Bay Road, meeting the existing off-road CCT. There may be minor enhancements to stabilize the trail surfacing along the existing segment.

From there, the existing CCT would be extended to connect with an elevated boardwalk north of the bridge, which would provide a separated facility for pedestrians and bicyclists, and minimize impacts to the existing wetland.

Where the boardwalk ends, the trail would transition from off-road to a separated sidepath in the ROW at the sewer lift station building. The trail would cross Ingersoll Drive, with a potential spur along the Drive as a shared-use roadway. At Ingersoll Road, the trail crosses from the west side of West Bay Road to the east side, entering Sub Area 3. Coordination and agreements with one landowner is required for implementation.

Sub Area 3

In Sub Area 3, the CCT is an off-road trail in the ROW requiring minor relocations of utility poles and potential minor modifications to roadside swales to accommodate a consistent width of at least 8’ to meet minimum shared-use standards. Within this section, the trail connects to the existing CCT trailhead, and spurs to an off-road trail that follows the south side of Ingersoll Drive, and transitions to a shared-use roadway once the ROW narrows. The CCT in this Sub Area is within the ROW, and does not require landowner agreements.

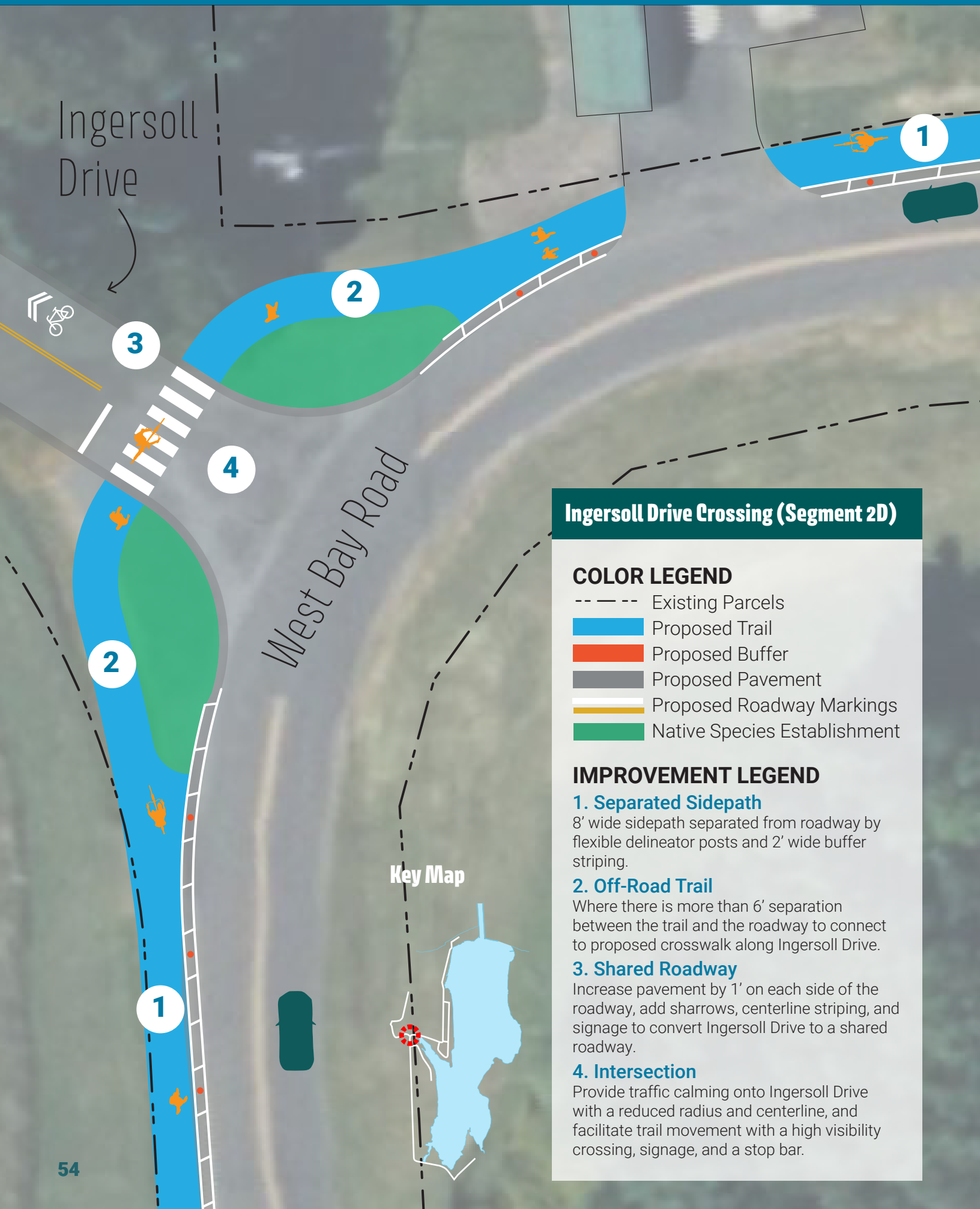
Sub Area 4

In the southern section, or Sub Area 4, the CCT continues east and north of West Bay Road as an off-road trail. Over Turtle Cove, the trail becomes an elevated boardwalk. East of Smith Road, the CCT crosses to the south side of West Bay Road at Anchor Marina, due to constraints in the ROW east of this area.

The trail continues as an off-road trail, and transitions to an enhanced paved shoulder near the bend, where there are significant grade changes and constraints in the ROW. North of 104A, the trail crosses to the east side of West Bay Road to avoid safety and security concerns at the intersection of West Bay Road and Route 104A.

East of the crossing, an off-road trail segment would connect with existing sidewalk to the west of Eldredge Avenue. Coordination with NYSDOT to extend the sidewalk to West Bay Road and agreements with three landowners are required for implementation.


Legend
Water
Parcels
Off-Road Trail on Private Property
Off-Road Trail in Right-of-Way
Sidepath in Right-of-Way
Enhanced Paved Shoulder
Shared Roadway
NYSDOT Sidewalk Project
Elevated Trail
Crossing
Paddle Points
Community Destination
Trailhead
Parking
Wayfinding
Map 14. Preliminary Trail Plan Concept
0
750
1,500
3,000
Feet
West Barrier Bar Park
Fairpoint Campground
Fairpoint Marina
Lake Ontario
Blind Sodus Bay
Little Sodus Bay
1A
1B
1C
2A
2B
2C
2D
2E
3A
3B
4A
4B
4C
4D
4E
4F
4G
WEST BAY RD
HADCOCK DR
PATTY RD
INGERSOLL DR
Meadow Cove
METZGER RD
BLIND SODUS BAY RD
Colloca Winery
INGERSOLL RD
SCHAFFER RD
Fair Haven Yacht Club
Turtle Cove Resort & Marina
WEST SIDE DR
KING ST
Bayside Marina
Turtle Cove
Anchor Marina
SMITH RD
LANSING ST
ELDREDGE AVE
COTTAGE ST
VICTORY ST
WILCOX ST
AVERY ST
PARSONAGE ST
MAIN ST
PLATT ST
S LAKE ST
STAFFORD ST
MEADE ST
CHURCH ST
FANCHER AVE
S RICHMOND ST
CROSS ST
FOURTH ST
WILDWOOD DR
CAYUGA ST
ONTARIO ST
SEVENTH ST
LAKE ST
TENTH ST
POPLAR ST
TWELFTH ST
LAKE ST EXTENSION
Cato-Fair Haven Trail
FAIR HAVEN RD
Note: Implementation of trail segments on private property will require coordination with landowners for trail access through agreements or easements. Trail implementation will not involve eminent domain.



Ingersoll Drive Crossing (Segment 2D)

COLOR LEGEND

- Existing Parcels
- Proposed Trail
- Proposed Buffer
- Proposed Pavement
- Proposed Roadway Markings
- Native Species Establishment

IMPROVEMENT LEGEND

1. Separated Sidepath
8' wide sidepath separated from roadway by flexible delineator posts and 2' wide buffer striping.

2. Off-Road Trail
Where there is more than 6' separation between the trail and the roadway to connect to proposed crosswalk along Ingersoll Drive.

3. Shared Roadway
Increase pavement by 1' on each side of the roadway, add sharrows, centerline striping, and signage to convert Ingersoll Drive to a shared roadway.

4. Intersection
Provide traffic calming onto Ingersoll Drive with a reduced radius and centerline, and facilitate trail movement with a high visibility crossing, signage, and a stop bar.

Ingersoll Road Crossing (Segment 2D & 3A)

COLOR LEGEND

- Existing Parcels
- Proposed Trail
- Proposed Buffer
- Proposed Pavement
- Proposed Roadway Markings
- Native Species Establishment

IMPROVEMENT LEGEND

1. Separated Sidepath
8' wide typical sidepath separated from the roadway by flexible delineator posts and 2' wide buffer striping. Will require coordination with landowner.

2. Intersection
Provide traffic calming and reduce crossing distance by tightening the southern turning radius.

3. Off-Road Trail with Enhanced Swale
10' wide off-road trail installed 6' from the road edge, accompanied by enhancements to the existing swale with salt-resistant, low maintenance, and drought tolerant vegetation.

4. New Crossing
Connect the CCT across West Bay Road with a high visibility crossing, incorporating ladder crosswalk markings, rapid rectangular flashing beacons (RRFBs), signage, and "shark teeth" markings.

5. Off-Road Trail
8' wide trail placed along the edge of swale and ROW along the east side of West Bay Road, maintaining at least 6' separation from the roadway.

Crossing East of Smith Road (Segment 4D)

COLOR LEGEND

- Existing Parcels
- Proposed Trail
- Proposed Pavement
- Proposed Roadway Markings
- Native Species Establishment

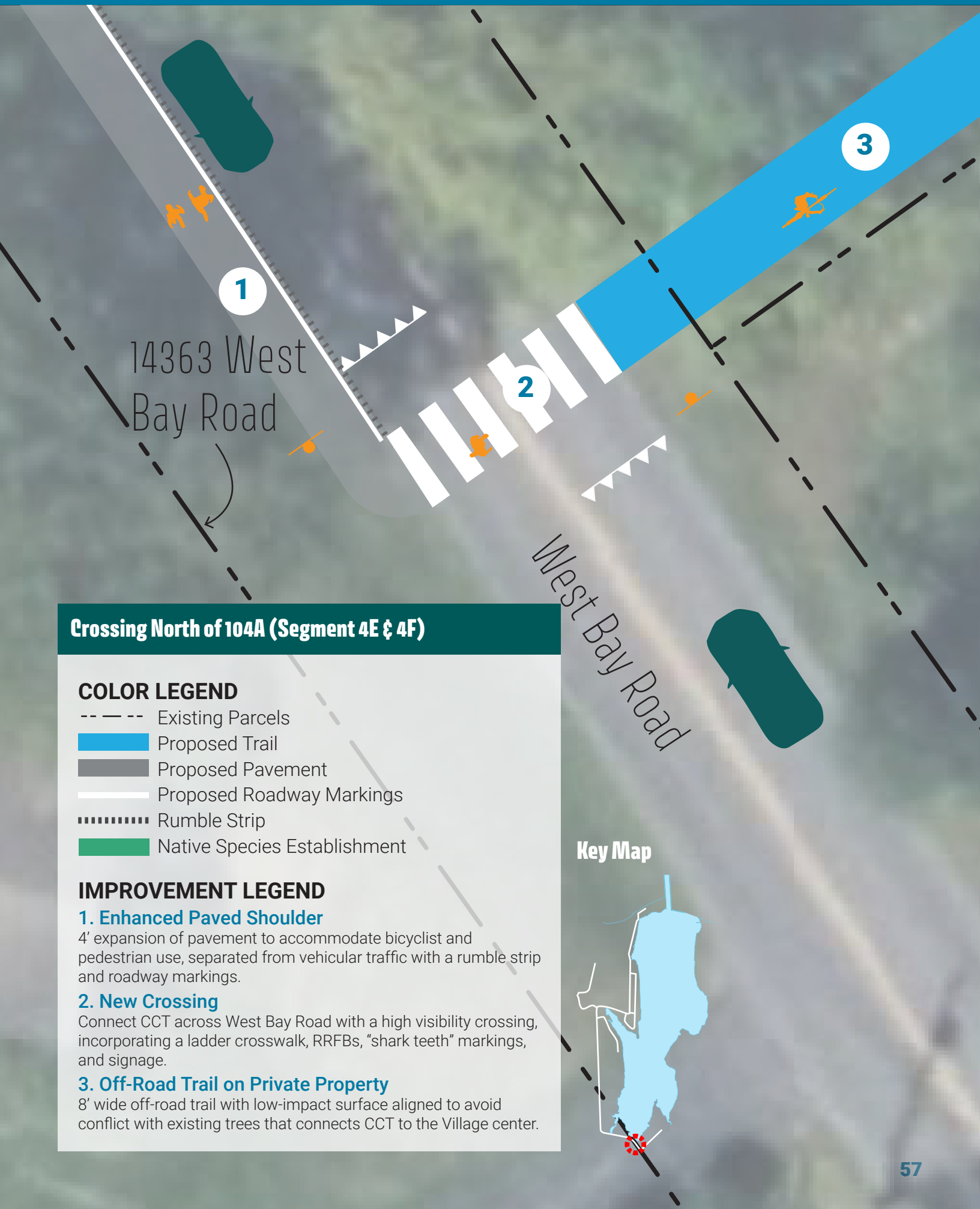
IMPROVEMENT LEGEND

1. Off-Road Trail on Private Property
8' wide off-road trail minimal impact trail placed between existing rows of trees to be coordinated with landowners due to constraints in the width and drainage in ROW.

2. New Crossing
Connect CCT across West Bay Road with a high visibility crossing, incorporating a ladder crosswalk, RRFBs, "shark teeth" markings, and signage.

3. Off-Road Trail with Planted Buffer
8' wide trail with the establishment of native plant species buffer. Buffer to be accommodated by road pavement reduction on West Bay Road.

Key Map



Crossing North of 104A (Segment 4E & 4F)

COLOR LEGEND

- Existing Parcels
- Proposed Trail
- Proposed Pavement
- Proposed Roadway Markings
- Rumble Strip
- Native Species Establishment

IMPROVEMENT LEGEND

1. Enhanced Paved Shoulder
4' expansion of pavement to accommodate bicyclist and pedestrian use, separated from vehicular traffic with a rumble strip and roadway markings.

2. New Crossing
Connect CCT across West Bay Road with a high visibility crossing, incorporating a ladder crosswalk, RRFBs, "shark teeth" markings, and signage.

3. Off-Road Trail on Private Property
8' wide off-road trail with low-impact surface aligned to avoid conflict with existing trees that connects CCT to the Village center.

Key Map

Drone image kindly provided by onePhoto Photography.

BRANDING, WAYFINDING & SIGNAGE

This chapter includes the branding, wayfinding, and signage that was developed for the Sterling-Fair Haven CCT. The topics addressed in this chapter include:

- General description;
- Wayfinding and Signage;
- Messaging;
- and Proposed Signage Design.

THE CCT BRAND

The Sterling-Fair Haven Community Connection Trail brand embodies an artistic approach through implied shapes and textures, evoking a sense of exploration and community interconnectedness. It is essentially an abstract composition reminiscent of winding pathways through nature.

The textures and fluid movement within the brand create a feeling of access and inclusion. The airy color palette, inspired by nature and featuring a variety of blues and greens, allows the natural essence to shine through while maintaining bold contrast for accessibility.

Whether the brand is applied to signage, promotional materials, or communicating with an audience, it will create uniformity for the trail system. See Appendix D for CCT Branding.

Wayfinding Goals

Orient

the user to where they are along the trail

Direct

the user along the trail to their desired location

Inform

the user of rules, regulations, natural systems, and critical environmental resources

Wayfinding & Signage

Wayfinding enables people to navigate through an environment with the use of effective signage and visual cues. An effective wayfinding system along the trail will entice residents, seasonal and regional visitors to explore beyond their traditional comfort zone.

The CCT brand has been extended into several signage types that provide informative, functional, and identifiable system of wayfinding. These include brand colors and the project logo displayed on a variety of sign types in potential templates. All signs include the project website URL and the QR code to visit the project website.

However, wayfinding is not limited to signage, but can also include visual cues from material consistency, landscape, and landmarks to help trail users navigate and orient themselves, creating an enjoyable and informative experience.

The following signs have been developed for the CCT:

- Trailhead kiosk
- Trail Use Sign
- Small Interpretive Sign
- Trail Marker

Prior to the installation of these features, specific surveys should be conducted to confirm property ownership, the location of above and underground utilities, and any other conflicts. Coordination with applicable regulatory agencies should occur to obtain the necessary permits and approvals prior to design, fabrication, and installation.

Messaging

The tagline for the CCT is:

Linking People, Recreation, & Nature

Therefore, wayfinding and signage material revolves around the community, around trail user groups, and learning about the natural systems that surround the trail.

Signs also include icons, which are centered around intended trail usage and potential activities, including:

- Hiking
- Fishing
- Bird Watching
- Leaf Watching
- Camping
- Paddling
- Bicycling
- Walking

TRAILHEAD KIOSK

The trailhead kiosk provides a range of information about the trail, and should be located at major decision points along the trail.

On one side of the kiosk is a welcome banner with the CCT logo and a drone image purchased from a local photographer at OnePhoto. On another side of the kiosk is a description of each of the types of activities along the trail and the corresponding icons. On the last side of the kiosk is a general map of the trail locating the activity types and providing a description of the trail purpose and intent. These kiosks should be used at major decision points along the trail, and where trailheads may be established. Each panel displays the project URL and scanable QR code.

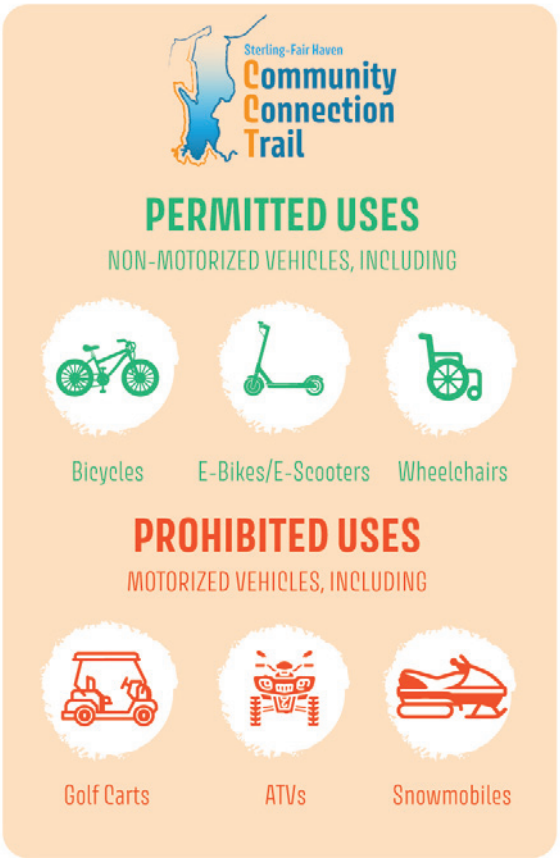
The trailhead kiosk concept displayed below is on a three-sided panel manufactured by Fossil. Each panel is 30” width x 80” length. The kiosk should be mounted on a concrete base per the manufacturer’s specifications.

TRAIL USE SIGN

The trail use sign identifies permitted and prohibited use of the trail, including user group types, as well as identifies areas that are ADA compliant.

The marker displayed below is manufactured by Pannier Graphics, in the single post upright model, as 12” in width x 24” in height. Follow manufacturer’s specifications for installation of the sign post.

The template to the right indicates an example for how the permitted versus prohibited uses may be displayed on the sign, including the project logo, a description, icons, and labels.



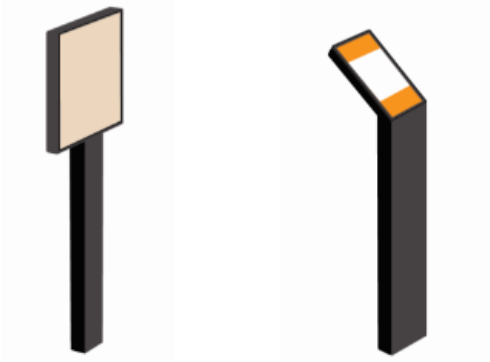
TRAIL MARKER

The trail marker is a flexible sign that can be used to identify native species or provide wayfinding along the trail. The trail marker version is intended to be provided at regular intervals along the trail, a minimum of a quarter mile apart.

The marker displayed below is manufactured by Pannier Graphics, in the plant identifier model, as 5 9/16” width x 11 7/16” height. Follow manufacturer’s specifications for installation of the sign post.

The first template is to support a specific marking of a feature of interest, and suggests potential locations for the project tagline, feature name, graphic, description, icon, and CCT logo.

Trail Use Sign & Marker



The second template suggests layout for the trail marker, which includes the CCT in bold, defined lettering, a QR code, and project website URL.

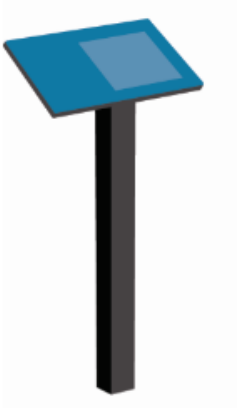
SMALL INTERPRETIVE SIGN

The small interpretive sign provides interpretive information as it relates to the trail, the bay, and the community. The sign should be placed at key locations along the trail where the feature is visible, and related to the information. This could include locations, such as Turtle Cove or Meadow Cove, or improvements, such as Green Infrastructure or Native Species Establishment.

The interpretive sign displayed below is manufactured by Pannier Graphics, and can be applied on a single post as a frameless model, 24" in width x 18" in length, or could be applied to the boardwalk railings. If posted, follow the manufacturer's specifications for installation.

The template suggests potential locations for title, description, project logo, graphic, project website URL and QR code.

Interpretive Sign



Drone image kindly provided by onePhoto Photography.

IMPLEMENTATION

This chapter establishes an action plan for implementing the Sterling-Fair Haven Community Connection Trail and its complementary system of trail spurs. The topics addressed in this chapter include:

- Design considerations;
- Cost estimates for each of the priority segments;
- Summary of potential funding sources;
- Next steps and required future studies.

DESIGN CONSIDERATIONS

The Sterling-Fair Haven Community Connection Trail is important to the local residents to facilitate a safe environment for walking and bicycling, which promotes community connectivity, quality of life, and public health; for regional trail users to expand the regional trail network in Central New York to Lake Ontario; and for the tourism-based economy that Fair Haven relies on each summer season. With its proximity to Little Sodus Bay and intersection with sensitive habitat areas, it will be important that the trail also consider environmental impacts and ecological contributions.

This feasibility study and conceptual plan for the recommended trail alignment considers structural improvements, trail surface treatments, safety features, road crossings, connectivity to existing resources and destinations, and possible environmental enhancements. The plan evaluates opportunities and develops strategies for minimizing/mitigating potential conflicts between trail users, motorists, property owners and others that would cross the trail to access adjacent properties.

Altogether, the CCT must consider and balance the following holistic objectives:

- Applying a vision for planning and design of accessible trail systems in sensitive habitats;
- Using planning strategies that focus on ecological conservation, visitor safety and universal accessibility;
- Considering the needs of all trail user groups in all seasons in order to promote accessibility and safety;
- Assessing concept alternatives using defensible evaluation criteria that includes factors such as construction costs, maintenance requirements, sustainability, environmental impacts and aesthetics;
- Applying CPTED principles to enhance the actual and perceived safety and security along the trail system, and to reduce vandalism
- Considering construction methods and materials that are cost-effective, low-impact, highly durable, and easily maintainable over the long term.
- The type of use, amount of use and user behavior all combine with natural factors to determine trail impacts and long-term sustainability.

Trail Composition

The CCT will prioritize low-impact, accessible solutions that provide connectivity to community assets and are maintainable over the long term. Sustainable trails are defined by the US Forest Service as, **trails having a tread that will not be easily eroded by water and use, will not affect water quality or the natural ecosystem, meet the needs of the intended users and provide a positive user experience, and that do no harm to the natural environment.** Sustainable trails can be used by a variety of non-motorized users including hikers, trail runners, off-road cyclists, equestrians, and cross-country skiers. Construction methods and surfacing may vary along different segments, especially

with consideration of corridor constraints, pedestrian preferences, bicyclist preferences, stability in areas of steep topography, stormwater management, water crossings, cost considerations, and/or material availability. There are several types of trail surface treatments that could be applied to the CCT, including asphalt, recycled asphalt product, stone dust, stabilized stone dust, and helical pile. Throughout the corridor, it will be important to strike a balance between.

Trail Usage

The CCT recognizes the importance of eliminating barriers to walking and bicycling and being sensitive to the adjacent uses of the trail.

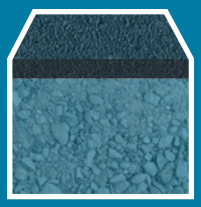
The CCT supports non-motorized use. However, the study references the latest research on the operational characteristics of **emerging trail user groups.** With the development of new technologies and changing demographics, devices such as e-bikes, scooters, adult tricycles, and recumbent bicycles are becoming more common and may become allowed on the CCT. Additionally, the American population is aging, and the number of people using mobility assistive devices (such as manual wheelchairs, powered wheelchairs, and powered scooters) is increasing. Planning and conceptual design aims for an inclusive and barrier-free facility that will minimize any potential conflicts between user groups and allow for use by residents of all mobility levels.

Trail Experience

The CCT **can be more than a linear trail that allows travel from point A to point B**, and the network needs to be adaptive to expanding over time. By considering both the short term and long term phasing of a trail system, and identifying potential systems of loops and spurs that branch off to multiple areas of the corridor, the trail system can provide more

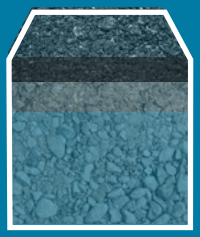
Trail Surface Options

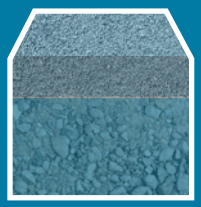
Trail Surface	Permeability	Stability on Slope	Install Cost	Maintenance Needs
Asphalt	None	High	$$$$	Low
Recycled Asphalt Product (RAP)	Low	High	$	Moderate
Stone Dust	High	Low	$$	High
Stabilized Stone Dust	Some	Medium	$$$	Moderate
Helical Pile with Composite Decking	Some	High	$$$$$	Low



ASPHALT TRAIL
Asphalt trail would have a higher environmental impact and installation cost, but has high longevity and low maintenance.

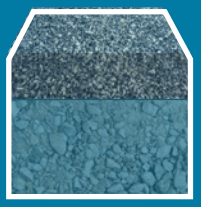
RAP TRAIL
Recycled asphalt pavement is the lowest cost, since the material can be available from local projects, is stable, and has medium maintenance needs.

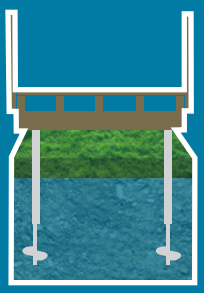




STONE DUST TRAIL
Stone dust has the least environmental impact and low installation cost, but high maintenance needs due to weeds and erosion, and may de-stabilize on steep slopes.

STABILIZED STONE DUST TRAIL
Stabilized stone dust is more stable on steeper slopes and provides a more even surface for ADA access than stone dust, but it is more expensive, and still requires maintenance.





HELICAL PILE & COMPOSITE TRAIL
Helical pile trail can minimize impacts in environmentally sensitive areas without disturbing soil and grade, and is relatively low maintenance. Openings between deck boards allows some permeability. However, it is the most expensive option of the five trail surface options.

diverse opportunities for visitors to observe and interact with natural environments and local culture.

Design considerations for the alignment of a trail include avoiding potential conflict areas, including utilities, incorporating minimal crossing points, and aligning necessary crossing points with existing intersections or high visibility areas, construction materials, edge conditions, wayfinding, and access points.

The quality of visitor experience will be enhanced by identifying separated trail segments, consistently supporting clear sight lines, and sequencing the trail with scenic views of Little Sodus Bay and Lake Ontario.

One metric for success will be more visitors and more use of the system. Heavier use of popular trails can increase impacts and maintenance requirements, especially on natural surface trails. Trails that are planned, designed and constructed to a high level of quality will be more sustainable over the long term.

Safety & Security

The CCT needs to be a good neighbor, particularly to nearby residential properties. Portions of the corridor are in close proximity to residential development. Design alternatives aim to strike a balance between maintaining privacy and providing trail access for neighbors. Residents close to potential trail corridors are often concerned with impacts to property values, noise, trespassing and crime. This study references the latest national data on the impacts of multi-use trail developments on neighboring properties.

Conceptual design alternatives strike a balance between providing Solitude and Security for trail users. Some segments of the trail corridor will align with West Bay Road, while other segments may spur away from the roadway into naturalized, forested environments. The opportunity to be alone in natural surroundings is an opportunity for many people to enjoy the peace and quiet of nature. Other visitors may be concerned with personal security in isolated areas, and may choose the route closest to West Bay Road for continuous visibility and security. Personal security and planning for emergency response are important elements of this feasibility study.

Therefore, the trail will apply Crime Prevention through Environmental Design (CPTED) strategies to support this trail plan, enhancing both perceived and actual personal security for trail users. The four main principles of CPTED have been integrated into concept planning:

- Natural Surveillance
- Territoriality
- Access Control
- Maintenance and Management.

Sustainability

Ecosystem preservation and restoration is an important aspect of this project. The CCT offers opportunities to enhance the landscape's ecosystem services, embed resiliency, and connect trail users to their distinctive natural and cultural environment. Therefore, it is recommended that in constructing and maintaining the trail, invasive species are managed and native species are established to support local natural systems, enhance four-season visual quality, improve climate resilience, and provide robust buffers and edge conditions. Collateral benefits may include:

- Biodiversity - By incorporating a wide variety of plant species, the trail can have a positive impact on local biodiversity. Biodiverse ecosystems are more resilient and more able to adapt to climate change.
- Pollinator Benefits - Pollinator species are crucial for fertilizing our food crops and

sustaining the plant populations around us. GI projects with a wide variety of plants can help sustain our pollinators by providing habitat and supplying consistent sources of food throughout the year

•Air Quality - Plants purify the air, removing pollutants such as carbon monoxide, ozone, dust and soot

•Carbon Sequestration – Native Plants and soils sequester carbon which can reduce greenhouse gas emissions

•Heat Island Mitigation – Natural systems provide cooling benefits including transpiration and shade

•Pedestrian Environments - Trail loops in urban centers will enhance walkability

It is also recommended to use locally available, reclaimed materials to reduce transportation cost, materials cost, and carbon footprint. This includes nature play stations, utilizing fallen trunks and tree branches and recycled asphalt product, mentioned before, which can be sourced from a local road project.

Citizen Science

The CCT can become a biodiversity corridor that provides extraordinary educational and stewardship opportunities. Citizen science is scientific research conducted with participation from the general public, conducting scientific experiments, collecting and analyzing data, interpreting results, making new discoveries, developing technologies and applications, and solving complex problems.

Citizen science is accomplished through Crowdsourcing, in which organizations submit an open call for voluntary assistance from a large group of individuals for online, distributed problem solving. Crowdsourcing applications can support both field data collection and location-based public engagement. The Federal Crowdsourcing and Citizen Science Catalog currently lists over 500 active citizen science projects. https://www.citizenscience.gov/#

Volunteers support a range of projects that do everything from improving our country's weather forecasts to protecting and managing sensitive habitats to charting the seafloor. On the CCT, citizen science can engage the public in climate action, biodiversity, invasive species management, and overall build stewardship of this community resource that supports the long-term sustainability of the corridor. Citizen science projects can also attract more attention to the corridor, involving volunteer groups, local school districts, and regional colleges and universities.

An abundance of mobile apps makes participation in citizen science projects easier than ever and allows data entry in the field.

One popular citizen science app is iNaturalist, a joint initiative of the National Geographic Society and the California Academy of Sciences. iNaturalist connects people to nature and creates a social network of naturalists, citizen scientists, and biologists built on the concept of mapping and sharing observations of biodiversity across the globe. iNaturalist users have contributed over 115,000,000 observations of plants, animals, fungi, and other organisms worldwide, and around 245,700 users.

OPERATIONS & MAINTENANCE

Overview

Sufficient operation and maintenance of the CCT is important in order to provide a safe and comfortable trail environment that continues to attract users. The trail is envisioned to be at least 8 feet typical in width, which should accommodate any necessary maintenance vehicle access. Cayuga County will need to develop maintenance agreements with the relevant agency or organization for any segments that are to be owned, operated, and/or maintained by outside parties. These should be developed as early as possible during the trail development process to ensure that its provisions will be in place prior to completion of the trail.

Operations

The operation of a trail consists of the day-to-day management of trail use. This includes, but is not limited to:

- Coordinating with partner agencies and adjacent property owners
- Providing up-to-date information and guidance for trail users
- Facilitating community engagement and special events
- Organizing volunteer trail programs and projects
- Marketing and branding

Cayuga County is anticipated to be the sole operator of the CCT.

Maintenance

The maintenance of a trail includes keeping the trail in a safe, accessible condition. This includes efforts ranging from routine maintenance, such as mowing or brush removal, to larger scale repairs such as replacement of damaged signs or trail resurfacing. The ongoing costs associated with maintenance should be considered during the funding process. Routine maintenance activities include, but are not limited to:

- Brush removal
- Surface repairs
- Sign and pavement marking replacement
- Drainage improvements
- Snow clearance
- Mowing
- Map/signage updates
- Garbage clean up
- Planting

It is anticipated that Cayuga County will maintain the majority of the CCT. However, there may be opportunities for partnerships with local municipalities, other agencies, and volunteer organizations for certain maintenance activities and segments.

NYSDOT

A portion of the proposed CCT falls within NYSDOT right of way. It is anticipated that NYSDOT will continue to own those areas in which the trail is to be constructed, however it is not anticipated that NYSDOT will operate or maintain the trail. NYSDOT access may be necessary for routine operations and maintenance of Route 104A.

Municipal Partnerships

In some instances, the proposed CCT is located along Wayne County Town of Wolcott, Cayuga County Town of Sterling or Fair Haven owned or operated roads. It may be appropriate for Cayuga County to develop maintenance agreements with the local municipality in these instances.

Volunteer Organizations

Volunteers play a critical role in the success of many trail systems. The Sterling-Fair Haven Community Connection Trail is a 501(c)(3) not-for-profit membership organization.

They have been a critical partner in sparking this trail study in conjunction with Cayuga County, and their members have assisted with a variety of maintenance activities, including trail installation, trail clearance, and trail signage and markers.

Additional local trail volunteers are often helpful in assisting with invasive species management and removal, tree plantings, trail pickup, and other tasks. Such volunteers may also play an integral role in the citizen science opportunities on page 69.

A Rails to Trails Conservancy report surveyed 200 trail managers regarding maintenance practices and costs. The report shows that on average, annual maintenance costs in 2014 were

$1,971/mile

for asphalt surfaced trails

and

$1,006/mile

for non asphalt surfaced trails.

COST ESTIMATES

Overview

Cost estimates for design and construction were developed for each segment of the proposed trail and are presented by subarea and segment.

"Soft" Costs

The planning-level cost estimates presented in this study were prepared by a licensed landscape architect and are based on standard construction estimating methods. In addition to estimating the cost of materials and labor to install the proposed trail facilities, each cost estimate also includes "soft" costs associated with construction, such as:

- Mobilization (estimated as 4% of the total cost of labor and materials)
- Survey operations (estimated as 2% of the total cost of labor and materials)
- Erosion and sediment control (estimated as 0.5% of the total cost of labor and materials)
- General Administration (estimated as 5% of the total cost of labor and materials)
- Design contingency (estimated as 25% of the total cost of labor and materials)
- Construction contingency (estimated as 20% of the total cost of labor and materials)
- Construction inspection contingency (estimated as 12% of the total cost of labor and materials)

This is a feasibility study and there are still several unknowns related to the design and construction of the proposed trail facilities. Therefore, high design and construction contingencies were applied to all of the estimates to account for these unknowns and ensure sufficient funding is sought and secured.

Assumptions

The following assumptions apply to the cost estimates provided in this study:

- All costs are estimated based on concept graphics, aerial imagery, and limited survey information.
- Any necessary permit fees are not included.
- Utility improvements and/or relocations are estimated based on field survey.
- Property acquisitions or easements, as indicated, are not included.

What's Included

The following features are included in the cost estimates:

- General site preparation and restoration, such as site clearing, grubbing, lawn restoration, earthwork, and unclassified excavation
- Trail facility installation, including subbase, trail surfacing, markings, and boardwalks/bridges
- Furnishings, such as wayfinding signage, interpretive signage, bike racks, benches, and lighting
- Landscaping, including plantings and curbing

PLANNING LEVEL COST ESTIMATE: TRAIL SEGMENT

PROJECT SUB-AREA	ESTIMATED COST
Sub-Area 1	$3,370,000
Sub-Area 2	$1,720,000
Sub-Area 3	$990,000
Sub-Area 4	$1,780,000
Total	**$7,860,000**

PLANNING LEVEL COST ESTIMATE: SUB AREA 1

SEGMENT	LENGTH	ESTIMATED COST
Segment 1A	400 LF X 8 FT WIDE SIDEPATH	$250,000
Segment 1B	18,000 LF X 10 FT WIDE OFF-ROAD TRAIL	$2,990,000
Segment 1C	1,300 LF x 4' WIDE ENHANCED SHOULDER WITH BUFFER	$130,000
Total	**19,700 LF**	**$3,370,000**

PLANNING LEVEL COST ESTIMATE: SUB AREA 2

SEGMENT	LENGTH	ESTIMATED COST
Segment 2A	2,100 LF X 10 FT WIDE SIDEPATH	$460,000
Segment 2B	1,800 LF X 10 FT WIDE OFF-ROAD TRAIL	$280,000
Segment 2C	200 LF X 10 FT WIDE BOARDWALK	$500,000
Segment 2D	1,000 LF X 10 FT WIDE SIDEPATH	$270,000
Segment 2E	7,500 LF X 2 FT WIDE PVMT EXTENSION FOR SHARED USE LANES	$210,000
Total	**12,600 LF**	**$1,720,000**

PLANNING LEVEL COST ESTIMATE: SUB AREA 3

SEGMENT	LENGTH	ESTIMATED COST
Segment 3A	4,800 LF X 2' WIDE PVMT EXTENSION FOR SHARED USE LANES	$140,000
Segment 3B	4,800 LF X 8' WIDE OFF-ROAD TRAIL	$850,000
Total	**9,600 LF**	**$990,000**

PLANNING LEVEL COST ESTIMATE: SUB AREA 4

SEGMENT	LENGTH	ESTIMATED COST
Segment 4A	800 LF X 8 FT WIDE OFF-ROAD TRAIL	$110,000
Segment 4B	470 LF X 8 FT WIDE OFF-ROAD TRAIL	$60,000
Segment 4C	90 LF X 10 FT WIDE BOARDWALK	$200,000
Segment 4D	1,000 LF X 8' WIDE OFF-ROAD TRAIL	$820,000
Segment 4E	450 LF X 4' WIDE ENHANCED SHOULDER	$230,000
Segment 4F	600 LF X 8 FT WIDE OFF-ROAD TRAIL	$110,000
Segment 4G	530 LF x 6 FT WIDE SIDEWALK	$250,000
Total	**3,410 LF**	**$1,780,000**

PRIORITY PROJECTS

Overview

There are several segments that have been included in this report which establish a continuous trail from the Village of Fair Haven to West Barrier Bar Park, creating the CCT. To guide the implementation of the trail, projects have been sorted based on the following set of evaluation criteria:

- Public support: the amount of votes that were collected during public meeting #1, ability to achieve the desired outcomes that were mentioned by stakeholders during interviews, and the amount of support voiced by the PAC
- Land control: whether or not the segment is in the public right of way or crosses private properties
- Construction cost: implementation cost of the trail segment based on cost estimates and weighed by length of segment, plus overall constructibility
- Safety improvement: addresses safety concerns such as high speeds, visibility, and crossings with traffic calming, crosswalk facilities, and separation from traffic
- Connectivity: provides an essential connection to a community destination or neighborhood, and provides a route that is improved from the current condition

Meets evaluation criteria

Somewhat meets evaluation criteria

Does not meet evaluation criteria

Using this evaluation, projects were categorized as high priority, medium priority, and low priority. While each segment has been classified, the intent is to implement the trails in contiguous groups of segments until the system is completed.

- **High priority** projects are highly feasible projects. They are favored by the public, within the public right of way, have a low to moderate construction cost, reduce safety issues and potential conflicts within the corridor, and/or are essential to provide critical connections within the corridor to access the CCT or provide a separated off-road trail.
- **Medium priority** projects are feasible projects with some constraints. They are favored by the public, they may be in the public right of way or on a landowner property that has been engaged in the project, has a low to high construction cost, may reduce safety concerns, and provide connections within the corridor through separated sidepath or other protected facility.
- **Low priority** projects are projects with significant feasibility challenges, cross multiple private properties, have a low to high construction cost, may or may not relate to improving safety, and complete a continuous trail, but may be a limited improvement to the existing facility. For example, they may not be on a preferred separated or off-road facility, or may be an improvement to an existing trail segment.

HIGH PRIORITY PROJECTS

SEG.	PUBLIC SUPPORT	LAND CONTROL	CONSTRUCTION COST	SAFETY IMPROV.	CONNECTIVITY
2C					
2D					
3B					
4A					
4C					
4D					
4E					
4F					
4G					

MEDIUM PRIORITY PROJECTS

1B					
1C					
2A					
4B					

LOW PRIORITY PROJECTS

1A					
2B					
2E					
3A					

NEXT STEPS

Step 1: Landowner Outreach

Several of the proposed trail alignments within this study are dependent on landowner cooperation and agreements for property owned by various private entities. It is essential to establish agreements that are acceptable to both landowners and the County before moving forward in the project and applying for grant funding so that there is a clear path ahead for how the CCT can be implemented as a continuous trail system. In cases where certain landowners may be opposed to the preliminary trail plan concept, there may be a need to revisit other options that were included in the trail segment exploration phase.

PROTECTION OF PRIVATE PROPERTY FOR PUBLIC TRAIL USAGE

Every state has a recreational use law which protects landowners from liability when others are using the easement for recreational purposes. In New York State, the Recreational Use Statue (General Obligations Law) was established to encourage landowners to open up land to the public for certain specific recreational uses, by indemnifying these landowners from liability. The Statue, "offers considerable protection to private (and in other cases public) landowners... its protection can be further enhanced with measures such as extending municipal insurance coverage to private land owners that allow trail access."

There are several options for enabling trail access, including verbal, written, and documented easements, however, several grant sources are dependent on site control, which the County would need through an easement to receive grant funding for project implementation. Easements have been granted in New York State with several trail programs, including the Champlain Area Trails, Hudson River Valley Greenway, and notably the Finger Lakes Trail.

CHAMPLAIN AREA TRAILS

Every year, Champlain Area Trails (CATS) works with private landowners to allow for trails on their properties. Many CATS are on private property through a revocable trail agreement, but they have also purchased properties to establish permanent trails.

https://www.champlainareatrails.com/

FINGER LAKES TRAIL

The Finger Lakes Trail (FLT) spans over 1,000 miles crossing 600+ private properties. Since its founding in 1962, it has never caused a lawsuit. Oral agreements and a handshake, written trail use agreement, or a trail easement have been used for FLT on private property.

Scan the QR codes to learn more!

https://fingerlakestrail.org/support-the-trail/

Hudson River Valley Greenway

The 275-mile Hudson River Greenway Trail System is voluntary, community-driven and dependent on partnerships with local landowners. To build relationships with landowners, they have published "A Community Trail Handbook for Landowners," linked below.

https://hudsongreenway.ny.gov/system/files/documents/2018/06/landownersguide.pdf

Step 2: Grant Funding Application

Once the preliminary trail concept plan has been accepted, the County can proceed with exploring grant funding to assist with implementation of the trail. A variety of funding sources can and should also be explored, as each trail segment has a unique set of opportunities and challenges. The tables below summarize potential federal and state funding sources.

Specifically, the New York State's Consolidated Funding Application (CFA) should be leveraged to implement the active transportation and green infrastructure recommendations in this study. The CFA is a streamlined resource where applicants can access multiple funding assistance programs made through state agencies. The availability of CFA funding and project types varies annually.

Furthermore, a ballot proposition for a $4.2 billion Bond Act was approved in November 2022 in New York State. This funding will help fund environmental and community projects that help protect water quality, help communities adapt to climate change, improve resiliency and create green jobs.

It should be noted that funding sources vary annually; therefore, project partners should monitor funding availability on an annual basis. Many funding sources also require site control by the owner.

Also, many of the listed funding sources require local match funding; therefore local funding should be evaluated and identified in annual operating budgets, as appropriate.

SUMMARY OF POTENTIAL FUNDING SOURCES

PROGRAM	DESCRIPTION	PROJECT TYPES	AGENCY	NOTES
Transportation Alternatives Program / Congestion and Air Quality Improvement Program (TAP/ CMAQ)	Supports bicycle, pedestrian, multi-use path, and non-motorized transportation- related projects. Projects must be related to surface transportation. The maximum award is $5 million.	Construction of pedestrian and bicycle facilities, recreational trails, and safe routes to schools, as well as community improvements, such as projects that reduce congestion and gas emissions.	This is a federally funded program, administered by NYSDOT.	Application timing varies year to year. Up to 80% of total project costs eligible, with 20% local share.
Consolidated Local Street and Highway Improvement Program (CHIPS)	Funds support the construction and repair of highways, bridges and highway railroad crossings, and other facilities not in the State highway system.	Funds can be used for resurfacing, shoulder improvements, new drainage systems, sidewalk improvements, traffic calming installations, and bus shelters.	Funding is administered through the NYSDOT.	Appropriations are defined annually. Would only be applicable to areas in which on-street facilities are proposed on local roads.

SUMMARY OF POTENTIAL FUNDING SOURCES

PROGRAM	DESCRIPTION	PROJECT TYPES	AGENCY	NOTES
Recreation Trails Program (RTP)	Provides funds to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Funded projects must be identified in, or further a specific goal of, the Statewide Comprehensive Outdoor Recreation Plan.	Funds the maintenance and restoration of existing trails, the purchase and lease of trail construction equipment, acquisition of easements, construction of new trails and assessments.	An assistance program of the U.S. DOT's Federal Highway Administration (FHWA). The RTP is administered by the Office of Parks, Recreation and Historic Preservation (OPRHP).	Funding is through the states' CFA process. Specific guidelines provided in association with each grant cycle.
Surface Transportation Block Grant program (STBG)	Provides flexible funding that may be used by states and localities to preserve and improve the conditions and performance on: any Federal-aid highway, bridge, and tunnel projects; any public road; pedestrian and bicycle infrastructure; and transit capital projects, including intercity bus terminals.	Funds can be used for transportation alternatives and recreational trail projects.	Funding is provided through the US Department of Transportation. Program is competitive at national level.	Available funding varies.
Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Discretionary Grants	Funds a range of planning and capital transportation improvement projects, with an emphasis on improving equity and sustainability in the nation's transportation system.	Funds capital transportation improvements, including: roads and bridges, public transportation, and intermodal projects. Pre-construction activities, such as design, are also eligible.	Funding is provided through the US Department of Transportation. Program is competitive at national level.	Available funding varies. In 2021, the maximum grant award is $25M and no more than $100M can be awarded to a state.
Environmental Protection Fund (EPF)	Funding for a range of planning and capital projects that protect the environment and enhance local communities.	Fundable projects cover a range of parks, open space, historic preservation and waterfront revitalization activities.	Multiple state agencies administer funding programs through the EPF, including NYSDOS, NYSDEC and OPRHP.	Funding is through the states' CFA process. Specific guidelines provided in association with each grant cycle.

SUMMARY OF POTENTIAL FUNDING SOURCES

PROGRAM	DESCRIPTION	PROJECT TYPES	AGENCY	NOTES
Green Innovation Grant Program (GIGP)	Provides grants on a competitive basis to projects that improve water quality and implement green infrastructure in New York State.	A range of green infrastructure-focused installation projects, including the installation of permeable pavements, bioretention and stormwater street trees.	Funded and overseen by the NYS Environmental Facilities Corporation (EFC).	Typically funded through the NYS CFA process. Up to 75% - 90% of total project costs.
Market New York	Promotes efforts that strengthen tourism in New York State, with an emphasis on projects that "create family memories through activities including but not limited to outdoor recreation, historic sites and museums, food and drink, festivals and the performing arts."	Eligible costs include acquisition or leasing of land, buildings, machinery and/or equipment; pre-development costs; remediation costs; accessibility services; purchase of equipment and/or event amenities; and new construction, renovation or leasehold improvements.	Funding is offered and administered through Empire State Development (ESD).	Funding is through the states' CFA process. Specific guidelines provided in association with each grant cycle.
Clean Water, Clean Air and Green Jobs Environmental Bond Act	A prioritized funding source for investments in environmental justice, climate change mitigation, shoreline restoration, flood resilience, water quality, open space land conservation, recreational resources, and jobs.	The Bond act authorizes $1.5B for Climate Change Mitigation, $1.1B for restoration and flood risk reduction, $650M for water quality improvement and resilient infrastructure, $650M for open space land conservation and recreation, and $300M for other projects	The NYS Department of Environmental Conservation is leading a working group with eight other state agencies to determine the exact structure of the office overseeing spending.	It is anticipated that a quarter of the total $4.2B allocated funding will be spent in the next five years.

Step 3: Detailed Survey, Fieldwork, & Traffic Studies

Limited fieldwork was conducted for this project to identify conflict points with utilities that presented themselves above ground, and was paired with mapping data that identified underground utility piping and networks. Once funds are available and landowner agreements are established, there will be a need to collect more detailed topographic survey, property boundary survey, and geotechnical investigations of the areas in which the trail is sited to learn more about

trail alignment elevations and slope, stormwater drainage, exact locations of property extents and the right of way, and sub-surface conditions, such as exact locations of pipes or soil conditions that may impact the structural design of the helical pier boardwalk structures.

Limited traffic studies have also been conducted for this project which create a basis for the need to improve safety and separate trail users from traffic along the corridor, especially with the speeds that were observed by the deployed traffic counters. There may need to be additional studies performed near crossing locations and dependent on proposed crossing enhancements to ensure an adequate amount of measures are included to protect pedestrians, to study proposed crossing locations, and to study traffic calming effectiveness of the proposed enhancements.

Step 4: Design Development

This step would involve technical design work to design and refine the trail alignment, surfacing, amenities and materials, high visibility crossings and enhancements, and structural support and foundation for structures. It is during this phase that landowners will be re-engaged to review trail alignments through their property, and during this phase that the public can review the overall trail design through the public right of way to ensure it is meeting their vision established in this document. Upon review and revisions, a final set of construction documents and specifications for the build-out of the trail will be signed and stamped by a licensed engineer or landscape architect and submitted to the County.

Step 5: Regulatory Approvals & Environmental Permitting

There will be a need to coordinate with local regulatory and permitting agencies prior to implementation, which will likely occur at the 90% design phase of the project. Aspects of the project that will need to be reviewed may include potential impacts within floodzones and wetlands for the boardwalks, review by NYSDOS due to overlap with critical and significant habitats, review by the NYSDEC for potential stormwater and drainage impacts through the state pollutant discharge elimination system permit process, and review by NYSDOT and local highway departments due to improvements and new maintenance needs in the local and state ROW's.

Continuous: Project Communication

As the project progresses from the concept plan included in this report, to continue to hold momentum and engage the community in the process, there should be regular communication between the project team and community members. In addition to a monthly or quarterly outreach effort, communication should be considered during the following milestones:

- Selection of a certain grant program to submit an application towards
- Grant application submittal and completion
- Grant award
- Key design development milestones

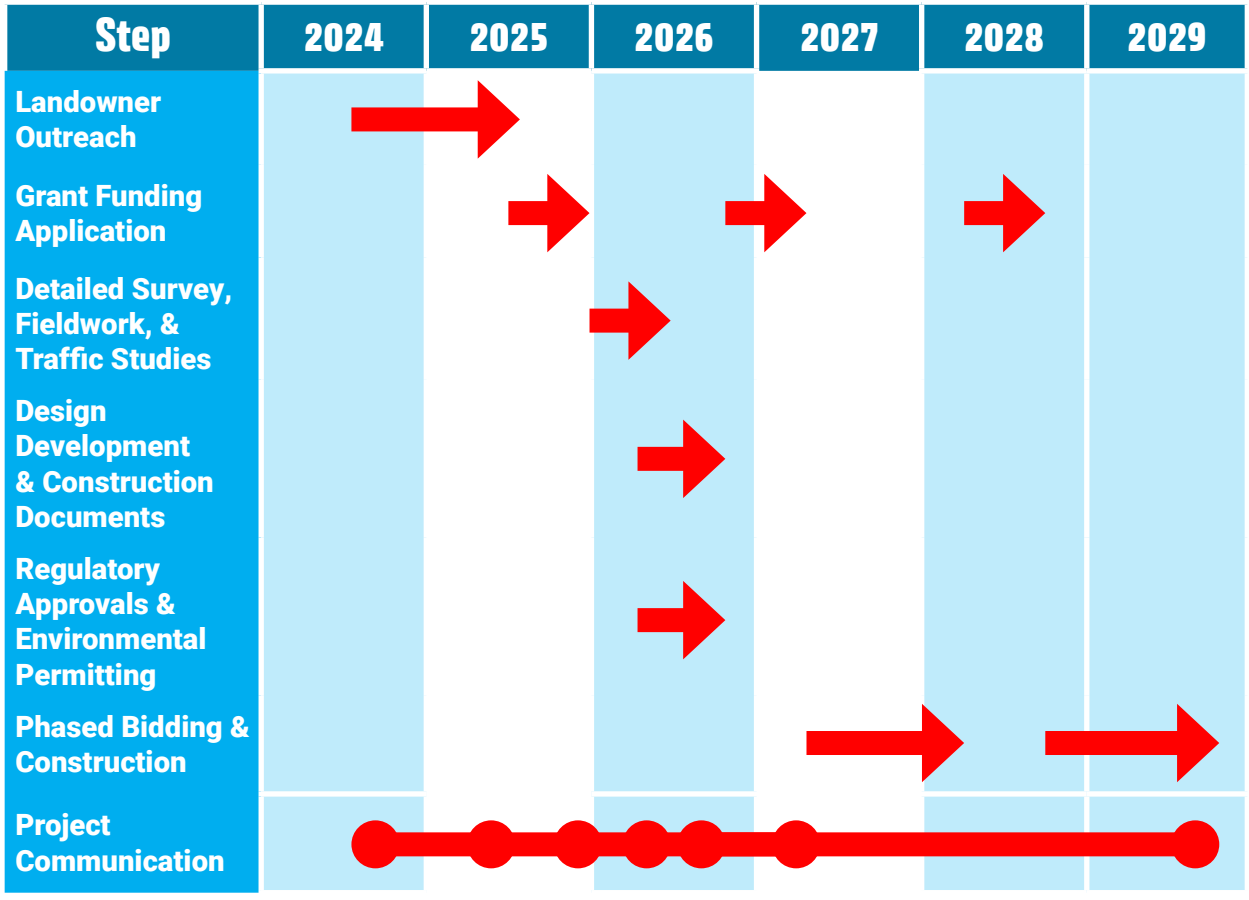
- Contract bidding
- Contract award
- Construction commencement
- Construction completion

One group that may be engaged during this process is the Chamber of Commerce, since one of the major objectives of the trail is to build the local economy and connect the neighbors and seasonal tourists to businesses and retail around Little Sodus Bay.

There are multiple options for distributing this information. This may also look like a printed local newsletter that is distributed by the Village and written by volunteers actively engaged in the trail development to alert the community about upcoming milestones. There could also be an investment in an e-newsletter to be distributed virtually to community members. Additionally, there could be postings on the Village social media pages, such as facebook, which is highly active within the community.

Anticipated Implementation Timeline

It is anticipated that implementation of the trail will be completed in the steps described over the course of 3-5 years, with construction commencing in 2027.



Sterling-Fair Haven

Community Connection Trail